

School District 85



**Fort Rupert Elementary School
5520 Beaver Harbour Road, Port Hardy, BC
Asbestos Management Inventory**



**North West
Environmental Group Ltd.**

NWest File: 39957 AMI1 V1.0

Date Issued: January 4, 2021

Report Information

Client Name:	School District 85
Contact:	Darby Gildersleeve
Issued on:	January 4, 2021
NWest File Number:	39957 AMI1 V1.0
NWest Primary Contact:	Daniel Morton

Document Sign-Off



Joel Shandro, B.Sc.
Senior Project Manager
Qualified Person as per OHS Regulation 6.1
Review



Daniel Morton, B.Sc., PMP, CVI
Project Manager
Qualified Person as per OHS Regulation 6.1
Review



Paddy Greig, B.Sc.
Occupational Hygiene Technician
Author

Confidentiality and Copyright

This document is for the sole use of the addressee and North West Environmental Group Ltd. (NWest). The document contains confidential information that shall not be reproduced in any manner or disclosed to or discussed with any other parties without the express written permission of NWest. Information in this document is to be considered the intellectual property of NWest in accordance with Canadian copyright law.

This report was prepared by NWest for the account of the above-noted client. The material herein reflects NWest's best judgement, in the light of the information available at the time of preparation. Any third-party use of this report, or any reliance on, or decisions made based on it, are the responsibility of such third parties. NWest accepts no responsibility for damage, if any, suffered by any third party as a result of decisions made or action based on this report.

Table of Contents

Table of Contents	ii
1 Introduction	1
2 Scope of Work and Exclusions	1
3 Regulatory Framework.....	2
4 Facility Description.....	2
5 Asbestos Management Inventory and Recommendations.....	3
6 General Recommendations	8
Appendix A. Photo Plates.....	9
Appendix B. Analytical Reports.....	15
Appendix C. Sample Location Drawings.....	16
Appendix D. Regulatory Framework.....	17
Appendix E. Methodology.....	18
Appendix F. Evaluation of Asbestos-Containing Materials	19

1 Introduction

North West Environmental Group Ltd. (NWest) was retained by School District 85 (the Client) to conduct an asbestos management inventory (AMI) at Fort Rupert Elementary School located at 5520 Beaver Harbour Road, Port Hardy, BC (site). The non-destructive assessment was conducted by NWest representatives, Luke Kozlowski and Paddy Greig on August 27, 2020.

The purpose of this assessment is to provide information regarding the presence and condition of asbestos and suspect asbestos containing building materials in the building structure. This inventory assessment involved the identification of asbestos containing materials and a condition assessment in support of the building owner/manager's regular monitoring of asbestos containing material conditions so that materials in good condition may be safely managed in place until they are removed, and damaged materials can be repaired or otherwise addressed in a timely manner. Regular inspections of asbestos containing building materials are required to mitigate the potential for occupant and worker exposure. This report may be used for day to day building maintenance activities involving minor disturbance of materials.

This assessment supports compliance with the following provincial legislation:

-) BC Workers Compensation Act – Part 2, Division 4 (General Duties of Employers, Workers and Others), Section 25 (General duties of owner).
-) BC Occupational Health and Safety Regulation – Part 6.4 (Asbestos-General Requirements, Inventory).

This asbestos management inventory assessment does not replace the requirement for the owner to undertake a pre-renovation or pre-demolition project-specific hazardous materials assessment as required by the BC Occupational Health and Safety Regulation section 20.112.

Note: ongoing repairs, maintenance, and renovations may result in some changes to the building after this report was printed.

2 Scope of Work and Exclusions

All accessible areas of the facility were included in this assessment. Whenever practicable, representative building material samples were collected for asbestos analysis. See Appendix E for assessment methodologies.

This assessment was non-destructive (e.g., inspection holes to assess otherwise intact systems such as wall cavities were not made) and non-invasive (e.g., assessment of cupboards, closets, and similar personal spaces were not undertaken; ceiling tiles were not removed to assess above-ceiling materials). As such, concealed asbestos containing materials may be present.

The following NWest historical data and information is included herein:

-) Project number 30006, "Asbestos Inventory and Condition Assessment Fort Rupert Elementary School", issued on November 10, 2016.
-) Project number 10555, "Fort Rupert Elementary School" bulk asbestos report, issued on September 10, 2009.

Areas/systems not included in the assessment are summarised in the following table.

Table 2-1. Assessment Exclusions

Area/System	Rationale
Roof	Non-destructive assessment
Attic	Non-destructive assessment
Wall/ceiling cavities	Non-destructive assessment
Concrete block walls	Non-destructive assessment
Equipment/System	Outside assessment scope of work
Underground/buried equipment and systems	Outside assessment scope of work
Indoor air quality assessment	Outside assessment scope of work
Contents	Outside assessment scope of work

3 Regulatory Framework

The methods used for assessment, sample collection, and analysis were in accordance with applicable regulations and are acceptable to WorkSafeBC. See Appendix D for details on the applicable regulatory framework and additional standards that apply to this project.

4 Facility Description

The following is a summary of the building. Area calculations are approximate.

Table 4-1. Building Summary

Building System	Details
Construction date	Original construction: 1964 Renovation/Addition(s): 1975 and 1984 additions
Renovation date(s) and description(s)	Extent of 1975 and 1984 renovations not disclosed
Number of floors/levels	1
Area	17,007 ft ²
Exterior Materials	
Roofing	Tar and gravel
Exterior	Concrete block and wood
Interior Materials	
Ceiling	Acoustic ceiling tile, concrete, drywall, texture coat, and wood
Walls	Drywall, concrete block, ceramic tile, wallpaper, wood
Floors	Sheet flooring, floor tile, ceramic tile, carpet, stair tread, and concrete
Insulation	Outside scope of assessment
HVAC (system type and insulation type)	Forced air
Pipe lagging	Fibreglass and cementitious
Lighting	Fluorescent

5 Asbestos Management Inventory and Recommendations

This section summarises the observations made, and the analytical results for material samples collected during the site assessment. Photo plates are presented in Appendix A, analytical laboratory reports are included in Appendix B, and drawings showing sample locations are presented in Appendix C.

The following table summarizes the results of the inventory, condition assessment, and recommended management actions for known and suspect asbestos-containing materials (ACMs). The recommendations are derived by the friability, accessibility, and condition of the ACMs. See Appendix F for details. Quantities are estimated.

Table 5-1. Asbestos-Containing Materials Summary

Description	System	Locations	Status	Quantity	Accessibility	Friability	Condition	Mgmt Recommendation
Acoustic ceiling tile 1 – Small pinhole	Ceiling	Room: 100, 101, 102, 103, 104, 105, 106, 107 Washroom: Girls, Boys Community Rental A, Community Rental A Vestibule, Community Rental A Washroom, Community Rental B, Community Rental B Washroom, Electrical, First Aid Room, Main Entry Hallway, Mezzanine Accessed by Gym, Room 101 A/V, Room 101 Storage, Staff Room, Main Office, Men Staff Washroom, Women Staff Washroom, East Wing Hallway	Suspect	11,925 ft ²	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Acoustic ceiling tile 2 – Patterned fissure small and large pinhole	Ceiling	Room: 103, 104, 105, 106 Washroom: Girls, Boys, Gym Main Entry Hallway, Hallway by Room 107, Mezzanine Accessed by Gym, Principals Office, Staff Room, Main Office, East Wing Hallway	Suspect	950 ft ²	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Acoustic ceiling tile 3 – Longitudinal fissure small pinhole	Ceiling	Washroom: Girls, Boys, Community Rental B Washroom	Suspect	80 ft ²	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact



Warning: in the event any additional suspect materials are encountered during renovation/repair activities, work on those materials should stop immediately and remain undisturbed until testing confirms the presence or absence of asbestos or other hazardous material

Description	System	Locations	Status	Quantity	Accessibility	Friability	Condition	Mgmt Recommendation
Acoustic ceiling tile 4 – Horizontal fissure small pinhole	Ceiling	Community Rental A Washroom, Gym, Main Entry Hallway, Hallway by Room 107, Mezzanine Accessed by Gym, Men Staff Washroom, Women Staff Washroom, East Wing Hallway	Suspect	285 ft ²	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Acoustic ceiling tile 5 – Textured 2'x4'	Ceiling	Gym, Hallway by Room 107	Suspect	2,515 ft ²	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Acoustic ceiling tile 6 – Textured ceiling tile	Ceiling	Janitor Room	Suspect	35 ft ²	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Concrete blocks (may contain vermiculite)	Siding	Exterior	Suspect	75% of buildings siding	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Concrete blocks (may contain vermiculite)	Wall	Room: 103, 104, 105 Washroom: Girls, Boys, Electrical, Gym, Gym Equipment Storage Room, Hall By Gym, Janitor Room, Janitor Room by Gym, Kitchen by Gym, Main Entry Hallway, Hallway by Room 107, Mezzanine Accessed by Gym, Principals Office, Room 109 Boys Changeroom, Room 110 Girls Changeroom, Staff Room, Main Office, Men Staff Washroom, Women Staff Washroom, East Wing Hallway	Suspect	12,050 ft ²	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Floor tile 1 – 12"x12" rose with white streaks	Floor	Room: 103, 104, 105 Electrical, Gym Equipment Storage Room, Hall by Gym, Janitor Room, Janitor Room by Gym, Kitchen by Gym, Main Entry Hallway, Hallway by Room 107, Mezzanine Accessed by Gym, Men Staff Washroom, Women Staff Washroom, East Wing Hallway	Confirmed	3,655 ft ²	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact



Warning: in the event any additional suspect materials are encountered during renovation/repair activities, work on those materials should stop immediately and remain undisturbed until testing confirms the presence or absence of asbestos or other hazardous material

Description	System	Locations	Status	Quantity	Accessibility	Friability	Condition	Mgmt Recommendation
1"x1" ceramic tile grout and thinset	Floor	Room 109 Boys Changeroom, Room 110 Girls Changeroom, Boys Washroom	Suspect	920 ft ²	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
4"x4" ceramic tile grout and thinset	Wall	Room 109 Boys Changeroom, Room 110 Girls Changeroom	Suspect	400 ft ²	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Drywall with joint compound	Wall	Community Rental A, Community Rental A Vestibule, Community Rental B, Community Rental B Washroom, First Aid Room	Suspect	2,520 ft ²	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Drywall with joint compound	Ceiling	Gym Stage Storage	Suspect	200 ft ²	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Mastic 1 – Gold/silver	Sink	Room: 100, 101, 103, 104, 105, 107 Community Rental A, Community Rental B, Kitchen by Gym, Staff Room	Suspect	9 sinks	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Mastic 2 – Grey	Window	Community Rental A	Suspect	1 window	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Mastic 3 – Black	Window	Community Rental B, Staff Room	Suspect	3 windows	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Mastic 4 – Black	Ductwork	Community Rental A Janitor, Room 101 Hot Water Tank Room	Suspect	Patches on ducting in rooms mentioned	Access B – Accessible to maintenance workers	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Caulking 1 – Grey (painted white)	Ductwork	Room: 100, 101, 102, 103, 104, 105, 106 First Aid Room, Room 101 A/V, Main Office	Suspect	At duct joints in mentioned rooms	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Caulking 2 – White	Wall penetration	Janitor Room by Gym	Suspect	1 ft ²	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact



Warning: in the event any additional suspect materials are encountered during renovation/repair activities, work on those materials should stop immediately and remain undisturbed until testing confirms the presence or absence of asbestos or other hazardous material

Description	System	Locations	Status	Quantity	Accessibility	Friability	Condition	Mgmt Recommendation
Caulking 3 – Grey	Windows	Exterior	Suspect	All exterior windows	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Fittings insulation 1 – Cementitious	Pipe insulation	Gym Equipment Storage Room, Janitor Room, Janitor Room by Gym, Room 110 Girls Changeroom	Suspect	13 fitting elbows	Access A – Accessible to all building users	Friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Brown stair tread	Stair	Hall By Gym	Suspect	65	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Grey stair tread	Stair	Mezzanine Accessed by Gym	Suspect	200	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Asbestos cement parging	Ceiling	Gym Equipment Storage Room, Hallway by Gym, Janitor Room by Gym, Kitchen by Gym, Room 109 Boys Changeroom, Room 110 Girls Changeroom	Confirmed	1,530 ft ²	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact
Baseboard adhesive	Wall	Throughout building	Suspect	Throughout building	Access A – Accessible to all building users	Non-friable	Good	Action 5 – Proactive ACM removal / Action 7 – Routinely monitor condition Test prior to impact

Note: asbestos-containing materials may be present in concealed or excluded locations and/or systems. See Section 2 of this report.

Materials suspected to contain asbestos which are often concealed in buildings and require destructive assessment to evaluate may be present which include, but are not limited to:

-) Electrical wiring and cables
-) Buried asbestos cement pipes
-) Formed cement products
-) Bell and spigot piping gaskets
-) Incandescent light fixtures (heat shields)
-) Floor leveling compound
-) Vermiculite in wall cavities including concrete block void spaces
-) Penetration caulking and/or parging



Warning: in the event any additional suspect materials are encountered during renovation/repair activities, work on those materials should stop immediately and remain undisturbed until testing confirms the presence or absence of asbestos or other hazardous material

A summary of materials known or presumed not to contain asbestos is presented as follows:

Table 5-2. Non-Asbestos-Containing Materials

Location(s)	Material Description	Sample Quantity	Comments
Room: 100, 101 Boys Washroom, Community Rental A Vestibule, Staff Room	Sheet flooring 1 – Grey speckled	1	None
Gym, Hall By Gym	Sheet flooring 2 – Green rubber	1	None
Room: 107 Girls Washroom, Community Rental A, Community Rental A Janitor, Community Rental A Washroom	Sheet flooring 3 – Grey mosaic	1	None
Room 101 Hot Water Tank Room	Sheet flooring 4 – Yellow with brown and orange streaks	1	None
Gym Stage	Sheet flooring 5 – Peach and beige mosaic	1	None
Room: 103, 104, 105, 107 Community Rental B, Community Rental B Washroom, Main Office	Sheet flooring 6 – Light grey pebble mosaic	0	Installed post 2016 inventory assessment
First Aid Room	Floor tile 2 – 12"x12" beige with white streaks	1	None
Room: 101, 102, 103, 104, 105, 106, Main Entry Hallway, Mezzanine Accessed by Gym, Principals Office, Room 101 A/V, Staff Room, Main Office, East Wing Hallway	Floor tile 3 – 12"x12" peach with rose streaks	1	None
	Drywall with no joint compound	0	Drywall with no joint compound does not contain asbestos
Room: 100, 107	Wallpaper	1	None
Gym Stage	Texture coat	3	None
Gym Equipment Storage Room, Janitor Room, Janitor Room by Gym, Room 101 Hot Water Tank Room, Room 110 Girls Changeroom	Fibreglass pipe run insulation	0	Confirmed visually

Materials assumed not to contain asbestos include:

-) post-1990 construction materials with the exception of formed cement products, vermiculite, fire stop caulking, gaskets.
-) wood and wood composite materials
-) carpet
-) plastics in non-industrial applications
-) metals
-) glazing
-) exterior below-grade drainage and plumbing systems
-) ceramic tile, excluding adhesives, grout, and thinset mortar



Warning: in the event any additional suspect materials are encountered during renovation/repair activities, work on those materials should stop immediately and remain undisturbed until testing confirms the presence or absence of asbestos or other hazardous material

6 General Recommendations

Based on observations made and analytical results, NWest makes the following recommendations.

1. Ensure that the inventory is kept current with respect to presence and condition of asbestos-containing materials, and a record is kept of any changes made to the inventory.
2. Retain a current version of the inventory until all the asbestos-containing materials are removed from the Site.
3. Ensure that a copy of the current version of the inventory is readily available at the Site.
4. Ensure that all asbestos-containing materials present at the Site are identified by signs, labels or, when these are not practicable, other effective means.
5. A qualified person must undertake a pre-renovation/demolition project-specific hazardous materials assessment prior to planned work other than minor maintenance activities that impacts building materials or systems that conforms to the requirements of the BC Occupational Health and Safety Regulation section 20.112. A qualified person must complete a risk assessment and safe work procedures for all hazardous materials that may be impacted by maintenance and/or renovation work. Removal or disturbance of hazardous materials must be undertaken by a qualified contractor employing WorkSafeBC-approved procedures.
6. Maintenance work must STOP if previously unidentified suspected hazardous materials are encountered or inadvertently damaged or disturbed during maintenance activities. These suspect materials must be left undisturbed until a qualified person has determined the status of the material.
7. Damage to asbestos-containing materials must be repaired or otherwise rendered non-hazardous to unprotected workers and occupants without delay (e.g. enclose damaged materials with a dust barrier).

Appendix A. Photo Plates

The following photo plates provide a general documentation of the building materials that were sampled and analyzed, and observations made during the assessment. They are meant to summarize the results of analysis and observations and are not intended to include all hazardous materials, or their locations, observed during the assessment.

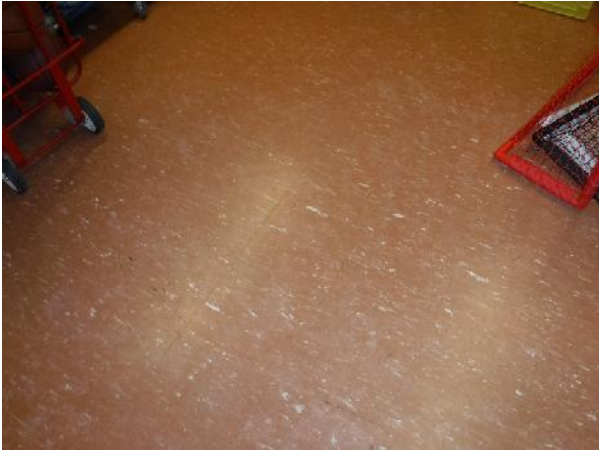


Photo 1
Description: Floor tile 1 – 12"x12" Rose with white streaks
Location: Gym Equipment Storage Room
Asbestos: 0.75% Chrysotile
Sample(s): 30006-18



Photo 2
Description: Acoustic ceiling tile 1 – Small pinhole
Location: Main Entry Hallway
Asbestos: Suspect



Photo 3
Description: Acoustic ceiling tile 3 – Longitudinal fissure small pinhole
Location: Boys Washroom
Asbestos: Suspect



Photo 4
Description: Acoustic ceiling tile 4 – Horizontal fissure small pinhole
Location: Boys Washroom
Asbestos: Suspect



Photo 5
Description: Acoustic ceiling tile 5 – Textured 2'x4'
Location: Gym
Asbestos: Suspect



Photo 6
Description: Acoustic ceiling tile 6 – Textured ceiling tile
Location: Janitor Room
Asbestos: Suspect



Photo 7
Description: Concrete blocks (may contain vermiculite)
Location: Kitchen by Gym
Asbestos: Suspect



Photo 8
Description: 1"x1" ceramic tile grout and thinset
Location: Room 110 Girls Changeroom
Asbestos: Suspect concealed asbestos leveling compound(s)



Photo 9
Description: 4"x4" ceramic tile grout and thinset
Location: Room 109 Boys Changeroom
Asbestos: **Suspect concealed asbestos leveling compound(s)**



Photo 10
Description: Drywall with joint compound
Location: Community Rental B
Asbestos: **Suspect**



Photo 11
Description: Mastic 1 – Gold/silver
Location: Room 105
Asbestos: **Suspect**



Photo 12
Description: Mastic 2 – Grey
Location: Community Rental A
Asbestos: **Suspect**



Photo 13
Description: Mastic 3 – Black
Location: Community Rental B
Asbestos: Suspect



Photo 14
Description: Mastic 4 – Black
Location: Community Rental A Janitor
Asbestos: Suspect



Photo 15
Description: Caulking 1 – Grey (painted white)
Location: Room 100
Asbestos: Suspect



Photo 16
Description: Caulking 2 – White
Location: Janitor Room by Gym
Asbestos: Suspect



Photo 17
Description: Fittings insulation 1 -
Cementitious
Location: Janitor Room
Asbestos: Suspect



Photo 18
Description: Brown stair tread
Location: Hall by Gym
Asbestos: Suspect



Photo 19
Description: Grey stair tread
Location: Mezzanine Accessed by Gym
Asbestos: Suspect



Photo 20
Description: Baseboard adhesive
Location: Electrical Room
Asbestos: Suspect



Photo 21
Description: Acoustic ceiling tile 2 – Patterned fissure small and large pinhole
Location: Main Entry Hallway
Asbestos: Suspect



Photo 22
Description: Caulking 3 – Grey
Location: Exterior
Asbestos: Suspect



Photo 21
Description: Asbestos cement parging
Location: Hallway by Gym
Asbestos: 5% Chrysotile
Sample(s): 10555-06

Appendix B. Analytical Reports



Bulk Sample Report

Asbestos Analysis of Bulk Materials using Polarized Light Microscopy

Client: School District 85 - Vancouver Island North

Date: September 29, 2016

Contractor: School District 85 - Vancouver Island North

Client Job or PO#:

Project: Fort Rupert Elementary AB Inventory

Project number: 30006

Sample No	Location	Date Analysed	Analyst	Client Description	Phase	%	Asbestos	%	Other Materials	%	Comments
30006-1 Layer 1	Room 100	Aug-03-2016	IATL	Other - Wood wall with wallpaper	Red Wallpaper	50	None Detected	0	Synthetic (5%) Non-Fibrous (95%)	100	
30006-1 Layer 2	Room 100	Aug-03-2016	IATL	Other - Wood wall with wallpaper	Clear Mastic	50	None Detected	0	Non-Fibrous	100	
30006-2	Room 100	Aug-03-2016	IATL	Sheet Flooring - SF1- Gray Speckled	Grey Vinyl	100	None Detected	0	Synthetic (5%) Non-Fibrous (95%)	100	
30006-3	Room 101 Learning commons	Aug-03-2016	IATL	Ceiling Tile (Acoustic) - 1-small pinhole non- directional	White/Tan Ceiling	100	None Detected	0	Cellulose (65%) Wood Fibre (5%) Non-Fibrous (30%)	100	
30006-4 Layer 1	Room 101 Learning commons	Aug-03-2016	IATL	Other - Drywall with Wallpaper	Lt Grey/Tan	50	None Detected	0	Synthetic (5%) Non-Fibrous (95%)	100	
30006-4 Layer 2	Room 101 Learning commons	Aug-03-2016	IATL	Other - Drywall with Wallpaper	White/Tan	50	None Detected	0	Cellulose (5%) Non-Fibrous (95%)	100	
30006-5	Room 101 Learning commons Crawl Space	Aug-03-2016	IATL	Sheet Flooring - SF4- Yellow with Brown and Orange streaks	Beige/Yellow/Bro wn/Orange	100	None Detected	0	Cellulose (60%) Non-Fibrous (40%)	100	
30006-6	Room 101 Learning commons Crawl Space	Aug-03-2016	IATL	Caulking - Duct Caulking	Black Caulk	100	None Detected	0	Non-Fibrous	100	
30006-7	Room 101 Learning commons storage	Aug-03-2016	IATL	Sheet Flooring - SF3- Gray Mosaic	Grey Vinyl	100	None Detected	0	Cellulose (5%) Synthetic (5%) Non-Fibrous (90%)	100	
30006-8	Room 101 Learning commons storage	Aug-03-2016	IATL	Ceiling Tile (Acoustic) - 1-small pinhole non- directional	White/Tan	100	None Detected	0	Cellulose (65%) Wood Fibre (5%) Non-Fibrous (30%)	100	
30006-9	Electrical	Aug-03-2016	IATL	Floor Tile - FT1-12x12 Rose with White streaks	Lt Orange/White Floor	100	Chrysotile	0.5	Non-Fibrous	99.5	

Note: Samples were analyzed by method: EPA/600/R-93/116" Bulk Asbestos Analysis by Polarized Light Microscopy". For heterogenous materials the concentration may vary. No reproduction without permission.

Sample No	Location	Date Analysed	Analyst	Client Description	Phase	%	Asbestos	%	Other Materials	%	Comments
30006-10	First Aid Room	Aug-03-2016	IATL	Floor Tile - FT3-12x12 Peach with Rose Streaks	Tan Floor	100	None Detected	0	Non-Fibrous	100	
30006-11	Office	Aug-03-2016	IATL	Floor Tile - FT2-12x12 Beige with White Streaks	Beige Floor	100	None Detected	0	Non-Fibrous	100	
30006-12	Main Entry Hallway	Aug-03-2016	IATL	Ceiling Tile (Acoustic) - 2-Patterned fissure small and large pinhole	White Tan Ceiling	100	None Detected	0	Cellulose (70%) Wood Fibre (2%) Non-Fibrous (28%)	100	
30006-13	Boys Washroom	Aug-03-2016	IATL	Ceiling Tile (Acoustic) - 3-Longitudinal Fissure Small Pinhole	White/Tan Ceiling	100	None Detected	0	Cellulose (98%) Non-Fibrous (2%)	100	
30006-14	Staff Washroom	Aug-03-2016	IATL	Ceiling Tile (Acoustic) - 4-Horizontal Fissure Small Pinhole	Tan Ceiling	100	None Detected	0	Cellulose (60%) Wood Fibre (10%) Non-Fibrous (30%)	100	
30006-15	Janitor Room	Aug-03-2016	IATL	Fittings Insulation - Cementitious	Off-White Insulation	100	None Detected	0	Cellulose (5%) Wood Fibre (10%) Non-Fibrous (85%)	100	
30006-16	Room 110 Girls changeroom	Aug-03-2016	IATL	Other - Cementitious	White Texture	100	None Detected	0	Non-Fibrous	100	
30006-17 Layer 1	Gym	Aug-03-2016	IATL	Sheet Flooring - SF2-Green rubber	Green Rubber	50	None Detected	0	Non-Fibrous	100	
30006-17 Layer 2	Gym	Aug-03-2016	IATL	Sheet Flooring - SF2-Green rubber	Tan Ceiling	50	None Detected	0	Cellulose (70%) Wood Fibre (5%) Non-Fibrous (25%)	100	
30006-18	Gym storage room	Aug-03-2016	IATL	Floor Tile - FT1-12x12 Rose with White streaks	Orange/White Floor	100	Chrysotile	0.75	Non-Fibrous	99.25	
30006-19	Gym Stage	Aug-03-2016	IATL	Sheet Flooring - SF5-Peach and Beige Mosaic	Tan/White Vinyl	100	None Detected	0	Cellulose (10%) Synthetic (10%) Non-Fibrous (80%)	100	
30006-20	Gym Stage	Aug-03-2016	IATL	Drywall Joint Compound - Under Stage storage	White Joint Compound	100	None Detected	0	Non-Fibrous	100	
30006-21	Gym Stage	Aug-03-2016	IATL	Texture Coat - Cementitious	White Texture	100	None Detected	0	Cellulose (3%) Non-Fibrous (97%)	100	
30006-22	Gym Stage	Aug-03-2016	IATL	Texture Coat - Cementitious	White Texture	100	None Detected	0	Cellulose (3%) Non-Fibrous (97%)	100	
30006-23	Gym Stage	Aug-03-2016	IATL	Texture Coat - Cementitious	White Texture	100	None Detected	0	Cellulose (3%) Non-Fibrous (97%)	100	
30006-24	Gym Hallway	Aug-27-2009		Mortar - Ceiling Parging	White Cementitious	100	Chrysotile	5	Non-Fibrous	95	

Note: Samples were analyzed by method: EPA/600/R-93/116" Bulk Asbestos Analysis by Polarized Light Microscopy". For heterogenous materials the concentration may vary. No reproduction without permission.



**North West
Environmental Group Ltd.**

Asbestos Analysis of Bulk Materials using Polarized Light Microscopy

#3 – 835 Devonshire Road
Victoria, B.C. V9A 4T5

Tel:250-384-9695

Fax:250-384-9865

e-mail:northwest@nwest.bc.ca

Client: **School District 85 - Vancouver Island North**

Thursday, September 10, 2009

Client Job or PO # 0

Site: **Fort Rupert Elementary**

NW Project Number: 10555

Sample Number	Location	Date Analysed	Analyst	Description	Phase	%	Asbestos	%	Other Materials	%
10555-01	Office	08/27/09	SD	Floor Tile	Yellow Vinyl	95	None Detected	0	Non-Fibrous	100
10555-01	Office	08/27/09	SD	Floor Tile - Mastic	Black Mastic	5	None Detected	0	Cellulose Non-Fibrous	5 95
10555-02	Hallways and Classroom	08/27/09	SD	Florr Tile	Orange Vinyl	100	None Detected	0	Non-Fibrous	100
10555-03	Learning Assistance	08/27/09	SD	Sheet Flooring	Mosaic Pattern Vinyl	80	None Detected	0	Cellulose Non-Fibrous	2 98
10555-03	Learning Assistance	08/27/09	SD	Sheet Flooring - Backing	Grey Backing	20	None Detected	0	Cellulose Non-Fibrous	80 20
10555-04	Library WC's	08/27/09	SD	Sheet Flooring	Grey Mosaic Pattern Vinyl	80	None Detected	0	Cellulose Non-Fibrous	5 95
10555-04	Library WC's	08/27/09	SD	Sheet Flooring - Backing	Grey Backing	20	None Detected	0	Cellulose Glass Non-Fibrous	75 5 20
10555-05	Library WC's	08/27/09	SD	Sheet Flooring	Brown Mosaic Pattern Vinyl	80	None Detected	0	Non-Fibrous	100



**North West
Environmental Group Ltd.**

Asbestos Analysis of Bulk Materials using Polarized Light Microscopy

#3 – 835 Devonshire Road
Victoria, B.C. V9A 4T5

Tel:250-384-9695

Fax:250-384-9865

e-mail:northwest@nwest.bc.ca

Client: **School District 85 - Vancouver Island North**

Site: **Fort Rupert Elementary**

Thursday, September 10, 2009

Client Job or PO # 0

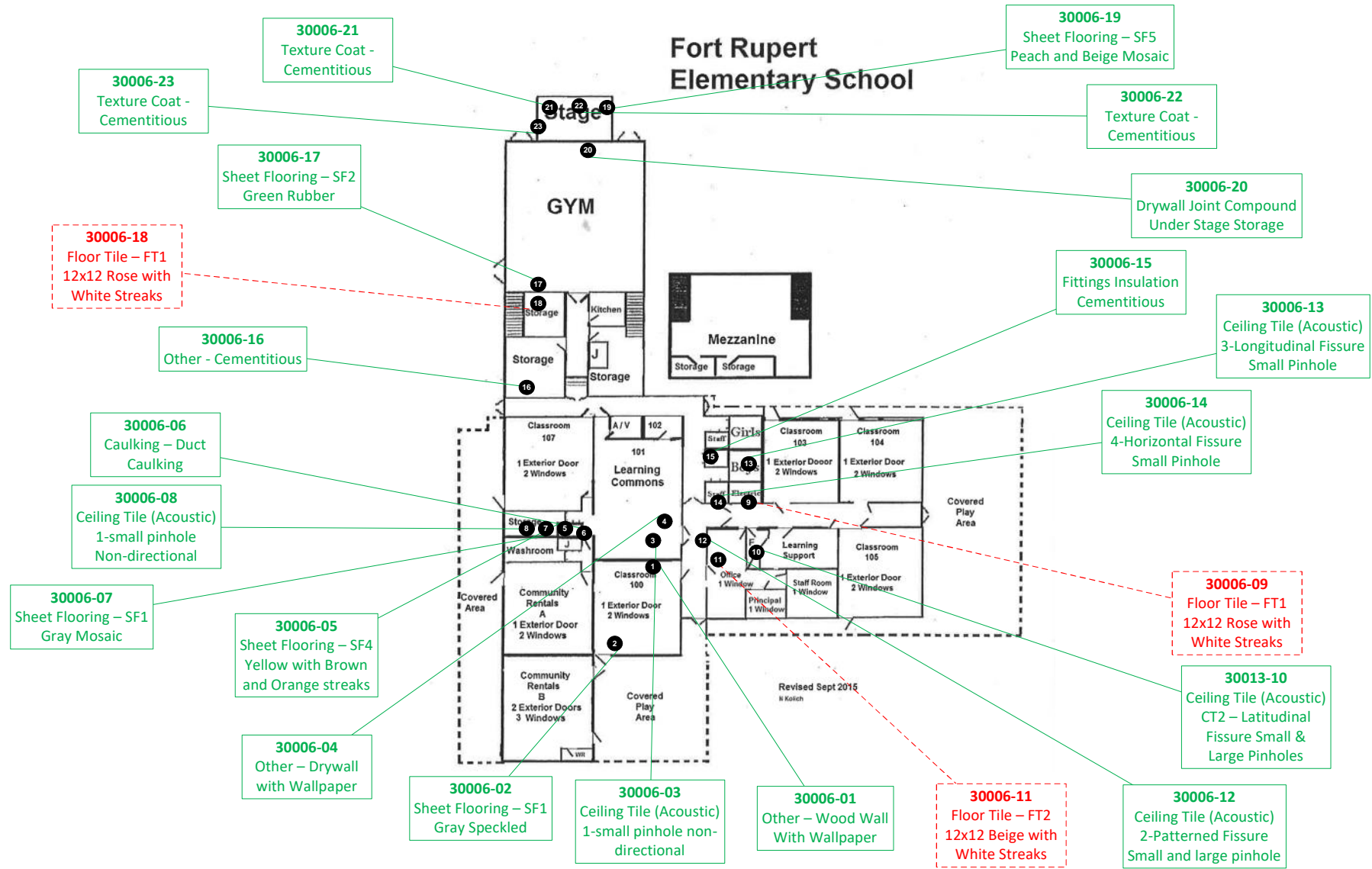
NW Project Number: 10555

Sample Number	Location	Date Analysed	Analyst	Description	Phase	%	Asbestos	%	Other Materials	%
10555-05	Library WC's	08/27/09	SD	Sheet Flooring - Backing	Grey Backing	20	None Detected	0	Cellulose Glass Synthetic Non-Fibrous	60 10 5 25
10555-06	Gym Hallway	08/27/09	SD	Ceiling and Wall Parging	White Cement	100	Chrysotile	5	Non-Fibrous	95
10555-07	Stage	08/27/09	SD	Sheet Flooring	Orange Mosaic Vinyl	80	None Detected	0	Non-Fibrous	100
10555-07	Stage	08/27/09	SD	Sheet Flooring - Backing	Grey Backing	20	None Detected	0	Cellulose Glass Non-Fibrous	70 10 20

Appendix C. Sample Location Drawings



Fort Rupert Elementary School



Drawing Not to Scale

Sample Result Key

- 123 No Asbestos Detected
- 123 Material Contains Asbestos
- 123 Lead (Pb) Sample

ADDRESS/LOCATION:
Fort Rupert Elementary School

DRAWING TITLE:
School District 85

PROJECT NO.: 30006

DATE: 07/06/2016

SURVEYED BY: Julie Scott/Moncrieff/
Bill Sullivan

DRAWING NO.: 003



**North West
Environmental Group Ltd.**

#201-415 Gorge Road East
Victoria B.C. V8T 2W1

Appendix D. Regulatory Framework

1. **Workers Compensation Act**, Part 2, Division 4 (General Duties of Employers, Workers and Others), Section 25 (General duties of owner).
2. **BC Occupational Health and Safety Regulation**, BC Reg. 296/97, including amendments.
3. **Safe Work Practices for Handling Asbestos**, WorkSafeBC, current edition.
4. **Hazardous Waste Regulation**, BC Ministry of Environment, including amendments.
5. **Transportation of Dangerous Goods Regulations SOR / 2008-34**, Transportation of Dangerous Goods Act, SOR/2008/34 including amendments.

Appendix E. Methodology

The assessment adhered to applicable regulations and followed industry-accepted standards and methodologies.

Note: Not all of the following materials and/or methods were necessarily included in this assessment.

Asbestos

An initial walk-through was conducted of the assessment areas for building materials and machinery or equipment to make a preliminary determination if asbestos could be present.

To confirm or discount the presence of asbestos, representative bulk samples were collected. The sample locations in the building are identified with a unique sample number. Whenever practicable, a representative number of material samples were collected as per WorkSafeBC guidance. Some materials could not be representatively sampled due to accessibility or if sample collection would damage the remaining material.

Bulk samples were submitted for analysis in accordance with the following method: EPA 600 R-93 / 116-1993. Samples consisting of greater than 0.5% asbestos were reported as an asbestos-containing material as per WorkSafeBC. See Appendix G for details on how asbestos-containing materials are evaluated to determine management actions.

Vermiculite samples were submitted for analysis in accordance with the Research Method for Sampling and Analysis of Fibrous Amphibole in Vermiculite Attic Insulation (EPA/600/R-04/004, January 2004, US EPA.) Samples of loose fill vermiculite insulation found to contain any trace of asbestos were reported as

Appendix F. Evaluation of Asbestos-Containing Materials

Evaluation of asbestos-containing materials (ACMs) is based on the condition of the material, its accessibility, and its friability. The following are guidelines used to evaluate ACMs and the action, if any, required to safely manage them.

Spray Applied Fireproofing, Insulation and Texture Finishes

In evaluating the condition of ACM spray applied as fireproofing, thermal insulation or texture, decorative or acoustic finishes, the following criteria apply.

GOOD	Surface of material shows no significant signs of damage, deterioration or delamination. Up to one percent visible damage to surface is allowed within range of GOOD. Evaluation of sprayed fireproofing requires the assessor to be familiar with the irregular surface texture typical of sprayed asbestos products. GOOD condition includes un-encapsulated or unpainted fireproofing or texture finishes, where no delamination 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, delamination or deterioration. More than one percent damage to surface of ACM spray.
DEBRIS	Spray materials are dislodged from surface application source. The identified debris is noted as being separated from the original source.

Mechanical Insulation

In evaluating the condition of mechanical insulation (on boilers, breeching, ductwork, piping, tanks, equipment etc.) the following criteria are used.

GOOD	Insulation is completely covered in jacketing and exhibits no evidence of damage or deterioration. No insulation is exposed. Includes conditions where the jacketing has minor surface damage (i.e., scuffs or stains), but the jacketing is not penetrated.
FAIR	Minor penetration damage to jacketed insulation (cuts, tears, nicks, deterioration or delamination) or undamaged insulation that has never been jacketed. Insulation is exposed but not showing surface disintegration. The extent of missing insulation should be minor to none.
POOR	Original insulation jacket is missing, damaged, deteriorated or delaminated. Insulation is exposed and significant areas have been dislodged. Damage cannot be readily repaired.
DEBRIS	Insulation materials are dislodged from surface application source. The identified debris is noted as being separated from the original source.

Non-Friable and Potentially Friable Materials

Non-friable materials generally have little potential to release airborne fibres, even when damaged by mechanical breakage. However, some non-friable materials, i.e., exterior asbestos concrete products, may have deteriorated so that the binder no longer effectively contains the asbestos fibres. In such cases of significantly deteriorated non-friable material, the material will be treated as a friable product.

Accessibility

The accessibility of building materials known or suspect of being ACM is rated according to the following criteria.

Access (A)	Areas of the building within reach (from floor level) of all building users. Includes areas such as gymnasiums, workshops, and storage areas where activities of the building users may result in disturbance of ACM not normally within reach from floor level.
-------------------	--

Access (B)	Frequently entered maintenance areas within reach of maintenance staff, without need for a ladder. Includes: frequently entered pipe chases, tunnels and service areas or areas within reach from a fixed ladder or catwalk (e.g., tops of equipment, mezzanines).
Access (C) Exposed	Areas of the building above 2.5 metres where use of a ladder is required to reach the ACM. Only refers to ACM materials that are exposed to view, from the floor or ladder, without removing or opening other building components such as ceiling tiles, or service access doors or hatches. Does not include infrequently accessed service areas of the building.
Access (C) Concealed	Areas of the building which require removal of a building component including lay-in ceilings and access panels into solid ceiling systems. Includes rarely entered crawlspaces, attic spaces etc. Observations are limited to the extent visible from the access points.
Access (D)	Areas of the building behind inaccessible solid ceiling systems, walls, or mechanical equipment, etc., where demolition of the ceiling, wall or equipment etc., is required to reach the ACM. Evaluation of condition and extent of ACM is limited or impossible, depending on the assessor's ability to visually examine the materials in Access D.
ACM in Plenum	Areas of the building where air movement through open or closed air spaces or plenums can be accesses by Access X, where X is any of the Accesses A-D, inclusive.

Action Matrix

The following Action Matrix determines what, if any, action is required to safely manage ACMs.

Access	Condition			
	Good	Fair	Poor	Debris
(A)	Action 5/7	Action 5/6	Action 3	Action 1
(B)	Action 7	Action 6/5	Action 3	Action 1
(C) Exposed	Action 7	Action 6	Action 4	Action 2
(C) Concealed	Action 7	Action 7	Action 4	Action 2
(D)	Action 7	Action 7	Action 7	Action 7
(X)	Action 5/7	Action 5/6	Action 3	Action 1

Action Table

The following is a description of the action required to manage ACMs, based on the outcome of the evaluation.

Action 1	Immediate Clean Up of Debris That is Likely to be Disturbed Restrict access/shut off air handling system if disturbance of the ACM DEBRIS is likely, and clean up ACM DEBRIS immediately. Utilize proper asbestos procedures. This action is required for compliance with regulatory requirements.
Action 2	Entry into Areas with ACM Debris At locations where ACM DEBRIS can be isolated in lieu of removal or clean up, use appropriate means to limit entry to the area. Restrict access to the area to persons utilizing moderate risk asbestos-work precautions. The precautions will be required until the ACM DEBRIS has been cleaned up, and the source of the DEBRIS has been stabilized or removed.
Action 3	ACM Removal Required for Compliance Remove ACM for compliance with regulatory requirements. Utilize asbestos procedures appropriate to the scope of the removal work.
Action 4	Access into Areas Where ACM is Present and Likely to be Disturbed by Access Use asbestos precautions when entry or access into an area is likely to disturb the ACM. ACTION 4 must be used until the ACM is removed (Use ACTION 1 or 2 if DEBRIS is present).
Action 5	Proactive ACM Removal

	Remove ACM in lieu of repair, or at locations where the presence of asbestos in GOOD condition is not desirable.
Action 6	ACM Repair Repair ACM found in FAIR condition, and not likely to be damaged again or disturbed by normal use of the area or room. Upon completion of the repair work, treat ACM as material in GOOD condition and implement ACTION 7. If ACM is likely to be damaged or disturbed during normal use of the area or room, implement ACTION 5.
Action 7	Routine Surveillance Institute routine surveillance of the ACM. Trained workers or contractors must use appropriate asbestos precaution during disturbance of the remaining ACM.

End of report. This page intentionally left blank.