

# **ASBESTOS BUILDING MATERIALS SURVEY**

# 208 Elizabeth Avenue, St. John's Newfoundland and Labrador



Prepared for:

Arts & Administration Building Memorial University of Newfoundland 208 Elizabeth Avenue St. John's Campus, NL A1B 2V2

> Attention: Ms. Sheila Miller April 12, 2012

Pinchin File No. 02-02-00782

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27 AUSTIN STREET, 2<sup>ND</sup> FLOOR, ST. JOHN'S, NEWFOUNDLAND, A1B 4C3 TEL: (709) 754-4490 FAX: (709) 754-1359 ROTHESAY, NB • DARTMOUTH, NS • LABRADOR CITY, NL • CORNER BROOK, NL

ISO 9001:2008 Registered Quality System (Dartmouth, NS)

#### **EXECUTIVE SUMMARY**

#### **INTRODUCTION**

Under the Newfoundland and Labrador Asbestos Abatement Regulations 111/98 and upon request of Occupational Health and Safety Division, Memorial University is undertaking completing Asbestos Building Material Surveys on all building build prior to 1990. The Department of Health and Safety has compiled a report for the Arts and Administration building which has taken into account the condition, composition, accessibility and potential for damage or deterioration of asbestos containing material. Pinchin LeBlanc Environmental Limited (Pinchin) aided in the translation of the field notes and the summary of the findings.

#### **BUILDING DESCRIPTION**

The Arts and Administration Building was constructed in 1962 and since construction, the building has under gone several renovations throughout the years in different areas of the building. An addition was made to the building in 1992, commonly referred to as the Annex. This section was not included in this survey based on the age of construction. The original construction consists of a four level structure, concrete foundation, brick exterior with a pitch and gravel roof. The building is equipped with constant volume with ducted supply and return system. Interior finishes mainly consist of vinyl floor tile, vinyl sheet flooring with carpet coverings in areas and terrazzo flooring; walls are a mixture of hard wall plaster, drywall and cinder block with a suspended ceiling system or a fixed ceiling with a texture coat.

Asbestos-containing building materials were identified in the Site Building including:

- i. Spray applied fireproofing;
- ii. Parging cement on mechanical equipment;
- iii. Vinyl floor tiles,
- iv. Textured finish on ceilings,
- v. Hard wall plaster
- vi. Ceiling tiles and ceiling tile mastic; and
- vii. (Transite) cement board products.

This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.

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#### 1.0 INTRODUCTION

Memorial University of Newfoundland, Department of Health and Safety retained Pinchin LeBlanc Environmental Limited (Pinchin) to compile data from past assessments and produce a summary report of the building located at 208 Elizabeth Avenue. John's, Newfoundland and Labrador (hereafter referred to as the "Site Building").

The Site Building was constructed in 1962 and since construction the building has under gone several renovations throughout the years in different areas of the building. An addition was made to the building in 1992, referred to as the Annex. This section was not included in this survey based on the age of construction. The original construction consists of a four level structure, concrete foundation, brick exterior with a pitch and gravel roof. The building is equipped with constant volume ducted supply and return system. Interior finishes mainly consist of vinyl floor tile, vinyl sheet flooring with carpet coverings in areas and terrazzo flooring; walls are a mixture of hard wall plaster, drywall and cinder block with a suspended ceiling system or a fixed ceiling with a texture coat.

#### 2.0 SURVEY AND ASSESSMENT CRITERIA

#### 2.1 Scope

The most recent assessment was conducted by Susan Knight, with the Department of Health and Safety, Memorial University during the months of August and September 2010. Susan's notes identify all accessible areas were assessed to determine the location, condition and quantity of asbestos containing material. Recommendations were made as to ensure compliance with the Newfoundland and Labrador Asbestos Abatement Regulations 111/98 regarding the repair, removal, containment and disposal for any materials identified as asbestos containing. The information completed by the surveyor was presented to Pinchin LeBlanc Environmental Limited to produce a compiled summary of the findings.

#### 2.2 Survey Methodology

Areas of the building that were accessible by MUN staff and previous environmental assessors were labeled on field survey sheets. Materials identified in the survey included ceiling and wall finishes, various types of flooring, mechanical insulations, hard board products and adhesive products in the building. This report was completed in conjunction with the use of past surveys and reference samples collected during those surveys and, in addition, various bulk samples that have been collected over the past 5 years. Surveys referenced included "Memorial University of Newfoundland Asbestos Hazard Assessment, Arts and Administration Building Asbestos Product Survey" prepared by Pinchin Leblanc Environmental, Oct 1995; as well as the All Tech

Environmental report titled "Asbestos Assessment, Arts and Administration Building" submitted in 2008.

# 2.3 Sampling Methodology

Past Sampling included both friable and non friable bulk suspect asbestos containing material (ACM).

Samples were submitted by MUN staff to the Pinchin Environmental Laboratory in Mississauga, Ontario for analysis. Analytical methods followed EPA 600/R-93/116 – Method for the Determination of Asbestos in Bulk Building Materials Dated July 1993.

Samples collected by ALL-Tech were transported to IATL laboratories in Mount Laurel, New Jersey for Polarized Light Microscopy/Dispersion Staining (PLM/DS) analysis.

# 3.0 ASBESTOS-CONTAINING MATERIALS (ACM)

The information provided included both friable and non-friable asbestos-containing materials as well as suspect asbestos-containing building materials. The term *friable* is applied to a material that can be readily reduced to dust or powder by hand or moderate pressure (i.e. pipe insulation). Asbestos materials that are considered friable have a much greater potential to release airborne asbestos fibres when disturbed. All provincial regulations regarding asbestos materials distinguish between friable and non-friable materials when assigning appropriate work practices.

# 3.1 Regulatory Requirements

Each province has issued regulations or guidelines for control of work around ACMs and for the packaging and disposal of asbestos waste. These regulations and guidelines are enforceable under the Newfoundland & Labrador Occupational Health and Safety Act. These are:

- Asbestos Abatement Regulation (111/98) made under the Newfoundland and Labrador Occupational Health and Safety Act.
- Department of Environment and Conservation Policy Directive: GD-PPD-03 Asbestos Waste Disposal
- Occupational Health and Safety Regulation 70/09: Part VI Occupational Health Requirements Asbestos
- Newfoundland and Labrador Guidance Document for Low Risk Asbestos Abatement Procedures
- Newfoundland and Labrador Guidance Document for Moderate Risk Asbestos Abatement Procedures

#### 3.2 Survey Exclusions

It should be noted that destructive testing was not conducted during MUN's survey to determine concealed conditions. There will be areas in the building that are suspect to contain asbestos containing material, i.e., behind washroom facilities walls/ceiling, inaccessible/unidentified shafts, cavities, pipe chases and such that were not accessed. Additional care should be taken to during renovations/demolition in areas suspected to have concealed asbestos containing materials to ensure these materials are not disturbed.

In addition, the building has undergone several renovations throughout the years. Due to multiple renovations over time, asbestos containing materials may have been hidden behind newly constructed walls and ceilings, and such areas were inaccessible during the survey. Should any suspect materials be uncovered during further renovations or alterations, the materials should be analyzed to confirm the presence or absence of asbestos.

A number of asbestos containing materials were not included in this survey however have the potential to contain asbestos, such as: materials other than normal building fabric, materials in laboratories or special purpose facilities and building materials that cannot be reasonably and safely assessed without assistance including electrical equipment (components or wiring), mechanical packing, ropes and gaskets, fire door cores, window calking, roofing materials, paper products used under flooring, or exterior siding, and brick, mortar or grout.

#### **3.3** Evaluation of Condition

The condition of any ACM found was evaluated as well as the potential for disturbance of the ACM. These evaluation criteria were based on the conclusions of published studies, particularly the "Royal Commission on Matters of Health and Safety Arising from the Use of Asbestos in Ontario", existing Newfoundland and Labrador regulation, and our experience involving buildings that contain ACM.

#### Friable Materials

The evaluation of the condition of friable materials such as mechanical insulations utilizes the following criteria:

- GOOD Material is completely covered and exhibits no evidence of damage or deterioration. No material is exposed. Includes conditions where the covering has minor damage (i.e., scuffs or stains), but the jacketing is not penetrated.
- FAIR Minor penetrating damage to covering (cuts, tears, nicks, deterioration or delamination), or undamaged insulation that had never been jacketed. Insulation is exposed but not showing surface disintegration. The extent of missing insulation ranges from minor to none. Damage can be repaired.
- POOR Original material cover is missing, damaged, deteriorated or delaminated. Material is exposed and significant areas have been dislodged. Damage cannot be readily.

The evaluation of mechanical insulation may be limited by the number of observations made and building components such as ducts or bulkheads that obstruct observations. It is not possible to observe each foot of mechanical insulation from all angles. Persons working in proximity to mechanical insulation or entering ceilings with mechanical insulation are advised to be watchful of ACM DEBRIS regardless of the reported condition.

#### Spray Applied Fireproofing, Insulation and Texture Finishes

To evaluate the condition of ACM spray applied as fireproofing, non-mechanical thermal insulation, or texture, decorative or acoustic finishes, the following criteria is applied:

- GOOD Surface of material shows no significant signs of damage, deterioration or delaminating. Up to 1% visible damage to surface is allowed within range of GOOD. Evaluation of sprayed fireproofing requires the surveyor to be familiar with the irregular surface texture typical of fireproofing as installed. GOOD condition includes un-encapsulated or unpainted fireproofing or texture finishes, where no delaminating or damage is observed, and encapsulated fireproofing or texture finishes where the encapsulation has been applied after the damage or fallout occurred.
- POOR Sprayed materials show signs of damage, delaminating or deterioration. More than 1% damage to surface of ACM spray.

In observation areas where damage exists, in isolated locations, both GOOD and POOR condition may be applicable. FAIR condition is not utilized in the evaluation of the fireproofing, non-mechanical insulation, or texture coat finishes.

The evaluation of ACM spray applied as fireproofing, non-mechanical thermal insulation, or texture, decorative or acoustic finishes which are present above ceilings, may be limited by the number of observations made, and by building components such as ducts or full height bulkheads that obstruct the above ceiling observations. Persons entering the ceiling are advised to be watchful for ACM DEBRIS prior to accessing or working above ceilings in areas of buildings with ACM regardless of the reported condition.

# Non-friable and Potentially Friable Materials

The condition of non-friable ACM, such as plaster finishes containing asbestos and manufactured products such as acoustic ceiling tiles and asbestos cement products (Transite), all of which have the potential to become friable when handled are evaluated as follows:

- GOOD No significant damage. Material may be cracked or broken but is stable and not likely to become friable upon casual contact.
- POOR Material is severely damaged. Loose DEBRIS is present or binder has disintegrated to the point where contact will cause the material to become friable.

The evaluation of the condition of non-friable and potentially friable materials does not utilize a FAIR condition rating.

The priority for remedial action is based not only on the evaluation of condition but is also based on several other factors which include:

- Accessibility or potential for direct contact and disturbance which can cause release of asbestos to the air;
- Practicality of repair (for example, will damage to the ACM continue even if it is repaired); and
- Efficiency of the work (for example, if damaged ACM is being removed in an area, it may be most practical to remove all ACM in the area even if it is in GOOD condition).

# 3.4 Analytical Methods

Bulk samples were analyzed using a combination of dispersion staining and polarized light microscopy. The analytical method follows the U.S. EPA Method 600/R-93/116 dated July 1993. This method of analysis is also identified in the NL Asbestos Regulation 111/98. In Section 9 of the regulation, it states, "A competent laboratory would use polarized-light

microscopy, be able to report the percentage range as well as the type of asbestos in the material and have demonstrated competence in the analysis of asbestos". A discrepancy lies within Regulation 111/98, as the method stated for identification of asbestos within the Regulation is PLM. This method uses a reported result for asbestos by volume; however, the Regulation defines an asbestos material as a material with an asbestos composition greater than 1% by weight. As a result of this discrepancy, for reporting purposes, Pinchin will follow the reporting unit set by the PLM method where an ACM is reported with a percent by volume rather than by weight. Therefore Pinchin will use a definition of an ACM as materials having an asbestos content of greater than 1% asbestos content by volume.

### 3.5 Summary of Asbestos Sample Results

The following is a summary of all the analytical results provided.

Sample Number	Sample Location	Sample Description	Result
AA-1018-001-19- 08-10	AA-1018 Mechanical Room (Loc 001)	Plaster ceiling	1-5% Chrysotile <0.1% Actinolite/Tremolite
AA-1018-002-19- 08-10	AA-1018 Mechanical Room (Loc 001)	Plaster wall (31)	<0.01% Chrysotile
AA-1023A-001- 19-08-10	AA-1023A Cashier Office (Loc 004)	Remnant plaster debris	<0.1% Actinolite/Tremolite
AA-1023A-002- 19-08-10	AA-1023A Cashier Office (Loc 004)	Texture ceiling	5-10% Chrysotile
AA-1025A-001- 24-08-10	AA-1025A Vault (Loc 007)	Plaster Wall (1)	1-5% Chrysotile
AA-1026A-001- 24-08-10	AA-1026A Office (Loc 009)	Plaster wall/skim coat	None Detected
AA-1020-002-27- 08-10	AA-1020 Receiving Doors (Loc 030)	Tar paper - duct work	None Detected
AA-1013-001-27- 08-10	AA-1013 Theater Storage (Loc 042)	Tar paper - straight run piping	None Detected
AA-1013G-001- 27-08-10	AA-1013G Mechanical Room (Loc 049)	Expansion joint cloth	25-50% Chrysotile
AA-1C01-001-31- 08-10	AA-1C01 Corridor (Loc 080)	Plaster material on wire mesh	<0.1% Chrysotile <0.1% Actinolite/Tremolite
AA-1007A-001- 31-08-10	AA-1007A Office (Loc 075)	2' x 2' Acoustic ceiling tile pinhole w fissure	None Detected
AA-2013-001-08- 09-10	AA-2013 Male washroom (Loc 105)	2' x 2' Acoustic ceiling tile pinhole	None Detected

Sample Number	Sample Location	Sample Description	Result
AA-2015A-001- 22-09-10	AA-2015A Reid Theater	Old theater curtain	None Detected
AA-3006-001-09-	AA-3006 Office	Plaster wall/skim	<0.1% Chrysotile
09-10	(Loc 151)	coat	<0.1% Chrysotile
AA-4017-001-23-	AA-4017 Mechanical	Plaster wall/skim	<0.1% Chrysotile
09-10	Room (Loc 279)	coat	<0.1% Chrysotile
AA-4017-002-23- 09-10	AA-4017 Mechanical Room (Loc 279)	Unidentified material (debris under air handling unit)	10-25% Chrysotile
AA-001/AA-016	AA-1000A/1038	9" x 9" Tan floor tile	4.8-7.6% Chrysotile
AA-028	AA-1C06	12" x 12" Green floor tile	None Detected
AA-026	AA-1039	12" x 12" Tan floor tile	1.8% Chrysotile
AA-010	AA-1001A	Floor tile, white top layer	None Detected
AA-011	AA-1001A	Floor tile, pink	None Detected
AA-009	AA-1001A	Floor tile, gray layer	6.4% Chrysotile
AA-027	AA-1021	Tan/Brown VSF	None Detected
AA-032	AA-2001	Tan/Gray VSF	None Detected
AA-035	AA3001	Tan VSF	None Detected
AA-006	AA-1001	2' x 4' Acoustic Ceiling Tile	None Detected
AA-014	AA-1005	2' x 2' ACT Tan	None Detected
AA-1015-01	AA-1015	Plaster ceiling	None Detected
AA-1016-01	AA-1016	Plaster ceiling	None Detected
AA-001	AA2022A	Plaster ceiling	1-5% Chrysotile
AA-1V01-001-18- 10-10	AA-1V01	Plaster ceiling	1-5% Chrysotile <1% Actinolite/Tremolite
AA-2018-01	AA-2018	Plaster ceiling	None Detected
AA-2032B-003- 04-27-10	AA-2032A	Plaster ceiling	<0.1% Chrysotile <0.1% Actinolite/Tremolite
AA-3030-01	AA-3030	Plaster ceiling	None Detected
AA-2013-01	AA-2013	Plaster ceiling	None Detected
AA-3025B-01	AA3025B	Plaster ceiling	1% Chrysotile
AA-3025A-01	AA3025B	Plaster ceiling	None Detected
AA-4022-01	AA-4022	Plaster ceiling	1% Chrysotile
AA-4025-01	AA-4028	Plaster ceiling	None Detected
AA-1016-02	AA-1016	Plaster wall	None Detected
AA-2022	AA-2022	Plaster wall	None Detected

Sample Number	Sample Location	Sample Description	Result
AA-2018-02	AA-2018	Plaster wall	1% Chrysotile
AA-2032B-001- 04-27-10	AA-2032A	Plaster wall	<0.1% Chrysotile <0.1% Actinolite/Tremolite
AA-3030-02	AA-3030	Plaster wall	1% Chrysotile 1% Actinolite
AA-3025B-02	AA3025B	Plaster wall	1% Chrysotile 1% Actinolite
AA-4022-02	AA-4022	Plaster wall	None Detected
AA-4025-02	AA-4028	Plaster wall	None Detected
9 12 084	AA3027	Stucco ceiling	10% Chrysotile
02-435-095	AA-3015	Texture ceiling	5-10% Chrysotile
02-435-094	AA-4048	Texture ceiling	5-10% Chrysotile
1856-02	AA2015A	Electrical foot wiring	50-75% Chrysotile
1856-03	AA-2015A	Texture coat – cat walk	10-25% Chrysotile
AA-038	AA-1001	Transite sheeting	25% Chrysotile
AA-013	AA-1003	Fire proofing	95% Amosite
9 12 087	AA-2024	Fire proofing	70% Amosite
AA-030	AA-2000H	Fire proofing	None Detected
AA-037	AA-3026	Fire proofing	None Detected
9 12 083	AA-3004	Fire proofing	65% Amosite
AA-017	AA-1018	Parging cement	75% Chrysotile
AA-002	AA-1000A	Parging cement	70% Chrysotile
9 12 070	AA-1C01	Parging cement	35% Chrysotile
AA-1C01-01	AA-1C01	Drywall joint compound	None Detected
AA-1C01-02	AA-1C01	Drywall joint compound	5% Chrysotile
AA-024	AA-1024	Drywall joint compound	1.6% Chrysotile
AA-020	AA-1017	Drywall joint compound	2.6% Chrysotile
AA-015	AA-1016	Drywall joint compound	None Detected
AA-023	A-1025	12x12 Grey Floor Tiles	None Detected
AA-024	A-1024	Drywall joint compound	1.6% Chrysotile
AA-021	A-1017	Texture	6.3% Chrysotile
AA-020	A-1017	Drywall joint compound	2.1% Chrysotile

Sample Number	Sample Location	Sample Description	Result		
AA-015	A-1016	Drywall joint compound	None Detected		
AA-019	A-1013	Parging (Tan/Grey Insulation – Pipe Fitting 1")	70% Chrysotile		
AA-018	A-1013	Parging (Grey Insulation Pipe fitting 3")	75% Chrysotile		
AA-016	A-1038	Tan floor tiles + tar mastic	7.5% Chrysotile		
AA-028	A-1005	Green 12x12 floor tiles	None Detected		
AA-017	Mechanical Room 1018	Grey Insulation (Pipe fitting)	75% Chrysotile		
AA-022	A-1023	2x4 Tan ceiling tiles	None Detected		
Newfoundland Department of Government Services recognizes materials with greater than 1% asbestos by weight as an asbestos-containing material.					

# **3.6** Locations of Asbestos-Containing Materials (ACM)

The following sections provide the findings from this survey.

#### 3.6.1 Sprayed or Trowelled Fireproofing and Thermal Insulation

#### Thermal Fireproofing

Sprayed fireproofing materials were identified on MUN survey sheets throughout the building in various locations on exterior structural beams. This material was sampled during previous surveys (reference samples 9 12 087, 9 12 083, AA-013) and analysis indicates fireproofing contains between 65% -95% amosite asbestos. Newly installed fire proofing was also identified on survey sheets in several areas as well, analysis indicates new fireproofing does not contain asbestos (reference samples AA-030, AA-037). The majority of this fireproofing was identified on survey sheets above the drop down acoustical ceiling tiles system. In these cases where ceiling cavities were not accessible during the time of MUN survey, fireproofing was assumed present on exterior structural steel and as identified on the MUN survey sheets in GOOD condition. Refer to the table below (Table 3) for locations, suspect locations and condition of asbestos containing fireproofing (*as identified on the MUN survey sheets*).

Room # and Location ID	Description	Condition & Quantity		
Koom # and Location ID	Description	Good	Fair	Poor
AA-1018 Mechanical Room (Loc 001)	Fireproofing, exterior wall	7 linear feet		2 lf
AA-1019 Office (Loc 002)	Fireproofing, exterior wall	20 linear feet Suspect		
AA-1022 Office (Loc 003)	Fireproofing, exterior wall	20 linear feet Suspect		
AA-2000 (Loc 081)	Fireproofing, exterior wall (Suspect)	Condition not provided		
V-013 Room 1001-A1 (Storage – Level 1)	Spray fireproofing, wall			POOR
V-013 Room 1001C (Storage – Level 1)	Spray fireproofing, wall			POOR
V-013 Room 1002A (Office – Level 1)	Spray fireproofing, wall			POOR
V-013 Room 1002B (Office)	Spray fireproofing, wall			POOR
V-013 Room 1002C (Office)	Spray fireproofing, wall			POOR
AA-013 Room 1003 (Storage)	Sprayed fireproofing, structure			POOR
V-013 Room 1004A (Office)	Spray fireproofing, wall			POOR
V-013 Room 1004B (Office)	Spray fireproofing, wall			POOR
V-013 Room 1004C (Office)	Spray fireproofing, wall			POOR
V-013 Room 1005 (Office)	Spray fireproofing, wall			POOR
V-013 Room 1005B (Office)	Spray fireproofing, wall			POOR
V-013 Room 1007 (Office)	Spray fireproofing, wall			POOR
V-013 Room 1007A (Office)	Spray fireproofing, wall			POOR
V-013 Room 1009 (Office)	Spray fireproofing, wall			POOR
V-013 Room 1010 (Office)	Spray fireproofing, wall			POOR
V-013 Room 1017C (Mail Services)	Spray fireproofing, wall			POOR
V-013 Room 1024A (Office)	Spray fireproofing, wall			POOR
V-013 Room 1024B (Office)	Spray fireproofing, wall			POOR
V-013 Room 1024C (Office)	Spray fireproofing, wall			POOR
V-013 Room 1024D (Office)	Spray fireproofing, wall			POOR
V-013 Room 1024E (Office)	Spray fireproofing, wall			POOR
AA-2000 (Loc 081 – Registrars Office)	Suspect fireproofing on exterior wall beam (above fixed ceiling)	Condition not provided		

#### Table 3.6.1.1Fire Proofing Summary

		Condition & Quantity		Condition & Qua	tity
Room # and Location ID	Description	Good	Fair	Poor	
AA-2005 (Loc 094 – P.	Suspect fireproofing on	Condition			
McCann)	exterior beam	not provided			
AA-2006 (Loc 095 – M.	Suspect fireproofing on	Condition			
Puxley)	exterior ceiling perimeter	not provided			
AA-2009 (Loc 099 – Meet &	Suspect fireproofing on	Condition			
Greet Centre)	exterior beam	not provided			
AA-2009A (Loc 100 – Board	Suspect fireproofing on	Condition			
Room)	exterior beam	not provided			
AA-2V01 (Loc 102 –	Suspect fireproofing on	Condition			
Entrance)	exterior beam	not provided			
AA-2010 (Loc 110 – E.	Suspect fireproofing on	Condition			
Bruce)	exterior beam	not provided			
	Suspect fireproofing on	Condition			
AA-2021 (Loc 111 – Office)	exterior beam above	not provided			
	stucco.	-			
AA-2023 (Loc 112 – Vice	Suspect fire proofing on	Condition			
President Research)	exterior beam	not provided			
AA-2024 (Loc 114 – Kent	Suspect fireproofing on	Condition			
Decker)	exterior beam	not provided			
AA-2025 (Loc 115 – Office	Suspect fireproofing on	Condition			
C. Tibbo)	exterior beam	not provided			
AA-2026 (Loc 116 – Office	Suspect fireproofing on	Condition			
C. Wilkinson)	exterior beam above fixed	not provided			
,	ceiling	-			
AA-2027A (Loc 118 – Board	Suspect fireproofing above	Condition			
Room)	ceiling	not provided			
AA-2028 (Loc 119 – L.	Suspect fireproofing on	Condition			
Tilley)	exterior beam above T-bar	not provided		_	
AA-2033 (Loc 120 – Open	Suspect fireproofing on	Condition			
Office)	exterior beam	not provided			
	Suspect fireproofing in	Condition			
AA-2032 (Loc 122)	ceiling space on exterior	not provided			
	beam	1			
AA-2032A (Loc 125 –	Suspect fireproofing on	Condition			
Kitchenet)	exterior beam above	not provided			
,	ceiling	-			
AA-2032B (Loc 126 –	Suspect fireproofing on	Condition			
Washroom)	beam above fixed ceiling	not provided			
AA-3031 (Loc 127 – T.	Suspect fireproofing	Condition			
Pardy)	Eiroproofing procent	not provided			
AA-2022F (Loc 135 – D.	Fireproofing present	GOOD			
Collins)	(suspect)				

	Description	Condition & Quantity		tity
<b>Room # and Location ID</b>	Description	Good	Fair	Poor
A-3001 (Loc 147 – L.	Fireproofing on wall beam	Condition		
Matthews)	(suspect)	not provided		
A-3002 (Loc 148 – A. Juhasz-	Suspect fireproofing on	Condition		
Ormsby)	exterior beam	not provided		
A-3004 (Loc – 150 – Dr. B.	Suspect fireproofing	Condition		
O'Dywer)		not provided		
A-3005 (Loc 151 – D.	Suspect fireproofing	Condition		
McKay/Dr. Schrank)	behind exterior wall	not provided		
AA-3007 (Loc 153 – Empty	Suspect fireproofing on	Condition		
Office)	exterior structural beam	not provided		
AA-3008 (Loc 154 – Dr. A.	Suspect fireproofing on	Condition		
Stavelery)	exterior beam	not provided		
AA-3009 (Loc 155 – Dr. M.	Suspect fireproofing on	Condition		
Cummings)	exterior beam	not provided		
AA-3010 (Loc 156 – D.	Suspect fireproofing on	Condition		
Walsh)	exterior beam	not provided		
AA-3011 (Loc 157 – R.	Suspect fireproofing on	Condition		
Ormsby)	exterior beam	not provided		
AA-3012 (Loc 158 – Dr. J.	Suspect fireproofing on	Condition		
Lokash)	exterior beam	not provided		
AA-3019 (Loc 167 – English Language R. Centre)	Suspect fireproofing on exterior beam above fixed ceiling	Condition not provided		
AA-3021 (Loc 170 – J. Byrne)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-3022 (Loc 171 – N.	Suspect fireprecing	Condition		
Bobby)	Suspect fireproofing	not provided		
AA-3029 (Loc 178 – M.	Suspect fireproofing on	Condition		
Dalton)	exterior beam	not provided		
AA-3031 (Loc 179 – P. Sharrodes)	Suspect fireproofing	Condition not provided		
AA-3034 (Loc 181 – NL Dialect)	Suspect fireproofing	Condition not provided		
AA-3035 (Loc 182 – J.	Suspect fireproofing	Condition		
Skidmore)		not provided		
AA-3036 (Loc 183 – A	Suspect fireproofing	Condition		
Loman)		not provided		
AA-3040 (Loc $185 - R$ .	Suspect fireproofing	Condition		
Hollett)		not provided		
AA-3042 (Loc 187 – Dr. N. Pedri)	Suspect fireproofing	Condition not provided		
1 (011)		not provided		

Deem # and Leasting ID	Description	Condition & Quantity		tity
Room # and Location ID	Description	Good	Fair	Poor
AA-3044 (Loc 188 – Dr. C. Lockett)	Suspect fireproofing	Condition not provided		
AA-3047C (Loc 193 – Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3047D (Loc 194 – President Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3047D (Loc 195 – Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3047F (Loc 196 – Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3047G (Loc 197 – Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3047H (Loc 198 – Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3047J (Loc 199)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3047K (Loc 200)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling			
AA-3047L (Loc 201 – Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling			
AA-3047 (Loc 204 – General Area)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		

Deem # and Leastion ID	Description	Condition & Quantity		tity
Room # and Location ID	Description	Good	Fair	Poor
AA-3037D (Loc 209 – Office)	Suspect fireproofing behind drywall on exterior beam above T-bar ceiling	Condition not provided		
AA-3037E (Loc 210 – Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3037F (Loc 211 – Office)	Suspect fireproofing on exterior beam under drywall above T-bar ceiling	Condition not provided		
AA-3033 (Loc 212 – Dept of Eng Seminar Room)	Suspect fireproofing on exterior beam above fixed ceiling	Condition not provided		
AA-3027D (Loc 217 – Office)	Suspect fireproofing behind exterior walls (exterior beam above T-bar ceiling)	Condition not provided		
AA-3027C (Loc 218 – Office of W. Schipper)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA- 3027B (Loc 219 – P. Byrne)	Suspect fireproofing behind exterior walls (exterior beam above T- bar)	Condition not provided		
AA-4001 (Loc 225 – Dr C English)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4003 (Loc 227 – Dr. K. Korneski)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4405 (Loc 228 – M. Whelan)	Suspect fire proofing on exterior beam above ceiling	Condition not provided		
AA-4006 (Loc 229 – Dr. L. Bryan)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4007 (Loc 230 – Dr. M. Cassis)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4008 (Loc 231 – Dr. C. Lambert)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		

Deem # and Leastion ID	Description	Condition & Quantity		tity
<b>Room # and Location ID</b>	Description	Good	Fair	Poor
AA-4009 (Loc 232 – Dr. S. Curtis)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4010 (Loc 233 – Dr. S. Ryan)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4011 (Loc 234 – Student Room)	Suspect fireproofing on exterior beam	Condition not provided		
AA-4012 (Loc 235 – Dr. E. Basak)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4013 (Loc 236 – Dr. D Bregent-Heald)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4014 (Loc 237 – Dr. J. Webb)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4015 (Loc 238 – Dr. R.K.L Panjabi)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4016 (Loc 240 – Dr. S. Cadigan)	Suspect fireproofing on exterior beam above T-bar ceiling	Condition not provided		
AA-4019 (Loc 242 – Open Office)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4019A (Loc 243 – F. Warren)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4023C (Loc 248 – C. Hatcher)	Suspect fireproofing on exterior beam	Condition not provided		
AA-4023A (Loc 249 – Open Office)	Suspect fireproofing on exterior beam above fixed ceiling	Condition not provided		
AA-4029 A/B/C (Loc 250 – Recruitment & Retention)	Suspect fireproofing on exterior beam and suspect fireproofing above fixed ceiling	Condition not provided		
AA-4031A (Loc 252 – S. Brown)	Suspect fireproofing on exterior beam	Condition not provided		
AA-4031B (Loc 253 – M. Fowler)	Suspect fireproofing on exterior beam	Condition not provided		

Deems # and Leastion ID	Description	Condition & Quantity		tity
Room # and Location ID	Description	Good	Fair	Poor
AA-4045 (Loc 254 – K.	Suspect fireproofing on	Condition		
Stockley)	exterior beam	not provided		
AA-4044 (Loc 255 – T.	Suspect fireproofing on	Condition		
Hickey)	exterior beam	not provided		
AA-4043 (Loc 256 – K.	Suspect fireproofing on	Condition		
Slaney)	exterior beam	not provided		
AA-4042 (Loc 257 – L. Chapman)	Suspect fireproofing on exterior beam	Condition not provided		
AA-4041 (Loc 258 – R.	Suspect fireproofing on	Condition		
Baker)	exterior beam	not provided		
AA-4040 (Loc 259 – T.	Suspect fireproofing	Condition		
Coady/H. Arnnott)	behind exterior wall	not provided		
AA-4040A (Loc 260 – C.	Suspect fireproofing	Condition		
Horlick)	behind exterior wall	not provided		
AA-4038 (Loc 262 – L.	Suspect fireproofing on	Condition		
Curran)	exterior beam	not provided		
AA-4037 (Loc 263 – T.	Suspect fireproofing on	Condition		
Pittman)	exterior beam	not provided		
AA-4037 (Loc 264 – T.	Suspect fireproofing on	Condition		
Squires)	exterior beam	not provided		
AA-4032 (Loc 265 – J.	Suspect fireproofing on	Condition		
Norman)	exterior beam	not provided		
AA-4033 (Loc 266 – J.	Suspect fireproofing on	Condition		
Purrell)	exterior beam	not provided		
AA-4032A (Loc 267 – HR	Sugrest finance fina	Condition		
Admin, B. Mullett)	Suspect fireproofing	not provided		
A A 4022 (L a a 268 A SI)	Sugreet finance ofine	Condition		
AA-4032 (Loc 268 – ASI)	Suspect fireproofing	not provided		
AA-4030A (Loc 269 – Office)		Condition not provided		
AA-4025C (Loc 273 – H. Lambert)	Suspect fireproofing on exterior beam above fixed ceiling	Condition not provided		
AA-4025 (Loc 274 – Pension & Benefits)	Suspect fireproofing on exterior beam above fixed ceiling	Condition not provided		
AA-4025B (Loc 275 – M. Byrne)	Suspect fireproofing on exterior beam above ceiling	Condition not provided		
AA-4025A (Loc 276 – M. Wade)	Suspect fireproofing on exterior beam above	Condition not provided		

Room # and Location ID	Description	Conditio	tity	
Koom # and Location ID	Description	Good	Good Fair	
	ceiling			
AA-4024 (Loc 277 – G. Roberts)	Suspect fireproofing on exterior beam	Condition not provided		
AA-1804, 2504, 3504 (Loc	Suspect fireproofing	Condition		
283 – Stairwell #3)behind exterior wallnot providedNewfoundland Department of Government Services recognizes materials with greater than 1% asbestos by				
weight as an asbestos-containing material.				

#### 3.6.2 Mechanical Insulation

Mechanical insulation in the form of parging cement was observed on various elbows and fittings throughout the building. Sample analysis (reference samples 9 12 083, AA-017, AA-002) indicates it contains 35%-75% Chrysotile asbestos. Pipe fittings and elbows are primary identified on MUN survey sheets above the drop down acoustical ceiling tile system and leading into wall heaters. It should be noted that fittings are suspected behind fixed walls, pipe chases, and in all wall mounted heaters, there areas are not listed below. Special care should be taken during renovations, repairs or demolition of walls in areas where there is suspect piping, such as washroom facilities, to ensure no potential asbestos containing materials are disturbed.

Two types of tar paper were observed during this survey and sample analysis indicated no asbestos content. Samples were collected from duct work and pipe insulation in AA-1020, and AA-1013 respectively (reference sample AA-1020-002-27-08-10, and AA-1013-001-27-08-10). The condition and quantity of these materials were extrapolated from the MUN survey sheets. Cells that are not filled in or completed indicate that no information was provided on the survey sheets.

#### Table 3.6.2.1 Mechanical Insulation

	Density	Condition & Qua		uantity
Room # and Location ID	Description	Good	Fair	Poor
AA-1018 Mechanical Room (Loc 001)	Parging cement, elbows & fittings	51ea		2 ea
AA-2000 (Loc 081 – Registrars Office)	Suspect piping behind exterior wall			
AA-2002 (Loc 090 – Office)	Suspect piping on exterior wall			
AA-2002A (Loc 091 – G. W. Collins)	Suspect piping behind exterior wall (heater)			
AA-2004 (Loc 092 – Glen Collins Office)	Suspect piping behind exterior wall. No access and fireproofing.			
AA-2004A (Loc 093 – Washroom)	Suspect piping (no access)			
AA-2005 (Loc 094 – P. McCann)	Suspect piping behind wall.			
AA-2006 (Loc 095 – M. Puxley)	Suspect piping behind exterior wall			
AA-2007 (Loc 096 – L. Thorne)	Suspect piping behind wall			
AA-2008 (Loc 097 – S. Singlton)	Suspect piping behind wall			
AA-2008A (Loc 098 – Singlton)	Suspect piping behind wall			
AA-2009 (Loc 099 – Meet & Greet Centre)	Suspect piping behind exterior wall			
AA-2009A (Loc 100 – Board Room)	Suspect piping behind exterior wall			
AA-2V01 (Loc 102 – Entrance)	Suspect piping behind walls (heaters)			
AA-2013 (Loc 104 – Female Washroom)	Suspect piping behind walls			
AA-2014 (Loc 105 – Male Washroom)	Straight piping	Type not provided		
AA-2018 (Loc 108 – Female staff washroom)	Suspect piping behind walls			
AA-2021 (Loc 111 – Office)	Suspect piping behind walls			
AA-2023 (Loc 112 – Vice	Suspect piping behind			
president research))	exterior walls			
A-2024B (Loc 113 –	Suspect piping behind pipe			
Kitchenette and Washroom)	chase			

Deem # and Leasting ID	Description	Condition & Qua		antity
Room # and Location ID	Description	Good	Fair	Poor
A-2034 (Loc 114 – Kent	Suspect piping behind			
Decker)	exterior walls (heaters)			
A-2025 (Loc 115 – Office C.	Suspect piping behind			
Tibbo)	exterior wall			
A-2026 (Loc 116 – Office C.	Suspect piping behind			
Wilkson)	exterior wall			
A-2027A (Loc 118 – Board	Suspect piping behind			
Room)	exterior wall			
AA-2028 (Loc 119 – L. Tilly)	Suspect piping exterior wall			
AA-2033 (Loc 121 – Open	Suspect piping behind			
Office)	exterior wall			
A-2032 (Loc 122)	Suspect piping behind			
, , , , , , , , , , , , , , , , ,	exterior wall			
AA-2032B (Loc 126 –	Suspect piping behind			
Washroom)	exterior wall			
A-2031 (Loc 127 – T. Pardy)	Suspect piping behind			
	exterior wall			
AA-2029A (Loc 131 –	Piping visible from coat			
Washroom)	dresser (suspect)			
AA-2022 (Loc 133 – Finance	Suspect piping behind			
Open Office)	exterior wall (heating)			
AA-2022F (Loc 135 – D.	Suspect piping behind			
Collins)	exterior wall			
A-2022D (Loc 136 – G. Pike)	Suspect piping behind			
	exterior wall			
AA-2022C (Loc 137 – H.	Suspect piping behind			
Whelan)	exterior wall			
AA-2010 (Loc 140 – Custodial	Piping visible maybe above			
Room)	other ceiling space			
A-2003 (Loc 142 – Pagistration)	Suspect piping behind exterior wall			
Registration) A-2004 (Loc 143 – Corridor				
East)	Suspect piping in some walls			
A-3001 (Loc 147 – L.	Suspect piping behind			
Matthews)	exterior wall			
A-3002 (Loc 148 – A. Juhasz-				
Ormsby	Suspect piping behind walls			
A-3003 (Loc 149 – R. Finley)	Suspect piping behind walls			
A-3004 (Loc 150 – Dr. B.				
O'Dwyer)	Suspect piping behind walls			
A-3005 (Loc 151 – D.	Suspect piping behind			
McKay/Dr. Schrank)	exterior wall			

Deem # and I are the D		Condition &		Quantity	
<b>Room # and Location ID</b>	Description	Good	Fair	Poor	
AA-3007 (Loc 153 – Empty	Suspect piping behind				
office)	exterior wall				
AA-3008 (Loc 154 – Dr. A.	Suspect piping behind				
Stavelery)	exterior walls				
AA- 3009 (Loc 155 – Dr. M.	Suspect piping behind				
Cummings)	exterior walls				
AA-3012 (Loc 156 – DR.	Suspect piping behind walls				
Walsh)	(concealed)				
AA-3011 (Loc 157 – R. Ormsby)	Suspect piping				
AA-3012 (Loc 158 – Dr. J.	Suspect piping behind				
Lokash)	exterior walls				
AA-3013 (Loc 159)	Suspect piping behind walls				
AA-3014 (Loc 160 – Storage	Luidentified Stariaht Dining				
Room)	Unidentified Straight Piping				
AA-3016 (Loc 165 – Cosutdial	Suggest nining habind wall				
Closet)	Suspect piping behind wall				
AA-3018 (Loc 166 –	Suspect piping behind				
Classroom)	exterior wall				
AA-3019 (Loc 167 – English	Suspect piping behind				
Lanaguage R. Centre)	exterior wall				
AA-3017 (Loc 168 –	Suspect piping behind				
Classroom)	exterior wall (heater)				
AA-3020 (Loc 169 –	Suspect piping behind				
Classroom)	exterior wall				
AA-3021 (Loc 170 – J. Byrne)	Suspect piping behind				
AA-3021 (Loc 170 – J. Dyline)	exterior wall				
AA-3022 (Loc 171 – N.	Suspect piping				
Bobby)					
AA-3023 (Loc 172 – Dr. V.	Suspect piping behind				
Legge)	exterior wall				
AA-3025 (Loc 174 – G.	Suspect piping behind				
Billard)	exterior wall				
AA-3026 (Loc 175 – Dept. of	Suspect piping behind				
English & Literature)	exterior wall				
AA-3026B/A (Loc 170/150 –	Suspect piping behind				
Dr. Batisch, Dept of English)	exterior wall				
A-3028 (Lox 177 – Staff	Suspect piping behind				
Lounge)	exterior wall				
AA-3029 (Loc 178 – M.	Suspect piping behind				
Dalton)	exterior wall				

	Description	Condi	tion & Q	uantity
<b>Room # and Location ID</b>	Description	Good	Fair	Poor
AA-3031 (Loc 179 – P. Sharrods)	Suspect piping			
AA-3035 (Loc 182 – J. Skidmore)	Suspect piping behind exterior wall			
AA-3036 (Loc 183 - A. Loman)	Suspect piping			
AA-3040 (Loc 185 – R. Hollett)	Suspect piping			
AA-3041 (Loc 186 – Dr/ Classold)	Suspect piping behind exterior wall			
AA-3042 (Loc 187 – Dr. N. Pedri)	Suspect piping			
AA-3047B (Lox 193 – Office)	Suspect piping on straight pipe			
AA-3047D (Lox 194 – President Office)	Straight piping (suspect)			
AA-3047E (Loc 195 – Office)	Straight piping (suspect)			
AA-3047DF (Loc 196 – Office)	Straight piping (suspect)			
AA-3047G (Loc 197 – Office)	Straight piping (suspect)			
AA-3047H (Loc 198 – Office)	Straight piping (suspect)			
AA-3047J (Loc 199)	Straight piping (suspect)			
AA-3047K (Loc 200 – Office)	Straight piping (suspect)			
AA-3047L (Loc 201 – Office)	Straight piping (suspect)			
AA-3047M (Loc 202 – Washroom)	Piping			
AA-3037D (Loc 209 – Office)	Straight piping /Elbow			
AA-3033 (Loc 212 – Dept of	Suspect piping behind			
eng seminar room)	exterior wall			
No room number listed (Loc	Suspect piping behind			
213 – Stoprage Room)	exterior walls			
AA-3027D (Loc 217 – Office)	Suspect piping behind exterior wall			
AA-3027C (Loc 218 – Office	Suspect piping behind			
W. Schipper)	exterior wall			
AA-3027B (Loc 219 – P. BYRNE)	Suspect piping behind exterior wall			
AA-3025A + B + Washroom (Loc 222 – Male washroom corridor)	Straight piping, elbows and fittings	2 ea		2 ea
AA-3029 (Loc 223)	Piping, fittings and elbows			
AA-3014A	Elbows (2)			

	Description	Condition & Quantity		
<b>Room # and Location ID</b>	Description	Good	Fair	Poor
AA-3029	Piping, fittings (3) and elbow (1)			
AA-3037	Piping, (new), elbows (2)			
AA-4001 (Loc 225 – Dr. C.	Suspect piping behind			
English)	exterior wall			
AA-4001 (Loc 228 – M. Whelan)	Suspect behind exterior wall			
AA-4006 (Loc 229 – Dr. L. Bryan)	Suspect piping behind exterior wall			
AA-4007 (Loc 230 – Dr. M. Cassis)	Suspect piping behind exterior wall			
AA-4008 (Loc 231 – Dr. C.	Suspect piping behind			
Lambert)	exterior wall			
AA-4009 (Loc 232 – Dr. S.	Suspect piping behind			
Curtis)	exterior wall			
AA-4010 (Loc 233 – Dr. S.	Suspect piping behind			
Ryan)	exterior wall			
AA-4011 (Loc 234 – Student	Suspect piping behind			
Room)	exterior wall			
AA-4012 (Loc 235 – Dr. E.	Suspect piping behind			
Basak)	exterior wall			
AA-4013 (Loc 236 – Dr. D.	Suspect piping behind			
Bregent-Heald	exterior wall			
AA-4014 (Loc 237 – Dr. J.	Suspect piping behind			
Webb)	exterior wall			
AA-4015 (Loc 238 – Dr.	Suspect piping behind			
R.K.L.Panjabi)	exterior wall			
AA-4004 (Loc 240 – Dr. S.	Suspect piping in exterior			
Cadigan)	wall			
AA-4019 (Loc 242 – Open	Suspect piping behind			
Office)	exterior wall			
AA-4019A (Loc 243 – F. Warren)	Suspect behind exterior wall			
AA-4023C (Loc 248 – C.	Suspect piping behind			
Hatcher)	exterior wall			
AA-4023A (Loc 249 – Open	Suspect piping behind			
Office)	exterior wall			
AA-4029 A/B/C (Loc 250 –	Suspect piping behind			
Recruitment and Retention)	exterior wall			
AA-4031A (Loc 252 – S.	Suspect piping behind			
Brown)	exterior wall			

<b>Deem # and Leastion ID</b>	Decerintion	Condi	tion & Qi	uantity
<b>Room # and Location ID</b>	Description	Good	Fair	Poor
AA-4031B (Loc 253 – M.	Suspect piping behind			
Fowler)	exterior wall			
AA-3038 (Loc 262 – L.	Suspect piping behind			
Curran)	exterior wall			
AA-4039 (Loc 261 – A.	Suspect piping behind			
Carroll)	exterior wall			
AA-4040A (Loc 260 – C.	Suspect piping behind			
Horlick)	exterior wall			
AA-4037 (Loc 263 – T.	Suspect piping behind			
Pittman)	exterior wall			
AA-4035 (Loc 264 – T.	Suspect piping behind			
Squires)	exterior wall			
AA-4034 (Loc 265 – J.	Suspect piping behind			
Norman)	exterior wall			
A A 4022 (L = 266 L D = 11)	Suspect piping behind			
AA-4033 (Loc 266 – J. Purrell)	exterior wall			
AA-4032A (Loc 267 – HR	G			
Admin, B. Mullett)	Suspect piping			
AA-4032 (Loc 268 – ASI)	Suspect piping			
AA-4030 (Loc 269 – Office)	Suspect piping			
AA-4030 (Loc 270 – Office)	Suspect piping			
AA-4028 (Loc 271 – Female	Suspect piping behind			
Washroom)	exterior walls			
	Suspect piping behind			
AA-4025C (Loc 273)	exterior walls			
AA-4025 (Loc 274 – Pension	Suspect piping behind			
& Benefits)	exterior walls			
	Suspect piping behind			
AA-4024 (Loc 277 – G.	exterior wall and corridor			
Roberts)	wall (previous sink)			
AA-4022 (Loc 278 – Male	Suspect piping behind			
Washroom)	exterior walls and ceiling			
AA-4017 (Loc 279 –	Suspect straight piping,			2
Mechanical Room)	elbows and fittings (2)			POOR
AA-1504, 2504, 3504 (Loc 283	Suspect piping behind			
- Stairwell 3)	exterior walls			
AA-1C04, 2C04, 3C04 AND				
3C04 (Loc 284 – Stairwell 4)	Suspect interior wall piping			
<u>NOTE:</u> Fittings are suspected be	hind washroom facilities walls o	and in all w	all mounte	ed
heaters, these areas are not liste	•			

#### 3.6.3 Acoustic Ceiling Tiles

Acoustical ceiling tiles are present as a suspended ceiling system in several areas of the building. Five (5) distinctly different styles were identified on the MUN survey sheets and analysis did not identify the presence of asbestos in any of the ceiling tiles. The following list provides style, location and sample analysis of tiles collected throughout the building.

- 2' x 2' Pinhole with fissure (AA-1007) reference sample AA-1007A-001-31-08-10
- 2' x 2' Pinhole (AA-2013) reference sample AA-2013-001-08-09-10
- 2' x 2' Pinhole with fissure (AA-4048) AA-4048-001-24-09-10
- 2' x 2' Pinhole with fleck (AA-1001) AA-006
- 2' x 2' Pinhole with fleck (AA-1005) AA-014

#### 3.6.4 Drywall, Plaster, and Texture Finishes

Drywall was used as a wall and ceiling finish throughout the building. Until the early to mid-1980s, drywall joint compound may have contained chrysotile asbestos. Drywall joint compound is considered a non-friable material. Interior finishes consist mainly of hard wall plaster or drywall with textured/stucco ceiling finishes.

A number of smooth coat plaster samples were collected throughout the facility. Sampling indicates smooth plaster finishes contain between 1-5% chrysotile asbestos, with trace amounts of Actinolite and Tremolite (0-1%) (Reference sample AA-1018-001-19-08-10, AA-1018-002-19-08-10, AA-1023A-001-19-08-10, AA-001, AA-1V01-001-18-10-10, AA-2032B-003-04-27-10, AA-3025B-01, AA-4022-01, AA-3025B-02, AA-3030-02, AA-2018-02). All wall plasters are to be managed as asbestos unless testing determines otherwise.

The majority of ceiling throughout the building are composed of wall plaster with a stucco/textured coat. Sample analysis of this material (reference sample 9 12 084, 02-435-095, 02-435-094, AA-1023A-002-19-08-10) indicates 5-10% chrysotile asbestos. The majority of stucco ceiling is in GOOD condition. There are some areas where stucco ceiling was observed not painted above the drop down acoustical ceiling system. The condition of these items was extra ported from the MUN survey sheets.

Refer to Table below for locations and conditions of asbestos containing ceilings (stucco or plaster).

# Table 3.6.4.1 Ceiling Texture/Stucco Summary

ROOM # AND LOCATION ID	DESCRIPTION		<b>DITION</b> JANTIT	
ID		GOOD	FAIR	POOR
AA-1019 Office (Loc 002)	stucco ceiling	161 ft <sup>2</sup>		
AA-1022 Office (Loc 003)	stucco ceiling	161 ft <sup>2</sup>		
AA-002 Room 1000 (Level 1)	plaster ceiling			
V-002 Room 1001 (Conference Room – Level 1)	plaster ceiling			
V-002 Room 1001A2/1001B (Offices – Level 1)	plaster ceiling	450 ft <sup>2</sup>		
V-002 Room 1008 (Janitors Storage – Level 1)	plaster ceiling	80.0 ft <sup>2</sup>		
V-002 Room 1011 (ComMUNications – Level 1)	plaster ceiling	120.0 ft <sup>2</sup>		
V-002 Room 1013 (Bathroom – Level 1)	plaster ceiling			
V-002 Room 1015 (Men's Washroom – Level 1)	plaster ceiling	120.0 ft <sup>2</sup>		
V-002 Room 1016A (Women's Washroom – Level 1)	plaster ceiling	120.0 ft <sup>2</sup>		
AA-021 Room 1017 (Mail Services – Level 1)	ceiling debris			ALL
V-021 Room 1017 (Mail Services – Level 1)	ceiling plaster			
V-002 Room 1018 (Mechanical Room – Level 1)	ceiling plaster	846.0 ft <sup>2</sup>		
V-021 Room 1019 (Office – Level 1)	ceiling plaster			
V-021 Room 1020 (Porch – Level 1)	ceiling plaster	120.0 ft <sup>2</sup>		
V-025 Room 1021 (Lunch Room – Level 1)	ceiling joint compound			
V-021 Room 1021 (Lunch Room – Level 1)	ceiling plaster			
V-021 Room 1022 (Office – Level 1)	ceiling plaster			
V-021 Room 1023 (Cashiers Office – Level 1)	ceiling debris			ALL
V-021 Room 1023 (Cashiers Office – Level 1)	ceiling plaster	GOOD		

ROOM # AND LOCATION	DESCRIPTION		CONDITION & QUANTITY	
ID		GOOD	FAIR	POOR
V-021 Room 1024E (Office – Level 1)	ceiling plaster			
V-021 Room 1024F (Lunchroom – Level 1)	ceiling plaster	140.0 ft <sup>2</sup>		
V-021 Room 1025 (Security Coin Room – Level 1)	ceiling plaster			
V-021 Room 1026 (Reception/Office – Level 1)	ceiling plaster			
V-021 Room 1027 (Office – Level 1)	ceiling plaster			
V-021 Room 1030 (File Room – Level 1)	ceiling debris			ALL
V-021 Room 1031 (Conference Room – Level 1)	ceiling debris			ALL
V-021 Room 1032 (Office – Level 1)	ceiling plaster			
V-002 Room 1037 (File Storage Room – Level 1)	ceiling plaster	180.0 ft <sup>2</sup>		
V-002 Room 1038 (File Storage Room – Level 1)	ceiling plaster	550.0 ft <sup>2</sup>		
V-021 Room 1039 (Office – Level 1)	ceiling plaster			
V-002 Room 1C01 (Main Hallway – Level 1)	ceiling plaster	200.0 ft <sup>2</sup>		
AA-038 Room 1C01 (Main Hallway – Level 1)	ceiling transite	30.0 ft <sup>2</sup>		
V-021 Room 1C05 (Hall – Level 1)	ceiling plaster	160.0 ft <sup>2</sup>		
V-034 Room 2000 (Offices – Level 2)	ceiling plaster			
AA-034 Room 2001 (Offices – Level 2)	ceiling plaster	740.0 ft <sup>2</sup>		
V-034 Room 2001A (Office – Level 2)	ceiling plaster	60.0 ft <sup>2</sup>		
V-034 Room 2001B (Office – Level 2)	ceiling plaster	60.0 ft <sup>2</sup>		
V-034 Room 2001C (Mechanical Room – Level 2)	ceiling plaster	60.0 ft <sup>2</sup>		
V-034 Room 2002 (Registrars Office – Level 2)	ceiling plaster	110.0 ft <sup>2</sup>		

ROOM # AND LOCATION ID	DESCRIPTION	CONDITION & QUANTITY		
ID		GOOD	FAIR	POOR
V-034 Room 2003B/D/E/F (Assistant Registrars Office – Level 2)	ceiling plaster			
V-034 Room 2004 (Registrars Office – Level 2)	ceiling plaster			
V-034 Room 2005 (Office – Level 2)	ceiling plaster			
V-034 Room 2006 (Office – Level 2)	ceiling plaster			
V-034 Room 2007 (Office – Level 2)	ceiling plaster			
V-034 Room 2008 (Office – Level 2)	ceiling plaster			
V-034 Room 2008A (Office – Level 2)	ceiling plaster			
V-034 Room 2011 (Office – Level 2)	ceiling plaster			
V-034 Room 2014 (Men's Washroom – Level 2)	ceiling debris			POOR
V-034 Room 2015 (Theatre – Level 2)	ceiling plaster	GOOD		
V-034 Room 2020 (Office – Level 2)	ceiling plaster			
V-034 Room 2021 (Office – Level 2)	ceiling plaster	GOOD		
V-034 Room 2022 (Financial Services – Level 2)	ceiling plaster	GOOD		
V-034 Room 2022A (File Room – Level 2)	ceiling plaster	GOOD		
V-034 Room 2022B (Mechanical Room – Level 2)	ceiling plaster	GOOD		
V-034 Room 2023 (Office – Level 2)	ceiling plaster	GOOD		
V-034 Room 2024 (Office – Level 2)	ceiling plaster	GOOD		
V-034 Room 2024A (Bathroom – Level 2)	ceiling plaster	GOOD		
V-034 Room 2024B (Kitchen – Level 2)	ceiling plaster	GOOD		
V-034 Room 2025 (Office – Level 2)	ceiling plaster	GOOD		

ROOM # AND LOCATION ID	DESCRIPTION	CONDITION & QUANTITY		
		GOOD	FAIR	POOR
V-034 Room 2026 (Office – Level 2)	ceiling plaster	GOOD		
V-034 Room 2027 (File Room – Level 2)	ceiling plaster	GOOD		
V-034 Room 2027A (Meeting Room – Level 2)	ceiling plaster	GOOD		
V-034 Room 2028 (Office of the President – Level 2)	ceiling plaster	GOOD		
V-034 Room 2030 (Office – Level 2)	ceiling plaster	GOOD		
V-034 Room 2031 (Office – Level 2)	ceiling plaster	GOOD		
V-034 Room 2032 (Office of the president – Level 2)	ceiling plaster	GOOD		
V-034 Room 2032C (Hall – Level 2)	ceiling plaster	GOOD		
V-034 Room 2033/B (Office of the President – Level 2)	ceiling plaster	GOOD		
V-034 Room 2033/A (Office of the President – Level 2)	ceiling plaster	GOOD		
V-034 Room 2C01 (Main Foyer – Level 2)	ceiling plaster	700.0 ft <sup>2</sup>		
V-034 Room 2C02 (Hall – Level 2)	ceiling plaster	GOOD		
V-034 Room 2C03 (Hall – Level 2)	ceiling plaster	GOOD		
V-034 Room 2C04 (Hall – Level 2)	ceiling plaster	GOOD		
V-034 Room 2V03 (Porch – Level 2)	ceiling plaster	GOOD		
V-034 Room 3000 (Graduate Room – Level 3)	ceiling plaster	GOOD		
V-034 Room 3001 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3003 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3004 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3005 (Office – Level 3)	ceiling plaster	GOOD		

ROOM # AND LOCATION ID	DESCRIPTION	CONDITION & QUANTITY		
		GOOD	FAIR	POOR
V-034 Room 3006 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3007 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3008 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3009 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3010 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3011 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3012 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3013 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3014 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3014-A (Meeting Room – Level 3)	ceiling plaster	GOOD		
V-034 Room 3015 (Copier Room – Level 3)	ceiling plaster	GOOD		
V-034 Room 3015A (Copy Room – Level 3)	ceiling plaster	GOOD		
V-034 Room 3017 (Classroom – Level 3)	ceiling plaster	GOOD		
V-034 Room 3019 (Research Centre – Level 3)	ceiling plaster	GOOD		
V-034 Room 3020 (Classroom – Level 3)	ceiling plaster	GOOD		
V-034 Room 3021 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3022 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3023 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3024 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3027 (Hall – Level 3)	ceiling plaster	GOOD		

ROOM # AND LOCATION ID	DESCRIPTION	CONDITION & QUANTITY		
		GOOD	FAIR	POOR
V-034 Room 3027A (M.E.S.S. – Level 3)	ceiling plaster	GOOD		
V-034 Room 3027B (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3027C (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3027D (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3027E (Closet – Level 3)	ceiling plaster	GOOD		
V-034 Room 3027F (Supply Room – Level 3)	ceiling plaster	GOOD		
V-034 Room 3028 (Lounge – Level 3)	ceiling plaster	GOOD		
V-034 Room 3029 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3031 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3032 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3033 (Seminar Room – Level 3)	ceiling plaster	GOOD		
V-034 Room 3034 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3035 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3036 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3037 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3037B (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3039A (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3043 (Office – Level 3)	ceiling plaster	GOOD		
V-034 Room 3045 (Storage – Level 3)	ceiling plaster	GOOD		
V-034 Room 3C01 (Main Hallway – Level 3)	ceiling plaster	GOOD		

ROOM # AND LOCATION ID	DESCRIPTION	CONDITION & QUANTITY		
		GOOD	FAIR	POOR
V-034 Room 4001 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4002 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4008 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4009 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4010 (Office - Level 4)	ceiling plaster	GOOD		
V-034 Room 4011 (PhD Room – Level 4)	ceiling plaster	GOOD		
V-034 Room 4012 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4013 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4014 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4015 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4016 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4018 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4019 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4019A (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4019B (File Room – Level 4)	ceiling plaster	GOOD		
V-034 Room 4023 (HR Reception – Level 4)	ceiling plaster	GOOD		
V-034 Room 4023A (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4023B (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4023C (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4023D (File Room – Level 4)	ceiling plaster	GOOD		

ROOM # AND LOCATION ID	DESCRIPTION	CONDITION & QUANTITY		
		GOOD	FAIR	POOR
V-034 Room 4023E (File Room - Level 4)	ceiling plaster	GOOD		
V-034 Room 4024 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4025 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4025A (Office – level 4)	ceiling plaster	GOOD		
V-034 Room 4025B (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4025C (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4029 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4030 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4030A (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4031 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4031A (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4032 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4032A (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4033 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4034 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4035 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4039 (Employment Office – Level 4)	ceiling plaster		FAIR	
V-034 Room 4040 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4046 (Office – Level 4)	ceiling plaster	GOOD		
V-034 Room 4C01 (Hall – Level 4)	ceiling plaster	GOOD		

ROOM # AND LOCATION	DESCRIPTION	CONDITION & QUANTITY					
ID		GOOD	FAIR	POOR			
V-021 Room 1017 (Mail Services Room – Level 1)	ceiling plaster		FAIR				
Note: Quantity and conditions were taken from MUN Survey Sheets							
Newfoundland Department of Government Services recognizes materials with greater than 1% asbestos by weight as an asbestos-containing material.							

#### 3.6.5 Vinyl Flooring Materials

Flooring throughout the building consists of poured concrete, terrazzo, floor tiles and vinyl sheet flooring. Floor tile and vinyl sheet flooring samples were collected and analysis indicated that there are 2 types of asbestos containing flooring products (Refer to samples collected by ALL-tech, sample #'s AA-001, AA-009, AA-012, AA-016, AA-024 and AA-031). Refer to the table below for locations and conditions of asbestos and non-asbestos containing flooring products.

Room # and Location ID	Description	Condition & Quantity			
Room # and Location ID	Description	Good	Fair	Poor	
AA-1019 Office (Loc 002)	9" x 9" floor tile - tan	161 ft <sup>2</sup>			
AA-1022 Office (Loc 003)	9" x 9" floor tile - tan	161 ft <sup>2</sup>			
AA-1021 (Lunch room – level 1)	9" x 9" floor tile	120.0 ft <sup>2</sup>			
AA-2000 (Loc 081)	Vinyl floor tiles (suspect)	GOOD			
AA-2001/C/D/EA (Open Office – level 2)	Vinyl floor tiles (suspect)	GOOD			
AA-2001F (Loc 083 - Kitchen/Break Room)	Vinyl Sheet Flooring (Sample #: NEW A001)				
AA-2001F (Loc 083 - Kitchen/Break Room)	Vinyl Floor Tiles	GOOD			
AA-2001A (Loc 084 – Open Office)	Vinyl sheet flooring/vinyl floor tiles				
AA-2001B (Loc 085)	Vinyl sheet flooring/vinyl floor tiles				
AA-001 2000D (Loc 086 – M. Murray Floor2)	Vinyl floor tiles (suspect)	GOOD			
AA-2000 F-E (Loc 087)	Vinyl floor tiles (suspect)				
AA-2000G (Loc 088)	Vinyl floor tile (suspect)				
AA-2000H (Loc 089 – Mechanical Room)	Vinyl sheet flooring	GOOD			
AA-2002 (Loc 090 – Office)	Vinyl sheet flooring (brown)				

#### Table 3.6.5.1 Flooring Products Summary

Deems # and Leastion ID	Description	<b>Condition &amp; Quantity</b>			
<b>Room # and Location ID</b>	Description	Good	Fair	Poor	
AA-2002 (Loc 090 – Office)	Vinyl floor tiles (suspect) (AA-001 – Suspect)				
AA-2002A (Loc 091 – G.W.Collins Registrar)	Vinyl floor tiles (suspect)				
AA-2004 (Loc 092 – Glen Collins Office)	Vinyl floor tiles (suspect)				
AA-2005 (Loc 094 – P. McCann Office)	9x9 vinyl floor tiles				
AA-2006 (Loc 095 – M. Puxley)	9x9 vinyl floor tiles	GOOD			
AA-2007 (Loc 096 – L. Thorne)	9x9 vinyl floor tiles	GOOD			
AA-2008 (Loc 097 – S. Singleton)	9x9 vinyl floor tiles	GOOD			
AA-2008A (Loc 098 – Singleton)	9x9 vinyl floor tiles	GOOD			
AA-2009 (Loc 099 – Meet & Greet Centre)	Vinyl floor tiles (suspect)				
AA-2009A (Loc 100 – Board Room)	Vinyl floor tiles (suspect)				
AA-2C01 (Loc 101 – Lobby)	Terrazzo	GOOD			
A-2V01 (Loc 102 – Entrance)	Terrazzo	GOOD			
AA-2014 (Loc 105 – Male Washroom)	Terrazzo				
AA-2017 (Loc 107)	Terrazzo				
AA-1018 (Loc 108)	Terrazzo	GOOD			
AA-2020 (Loc 110 – E Bruce)	Vinyl floor tiles (suspect)				
AA-2021 (Loc 111 - Office)	Vinyl floor tiles (suspect)				
A-2023 (Loc 112 – Vice President Research)	Vinyl floor tiles (suspect)				
A-2024B (Loc 113 – Kitchen & Washroom)	12x12 Vinyl floor tile (New, brown with speckle)				
A-2024 (Loc 114 – Kent Decker)	Vinyl floor tiles (suspect)				
A-2025 (Loc 115 – Office C. Tibbo)	Vinyl floor tiles (suspect)				
A-2026 (Loc 116 – Office C. Wilkson)	Vinyl floor tiles (suspect)				
A-2027 (Loc 117 – Copy Room)	Vinyl floor tiles (suspect)				

Deem # and Leasting ID	Description	Condition & Quantity			
Room # and Location ID	Description	Good	Fair	Poor	
A-2027A (Loc 118 – Board Room)	Vinyl floor tiles (suspect)				
AA-2028 (Loc 119 – L. Tilley)	Vinyl floor tiles (suspect)				
AA-2033 (Loc 120 – open office)	Vinyl floor tiles (suspect)				
AA-2033 (Loc 120 – Closet)	Terrazzo				
A-2032 (Loc 122)	Vinyl floor tiles (suspect)				
A-2033A (Loc 123 – Multipurpose Room)	Vinyl floor tiles (suspect)				
A-2032C (Loc 124 – Corridor)	Terrazzo				
A-2032A (Loc 125 – Kitchent)	Clay Tiles				
A-2032B (Loc 126 – Washroom 2 <sup>nd</sup> floor)	Ceramic Tiles				
A-2031 (Loc 127 – T. Pardy 2 <sup>nd</sup> floor)	Vinyl Floor Tiles (suspect)				
A-2030 (Loc 128 – E. Roberts $2^{nd}$ floor)	Concrete (poured) (possible floor tile)				
A-2C03A (Loc 129 – Corridor 2 <sup>nd</sup> floor)	Terrazzo				
A-2029A (Loc $130$ – Closet $2^{nd}$ floor)	12x12 vinyl floor tiles				
A-2029A (Loc 131 – Washroom 2 <sup>nd</sup> floor)	12x12 vinyl floor tiles				
A-2029 (Loc $132$ – Board of Rejents Board Room $2^{nd}$ floor)	Carpet				
A-2022F (Loc 135 – D. Collins)	Vinyl sheet flooring (suspect)	GOOD			
A-2022D (Loc 136 – G. Pike)	Vinyl sheet flooring (suspect)				
A-2022A (Loc 139 – File Room)	12x12 vinyl floor tiles				
A-2010 (Loc 140 – Custodial Room 2 <sup>nd</sup> floor)	Ceramic Tiles				
A-2003 (Loc 142 – Registration on 2 <sup>nd</sup> floor – Section #1)	Flooring - suspect				
A-2003 (Loc 142 – Registration on 2 <sup>nd</sup> floor – Section #2)	Flooring - suspect				
A-2004 (Loc 143 – Corridor East)	Terrazzo				
A-2C02 (Loc 144 – West Corridor)	Terrazzo				

	Description	<b>Condition &amp; Quantity</b>			
Room # and Location ID	Description	Good	Fair	Poor	
A-2C03 (Loc 145 – Foray)	Carpet				
A-2C03 (Loc 145 – Foray)	12x12 marble flooring				
A-2V02 (Loc 146 – Entrance)	Marble flooring				
A-3006 (Loc 152 – F. Polack 3 <sup>rd</sup> floor)	12"x12" vinyl floor tiles (non-detected Sample # A010)				
A-3014 (Loc 160 – Storage Room)	Vinyl Sheet flooring (suspect)				
A-3014A (Loc 161 – Board Room/Library)	Vinyl sheet flooring (suspect)				
A-3015 (Loc 162 – Copy Room)	Vinyl sheet flooring (suspect)				
A-3015A (Loc 163 – File Room)	Vinyl sheet flooring (suspect)				
A-3000 (Loc 164 – Graduate Room 3 <sup>rd</sup> Floor)	12" x 12" Vinyl floor tiles	GOOD			
A-3016 (Loc 165 – Coustodial Closet 3 <sup>rd</sup> floor)	Clay tiles				
A-3026B/A (Loc 176 – Dr. Batisch Head, Dept of English)	Vinyl sheet flooring (sample # A-035)				
A-3028 (Loc 177 – Staff Lounge)	Vinyl sheet flooring (suspect)				
A-3029 (Loc 178 – M. Dalton)	12"x12" vinyl floor tiles (New white streak – Sample # A010)				
A-3031 (Loc 179 – Dr. Sherrodes)	12"x12" vinyl floor tiles (beige speckle)				
A-3038 (Loc 184 – D. Farquharson)	No entry to room				
A-3045 (Loc 189 – Electrical Room)	Vinyl sheet flooring (Sample # A-035)				
A-3046 (Loc 190 – Custodial Closet)	Clay tiles				
A-3047M (Loc 202 – Washroom)	Ceramic Tiles				
A-3033 (Loc 211 – Dept of Eng Seminar Room)	12"x12" vinyl floor tiles (blue speckle)				
No room number – Loc 213 (Storage Room 3 <sup>rd</sup> floor)	Ceramic tiles				
A-3030 (Loc 214 – Female)	Ceramic tiles				
A-3027E (Loc 216 – Closet)	Vinyl sheet flooring				
A-3027D (Loc 217 – Office)	Vinyl sheet flooring				

Room # and Location ID	Description	Condi	Condition & Quantity			
Koom # and Location ID	Description	Good	Fair	Poor		
A-3027B (Loc 219 – P. Bryne)	Vinyl Sheet flooring					
A-3025, A + B + Washroom						
(Loc 222 – Male Washroom	Ceramic tiles					
Corridor)						
A-3C01 (Loc 223)	Terrazzo					
Newfoundland Department of Government Services recognizes materials with greater than 1% asbestos by						
weight as an asbestos-containing mat	erial.					

The possibility of multiple layers of flooring, tiles covered with carpets and as well other concealed conditions may exist in the Site Building. Should any additional floor coverings be uncovered, these flooring materials are to be managed as asbestos materials until sampling determines otherwise.

#### 3.6.6 Asbestos Cement Products

#### 3.6.7 Vermiculite Insulation

No vermiculite containing products were identified in the MUN survey sheets. Visual observations were made above the ceilings and through accessible hatches by MUN surveyor. Wall cavities were not investigated.

#### 3.6.8 Other Asbestos-Containing Building Materials

Hardboard (transite) sheeting was identified in various areas throughout the building. Sampling determined 25% chrysotile asbestos (reference sample AA-038 – Location above doors in hall 1C01). These materials were observed as perforated ceiling panels at entrances to office and in some areas as wall panels on the first floor corridor (mainly painted white). Other forms of transite were observed on the footing of interior doors (painted black) throughout the building and as a backing to the kitchen sink in room (reference sample AA-1021 (painted).

Expansion joint cloth was observed on mechanical equipment in AA-1013G. Sample analysis of this material indicates an asbestos content of 20-50% Chrysotile asbestos.

#### 4.0 SURVEY LIMITATIONS

It should be noted that all information provided in the above report was provided to Pinchin LeBlanc by Memorial University, St. John's Campus in request of preparing this documentation for the sole benefit of our client (*Memorial University, St. John's Campus*). Pinchin LeBlanc identified sample numbers, locations and results from the MUN survey sheets provided by the client. It is also to be noted that destructive testing was not conducted during the survey conducted by Memorial University surveyor (*Susan Knight*) to determine concealed conditions.

There are areas in the building that are suspect to contain asbestos containing material, i.e. behind washroom facilities walls/ceiling, inaccessible/unidentified shafts, cavities, pipe chases and such that were not accessed. Additional care should be taken during renovations/demolition in areas suspected to have concealed asbestos containing materials to ensure these materials are not disturbed.

Due to multiple renovations over time, asbestos containing materials may have been hidden behind newly constructed walls and ceilings, and such areas were inaccessible during the inspection. Should any suspect materials are uncovered during further renovations or alterations, the materials should be analyzed to confirm the presence or absence of asbestos.

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

The investigation performed by the Memorial University surveyor was not exhaustive and cannot be construed as a certification of the absence of any asbestos materials from the site. Conclusions derived are specific and limited to the immediate area of investigation. Representative samples have been analyzed for substances that are expected based on the data available at the time of the study. The absence of information relating to a specific substance does not preclude its presence.

Third party use of this report, or any reliance on or decisions made based on the findings of this report, are the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted based on this report.

#### 4.1 Pinchin LeBlanc Environmental Asbestos Product Summary

Sample preparation and analytical procedures are in compliance with the Code for the Determination of Asbestos from Bulk Insulation Samples, dated the 23rd of August, 1985 and issued by the Occupational Health and Safety Division of the Ontario Ministry of Labour, and U.S. EPA Method 600/R-93/116 dated July, 1993. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the volume percentage of asbestos present. The lower limit of reliable quantitation is estimated to be 0.1%. A reported concentration of <0.1% indicates the presence of confirmed asbestos in trace quantities limited to only a few fibres or fibre bundles in an entire sample. Multiple phases within a sample are analyzed separately. A reported concentration of less then (<) the regulatory threshold indicates the presence of confirmed asbestos reserves the fibres or fibres or less then (<) the regulatory threshold indicates the presence of confirmed asbestos reserves the fibres or fibres or less then (<) the regulatory threshold indicates the presence of confirmed asbestos reserves the fibres or fibres or less then (<) the regulatory threshold indicates the presence of confirmed asbestos reserves the fibres or fibres or fibres or less then (<) the regulatory threshold indicates the presence of confirmed asbestos in trace quantities.

fibre bundles in a entire sample. This method complies with all provincial regulatory requirements (NIOSH 9002, I.R.S.S.T. 244-2). Multiple phases within a sample are analyzed and reported separately.

#### PINCHIN LEBLANC ENVIRONMENTAL LIMITED

Prepared by:

Erika Ryan Environmental Technologist Hazardous Materials Group eryan@pinchinleblanc.com

Reviewed by:

Lacke

Paul Staeben NL Branch Manager/Project Manager Hazardous Materials Group pstaeben@pinchinleblanc.com

**APPENDIX I** 

ASBESTOS ANALYTICAL RESULTS (PROVIDED BY MUN)

JORDAN CONSTRUCTION 709 368 643509 754-4194 NO.2239 P.22.2



24 MAPR. 26. 2009) 9 7: 53AM

151 Crosbie Rosd Suite 402 SL John's, NL A18 484

2

Bus: (709) 754-4146 Fax: (709) 754-4194 Email: noavis@toslitech.com

SCANNE

April 24, 2009

Project# 9258

Mr. Glenn Dyke Jordan Construction Ltd. 37 Commonwealth Avenue Mount Pearl, NL A1N 1W7

## RE: Buik Sample Results - MUN Arts and Administration Building, St. John's, NL

On April 22, 2009, three (3) bulk samples were collected by ALL-TECH Environmental Services Limited from various locations in the Arts and Administration Building of Memorial University. Upon the request of Mr. Glenn Dyke these samples underwent laboratory PLM/DS analysis to determine their asbestos content.

Listed in Table 1.9 below are the sample descriptions and laboratory results of this analysis.

Bulk Sample Results					
Sample Number	Sample Description/Location	Asbestos Content			
AA-01	Drywall Joint Compound - Wall Room A-2001B	None Detected			
AA-02	Plaster Wall Corridor A-2002 by Room A-2002	<1% Tremolite			
AA-03	Drywall Joint Compound - Bulkhead Room A-2001B	None Detected			

Table 1.0 Bulk Sample Results

Laboratory analysis confirmed that the samples **did not co**ntain an asbestos concentration greater than the Newfoundiand and Labrador guideline of 1%. (*Newfoundland and Labrador Asbestos Abatement Regulations, 1998*).

If you should have any questions regarding the results, please feel free to contact me at (709)754-4146.

Thank You,

ike and

Nikki Davis, B. Tech., Env. Tech. Environmental Consultant ALL-TECH Environmental Services Limited

Encl: Laboratory Results (1) Sample Locations (1)

Sydney, NS

Mencion, NB Saint John, NB

Comer Brook, NL

JORDAN CONSTRUCTION 709 368 643508 754-4184 NO. 2239 P.33 3



24 FAPR-26,2009)8-7:53AM

Ph: (506) 656-1058 Fax: (506) 652-7998 email@toaltech.com

# Certificate of Analysis

Nikki Davis ALL-TECH Environmental Services Limited 151 Crosbie Road Suite 402 St. John's, NF A1B 484 A2H 6C7 Report Date: 24-Apr-09 AT Project#: 9258 Project: MUN Arts / Admin Building Jordan's Construction PO / WO:

## Bulk Sample Analysis Summary

Lab No:	L-2099-1	,	Material Description: AA-07, Drywall Joint Con	npound, Wall.
<u>V Asbestos</u>		<u>1000</u>	Location: A-2001B, Mun Arts / Admin. Bidg. <u>Non-Asbentos Fibrous Material</u>	Non-Florous Material
Non-Detect	ed		Cellulose	
Lab No:	1-2099-2		Material Description: AA-02, Plaster Wall. Location: A-2002B, Mun Arts / Admin, Bldg.	
<u> 4 Antinatos</u>		Type	Han-Asbestas Fibrous Majural	Non-Fibrous Material
<1%		Tremolite		Mica
Lab No:	L-2099-3		Material Description: AA-03, Drywall Joint Cor Location: A-20018, Mun Arts / Admin, Bidg.	npound, Buikhead.
MASDerits		Type	Non-Asbertos Fibrous Insterial	Non-Sibrory Material
Non-Detect		Joht Microseo	Cellulose by / Dispersion Staining (PLIMOS), Test Memor: NIOSH 9002, 1	CC <15 by volume.

LOD - Refers to Limit of Demotion

Analysis Performed By:

Date: 24-Apr-09

Page 1 of 1

Received Time Apr. 24. 1 20PM

APPENDIX III LABORATORY ASBESTOS RESULTS



Client:

ALL-TECH Env'l Services Ltd.

. .

 $\mathbf{NL}$ 

A1B 4B4

151 Crosbie Rd, Suite 402

St. John's

Report Date:5/22/2008Project:Arts&Admin.Bldg.-MUNProject No.:7660

Client No.:	. 3314622 AA-001	Description / Location:	Tan Floor Tile; 9x9 Room A-1000	30	
% Ashestos	Type	% Non-Asbestos Fibrou	<u>s Material</u> Type		% Non-Fibrous Materia
PC 4.8	Chrysotile	None Detected	1 None Det	ected	PC 95.2
Lab No.: Client No.:	3314622 ` AA-001`	Description / Location:	Yellow Mastic Room A-1000	al	Løyer No.: 2
<u>% Ashestos</u>	. Түре	<u>% Non-Asbestos Fibrou</u>	<u>s Material</u> <u>Type</u>		% Non-Fibrous Materia
None Detected	None Detected	None Detector	i None Det	ected	100
Lab No.: Client No.:	3314623 AA-002	Description / Location:	Off-White Acoustica Ceiling; Room A-100		
% Asbestos	Type	% Non-Ashestos Fibrou	<u>s Material</u> <u>Type</u>		% Non-Fibrous Materia
PC 5.3	• Chrysotile	None Detected	9 v.	-	PC 94.7
Lab No.:	3314624	Description / Location:	Grey/Tan Insulation		
Client No.:			Pipe Fitting In Bulkt	ead, Room A-1000	<u>s</u>
<u>% Asbestos</u>	Type	% Non-Astiestos Fibrou	is Material Type	1	% Non-Fibrous Materi
70	Chrysotil∉	10	Cellule	osé	20
. <u>Store</u> M	IST-NVLAP No. 1011	(5.4 NV DOI			
	his confidential report relates only to	(hose item(x) tested and does not represen report shall not be reproduced except in fi	ull, without written approval o	LAP, AIHA or ony ogency o	No. 100188 I the U.S. government
		-	EPA 600/R-93/116	····	
limit o EPA 6 due to	of quantization (PC-Trace) means that 500 Method - If not reported or otherwi	d performed Mothod not performed unless ashestos was detected but is not quantifiable ise noted, layer is either not present or the el acroscope Therefore, negative PLM results	= under the foint Counting regi lient has specifically requested	men. Analysis includes all d that it not be analyzed. Smal	isting separable layers in accordance I ashestos fibers may be missed by Pl
analysis Perfe	ormed By: L. Solebello	·	Approved By:	Frank E. Ehrenfeld, I	<u>,60</u>
				Trans, E. Enremeid, I	



Client: ALL-TE	CH Env'l Services Ltd.
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151 Crosbie Rd, Suite 402

St. John's NL A1B 4B4

#### Report Date: 5/22/2008

 Project:
 Arts&Admin.Bldg.-MUN

 Project No.:
 7660

Lab No.: Client No.:	3314625. ДА <b>-</b> 004	12	Description / Location:	White Pla Wall, Roo	aster om A-1000	·	12 (n. 18) 12
% Asbestos	Type		% Non-Asbestos Fibrous	Material	Type		% Non-Fibrous Material
None Detected	None Detected		None Detected		None Detected		100
	0.20			÷.	2 2		<u>9</u>
Lab No.: Client No.:	3314626 AA-005	2	Description / Location:	Off-White Room A-1	e Joint Compound 1001		-
% Asbestos	Type		% Non-Asbestos Fibrous	Material	Type	4) se	% Non-Fibrous Material
None Detected	None Detected		None Detected		None Detected		100
					2		
Lab No.: Client No.;	3314627 AA-006		Description / Location:	White/Ta Room A-1	n Ceiling Tile; 2x4 1001		
<u>% Asbestas</u>	Type		% Non-Ashestos Fibrous	Material	<u>Type</u>		<u>% Non-Fibrous Material</u>
None Detected	None Detected	8	35		Cellulose		30
-	9 - <sup>16</sup>	÷-	35 No. 65	15	Fibrous Glass		
Lab No.: Client No.:	3314628 AA-007		Description / Location:	Grey Insu Room A-	ilation, 1" Pipe Fitt 1001A1		
% Asbestos	· <u>Typ</u> e	22	%'Non-Asbestos Fibrons	; <u>Materjal</u>	Турс		% Non-Fibrous Material
None Detected	None Detected		5		Cellulose		70
	1		25		Fibrous Glass		
·····		916 - EV			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		·····
	ST-NVLAP No. s confidential report relate	only to those it	em(s) tested and does not represent	an endarseme	ent by NIST-NVLAP, AIH		
	<u></u> .	This report.	shall not be reproduced except in fu Analysis Method:			oratory.	
Limit of EPA 60 due to 1	quantitation (FC-Trace) me 00 Method If not reported to	sna that asbesto r ocherwise note	med. Method not performed uhless a swas detected but, is not quantifiable d, layer 18 either not present or the di oc Therafore, negauve PLM results	stated. Quantij under the Pour ont has specifi	fication at <0 25% by vol- at Counting regimen Ana cally requested that is not	alysis includes all distinct be analyzed - Small ashe	separable layers in accordance w
Analysis Perfo	rmed By: <u>L. Sol</u>	ebello	· · · · · · · · · · · · · · · · · · ·		··· · · · · · · · · · · · · · · · · ·		S
Date: 5/22	/2008		Pa <u>c</u> e 2	of 15			



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# **CERTIFICATE OF ANALYSIS**

Client:	ALL-TECH Env	"l Services	Ltd.	-	Report Date:	5/22/2008	
	151 Crosbie Rd,	Suite 402			Project:	Atts&Admin.	Bidg -MUN
- 	St. John's	NL	AIB 4B4		Project No.:	7660	
'n,#** - μ +≮nΩr	лан. Э	BUL	K SAMPLE AN	ALYSIS	SUMMAR	Y	1
Lab No.:	3314629 AA-008		Description / Location:	Grey Insu Room A-1	lation; 3" Pipe Finin		
% Asbestos	Туре		<u>% Non-Ashestos Fibroi</u>		UUTAI <u>Type</u>		
75	Chrysofile		None Detecte		None Detected		<u>% Non-Fibrous Materia</u>
e 5	-	a	1.4244 (P. 194444)	10	TAONE DECESIED		25
<b>.</b>							<u>a</u>
Lab No.: Client No.:	3314630 AA-009		Description / Location:	Grey Floo Room A-1	r Tile; 12x12 001A2		
% Ashestos	Type		*. <u>% Non-Asbestos Fibror</u>	<u> </u>	Type		% Non-Fibrous Materia
PC 6.4	Chrysotile		None Detected		None Detected		PC 93.6
				3			
Lab No.: Client No.:	3314630 AA-009	×)	Description / Location:	Black Mas Room A-1		8	Layer No.: 2
% Ashestos	Type		% Non-Asbestos Fibrou	s <u>Material</u>	Type		<u>% Non-Fibrous Materia</u>
None Detected	None Detected		None Detected	3	None Detected		100
			92 J.				
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			2	кі <sub>ла</sub>	s2		
					22	a a	-
2	7		50 50		14		÷.
5. <sup>12</sup>		*1	2		41 e <sup>2</sup>		
					a.,	-	
NI	ST-NVLAP No.	101165-0	NY-DOI	H No. 110	21 4	IIIA Lab No	100199
The	is confidential report relates	only to those the This encode	m(s) texted and does not represent hall not be reproduced except in fu	an endorsemen	SHONDSTIND AD ATHA		. 100100 I.S. government
	- <u> </u>		Analysis Method:			tory!	
EPA 60	Mothod. If not reported or	otherwise noted	ned. Method not performed unless, was detected but is not quantifable , layer is either not present or the olic c Therefore, negative PLM results	under the Point	Counting regimen. Analys	is includes all distance:	eparable layers in accordance w
nalysis Perfo	rmed By: L. Solo	bello					



Client:
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ALL-TECH Env'l Services Ltd.

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Report Date:	5/22/2008	
Project:	Arts&Admin.BldgMUN	
Project No.:	7660	

#### BULK SAMPLE ANALYSIS SUMMARY

	Lab No.: Client No.:	3314631 AA-010	Des	cription / Location:		or Tile; 12x12 om A-1001A2	-	20	
25	<u>% Asbestos</u>	Type		% Non-Asbestos Fibrou	is <u>Material</u>	Type		<u> % Non-Fibrous Mater</u>	ial
	None Detected	None Detected	-	· None Detector	i N	lone Detected	X	100	
30					(4)	11			
ň	Lab No.: Client No.;	3314631 -AA-010	Des	cription / Location:	Black Mastic Top Layer, Re	00m A-1001A2		Layer No.: 2	đ.
	<u>% Asbestos</u>	Туре		% Non-Ashestos Fibror	<u>s Material</u>	Type		% Non-Fibrous Mater	al
	None Detected	None Detected	ı	None Detects	a 🤉 N	ons Detected		100 -	-
			<u> </u>					-	
		3		12					
			÷.		20				
			6° 5	25					
	3.3	8		9	a = 2	- 2# 81	*		
		<i>(</i> <b>5</b>		3	$\Omega = 0$				
	. E		10 9		09		<del>2</del> 7	2 15	
		:=:	<u>1</u>	9	2		344		

NIST-NVLAP No. 101165-0 NY-DOH No. 11021 AIHA Lab No. 100188 This confidential report relates only to those item(s) tested and does not represent an endorsement by NIST-NVLAP, AIHA or any egency of the U.S. government This report shall not be reproduced except in full, without written approval of the laboratory. Analysis Method: EPA 600/R-93/116 (PC) Indicates Stratified Point Count Method performed Moulod not performed unless stated. Quantification at <0.25% by volume is possible with this method. (PC-Trace) represents this Comments; imit of quantitation (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regiment. Analysis includes all distinct separable layers in accordance with UPA 600 Method. If not reported or otherwise noted, layer is either not present or the client has specifically requested that it not be analyzed. Small asbestos fibers may be missed by PLM due to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix Analysis Performed By: L. Solebello Date: 5/22/2008 Page 4 of 15 ----(0.0)- -- --- --- ----



Client:

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ALL-TECH Env'l Services Ltd.

Report Date: 5/22/2008

151 Crosbie Rd, Suite 402 St. John's NĽ A1B 4B4

Project No.: 7660

Project:

Arts&Admin.Bldg.-MUN

# BULK SAMPLE ANALYSIS SUMMARY

Lab Clier	No.: ut No.:	3314632 AA-011	72	Des	cription / Loca		ink Floor fiddle La	Tile yer, Room A-1	00142			
<u>% As</u>	bostos		Type		% Non-Asbesto			<u>Type</u>	00172		94 Man 1751	38
None	Detected	None	e Detected			Detected	22	Nanc Detected	l		<u>% Non-Fibrous</u> 100	Mülerial
					ð.						15	
Lab. Clier	No.: nt No.:	3314632 AA-011		Des	cription / Loca		lack Mas (iddle La:	stic yer, Room A-1	001A2		-Layer No.	: 2
<u>% As</u> l	bestos	•	Туре		% Non-Ashesto			<u>Type</u>			% Non-Fibrous	Material
None	Detected	None	Detected	17	None	Detected		None Datected			100	(
									22			
Lab i Clien	No.: at No.:	331,4632 AA-011		Dese	ription / Loca		lack Mas üddle Lay	tic yer, Room A-10	001A2		Layer No.	: 3
<u>% Ast</u>		:	<u>Type</u>	1	<u>% Non-Asbesto</u>	s Fibrous Ma	<u>uterial</u>	Τνρο		5	<u>% Non-Fibrous i</u>	Material
None :	Detected	None	Detected		None	Detected	-	None Detected			100	
				2								
	÷		••			,			<u></u>			,-
				5		2						
		\$ s		5		-						
								-				
			е 11		1		1.4			×		
	NI	ST-NVL	AP No. 10116	5-0		-DOH N						2
	This	confidential y	eport relates only to t	hase item(s) t	191 ssied and does not r be reproduced ex	enresent an e	ndorsement	IN NUSTINIT AD A	THE of any in	Lab No. 1 may of the U.S.	200188 20vernment	
					Analysis M	fethod: EPA	.600/R-93	/116				
Comments:	EPA 600	Method If n	d Point Count Method (C-Trace) means that a or reported or otherwise tions of the optical mid- he-matrix.	a nated lines.		-2 -1	Neto 1 Offic C	Joaning regimen. A	marysis motode:	s all distinct sep.	anable layers in acco	rdance with
Analysis	Perfor	med By:_	L. Solebello			·		<u> </u>	·			<u> </u>
Date:	_ 5/22/	2008				Page 5 of 1:	5				2	6
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Client: ALL-TECH Env'l Services Ltd.

151 Crosbie Rd, Suite 402

St. John's NL AlB 4B4

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Report Date: 5/22/2008 -

Project: Arts&Admin.Bldg.-MUN Project No.: 7660

Lab No.: Client No.:	3314633 AA-012	Description / Location:	Grey Floor Tile Bottom Layer, Room A-1001A2	,
<u>% Azbestos</u>	Type	% Non-Asbestos Fibrou		<u>% Non-Fibrous Material</u>
PC 6.5	Chrysotile	None Detecto	None Detected	PC 93.5
	告 彩 法			PC 93.3
Lab No.: Client No.:	-3314633 AA-012	Description / Location:	Black Mastic Bottom Layer, Room A-1001A2	Layer No.: 2
<u>% Ashestos</u>	Type	% Non-Asbestos Fibrou		% Non-Fibrous Material
None Detected	None Detected	None Detected	_ <b>-</b> -	100
		8	<i>6</i>	
Lab No.; Client No.:	3314633 AA-012	Description / Location:	Black Mastic Bottom Layer, Room A-1001A2	Layer No.: 3
% Asbestos	- <u>Түрс</u>	% Non-Asbestos Fibrou		% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100
	+C 11. 11			
Lab No.: Client No.:	3314634 AA-013	Description / Location:	Grey Insulation Spray-On Fireproofing, Room A	-1003
<u>% Asbestos</u>	Type	% Non-Asbestos Fibrous		<u>% Non-Pibrous Material</u>
95	Amosite	None Detected		5
	ુર વિ	ŝ.		
		·····		
	ST-NVLAP No. 10116		I No. 11021 AI	HA Lab No. 100188
Thu	confidential report relates only to the This re	oss tiem(s) tested and does not represent port shall not be reproduced except in fu	an endorsement by NIST-NVLAP, AIHA or U, without written approval of the laborator	t
		Aualysis Method:	EPA 600/R-93/116	
RPA 60(	Mathod Franciscus		man are come contaille telenion. Analysis i	possible with this method. (PC-Trace) represents this neledes all distinct separable layers in accordance with alyzed. Small asbestos fibers may be missed by PLM in be used as a confirming technique. Regulatory Limit
Analysis Perfor	med By: L. Solebello			
Date: <u>5/22/</u>	2008	Page 6	of 15	64
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Client; ALL-TECH Env'I Services Ltd.

Report Date: 5/22/2008

151 Crosbie Rd, Suite 402

28

St. John's NL

Project: Arts&Admin Bldg-MUN Project No.: 7660

## BULK SAMPLE ANALYSIS SUMMARY

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	Lab No.: Client No.:	-3314635 AA-014		Description	/ Location:	Tan Coiling Room A-100			
			8	54 C	50				
	% Asbestos	Type		<u>% Non-</u>	Asbestos Fibrous	Material	<u>Type</u>		<u>% Non-Fibrous Material</u>
	None Detected	None Detected			25	`	Cellulose		. 25
	25		-		50		Fibrous Glass		
				÷.					3 <b>7</b> ,
10	Lab No.:	3314636		Description	/ Location:	Off-White Jo	int Compound		
	Client No.:	AA-015		1		Wall, Room	-		
	% Asbestos	Type -		<u>% Non-</u>	Asbestos Fibrous	Material	Type	2	% Non-Fibrous Material
	None Detected	None Detected	62	а. Га	None Detected		None Detected		100
				8					
•••••	Lab No.: 🕛	3314637		Description	/ Location;	Tan Floor Ti	le; 9x9		
	Client No.:	AA-016	22			Room A-103	8		
	% Ashestos	Type		<u>% Non-</u>	Asbestos Fibrous	Material	Type		% Non-Fibrous Material
	PC 7.5	Chrysotile	J.	e -	None Detected		None Detected		PC 92.5
	10		1+			്യി		$\alpha^*$	:t.
	Lab No.:	3314637		Datastat	ал. / Х. а. а. Алана а	YD faats N daardii	251		
	-	AA-016	1977	Description ,	Locarion:	Black Mastie Room A-103			Layer No.: 2
	% Ashestos	Type		5 % Non-/	Ashestos Fibrous	Material	Type		26 Non-Fibrous Material
	PC 3.5	Chrysotile			None Detected		None Detected		PC 96.5
					20		2		
			•	••••••	••				
		ST-NVLAP No. 1 confidential report relates o	nly to those it	em(s) tested and d	ues not représent	No. 11023 an endorsement by		AIHA Lab No	<b>. 100188</b> J.S. government
		·	- ma reports		alysis Method: 1				<u> </u>
Cor	EPA 50 due to re	0 Method. If not reported or o	a inst aspestos therwise noted	med. Method not j was detected but i l laver as either po	performed unless a is not quantifiable u	atted. Quantificati Inder the Point Co or has specifically	on at <0 25% by volu unring regimen. And	lysis includes all distinct.	nethod. (RC-Trace) represents this separable layers in accordance with nus fibers may be minsed by PLM imming technique. Regulatory Limit
Ал	alysis Perfor	med By: L. Soleb	ello						

Date: 5/22/2008 --

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# **CERTIFICATE OF ANALYSIS**

Client: ALL-TECH Env'l Services Lt
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151 Crosbie Rd, Suite 402

St. John's

NL

Report Date:5/22/2008Project:Arts&Admin.Bldg.-MUNProject No.:7660

## BULK SAMPLE ANALYSIS SUMMARY

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	Lab No.: Client No.:	3314638 AA-017	Description / Location:	Grey Insula Pipe Fittlug	tion 3-Mech. Room 1018	-	
	% Asbestos	Type	% Non-Ashestos Fibrau	s Material	<u>Tvpc</u>		% Non-Fibrous Material
	75	Chrysotile	Trace		Fibrous Glass	Gi .	25
53		8 <sup>5</sup> 9	ял. ел.				
	Lab No.: Client No.:	3314639 AA-018	Description / Location:	Grey Insula			, <sup>21</sup>
	% Asbestos	Type	<u>% Non-Asbestos Fibrou</u>	<u>s Material</u>	Type		% Non-Fibrous Material
	75	Chrysotile	Trace		Cellulose		- 25
		2	Trace		Fibrous Glass	6	
	Lab No.: Client No.;	3314640 ,AA-019	Description / Location:	Tan/Grey J Pipe Fitting	nsulation g 1"-Room A- 1013	wie (ij)	neer ¥85, en Bolkenee L
	% Asbestos	Туре	% Non-Asbestos Fibrou		· <u>Турс</u>		% Non-Fibrous Material
	70	Chrysotile	5	8	Cellulose	≪	25
	ē)	54. 22	2 R	2	× *	a n	×
	Lab No.: Client No.:	3334641 AA-020	Description / Location:	Tan Joint ( Room A-10	-	-	
	% Asbestos	Type	% Non-Asbestos Fibrou	<u>s Material</u>	Type	9	% Non-Fibrous Material
	PČ 2.1	Chrysotile	None Detected	9	None Detected		ዮሮ 97.9
2		96 R.			0		
· •.			;				800 m m n n 10 14 00
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		This rep	ort shall not be reproduced except in fi	ill, without write	en approval of the laborate	r ony agency of the Q. iry.	J, gaverninzhi
			Analysis Method:				
	limit of EPA 6 doe to	ndicates Strauffed Point Count Method pe f quantitation (PC-Trace) means that asbe 00 Method. If not reported or otherwise r resolution limitations of the optical interp d upon the sample matrix	suos was detected but is not quantifiable toted, layer 1: either not present or the cl	e under the Pount lient has specifics	Counting regimen. Analysis illy requested that is not be a	s includes all destinct s nalyzed. Small asbest	eparable layers in accordance with os fibers may be missed by PLM
AI	alysis Perfo	ormed By: L. Solobello			а. С		
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Client: ALL-TECH Env'l Services Ltd. Report Date: 5/	/22/2008	
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151 Crosbie Rd, Suite 402

St. John's N

Project: Arts&Admin.Bldg.-MUN

NL

Project No.: 7660

## BULK SAMPLE ANALYSIS SUMMARY

	Lab No.: Client No.:	3314642 AA-021	Description / Location: Tan Acoustical Plaster Ceiling, Room A-1017	
	<u>% Asbestos</u>	Type	% Non-Asbestos Fibrous Material Type	<u>% Non-Fibrous Material</u>
	PC 6.3	Çhrysotile 	None Detected None Detected	PC 93.7
••••	Lab No.: Client No.:		Description / Location: Tan Ceiling Tile; 2x4 Room A-1023	
	<u>% Asbestos</u> -	<u>Ťvp</u> e	% Non-Asbesto's Fibrons Material Type	% Non-Fibrous Material
,	Notic Detected	None Detected	25     Collulose       50     Fibrous Glass	25
	Lab No.: Client No.:	33)4644 AA-023	Description / Location: Grey Floor Tile; 12x12 Room A-1025	
	% Asbestos	Type	% Non-Asbestos Fibrous Material Type	% Non-Fibrous Material
	None Detected	None Detected	None Detected None Detected	100
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		5 31x		
				а А
		ST-NVLAP No. 1011 confidential report relates only to	165-0 NY-DOH No. 11021 AIHA othose isom(s) tested and does not represent on undarsement by NIST-N/LAP. AIHA or any ag	Lab No. 100188

This report shall not be reprodueed except in full, without written approval of the laboratory. Analysis Method: EPA 600/R-93/116 Comments: (PC) Indicates Stratified Point Count Method performed. Method not performed unless stated. Quenafication at <0.25% by volume is possible with this method (PC-Trace) represents this limit of quantitation. (PC-Trace) means that asbestos was detected but is not quantifiable under the Point Counting regimen. Analysis moludes all distinct separable layers in accordance with EPA 600 Method. If not reported or otherwise noted, layer is either not present or the chern has specifically requested that is not be analyzed. Small asbestos fibers may be missed by PLM to resolution limitations of the optical microscope. Therefore, negative PLM results cannot be guaranteed. Electron Microscopy can be used as a confirming technique. Regulatory Limit is based upon the sample matrix.

Analysis Performed By: L. Solebello

Date: 5/22/2008

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Client;	ALL-TECH Env'l Services Ltd.	
	151 Crosbie Rd, Suite 402	R

St. John's

Report Date:5/22/2008Project:Arts&Admin.Bldg.-MUNProject No.:7660

	Lab No.: Client No.:	3314645	÷.	Description / Location:	Tan Floor Room A-1	•		
	% Ashestos	Type		<u>% Non-Asbestos Fibrogs</u>		Турс		<u>% Non-Fibrous Material</u>
	PC 6.8	Chrysotile	13 N.	None Detected		None Detected		PC 93.2
		i)	800	225		4	5	-0
	Lab No.: Client No.:	3314645 AA-024	:	Description / Location:	Black Mas Room A-1			Layer No.: 2
	<u>% Asbestos</u>	Type	÷	% Non-Asbestos Fibrous	Material	Type		• <u>% Non-Fibrous Material</u>
	PC 4.1	Chrysotile	,	Nono Defected	2	None Detected		PC 95.9
		· · · · ·		7.1	ж. 			
÷	Lab No.: Client No.:	3314646 AA-025	]	Description / Location:	Tan Joint ( Room A-10	*:		
	<u>% Asbestos</u>	<u>Tvpc</u>	۲	% Non-Asbestos Fibróus	<u>Material</u>	<u>Type</u> = X	9) M <sup>9)</sup> :	% Non-Fibrous Material
	PC 1.6	, Chrysotile	~	None Detected		None Detected		PC 98.4
·		2			22	ж. С	+#	
		2		(4)) (4))	-	14		
$x^{2}$	e	-	*1			<b>a</b>		
					2			i.
		ST-NVLAP No. 10		NY-DOH n(s) tested and does not represent of	No. 1102	21	AIHA Lab No.	. 100188
			This report sh	au not be reproduced except in jui	, without write	n opproval of the labo	pratory.	
Con	ÉPA 60 due to re	Method If not reported or or	berwase noted	Analysis Method: E ed Method not performed unless at was deteated but is not quantifieble u layor is either not present or the clie Therefort, negative PLM results of	ated. Quantific nder the Point (	ation at <0.25% by vol- Counting regimen. An:	lysis includes all distinct a	eparable layers in accordance with
Au	alysis Perfor	med By: L. Soleb	ello	· · · · · · · · · · · · · · · · · · ·				
Dat	e: <u>5/22/</u>	2008		Page 10	of 15			



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# **CERTIFICATE OF ANALYSIS**

Client: A	LL-TECH Env'l Services Ltd.
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151 Crosbie Rd, Suite 402

St. John's NL

Report Date:5/22/2008Project:Arts&Admin.Bldg.-MUNProject No.:7660

## BULK SAMPLE ANALYSIS SUMMARY

AlB 4B4

					_			
		3314647 AA-026		Description / Location:		Tile; 12x12 rpet; Room A-1039		с.
	<u>% Asbestos</u>	Type		% Non-Asbestos Fibrous		Type		% Non-Fibrous Material
	PC 1.8	Chrysoule	Ъ. С.	None Detected		None Detected		PC 98.2
	52	0		۰ ۳			τ)	
	•	3314647 AA-026	63	Description / Location:	Black Mas Under Car	stic pet; Room A-1039		Layer No.: 2
	% Asbestos	Type		% Non-Asbestos Fibrous		Type	2	% Non-Fibrous Material
	None Detected	None Detected		None Detected		None Detected		100
				×	2			
93 14		3314648 AA-027		Description / Location:	Tan/Brown Room A-10	n Vinyl Sheet Floorin 021	培	, )
	% Asbestos	Type		% Non-Ashestos Fibrous	Material	Type		% Non-Fibrous Material
	None Detected	None Delected		None Detected		Nono Detected		100
					~	·		54
		U						
							2 2	
0		0.041		<del>2</del>				-0
			÷	720				
		T-NVLAP No. 10			No. 1102	21 AJ	IHA Lab I	No. 100188
	·		This report	ism(s) tested and does not represent a shall not be reproduced except in full,	n enaorsement without writte	t by MISI-WIAP, AllIA or in approval of the laborator	' any agency of 4 ry	ie U.S. government
Con	aments: (PC) India	And Design of the second se		Analysis Method; E	PA 600/R-93	1/116		×
	EPA 600 2	Action if not reported or or	herries ante	med. Method not performed unless six s was detected but is not quantifiable u d, layer is either not present or the cher pe. Therefore, negative PLM results ca	THE DIE COLLEY	Comming regiment Analysis	includes all distin	ict separable layers in accordance with
An	alysis Perforn	ned By: L. Solebo	ello		<u></u>			a

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IATL

International Asbestos Testing Laboratories

# **CERTIFICATE OF ANALYSIS**

. T.	<b>te</b> .
Client:	ALL-TECH Env'l Services Ltd.

151 Crosbie Rd, Suite 402

.

St. John's NL . A1B 4B4

Report Date: 5/22/2008

Project: Arts&Admin.Bldg.-MUN Project No.: 7660

5	Lab No.: Client No.:	3314649 AA-028	De	scription / Location:		r Tile, 12x12 By Elevators 1s	t Floor (1C01)	
	% Asbestos	Type		% Non-Asbestos Fibrous	Material	Type		% Non-Fibrous Material
	None Detected	None Detected	55	None Detected	24	None Detected	2	100
ŝ		W 52	92	ž.		5		
Υ.	Lab No.: Client No.:	3314649 AA-028	De	scription / Location:	Yellow Ma Main Hall I	stic By Elevators 1st	t Floor (1C01)	Layer No.: 2
	<u>% Asbestos</u>	Type		% Non-Asbestos Fibrous	Material	<u>Турс</u>		% Non-Fibrous Material
	None Detected	None Detected	4.5 1	None Detected		None Delected		100
		San.						
9	Lab No.; Client No.:	3314650 AA-029	De	scription / Location:	White Joint Room A-20	-	8	**
	% Asbestos	Type	27	<u>% Non-Asbestos Fibrous</u>	Material	Type		% Non-Fibrous Material
	None Detected	None Detected		None Detected		None Detected		100
					, 4 K			
122	8. • • • • • • • • • • • • •			G				a .
	Lab No.:	3314651	Des	cription / Location:	Grey Insula	uon; Spray-On i	Fireproofing	
	Client No.:	AA-030			In Ceiling,	Room A-2000K		5-1 E
	Client No.: <u>% Ashestos</u>	Ад-030 <u>Туре</u>	-	% Non-Asbestos Fibrous		Room A-2000К. <u>Туре</u>		% Non-Pibrous Material
			÷	<u>% Non-Asbestos Fibrous</u> 70		_	E - E	<u>% Non-Pibrous Material</u> 30
	<u>% Ashestos</u>	Type	2	70	<u>Material</u>	<u>Type</u> Fībrous Glass	е но 20 10	
	<u>% Ashestos</u>	Type	-		<u>Material</u>	<u>Type</u> Fībrous Glass		
	<u>% Ashenton</u> None Detected	Type None Detected		70 	<u>Material</u>	<u>Type</u> Fībrous Glass	AIHA Lab	30 No. 100188
	<u>% Ashenton</u> None Detected	Type None Detected	only to those ttem(s)	70 NY-DOH tessed and does not represent	<u>Material</u> No. 1102	<u>Type</u> Fībrous Glass 	AIHA Lab	30 No. 100188
	<u>% Ashertos</u> Nove Detected NIS This	Type None Detected ST-NVLAP No.	only to those item(s) <u>This report shall</u>	70 NY-DOH fessed and does not represent not be reproduced except in ful Analysis Method: 1	<u>Material</u> No. 1102 an endorsement I, without writer EPA 600/R-93,	<u>Type</u> Fibrous Glass 1 1 by NIST-NVI.AP. All a approval of the lab /116	AIHA Lab HA ar any agency of oratory.	30 No. 100188 The U.S. government
	<u>% Ashertos</u> Nouc Detected NIS This uments: (PC) Inc. Innu of a EPA 600 due 19 re	Type None Detected ST-NVLAP No. confidential report relates quantumon. (Point Comp quantumon, If not reported on	This report shall This report shall be Method performed and that asbesios was to otherwise noted law	70 NY-DOH tessed and does not represent not be reproduced except in ful Analysis Mothod: 1 Method not performed unless s detected but is not quantifable	Material [No. 1102 an endorsement. ], withant writer EPA 600/R-93, ialed Quaptifica ander the Point C	Type Fibrons Glass I by NIST-NVLAP, All approval of the lab /116 hon at <0 25% by vo /ounting regimen. An	AIHA Lab HA or any agency of oratory. Jume 18 possible with alysis includes: all dis	30 No. 100188
	<u>% Ashertos</u> Noue Detected NIS This tments: (PC) Inc. Innu of a EPA 600 due to re is based	Type None Detected ST-NVLAP No. confidential report relates publication. (PC-Trace) me scolution. If not reported of scolution limitations of the o	This report shall This report shall it Method performed ans that asbestos was r otherwise noted, lay ptical microscope Th	70 NY-DOH tessed and does not represent not be reproduced except in ful Analysis Mothod: 1 Method not performed unless s detected but is not quantifable	Material [No. 1102 an endorsement. ], withant writer EPA 600/R-93, ialed Quaptifica ander the Point C	Type Fibrons Glass I by NIST-NVLAP, All approval of the lab /116 hon at <0 25% by vo /ounting regimen. An	AIHA Lab HA or any agency of oratory. Jume 18 possible with alysis includes: all dis	30 No. 100188 The U.S. government this method. (PC-Treee) represents this stands separable layers in accordance with
	% Ashestos Nove Detected NUS This Iments: (PC) Inc Iments: (PC) Inc Iments: content Iments: is based allysis Perfor	Type None Detected ST-NVLAP No. confidential report relates heates Stratified Point Coun- quantitation. (PC-Trace) the Mighida. If not reported on Mighida. If not reported on upon the semple matrix.	This report shall This report shall it Method performed ans that asbestos was r otherwise noted, lay ptical microscope Th	70 NY-DOH tested and does not represent not be reproduced except in ful Analysis Mothod: 1 Method not performed valess s detected but is not quanufiable t it is other not present or the old netefore, negative PLM results of	Material No. 1102 an endgramment. I, without writer EPA 600/R-93, ated Quaptifica ander the Point C an has specificall armot be guaracte	Type Fibrons Glass I by NIST-NVLAP, All approval of the lab /116 hon at <0 25% by vo /ounting regimen. An	AIHA Lab HA or any agency of oratory. Jume 18 possible with alysis includes: all dis	30 No. 100188 The U.S. government this method. (PC-Treee) represents this stands separable layers in accordance with
Con	% Ashestos Nove Detected NUS This Iments: (PC) Inc Iments: (PC) Inc Iments: content Iments: is based allysis Perfor	Type None Detected ST-NVLAP No. confidential report relates heates Stratified Point Coun- quantitation. (PC-Trace) the Mighida. If not reported on Mighida. If not reported on upon the semple matrix.	This report shall This report shall it Method performed ans that asbestos was r otherwise noted, lay ptical microscope Th	70 NY-DOH tessed and does not represent not be reproduced except in ful Analysis Mothod: 1 Method not performed unless s detected but is not quantifable	Material No. 1102 an endgramment. I, without writer EPA 600/R-93, ated Quaptifica ander the Point C an has specificall armot be guaracte	Type Fibrons Glass I by NIST-NVLAP, All approval of the lab /116 hon at <0 25% by vo /ounting regimen. An	AIHA Lab HA or any agency of oratory. Jume 18 possible with alysis includes: all dis	30 No. 100188 The U.S. government this method. (PC-Treee) represents this stands separable layers in accordance with



Client:	ALL-TECH Env	1 Service	s Ltd.		Report Date:	5/22/2008	
	151 Crosbie Rd,	Suite 402			Project:	Arts&Admin.	BIdgMUN
	St. John's	NL	AIB 4B4	-9	Project No.;	7660	
		BUL	K SAMPLE ANA	ALYSIS	SUMMAR	Y.	
Lab No.: Client No.:	3314652 AA-031		Description / Location:		Floor Tile; 12x12 pet, Room A-2000F		4
<u>% Asbestos</u>	Type		<u>% Non-Asbestos Fibrou</u>		Type		<u>% Non-Fibrous Material</u>
PC 7.8	Chrysotile		None Detected	d	None Detected		PC 92.2
			≝ ĝ				
Lab No.; Client No.;	3314652 AA-031	الي د	Description / Location:	Black Mas Under Carj	tic pet, Room A-2000H	٤	Layer No.: 2
% Asbestos	<u>Type</u>		% Non-Ashestos Fibrou	<u>is Material</u>	Туре	- *	% Non-Fibrous Material
None Detected	None Detected		None Detected	4	None Detected		100
			11				91
·· · · · · · · · · · · · · · · · · · ·					····· · · ·		
Lab No.: Client No.:	3314653 . AA-032		Description / Location:		/inyl Sheet Floorin bet Room A-2000	g	
<u>% Asbestos</u>	<u>Tvpc</u>	14	<u>% Non-Asbestos</u> Fibrou	•	Тура	~ ** :	Non-Fibrous Materia
None Detected	None Detected	55 E E	5		Collulose		<u>95</u> .
	125				3		2
			3				
Lab No.: Client No.;	3314654	ē	Description / Location:	White Ples Wall, Roor			
% Asbestos	Type		% Non-Asbestos Fibrou	<u>is Material</u>	<u>îvpc</u>		% Non-Fibrous Materia
None Detected	None Detected		None Delected	4	None Detected	8	100
	ST-NVLAP No.		) NY-DOI Mem(x) tested and does not represent	H No. 1102		AIHA Lab No	. 100188
		This repor	t shall not be reproduced except in fu	an endorsement all, without writte	ay NIST-NVLAP. ALHA h approval of the labora	or ony agency of the l dory.	J.S. gövörnmönt
Comments: (PC) in	ticitas Statified Point Cour	t Math of sant	Analysis Method:				
EPA 60 due to r	Quantitation. (PC-11ace) me O Method – If not reported a	ans that aspest otherwise not	prined Method not performed unless os was detected but is not quantifiable ed, layer is either not present or the el ope. Therefore, negative PLM results	under the Point ( ant has specifical	Counting regimen. Analys	sis includes all distinct	separable layers in accordance v
nalysis Perfo	rmed By: L. Sole	shello					
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late: 5/22	/2008						ħ1

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International Asbestos Testing Laboratories

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AIB 4B4

# **CERTIFICATE OF ANALYSIS**

Client: ALL-TECH Env'i Services Ltd.

St. John's

151 Crosbie Rd, Suite 402

 Report Date:
 5/22/2008

 Project:
 Arts&Admin.Bldg.-MUN

 Project No.:
 7660

Lab No.: Client No.:	3314655 AA-034	Description / Location:	Tan Acoustical Plaster Ceiling, Room A-2001	
% Asbestos	Турс	<u>% Non-Asbestos Fibrou</u>		% Non-Fibrous Material
PC 6.7	Chrysorile	None Detected	None Detected	PC 93.3
8				
а. 				
Lab No.:	3314656	Description / Location:	Tan Vinyl Sheet Flooring	
Client No.:	AA-035	۰	Under Carpet, Room 3001	
<u>% Asbestos</u>	. <u>Type</u>	<u>% Non-Asbestos Fibrou</u>	s Material <u>Type</u>	% Non-Fibrous Material
None Detected	None Detected	_ 5	Cellulose	95 .
	2	3		
Lab No .:	3314657	Description / Location:	Off-White Joint Compound	Şt
Client No.:	AA-036	54	Room A-3027B	1801 1881
% Asbestos	Type	% Non-Asbestos Fibrou	s Material Type	% Non-Fibrous Material
None Detected	None Detected	None Detected	None Detected	100
Ļab No.: Client No.:	3314658 AA-037	Description / Location:	Off-White Insulation; Fireproofing InCeilingInStructure,RoomA-3026	а <sup>6</sup> а.
- % Ashestos	<u>Type</u>	<u>% Non-Asbestos Fibrou</u>	s Material Type	% Non-Fibrous Materia)
None Detected	None Detected	40	Fibrous Glass	60
0.8		<u></u>		
		<u></u>		
N	ST-NVLAP No. 10116		T NL 11001	Y 1 17 100100
	s confidential report relates only to t.	hose item(s) iested and does not represent	an endorsement by NIST-NVLAP, AIHA or any go	Lab No. 100188
	This r	eport shall not be reproduced except in fu	ll, without written approval of the laboratory. EPA 600/R-93/116	
EPA 60 due to p	X Method II not reported or otherwise	performed Method not performed unless : sbestos was detected but is not quantifiable e noted, lawer is either not meson or the eli	Stated Quantification at <0 25% by volume is possib under the Point Counting regimma. Analysis include (and has specifically requested that is not be analyzed cannot be guaranteed. Electron Microscopy can be u	s all distinct separable layers in accordance with
Analysis Perfo	rmed By: L. Solebello			
Date: 5/22	//2008	Page 14	4 cf 1 <i>5</i>	а.
	·	회 삶 242 - 161 - <b>1</b>	- 20 k (	775°



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# **CERTIFICATE OF ANALYSIS**

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Client:	ALL-TECH Env'l Service	es Ltd.
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St. John's

Report Date: 5/22/2008

151 Crosbie Rd, Suite 402

NLA1B 4B4 Project:

Arts&Admin.Bldg.-MUN 7660

Project No.:

Lab No Client I		3314659 AA-038	I	Description / Location:	Grey Trans Above Doc	site Panel ors in Hall 1C01		2	8		
<u>% Asbest</u>	05	Түре		% Nog-Asbestos Fibrou	s Material	Type			<u>% Non-1</u>	Fibrous <u>Mate</u>	rial
25		Chrysotile		Nane Detected	l	None Detected				75	
					-						
 	•••••									** *****	
	λ)					2		~ *	2		
39				3	2		72				
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	÷.		3.2		10	32					
		5			30						

NI: This	ST-NVLAP No. 101165-0	NY-DOH No. 11021	AIHA L	ab No. 100188	
	This report shall ne	tosted and does not represent an endorsement by NIST of be reproduced except in full, without writen appro-	1 TH A TH A TH A TH A A	y of the U.S. government	;
Comments: (PC) Ind		Analysis Method: FPA 600/D 03/110		· · · · · · · · · · · · · · · · · · ·	
4+5 M 4000	PIPIPIDO II DOLTCOORTO AT OTBATTICA DATA 1.	Violation performed unless stated. Quantification at a elected but is not quantification where the Point Counting: is either not present or the clicat has specificative request	operation Additable Themeter an	(IISTII) AL REPORTED IN LANSING	ice) represents th
is based u	med By: L. Solebello	elected but is not quantifiable under the Point Counting : is either not present or the clicat has specifically request heatine, negative PLM results cannot be guaranteed. Ele-	ed that it not be analyzed. Sn mon Microscopy can be used	as a confirming technique	A accordance wi missed by PLA Regulatory Lir
is based u	appin the sample matrix.	is efficient not present or the clicant has specifically request brofore, negative PLM results connot be guaranteed. Ele-	ed that it not be analyzed. Sn nron Microscopy can be used	an and sophia of the stray be as a confirming technique	A accordance wi missed by PLM Regulatory Lir
is based u	med By: L. Solebello	Is eliter not present or the elitent has specifically request arafare, negative PLM results cannot be guaranteed. Ele- Page 15 of 15	ed that it not be analyzed. Sn nron Microscopy can be used	an and soparative toyers a sail as been so that and as a confirming technique	in accordance wi = missed by Pl.b. 0. Regulatory Lir



#### ANALYSIS OF BULK SAMPLES FOR ASBESTOS CONTENT BY POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING

PROJECT NAME: MUN Arts Building

PROJECT NO.: 02 8147 02 LAB REFERENCE NO.: NLB557 - 2007

DATE: November 13, 2007

Four (4) bulk samples were submitted for determination of their asbestos content by Polarized Light Microscopy and Dispersion Staining.

Sample preparation and analytical procedures are in compliance with the Code for the Determination of Asbestos from Bulk Insulation Samples, dated the 23rd of August, 1985 and issued by the Occupational Health and Safety Division of the Ontario Ministry of Labour, and U.S. EPA Method 600/R-93/116 dated July, 1993. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the volume percentage of asbestos present. The lower limit of reliable quantitation is estimated to be 0.1%. A reported concentration of <0.1% indicates the presence of confirmed asbestos in trace quantities limited to only a few fibres or fibre bundles in an entire sample. Multiple phases within a sample are analyzed separately. A total of four (4) analyses were performed.

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

This test relates only to the items tested. The results are presented in the attached table.

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27 Austin Street St. John's, NL A1B 4C3

# PROJECT NAME: MUN Arts Building

**BULK SAMPLE ANALYSIS** 

PREPARED FOR: Mike Bannister

f 2	COMMENTS	Dust samples may contain very fine asbestos fibers, from airborne sources, which are below the resolution of the optical microscope. Consequently, the analysis of dust samples by PLM cannot be used as an indication of past or present airborne asbestos fiber levels.	Dust samples may contain very fine asbestos fibers, from airborne sources, which are below the resolution of the optical microscope. Consequently, the analysis of dust samples by PLM cannot be used as an indication of past or present airborne asbestos fiber levels.
PAGE: 1 of 2		50-75% 25-50%	25-50% 25-50%
8	S COMPOSITION (VISUAL ESTIMATE)	Cellulose Non-fibrous material	Cellulose Non-fibrous material
	SOUSEANO2/S	None Detected	Chrysotile 1-5%
		Non-tromogenous dust and debris	Non-homogenous dust and debris
	SAMPLE IDENTIFICATION	S#001 Dust sample in heater, Room 3051	S#002 Dust sample in heater, Room 3055

ANALYST: Chien

. FROM Pinchin LeBlanc Enviro.

LAB REFERENCE No: NLB 557

CNTERE Nution DATE: November 13, 2007

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	ILK SAMPLE		<b>MUN Arts Building</b>
	BULK		÷.
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	<u>ر به</u>		Ë
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PROJECT NAME: MUN Arts Building

**Mike Bannister PREPARED FOR:** 

27 Austin Street St. John's, NL A1B 4C3

IVIRONMENTAL

CHIN

PAGE: 2 of 2

DATE: November 13, 2007

LAB REFERENCE No: NLB 557

SAMPLE         SAMPLE           IDENTIFICATION         DESCRIPTION           S#003         Non-homogenous dust           Dust sample in heater,         and debrils				・ は、そ む し シーン	
	NOUL	ABBENIOS			
	ous dust	None Detected	Cellulose Non-fibrous material	<b>50-75%</b> 25-50%	Dust samples may contain very fine asbestos fibers, from airborne sources, which are below the resolution of the optical microscope. Consequently, the analysis of dust samples by PLM cannot be used as an indication of past or present airborne asbestos fiber levels
Parging on heater line, and granular, Room 3051 cementitous material	grey, hard aterial		1-5% Non-fibrous material	>75%	

ANALYST: Chenter L

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151 Crosbie Road Suite 402 St. John's, NL A1B 4B4 Bus: (709) 754-4146 Fax: (709) 754-4194 Email: dbutt@toalitech.com

November 19, 2008

Project# 8562

Mr. Darrin Cromwell Darrin Cromwell Painting and Plaster Ltd. 18A Shetland Place CBS, NL A1X 4E1

#### RE: Bulk Sample Results - Various Locations, Memorial University of Newfoundland

Attention: Mr. Darrin Cromwell

On November 10<sup>th</sup>, 2008, four (4) bulk samples were collected by Mr. Darrin Cromwell from the Memorial University of Newfoundland and delivered to ALL-TECH Environmental Services Ltd. Upon the request of Mr. Cromwell these samples underwent laboratory PLM/DS analysis to determine their asbestos content.

Listed in Table 1.0 below are sample descriptions and laboratory results of this analysis.

Table 1.0
Bulk Sample Results For
Memorial University

Sample Number	Sample Description/Location	Asbestos Content
1	White/Tan Plaster Room A3033A Ceiling Arts and Administration Building	None Detected
2	White/Tan Plaster Room A3028 Wall Arts and Administration Building	None Detected
3	White/Tan Plaster Room SN3125 Wall Science Building	None Detected
4	White/Tan Plaster Room ED2004 Wall Education Building	None Detected

Laboratory analysis confirmed that none of the four samples contained an asbestos concentration greater than the Newfoundland and Labrador guideline of 1%. (*Newfoundland and Labrador Asbestos Abatement Regulations, 1998*).



151 Crosbie Road Suite 402 St. John's, NL A1B 4B4 Bus: (709) 754-4146 Fax: (709) 754-4194 Email: dbutt@toalltech.com

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If you should have any questions regarding the results, please feel free to contact me at (709)754-4146.

Thank You,

Mikhi Daws

Nikki Davis, B. Tech., Env. Tech. Environmental Consultant ALL-TECH Environmental Services Limited

Encl: Laboratory Results

# IATL <sup>h</sup>

International Asbestos Testing Laboratories

NS

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054 Telephone: 856-231-9449 Fax: 856-231-9818

# **CERTIFICATE OF ANALYSIS**

Client: ALL-TECH Env'l Services Ltd.

Bedford

20 Duke Street; Suite 109

Report Date:11/19/2008Project:DarrinCromwell-MVNProject No.:Image: Comparison of the second second

## BULK SAMPLE ANALYSIS SUMMARY

B4A2Z5

	Lab No.: Client No.:	3463425 1	Description / Location:	White/Tan H Arts 3033A	Plaster Ceiling-MVN	
	% Asbestos	Type	% Non-Ashestos Fibrou	Material	Type	% Non-Fibrous Material
	None Delected	None Detected	None Detected		None Detected	100
	Lab No.:	3463426	Description / Location:	White/Fan I	Plaster	
	Client No.:	2		Arts 3028 V		
	% Asbestos	Type	% Non-Ashestos Fibrous	Material	Туре	% Non-Fibrous Material
	None Delected	None Detected	None Detected		None Detected	100
	Lab No.:	3463427	Description / Location:	White/Tan H		
	Client No.:	3		Science 312	5 Wall-MVN	
	% Asbestos	Type	24 Non-Asbestos Fibrous	Material	Type	% Non-Fibrous Material
	None Detected	None Detected	None Detected		None Detected	100
				****		
	Lab No.:	3463428	<b>Description / Location:</b>	White/Tan H	laster	
	Client No.:	4		Education 2	004 Wall-MVN	
	% Ashestos	Typg	% Non-Ashestos Fibrous	Material	Type	% Non-Fibrous Material
	None Detected	None Detected	None Detected		None Detected	100
		IST-NVLAP No. 10	1165 0 NV-DOF	I No. 1102	1	Lab No. 100188
		is confidential report relates on	to those (tom(s) tested and does not represent This report shall not be reproduced except in ful	an endorsenient l	by NIST-NVLAP, AIHA or any of	
			Analysis Method:			
	limit of EPA 60 due to r	quantitation. (PC-Trace) means 10 Method. If not reported or oth	icthod performed. Method not performed unless s that abbestos was detected but is not quantifiable terwise noted, layer is either not present or the chu al microscope. Therefore, negative FLM results c	inder the Point Co as has specifically	ounting regimen. Analysis include requested that it not be analyzed	es all distinct separable layers in accordance with . Small asbestos fibers may be missed by PLM
4	Analysis Perfo	rmed By; R. Caran		Approved	l By:	
]	Date: 11/18	8/2008	Page I	of l	Frank B. Ehren Laboratory Dir	
			5			





151 Crosbie Road Suite 402 St. John's, NL A1B 4B4 Bus: (709) 754-4146 Fax: (709) 754-4194 Email: dbutt@toalltech.com

November 19, 2008

Project# 8562

Mr. Darrin Cromwell Darrin Cromwell Painting and Plaster Ltd. 18A Shetland Place CBS, NL A1X 4E1

#### RE: Bulk Sample Results - Various Locations, Memorial University of Newfoundland

Attention: Mr. Darrin Cromwell

On November 10<sup>th</sup>, 2008, four (4) bulk samples were collected by Mr. Darrin Cromwell from the Memorial University of Newfoundland and delivered to ALL-TECH Environmental Services Ltd. Upon the request of Mr. Cromwell these samples underwent laboratory PLM/DS analysis to determine their asbestos content.

Listed in Table 1.0 below are sample descriptions and laboratory results of this analysis.

Sample Number	Sample Description/Location	Asbestos Content
`1	White/Tan Plaster Room A3033A Ceiling Arts and Administration Building	None Detected
2	White/Tan Plaster Room A3028 Wall Arts and Administration Building	None Detected
3	White/Tan Plaster Room SN3125 Wall Science Building	None Detected
4	White/Tan Plaster Room ED2004 Wall Education Building	None Detected

#### Table 1.0 Bułk Sample Results For Memorial University

Laboratory analysis confirmed that none of the four samples contained an asbestos concentration greater than the Newfoundland and Labrador guideline of 1%. (*Newfoundland and Labrador Asbestos Abatement Regulations, 1998*).



151 Crosbie Road Suite 402 St. John's, NL A1B 4B4 Bus: (709) 754-4146 Fax: (709) 754-4194 Email: dbutt@toailtech.com

If you should have any questions regarding the results, please feel free to contact me at (709)754-4146.

Thank You,

Nikli Dan ~

Nikki Davis, B. Tech., Env. Tech. Environmental Consultant ALL-TECH Environmental Services Limited

Enci: Laboratory Results

## IATL International Asbestos Testing Laboratories

9000 Commerce Parkway Suite B Mt. Laurel, NJ 08054 Telephone: 856-231-9449 Fax: 856-231-9818

# **CERTIFICATE OF ANALYSIS**

Client: ALL-TECH Env'l Services Ltd.

1

Report Date:11/19/2008Project:DarrinCromwell-MVNProject No.:Image: Comparison of the second second

20 Duke Street; Suite 109 Bedford NS

#### BULK SAMPLE ANALYSIS SUMMARY

B4A2Z5

Lab No.: Client No.;	3463425 I	Description / Location:	White/Ta	n Plaster A Ceiling-MVN	
% Asbestos	- <u>Type</u>	% Non-Ashestos Fibrou		Type	% Non-Fibrous Material
None Detected	None Detected	None Detected		None Detected	100
Lab No.:	3463426	Description / Location:	White/Ta	n Plaster	······
Client No.:	2		Arts 3028	Wall-MVN	
% Asbestos	Type	% Non-Ashenos Fibrou	<u>Materini</u>	Type	% Non-Fibrous Material
None Delected	None Octoriod	None Detected		None Detected	100
Lab No.: Client No.:	34634 <b>27</b> 3	Description / Location:	White/Tai		525675
% Asbestos	Type	% Non-Asbestos Fibrou		Type	% Non-Fibrous Material
None Detected	None Detected	None Detected		None Detected	100
Lab No.:	3463428	Description / Location:	White/Ta	n Plaster	
Client No.:	4	•	Education	2004 Wall-MVN	
% Asbestos	Type	% Non-Asbestos Fibrous	Material	Тура	% Non-Fibrous Material
None Detected	None Detected	None Detected		None Detected	100
······					
	ST-NVLAP No. 101165-0				IA Lab No. 100188
Thi	s confidential report relates only to those t This report	tom(s) tested and does not represent shall not be reproduced except in ful	an endorsenun 1. without writt	u by NIST-NVLAP, AIHA or an ion approval of the laboratory.	y ogency of the U.S. government
		Analysis Method:			
limit of EPA 60 due to r	quantitation. (PC-Trace) means that abbesic 0 Method. If not reported or otherwise not	is was detected but is not quantifiable : at, layer is either not present or the che	ander the Point ast has specific:	Counting regimen. Analysis inc illy requested that it only be analy	possible with this method. (PC-Trace) represents this holes all distinct separable layers in accordance with zod. Small asbestos fibets may be missed by PLM be used as a confirming technique. Regulatory Limit
Analysis Perfo	rmed By: R. Caran		Approv	ed By:	
Date: 11/18	3/2008	Page 1	of l	Frank E. En Laboratory I	

10:35:43 0 1. 2009-08-03 3 7097544490

From: 7097544490

To: 7372339

06/03/2009 09:24 #577 P-003/006

ART LUL 5. AA-290.06



#### ANALYSIS OF BULK SAMPLES FOR ASBESTOS CONTENT BY POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING

PROJECT NAME: **MUN Arts and Administration Building** 

PROJECT NO .: 02-7349 LAB REFERENCE NO .: NLB304 - 2007

DATE: April 13, 2007

Eight (8) bulk samples were submitted for determination of their asbestos content by Polarized Light Microscopy and Dispersion Staining.

Sample preparation and analytical procedures are in compliance with the Code for the Determination of Asbestos from Bulk Insulation Samples, dated the 23rd of August, 1985 and issued by the Occupational Health and Safety Division of the Ontario Ministry of Labour, and U.S. EPA Method 600/R-93/116 dated July, 1993. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the volume percentage of asbestos present. The lower limit of reliable quantitation is estimated to be 0.1%. A reported concentration of <0.1% indicates the presence of confirmed asbestos in trace quantities limited to only a few fibres or fibre bundles in an entire sample. Multiple phases within a sample are analyzed separately. A total of thirteen (13) analyses were performed.

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

This test relates only to the items tested. The results are presented in the attached table.

LEBLANC ENVIRONMENTAL

## BULK SAMPLE ANALYSIS

PROJECT NAME: MUN Arts and Administration Building

PREPARED FOR: Mark Bailey

860 Topsail Road Mount Pearl NL A1N 3/7

PAGE: 1 of 3

DATE: April 13, 2007

COMMENTS	50-75% 25-50%	25-50% 50-75%	>75%	<ul> <li>&gt;75% Vinyi floor tiles may contain</li> <li>&gt;75% very fine asbestos fibres which are not visible using the PLM method. For</li> </ul>	<ul> <li>&gt;75% confirmation of the absence of asbestos, analysis by Transmission Electron Microscopy (TEM) is recommended</li> </ul>	>75% Vinyl floor tiles may contain very fine asbestos fibres which are not visible using the PLM method. For confirmation of the absence of asbestos, analysis by Transmission Electron
% COMPOSITION (VISUAL ESTIMATE) SBESTOS   OTHER	Mineral Wool Non-fibrous material	Mineral Wool Non-fibrous material	Non-fibrous material	Non-fibrous material	Non-fibrous material	Non-fibrous material
% COMPOSITION ASBESTOS	None Detectori	None Detected	None Detected	None Detected	None Detected	None Detected
SAMPLE DESCRIPTION	Homogenous, grey, compressed fibrous material.	Homogenous, grey, soft, cementitous material	Homogenous, Grey, soft, cementitous material	2 Phases: A. Homogenous, white, consolidated	material B. Homogenous, biack tar	Homogenous, green, consolidated material
SAMPLE IDENTIFICATION	S#001 2x2 ceiling tile	S#002 Mechanical pipe insulation	S#003 Drywall joint filler	<b>S#004</b> 1x1 off-white floor tile		S#005 1x1 dark green floor tile

ANALYST: 22

LAB REFERENCE No: NLB 304

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NNOW

PROJECT NAME: MUN Arts and Administration Building

BULK SAMPLE ANALYSIS

PREPARED FOR: Mark Bailey

860 Topsaii Road Mount Pearl NL. A1N 3.77

PAGE: 2 of 3

DATE: April 13, 2007

		1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 - 1919 -
COMMENTS	Vinyl flocr tiles may contain very fine asbestos fibres which are not visible using the PLM method. For confirmation of the absence of asbestos, analysis by Transmission Electron Microscopy (TEM) is recommended.	Vinyl floor tiles may contain very fine asbestos fibres which are not visible using the PLM method. For confirmation of the absence of asbestos, analysis by Transmission Electron Microscopy (TEM) is recommended.
	>75%	>75% >75% >75%
% COMPOSITION (VISUAL ESTIMATE) SBESTOS	Non-fibrous material	Non-fibrous material Non-fibrous material Non-fibrous material
% COMPOSITION ASBESTOS	None Detected	None Detected None Detected None Detected
SAMPLE DESCRIPTION	Homogenous, grey, consolidated material	<ul> <li>3 Phases:</li> <li>A. Homogenous, grey, consolidated material</li> <li>B. Homogenous, black tar</li> <li>C. Homogenous, grey, hard and granular, cementitous</li> </ul>
SAMPLE	S#006 1x1 orange floor tile	S#007 1x1 purple floor tile

ANALYST: 22

LAB REFERENCE No: NLB 304

7097544490

10:35:43 a.m. 2009-06-03 5

LEBLANC ENVIRONMENTAL BENVIRONMENTAL 660 Topsail Road Mount Pearl NL A1N 3J7

## BULK SAMPLE ANALYSIS

PROJECT NAME: MUN Arts and Administration Building

PREPARED FOR: Mark Bailey

PAGE: 3 of 3

7097544490

To:7372339

SAMPLE	SAMPLE	% COMPOSITION ASBESTOS	% COMPOSITION (VISUAL ESTIMATE) SHESTOS 0THER		COMMENTS
	3 Phases:				Vinyl floor tiles may contain
1x1 blue floor tile	A. Hemogenous,	None Detected	Non-fibrous material >7	>75%	very fine asbestos tibres
	blue,				which are not visione using the PLM method. For
	consoliualeu meterial				confirmation of the absence
	B. Homogenous,	None Detected	Non-fibrous material >7	>75%	of asbestos, analysis by
	black tar				
	C. Homogenous,	None Detected	Non-fibrous material >/	>75%	Microscopy (I EM) is
	grey, hard and				recommended.
	granular,				
	cementitous				
	material			_	

ANALYST: 16

From: 7097544490

LAB REFERENCE No: NLB 304

DATE: April 13, 2007

p.2



161 Crosbie Road Suite 402 St. John's, NL A18 484 CNTERED CNTERED

> Bus: (709) 754-4146 Fax: (709) 754-4194 Email: dbutt@toalitech.com

Project# 8361

Mr. Darrin Cromwell Darrin Cromwell Painting and Plaster Ltd. 18A Shetland Place CBS NI

CBS, NL A1X 4E1

October 3, 2008

### RE: Bulk Sample Results - Arts and Administration Building, Memorial University of Newfoundland

Attention: Mr. Darrin Cromwell

On September 28, 2008, two (2) plaster bulk samples were collected by Mr. Darrin Cromwell from the Memorial University of Newfoundland and delivered to ALL-TECH Environmental Services Ltd. Upon the request of Mr. Cromwell these samples underwent laboratory PLM/DS analysis to determine their asbestos content.

Listed in Table 1.0 below are sample descriptions and laboratory results of this analysis.

### Table 1.0 Bulk Sample Results For Memorial University Sept. 28, 2008

Sample Number	Sample Description/Location	Asbestos Content
1022	Plaster Wall Room 1022 Arts and Administration Building	1-5% Chrysotile Asbestos
1023	Plaster Wall Room 1023 Arts and Administration Building	1-5% Chrysotile Asbestos

Laboratory analysis confirmed that both samples contained an asbestos concentration greater than the Newfoundland and Labrador guideline of 1%. (Newfoundland and Labrador Asbestos Abatement Regulations, 1998).

If you should have any questions regarding the results, please feel free to contact me at (709)754-4146.

Thank You,

Nich

Nikki Davis, B. Tech., Env. Tech. Environmental Consultant ALL-TECH Environmental Services Limited Encl: Laboratory Results

4

Client:



Ph: (902) 835-3727 Fax: (902) 835-5266 email@toalltech.com

### **Certificate of Analysis**

ALL-TECH Environmental 151 Crosbie Road, suite 402 St. John's, NL A1B 4BY

Report Date:

Project:

Lab No.

Location:

October 2, 2008

8361 B-1**545** 

### Bulk Sample Analysis Summary

Client No: 1022		Material Description: Location:	Plaster Wall, Art's 1022
<u>% Asbestos</u> 1-5%	<u>Type</u> Chrysotile	<u>Non-Asbes</u>	tos Fibrous Material
Client No: 1023	·	Material Description: Location:	Plaster Wali, Art's 1023
<u>% Asbestos</u> 1-5%	<u>Type</u> Chrysotile	Non-Asbes	tos Fibrous Materiał

Identification: Polarized Light Microscopy / Dispersion Staining (PLM/DS). Test Method: NIOSH 9002

Analysis Performed By:

Evan Smith

Date: October 2, 2008





October 12, 2010

Pinchin LeBlanc Environmental Ltd. 27 Austin Street, 2nd Floor St. John's NL A1B 4C3

Attention:	Angela Stagg
Lab Reference No.: Client Project Name:	b75734 Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.:	N/A
Date Received:	October 4, 2010
Date Analyzed:	October 12, 2010
Analyst(s):	K. Cockburn-Swance
# Samples submitted:	17
# Phases analyzed:	21

### Methods of Analysis:

EPA 600/R-93/116 - Method for the Determination of Asbestos in Bulk Building Materials dated July, 1993

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared with representative portions of material and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. A reported concentration of less than (<) the regulatory threshold (see chart below) indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with all provincial regulatory requirements (NIOSH 9002, I.R.S.S.T. 244-2). Multiple phases within a sample are analyzed and reported separately.

Provincial Jurisdiction	Regulatory Threshold	Provincial Jurisdiction	Pagulatan Thurst
Ontario	0.5%		Regulatory Threshold
Quebec	0.1%	Saskatchewan	
Alberta, British Columbia,			Unstated, likely 1.0%
NWT, Yukon, Nunavut	1%	Atlantic Provinces	1%

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

Pinchin Environmental Ltd. is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 101270-0 and NVLAP Lab Code 200795-0) for selected test methods for the identification of asbestos in bulk samples and meets all requirements of ISO/IEC 17025:2005 and relevant requirements of ISO 9002:1994.

This report relates only to the items tested. If you have any questions, please feel free to contact me.

Yours truly,

Digitally Signed by Karen Slayer Kaun Mayer Kelever@pinchin.com (aboratory Manager, Asbestos Services Pinchin Envirosmental Ltd. Pinchin Environmental Ltd.

Laboratory Manager, Asbestos Services

NOTE: This test report may not be reproduced, except in full, without the written approval of the laboratory. The client may not use this report to claim product endorsement by NVLAP or any agency of the U.S. Government. This report is valid only when signed in blue ink by the analyst and the laboratory manager. Vinyl asbestos floor tiles contain very fine fibres of asbestos and may be missed by some laboratories using the PLM method. Internal verification studies performed by Pinchin indicate that the chance of missing asbestos 

2470 MILLTOWER COURT, MISSISSAUGA, ON L5N 7W5 TEL: (905) 363-0678 FAX: (905) 363-0681 MISSISSAUGA • OTTAWA • KINGSTON • KENORA • HAMILTON • PETERBOROUGH • SUDBURY • WATERLOO • SARNIA • WINNIPEG • BRANDON





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### Pinchin Environmental Asbestos Laboratory Certificate of Analysis

Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.:	N/A
Prepared For:	Angela Stagg

Lab Reference No.:b75734Date Analyzed:October 12, 2010

### **BULK SAMPLE ANALYSIS**

SAMPLE	SAMPLE	% COMPOSITIO	N (VISUAL ESTIMATE)
IDENTIFICATION	DESCRIPTION	ASBESTOS	OTHER
AA-1018-001-19-08-10 Arts & Administration, AA- 1018, Mechanical Room, Plaster ceiling	2 Phases: a) Homogeneous, off- white, hard, cementitious, ( plaster base coat.		5% Cellulose 0.1-1% 1% Vermiculite 10-25% Other Non-Fibrous > 75%
	b) Homogeneous, white, hard, cementitious, plaster top coat.	None Detected	Non-Fibrous Material > 75%
AA-1018-002-19-08-10 Arts & Administration, AA- 1018, Mechanical Room, Plaster wall (31)	Homogeneous, grey, hard, cementitious, plaster material.	Chrysotile < 0.	% Non-Fibrous Material > 75%
AA-1023A-001-19-08-10 Arts & Administration, AA- 1023A. Cashier Office, Remnant plaster wall	2 Phases: a) Homogeneous, beige, hard, cementitious, plaster base coat.	Actinolite/Tremolite < 0.1	% Vermiculite 10-25% Other Non-Fibrous > 75%
	<ul> <li>b) Homogeneous, white, hard, cementitious. plaster top coat.</li> </ul>	None Detected	Non-Fibrous Material > 75%
AA-1023A-002-19-08-10 Arts & Administration, AA- 1023A, Cashier Office, Textured ceiling above t- bar ceiling	Non-homogeneous, off- white, finishing or texture coat.	Chrysotile 5-10	% Perlite 25-50% Vermiculite 5-10% Other Non-Fibrous 50-75%
AA-1025A-001-24-08-10 Arts & Administration, AA- 1025A, Vault, Plaster wall (1)	Homogeneous, grey, hard, cementitious, plaster material.	Chrysotile 1-5	% Non-Fibrous Material > 75%

**REVIEWED BY** 

L. Alayer

ANALYST





Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.:	N/A
Prepared For:	Angela Stagg

Lab Reference No.: b75734 Date Analyzed: October 12, 2010

SAMPLE	SAMPLE	% COMPO	SITION	(VISUAL ESTIMATE)	
IDENTIFICATION	DESCRIPTION	ASBESTOS		OTHER	
AA-1026A-001-24-08-10 Arts & Administration, AA- 1026A, Office, Plaster Wall/Skim coat	Homogeneous, grey, hard, cementitious, plaster material.	None Detected		Non-Fibrous Material	> 75%
AA-1020-001-27-08-10 Arts & Administration, AA- 1020, Receiving Doors, Tar paper on duct work	Homogeneous, black, tar material.	None Detected		Tar and other non- fibrous	> 75%
Comments:	Cellulose and fibreglass are	present on the surface of t	his sam	ole	
AA-1013-001-27-08-10 Arts & Administration, AA- 1013, Theatre Storage, Tar paper on straight run piping, fountain hatch	Homogeneous, black, tar material.	None Detected		Tar and other non- fibrous	> 75%
Comments:	Cellulose and foil are preser	nt on the surface of this san	nle		
AA-1013G-001-27-08-10 Arts & Administration, AA- 1013G, Mechanical Room, Expansion joint cloth, air handling unit	Homogeneous, off-white, woven fabric.		25-50%	Glass Fibres Synthetic Fibres Non-Fibrous Material	25-50% 25-50% 5-10%
Arts & Administration, AA-		Chrysotile Actinolite/Tremolite		Vermiculite Other Non-Fibrous	10-25% > 75%

REVIEWED BY K. Mayer

ANALYST





Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.:	N/A
Prepared For:	Angela Stagg

Lab Reference No.: b75734 Date Analyzed: October 12, 2010

### **BULK SAMPLE ANALYSIS**

SAMPLE	SAMPLE	% COMPOSITION	(VISUAL ESTIMATE)	
IDENTIFICATION	DESCRIPTION	ASBESTOS	OTHER	
AA-1007A-001-31-08-10 Arts & Administration, AA- 1007, Office, 2' x 2' Acoustic celling tile, pinhole w fissure	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose Mineral Wool Non-Fibrous Material	25-50% 50-75% 5-10%
AA-2013-001-08-09-10 Arts & Administration, AA- 2013, Office, 2' x 2' Acoustic ceiling tile, pinhole	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 1-5%
AA-2015A-001-22-09-10 Arts & Administration, AA- 2015A, Reid Theatre. Old theatre curtain	Homogeneous, brown, woven fabric.	None Detected	Cotton Non-Fibrous Material	> 75% 1-5%
Arts & Administration, AA- 3006, Office, Plaster wall/	2 Phases: a) Homogeneous, off- white, hard, cementitious, plaster base coat.	Chrysotile 0,1-1%	Vermiculite Other Non-Fibrous	10-25% > 75%
	b) Homogeneous, grey, hard, cementitious, plaster top coat.	Chrysotile < 0.1%	Non-Fibrous Material	> 75%

**REVIEWED BY** 

L. Mayer

ANALYST





Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.:	N/A
Prepared For:	Angela Stagg

Lab Reference No.:	b75734
Date Analyzed:	October 12, 2010

SAMPLE IDENTIFICATION	SAMPLE DESCRIPTION			VISUAL ESTIMATE)	
AA-4017-001-23-09-10 Arts & Administration, AA-	2 Phases:	ASBEST	05	OTHER	
4017, Mechanical Room, Plaster wall/ skim coat	a) Homogeneous, off- white, hard, cementitious, plaster base coat.	Chrysotile	< 0.1%	Vermiculite Other Non-Fibrous	10-25% <b>&gt; 75%</b>
	<ul> <li>b) Homogeneous, grey, hard, cementitious, plaster top coat.</li> </ul>	Chrysotile	< 0.1%	Non-Fibrous Material	> 75%
AA-4017-002-23-09-10 Arts & Administration, AA- 4017, Mechanical Room, Unidentified material, suspect ACT, or stucco ceiling	Homogeneous, off-white, finishing or texture coat.	Chrysotile	10-25%	Perlite Other Non-Fibrous	25-50% 25-50%
Arts & Administration, AA-	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected		Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% 1-5%

REVIEWED BY L. Mayer

ANALYST





May 5, 2010

Pinchin LeBlanc Environmental Ltd. 27 Austin Street, 2nd Floor St. John's NL A1B 4C3

Attention:	J. Eustace / S. Knight
Lab Reference No.:	b72033 Memorial University of Newfoundland
Client Project Name: Client Project No.:	Memorial University of Newfoundland 02-02-00415
Date Received: Date Analyzed:	April 28, 2010 May 5, 2010
Analyst(s):	L. DeCurtis
# Samples submitted: # Phases analyzed:	2 4

### Methods of Analysis:

EPA 600/R-93/116 - Method for the Determination of Asbestos in Bulk Building Materials dated July, 1993

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. The percentage range category reported reflects the level of uncertainty of the method for estimating quantities of asbestos in bulk samples. A reported concentration of less than (<) the regulatory threshold (see chart below) indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with all provincial regulatory requirements (NIOSH 9002, I.R.S.S.T. 244-2). Multiple phases within a sample are analyzed separately.

Provincial Jurisdiction	Regulatory Threshold	Provincial Jurisdiction	Regulatory Threshold
Ontario	0.5%	Manitoba	0.1% friable 1% non-friable
Quebec	0.1%	Saskatchewan	Unstated, likely 1.0%
Alberta, British Columbia,			
NWT, Yukon, Nunavut	1%	Atlantic Provinces	1%

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

Pinchin Environmental Ltd. is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 101270-0 and 200795-0) for selected test methods for the identification of asbestos in bulk samples and meets all requirements of ISO/IEC 17025:2005 and relevant requirements of This report relates only to the items tested. If you have any questions, please feel free to contact me.

Yours truly,

Karen Blayer

Digitally Signed by Karen Slayer kslayer@pinchin.com 4 Laboratory Manager, Asbestos Services Pinchin Environmental Ltd.

Laboratory Manager, Asbestos Services

NOTE: This test report may not be reproduced, except in full, without the written approval of the laboratory. The client may not use this report to claim product endorsement by NVLAP or any agency of the U.S. Government. This report is valid only when signed in blue ink by the analyst and the laboratory manager. Vinyl asbestos floor tiles contain very fine fibres of asbestos and may be missed by some laboratories using the PLM method. Internal verification studies performed by Pinchin indicate that the chance of missing asbestos in floor tiles is no higher than about 2%. Supporting laboratory documentation is available upon request.

PINCHIN ENVIRONMENTAL LTD. 2470 MILLTOWER COURT, MISSISSAUGA, ON L5N 7W5 TEL: (905) 363-0678 FAX: (905) 363-0681 MISSISSAUGA • OTTAWA • KINGSTON • KENORA • HAMILTON • PETERBOROUGH • SUDBURY • WATERLOO • SARNIA • WINNIPEG • BRANDON





Client Project Name:	Memorial University of Newfoundland
Client Project No.:	02-02-00415
Prepared For:	J. Eustace / S. Knight

Lab Reference No.:b72033Date Analyzed:May 5, 2010

### BULK SAMPLE ANALYSIS

SAMPLE	SAMPLE	% COMPO	<b>DSITION</b> (	VISUAL ESTIMATE)	
IDENTIFICATION	DESCRIPTION	ASBESTOS		OTHER	
AA-2032B-001-04-27-10	2 Phases:				
Arts and Administration,	a) Homogeneous, beige,	Chrysotile	0.1-1%	Cellulose	0.1-1%
washroom AA-2032B,	hard, cementitious, plaster	Actinolite/Tremolite	< 0.1%	Vermiculite	10-25%
Plaster Wall	base coat.			Other Non-Fibrous	> 75%
	b) Homogeneous, white, hard, cementitious, plaster top coat.	None Detected		Non-Fibrous Material	> 75%
AA-2032B-003-04-27-10	2 Phases:				
Arts and Administration,	a) Homogeneous, beige,	Chrysotile		Cellulose	0.1-1%
washroom AA-2032B,	hard, cementitious, plaster	Actinolite/Tremolite	< 0.1%	Vermiculite	10-25%
Plaster Ceiling	base coat.			Other Non-Fibrous	> 75%
	b) Homogeneous, white, hard, cementitious, plaster top coat.	None Detected		Non-Fibrous Material	> 75%

REVIEWED BY

K. Mayer

ANALYST Ling De Curtis



A

в

1004248PLM\_2

AA-2032B-

1004248PLM 4

004-04-27-10-

finish

base

Plaster ceiling

### Bulk Asbestos Analysis

### By Polarized Light Microscopy EPA Method: 600/R-93/116 and 600/M4-82-020



Crushed

Crushed

Non Fibrous

Heterogeneous

Gray

	nin LeBlanc Environmenta ustin St	al Attn: Nicole Po Jane Eust			Lab Order II Analysis ID:	D: 1004248
2nd I					Date Receive	
Project: Memor 02-02-0	ial University of Newfour 90415	ndland			Date Reporte	
Sample 1D	Description	- Asbestos	Fibrous	No	n-Fibrous	Attributes
Lab Sumple ID	Lab Notes	Aspestos	Components	Co	mponents	Treatment
AA-2032B - 002-04-27-10-	Plaster wall	None Detected		100%	Other	White Non Fibrous Homogeneous
A 1004248PLM_1	finish	_				Crushed
AA-2032B- 002-04-27-10- B	Plaster wall	None Detected	3% Cellulose	97%	Other	Gray Non Fibrous Heterogeneous
1004248PLM 3	oase					Crushed
AA-2032B- 004-04-27-10-	Plaster ceiling	None Detected		100%	Other	White Non Fibrous Homogeneous

**None Detected** 

3%

Cellulose

97%

Other

Disclaimer: Due to the nature of the EPA 600 method, asbestos may not be detected in samples containing low levels of asbestos. We strongly recommended that analysis of floor tiles, vermiculite, and/or heterogeneous soil samples be conducted by TEM for confirmation of "None Detected" by PLM. This report relates only to the samples tested and may not be reproduced, except in full, without the written approval of SAL. This report may not be used by the client to claim product endorsement by NVLAP or any other agency of the Histogenerunnent. Estimated MPL is 0.5%.

Bart Huber (4)

Analyst

Nathaniel Durham, MS or Approved Signatory

Scientific Analytical Institute, Inc. 302-L Pomona Dr. Greensboro, NC 27407 (336) 292-3888

From:7097544490



### ANALYSIS OF BULK SAMPLES FOR ASBESTOS CONTENT BY POLARIZED LIGHT MICROSCOPY AND DISPERSION STAINING

PROJECT NAME: MUN Arts and Administration Building

PROJECT NO.: 02-7349 LAB REFERENCE NO.: NLB304 - 2007

DATE: April 13, 2007

Eight (8) bulk samples were submitted for determination of their asbestos content by Polarized Light Microscopy and Dispersion Staining.

Sample preparation and analytical procedures are in compliance with the Code for the Determination of Asbestos from Bulk Insulation Samples, dated the 23rd of August, 1985 and issued by the Occupational Health and Safety Division of the Ontario Ministry of Labour, and U.S. EPA Method 600/R-93/116 dated July, 1993. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the volume percentage of asbestos present. The lower limit of reliable quantitation is estimated to be 0.1%. A reported concentration of <0.1% indicates the presence of confirmed asbestos in trace quantities limited to only a few fibres or fibre bundles in an entire sample. Multiple phases within a sample are analyzed separately. A total of thirteen (13) analyses were performed.

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

This test relates only to the items tested. The results are presented in the attached table.



## **BULK SAMPLE ANALYSIS**

PROJECT NAME: MUN Arts and Administration Building

PREPARED FOR: Mark Bailey

DATE: April 13, 2007

LAB REFERENCE No: NLB 304

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PAGE: 1 of 3

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					•
SAMPLE IDENTIFICATION	SAMPLE	% COMPOSITION (VISUAL EST	(VISUAL ESTIMATE)		
S#001	Homogenous, grev	None Detected	CINER		COMMENTS
2x2 ceiling tile	compressed fibrous material.		Non-fibrous material	25-50%	
S#002 Mechanical pipe insulation	Homogenous, grey, soft, cementitous material	None Detected	Mineral Wool Non-fibrous material	25-50% 50-75%	
S#003 (TY/ICAL) Drywall joint filler	Homogenous, Grey, soft, cementitous material	None Detected	Non-fibrous material	>75%	
1x1 off-white floor tile	2 Phases: A. Homogenous, white,	None Detected	Non-fibrous material	>75%	Vinyl floor tiles may contain very fine asbestos fibres which are not visible using
	material B. Homogenous, black tar	None Detected	Non-fibrous material	>75%	confirmation of the absence of asbestos, analysis by Transmission Electron Microscopy (TEM) is
1x1 dark green floor tile	Homogenous, green, consolidated material	None Detected	Non-fibrous material	>75%	Vinyl floor tiles may contain very fine asbestos fibres
				<u> </u>	the PLM method. For
			β.		of asbestos, analysis by
					Transmission Electron
					Microscopy (TEM) is
					recommended.

ANALYST: 12/1-15

06/03/2009 09 24 #577 P 004/006

··· From: 7097544490

				in lance for	
			<u>.</u>	cementitous	
				granular,	
				grey, hard and	
Microscopy (1 Lm) is	wer <	Non-tiprous material	None Detected	C. Homogenous,	
I FARSINISSION CHECUUI	1026/		•	black tar	900 <u>0</u> 0
of aspestos, analysis by	×, c / <	Non-fibrous material	None Detected	B. Homogenous,	•••
				material	
the PLM method. For				consolidated	
which are not visible using				grey,	
very fine asbestos fibres	>75%	Non-fibrous material	None Detected	A. Homogenous,	1x1 purple floor tile
Vinyl floor tiles may contain				3 Phases:	S#007
recommended.					
Microscopy (TEM) is					
Transmission Electron					
of asbestos, analysis by					
confirmation of the absence					
the PLM method. For					
which are not visible using					
very fine aspestos fibres				consolidated material	1x1 orainge floor tile
Vinyl floor tiles may contain	>75%	Non-fibrous material	None Detected	Homogenous, grey,	S#006
COMMENTS		% COMPOSITION (VISUAL ESTIMATE) SBESTOS   OTHER	% COMPOSITION	SAMPLE	SAMPLE IDENTIFICATION
13	PAGE: 2 of 3	P			AIN 3J7
DATE: April 13, 2007	AIE: Apr	c	D• Mark Pailay		Mount Pearl NL
		1			
LAB REFERENCE No: NLB 304	AB REFEF	40	E: MUN Arts and Administration Buildin	PROJECT NAME:	ENVIRONMENTAL
		010	BULN SAMPLE ANALISIS	t ere	PINCHIN
		1010	JIN S DAMPIC ANALY		

ANALYST: Celector in

#577 P\$005000

From: 7097544490

BULK SAMPLE ANALYSIS

To:7372339

E0-90-6002 W 8 27 5 5 01 ς 0677751601

00/03/2000 00:5t

## BULK SAMPLE ANALYSIS

# PROJECT NAME: MUN Arts and Administration Building

PREPARED FOR: Mark Bailey

### DATE: April 13, 2007

LAB REFERENCE No: NLB 304

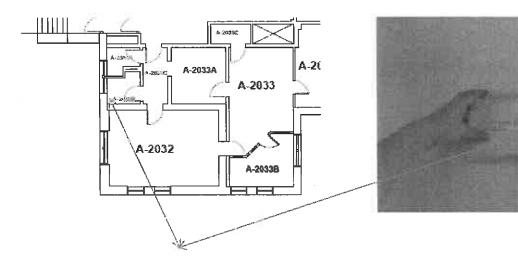
PAGE: 3 of 3

					C
	SAMPLE	% COMPOSITION	% COMPOSITION (VISUAL ESTIMATE)		
CHOOP INTICATION	DESCRIPTION	ASBESTOS	OTHER		COMMENTS
1v1 blue floor tile	J Phases:				Vinyl floor tiles may contain
		None Detected	Non-tibrous material	>75%	very fine asbestos fibres
	Dine'				which are not visible using
	consolidated		<del>.</del>		the PLM method For
	material				confirmation of the absence
	B. Homogenous,	None Detected	Non-fibrous material	>75%	of asbestos analysis by
	black tar				Transmission Electron
	C. Homogenous,	None Detected	Non-fibrous material	>75%	Microscopy (TEM) is
	grey, hard and				recommended.
	granular,				
	cementitous				
	material				

ANALYST: Checky the

From:7097544490

MAMA	RIAL	A	SBE	STOS BUI	-K SA	MPLI	NG F	ORM	
Sample #:	AA-2032	B-02		Date Sampled	March 2	3 2010			
Building:	Arts & Ac	ministration		Sampler	Susan Kn	Susan Knight			
Location:	AA-2032	-2032B		Analysis	Paracel Lab PLM				
MUN Project #:				Work Order #:					
				Sampling Param					
Pipe/Tank	Floo	oring	Ceil	ing	Roofing		Loca	tion	
Insulation		12" x 12" Tile		Textured	Shir	ngle		Floor	
Elbow		9" x 9" Tile		Stucco	Roll	led	3	Wall Orientation	
Fitting		Vinyle Sheet		Popcorn	Felt	:		Ceiling	
Transite Pip	e 🗌	Mastic		DMIC	Tar			Above Ceiling	
Gasket	Wal	I		Plaster				Other	
Tank Insulat	ion	Transite Panel		Acoustic Tile (Dro	oped)				
Pipe Wrap		Textured Wall		Acoustic Tile (Glue	ed-On)				
нуас	×	Plaster		Mastic	Miscella	neous _			
Insulation		DMIC	Stru	ictural					
Таре				Steel F.P.ing	No. of Ph	ases:	2		
Paper Wrap				Deck F.P.ing	Colour:		White/Be	eige	





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### **Certificate of Analysis**

Memorial University of Newfoundland PO Box 4200 St. Johns, NL A1C 5S7 Attn: Susan Knight	Phone: 709-737-3786 Fax: (709) 737-3786
Client PO: P0069716	Report Date: 31-Mar-2010
Project: Arts and Administration (Washrooms)	Order Date: 25-Mar-2010
Custody:	Order #: 1013174

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
1013174-01	AA-1C01-01 (DWJC)
1013174-02	AA-1C01-02 (DWJC)
1013174-03	AA-1016A-01 (White)
1013174-04	AA-1016A-01 (Beige)
1013174-05	AA-1016A-02 (White)
1013174-06	AA-1016A-02 (Beige)
1013174-07	AA-1015-01 (White)
1013174-08	AA-1015-01 (Beige)
1013174-09	AA-2013-01 (White)
1013174-10	AA-2013-01 (Beige)
1013174-11	AA-2018-01 (White)
1013174-12	AA-2018-01 (Beige)
1013174-13	AA-2018-02 (White)
1013174-14	AA-2018-02 (Beige)
1013174-15	AA-2032B-01 (White)
1013174-16	AA-2032B-01 (Beige)
1013174-17	AA-2032B-02 (White)
1013174-18	AA-2032B-02 (Beige)
1013174-19	AA-3030-01 (White)
1013174-20	AA-3030-01 (Beige)
1013174-21	AA-3030-02 (White)
1013174-22	AA-3030-02 (Beige)
1013174-23	AA-3025A-01 (White)

1013174-24	AA-3025A-01 (Beige)
1013174-25	AA-3025A-02 (White)
1013174-26	AA-3025A-02 (Beige)
1013174-27	AA-3025B-01 (White)
1013174-28	AA-3025B-01 (Beige)
1013174-29	AA-4022-01 (White)
1013174-30	AA-4022-01 (Beige)
1013174-31	AA-4022-02 (White)
1013174-32	AA-4022-02 (Beige)
1013174-33	AA-4028-01 (White)
1013174-34	AA-4028-01 (Beige)
1013174-35	AA-4028-02 (White)
1013174-36	AA-4028-02 (Beige)

Approved By:

Don Bellsle, MSc For Heather S.H. McGregor, BSc Laboratory Director - Microbiology

Any use of these results implies your agreement that our total liability in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Page 1 of 5



Client: Memorial of PO Box 42 St. Johns,

Memorial University of Newfoundland PO Box 4200 St. Johns, NL A1C 5S7

Attn:

Received Date: 25-Mar-10 Report Date: 31-Mar-10

Susan Knight Tel: 709-737-3786 Fax: (709) 737-3786

Project: Arts and Administration (Washrooms) Paracel Report No.: 1013174

### Asbestos by PLM \*\*MDL - 0.5%\*\*

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1013174-01	23-Mar-10	Sample Hornogenized	White	Drywall Joint Compound	No	Client ID: AA-1CO1-01 (DWJC)	
						Non-Fibers	100
1013174-02	23-Mar-10	Sample Homogenized	White/Grey	Drywall Joint Compound	Yes	Chent ID: AA-1C01-02 (DWIC)	
						Chrysotile	5
						Non-Fibers	95
1013174-03	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-1016A-01 (White)	
						Non-Fibers	100
1013174-04	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-1016A-01 (Beige)	
						Non-Fibers	100
1013174-05	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-1016A-02 (White)	
						Non-Fibers	100
1013174-06	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-1016A-02 (Beige)	
						Non-Fibers	100
1013174-07	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-1015-01 (White)	
						Non-Fibers	100
1013174-08	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-1015-01 (Beige)	
						Non-Fibers	100
1013174-09	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-2013-01 (White)	
						Non-Fibers	100
1013174-10	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-2013-01 (Beige)	
						Non-Fibers	100
1013174-11	23-Mar-10	Sample Homogenized	White	Plaster	No	Chent ID: AA-2018-01 (White)	
						Non-Fibers	100
1013174-12	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-2018-01 (Beige)	
						Non-Fibers	100
1013174-13	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-2018-02 (White)	
						Non-Fibers	100
1013174-14	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-2018-02 (Beige)	
						Chrysotile	1
						Non-Fibers	99

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Client: Memorial University of Newfoundland PO Box 4200 St. Johns MI, A1C 5C7

St. Johns, NL A1C 5S7

Project: Arts and Administration (Washrooms) Paracel Report No.: 1013174

Asbestos by PLM \*\*MDL - 0.5%\*\*

Paracel I.D.	Sample Date	Layers Analyzed	Calour	Description	Asbestos Detected:	Material Identification	% Content
1013174-15	23-Mar-10	Sample Homogenized	White	Plaster	Yes	Client ID: AA-2032B-01 (White)	
						Anthophyllite	5
						Non-Fibers	95
1013174-16	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-2032B-01 (Beige)	
						Anthophyllite	1
						Non-Fibers	99
1013174-17	23-Mar-10	Sample Homogenized	White	Plaster	Yes	Client ID: AA-2032B-02 (White)	1. 1. 2. 1. 0. 1
						Anthophyllite	5
						Non-Fibers	95
1013174-18	23-Mar-10	Sample Homogenized	Beiga	Plaster	Yes	Client ID: AA-2032B-02 (Beige)	my 's Ball
						Chrysotile	t)
						Non-Fibers	99
1013174-19	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-3030-01 (White)	10000
						Non-Fibers	100
1013174-20	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-3030-01 (Beige)	
						Non-Fibers	100
1013174-21	23-Mar-10	Sample Homogenized	White	Plaster	Yes	Client iD: AA-3030-02 (White)	
						Anthophyllite	्र
						Non-Fibers	99
1013174-22	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Clisht ID: A4-3030-02 (Beige)	The Red With St
						Chrysotile	E
						Non-Fibers	99
1013174-23	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-3025A-01 (White)	
						Non-Fibers	100
1013174-24	23-Mar-10	Sample Homogenized	Beige	Plaster	Ne	Client ID: AA-8025A-01 (Beige)	
						Non-Fibers	100
1013174-25	23-Mar-10	Sample Homogenized	White	Plaster	Yes	Client ID: AA-3025A-02 (White)	
						Anthophyllite	1
						Non-Fibers	99

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Fax: (709) 737-3786

Susan Kright

Tel: 709-737-3786

Received Date: 25-Mar-10

Attn:

Report Date: 31-Mar-10



lient:	PO Box 4	l University of Newfoundland 1200 , NL A1C 5S7	d		Attn:	Susan Knight Tel: 709-737-3786 Fax: (709) 737-3786	
Project: Paracel Repol	Arts and <b>t No.:</b> 101317-	Administration (Washroom. 4	5)		Received Date Report Date:		
Asbestos	by PLM	** <b>MDL - 0.5%</b> **					
Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1013174-26	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-3025A-02 (Beige)	
						Chrysotile	1
						Non-Fibers	99
1013174-27	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-3025B-01 (White)	
						Non-Fibers	100
1013174-28	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-3025B-01 (Beige)	
						Chrysotile	1
						Non-Fibers	99
1013174-29	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-4022-01 (White)	
						Non-Fibers	100
1013174-30	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-4022-01 (Beige)	
						Chrysotile	1
						Non-Fibers	99
1013174-31	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-4022-02 (White)	
						Non-Fibers	100
1013174-32	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-4022-02 (Beige)	
						Non-Fibers	100
1013174-33	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-4028-01 (White)	
						Non-Fibers	100
1013174-34	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-4028-01 (Beige)	
			5			Non-Fibers	100
1013174-35	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-4028-02 (White)	
						Non-Fibers	100
1013174-36	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-4028-02 (Beige)	
		, ,	5			Non-Fibers	100

MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

Analytes in bold indicate asbestos content which may include:

Actinolite, Amosite, Anthopyllite, Chrysotile, Crocidolite and/or Tremolite.

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Client:	Memorial University of Newfoundland	Attn:	Susan Knight	
	PO Box 4200		Tel: 709-737-3786	
	St. Johns, NL A1C 5S7		Fax: (709) 737-3786	
Project:	Arts and Administration (Washrooms)	Received Date.	: 25-Mar-10	
Paracel Report No.:	1013174	Report Date:	31-Mar-10	

Analysis Summary Table							
Analysis	Method Reference/Description	Lab Location	NVLAP Lab Code	Analysis Date			
Asbestos by PLM	by EPA 600/R-93/116	Ottawa West Lab	200812-0	30-Mar-10			

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### **Certificate of Analysis**

### Memorial University of Newfoundland

PO Box 4200 St. Johns, NL A1C 5S7 Attn: Susan Knight

Client PO: P0069716 Project: Custody: Phone: 709-737-3786 Fax: (709) 737-3786

Report Date: 20-J	an-2010
Order Date: 18-J	an-2010
Order 4	004068

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

 Paracel ID
 Client ID

 1004068-01
 AA-001 (white)

 1004068-02
 AA-001 (beige)

Approved By:

Service and a service of the service

Heather S.H. McGregor, BSc Laboratory Director - Microbiology

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Page 1 of 2



Client:

Memorial University of Newfoundland PO Box 4200

St. Johns, NL A1C 5S7

Attn: Susan Knight Tel: 709-737-3786

Fax: (709) 737-3786

Project:

Paracel Report No.: 1004068

Received Date: 18-Jan-10 Report Date: 20-Jan-10

### Asbestos by PLM \*\*MDL - 0.5%\*\*

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1004068-01	18-Jan-10	Sample homogenized	White	Plaster	No	Client ID: AA-001 (white)	
						Non-Fibers	100
1004068-02	18-Jan-10	Sample homogenized	Beige	Plaster	No	Client ID: AA-001 (beige)	
						Non-Fibers	100

MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool Analytas in bold indicate asbestos content which may include:

Actinolite, Amosite, Anthopyllite, Chrysotile, Crocidolite and/or Tremolite.

Analysis Summary Table				
Analysis	Method Reference/Description	Lab Location	NVLAP Lab Code	Analysis Date
Asbestos by PLM	by EPA 600/R-93/116	Ottawa West Lab	200812-0	19-Jan-10

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Page 2 of 2



Ph: (506) 658-1058 Fax: (506) 652-7998 email@toalltech.com

### Certificate of Analysis

Nikki Davis Report Date: 09-Feb-09 ALL-TECH Environmental Services Limited AT Project#: 8941 151 Crosbie Road Project: Mun Suite 402 St. John's, NF A1B 4B4 PO / WO: A2H 6C7 Bulk Sample Analysis Summary Material Description: AA-01, Plaster above Ceiling, on wall netting Lab No: L-2012-1 Location: A-2022A, MUN. % Asbestos Type Non-Asbestos Fibrous Material Non-Fibrous Material 1-5% Chrysotile Cellulose Mica Material Description: QC-01, Textured Ceiling Lab No: L-2012-2 Location: Corridor 1C01 Outside QC1005, MUN. Non-Asbestos Fibrous Material Non-Fibrous Material % Asbestos Туре Cellulose Non-Detected Identification: By Polarized Light Microscopy / Dispersion Staining (PLM/DS). Test Method: NIOSH 9002, LOD <1% by volume. LOD - Refers to Limit of Detection

Analysis Performed By:

Date: (

09-Feb-09



Sample #: AA		Date Samp	led: March 23 2010	
	s & Administration		ler: Susan Knight	
Location: AA	-2018-01		sis: Paracel Lab PLN	l
UN Project #:		Work Order # Bulk Sampling Par		······································
pe/Tank	Flooring	Ceiling	Roofing	Location
Insulation	12" x 12" Tile	Textured	Shingle	Floor
Elbow	9" x 9" Tile	Stucco	Rolled	Wall Orientation
Fitting	Vinyle Sheet	Popcorn	Felt	x Ceiling
Transite Pipe	Mastic		Tar	Above Ceiling
Gasket	Wall	x Plaster		Other
Tank Insulation	Transite Panel	Acoustic Tile (1	)rapped)	
Pipe Wrap	Textured Wall	Acoustic Tile (	, . ,	
	Plaster	Mastic	Miscellaneous	
Insulation	DWJC	Structural	wiscenaneous	
Таре	DW3C		No. of Disease	2
Paper Wrap		Steel F.P.ing		
		Deck F.P.ing	Colour:	White/Beige
	A-2015			



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### **Certificate of Analysis**

1013174-24

Memorial University of Newfoundland

PO Box 4200 St. Johns, NL A1C 5S7 Attn: Susan Knight

Client PO: P0069716

Project: Arts and Administration (Washrooms) Custody:

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

	•
Paracel ID	Client ID
1013174-01	AA-1C01-01 (DWJC)
1013174-02	AA-1C01-02 (DWJC)
1013174-03	AA-1016A-01 (White)
1013174-04	AA-1016A-01 (Beige)
1013174-05	AA-1016A-02 (White)
1013174-06	AA-1016A-02 (Beige)
1013174-07	AA-1015-01 (White)
1013174-08	AA-1015-01 (Beige)
1013174-09	AA-2013-01 (White)
1013174-10	AA-2013-01 (Beige)
1013174-11	AA-2018-01 (White)
1013174-12	AA-2018-01 (Beige)
1013174-13	AA-2018-02 (White)
1013174-14	AA-2018-02 (Beige)
1013174-15	AA-2032B-01 (White)
1013174-16	AA-2032B-01 (Beige)
1013174-17	AA-2032B-02 (White)
1013174-18	AA-2032B-02 (Beige)
1013174-19	AA-3030-01 (White)
1013174-20	AA-3030-01 (Beige)
1013174-21	AA-3030-02 (White)
1013174-22	AA-3030-02 (Beige)
1013174-23	AA-3025A-01 (White)

1013174-25	AA-3025A-02 (White)
1013174-26	AA-3025A-02 (Beige)
1013174-27	AA-3025B-01 (White)
1013174-28	AA-3025B-01 (Beige)
1013174-29	AA-4022-01 (White)
1013174-30	AA-4022-01 (Beige)
1013174-31	AA-4022-02 (White)
1013174-32	AA-4022-02 (Beige)
1013174-33	AA-4028-01 (White)
1013174-34	AA-4028-01 (Beige)
1013174-35	AA-4028-02 (White)
1013174-36	AA-4028-02 (Beige)

AA-3025A-01 (Beige)

Approved By:

Don Belisle, MSc For Heather S.H. McGregor, BSc Laboratory Director - Microbiology

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Page 1 of 5

Phone: 709-737-3786 Fax: (709) 737-3786

Report	Date:	31-Mar-2010
Order	Date:	25-Mar-2010
	Order	#: 1013174



Memorial University of Newfoundland Client: PO Box 4200

St. Johns, NL A1C 557

Attn:

Received Date: 25-Mar-10

Report Date: 31-Mar-10

Susan Knight Tel: 709-737-3786 Fax: (709) 737-3786

Project: Arts and Administration (Washrooms) Paracel Report No.: 1013174

### Asbestos by PLM \*\*MDL - 0.5%\*\*

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1013174-01	23-Mar-10	Sample Homogenized	White	Drywall Joint Compound	No	Client ID: AA-1C01-01 (DWJC)	
						Non-Fibers	100
1013174-02	23-Mar-10	Sample Homogenized	White/Grey	Drywall Joint Compound	Yes	Client ID: AA-1C01-02 (DWJC)	
						Chrysotile	5
						Non-Fibers	95
1013174-03	23-Mar-10	Sample Homogenized	White	Plaster	No	Clent ID: AA-1016A-01 (White)	
						Non-Fibers	100
1013174-04	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-1016A-01 (Beige)	
						Non-Fibers	100
1013174-05	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-1016A-02 (White)	
						Non-Fibers	100
1013174-06	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-1016A-02 (Beige)	
						Non-Fibers	100
1013174-07	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-1015-01 (White)	
						Non-Fibers	100
1013174-08	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-1015-01 (Beige)	
						Non-Fibers	100
1013174-09	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-2013-01 (White)	
						Non-Fibers	100
1013174-10	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-2013-01 (Beige)	
						Non-Fibers	100
1013174-11	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-2018-01 (White)	
						Non-Fibers	100
1013174-12	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-2018-01 (Beige)	
						Non-Fibers	100
1013174-13	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-2018-02 (White)	
						Non-Fibers	100
1013174-14	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-2018-02 (Beige)	
						Chrysotile	1
						Non-Fibers	99

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Page 2 of 5

### GPARACEL

Memorial University of Newfoundland	Attn:	Susan Knight	
PO Box 4200		Tel: 709-737-3786	
St. Johns, NL A1C 5S7		Fax: (709) 737-3786	
Arts and Administration (Washrooms)	Received Dat	te: 25-Mar-10	
1013174	Report Date:	31-Mar-10	
	PO Box 4200	PO Box 4200 St. Johns, NL A1C 5S7 Arts and Administration (Washrooms) <b>Received Dat</b>	PO Box 4200         Tel: 709-737-3786           St. Johns, NL A1C 557         Fax: (709) 737-3786           Arts and Administration (Washrooms)         Received Date: 25-Mar-10

\*\*MDL - 0.5%\*\* Asbestos by PLM

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
013174-15	23-Mar-10	Sample Homogenized	White	Plaster	Yes	Client ID: AA-2032B-01 (White)	
						Anthophyllite	5
						Non-Fibers	95
013174-16	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-2032B-01 (Belgn)	
						Anthophyllite	1
						Non-Fibers	99
013174-17	23-Mar-10	Sample Homogenized	White	Plaster	Yes	Client ID: AA-2032B-02 (White)	
						Anthophyllite	5
						Non-Fibers	95
013174-18	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-2032B-02 (Beige)	
						Chrysotile	E.
						Non-Fibers	99
013174-19	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-3030-01 (White)	
						Non-Fibers	100
013174-20	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-3030-01 (Beige)	
						Non-Fibers	100
013174-21	23-Mar-10	Sample Homogenized	White	Plaster	Yes	Client ID: A4-3030-02 (White)	
						Anthophyllite	1
						Non-Fibers	99
013174-22	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Cant ID: AA-3030-02 (Beige)	
						Chrysotile	1
						Non-Fibers	99
013174-23	23-Mar-10	Sample Homogenized	White	Plaster	No	Client 10: AA-30254-01 (White)	
						Non-Fibers	100
1013174-24	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-3025A-01 (Beige)	
						Non-Fibers	100
1013174-25	23-Mar-10	Sample Homogenized	White	Plaster	Yes	Client ID: AA-3025A-02 (White)	
						Anthophyllite	1
						Non-Fibers	99

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Page 3 of 5



Memorial University of Newfoundland Client:

PO Box 4200 St. Johns, NL A1C 5S7 Attn:

Received Date: 25-Mar-10

Report Date: 31-Mar-10

Tel: 709-737-3786 Fax: (709) 737-3786

Susan Knight

Project: Arts and Administration (Washrooms) Paracel Report No.: 1013174

### \*\***MDL - 0.5%**\*\* Asbestos by PLM

Paracel I.D.	Sample Date	Layers Analyzed	Colour	Description	Asbestos Detected:	Material Identification	% Content
1013174-26	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-3025A-02 (Beige)	
						Chrysotile	1
						Non-Fibers	99
1013174-27	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-3025B-01 (White)	
						Non-Fibers	100
1013174-28	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-3025B-01 (Beige)	
						Chrysotile	1
						Non-Fibers	99
1013174-29	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-4022-01 (White)	
						Non-Fibers	100
1013174-30	23-Mar-10	Sample Homogenized	Beige	Plaster	Yes	Client ID: AA-4022-01 (Beige)	
						Chrysotile	1
						Non-Fibers	99
1013174-31	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-4022-02 (livhite)	
						Non-Fibers	100
1013174-32	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-4022-02 (Beige)	
						Non-Fibers	100
1013174-33	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-4028-01 (White)	
						Non-Fibers	100
1013174-34	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-4028-01 (Beige)	
						Non-Fibers	100
1013174-35	23-Mar-10	Sample Homogenized	White	Plaster	No	Client ID: AA-4028-02 (White)	
						Non-Fibers	100
1013174-36	23-Mar-10	Sample Homogenized	Beige	Plaster	No	Client ID: AA-4028-02 (Beige)	
						Non-Fibers	100

MMVF: Man Made Vitreous Fibers: Fiberglass, Mineral Wool, Rockwool, Glasswool

Analytes in bold indicate asbestos content which may include:

Actinolite, Amosite, Anthopyllite, Chrysotile, Crocidolite and/or Tremolite.

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Page 4 of 5

### **GPARACEL**

Client:	Memorial University of Newfoundland	Attn: Susan Knight	
	PO Box 4200	Tel: 709-737-3786	
	St. Johns, NL A1C 557	Fax: (709) 737-3786	
Project:	Arts and Administration (Washrooms)	Received Date: 25-Mar-10	
Paracel Report No.:	1013174	Report Date: 31-Mar-10	

Analysis Summary Tal	ble			
Analysis	Method Reference/Description	Lab Location	NVLAP Lab Code	Analysis Date
Asbestos by PLM	by EPA 600/R-93/116	Ottawa West Lab	200812-0	30-Mar-10

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### **GTTAWA** SDB 23 DT 4 Control Data SDB 23 DT 4 Control Data

#125158A08A

EARNIA National States

Page 3 of 5





October 12, 2010

Pinchin LeBlanc Environmental Ltd. 27 Austin Street, 2nd Floor St. John's NL A1B 4C3

Attention:	Angela Stagg
Lab Reference No.:	b75734
Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.:	N/A
Date Received:	October 4, 2010
Date Analyzed:	October 12, 2010
Analyst(s):	K. Cockburn-Swance
# Samples submitted:	17
# Phases analyzed:	21

### Methods of Analysis:

EPA 600/R-93/116 - Method for the Determination of Asbestos in Bulk Building Materials dated July, 1993

Bulk samples are checked visually and scanned under a stereomicroscope. Slides are prepared with representative portions of material and observed under a Polarized Light Microscope (PLM) at magnifications of 40X, 100X or 400X as appropriate. Asbestos fibres are identified by a combination of morphology, colour, refractive index, extinction, sign of elongation, birefringence and dispersion staining colours. A visual estimate is made of the percentage of asbestos present. A reported concentration of less than (<) the regulatory threshold (see chart below) indicates the presence of confirmed asbestos in trace quantities, limited to only a few fibres or fibre bundles in an entire sample. This method complies with all provincial regulatory requirements (NIOSH 9002, I.R.S.S.T. 244-2). Multiple phases within a sample are analyzed and reported separately.

Provincial Jurisdiction	Regulatory Threshold	Provincial Jurisdiction	Regulatory Threshold
Ontario	0.5%	Manitoba	0.1% friable 1% non-friable
Quebec	0.1%	Saskatchewan	Unstated, likely 1.0%
Alberta, British Columbia,		· · · · · · · · · · · · · · · · · · ·	
NWT, Yukon, Nunavut	1%	Atlantic Provinces	1%

All bulk samples submitted to this laboratory for asbestos analysis are retained for a minimum of three months. Samples may be retrieved, upon request, for re-examination at any time during that period.

Pinchin Environmental Ltd. is accredited by the National Institute of Standards and Technology, National Voluntary Laboratory Accreditation Program (NVLAP Lab Code 101270-0 and NVLAP Lab Code 200795-0) for selected test methods for the identification of asbestos in bulk samples and meets all requirements of ISO/IEC 17025:2005 and relevant requirements of ISO 9002;1994.

This report relates only to the items tested. If you have any questions, please feel free to contact me.

Yours truly,

Digitally Signed by Karen Slaver Kaun Mayn Laboratory Manager, Asbestos Services Pinchin Environmental Ltd.

Laboratory Manager, Asbestos Services

NOTE: This test report may not be reproduced, except in full, without the written approval of the laboratory. The client may not use this report to claim product endorsement by NVLAP or any agency of the U.S. Government. This report is valid only when signed in blue ink by the analyst and the laboratory manager. Vinyl asbestos floor tiles contain very fine fibres of asbestos and may be missed by some laboratories using the PLM method. Internal verification studies performed by Pinchin indicate that the chance of missing asbestos in floor tiles is no higher than about 2%. Supporting laboratory doeINGhtH4GNX/IRCHMENTAtuhTAtainty is available upon request.

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### Pinchin Environmental Asbestos Laboratory Certificate of Analysis

Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.: Prepared For:	N/A Angela Stagg
Lab Reference No.:	b75734

Date Analyzed:

b75734 October 12, 2010

### BULK SAMPLE ANALYSIS

SAMPLE	SAMPLE	% COMPOSITION (VISUAL ESTIMATE)		
IDENTIFICATION	DESCRIPTION	ASBESTOS	OTHER	
AA-1018-001-19-08-10 Arts & Administration, AA- 1018, Mechanical Room, Plaster ceiling	2 Phases: a) Homogeneous, off- white, hard, cementitious, plaster base coat.		Cellulose 0.1-1% Vermiculite 10-25% Other Non-Fibrous > 75%	
	b) Homogeneous, white, hard, cementitious, plaster top coat.	None Detected	Non-Fibrous Material > 75%	
AA-1018-002-19-08-10 Arts & Administration, AA- 1018, Mechanical Room, Plaster wall (31)	Homogeneous, grey, hard, cementitious, plaster material.	Chrysotile < 0.1%	Non-Fibrous Material > 75%	
AA-1023A-001-19-08-10 Arts & Administration, AA- 1023A, Cashier Office, Remnant plaster wall	2 Phases: a) Homogeneous, beige, hard, cementitious, plaster base coat.	Actinolite/Tremolite < 0.1%	Vermiculite 10-25% Other Non-Fibrous > 75%	
above t-bar ceiling	b) Homogeneous, white, hard, cementitious, plaster top coat.	None Detected	Non-Fibrous Material > 75%	
AA-1023A-002-19-08-10 Arts & Administration, AA- 1023A, Cashier Office, Textured ceiling above t- bar ceiling	Non-homogeneous, off- white, finishing or texture coat.	Chrysotile 5-10%	Perlite 25-50% Vermiculite 5-10% Other Non-Fibrous 50-75%	
AA-1025A-001-24-08-10 Arts & Administration, AA- 1025A, Vault, Plaster wall (1)	Homogeneous, grey, hard, cementitious, plaster material.	Chrysotile 1-5%	Non-Fibrous Material > 75%	

**REVIEWED BY** 

K. Mayer

ANALYST





Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.: Prepared For:	N/A Angela Stagg
Lab Reference No.:	b75734

Date Analyzed:

October 12, 2010

SAMPLE	SAMPLE	% COMPOSITION (VISUAL ESTIMATE)	
IDENTIFICATION	DESCRIPTION	ASBESTOS	OTHER
AA-1026A-001-24-08-10 Arts & Administration, AA- 1026A, Office, Plaster Wall/Skim coat	Homogeneous, grey, hard, cementitious, plaster material.	None Detected	Non-Fibrous Material > 75%
AA-1020-001-27-08-10 Arts & Administration, AA- 1020, Receiving Doors, Tar paper on duct work	Homogeneous, black, tar material.	None Detected	Tar and other non- > 75% fibrous
Comments:	Cellulose and fibreglass are	present on the surface of this s	sample.
AA-1013-001-27-08-10 Arts & Administration, AA- 1013, Theatre Storage, Tar paper on straight run piping, fountain hatch	Homogeneous, black, tar material.	None Detected	Tar and other non- > 75% fibrous
Comments:	Cellulose and foil are prese	nt on the surface of this sample	· · · · · · · · · · · · · · · · · · ·
AA-1013G-001-27-08-10 Arts & Administration, AA- 1013G, Mechanical Room, Expansion joint cloth, air handling unit	Homogeneous, off-white, woven fabric.	Chrysotile 25-	50% Glass Fibres 25-50% Synthetic Fibres 25-50% Non-Fibrous Material 5-10%
AA-1C01-001-31-08-10 Arts & Administration, AA- 1C01, Corridor, Plaster material on wire mesh	Homogeneous, off-white, hard, cementitious, plaster base coat.		0.1% Vermiculite 10-25% 0.1% Other Non-Fibrous > 75%

**REVIEWED BY** 

K. Alayer

ANALYST al-





Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.: Prepared For:	N/A Angela Stagg
Lab Reference No :	h75734

Lab Reference No.: Date Analyzed:

D75734 October 12, 2010

SAMPLE	SAMPLE SAMPLE % COMPOSITION (		VISUAL ESTIMATE)	/ISUAL ESTIMATE)	
IDENTIFICATION	DESCRIPTION	ASBESTOS	OTHER		
AA-1007A-001-31-08-10 Arts & Administration, AA- 1007, Office, 2' x 2' Acoustic ceiling tile, pinhole w fissure	layered, compressed, acoustic ceiling tile.	None Detected	Cellulose 25-50 Mineral Wool 50-75 Non-Fibrous Material 5-10	5%	
AA-2013-001-08-09-10 Arts & Administration, AA- 2013, Office, 2' x 2' Acoustic ceiling tile, pinhole	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected	Cellulose25-50Mineral Wool25-50Perlite10-25Other Non-Fibrous1-50	0%	
AA-2015A-001-22-09-10 Arts & Administration, AA- 2015A, Reid Theatre, Old theatre curtain	Homogeneous, brown, woven fabric.	None Detected		5% 5%	
AA-3005-001-09-09-10 Arts & Administration, AA- 3006, Office, Plaster wall/ skim coat	2 Phases: a) Homogeneous, off- white, hard, cementitious, plaster base coat.	Chrysotile 0,1-1%	Vermiculite 10-2. Other Non-Fibrous > 7	25% 75%	
	b) Homogeneous, grey, hard, cementitious, plaster top coat.	Chrysotile < 0.1%	Non-Fibrous Material > 7	′5%	

REVIEWED BY K. Mayer

ANALYST





Client Project Name:	Department of Health & Safety, Memorial University of Newfoundland 208 Elizabeth Ave., St. John's, NL A1C 5S7
Client Project No.: Prepared For:	N/A Angela Stagg
Lab Reference No.:	b75734

Date Analyzed:

October 12, 2010

SAMPLE SAMPLE % COMPOSITION (			ISUAL ESTIMATE)		
IDENTIFICATION	DESCRIPTION	ASBESTO	S	OTHER	
AA-4017-001-23-09-10 Arts & Administration, AA- 4017, Mechanical Room, Plaster wall/ skim coat	2 Phases: a) Homogeneous, off- white, hard, cementitious, plaster base coat.	Chrysotile	< 0.1%	Vermiculite Other Non-Fibrous	10-25% <b>&gt; 75%</b>
	b) Homogeneous, grey, hard, cementitious, plaster top coat.	Chrysotile	< 0.1%	Non-Fibrous Material	> 75%
AA-4017-002-23-09-10 Arts & Administration, AA- 4017, Mechanical Room, Unidentified material, suspect ACT, or stucco ceiling	Homogeneous, off-white, finishing or texture coat.	Chrysotile	10-25%	Perlite Other Non-Fibrous	25-50% 25-50%
AA-4048-001-24-09-10 Arts & Administration, AA- 4048, Records Room, 2' x 2' Acoustic ceiling tile, pinhole w fissure	Homogeneous, beige, layered, compressed, acoustic ceiling tile.	None Detected		Cellulose Mineral Wool Perlite Other Non-Fibrous	25-50% 25-50% 10-25% <b>1-5%</b>

**REVIEWED BY** L. Slarger

ANALYST

PowerVac

Fax: 709-781-3265

AA-177-08-

ð \_Н ENVIRONMENTAL SERVICES LIMIT

£

151 Crocbie Road Suite 402 St. John's, NL A18 484

Bus; (709) 754-4146 Fax: (709) 754-4194

Email: onewhook@toalRech.com

July 20, 2009

RECEIVED JUL 2 1 2009

Power Vac Services Limited 155 McNamara Drive Paradise, NL A1L 0A7

### RE: Bulk Sample Results - MUN Arts & Administration Building Room 2001, St. John's, NL

On July 7, 2009, one (1) bulk sample was collected by ALL-TECH Environmental Services Limited from room 2001 of the Arts & Administration Building, MUN, St. John's, NL. This sample underwent laboratory PLM/DS analysis to determine it's asbestos content.

Listed in Table 1.0 below is the sample description and laboratory result of this analysis.

Table 1.0				
Bulk Sample Results				
Room 2001 Arts & Administration Building, MUN	ł			
St. John's, NL				

Sample Number	Sample Description/Location	Asbestos Content
1	Drywall Joint Compound AA 2001 MUN	NONE DETECTED

Laboratory analysis confirmed that the sample did not contain an asbestos concentration greater than the Newfoundland and Labrador guideline of 1%. (Newfoundland and Labrador Asbestos Abatement Regulations, 1998). No Further Action is required at this time.

If you should have any questions regarding the results, please feel free to contact me at (709)754-4146.

Thank You,

ven Newbork

Orven Newhook, B.Sc. Environmental Consultant ALL-TECH Environmental Services Limited Encl: Laboratory Results (1)

### International Ashertos Testing Laboratories **IAT**

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9004 Conceases Peterse State B Mr. Lincol, NJ (20054 Telephone: 256-231-9449 Fee: 856-231-9848

### **CERTIFICATE OF ANALYSIS**

ALL-TECH Envil Services Let. Clicut: 151 Crosbie Rd, Suite 402 St. John's NL A1B 4B4

Repart Date: 7/10/2009 Project MUN Arts & Admin Project No.:

### BULK SAMPLE ANALYSIS SUMMARY

Lah Ne.) Climit Na.:	<b>3656970</b> 1	Description / Loonties: W Ro	line John Compound ing 2001	
	These sectors	M Non-Astronet Plantes Ma	mid The	24 Non-Silburga Manufat
Mana Demond	bine Develo	New Ortered	Non-Detected	100

MIST-NYLAP No. 101165-0	NY-DOH No. 11821	ATHA LAD No. 199185
The confidences report relation only to finish there is a start of and does not represent to the start manual by \$2537-377. BY, APAL AN AND AND AND AND AND AND AND AND AND		
	Antyna Mathod: EPA NOR-93/116	
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Andrew Berformed Bry R. Caren	· · · · · · · · · · · · · · · · · · ·	

a Performed Bys R. Caran

Approval By:

7/8/2009 Detes -----

Progr 1 of 1

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