

**Project #: 14610**

**ASBESTOS ASSESSMENT  
Science Building  
Memorial University of Newfoundland  
St. John's, NL**



**Prepared for:**

**Tina Giles-Murphy  
Director, Department of Health and Safety  
Memorial University of Newfoundland  
208 Elizabeth Avenue  
St. John's, NL  
A1B 1T5**

**Prepared by:**



**151 Crosbie Rd. St. John's NL, A1B 4B4  
Tel: (709) 754-4146 Fax: (709) 754-4194**

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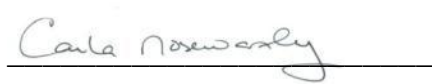
## EXECUTIVE SUMMARY

ALL-TECH Environmental Services Limited conducted an Asbestos Assessment at the Science Building, located at Memorial University of Newfoundland (MUN), St. John's, NL. The objective of the assessment was to determine the presence of asbestos containing materials throughout the building. It was determined that:

- Forty five (45) of the one hundred eighty five (185) suspect asbestos samples analyzed contained asbestos greater than 1%. (*Newfoundland and Labrador Regulation 111/98, Asbestos Abatement Regulations, 1998 under the Occupational Health and Safety Act.*)
- Pipe fitting insulation was sampled and found to contain between 18% and 60% Chrysotile asbestos.
- Duct parging was sampled and found to contain between 10% and 40% Chrysotile asbestos.
- Drywall joint compound was sampled and found to contain <1% Chrysotile. Samples found to be <1% are not considered to be asbestos containing.
- Three of six tar samples were found to contain between 5% and 20% Chrysotile asbestos.
- Three of twenty-one samples of plaster were found to contain 2% - 10% Chrysotile asbestos.
- Twelve of thirty samples of vinyl floor tile were found to contain between 2 and 8% Chrysotile asbestos, while the associated mastics were found to contain 2 – 8% Chrysotile asbestos.
- Textured finished ceilings were found to contain 5% - 8% Chrysotile asbestos.
- Sprayed fireproofing was found to contain 40% Amosite asbestos.
- Four samples of transite material were found to contain between 8% - 30% Chrysotile asbestos.
- Three samples of light fixture heat shields sampled were found to contain 50% Chrysotile asbestos.

**This summary is not to be used alone. This report must be reviewed in its entirety.**

Thank you,

A handwritten signature in purple ink that reads "Carla Noseworthy". The signature is written in a cursive style and is positioned above a horizontal line.

Carla Noseworthy, C.E.T.  
Environmental Consultant  
***ALL-TECH Environmental Services Limited***

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## **1.0 INTRODUCTION**

ALL-TECH Environmental Services Limited was contracted by the Department of Health and Safety, Memorial University of Newfoundland (MUN), to complete an Asbestos Assessment at the Science Building, located at Memorial University of Newfoundland, St. John's, NL. The purpose of the assessment was to identify the presence of asbestos containing materials located throughout the building. The assessment was conducted in December 2011, January 2012.

## **2.0 ASBESTOS ASSESSMENT**

Asbestos is a general term which is used to describe a group of fibrous mineral silicates. The six major types of asbestos are; chrysotile (white asbestos), crocidolite (blue), amosite (brown), anthophyllite, tremolite and actinolite. Commercially, asbestos has been used widely in such applications as fireproofing, textiles, friction products, reinforcing materials (i.e. cement pipes, sheets) and insulation (both thermal and acoustic).

Asbestos materials can be found in one of two forms; friable or non-friable. Friable asbestos material refers to material that when dry, can be crumbled, pulverized or reduced to a powder by hand pressure thus releasing fibers into the air. This type of asbestos material is hazardous due to its potential to become airborne if damaged or disturbed. Friable asbestos building products used in the past were sprayed acoustic & fire protection insulations, ceiling/wall finishes, drywall joint compounds, mechanical insulations on pipes, tanks, boilers, vessels, etc. Non-friable building products used in the past were vinyl floor tiles, gaskets, transite panels, and transite shingles. Non-friable materials if handled improperly during removal or renovations, such as cutting transite panels with an electrical tool, can cause high fiber release. Also, non-friable asbestos products can become friable if damaged through years of aging (water damage, general deterioration of materials, etc.).

Asbestos containing materials (ACM) can be properly managed and left in place depending on their location, condition, and friability. Non-friable materials receive less attention than friable materials due to the fact that the asbestos fibers in the non-friable material are bound or held tightly together, reducing the chance of fibers becoming airborne. This makes the non-friable products safer and easier to manage.

The mere presence of asbestos in building materials is not necessarily a problem; however, inhaling asbestos fibers can cause associated health problems. The hazards of asbestos exposure are directly related to the degree to which fibers are released (become airborne). Intact and undisturbed asbestos do not pose a health risk.

## **2.1 Scope of Work**

Representative suspect asbestos containing materials were sampled from wall finishes, various types of flooring, mechanical insulation, lighting fixtures, and lab components located throughout the building.

The asbestos assessment involved a visual investigation of representative building structures, mechanical insulations, building fixtures, wall & ceiling finishes, and flooring for the presence of asbestos materials. If these materials were suspected to contain asbestos, a bulk sample was collected of the representative material.

It should be noted that asbestos containing materials such as piping straight runs & fittings may be present behind existing drywall walls, ceilings, columns, shafts, etc. Since no destructive testing was performed during this assessment, additional care should be taken during renovations/demolition to ensure that no asbestos containing materials are to be disturbed.

## **2.2 Methodology**

The Science building was constructed in three stages. All four floors of 'A' Block, 1<sup>st</sup> – 3<sup>rd</sup> floors of 'B' Block and the first floor of 'C' Block were constructed in 1959. The fourth floor of 'B' Block and 2<sup>nd</sup> – 4<sup>th</sup> floors of 'C' Block were constructed in 1970. 'D' Block was constructed in 1971. As such, the Science building was treated as three separate buildings based on the difference of building components.

A total of one hundred thirty eight (138) suspect asbestos bulk samples were collected from the building. Based on the type of sample submitted, some were split to separate layers, thus a total of one hundred eighty five (185) samples were analyzed. Representative suspect asbestos bulk material samples from floors, wall finishes, pipe fitting insulation and mastics, suspect transite material and light fixture heat shields were carefully collected and placed into labeled sealable plastic bags and transported to the EMSL Analytical Inc. in New Jersey, USA, for Polarized Light Microscopy/Dispersion Staining (PLM/DS) analysis. The EPA test method for bulk analysis (EPA/600/R-93/116) states in paragraph 2.2.2 that *"the detection limit for visual estimation is a function of the quantity of the sample analyzed, the nature of matrix interference, sample preparation, and fiber size and distribution. Asbestos may be detected in concentrations of less than one percent by area if sufficient material is analyzed. Samples may contain fibers too small to be resolved by PLM (< 0.25 µm in diameter) so detection of those fibers by this method may not be possible."*

## **2.3 Applicable Standards**

The province defines Asbestos material as "material containing greater than 1% asbestos by dry weight." Materials identified as ACM must be managed, handled and disposed of as per the Newfoundland and Labrador Regulation 111/98, *Asbestos Abatement Regulations, 1998* under the *Occupational Health and Safety Act* (O.C. 98-

730).

Also, the Province of Newfoundland and Labrador have set standards for exposure to airborne asbestos fibres to as low as is reasonably achievable (ALARA) but in any case shall not exceed Threshold Limit Values (TLVs) as published by the American Conference of Governmental Industrial Hygienists (ACGIH) and are primarily used for the occupational exposure to employees and workers who from day to day come in contact with asbestos. ACGIH guidelines state the airborne asbestos limit as follows:

Asbestos (all forms) 0.1 fibres per cubic centimetre (f/cc) as determined by air sampling following the NIOSH 7400 Asbestos and Other Fibres by Phase Contrast Microscopy.

The *Newfoundland Asbestos Abatement Regulations 111/98* requires that all employers, building owners and principal contractors follow this Regulation when handling or using asbestos in their workplace. This Regulation applies to every workplace covered under the Occupational Health and Safety Legislation where asbestos or materials containing asbestos, is likely to be handled, dealt with, disturbed or removed and includes every project, project owner, contractor, employer and employee engaged in or on the project. An owner/contractor to whom this Regulation applies shall take every reasonable precaution to ensure that every worker who is not an employee of the owner/contractor and who works in the workplace of the owner/contractor is protected and every such worker shall comply with the requirements of this Regulation.

## **2.4 Survey Findings**

Laboratory analysis confirmed that forty five (45) of the one hundred eighty five (185) bulk samples analyzed from the building, in three stages, contained asbestos greater than 1%. Table 1.0 – Table 3.0 below illustrates the results of this sampling. **See Appendix II - Laboratory Asbestos Results.**

**Table 1.0  
Summary of Suspect Asbestos Containing Materials Tested  
Science Building – A Block, 1<sup>st</sup> – 3<sup>rd</sup> Floors B Block, 1<sup>st</sup> Floor C Block  
(Constructed 1959)  
Memorial University of Newfoundland  
St. John's, NL**

Sample No.	Sample Description and Location	Asbestos Results	Photograph
SN-47	Hallway SN1C04 – 1' x 1' Vinyl Floor Tile, light brown w/ dark brown and orange	5% Chrysotile	1
	Mastic	3% Chrysotile	
SN-48	Hallway SN1C04 – 1' x 1' Vinyl Floor Tile, beige w/ light brown and white	None Detected	2
	Mastic	2% Chrysotile	
SN-49	Hallway SN1C04 – 2' x 4' Ceiling Tile, Fissure	None Detected	
SN-50	Hallway SN1C04 – 1' x 1' Vinyl Floor Tile, grey w/ black	None Detected	
	Mastic	None Detected	
SN-51	Room SN1077 – 1' x 1' Vinyl Floor Tile, cream w/ orange	None Detected	
	Mastic	None Detected	
SN-52	Room SN1074C – 9" x 9" Vinyl Floor Tile, Brown w/ white	5% Chrysotile	3
	Mastic	3% Chrysotile	
SN-53	Room SN1074 - Vinyl Sheet Flooring, cream mix	None Detected	
	Mastic	None Detected	
SN-54	Room SN1076 – 1' x 1' Vinyl Floor Tile, grey mix	None Detected	
	Mastic	None Detected	
SN-55	Room SN1076 – Textured Finish, Ceiling	5% Chrysotile	--
SN-56	Room SN1073 – 1' x 1' Vinyl Floor Tile, Black	4% Chrysotile	4
	Black Mastic	<1% Chrysotile	
	Yellow Mastic	None Detected	
SN-57	Room SN1073 – Plaster	None Detected	
SN-58	Hallway SN1C04 – 2' x 4' Ceiling Tile, pinhole	None Detected	
SN-59	Room SN1070, Plaster	None Detected	



Sample No.	Sample Description and Location	Asbestos Results	Photograph
SN-60	Room 1063A - 1' x 1' Vinyl Floor Tile, grey w/ beige	None Detected	
	Mastic	None Detected	
<b>SN-61</b>	<b>Room SN1068 – Pipe Fitting Insulation</b>	<b>18% Chrysotile</b>	<b>6</b>
<b>SN-62</b>	<b>Room SN1064 – Textured Finish, Ceiling</b>	<b>5% Chrysotile</b>	<b>--</b>
SN-63	Room SN1060 – Plaster, Skim Coat	None Detected	
	Base Coat	<1% Chrysotile	
SN-64	SN1060 – 2' x 2' Ceiling Tile, textured fissure	None Detected	
SN-65	Room SN1058 – Plaster, Skim Coat	None Detected	
	Base Coat	<1% Chrysotile	
<b>SN-66</b>	<b>Room SN1052 – 1' x 1' Vinyl Floor Tile, grey w/ white</b>	<b>2% Chrysotile</b>	<b>7</b>
	Mastic	None Detected	
<b>SN-67</b>	<b>Room SN1050, 1' x 1' Vinyl Floor Tile, dark beige w/ brown, white</b>	<b>3% Chrysotile</b>	<b>8</b>
	<b>Mastic</b>	<b>5% Chrysotile</b>	
SN-68	Room SN1050 – 2' x 2' Ceiling Tile, pinhole, fissure	None Detected	
<b>SN-69</b>	<b>Room SN1049 – Transite Fume Hood</b>	<b>15% Chrysotile</b>	<b>9</b>
SN-70	Room SN1048 – Plaster (I-Beam), Skim Coat	None Detected	
	Base Coat	None Detected	
SN-71	Room SN1083 - Plaster	None Detected	
<b>SN-72</b>	<b>Room SN1091 – Textured finish, ceiling</b>	<b>8% Chrysotile</b>	<b>--</b>
<b>SN-73</b>	<b>Room SN1103 – 1' x 1' Vinyl Floor Tile, Red w/ brown</b>	<b>3% Chrysotile</b>	<b>10</b>
	Mastic	None Detected	
<b>SN-74</b>	<b>Room SN1093 – 1' x 1' Vinyl Floor Tile, cream w/ brown stripes</b>	<b>2% Chrysotile</b>	<b>11</b>
	<b>Mastic</b>	<b>2% Chrysotile</b>	
<b>SN-75</b>	<b>Room SN1111 – Duct Parging (at seams)</b>	<b>40% Chrysotile</b>	<b>12</b>

Sample No.	Sample Description and Location	Asbestos Results	Photograph
<b>SN-76</b>	<b>Hallway SN2C01 – Textured Finish, Ceiling</b>	<b>8% Chrysotile</b>	<b>--</b>
SN-77	Room SN2104 – Drywall Joint Compound	None Detected	
SN-78	Hallway SN2C05 – Vinyl Sheet Flooring, olive green w/ pink, grey, cream	None Detected	
<b>SN-79</b>	<b>Room SN2091 - Light fixture heat shield</b>	<b>50% Chrysotile</b>	<b>13</b>
SN-80	Room SN2090 – Tar Wrap	None Detected	
<b>SN-81</b>	<b>Room SN2087 – Pipe Fitting Insulation</b>	<b>60% Chrysotile</b>	<b>--</b>
SN-82	Room SN2087 – Vinyl Sheet Flooring, light brown mix	None Detected	
	Mastic	None Detected	
SN-83	Room SN2088 – 1' x 1' Vinyl Floor Tile, cream w/ light brown	None Detected	
	Mastic	None Detected	
SN-84	Room SN2085 – Duct Wrap	None Detected	
<b>SN-85</b>	<b>Room SN2085 – Debris on Duct</b>	<b>10% Chrysotile</b>	<b>14</b>
<b>SN-86</b>	<b>Room SN2085 – Plaster</b>	<b>10% Chrysotile</b>	<b>--</b>
SN-87	Room SN2098 – Vinyl Sheet Flooring, green mix	None Detected	
	Mastic	None Detected	
SN-88	Room SN2098 – 2' x 2' Ceiling Tile, large pinhole / fissure	None Detected	
<b>SN-89</b>	<b>Room SN3107 – Transite at counter</b>	<b>8% Chrysotile</b>	<b>15</b>
SN-90	Hallway SN3C06 – Vinyl Sheet Flooring, black, brown, cream mix	None Detected	
<b>SN-91</b>	Room SN3105 – plaster / drywall, Skim Coat	None Detected	<b>--</b>
	<b>Base Coat</b>	<b>2% Chrysotile</b>	
SN-92	Room SN1112 – Vinyl Sheet Flooring, grey mix	None Detected	
SN-93	Room SN1008 – 2' x 2' Ceiling Tile, pinhole	None Detected	
SN-94	Room SN2025 – 2' x 4' Ceiling Tile, large pinhole	None Detected	

Sample No.	Sample Description and Location	Asbestos Results	Photograph
<b>SN-95</b>	<b>Room SN3125D – Sprayed Fireproofing</b>	<b>40% Amosite</b>	<b>16</b>
SN-96	Room 3125D - Plaster	None Detected	
SN-97	Room SN3125D – 1' x 1' Vinyl Floor Tile- light grey w/ med. grey and white	None Detected	
<b>SN-98</b>	<b>Room SN3126 – Textured Finish, Ceiling</b>	<b>5% Chrysotile</b>	<b>--</b>
SN-99	Room SN3003 - Plaster	None Detected	
SN-100	Room SN3000 - 2' x 2' Ceiling Tile- pinhole/fissure	None Detected	
SN-101	Room SN4117 - Tar on uninsulated Rain Water Leader	None Detected	
<b>SN-102</b>	Room SN4003 – Plaster, Skim Coat	None Detected	<b>--</b>
	<b>Base Coat</b>	<b>2% Chrysotile</b>	
SN-103	Room SN4000 – 2' x 4' Ceiling Tile, pinhole	None Detected	
SN-104	Room SN4000 – Vinyl Sheet Flooring, beige w/ white, tan	None Detected	
	Mastic	None Detected	
<b>SN-105</b>	<b>Room SN2109 – Transite Wall Panels</b>	<b>15% Chrysotile</b>	<b>17, 18</b>
<b>SN-106</b>	<b>Room SN3114 – Tar on Sinks</b>	<b>5% Chrysotile</b>	<b>19</b>
SN-107	Room SN1107B - Drywall Joint Compound	None Detected	
SN-108	Room SN1107B – Tar on Fibreglass Duct	None Detected	
SN-109	Room SN1107B – 2' x 4' Ceiling Tile, Plain	None Detected	
SN-110	Room SN1000 – 1' x 1' Vinyl Floor Tile, light grey w/ med grey	None Detected	
SN-111	Room SN2011 – Vinyl Sheet Flooring, tan w/ brown, orange	None Detected	
SN-112	Room SN4015 – Vinyl Sheet Flooring, blue	None Detected	
<b>SN-113</b>	<b>Room SN5115 – Parging on Duct Wrap</b>	<b>10% Chrysotile</b>	<b>--</b>
SN-132	Room SN4018 – Drywall Joint Compound	None Detected	

### **Mechanical and Pipe Material**

Pipe fitting insulation which could potentially contain asbestos was observed in various locations throughout the surveyed areas. Samples were collected from Rooms SN1068 and SN2087 and analyzed for asbestos content using the PLM method of detection. The samples were found to contain between 18% and 60% Chrysotile asbestos (See samples SN-61 and SN-81 in Appendix II and Photograph 6 in Appendix I)

*However, it should be noted that asbestos containing pipe insulation may be located behind fixed wall cavities and ceiling plenums that were inaccessible at the time of assessment. During demolition precautionary measures must be taken to avoid disturbing any potential ACM in these areas.*

Duct parging and parging debris were noted in three locations within the surveyed areas. Samples were collected from Rooms SN1111, SN2085 and SN5115 and analyzed for asbestos content using the PLM method of detection. The samples were found to contain between 10% and 40% Chrysotile asbestos. (See samples SN-75, SN-85 and SN-113 in Appendix II and Photographs 12, 14 in Appendix I). It should be noted that the parging observed on the duct in Room SN1111 and SN5115 were on the seams of the duct; the ducts were observed to be of a fiberglass or foam material.

Suspect asbestos containing duct wrap was observed in Room SN2085 and analyzed for asbestos content using the PLM method of detection. This sample was found to not contain asbestos. (see sample SN-84 in Appendix II)

Tar mastic wrap on fiberglass pipe, duct and un-insulated rain water leaders was observed in various locations throughout the surveyed areas. Samples were collected from Rooms SN2090, SN1107B and Room SN4117 and analyzed for asbestos content using the PLM method of detection. The samples were found not contain asbestos. (See samples SN-80, SN-101, and SN-108 in Appendix II)

Tar was observed on sinks in select labs throughout the surveyed areas. A sample was collected from Room SN3114 and analyzed for asbestos content using the PLM method of detection. The sample was found to contain 5% Chrysotile asbestos. Based on this result, it should be noted that all tar on sinks must be considered to be asbestos containing. (See sample SN-106 in Appendix II and Photograph 19 in Appendix I)

### **Acoustic and Thermal Insulating Products**

No acoustic or thermal insulating products were observed in the building during the assessment.

### **Friable Acoustic Texture Coats and Plaster Finishes**

Plaster finishes were observed throughout the surveyed areas during the assessment. Eleven (11) samples were collected and analyzed for asbestos content using the PLM method of detection. One sample was found to contain 10% Chrysotile asbestos, and two samples were found to contain <1% Chrysotile asbestos (below the Newfoundland and Labrador Regulation 111/98 limit). The base coats of two additional samples were found to contain 2% Chrysotile asbestos. The remaining samples were found to not contain asbestos. (see samples SN-57, SN-59, SN-63, SN-65, SN-70, SN-71, SN-86, SN-91, SN-96, SN-99, and SN-102 in Appendix II). Based on these results, and due to the uncertainty of when and where a specific type of plaster was used, all plaster in the surveyed areas must be considered to be asbestos containing, unless proven otherwise by sufficient testing.

Drywall joint compound (DJC) finishes were observed throughout the surveyed areas during the assessment. Three (3) samples were collected and analyzed for asbestos content using the PLM method of detection. None of the three (3) samples were found to contain asbestos. (See samples SN-77, SN-107 and SN-132 in Appendix II).

*It should be noted that more samples were not collected of this material in order to maintain the integrity of the walls. The materials should be sampled prior to any renovation or demolition in an area containing drywall walls.*

Textured finished ceilings were observed in select locations throughout the surveyed areas. Five (5) samples were collected from various locations and analyzed for asbestos content using the PLM method of detection. The samples were found to contain between 5% and 8% Chrysotile asbestos. (See samples SN-55, SN-62, SN-72, SN-76 and SN-98 in Appendix II and Photograph 13 in Appendix I)

### **Friable Acoustic and Thermal Fireproofing Products**

Sprayed acoustic or sprayed fireproofing was observed in the surveyed areas during the assessment. One (1) sample was collected from Room SN3125D and analyzed for asbestos content using the PLM method of detection. The sample was found to contain 40% Amosite asbestos. This material was observed in the ceiling spaces of hallways and rooms throughout the surveyed area. (See sample SN-95 in Appendix II and Photograph 16 in Appendix I)

### **Friable Ceiling Tiles / Ceiling Tile Adhesives**

2' x 4' and 2' x 2' ceiling tiles were observed throughout the surveyed areas during the assessment. Five (5) samples of 2' x 2' ceiling tiles and five (5) samples of 2' x 4' ceiling tiles were collected and analyzed for asbestos content using the PLM method of detection. None of the samples were found to contain asbestos. (See samples SN-49, SN-58, SN-64, SN-68, SN-88, SN-93, SN-94, SN-100, SN-103, and SN-109 in Appendix II)

In addition some ceiling tiles were observed to have a date stamp on the back of the tile indicating the date of manufacture. These tiles were not suspected to contain asbestos.

### **Vinyl Sheet/Linoleum Flooring**

Vinyl sheet/linoleum flooring was observed throughout the surveyed areas during the assessment. Nine (9) samples of the flooring were collected and analyzed for asbestos content using the PLM method of detection. None of the samples or their associated mastics, if any, were identified as containing asbestos. (See samples SN-53, SN-78, SN-82, SN-87, SN-90, SN-92, SN-104, SN-111 and SN-112 in Appendix II.)

### **Non-Friable Vinyl Floor Tiles/ Floor Tile Adhesives**

Vinyl floor tiles which could potentially contain asbestos were observed throughout the surveyed areas during the assessment. Fourteen (14) samples of 1' x 1' vinyl floor tiles and one (1) sample of 9" x 9" vinyl floor tiles were sampled and analyzed for asbestos content using the PLM method of detection. Seven (7) of the 1' x 1' tiles were found to contain between 2% and 5% Chrysotile asbestos. Associated mastics were also found to contain between 2% and 5% Chrysotile or to not contain asbestos. The 9" x 9" tile was found to contain 5% Chrysotile asbestos and its associated mastic was found to contain 3% Chrysotile. (See samples SN-47, SN-48, SN-50, SN-51, SN-52, SN-54, SN-56, SN-60, SN-66, SN-67, SN-73, SN-74, SN-83, SN-97, SN-110 in Appendix II and Photographs 1, 2, 3, 4, 8, 10, and 11 in Appendix I)

### **Non-Friable Transite Panels, Sheeting and Shingles**

Suspect asbestos containing transite fume hoods, counter edge, exterior wall panels and interior wall panels were observed in select labs and rooms throughout the surveyed areas. Three (3) samples of this material were collected from select areas and analyzed for asbestos content using the PLM method of detection. The samples were found to contain between 8 and 15% Chrysotile asbestos. (See samples SN-69, SN-89, and SN-105 in Appendix II, and Photographs 9, 15, 17 and 18 in Appendix I)

### **Non-Friable Transite Piping**

Transite piping was not observed during the assessment.

### **Electrical Wiring/ Lighting**

One type of light fixture heat shield was observed in the surveyed areas. One (1) sample was collected from Room SN2091 and analyzed for asbestos content using the PLM method of detection. The sample was found to contain 50% Chrysotile asbestos (see sample SN-79 in Appendix II, photograph 13 in Appendix I).

## **Roofing Materials**

Access to the roof was not available at the time of the assessment.

## **Other Materials**

Window caulking, interior or exterior, was not sampled during this assessment.

No other materials suspected of containing asbestos were observed during the assessment.

**Table 2.0  
Summary of Suspect Asbestos Containing Materials Tested  
Science Building – 4<sup>th</sup> Floor B Block, 2<sup>nd</sup> – 4<sup>th</sup> Floors C Block  
(Constructed 1970)  
Memorial University of Newfoundland  
St. John's, NL**

<b>Sample No.</b>	<b>Sample Description and Location</b>	<b>Asbestos Results</b>	<b>Photograph</b>
SN-114	Room SN4113 – Vinyl Sheet Flooring, blue-grey w/ light grey	None Detected	
SN-115	Room SN4113 – 2' x 2' Ceiling Tile, textured pinhole/fissure	None Detected	
SN-116	Hallway SN4C06 – Vinyl Sheet Flooring, mustard mix	None Detected	
SN-117	Hallway SN4C06 – Vinyl Sheet Flooring, cream mix	None Detected	
SN-118	Room SN4103 – 1' x 1' Vinyl Floor Tile, grey w/ black	None Detected	
	Mastic	None Detected	
SN-119	Room SN4094 – Vinyl Sheet Flooring, brown w/ pink, cream	None Detected	
SN-120	Stairway SN4S04 – Plaster	None Detected	
SN-121	Room SN4092 – Plaster, Skim Coat	None Detected	
	Base Coat	None Detected	
SN-122	Room SN4096 – 1' x 1' Vinyl Floor Tile, light grey w/ med grey	None Detected	
	Mastic	None Detected	
SN-123	Hallway SN4C05 near Room SN4059 – 2' x 4' Ceiling Tile, pinhole / large fissure	None Detected	



Sample No.	Sample Description and Location	Asbestos Results	Photograph
SN-124	Hallway SN4C05 near Room SN4052 – Drywall Joint Compound	None Detected	
SN-125	Hallway SN3C05 near Room SN3075 – Plaster, Skim Coat	None Detected	
	Base Coat	None Detected	
SN-126	Hallway SN3C05 near Room SN3075 – Drywall Joint Compound	<1 Chrysotile	
SN-127	Hallway SN4C06 near Room SN4092 – Plaster	None Detected	
<b>SN-128</b>	<b>Room SN4051 – Pipe Fitting insulation</b>	<b>20% Chrysotile</b>	<b>20</b>
SN-129	Room SN2048A – Drywall Joint Compound	<1% Chrysotile	
<b>SN-130</b>	<b>Room SN2048A – Pipe Hanger Insulation</b>	<b>20% Chrysotile</b>	<b>21</b>
SN-131	Room SN2048A – Drywall Joint Compound	<1% Chrysotile	
<b>SN-133</b>	<b>Room SN4100 – Tar Mastic on Fiberglass Pipe</b>	<b>5% Chrysotile</b>	<b>22</b>
<b>SN-134</b>	<b>Room SN4100 – Light Fixture Heat Shield</b>	<b>50% Chrysotile</b>	<b>--</b>
SN-135	Room SN3070 – Vinyl Sheet Flooring, tan / brown mix	None Detected	
SN-136	Room SN3101 – Plaster	None Detected	
SN-137	Room SN2057 – Vinyl Sheet Flooring, rose mix	None Detected	
SN-138	Room SN2071 – Vinyl Sheet Flooring, cream mix w/ blue	None Detected	

### **Mechanical and Pipe Material**

Pipe fitting insulation which could potentially contain asbestos was observed in various locations throughout the surveyed areas. Samples were collected from Rooms SN4051 and SN2048A (in this location, pipe hanger insulation) and analyzed for asbestos content using the PLM method of detection. The samples were both found to contain 20% Chrysotile asbestos (see samples SN-128 and SN-130 in Appendix II, Photographs 20 and 21 in Appendix I)

*However, it should be noted that asbestos containing pipe insulation may be located behind fixed wall cavities and ceiling plenums that were inaccessible at the time of assessment. During demolition precautionary measures must be taken to avoid disturbing any potential ACM in these areas.*



Tar mastic on fiberglass pipe was observed in various locations throughout the surveyed areas. A sample was collected from Room SN4100 and analyzed for asbestos content using the PLM method of detection. The sample was found to contain 5% Chrysotile asbestos. It should be noted that tar mastic on such pipes that may be within the surveyed areas are also considered to be asbestos containing. (See sample SN-133 in Appendix II, Photograph 22 in Appendix I)

### **Acoustic and Thermal Insulating Products**

No acoustic or thermal insulating products were observed in the building during the assessment.

### **Friable Acoustic Texture Coats and Plaster Finishes**

Drywall joint compound (DJC) finishes were observed throughout the surveyed areas during the assessment. Five (5) samples were collected and analyzed for asbestos content using the PLM method of detection. Three (3) of the samples were found to contain <1% Chrysotile asbestos (below the Newfoundland and Labrador Regulation 111/98 limit) and the remaining two were found to not contain asbestos. (See samples SN-124, SN-126, SN-129, SN-131 and SN-132 in Appendix II).

Plaster finishes were observed throughout the surveyed areas during the assessment. Five (5) samples were collected and analyzed for asbestos content using the PLM method of detection. All samples were identified as non-asbestos containing (See samples SN-120, SN-121, SN-125, SN-127, and SN-136, in Appendix II).

### **Friable Acoustic and Thermal Fireproofing Products**

Sprayed acoustic or sprayed fireproofing was not observed in the surveyed areas during the assessment.

### **Friable Ceiling Tiles / Ceiling Tile Adhesives**

Various 2' x 2' and 2' x 4 ceiling tiles were observed in the surveyed areas during the assessment. Two (2) samples were collected and analyzed for asbestos content using the PLM method of detection. Both samples were found to not contain asbestos. (See samples SN-115, SN-123 in Appendix II)

In addition some ceiling tiles were observed to have a date stamp on the back of the tile indicating the date of manufacture. These tiles were not suspected to contain asbestos.

### **Vinyl Sheet/Linoleum Flooring**

Vinyl sheet/linoleum flooring was observed throughout the surveyed areas during the assessment. Seven (7) samples of the flooring were collected and analyzed for asbestos content using the PLM method of detection. None of the samples were

identified as containing asbestos. (See samples SN-114, SN-116, SN-117, SN-119, SN-135, SN-137, and SN-138 in Appendix II.)

### **Non-Friable Vinyl Floor Tiles/ Floor Tile Adhesives**

Vinyl floor tiles were observed throughout the surveyed areas during the assessment. Two (2) samples of 1' x 1' vinyl floor tiles were sampled and analyzed for asbestos content using the PLM method of detection. The samples were identified as non-asbestos containing. The associated mastics, if any, were also identified as non-asbestos containing. (See samples SN-118, and SN-122 in Appendix II.)

### **Non-Friable Transite Panels, Sheeting and Shingles**

A suspect asbestos containing transite autoclave was observed in Room SN4098. A sample of this material was not available for collection. However, based on previous samples, this material should be treated as asbestos containing unless proven otherwise by subsequent testing. (See Photograph 43 in Appendix I)

### **Non-Friable Transite Piping**

Transite piping was not observed during the assessment.

### **Electrical Wiring/ Lighting**

One type of light fixture heat shield was observed in the surveyed areas. One (1) sample was collected from Room SN4100 and analyzed for asbestos content using the PLM method of detection. This material was found to contain 50% Chrysotile asbestos (See sample SN-134 in Appendix II).

### **Roofing Materials**

Access to the roof was not available at the time of the assessment.

### **Other Materials**

Window caulking, interior or exterior, was not sampled during this assessment.

No other materials suspected of containing asbestos were observed during the assessment.

**Table 3.0**  
**Summary of Suspect Asbestos Containing Materials Tested**  
**Science Building - D Block**  
**(Constructed 1971)**  
**Memorial University of Newfoundland**  
**St. John's, NL**

Sample No.	Sample Description and Location	Asbestos Results	Photograph
SN-01	Vestibule SN1V03 - Plaster (white), Ceiling	<1% Chrysotile	
SN-02	Vestibule SN1V03 – Pipe Fitting	35% Chrysotile	23
SN-03	Hallway SN1C03 – 1' x 1' Vinyl Floor Tile, olive w/ cream, green	6% Chrysotile	24
SN-04	Hallway SN1C03 – 1' x 1' Vinyl Floor Tile, light grey with w/ medium grey	None Detected	
SN-05	Hallway SN1C03 – 1' x 1' Vinyl Floor Tile, light green	3% Chrysotile	25
	Mastic	8% Chrysotile	
SN-06	Hallway SN1C03 – 1' x 1' Vinyl Floor Tile, cream w/ brown	2% Chrysotile	25
	Mastic	None Detected	
SN-07	Hallway SN1C03 – 1' x 1' Vinyl Floor Tile, light grey w/ black	None Detected	26
	Mastic	5% Chrysotile	
SN-08	Room SN1045 – Vinyl Sheet Flooring, brown mix	None Detected	
SN-09	Room SN1045 – 2' x 2' Ceiling Tile, pinhole/fissure	None Detected	
SN-10	Room SN1045 – 2' x 2' Ceiling Tile, pinhole	None Detected	
SN-11	Room SN1045 – 2' x 2' Pinhole	None Detected	
SN-12	Room SN1045C – Fumehood (transite)	30% Chrysotile	27
SN-13	Room SN1045B – 2' x 2' Ceiling Tile, pinhole/fissure	None Detected	
SN-14	Room SN1039 – 1' x 1' Vinyl Floor Tile, light grey w/ medium grey	None Detected	
	Mastic	None Detected	
SN-15	Room SN1046 – 2' x 2' Ceiling Tile, pinhole/fissure	None Detected	

Sample No.	Sample Description and Location	Asbestos Results	Photograph
SN-16	Room SN1047 – 1' x 1' Vinyl Floor Tile, light grey w/ medium grey	None Detected	
	Mastic	None Detected	
SN-17	Hallway SN1C03, outside Room SN1045 – Plaster	None Detected	
SN-18	Hallway SN1C03, outside Room SN1045 – 2' x 4' Ceiling Tile, horizontal pinhole/fissure	None Detected	
SN-19	Hallway SN1C03, outside Room SN1045 – 2' x 4' Ceiling Tile, vertical pinhole/fissure	None Detected	
SN-20	Hallway SN1C03, outside Room SN1043 - canvas wrap on fiberglass pipe	None Detected	
SN-21	Room SN1042 – 1' x 1' Vinyl Floor Tile, beige w/ light brown	None Detected	
	Mastic	None Detected	
SN-22	SN1041 - 2' x 2' Ceiling Tile, pinhole fissure	None Detected	
SN-23	Hallway SN1C03, outside Room SN1038 – Plaster (skim coat)	None Detected	
	Hallway SN1C03, outside Room SN1038 – Plaster (base coat)	None Detected	
<b>SN-24</b>	<b>Room SN1034 – 1' x 1' Vinyl Floor Tile, light grey w/ med grey stripes</b>	<b>2% Chrysotile</b>	<b>--</b>
SN-25	Room SN1034 – 2' x 2' Ceiling Tile, pinhole/small fissure	None Detected	
SN-26	Room SN1031 – Drywall	None Detected	
	Drywall Joint Compound	<1% Chrysotile	
<b>SN-27</b>	<b>Room SN1030 – Light fixture heat shield</b>	<b>50% Chrysotile</b>	<b>28</b>
SN-28	Room SN2044 – 1' x 1' Vinyl Floor Tile, light grey w/ medium grey	None Detected	
<b>SN-29</b>	<b>Hallway SN2C03 – Tar on Fibreglass Pipe</b>	<b>20% Chrysotile</b>	<b>29</b>
SN-30	Hallway SN2C03 - Vinyl Sheet Flooring, ochre mix	None Detected	
	Mastic	None Detected	

Sample No.	Sample Description and Location	Asbestos Results	Photograph
SN-31	Room SN2041 – Vinyl Sheet Flooring, light brown mix	None Detected	
	Mastic	None Detected	
SN-32	Room SN2036 – Vinyl Sheet Flooring, wood grain pattern	None Detected	
	Mastic	None Detected	
SN-33	Room SN2036 – Vinyl Sheet Flooring, grey w/ pink and green	None Detected	
	Mastic	Mastic	
SN-34	Hallway SN1C03, outside Room SN2028 – Plaster (skim coat)	None Detected	
	Plaster Rough coat	None Detected	
SN-35	Room SN3062 – Vinyl Sheet Flooring, blue and white mix	None Detected	
	Mastic	None Detected	
SN-36	Hallway SN3C04, near Room SN3060 – 1' x 1' Vinyl Floor Tile, red and black	None Detected (TEM Recommended)	
	Mastic	None Detected	
SN-37	Room SN3059 – 2' x 2' Ceiling Tile, pinhole/fissure	None Detected	
SN-38	Room SN3058 – Vinyl Sheet Flooring, blue mix	None Detected	
	Mastic	None Detected	
SN-39	Room SN3042 – Vinyl Sheet Flooring, grey/beige mix	None Detected	
	Mastic	None Detected	
SN-40	Room SN3042 – Plaster	None Detected	
SN-41	Room SN4047A – 1' x 1' Vinyl Floor Tile, blue mix	None Detected	
SN-42	Hallway SN4C04 – Vinyl Sheet Flooring, brown mix	None Detected	
SN-43	Room SN4039 – 1' x 1' Vinyl Floor Tile, pink, grey, white	None Detected	
	Mastic	None Detected	
SN-44	Room SN4022 – Vinyl Sheet Flooring, grey w/ green	None Detected	
SN-45	Room SN4027 – Vinyl Sheet Flooring, pink speckle	None Detected	
	Mastic	None Detected	
SN-46	Room SN4040 – Drywall Joint Compound	None Detected	

### **Mechanical and Pipe Material**

Pipe fitting insulation which could potentially contain asbestos was observed in various locations throughout the surveyed areas. A sample was collected from the vestibule SN1V03 and analyzed for asbestos content using the PLM method of detection. This sample was found to contain 35% Chrysotile asbestos (See sample SN-02 in Appendix II, Photograph 23 in Appendix I).

*However, it should be noted that asbestos containing pipe insulation may be located behind fixed wall cavities and ceiling plenums that were inaccessible at the time of assessment. During demolition precautionary measures must be taken to avoid disturbing any potential ACM in these areas.*

Canvas wrap on fiberglass pipe was observed in various locations throughout the surveyed areas. A sample was collected from the hallway SN1C03 and analyzed for asbestos content using the PLM method of detection. The sample was found not to contain asbestos (See sample SN-20 in Appendix II)

Tar mastic on fiberglass pipe was observed in various locations throughout the hallway SN2C03. A sample was collected from this area and analyzed for asbestos content using the PLM method of detection. The sample was found to contain 20% Chrysotile asbestos. It should be noted that tar mastic on such pipes that may be within D Block are also considered be asbestos containing. (See sample SN-29 in Appendix II, Photograph 29, in Appendix I)

### **Acoustic and Thermal Insulating Products**

No acoustic or thermal insulating products were observed in the building during the assessment.

### **Friable Acoustic Texture Coats and Plaster Finishes**

Plaster finishes were observed throughout the surveyed areas during the assessment. Five (5) samples were collected and analyzed for asbestos content using the PLM method of detection. The samples were found to contain either <1% Chrysotile asbestos (below the Newfoundland and Labrador Regulation 111/98 limit) or to not contain asbestos. ( See samples SN-01, SN-17, SN-23, SN-34, SN-40 in Appendix II)

Drywall joint compound (DJC) finishes were observed throughout the surveyed areas during the assessment. Two (2) samples were collected and analyzed for asbestos content using the PLM method of detection. The samples were found to contain either <1% Chrysotile asbestos (below the Newfoundland and Labrador Regulation 111/98 limit) or to not contain asbestos. (See samples SN-26 and SN-46 in Appendix II).

*It should be noted that more samples were not collected of this material in order to maintain the integrity of the walls. The materials should be sampled prior to any renovation or demolition in an area containing drywall walls to verify the presence or absence of asbestos*

### **Friable Acoustic and Thermal Fireproofing Products**

Sprayed acoustic or sprayed fireproofing was not observed in the surveyed areas during the assessment.

### **Friable Ceiling Tiles / Ceiling Tile Adhesives**

2' x 4' and 2' x 2' ceiling tiles were observed throughout the surveyed areas during the assessment. Eight (8) samples of 2' x 2' ceiling tiles and two (2) samples of 2' x 4' ceiling tiles were collected and analyzed for asbestos content using the PLM method of detection. None of the samples were found to contain asbestos. (See samples SN-09, SN-10, SN-11, SN-13, SN-15, SN-18, SN-19, SN-22, SN-25, and SN-37 in Appendix II)

In addition some ceiling tiles were observed to have a date stamp on the back of the tile indicating the date of manufacture. Based on the date, these tiles were not suspected to contain asbestos.

### **Vinyl Sheet/Linoleum Flooring**

Vinyl sheet/linoleum flooring was observed throughout the surveyed areas during the assessment. Eleven (11) samples of the flooring were collected and analyzed for asbestos content using the PLM method of detection. None of the samples were identified as containing asbestos. (See samples SN-08, SN-30, SN-31, SN-32, SN-33, SN-35, SN-38, SN-39, SN-42, SN-44 and SN-45 in Appendix II.)

### **Non-Friable Vinyl Floor Tiles/ Floor Tile Adhesives**

Vinyl floor tiles which could potentially contain asbestos were observed throughout the surveyed areas during the assessment. Thirteen (13) samples of 1' x 1' vinyl floor tiles were sampled and analyzed for asbestos content using the PLM method of detection. Four (4) of the tiles were found to contain between 3% and 8% Chrysotile asbestos. Associated mastics were found to either contain between 5% and 8% Chrysotile or to not contain asbestos. (See samples SN-03, SN-04, SN-05, SN-06, SN-07, SN-14, SN-16, SN-21, SN-24, SN-28, SN-36, SN-41 and SN-43 in Appendix II, and Photographs 24, 25, 26 in Appendix I.)

### **Non-Friable Transite Panels, Sheeting and Shingles**

Suspect asbestos containing transite fume hoods were observed in select labs throughout the surveyed areas. One (1) sample of this material was collected from Room SN1045C and analyzed for asbestos content using the PLM method of detection.

The sample was found to contain 30% Chrysotile asbestos. (See sample SN-12 in Appendix II, and Photograph 27 in Appendix I)

### **Non-Friable Transite Piping**

Transite piping was not observed during the assessment.

### **Electrical Wiring/ Lighting**

One type of light fixture heat shield was observed in the surveyed areas. One (1) sample was collected from Room SN1030 and analyzed for asbestos content using the PLM method of detection. The sample was found to contain 50% Chrysotile asbestos (See sample SN-27 in Appendix II, and Photograph 28 in Appendix I).

### **Roofing Materials**

Access to the roof was not available at the time of the assessment.

### **Other Materials**

Window caulking, interior or exterior, was not sampled during this assessment.

No other materials suspected of containing asbestos were observed during the assessment.



## **2.5 Recommendations**

The assessment identified that numerous materials contained a concentration of asbestos equal to or greater than 1% by dry weight. According to regulations, the owner of any building/ residence is required to implement and maintain specific health and safety measures, therefore the following recommendations are provided:

All materials listed in fair and/or poor condition are to be repaired or removed immediately. See APPENDIX III – Asbestos Building Survey Information for materials condition and locations.

Ensure that prior to and during any major renovations/demolition extreme caution is implemented to make certain that asbestos containing materials are not disturbed. It should be noted that asbestos containing materials may be concealed behind fixed walls/ceiling plenums and under existing sub-floors.

Ensure that when disturbing asbestos materials, the asbestos removal contractor follows all federal and provincial regulations in accordance to the Newfoundland and Labrador Regulation 111/98.

Retain a copy of this report on-site for future reference of friable and non-friable asbestos products.

Provide asbestos air monitoring and inspection during the removal of asbestos to ensure that all government guidelines and regulations are followed throughout the removal process.

### **3.0 DISCLAIMER**

This report was prepared by ALL-TECH Environmental Services Limited for the sole benefit of our client Ms. Tina Giles-Murphy. The information in the report is based on information provided or obtained by ALL-TECH. The report is based on ALL-TECH's best judgment with the information provided at the time of the assessment. Any use and/or conclusions used by any third party, is the responsibility of that third party. ALL-TECH accepts no liability and/or damages occurred by any third party that uses information obtained in this report.

If you have any questions regarding this report, please do not hesitate to call me at (709) 754-4146.

Thank You,



Carla Noseworthy, CET  
Environmental Consultant

**ALL-TECH Environmental Services Limited**

**Reviewed by:**



Orven Newhook, B.Sc.  
Project Manager

**ALL-TECH Environmental Services Limited**

**APPENDIX I**  
PHOTOGRAPHS OF ASBESTOS CONTAINING MATERIALS



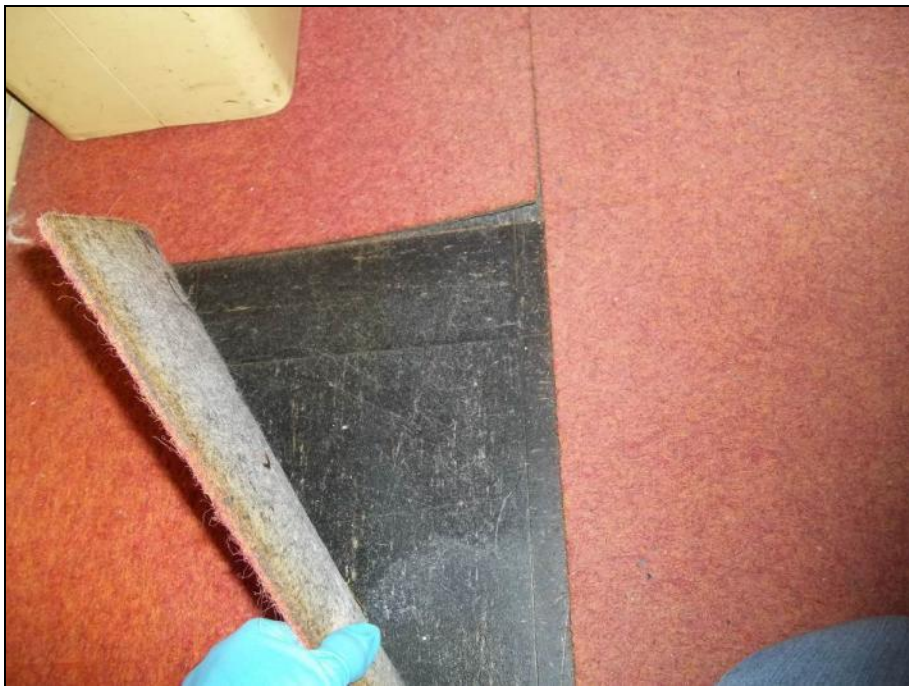
**Photograph 1: Hallway SN1C04. Asbestos containing 1' x 1' vinyl floor tile and mastic. Sample SN-47**



**Photograph 2: Hallway SN1C04. Asbestos containing mastic under floor tile. Sample SN-48.**



**Photograph 3: Room SN1074C. Asbestos containing 9" x 9" vinyl floor tile and mastic.  
Sample SN-52**



**Photograph 4: Room SN1073. Asbestos containing 1' x 1' vinyl floor tile, found under carpet.  
Sample SN-56**



**Photograph 6: Room SN1068. Asbestos containing pipe fitting insulation. Sample SN-61.**



**Photograph 7: Room SN1052. Asbestos containing 1' x 1' vinyl floor tile under carpet.  
Sample SN-66.**

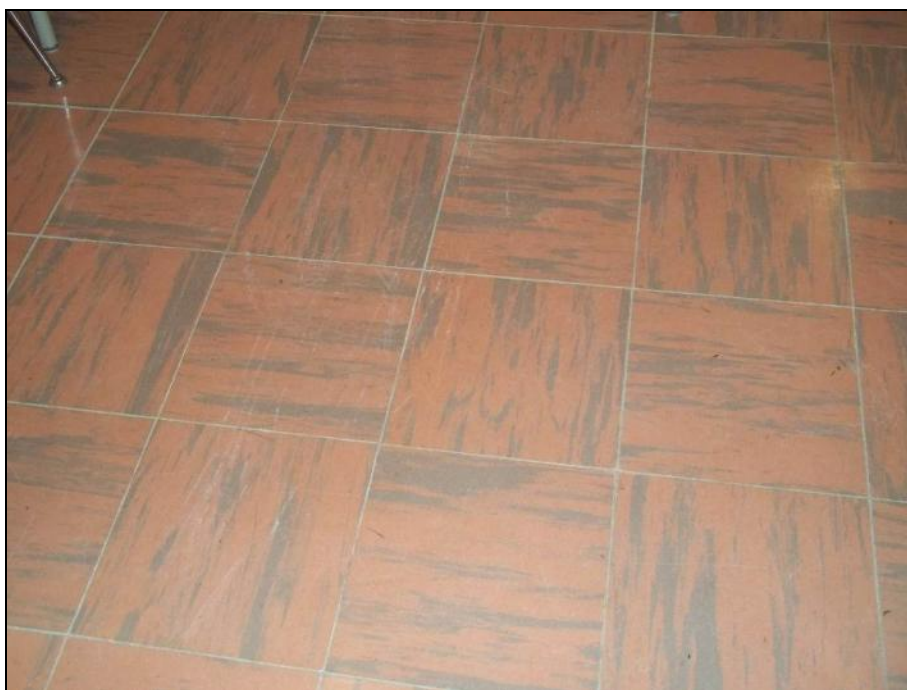




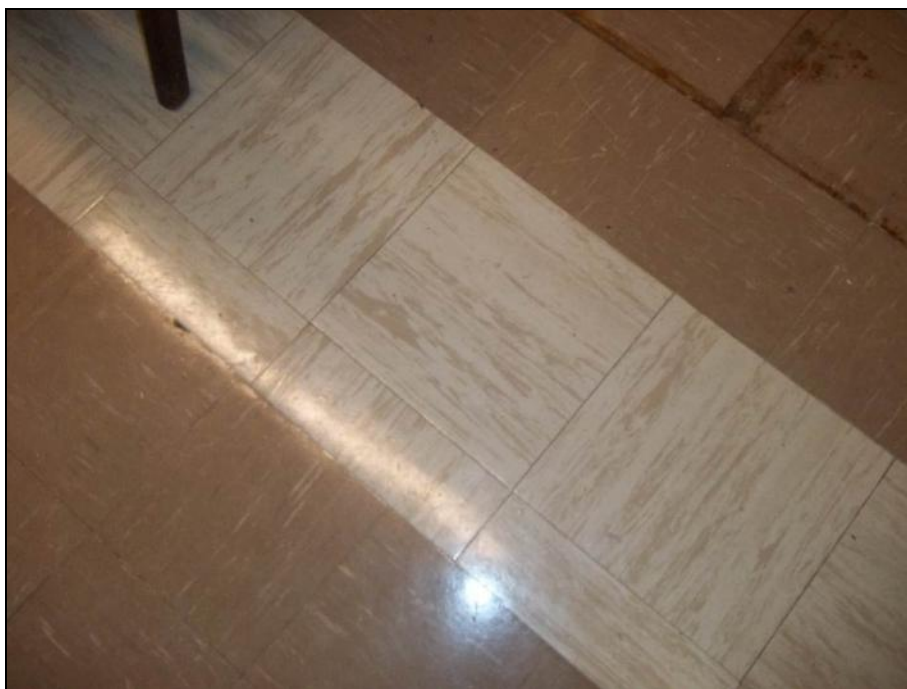
**Photograph 8: Room SN1050. Asbestos containing 1' x 1' vinyl floor tile and mastic. Sample SN-67.**



**Photograph 9: Room SN1049. Asbestos containing transite fume hood. Sample SN-69.**



**Photograph 10: Room SN1103. Asbestos containing 1' x 1' vinyl floor tile. Sample SN-73.**



**Photograph 11: Room SN1093. Asbestos containing, light coloured 1' x 1' vinyl floor tile and mastic. Sample SN-74.**





**Photograph 12: Room SN1111. Asbestos containing parging along the seam of the fiberglass insulated duct. Sample SN-75.**



**Photograph 13: Room SN2091. Asbestos containing light fixture heat shields Sample SN-79. Also note asbestos containing textured ceiling.**



**Photograph 14: Room SN2085. Asbestos containing padding debris on foam insulated duct.  
Sample SN-85.**



**Photograph 15: Room SN3107. Asbestos containing transite on counter.  
Sample SN-89.**



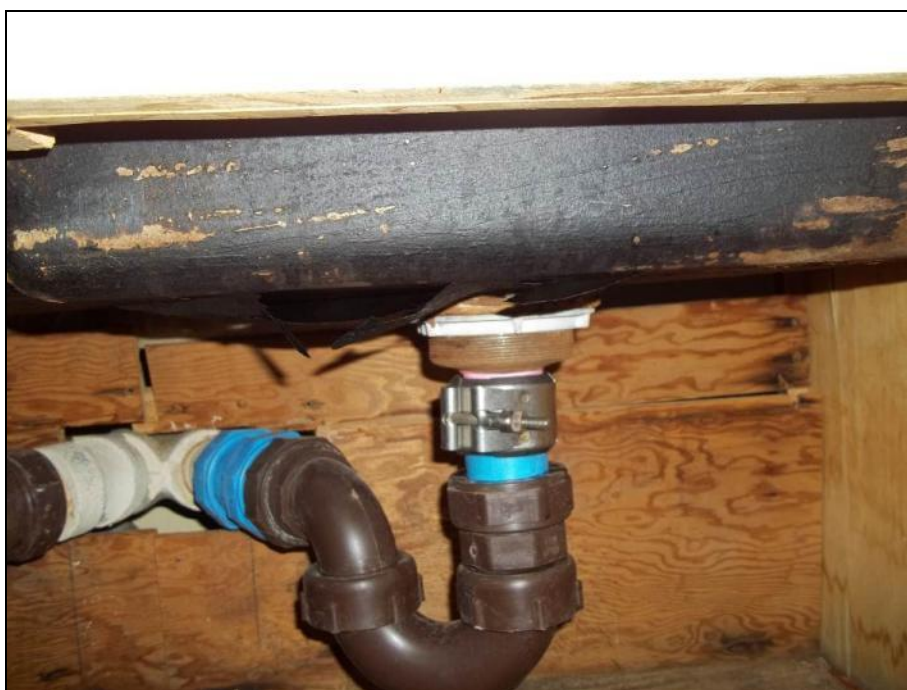
**Photograph 16: Room SN3125D. Asbestos containing fireproofing on I-Beam.  
Sample SN-95**



**Photograph 17: Room SN2109. Asbestos containing transite panels.  
Sample SN-105**



**Photograph 18: Room SN2109. Asbestos containing transite panels.  
Sample SN-105**



**Photograph 19: Room SN3114. Asbestos containing tar on lab sink.  
Sample SN-106**





**Photograph 20: Room SN4051. Asbestos containing pipe fitting insulation.  
Sample SN-128**



**Photograph 21: Room SN2048A. Asbestos containing pipe hanger insulation.  
Sample SN-130**



**Photograph 22: Room SN4100. Asbestos containing tar mastic on fiberglass pipe insulation.  
Sample SN-133**



**Photograph 23: Vestibule SN1V03. Asbestos containing pipe fitting insulation.  
Sample SN-02**



**Photograph 24: Hallway SN1C03. Asbestos containing 1' x 1' green vinyl floor tile. Sample SN-03**



**Photograph 25: Hallway SN 1C03. Asbestos containing 1' x 1' light green vinyl floor tile and mastic; and cream with brown. Samples SN-05 and SN-06.**



**Photograph 26: Hallway SN1C03. Asbestos containing tile associated with grey tile. Sample SN-07.**



**Photograph 27: Room SN1045C. Asbestos containing transite fume hood. Sample SN-12**





**Photograph 28: Room SN1030. Asbestos containing light fixture heat shield. Sample SN-27**



**Photograph 29: Hallway SN2C03. Asbestos containing tar on fiberglass insulated pipe.  
Sample SN-29**



**Photograph 30: Room SN3006B. Asbestos containing pipe fittings located above ceiling tile, in fair condition.**



**Photograph 31: Room SN3006C. Asbestos containing pipe fittings located within a cupboard, in poor condition.**



**Photograph 32: Room SN3023. Asbestos containing pipe fittings located within a cupboard, in poor condition**



**Photograph 33: Room SN4117. Asbestos containing rain water leader, in poor condition**





**Photograph 34: Room SN4002. Asbestos containing pipe fitting insulation, located within a wall hatch, in poor condition**



**Photograph 35: Room SN4020. Asbestos containing pipe fitting insulation, located within a cupboard, in poor condition**



**Photograph 36: Room SN4020. Asbestos containing pipe fitting insulation, located within a cupboard, in poor condition.**



**Photograph 37: Room SN3125D. Asbestos containing transite panels on the exterior wall, above ceiling tiles.**



**Photograph 38: Room SN2092. Asbestos containing pipe fitting, located within a cupboard, in poor condition.**



**Photograph 39: Room SN3119A. Asbestos containing transite cart, in poor condition**





**Photograph 40: Room SN3109. Asbestos containing pipe fittings, located within a cupboard in poor condition**



**Photograph 41: Room SN3112A. Asbestos containing pipe fittings, in poor condition**



**Photograph 42: Room SN1066. Asbestos containing pipe fittings, located in the ceiling space within an access hatch, in poor condition**



**Photograph 43: Room SN4098. Suspect asbestos containing transite autoclave.**





**Photograph 44: Room SN4090. Asbestos containing light fixture heat shield, in poor condition**



**Photograph 45: Room SN2048A. Asbestos containing pipe hanger insulation, in poor condition**



**Photograph 46: Room SN1030. Asbestos containing light fixture heat shield, in poor condition**



**Photograph 47: Hallway SN3C02. Asbestos containing pipe fitting, in poor condition**

**APPENDIX II**  
LABORATORY ASBESTOS RESULTS

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 786-5974 Email: [cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

Attn: **Carla Noseworthy**  
**All-Tech Environmental Services Limited**  
**151 Crosbie Road**  
**Suite 402**  
**St. John's, NL A1B 4B4**

Customer ID: ATE544D  
Customer PO:  
Received: 01/05/12 10:20 AM  
EMSL Order: 041200258

Fax:  
Project: **14610-D BLOCK**

Phone: (709) 754-4146

EMSL Proj:  
Analysis Date: 1/11/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-01 041200258-0001	SN1V03 - PLASTER (WHITE) CEILING	White Non-Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	<1% Chrysotile
SN-02 041200258-0002	SN1V03 - PIPE FITTING	Gray Fibrous Heterogeneous	15% Cellulose	50% Non-fibrous (other)	35% Chrysotile
SN-03 041200258-0003	SN1C03 - 1 X 1 VT OLIVE W/ CREAM & GREEN	Gray Non-Fibrous Homogeneous		94% Non-fibrous (other)	6% Chrysotile
SN-04 041200258-0004	SN1C03 - 1 X 1 VT LIGHT GREY W/ MED. GREY	Grayish Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-05 041200258-0005	SN1C03 - 1 X 1 VT LIGHT GREY W/ BROWN	Tan Non-Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
SN-05-Mastic 041200258-0005A	SN1C03 - 1 X 1 VT LIGHT GREY W/ BROWN	Black Non-Fibrous Homogeneous		92% Non-fibrous (other)	8% Chrysotile

Report Amended: 01/23/2012 17:49:04 Replaces the Initial Report 01/11/2012 13:00:43. Reason Code: QA/QC-Comment Change

## Analyst(s)

Adam Gart (26)  
Christine Hatter (35)

Nancy Stalter (4)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

EMSL maintains liability limited to the cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. This report must not be used by the client to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the federal government. The test results contained within this report meet the requirements of NELAC unless otherwise specified. Samples received in good condition unless otherwise noted. Estimated accuracy, precision and uncertainty data available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 786-5974 Email: [cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

Attn: **Carla Noseworthy**  
**All-Tech Environmental Services Limited**  
**151 Crosbie Road**  
**Suite 402**  
**St. John's, NL A1B 4B4**

Customer ID: ATE544D  
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Received: 01/05/12 10:20 AM  
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Fax:  
Project: **14610-D BLOCK**

Phone: (709) 754-4146

EMSL Proj:  
Analysis Date: 1/11/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-06 041200258-0006	SN1C03 - 1 X 1 VT CREAM W/ BROWN	Gray Non-Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
SN-06-Mastic 041200258-0006A	SN1C03 - 1 X 1 VT CREAM W/ BROWN	Brown/Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-07 041200258-0007	SN1C03 - 1 X 1 VT LIGHT GREY W/ BLACK	Cream Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-07-Mastic 041200258-0007A	SN1C03 - 1 X 1 VT LIGHT GREY W/ BLACK	Black Non-Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
SN-08 041200258-0008	SN1045 - VFS BROWN MIX	Tan/White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-09 041200258-0009	SN1045 - 2 X 2 CT PINHOLE FISSURE	Gray/White Fibrous Heterogeneous	45% Min. Wool 45% Cellulose	10% Non-fibrous (other)	None Detected

Report Amended: 01/23/2012 17:49:04 Replaces the Initial Report 01/11/2012 13:00:43. Reason Code: QA/QC-Comment Change

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Christine Hatter (35)

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**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 786-5974 Email: [cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

Attn: **Carla Noseworthy**  
**All-Tech Environmental Services Limited**  
**151 Crosbie Road**  
**Suite 402**  
**St. John's, NL A1B 4B4**

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Fax:  
Project: **14610-D BLOCK**

Phone: (709) 754-4146

EMSL Proj:  
Analysis Date: 1/11/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-10 041200258-0010	SN1045 - 2 X 2 CT PINHOLE	Gray/White Fibrous Heterogeneous	50% Cellulose 40% Min. Wool	10% Non-fibrous (other)	None Detected
SN-11 041200258-0011	SN1045 - 2 X 2 CT DOT PINHOLE	Gray/White Fibrous Heterogeneous	45% Cellulose 45% Min. Wool	10% Non-fibrous (other)	None Detected
SN-12 041200258-0012	SN1045C - FUMEHOOD TRANSITE	Gray Fibrous Heterogeneous		70% Non-fibrous (other)	30% Chrysotile
SN-13 041200258-0013	SN1045B - 2 X 2 CT PINHOLE FISSURE	Gray/White Fibrous Heterogeneous	35% Min. Wool 50% Cellulose	15% Non-fibrous (other)	None Detected
SN-14 041200258-0014	SN1039 - 1 X 1 VT LIGHT GREY W/ MED. GREY	Grayish Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-14-Mastic 041200258-0014A	SN1039 - 1 X 1 VT LIGHT GREY W/ MED. GREY	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Report Amended: 01/23/2012 17:49:04 Replaces the Initial Report 01/11/2012 13:00:43. Reason Code: QA/QC-Comment Change

## Analyst(s)

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Christine Hatter (35)

Nancy Stalter (4)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-15 041200258-0015	SN1046 - 2 X 2 CT PINHOLE FISSURE	Gray Fibrous Heterogeneous	45% Cellulose 30% Min. Wool	25% Non-fibrous (other)	None Detected
SN-16 041200258-0016	SN1047 - 12" X 12" VT LIGHT GREY W/ MED. GREY	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-16-Mastic 041200258-0016A	SN1047 - 12" X 12" VT LIGHT GREY W/ MED. GREY	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-17 041200258-0017	SN1C03 OUTSIDE SN1045 - PLASTER	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-18 041200258-0018	SN1C03 @ SN1045 - 2 X 4 CT HORIZONTAL PINHOLE FISSURE	Gray/Tan Fibrous Heterogeneous	40% Min. Wool 45% Cellulose	15% Non-fibrous (other)	None Detected

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-19 041200258-0019	SN1C03 @ SN1045 - 2 X 4 CT VERTICAL PINHOLE FISSURE	Gray/Tan Fibrous Heterogeneous	45% Min. Wool 45% Cellulose	10% Non-fibrous (other)	None Detected
SN-20 041200258-0020	SN1C03 @ SN1043 - CANVAS WRAP ON FIBERGLASS	Tan/Beige Fibrous Heterogeneous	60% Cellulose 30% Min. Wool	10% Non-fibrous (other)	None Detected
SN-21 041200258-0021	SN1042 - 12 X 12 VT BEIGE W/ LIGHT BROWN	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-21-Mastic 041200258-0021A	SN1042 - 12 X 12 VT BEIGE W/ LIGHT BROWN	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-22 041200258-0022	- 2 X 2 CT H. PH FISSURE	Gray Fibrous Heterogeneous	50% Min. Wool 35% Cellulose	15% Non-fibrous (other)	None Detected
SN-23-Skim Coat 041200258-0023	SN1C03 @ SN1038 - PLASTER	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	%	<u>Non-Asbestos</u>		<u>Asbestos</u>
				Fibrous	% Non-Fibrous	% Type
SN-23-Base Coat 041200258-0023A	SN1C03 @ SN1038 - PLASTER	Non-Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected
SN-24 041200258-0024	SN1034 - 12 X 12 VT LIGHT GREY W/ MED. GREY STRIPES	Gray Non-Fibrous Homogeneous			98% Non-fibrous (other)	2% Chrysotile
SN-25 041200258-0025	SN1034 - 2 X 2 CT PINHOLE SMALL FISSURE	Gray/White Fibrous Heterogeneous	35% Cellulose 35% Min. Wool		30% Non-fibrous (other)	None Detected
SN-26 041200258-0026	SN1031 - DRYWALL	White Non-Fibrous Heterogeneous	10% Cellulose		90% Non-fibrous (other)	None Detected
SN-26-Joint Compound 041200258-0026A	SN1031 - DRYWALL	Beige Non-Fibrous Homogeneous			100% Non-fibrous (other)	<1% Chrysotile
SN-27 041200258-0027	SN1030 - LIGHT FIXTURE HEAT SHIELD	Beige Fibrous Heterogeneous			50% Non-fibrous (other)	50% Chrysotile

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-28 041200258-0028	SN2044 - 12 X 12 VT LIGHT GREY W/ MED GREY	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-29 041200258-0029	SN2C03 - TAR ON FIBERGLASS PIPE	Black Non-Fibrous Homogeneous		80% Non-fibrous (other)	20% Chrysotile
SN-30 041200258-0030	SN2C03 - VSF- OCHRE MIX	Tan/Red/Green Fibrous Heterogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
SN-30-Mastic 041200258-0030A	SN2C03 - VSF- OCHRE MIX	Tan Non-Fibrous Homogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
SN-31 041200258-0031	SN2041 - VSF LIGHT BROWN MIX	Brown Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-31-Mastic 041200258-0031A	SN2041 - VSF LIGHT BROWN MIX	Brown/Tan Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-32 041200258-0032	SN2036 - VSF WOOD GRAIN	Orange Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-32-Mastic 041200258-0032A	SN2036 - VSF WOOD GRAIN	Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-33 041200258-0033	SN2036 - VSF GREY W/ PINK & GREEN	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-33-Mastic 041200258-0033A	SN2036 - VSF GREY W/ PINK & GREEN	Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-34-Skim Coat 041200258-0034	SN1C03 @ SN2028 - PLASTER	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-34-Rough Coat 041200258-0034A	SN1C03 @ SN2028 - PLASTER	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	%	<u>Non-Asbestos</u>		<u>Asbestos</u>
				Fibrous	% Non-Fibrous	% Type
SN-35 041200258-0035	SN3062 - VSF BLUE & WHITE MIX	White/Blue Non-Fibrous Homogeneous			100% Non-fibrous (other)	None Detected
SN-35-Mastic 041200258-0035A	SN3062 - VSF BLUE & WHITE MIX	Yellow Non-Fibrous Homogeneous			100% Non-fibrous (other)	None Detected
SN-36-Floor Tile 041200258-0036	SN3C04 @ SN3060 - 12 X 12 VT RED & BLACK	Red Non-Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected
Recommend TEM						
SN-36-Mastic 041200258-0036A	SN3C04 @ SN3060 - 12 X 12 VT RED & BLACK	Yellow Non-Fibrous Homogeneous			100% Non-fibrous (other)	None Detected
SN-37 041200258-0037	SN3059 - 2 X 2 CT PINHOLE FISSURE	Gray/White Fibrous Heterogeneous	40% 40%	Cellulose Min. Wool	20% Non-fibrous (other)	None Detected
SN-38 041200258-0038	SN3058 - VSF BLUE MIX	Blue Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>	
			% Fibrous	% Non-Fibrous	% Type	
SN-38-Mastic 041200258-0038A	SN3058 - VSF BLUE MIX	Yellow Non-Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)		None Detected
SN-39 041200258-0039	SN3042 - VSF GREY/ BEIGE MIX	White Non-Fibrous Homogeneous		100% Non-fibrous (other)		None Detected
SN-39-Mastic 041200258-0039A	SN3042 - VSF GREY/ BEIGE MIX	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)		None Detected
SN-40 041200258-0040	SN3042 - PLASTER	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)		None Detected
SN-41 041200258-0041	SN4047A - 12 X 12 VT BLUE MIX	Blue Non-Fibrous Homogeneous		100% Non-fibrous (other)		None Detected
SN-42 041200258-0042	SN4C04 - VSF BROWN MIX	Brown Non-Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (other)		None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-43-Floor Tile 041200258-0043	SN4039 - 12 X 12 VT PINK-GREY W/ WHITE	Gray/Pink Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-43-Mastic 041200258-0043A	SN4039 - 12 X 12 VT PINK-GREY W/ WHITE	Clear Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-44 041200258-0044	SN4022 - VSF GREY W/ GREEN	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-45 041200258-0045	SN4027 - VSF PINK SPECKLE	Various/Pink Non-Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
SN-45-Mastic 041200258-0045A	SN4027 - VSF PINK SPECKLE	Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-46 041200258-0046	SN4040 - DRYWALL JOINT COMPOUND	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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## Analyst(s)

Adam Gart (26)  
Christine Hatter (35)

Nancy Stalter (4)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 786-5974 Email: [cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

Attn: **Carla Noseworthy**  
**All-Tech Environmental Services Limited**  
**151 Crosbie Road**  
**Suite 402**  
**St. John's, NL A1B 4B4**

Customer ID: ATES44D  
Customer PO:  
Received: 01/30/12 8:40 AM  
EMSL Order: 041202246

Fax:  
Project: **14610 - Phase 1959**

Phone: (709) 754-4146

EMSL Proj:  
Analysis Date: 2/6/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
SN-47-Floor Tile 041202246-0001	SN1C04 - 12"x12" VFT, Light Brown w/ Dark Brown and Orange	Brown Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
SN-47-Mastic 041202246-0001A	SN1C04 - 12"x12" VFT, Light Brown w/ Dark Brown and Orange	Black Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
SN-48-Floor Tile 041202246-0002	SN1C04 - 12"x12" VFT, Beige w/ Light Brown and White	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-48-Mastic 041202246-0002A	SN1C04 - 12"x12" VFT, Beige w/ Light Brown and White	Black Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
SN-49 041202246-0003	SN1C04 - 2'x4' CT, Fissure	Gray Fibrous Homogeneous	35% Cellulose 35% Min. Wool	30% Non-fibrous (other)	None Detected
SN-50-Floor Tile 041202246-0004	SN1C04 - 12"x12" VFT, Grey w/ Black	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Initial report from 01/30/2012 16:10:57

Analyst(s)

Ted Young (39)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
SN-50-Mastic 041202246-0004A	SN1C04 - 12"x12" VFT, Grey w/ Black	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-51-Floor Tile 041202246-0005	SN1077 - 12"x12" VFT, Cream w/ Orange	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-51-Mastic 041202246-0005A	SN1077 - 12"x12" VFT, Cream w/ Orange	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-52-Floor Tile 041202246-0006	SN1074C - 9"x9" VFT, Brown w/ White	Tan Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
SN-52-Mastic 041202246-0006A	SN1074C - 9"x9" VFT, Brown w/ White	Black Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
SN-53-Flooring 041202246-0007	SN1074 - VSF, Cream Mix	Cream Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
SN-53-Mastic 041202246-0007A	SN1074 - VSF, Cream Mix	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-54-Floor Tile 041202246-0008	SN1076 - 12"x12" VFT, Grey Mix	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-54-Mastic 041202246-0008A	SN1076 - 12"x12" VFT, Grey Mix	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-55 041202246-0009	SN1076 - Textured Finish Ceiling	White Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
SN-56-Floor Tile 041202246-0010	SN1073 - 12"x12" VFT, Black	Black Fibrous Homogeneous		96% Non-fibrous (other)	4% Chrysotile
SN-56-Black Mastic 041202246-0010A	SN1073 - 12"x12" VFT, Black	Black Fibrous Homogeneous		100% Non-fibrous (other)	<1% Chrysotile

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600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
SN-56-Yellow Mastic 041202246-0010B	SN1073 - 12"x12" VFT, Black	Yellow Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-57 041202246-0011	SN1073 - Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-58 041202246-0012	SN1C04 - 2"x4' CT, Pinhole	Gray/White Fibrous Heterogeneous	35% Cellulose 35% Min. Wool	30% Non-fibrous (other)	None Detected
SN-59 041202246-0013	SN1070 - Plaster	Gray Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-60-Floor Tile 041202246-0014	SN1063A - 12"x12" VFT, Grey w/ Beige	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Recommend TEM analysis					
SN-60-Black Mastic 041202246-0014A	SN1063A - 12"x12" VFT, Grey w/ Beige	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	%	<u>Non-Asbestos</u>		<u>Asbestos</u>
				Fibrous	% Non-Fibrous	% Type
SN-60-Yellow Mastic 041202246-0014B	SN1063A - 12"x12" VFT, Grey w/ Beige	Yellow Non-Fibrous Homogeneous			100% Non-fibrous (other)	None Detected
SN-61 041202246-0015	SN1068 - Pipe Fitting Insulation	Gray Fibrous Homogeneous			82% Non-fibrous (other)	18% Chrysotile
SN-62 041202246-0016	SN1064 - Textured Finish Ceiling	White Fibrous Homogeneous			95% Non-fibrous (other)	5% Chrysotile
SN-63-Skim Coat 041202246-0017	SN1060 - Plaster	White Non-Fibrous Homogeneous			100% Non-fibrous (other)	None Detected
SN-63-Base Coat 041202246-0017A	SN1060 - Plaster	Gray Fibrous Homogeneous			100% Non-fibrous (other)	<1% Chrysotile
SN-64 041202246-0018	SN1060 - 2"x2' CT, Textured Fissure	Gray Fibrous Homogeneous	35% Cellulose 35% Min. Wool		30% Non-fibrous (other)	None Detected

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**St. John's, NL A1B 4B4**

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Phone: (709) 754-4146

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
SN-65-Skim Coat 041202246-0019	SN1058 - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-65-Base Coat 041202246-0019A	SN1058 - Plaster	Gray Fibrous Homogeneous		100% Non-fibrous (other)	<1% Chrysotile
SN-66-Floor Tile 041202246-0020	SN1052 - 12"x12" VFT, Grey w/ White	Gray Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
SN-66-Mastic 041202246-0020A	SN1052 - 12"x12" VFT, Grey w/ White	Black/Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-67-Floor Tile 041202246-0021	SN1050 - 12"x12" VFT, Dark Beige w/ Brown, White	Tan Fibrous Homogeneous		97% Non-fibrous (other)	3% Chrysotile
SN-67-Mastic 041202246-0021A	SN1050 - 12"x12" VFT, Dark Beige w/ Brown, White	Black Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile

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600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
SN-68 041202246-0022	SN1050 - 2"x2" CT, Pinhole/Fissure	Gray	35% Cellulose	30% Non-fibrous (other)	None Detected
		Fibrous	35% Min. Wool		
		Homogeneous			
SN-69 041202246-0023	SN1049 - Transite Fume Hood	Gray/White Fibrous Heterogeneous		85% Non-fibrous (other)	15% Chrysotile
SN-70 041202246-0024	SN1048 - Plaster (I-Beam)	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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EMSL Order: 041202245

Fax:  
Project: **14610 - Phase 1959**

Phone: (709) 754-4146

EMSL Proj:  
Analysis Date: 2/6/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	%	<u>Non-Asbestos</u>		<u>Asbestos</u>
				Fibrous	% Non-Fibrous	% Type
SN-71-Skim Coat 041202245-0001	SN1083 - Plaster	White Non-Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected
SN-71-Base Coat 041202245-0001A	SN1083 - Plaster	Gray Non-Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected
SN-72 041202245-0002	SN1091 - Textured Finish Ceiling	Gray Fibrous Heterogeneous			92% Non-fibrous (other)	8% Chrysotile
SN-73-Floor Tile 041202245-0003	SN1103 - 12"x12" VFT, Red w/ Brown	Red Fibrous Homogeneous			97% Non-fibrous (other)	3% Chrysotile
SN-73-Mastic 041202245-0003A	SN1103 - 12"x12" VFT, Red w/ Brown	Black Non-Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected
SN-74-Floor Tile 041202245-0004	SN1093 - 12"x12" VFT, Cream w/ Brown Stripes	White Non-Fibrous Homogeneous			98% Non-fibrous (other)	2% Chrysotile

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Sample	Description	Appearance	%	Non-Asbestos		Asbestos
				Fibrous	% Non-Fibrous	% Type
SN-74-Mastic 041202245-0004A	SN1093 - 12"x12" VFT, Cream w/ Brown Stripes	Black Fibrous Heterogeneous			98% Non-fibrous (other)	2% Chrysotile
SN-75 041202245-0005	SN1111 - Duct Parging	Gray Fibrous Heterogeneous			60% Non-fibrous (other)	40% Chrysotile
SN-76 041202245-0006	SN2C01 - Textured Ceiling	Gray Fibrous Heterogeneous			92% Non-fibrous (other)	8% Chrysotile
SN-77 041202245-0007	SN2104 - Drywall Joint Compound	Tan Non-Fibrous Heterogeneous			100% Non-fibrous (other)	None Detected
SN-78 041202245-0008	SN2C05 - VSF - Olive green w/ Pink, Grey, Cream	Tan Fibrous Heterogeneous	10%	Cellulose	90% Non-fibrous (other)	None Detected
SN-79 041202245-0009	SN2091 - Light Fixture Heat Shield	Gray Fibrous Heterogeneous			50% Non-fibrous (other)	50% Chrysotile

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**St. John's, NL A1B 4B4**

Customer ID: ATE544D  
Customer PO:  
Received: 01/30/12 8:40 AM  
EMSL Order: 041202245

Fax:  
Project: **14610 - Phase 1959**

Phone: (709) 754-4146

EMSL Proj:  
Analysis Date: 2/6/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-80 041202245-0010	SN2090 - Tar Wrap	Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-81 041202245-0011	SN2087 - Pipe Fitting	Gray Fibrous Heterogeneous		40% Non-fibrous (other)	60% Chrysotile
SN-82-Linoleum 041202245-0012	SN2087 - VSF - Light Brown Mix	Brown Fibrous Heterogeneous	15% Cellulose	85% Non-fibrous (other)	None Detected
SN-82-Mastic 041202245-0012A	SN2087 - VSF - Light Brown Mix	Brown Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-83-Floor Tile 041202245-0013	SN2088 - 1'x1' VFT - Cream w/ Light Brown	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-83-Mastic 041202245-0013A	SN2088 - 1'x1' VFT - Cream w/ Light Brown	Brown/Black Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected

Initial report from 01/30/2012 16:10:57

Analyst(s)

Johnny Yu (31)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone: (800) 220-3675 Fax: (856) 786-5974 Email: [cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

Attn: **Carla Noseworthy**  
**All-Tech Environmental Services Limited**  
**151 Crosbie Road**  
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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-84 041202245-0014	SN2085 - Duct Wrap	White Fibrous Heterogeneous	60% Cellulose	40% Non-fibrous (other)	None Detected
SN-85 041202245-0015	SN2085 - Debris on Duct	Tan Fibrous Heterogeneous		90% Non-fibrous (other)	10% Chrysotile
SN-86 041202245-0016	SN2085 - Plaster	Tan Fibrous Heterogeneous		90% Non-fibrous (other)	10% Chrysotile
SN-87 - Linoleum 041202245-0017	SN2098 - VSF - Green Mix	Gray/Green Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
SN-87-Mastic 041202245-0017A	SN2098 - VSF - Green Mix	Yellow Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-88 041202245-0018	SN2098 - 2"x2" CT - Large Pinhole/Fissure	Tan Fibrous Heterogeneous	45% Cellulose 45% Min. Wool	10% Non-fibrous (other)	None Detected

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Analysis Date: 2/6/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-89 041202245-0019	SN3107 - Transite	Gray Fibrous Heterogeneous		92% Non-fibrous (other)	8% Chrysotile
SN-90 041202245-0020	SN3C06 - VSF - Black, Brown, Cream Mix	Brown Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-91-Skim Coat 041202245-0021	SN3105 - Plaster/Drywall	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-91-Base Coat 041202245-0021A	SN3105 - Plaster/Drywall	Tan Fibrous Heterogeneous		98% Non-fibrous (other)	2% Chrysotile
SN-92 041202245-0022	SN1112 - VSF - Grey, White Mix	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-93 041202245-0023	SN1008 - 2x2 CT - Pinhole	Tan Fibrous Heterogeneous	45% Cellulose 45% Min. Wool	10% Non-fibrous (other)	None Detected

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200 Route 130 North, Cinnaminson, NJ 08077

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-94 041202245-0024	SN2025 - 2x4 CT - Large Pinhole	Tan Fibrous Heterogeneous	50% Min. Wool 40% Cellulose	10% Non-fibrous (other)	None Detected

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Analysis Date: 2/6/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN95 041202244-0001	SN3125D - Trowelled Fireproofing	Brown Fibrous Homogeneous		60% Non-fibrous (other)	40% Amosite
SN96 041202244-0002	SN3125D - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN97 041202244-0003	SN3125D - 1x1 VT - Light Grey w/ Medium Grey and White	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
There is no mastic on this sample					
SN98 041202244-0004	SN3126 - Texture Ceiling	White Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
SN99 041202244-0005	SN3003 - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN100 041202244-0006	SN3000 - 2x2 CT - Pinhole/Fissure	Gray Fibrous Homogeneous	35% Cellulose 35% Min. Wool	30% Non-fibrous (other)	None Detected

Initial report from 01/30/2012 16:10:57

Analyst(s)

Ted Young (21)

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**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

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**St. John's, NL A1B 4B4**

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Project: 14610 - Phase 1959

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EMSL Proj:  
Analysis Date: 2/6/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	<u>Non-Asbestos</u>		<u>Asbestos</u>
			% Fibrous	% Non-Fibrous	% Type
SN101 041202244-0007	SN4117 - Tar on Uninsulated RWL	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN102-Skim Coat 041202244-0008	SN4003 - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN102-Base Coat 041202244-0008A	SN4003 - Plaster	White Fibrous Homogeneous		98% Non-fibrous (other)	2% Chrysotile
SN103 041202244-0009	SN4000 - 2x4 Ceiling Tile Pinhole	Gray Fibrous Homogeneous	35% Cellulose 35% Min. Wool	30% Non-fibrous (other)	None Detected
SN104-Flooring 041202244-0010	SN4000 - VSF, Beige w/ White and Tan	Beige Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN104-Mastic 041202244-0010A	SN4000 - VSF, Beige w/ White and Tan	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Initial report from 01/30/2012 16:10:57

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200 Route 130 North, Cinnaminson, NJ 08077

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**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN105 041202244-0011	SN2109 - Transire Panel	Gray/White Fibrous Heterogeneous		85% Non-fibrous (other)	15% Chrysotile
SN106 041202244-0012	SN3114 - Tar on Sink	Black Fibrous Homogeneous		95% Non-fibrous (other)	5% Chrysotile
SN107 041202244-0013	SN1107B - Drywall Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN108 041202244-0014	SN1107B - Tar on Fibreglass Duct	Black Fibrous Homogeneous	20% Cellulose	80% Non-fibrous (other)	None Detected
SN109 041202244-0015	SN1107B - 2'x4' Ceiling Tile Plain	Gray Fibrous Homogeneous	35% Cellulose 35% Min. Wool	30% Non-fibrous (other)	None Detected
SN110 041202244-0016	SN1000 - 1'x1' Vinyl Floor Tile, Light Grey w/ Med Grey	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Recommend TEM analysis

Initial report from 01/30/2012 16:10:57

Analyst(s)

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200 Route 130 North, Cinnaminson, NJ 08077

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EMSL Proj:  
Analysis Date: 2/6/2012

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA  
600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN111 041202244-0017	SN2011 - VSF - Tan w/ Brown, Orange	Brown Fibrous Heterogeneous	1% Cellulose	99% Non-fibrous (other)	None Detected
SN112 041202244-0018	SN4015 - VSF - Blue	Brown/Blue Fibrous Heterogeneous	10% Cellulose	90% Non-fibrous (other)	None Detected
SN113 041202244-0019	SN5115 - Parging on Duct Wrap	Gray Fibrous Heterogeneous		90% Non-fibrous (other)	10% Chrysotile

Initial report from 01/30/2012 16:10:57

Analyst(s)

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Phone/Fax: (800) 220-3675 / (856) 786-5974

<http://www.emsl.com>[cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

EMSL Order: 041202950

CustomerID: ATES44D

CustomerPO:

ProjectID:

Attn: **Carla Noseworthy**  
**All-Tech Environmental Services Limited**  
**151 Crosbie Road**  
**Suite 402**  
**St. John's, NL A1B 4B4**

Phone: (709) 754-4146  
Fax:  
Received: 02/07/12 9:20 AM  
Analysis Date: 2/8/2012  
Collected: 2/3/2012

Project: 14610 - Phase 1970

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-114 041202950-0001	SN4113 - VSF - Blue Grey/Light Grey	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-115 041202950-0002	SN4113 - 2'x2' Ceiling Tile, Textured Pinhole/Fissure	Gray/White Fibrous Heterogeneous	35% Cellulose 35% Min. Wool	30% Non-fibrous (other)	None Detected
SN-116 041202950-0003	SN4C06 - VSF - Mustard Mix	Yellow/Orange Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
SN-117 041202950-0004	SN4C06 - VSF - Cream Mix	White Non-Fibrous Heterogeneous		100% Non-fibrous (other)	None Detected
SN-118-Floor Tile 041202950-0005	SN4103 - 1'x1' VFT, Grey w/ Black	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-118-Mastic 041202950-0005A	SN4103 - 1'x1' VFT, Grey w/ Black	Black Fibrous Homogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected
SN-119 041202950-0006	SN094 - VSF - Brown w/ Pink, Cream	Brown/Gray/Pink Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected

Analyst(s)

Ted Young (29)

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Initial report from 02/08/2012 12:40:45



**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (800) 220-3675 / (856) 786-5974

<http://www.emsl.com>[cinnaslab@EMSL.com](mailto:cinnaslab@EMSL.com)

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**151 Crosbie Road**  
**Suite 402**  
**St. John's, NL A1B 4B4**

Phone: (709) 754-4146  
Fax:  
Received: 02/07/12 9:20 AM  
Analysis Date: 2/8/2012  
Collected: 2/3/2012

Project: 14610 - Phase 1970

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-120 041202950-0007	SN4S04 - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Skim coat only present in this sample					
SN-121-Skim Coat 041202950-0008	SN4092 - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-121-Base Coat 041202950-0008A	SN4092 - Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-122-Floor Tile 041202950-0009	SN4096 - 1'x1' VFT, Light Grey w/ Med Grey	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-122-Mastic 041202950-0009A	SN4096 - 1'x1' VFT, Light Grey w/ Med Grey	Black Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-123 041202950-0010	SN4C05 - 2'x4' Ceiling Tile, Pinhole/Large Fissure	Gray/White Fibrous Heterogeneous	35% Cellulose 35% Min. Wool	30% Non-fibrous (other)	None Detected
SN-124-Joint Compound 041202950-0011A	SN4C05 - Joint Compound	Cream Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

Analyst(s)

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Initial report from 02/08/2012 12:40:45

**EMSL Analytical, Inc.**

200 Route 130 North, Cinnaminson, NJ 08077

Phone/Fax: (800) 220-3675 / (856) 786-5974

<http://www.emsl.com>[cinnasblab@EMSL.com](mailto:cinnasblab@EMSL.com)

EMSL Order: 041202950

CustomerID: ATES44D

CustomerPO:

ProjectID:

Attn: **Carla Noseworthy**  
**All-Tech Environmental Services Limited**  
**151 Crosbie Road**  
**Suite 402**  
**St. John's, NL A1B 4B4**

Phone: (709) 754-4146  
Fax:  
Received: 02/07/12 9:20 AM  
Analysis Date: 2/8/2012  
Collected: 2/3/2012

Project: 14610 - Phase 1970

**Test Report: Asbestos Analysis of Bulk Materials via EPA 600/R-93/116 and/or EPA 600/M4-82-020 Method(s) using Polarized Light Microscopy**

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-125-Skim Coat 041202950-0012	SN3C05 - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-125-Base Coat 041202950-0012A	SN3C05 - Plaster	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-126-Joint Compound 041202950-0013A	SN3C05 - Joint Compound	Cream Fibrous Homogeneous		100% Non-fibrous (other)	<1% Chrysotile
SN-127 041202950-0014	SN4C06 - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Only skim coat present in this sample					
SN-128 041202950-0015	SN4051 - Pipe Fitting Insulation	Gray Fibrous Homogeneous		80% Non-fibrous (other)	20% Chrysotile
SN-129-Joint Compound 041202950-0016A	SN2048A - Joint Compound	Cream Fibrous Homogeneous		100% Non-fibrous (other)	<1% Chrysotile
SN-130 041202950-0017	SN2048A - Pipe Hanger Insulation	Gray Fibrous Heterogeneous		80% Non-fibrous (other)	20% Chrysotile

Analyst(s)

Ted Young (29)

Stephen Siegel, CIH, Laboratory Manager  
or other approved signatory

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Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NVLAP Lab Code 101048-0, AIHA-LAP, LLC-IHLAP Lab 100194, NYS ELAP 10872, NJ DEP 03036

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-131 041202950-0018	SN2048A - Drywall Joint Compound	Cream Fibrous Homogeneous		100% Non-fibrous (other)	<1% Chrysotile
SN-132 041202950-0019	SN4018 - Drywall Joint Compound	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
SN-133 041202950-0020	SN4100 - Tar Mastic	Black Fibrous Heterogeneous		95% Non-fibrous (other)	5% Chrysotile
SN-134 041202950-0021	SN4090 - Light Fixture Heat Shield	Gray/Silver Fibrous Heterogeneous		50% Non-fibrous (other)	50% Chrysotile
SN-135 041202950-0022	SN3070 - VSF - Tan/Brown Mix	White/Pink Fibrous Heterogeneous	2% Cellulose	98% Non-fibrous (other)	None Detected
SN-136 041202950-0023	SN3101 - Plaster	White Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected
Skim coat only present in this sample					
SN-137 041202950-0024	NS2057 - VSF - Rose Mix	Gray/Rose Fibrous Heterogeneous	5% Cellulose	95% Non-fibrous (other)	None Detected

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Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
SN-138 041202950-0025	SN2071 - VSF - Cream w/ Blue	Gray Non-Fibrous Homogeneous		100% Non-fibrous (other)	None Detected

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**APPENDIX III**  
**ASBESTOS BUILDING SURVEY INFORMATION**

**Table 4.0**  
**Locations of Identified Asbestos Containing Materials**  
**Science Building – A Block, 1<sup>st</sup> – 3<sup>rd</sup> Floors B Block, 1<sup>st</sup> Floor C Block**  
**(Constructed 1959)**  
**Memorial University of Newfoundland**  
**St. John's, NL**

Room Location	Sample Description	Quantity	Condition	Photograph
<ul style="list-style-type: none"> <li>any plaster throughout the 1959 construction era must be considered to be asbestos containing</li> <li>any tar on pipes, ducts or sinks throughout the 1959 construction era must be considered to be asbestos containing</li> <li>some rooms contained access hatches in the ceilings – some of which may not be accessible</li> <li>asbestos containing fireproofing is located throughout the above-ceiling space in the first floor hallways of A and B Blocks,</li> </ul> <p>asbestos containing fireproofing is located above the ceiling tiles on the exterior walls of 2<sup>nd</sup>, 3<sup>rd</sup>, Floors B Block, 3<sup>rd</sup>, 4<sup>th</sup> Floors A Block</p>				
Hallway SN1C01	Fireproofing – above ceiling tile on walls	~1200 ft <sup>2</sup>	Good	
	9" x 9" Vinyl Floor Tile, Brown with white	~1200 ft <sup>2</sup>		
Hallway SN1C02	9" x 9" Vinyl Floor Tile, Brown with white	~1200 ft <sup>2</sup>	Good	
Hallway SN1C04	Pipe Fitting	~15	Good	
	1' x 1' Vinyl Floor Tile – light brown with dark brown and orange	~1200 ft <sup>2</sup>	Fair	
	1' x 1' Vinyl Floor Tile, beige with light brown and white - MASTIC	~ 50 ft <sup>2</sup>	Good	
Hallway SN1C05	Pipe Fitting	~20	Good	
Hallway SN1C08	Pipe Fitting	9	Good	
Stairway 1S03	Textured Finish Ceiling	~100 ft <sup>2</sup>	Good	
SN1000	Textured Finish Ceiling	~500 ft <sup>2</sup>	Good	
SN1003	Textured Finish Ceiling	~500 ft <sup>2</sup>	Good	
SN1006 / 1006A,B	*new renovation			
SN1008	Pipe Fitting	10	Fair	
SN1011	9" x 9" Vinyl Floor Tile, Brown with white	~150 ft <sup>2</sup>	Good	
SN1015	9" x 9" Vinyl Floor Tile, Brown with white	~170 ft <sup>2</sup>	Good	
SN1022	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN1027	Pipe Fitting	3	Good	
	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>		



Room Location	Sample Description	Quantity	Condition	Photograph
SN1029	9" x 9" Vinyl Floor Tile, Brown with white	~10 ft²	Good	
SN1029A	9" x 9" Vinyl Floor Tile, Brown with white	~10 ft²	Good	
SN1048	1' x 1' Vinyl Floor Tile, dark beige with brown, white	~300 ft²	Good	
	Pipe Fitting (limited viewing above ceiling)	2		
SN1049	1' x 1' Vinyl Floor Tile, dark beige with brown, white	~480 ft²	Good	
	Transite Fume hood	1		
SN1049A	1' x 1' Vinyl Floor Tile, dark beige with brown, white	~140 ft²	Good	
SN1050	1' x 1' Vinyl Floor Tile, dark beige with brown, white	~580 ft²	Good	
	Pipe Fitting	2		
SN1050A	1' x 1' Vinyl Floor Tile, dark beige with brown, white	~160 ft²	Good	
SN1050B	1' x 1' Vinyl Floor Tile, dark beige with brown, white	~80 ft²	Good	
SN1051	1' x 1' Vinyl Floor Tile, light brown with dark brown and orange	~700 ft²	Good	
	Pipe Fitting	5		
SN1052	Pipe Fitting	2	Good	
	1' x 1' Vinyl Floor Tile, light brown with dark brown and orange	~170 ft²		
	1' x 1' Vinyl Floor Tile, grey with white - MASTIC			
SN1053	Pipe Fitting Insulation	2	Good	
SN1056	1' x1' Vinyl Floor Tile – light brown with dark brown and orange	~130 ft²	Fair	
SN1058	Textured Finish Ceiling (above ceiling tile)	~170 ft²	Poor	
SN1059	Textured Finish Ceiling	~170 ft²	Good	
SN1061	Textured Finish Ceiling	~170 ft²	Good	
SN1062	Textured Finish Ceiling	~170 ft²	Good	
SN1063A	Textured Finish Ceiling	~320 ft²	Good	
SN1064	Textured Finish Ceiling	~200 ft²	Good	
SN1066	Pipe Fitting Insulation	3	Poor	42
SN1067	9" x 9" Vinyl Floor Tile, Brown with white	~130 ft²	Good	
SN1068	Pipe Fitting Insulation	1	Good	
SN1069A	Textured Finish Ceiling	~225 ft²	Good	
SN1070A,1070B, 1070C	Textured Finish Ceiling	~170 ft²	Good	
	9" x 9" Vinyl Floor Tile, Brown with white	~30 ft²		

Room Location	Sample Description	Quantity	Condition	Photograph
SN1071	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
	1' x 1' Vinyl Floor Tile, Black			
SN1072	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN1073	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN1074C	9" x 9" Vinyl Floor Tile, Brown with white	~ 160 ft <sup>2</sup>	Good	
SN1075	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN1076	Textured Finish Ceiling	~136 ft <sup>2</sup>	Good	
SN1082	Textured Finish Ceiling	~170 ft <sup>2</sup>		
	9" x 9" Vinyl Floor Tile, Brown with white	~170 ft <sup>2</sup>		
SN1083	Textured Finish Ceiling	~75 ft <sup>2</sup>	Good	
	9" x 9" Vinyl Floor Tile, Brown with white	~75 ft <sup>2</sup>		
SN1083B	Textured Finish Ceiling	~300 ft <sup>2</sup>	Good	
	9" x 9" Vinyl Floor Tile, Brown with white	~300 ft <sup>2</sup>		
SN1083C	Textured Finish Ceiling	~250 ft <sup>2</sup>	Good	
	9" x 9" Vinyl Floor Tile, Brown with white	~250 ft <sup>2</sup>		
	Transite Fume Hood	1		
SN1084	9" x 9" Vinyl Floor Tile, Brown with white	~135 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~135 ft <sup>2</sup>		
SN1085	Textured Finish Ceiling	~135 ft <sup>2</sup>	Good	
SN1086	9" x 9" Vinyl Floor Tile, Brown with white	~125 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~125 ft <sup>2</sup>		
SN1087	9" x 9" Vinyl Floor Tile, Brown with white	~850 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~850 ft <sup>2</sup>		
SN1088	9" x 9" Vinyl Floor Tile, Brown with white	~150 ft <sup>2</sup>	Good	
SN1089	9" x 9" Vinyl Floor Tile, Brown with white	~150 ft <sup>2</sup>	Good	
	1' x1' Vinyl Floor Tile, cream with brown stripes	~150 ft <sup>2</sup>		
	Textured Finish Ceiling	~150 ft <sup>2</sup>		
SN1090	9" x 9" Vinyl Floor Tile, Brown with white	~125 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~125 ft <sup>2</sup>		

Room Location	Sample Description	Quantity	Condition	Photograph
SN1091	9" x 9" Vinyl Floor Tile, Brown with white	~850 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~850 ft <sup>2</sup>		
SN1093	9" x 9" Vinyl Floor Tile, Brown with white	~150 ft <sup>2</sup>	Good	
	1' x 1' Vinyl Floor Tile, cream with brown stripes	~50 ft <sup>2</sup>		
	Textured Finish Ceiling	~150 ft <sup>2</sup>		
SN1094	9" x 9" Vinyl Floor Tile, Brown with white	~100 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~100 ft <sup>2</sup>		
SN1095	9" x 9" Vinyl Floor Tile, Brown with white	~100 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~100 ft <sup>2</sup>		
SN1096	9" x 9" Vinyl Floor Tile, Brown with white	~1000 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~1000 ft <sup>2</sup>		
SN1096B	9" x 9" Vinyl Floor Tile, Brown with white	~100 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~100 ft <sup>2</sup>		
SN1097	9" x 9" Vinyl Floor Tile, Brown with white	~100 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~100 ft <sup>2</sup>		
SN1098	9" x 9" Vinyl Floor Tile, Brown with white	~100 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~100 ft <sup>2</sup>		
SN1099	9" x 9" Vinyl Floor Tile, Brown with white	~100 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~100 ft <sup>2</sup>		
SN1100	9" x 9" Vinyl Floor Tile, Brown with white	~100 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~100 ft <sup>2</sup>		
SN1101	9" x 9" Vinyl Floor Tile, Brown with white	~150 ft <sup>2</sup>	Good	
	Textured Finish Ceiling	~150 ft <sup>2</sup>		
SN1102	Textured Finish Ceiling	~135 ft <sup>2</sup>	Good	
SN1103	1' x 1' Vinyl Floor Tile, Red with brown	~500 ft <sup>2</sup>	Good	
SN1106	Pipe Fitting (within pipe chase, limited viewing)	12	Good	
		1	Poor	
SN1107A	1' x 1' Vinyl Floor Tile, Red with brown	~170 ft <sup>2</sup>	Good	
SN1107B	Tar on Fibreglass Duct	~ 200 ft <sup>2</sup>	Good	
SN1111	Pipe Fitting	~40	Good	
	Duct Parging	~ 15 ft <sup>2</sup>	Poor	

Room Location	Sample Description	Quantity	Condition	Photograph
SN1111A	Pipe Fitting	~35	Good	
Hallway SN2C01	Textured Finish Ceiling	~1200 ft <sup>2</sup>	Good	
Hallway SN2C02	Textured Finish Ceiling	~1200 ft <sup>2</sup>	Good	
SN2001	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2002	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2006	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN2007	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN2008	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2009	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2012	Textured Finish Ceiling	~300 ft <sup>2</sup>	Good	
SN2012A	Textured Finish Ceiling	~300 ft <sup>2</sup>	Good	
SN2015	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2016	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2016A	Textured Finish Ceiling	~100 ft <sup>2</sup>	Good	
SN2016C	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2016D	Textured Finish Ceiling	~120 ft <sup>2</sup>	Good	
SN2016E	Textured Finish Ceiling	~120 ft <sup>2</sup>	Good	
SN2016F	Textured Finish Ceiling	~120 ft <sup>2</sup>	Good	
SN2016 G	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN2016H	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN2018	Textured Finish Ceiling	~800 ft <sup>2</sup>	Good	
SN2021	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2022	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2025	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN2026	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN2085	Parging Debris on Duct	--	Poor	
SN2086	Textured Finish Ceiling	~150 ft <sup>2</sup>	Fair	
SN2087	Textured Finish Ceiling	~800 ft <sup>2</sup>	Good	
	Pipe Fitting (limited access to hatches)	1	Poor	
SN2088	Textured Finish Ceiling	~300 ft <sup>2</sup>	Good	
SN2089	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN2089A	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN2090A	Textured Finish Ceiling	~100 ft <sup>2</sup>	Good	
SN2091	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
	Light Fixture Heat Shield	2	Fair	
SN2092	Textured Finish Ceiling	~400 ft <sup>2</sup>	Good	
	Pipe Fitting	2	Fair	
	Pipe Fitting	3	Poor	38
	Transite Fume Hood	1	Good	
SN2093	Textured Finish Ceiling	~400 ft <sup>2</sup>	Good	
SN2094	Textured Finish Ceiling	~800 ft <sup>2</sup>	Good	
SN2095	Textured Finish Ceiling	~800 ft <sup>2</sup>	Good	
SN2096	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	

Room Location	Sample Description	Quantity	Condition	Photograph
SN2097	Textured Finish Ceiling	~250 ft <sup>2</sup>	Good	
SN2098	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN2099	Textured Finish Ceiling	~250 ft <sup>2</sup>	Good	
SN2100	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN2102	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2106	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN2109	Textured Finish Ceiling	~400 ft <sup>2</sup>	Good	
	Transite Panels	~250 ft <sup>2</sup>		
Hallway SN3C01	Textured Finish Ceiling	~1200 ft <sup>2</sup>	Good	
Hallway SN3C02	Textured Finish Ceiling	~1200 ft <sup>2</sup>	Good	
	Pipe Fitting	9	Good	
		1	Poor	47
Hallway SN3C06	Pipe Fitting	~ 16	Good	
SN3000	Pipe Fitting	4	Good	
	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>		
SN3002	Pipe Fitting	6	Good	
SN3003	Pipe Fitting	2	Good	
		2	Fair	
SN3006A	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3006B	Pipe Fitting	4	Good	30
		1	Fair	
	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3006C	Transite Fume Hood	1	Good	
	Pipe Fitting	1	Good	31
		1	Poor	
	Light Fixture Heat Shield	1	Fair	
SN3007	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3007B	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3009	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN3010	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
	Pipe Fitting	10	Fair	
SN3010A	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3012	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	

Room Location	Sample Description	Quantity	Condition	Photograph
SN3013	Textured Finish Ceiling	~100 ft <sup>2</sup>	Good	
SN3015	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3016	Textured Finish Ceiling	~300 ft <sup>2</sup>	Good	
SN3017	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN3020	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN3021	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3022	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN3023	Textured Finish Ceiling	~500 ft <sup>2</sup>	Good	
	Pipe Fitting	2	Poor	32
	Transite Fume Hood	1	Good	
SN3024	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN3025	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3026	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN3027	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN3030	Pipe Fitting	1	Good	
	Transite Fume Hood	1		
SN3030A	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN3104	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
	Pipe Fitting	15		
SN3106	Pipe Fitting	2	Good	
	Tar Mastic on Fibreglass pipe	6 lf		
SN3107	Transite on Counter	--	Good	
SN3109	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
	Pipe Fitting	1	Poor	40
SN3110	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3112A	Pipe Fitting	2	Poor	41
SN3113	Pipe Fitting	5 + debris	Poor	
SN3114	<i>*Vinyl Sheet Flooring – grey mix</i>	~500 ft <sup>2</sup>	Good	
	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
	Pipe Fitting	2	Fair	
	Tar Paper on Sinks	--	Good	
SN3114A	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3118	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	



Room Location	Sample Description	Quantity	Condition	Photograph
SN3119	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3119A	Transite 2-level Cart observed in this location	--	Poor	39
SN3120	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3121	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3125	Transite panels along exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>		
SN3125A	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN3125C	Transite panels along exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>		
SN3125D	Transite panels along exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	37
	Sprayed Fireproofing on I-Beam, above ceiling tile	~200 ft <sup>2</sup>	Good	
	Pipe Fitting	1	Poor	
SN3126	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN31256A	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN3126B	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN3126C	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
Hallway SN4C01	Textured Finish Ceiling	~1200 ft <sup>2</sup>	Good	
Hallway SN4C02	Textured Finish Ceiling	~1200 ft <sup>2</sup>	Good	
SN4000	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN4000B	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN4001	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN4000C	Textured Finish Ceiling	~100 ft <sup>2</sup>	Good	
SN4000D	Textured Finish Ceiling	~75 ft <sup>2</sup>	Good	
SN4001A	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN4002	Pipe Fitting	2	Poor	34
		1	Good	
SN4006	Textured Finish Ceiling	~300 ft <sup>2</sup>	Good	
SN4009	Textured Finish Ceiling	~500 ft <sup>2</sup>	Good	
SN4010	Textured Finish Ceiling	~160 ft <sup>2</sup>	Good	
SN4011	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
	Pipe Fitting	2	Poor	
	Transite Desk near the Fume hood	--	Good	
SN4012	Textured Finish Ceiling	~800 ft <sup>2</sup>	Good	
SN4013	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	

Room Location	Sample Description	Quantity	Condition	Photograph
SN4014	Textured Finish Ceiling	~400 ft <sup>2</sup>	Good	
	*Vinyl Sheet Flooring – blue mix	~400 ft <sup>2</sup>		
SN4014A	Textured Finish Ceiling	~100 ft <sup>2</sup>	Good	
SN4014B	Textured Finish Ceiling	~100 ft <sup>2</sup>	Good	
SN4017	Textured Finish Ceiling	~160 ft <sup>2</sup>	Good	
	Transite Fume Hood	1		
SN4019	Textured Finish Ceiling	~800 ft <sup>2</sup>	Good	
SN4020	Pipe Fitting	6	Good	35, 36
		2	Poor	
	Rain Water Leader	1	Good	
	Transite Fume Hood and Counters	--	Good	
	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN4020A	Textured Finish Ceiling	~170 ft <sup>2</sup>	Good	
SN4112	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN4114	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN4116	Textured Finish Ceiling	~200 ft <sup>2</sup>	Good	
SN4116A	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN4116B	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN4116 D	Textured Finish Ceiling	~150 ft <sup>2</sup>	Good	
SN4116E	Textured Finish Ceiling	~250 ft <sup>2</sup>	Good	
SN4116F	Textured Finish Ceiling	~250 ft <sup>2</sup>	Good	
SN4116G	Textured Finish Ceiling	~575 ft <sup>2</sup>	Good	
SN4117	Rain Water Leader + Fitting / Tar	1	Poor	33
	Sprayed Fireproofing exterior wall, above ceiling tile	~200 ft <sup>2</sup>	Good	
SN5115	Pipe Fitting	~ 30	Good	
	Parging on Duct Wrap	--	Fair	

\*unable to collect sample, assume as asbestos containing material unproven otherwise

**Table 5.0**  
**Locations of Identified Asbestos Containing Materials**  
**Science Building – 4<sup>th</sup> Floor B Block, 2<sup>nd</sup> – 4<sup>th</sup> Floor C Block**  
**(Constructed 1970)**  
**Memorial University of Newfoundland**  
**St. John's, NL**

Room Location	Sample Description	Quantity	Condition	Photograph
<ul style="list-style-type: none"> <li>any tar on pipes, ducts or sinks throughout the 1970 construction era must be considered to be asbestos containing</li> <li>some rooms contained access hatches in the ceilings – some of which may not be accessible</li> </ul>				
Hallway SN2C04	Pipe Fitting Insulation	~ 20	Good	
Hallway SN3C05	Pipe Fitting Insulation	2	Good	
Hallway SN4C06	limited viewing above ceiling due to large air duct. Potential for pipe fitting insulation	--		
SN2048/A	Pipe Fitting Insulation (fittings + hangers)	~250	Good	
		~ 10	Poor	45
SN2049	Pipe Fitting Insulation	12	Good	
SN2049A	Pipe Fitting Insulation	10	Good	
SN2050C	Pipe Fitting Insulation	2	Good	
SN2053	Pipe Fitting Insulation	2	Good	
SN2054	Pipe Fitting Insulation	4	Good	
SN2055	Pipe Fitting Insulation	4	Good	
SN2056	Pipe Fitting Insulation	4	Good	
SN2057C	Pipe Fitting Insulation	4	Good	
SN2058C	Pipe Fitting Insulation	6	Good	
SN2063	Pipe Fitting Insulation	6	Good	
SN2065	Pipe Fitting Insulation	7	Good	
SN2067	Pipe Fitting Insulation	4	Good	
SN2068	Pipe Fitting Insulation	6	Good	
SN2069	Pipe Fitting Insulation	6	Good	
SN2072	Pipe Fitting Insulation	4	Good	
SN2073	Pipe Fitting Insulation	4	Good	
SN2074	Pipe Fitting Insulation	4	Good	

Room Location	Sample Description	Quantity	Condition	Photograph
SN2082	Pipe Fitting Insulation	4	Good	
SN2083	Light Fixture Heat Shield	1	Fair	
	Tar on Pipe	--	Good	
SN2084	Light Fixture Heat Shield	1	Good	
SN3065	Pipe Fitting Insulation	4	Good	
SN3066F	Pipe Fitting Insulation	4	Good	
SN3069	Pipe Fitting Insulation	1	Good	
SN3070	Pipe Fitting Insulation	2	Good	
SN3072	Pipe Fitting Insulation	2	Good	
SN3073	Pipe Fitting Insulation	2	Good	
SN3074	Pipe Fitting Insulation	2	Good	
SN3075A	Light Fixture Heat Shields	3	Fair	
SN3075B	Pipe Fitting Insulation	2	Good	
SN3076	Pipe Fitting Insulation	2	Good	
SN3080	Pipe Fitting Insulation	2	Good	
SN3082	Pipe Fitting Insulation	2	Good	
SN3083	Pipe Fitting Insulation	2	Good	
SN3085	Pipe Fitting Insulation	2	Good	
SN3087	Pipe Fitting Insulation	2	Good	
SN3089	Pipe Fitting Insulation	2	Good	
SN3092C	Pipe Fitting Insulation	2	Good	
SN3092E	Pipe Fitting Insulation	2	Good	
SN3101	Pipe Fitting Insulation	4	Good	
		1	Poor	
SN4051	Pipe Fitting Insulation	~10	Good	
SN4053K	Tar on Rain Water Leader	--	Good	

Room Location	Sample Description	Quantity	Condition	Photograph
SN4068	Tar on Rain Water Leader	--	Good	
SN4088	Light Fixture Heat Shield	1	Poor	
SN4090	Light Fixture Heat Shield	1	Poor	44
SN4098	Transite Autoclave	1	Good	43
SN4100	Tar Mastic on Fibreglass insulated pipe	~ 5 lf	Good	

**Table 6.0**  
**Locations of Identified Asbestos Containing Materials**  
**Science Building - D Block (Constructed 1971)**  
**Memorial University of Newfoundland**  
**St. John's, NL**

Room Location	Sample Description	Quantity	Condition	Photograph
<ul style="list-style-type: none"> <li>any tar on pipes, ducts or sinks throughout the 1971 construction era must be considered to be asbestos containing</li> <li>some rooms contained access hatches in the ceilings – some of which may not be accessible</li> </ul>				
Vestibule SN1V03	Pipe Fitting	2	Good	
		6	Poor	
Hallway SN1C03	1' x 1' Vinyl Floor Tile – olive green with white	~1200 ft <sup>2</sup>	Good	
	1' x 1' Vinyl Floor Tile – light green	~16 ft <sup>2</sup>	Good	
	1' x 1' Vinyl Floor Tile – cream with brown	~12 ft <sup>2</sup>	Good	
	1' x 1' Vinyl Floor Tile mastic – light grey with black	~15 ft <sup>2</sup>	Good	
Hallway SN1C03, near Room SN1045	Pipe Fitting Insulation	4	Good	
Hallway SN1C03, near Room SN1038	Pipe Fitting Insulation	2	Good	
Hallway SN1C03, near Room SN1032	Pipe Fitting Insulation	~10	Good	
SN1030	Pipe Fitting Insulation	~ 7	Good	
	Light Fixture Heat Shield	1	Poor	46
SN1031	1' x 1' Vinyl Floor Tile – light grey with medium grey, stripes	~ 385 ft <sup>2</sup>	Good	
	1' x 1' Vinyl Floor Tile mastic – light grey with black	~ 20 ft <sup>2</sup>	Good	
	Pipe Fitting Insulation	~ 15	Fair	
SN1032 (unable to open access hatch)	Light Fixture Heat Shield	1	Fair	
SN1033	Pipe Fitting Insulation	6	Good	
		2	Poor	
SN1034	Pipe Fitting Insulation	~ 10	Good	
	1' x 1' Vinyl Floor Tile – light grey with medium grey, stripes	~ 180 ft <sup>2</sup>		
SN1036	Pipe Fitting Insulation	~ 5	Good	
SN1037	Pipe Fitting Insulation	~10	Good	



Room Location	Sample Description	Quantity	Condition	Photograph
	<i>* 1' x 1' Vinyl Floor Tile – medium grey with white</i>	~ 180 ft <sup>2</sup>		
SN1038	Pipe Fitting Insulation	~10	Good	
	<i>* 1' x 1' Vinyl Floor Tile – medium grey with white</i>	~ 700 ft <sup>2</sup>	Good	
SN1039	1' x 1' Vinyl Floor Tile mastic – light grey with black	~70 ft <sup>2</sup>	Good	
	Pipe Fitting Insulation	~ 15	Good	
SN1040	Pipe Fitting Insulation	~10	Good	
SN1041	Pipe Fitting Insulation	~10	Good	
SN1042	Pipe Fitting Insulation	~10	Good	
SN1043	Pipe Fitting Insulation	3	Good	
SN1044	Pipe Fitting Insulation	5	Good	
SN1045	Pipe Fitting	3	Good	
		2	Poor	
SN1045A – C	Transite Fumehood	1	Good	
SN1046	Pipe Fitting Insulation	6	Good	
SN2C03 near Room SN2043	**Tar on Fiberglass pipe	--	Good	
Hallway SN2C03 near Room SN2029	Pipe Fitting Insulation	1	Good	
SN2029	Pipe Fitting Insulation	8	Good	
SN2032	Pipe Fitting Insulation	2	Good	
	<i>* 1' x 1' Vinyl Floor Tile – medium grey with white</i>	~ 180 ft <sup>2</sup>		
SN2033	Pipe Fitting Insulation	~8	Good	
SN2034	Pipe Fitting Insulation	2	Good	
SN2035	Pipe Fitting Insulation	2	Good	
SN2036	Pipe Fitting Insulation	~10	Good	
SN2037	Pipe Fitting Insulation	3	Good	

Room Location	Sample Description	Quantity	Condition	Photograph
SN2038	Pipe Fitting Insulation	3	Good	
SN2039	Pipe Fitting Insulation	2	Good	
SN2040	Pipe Fitting Insulation	3	Good	
SN2041	Pipe Fitting Insulation	~ 15	Good	
SN2042	Pipe Fitting Insulation	2	Good	
SN2043	Pipe Fitting Insulation	3	Good	
SN2044	* 1' x 1' Vinyl Floor Tile – medium grey with white	~ 180 ft <sup>2</sup>	Good	
	Pipe Fitting Insulation	3	Good	
SN2045	Pipe Fitting Insulation	3	Good	
SN2046	1' x 1' Vinyl Floor Tile mastic – light grey with black	~ 180 ft <sup>2</sup>	Good	
	Pipe Fitting Insulation	2		
SN2047	Pipe Fitting Insulation	3	Good	
Hallway SN3C04	1' x 1' Vinyl Floor Tile – olive green with white	~1200 ft <sup>2</sup>	Good	
Hallway SN3C04 near Room SN3058	1' x 1' Vinyl Floor Tile – olive green with white	~1200 ft <sup>2</sup>	Good	
	* 1' x 1' Vinyl Floor Tile – grey	~20 ft <sup>2</sup>		
SN3035	Pipe Fitting Insulation	6	Good	
	Light Fixture Heat Shield	1		
SN3036	Pipe Fitting Insulation	4	Good	
SN3037	Light Fixture Heat Shield	1	Good	
SN3038	Pipe Fitting Insulation	4	Good	
SN3039	Pipe Fitting Insulation	4	Good	
SN3041	Pipe Fitting Insulation	2	Good	
SN3042	Pipe Fitting Insulation	~15	Good	
SN3043	1' x 1' Vinyl Floor Tile – cream with brown	~160 ft <sup>2</sup>	Good	
	Pipe Fitting Insulation	4		
SN3044	Pipe Fitting Insulation	4	Good	
SN3046	Pipe Fitting Insulation	3	Good	
SN3047	Pipe Fitting Insulation	3	Good	
	1' x 1' Vinyl Floor Tile mastic – light grey with black	~ 160 ft <sup>2</sup>		
SN3050B-E	Pipe Fitting Insulation	16	Good	

Room Location	Sample Description	Quantity	Condition	Photograph
SN3051	Pipe Fitting Insulation	4	Good	
SN3052	Pipe Fitting Insulation	4	Good	
SN3053	Pipe Fitting Insulation	3	Good	
SN3055	<i>*Vinyl Sheet Flooring – creamy brown</i>	~ 160 ft <sup>2</sup>	Good	
	Pipe Fitting Insulation	4		
SN3056	Pipe Fitting Insulation	4	Good	
	<i>*Vinyl Sheet Flooring – creamy brown</i>	~ 160 ft <sup>2</sup>		
SN3057	Pipe Fitting Insulation	3	Good	
SN3058	Pipe Fitting Insulation	~15	Good	
SN3060	Pipe Fitting Insulation	6	Good	
SN3061 / SN3061B	1' x 1' Vinyl Floor Tile mastic – light grey with black	~ 60 ft <sup>2</sup>	Good	
SN3061C	Pipe Fitting Insulation	5	Good	
SN3062	Pipe Fitting Insulation	~ 5	Good	
Hallway SN4C04 near Room SN4046	<i>* 1' x 1' Vinyl Floor Tile – light brown / medium brown stripes</i>	~10 ft <sup>2</sup>	Good	
SN4041	1' x 1' Vinyl Floor Tile mastic – light grey with black	~ 160 ft <sup>2</sup>	Good	
SN4045	1' x 1' Vinyl Floor Tile mastic – light grey with black	~ 160 ft <sup>2</sup>	Good	
SN4047A-C	1' x 1' Vinyl Floor Tile mastic – light grey with black	~ 300 ft <sup>2</sup>	Good	

*\*unable to collect sample, assume as asbestos containing material unproven otherwise*

**APPENDIX IV**  
**PRIORITY 1 ASBESTOS CONTAINING MATERIALS**

**Table 7.0**  
**Locations of Identified Priority 1 Asbestos Containing Materials**  
**Science Building**  
**Memorial University of Newfoundland**  
**St. John's, NL**

Room Location	Sample Description	Quantity	Condition
Hallway SN1C04	1' x 1' Vinyl Floor Tile	~1200 ft <sup>2</sup>	Fair
Vestibule SN1V03	Pipe Fitting Insulation	6	Poor
SN1008	Pipe Fitting Insulation	10	Fair
SN1030	Light Fixture Heat Shield	1	Poor
SN1031	Pipe Fitting Insulation	~ 15	Fair
SN1032	Light Fixture Heat Shield	1	Fair
SN1033	Pipe Fitting Insulation	2	Poor
SN1045	Pipe Fitting Insulation	2	Poor
SN1056	1' x 1' Vinyl Floor Tile	~130 ft <sup>2</sup>	Fair
SN1066	Pipe Fitting Insulation	3	Poor
SN1106	Pipe Fitting Insulation (within pipe chase)	1	Poor
SN1111	Duct Insulation (seams)	~ 15 ft <sup>2</sup>	Poor
SN2048A	Pipe Fitting Insulation (fittings + hangers)	~ 10	Poor
SN2083	Light Fixture Heat Shield	1	Poor
SN2085	Parging Debris on Duct	--	Poor
SN2086	Textured Ceiling	~ 150 ft <sup>2</sup>	Fair
SN2087	Pipe Fitting Insulation (limited access to hatches)	1	Poor
SN2091	Light Fixture Heat Shield	1	Poor
SN2092	Pipe Fitting Insulation	2	Fair
Hallway SN3C02	Pipe Fitting Insulation	1	Poor
SN3003	Pipe Fitting Insulation	2	Fair

Room Location	Sample Description	Quantity	Condition
SN3006B	Pipe Fitting Insulation	1	Fair
SN3006C	Pipe Fitting Insulation	1	Poor
	Light Fixture Heat Shield	1	Fair
SN3010	Pipe Fitting Insulation	10	Fair
SN3023	Pipe Fitting Insulation	2	Poor
SN3075A	Light Fixture Heat Shields	3	Fair
SN3101	Pipe Fitting Insulation	1	Poor
SN3109	Pipe Fitting Insulation	1	Poor
SN3112A	Pipe Fitting Insulation	2	Poor
SN3113	Pipe Fitting Insulation	5 + debris	Poor
SN3114	Pipe Fitting Insulation	2	Fair
SN3119A	Transite 2-level Cart observed	--	Poor
SN3125D	Pipe Fitting Insulation	1	Poor
SN4002	Pipe Fitting Insulation	2	Poor
SN4011	Pipe Fitting Insulation	2	Poor
SN4020	Pipe Fitting	2	Poor
SN4088	Light Fixture Heat Shield	1	Poor
SN4090	Light Fixture Heat Shield	1	Poor
SN4117	Rain Water Leader + Fitting / Tar	1	Poor
SN5115	Parging on Duct Wrap	--	Fair



**APPENDIX V**  
**FLOOR PLANS**

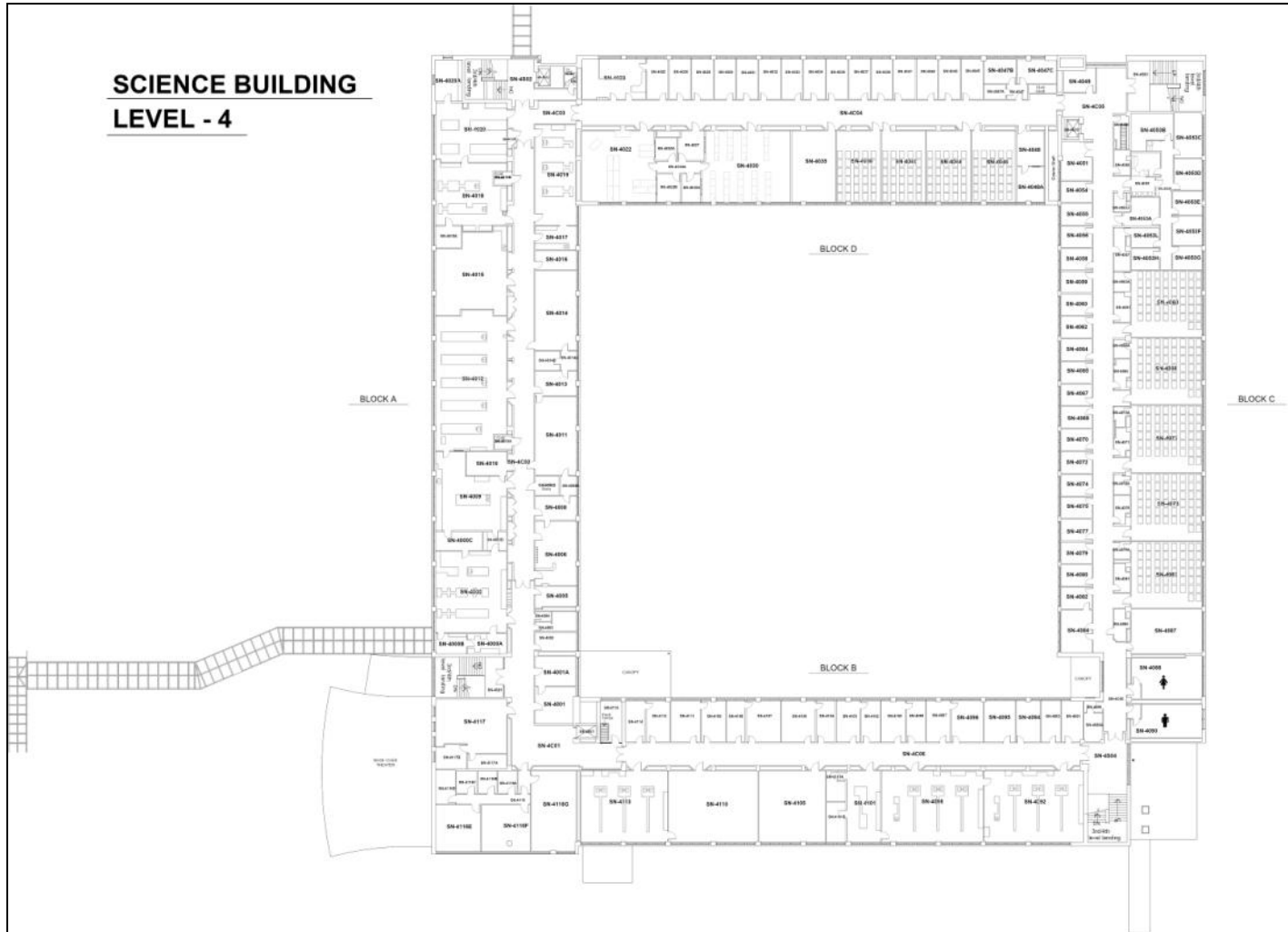
# SCIENCE BUILDING LEVEL - 1

# SCIENCE BUILDING

## LEVEL - 2

# SCIENCE BUILDING LEVEL - 3

**SCIENCE BUILDING**  
**LEVEL - 4**



**SCIENCE BUILDING**  
**LEVEL - 5 - Penthouse**

BLOCK - A

BLOCK - B

BLOCK - C

BLOCK - D

DN-001A

DN-002

DN-003

DN-011A

DN-011B

DN-011C

DN-011D

DN-011E

DN-011F

DN-011G

DN-011H

DN-011I

DN-011J

DN-011K

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**APPENDIX VI**  
**LIST OF INACCESSIBLE ROOMS**

## First Floor

SN1002	SN1083A
SN1004	SN1083D
SN1008C	SN1092
SN1008D	SN1104A
SN1008E	SN1104B
sn1009	SN1104C
SN1010	SN1109
SN1012	SN1110
SN1012A	SN1112
SN1012B	SN0C01
SN1016	
SN1016A	
SN1017	
SN1018	
SN1019	
SN1020	
SN1021	
SN1023	
SN1024	
SN1025	
SN1025A	
SN1026	
SN1027A	
SN1028	
SN1029A	
SN1029B	
SN1035	
SN1048A	
SN1050C	
SN1051A	
SN1054B	
SN1054C	
SN1063B	
SN1068	
SN1069B	
SN1069C	
SN1070A	
SN1074A	
SN1074B	
SN1077A	
SN1078	
SN1079	
SN1079A	
SN1081	

## SECOND Floor

SN2000	SN2110
SN2004	
SN2010	
SN2013	
SN2014	
SN2017	
SN2019	
SN2020	
SN2023	
SN2024	
SN2025A	
SN2026A	
SN2028	
SN2030	
SN2031	
SN2041	
SN2050A	
SN2050B	
SN2051	
SN2052	
SN2057F	
SN2062	
SN2064	
SN2064A	
SN2066	
SN2067A	
SN2069	
SN2070	
SN2071A	
SN2074	
SN2075	
SN2076	
SN2077	
SN2078	
SN2081	
SN2090B	
SN2102	
SN2104A	
SN2107	
SN2107A	
SN2109D	
SN2109E	
SN2109F	

### THIRD Floor

SN3004	SN3108
SN3011	SN3108A
SN3014	SN3109A
SN3027	SN3116
SN3028	SN3116A
SN3032	SN3119B
SN3032A	SN3124
SN3048	
SN3049	
SN3063	
SN3068	
SN3071	
SN3071A	
SN3077	
SN3079	
SN3081	
SN3081A	
SN3081B	
SN3081C	
SN3081D	
SN3084	
SN3086A	
SN3086B	
SN3086C	
SN3086D	
SN3086E	
SN3088	
SN3088A	
SN3090	
SN3091	
SN3092A	
SN3092B	
SN3092D	
SN3092F	
SN3093	
SN3094	
SN3095	
SN3095A	
SN3096	
SN3098	
SN3100	
SN3102	
SN3103	

## FOURTH Floor

SN4008	SN4105
SN4008A	SN4107
SN4008B	SN4108
SN4016	SN4109
SN4018A	SN4111
SN4022A	SN4115

SN4049

SN4052

### MECHANICAL ROOMS

SN4056

SN4057

SN5115A

SN4060

SN5021A

SN4061

SN5050

SN4062

SN4063

SN4064

SN4065

SN4066

SN4067

SN4068A

SN4069

SN4070

SN4071

SN4072

SN4073A

SN4074

SN4075

SN4076

SN4077

SN4078

SN4078A

SN4079

SN4079A

SN4080

SN4082

SN4083

SN4084

SN4089

SN4089A

SN4091

SN4093

SN4101A

SN4101B

SN4102