September 1, 2016

FIBRECO EXPORT INC.
1209 McKeen Avenue
North Vancouver, BC V7P 3H9

Attention: Mr. Glenn Dempster, Project Manager

Ref: PRE-PROJECT HAZARDOUS BUILDING MATERIALS SURVEY FOR THE DEMOLITION OR MODIFICATION OF SPECIFIC BUILDINGS AND STRUCTURES AT FIBRECO NORTH VAN TERMINAL LOCATED AT 1209 McKEEN AVENUE, NORTH VANCOUVER, BC

1.0 INTRODUCTION

Astech Consultants were retained by Fibreco Export Inc. to conduct a Pre-Project Hazardous Building Materials Survey and compile a detailed report on the presence and location of asbestos containing building materials, PCB containing ballasts, lead, mercury, and stored chemicals for the Demolition or Modification of Specific Buildings and Structures at the Fibreco North Van Terminal located at 1209 McKeen Avenue, North Vancouver, BC. Results of this survey are described in Section 8.0 of this report entitled, **Summary of Hazardous Materials and Estimated Budgets**.

Astech Consultants Ltd. survey and report format is designed specifically to satisfy the current applicable regulation from the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation 20.112 regarding hazardous building material assessments by a Qualified Person for buildings and structures, and the regulatory requirements of Labour Canada.

This survey was conducted on July 5, 7, 20, 22, 27, 29, August 3, and 8, 2016 by Tom Farrell assisted by Cassandra Marshall of Astech Consultants. It must be emphasized that this survey was concerned exclusively with the subject buildings and structures. The site survey was destructive in nature and thorough in investigating layered floor, wall, and ceiling systems. However, inaccessible floor cavities, wall cavities, and ceiling cavities which would require the actual dismantling of portions of the buildings and structures in order to gain access were not investigated. No attempt was made to investigate Buildings and Structures not to be impacted by project, underground services or the surrounding property. Therefore, if during work activities, other hazardous materials, asbestos containing materials, or potential asbestos containing materials not included in this report are discovered, work should immediately cease in the affected area. At that time, Astech Consultants Ltd. should be contacted so that they can initiate immediate appropriate action so that there are no undue delays.

2.0 BUILDING DESCRIPTION

The site is described as an industrial wood chip and wood pellet materials handling site alongside Burrard Inlet and is comprised of supporting buildings, structures, conveyors, loaders, rail and railcar dumper, wharfs, and jetties. The subject of this report is specific buildings, structures, and conveyors to be impacted by the project, as listed in Section 4.1 of the report. At the time of survey, the subject areas were in fair to good condition.

#101-Bldg.C-17802-66th Avenue
Cloverdale, BC, Canada V3S 7X1
Tel: 604-575-1122 Fax: 604-575-1152

3.0 METHODOLOGY

3.1 ASBESTOS CONTAINING MATERIALS

A visual inspection was undertaken in order to determine the type, location, and homogeneous nature of asbestos and potential asbestos containing building materials located at the subject buildings and structures. During this inspection, one hundred three (103) bulk samples of potential asbestos containing materials were collected from specific locations of the buildings and structures. The samples collected were submitted for analysis at our in-house laboratory in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation, utilizing polarized light microscopy, and dispersion staining techniques. Results of laboratory analysis of samples collected during this survey are attached.

3.2 LEAD PAINTS

A visual inspection was undertaken in order to determine the type and location of paints and primers suspected of containing lead at the buildings and structures. During this inspection, forty-four (44) bulk samples of potential lead paints and primers were collected from the buildings and structures. The samples collected were submitted for laboratory analysis in accordance with US EPA methods and the requirements of the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation. Results of laboratory analysis of samples collected during this survey are attached.

3.3 PCB CONTAINING MATERIALS, LEAD, MERCURY, STORED CHEMICALS, AND SILICA

A visual inspection was undertaken in order to determine the presence of:

- fluorescent light fixtures & HID light fixtures suspected of containing PCB ballasts or capacitors,
- construction materials suspected of containing lead and other heavy metals,
- thermostats and associated equipment suspected of containing mercury,
- stored chemicals suspected of being toxic, flammable, or explosive, and
- building materials suspected of containing silica in crystalline and non-crystalline forms.

4.0 INSPECTION RESULTS

4.1 ASBESTOS CONTAINING MATERIALS

The visual inspection and/or analytical results determined that asbestos containing materials or assumed asbestos containing materials are located at the following specific locations.

MCC #1 BUILDING - MAIN FLOOR

Electrical Room

- **Asbestos** containing filling compound on gypsum board (some concealed and some abutting adjoining building materials).
- **Asbestos** containing firestop putties at electrical cable penetrations and pipe sleeves (some concealed).

Wall Cavities and Ceiling Spaces

- No asbestos materials observed.

MCC #1 Building - Second Floor

Control Room

- **Asbestos** containing floor tiles (some concealed).
- **Asbestos** containing filling compound on gypsum board (some concealed and some abutting adjoining building materials).
- **Asbestos** containing firestop putties at electrical cable penetrations and pipe sleeves (some concealed).

Wall Cavities and Ceiling Spaces

- No asbestos materials observed.

MCC #1 Building - Exterior

Walls

- **Asbestos** containing firestop putties at electrical cable penetrations and pipe sleeves (some concealed).

Windows and Doors

- **Asbestos** containing sealant concealed in window of exterior metal door is assumed, until laboratory analysis determines otherwise. Destructive testing required.
- Non-asbestos sealant in exterior windows.

Rooftop

- **Asbestos** containing roofing membranes, felts, mastics, and/or patching compounds are assumed, until laboratory analysis determines otherwise. Destructive testing required.
- **Asbestos** containing caulkings, sealants, and mastics on flashings and at roof penetrations are assumed, until laboratory analysis determines otherwise. Destructive testing required.

Lunchroom Building - General Notes

- Although the analytical results for the exposed layer of retrofit gypsum board filling compound are non-asbestos, due to the non-destructive nature of the testing because of building occupancy, older concealed gypsum board with asbestos containing filling compound may be in place behind newer gypsum board with non-asbestos filling compound and/or wood panelling throughout the building. Destructive testing for concealed layers of gypsum board wall and ceiling systems will be necessary once the building is no longer in use and prior to demolition.
- Although the analytical results for the exposed layers of retrofit flooring materials are non-asbestos, due to the non-destructive nature of the testing because of building occupancy, older concealed asbestos containing flooring materials may be in place beneath the retrofit flooring materials that have been, for the most part, applied atop wood sub-floors throughout the building. Destructive testing for concealed layers of flooring materials will be necessary once the building is no longer in use and prior to demolition.

Lunchroom Building - Main Floor

Lunchroom including Closets, and Locker Room

- **Asbestos** containing flooring materials (tiles, adhesives, sheet floorings, etc.) may be concealed beneath layers of non-asbestos flooring materials and wood sub-floors. See **General Note** above.
- **Asbestos** containing filling compound on gypsum board may be concealed behind non-asbestos filling compound on gypsum board walls. See **General Note** above.

Ladies' Washroom/Shower Room (3 rooms),
Men's Washroom/Shower Room (3 rooms),
Hallway (adjacent Washrooms), and
Floor Cavities, Wall Cavities, and Ceiling Spaces
- **Asbestos** containing flooring materials (tiles, adhesives, sheet floorings, etc.) may be concealed beneath layers of non-asbestos flooring materials and wood sub-floors. See **General Note** above.
- **Asbestos** containing filling compound on gypsum board may be concealed behind non-asbestos filling compound on gypsum board walls. See **General Note** above.

Lunchroom Building - Second Floor

Hallways,
Foreman's Office including Closet,
Locker Room,
Lunchroom,
Washroom/Shower Area including Janitor's Closet within (4 rooms), and
Floor Cavities, Wall Cavities, and Ceiling Spaces
- **Asbestos** containing flooring materials (tiles, adhesives, sheet floorings, etc.) may be concealed beneath layers of non-asbestos flooring materials and wood sub-floors. See **General Note** above.
- **Asbestos** containing filling compound on gypsum board may be concealed behind non-asbestos filling compound on gypsum board walls. See **General Note** above.

Lunchroom Building - Exterior

Walls

Windows
- **Asbestos** containing sealant concealed in exterior windows (original and retrofit) is assumed, until laboratory analysis determines otherwise. Destructive testing required.

Sloped Canopy Rooftops
- No asbestos materials observed.

Upper Flat Rooftop
- **Asbestos** containing roofing membranes, felts, mastics, and/or patching compounds are assumed, until laboratory analysis determines otherwise. Destructive testing required.
- **Asbestos** containing caulkings, sealants, and mastics on flashings and at roof penetrations are assumed, until laboratory analysis determines otherwise. Destructive testing required.

Rotary Dumper (including below grade)

All Areas (including concrete pad east of Rotary Dumper)
- **Asbestos** containing sealant concealed in window and window of door at Sampling Room is assumed, until laboratory analysis determines otherwise. Destructive testing required.

Portable Wood Checkers Shed (at north end of Rotary Dumper)

All Areas
- **Asbestos** containing sealant concealed in windows is assumed, until laboratory analysis determines otherwise. Destructive testing required.

D.P.V. House #5 (adjacent Conveyor CV15)

Interior and Exterior
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

Conveyor CV15 (including below grade)

All Areas
- No asbestos materials observed.

D.P.V House #6 (at Conveyor CV21)

Interior and Exterior including Rooftop
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

Fire Hose Sheds (throughout subject areas)

Interiors and Exteriors including Rooftops
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

Conveyor CV21 (including below grade)

All Areas
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

Waterside Loader (at Conveyor CV21)

All Areas
- No asbestos materials observed.

Wood Chip Retaining Wall (at south end of stored wood chips)

All Areas
- No asbestos materials observed.

D.P.V. House #7 (at Conveyor CV22)

Interior and Exterior including Rooftop
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

Conveyor CV22 and Metal Catwalk Tower North including Waterside Barge Loader CV32 and Operators Booth (at Loader)

All Areas
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

Metal Electrical Shed (at Conveyor CV22)

Interior and Exterior including Rooftop
- **Asbestos** containing firestop putties at electrical cable penetrations (some concealed).

SHIP LOADER STRUCTURE AND BOOM

Open Areas of Structure and Boom
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).
- **Asbestos** containing gaskets concealed at metal tubes, hatches, motors, etc. are assumed, until laboratory analysis determines otherwise. Destructive testing required.

Operator's Booth (at mid-level),
Operator's Booth (at upper level), and
Hydraulic Room and Electrical Room
- No asbestos materials observed.

MCC #5 BUILDING

Interior
- No asbestos materials observed.

Exterior including Rooftop
- **Asbestos** containing roofing membranes, felts, mastics, and/or patching compounds are assumed, until laboratory analysis determines otherwise. Destructive testing required.
- **Asbestos** containing caulkings, sealants, and mastics on flashings and at roof penetrations are assumed, until laboratory analysis determines otherwise. Destructive testing required.

WOOD CHECKERS SHED (ADJACENT MCC #5 BUILDING)

Interior and Exterior including Rooftop
- No asbestos materials observed.

MCC #2 BUILDING

Interior
- **Asbestos** containing firestop putties at telecom cabinet penetration, electrical cable penetrations, and pipe sleeves (some concealed).

Exterior including Rooftop
- **Asbestos** containing firestop putties at electrical cable penetrations (some concealed).
- **Asbestos** containing roofing membranes, felts, mastics, and/or patching compounds are assumed, until laboratory analysis determines otherwise. Destructive testing required.
- **Asbestos** containing caulkings, sealants, and mastics on flashings and at roof penetrations are assumed, until laboratory analysis determines otherwise. Destructive testing required.

D.P.V. HOUSE #8

Interior and Exterior including Rooftop
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

WOOD CHECKER'S SHED (INTERTEK TESTING SERVICES)

Interior
- No asbestos materials observed.

Exterior including Rooftop
- **Asbestos** containing roofing membranes, felts, mastics, and/or patching compounds are assumed, until laboratory analysis determines otherwise. Destructive testing required.
- **Asbestos** containing caulkings, sealants, and mastics on flashings and at roof penetrations are assumed, until laboratory analysis determines otherwise. Destructive testing required.

CONVEYOR CV2 AND CONVEYOR CV3 INCLUDING TRANSFER TOWER

All Areas
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

CRADLE STRUCTURE

All Areas
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

D.P.V. HOUSE #9

Interior and Exterior
- **Asbestos** containing pipe thread compound at fittings of piping (mostly concealed).

4.2 PCB CONTAINING MATERIALS

The visual inspection determined that there are approximately fifty-eight (58) fluorescent light fixtures and forty-five (45) high intensity discharge (HID) light fixtures (including some in storage and some on exterior light poles) inside and outside the buildings and structures that are both old and new. The older light fixtures are suspected of having PCB containing ballasts or capacitors. PCB ballast/capacitor identification requires the disassembly of the light fixture in order to locate the manufacturer's identification code.

4.3 LEAD

The visual inspection and laboratory analytical results determined that, for the most part, enamel-type paints and primers containing lead were utilized on metal surfaces which include, but are not limited to, structural steel components, cladding and panels, catwalks, ladders, railings, machinery and equipment, conveyors, tubing and chutes, piping including associated valves and equipment, conduit, bollards, doors and frames, and other surfaces throughout the subject areas, with the exception of the paints and primers on the Cradle Structure which are considered to be non-lead containing. Paints and primers containing lead were also utilized on wood surfaces at D.P.V. House #6 and Fire Hose Sheds. As well, glazing finishes containing lead were utilized on ceramic tiles in the Lunchroom Building.

4.4 LIQUID MERCURY

The visual inspection determined that there are no mercury containing thermostats in the subject buildings and structures. However, there are numerous fluorescent light tubes and other light bulbs (CFL and mercury vapour) inside and outside the buildings and structures that contain mercury (including some in storage).

4.5 STORED CHEMICALS, OTHER HAZARDOUS MATERIALS, AND CONTROLLED WASTE MATERIALS

The following list of materials were present inside and outside the buildings and structures at time of inspection (including items likely to be retained for future use at the site):

Stored Chemicals and Other Hazardous Materials
- several containers of paint, solvents, cleaners, petroleum products including waste oil, and rodent poison,
- petroleum product and petroleum product residue in transmission gear equipment, pillow blocks, rollers, compressors, motors, pumps, hydraulic equipment, and associated piping and equipment,
- petroleum product residue on metal roof of Metal Electrical Shed at Conveyor CV22,
- batteries in emergency lighting,
- several fire extinguishers,
- compressors and piping with suspect ozone depleting substances (CFC's) in 2 refrigerators, 8 wall/ceiling-mounted air conditioners,
- smoke/heat/fire detectors with a radioactive component within, and
- several areas with bird droppings.

Controlled Waste Materials
- numerous wood pylons, pilings, timbers, and rail ties treated with creosote or chromated copper arsenate (CCA) including light poles and some in storage.

4.6 SILICA

All concrete, cement, grout, mortar, ceramic tiles, and any other cementitious building materials are suspected of containing silica in crystalline and non-crystalline forms.

4.7 NON-ASBESTOS GYPSUM BOARD

The visual inspection and/or analytical results determined the following:

- there is gypsum board with **asbestos** containing filling compound in the MCC #1 Building, and therefore would be disposed of as mixed asbestos and gypsum waste,
- there is assumed gypsum board with **asbestos** containing filling compound concealed behind wood and retrofit gypsum board with non-asbestos filling compound in the Lunchroom Building, and dependent upon eventual destructive testing, may be disposed of as mixed asbestos and gypsum waste, and
- there is retrofit gypsum board with non-asbestos filling compound in some areas of the Lunchroom Building.

5.0 RECOMMENDATIONS

5.1 ASBESTOS CONTAINING MATERIALS

Prior to demolition of a building or structure, asbestos containing materials must first be removed and disposed of by a qualified hazardous materials abatement contractor in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation. Disposal of asbestos containing materials must be performed in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

5.2 POLYCHLORINATED BIPHENYL (PCB) CONTAINING BALLASTS/CAPACITORS

It is recommended that the identification of PCB ballasts/capacitors be performed by qualified personnel prior to or in conjunction with the demolition of the buildings and structures, at a time when it becomes feasible to isolate electrical power and disassemble/disconnect the light fixtures. The ballasts/capacitors that are identified as PCB containing must be removed in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation, and disposed of in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

5.3 LEAD BUILDING MATERIALS AND HEAVY METAL BASED PAINTS

Where lead or potential lead based paints and/or primers are affected by a project, the work must be performed by a qualified contractor in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation and the WCB publication entitled Lead-Containing Paints and Coatings - Preventing Exposure in the Construction Industry.

Where the base substrate material is to be removed in conjunction with lead paint removal, the base substrate and lead based paints and/or primers should be removed intact by the contractor, in accordance with the contractor's risk assessment and site specific work procedures. The workers conducting the work and workers in close proximity to the work being performed, should be protected with personal protective equipment as determined by the contractor's risk assessment and site specific work procedures.

Lead containing paints which remain attached to wood and/or other building materials must be labelled as lead based paints (LBP) for transporting to a licensed/approved disposal site or recycling facility. A licensed/approved facility receiving the waste must be informed of the lead content of these materials and be agreeable to receiving these materials. Prior to acceptance of waste with lead paints at a licensed/ approved disposal facility, the contractor generating the waste must ensure that all waste materials containing LBPs are sampled intact, fastened directly to the base substrate, and representative of the waste stream created by demolition. The contractor shall have the representative sample analyzed utilizing a Toxicity Characteristic Leachate Procedure for lead (TCLP lead) test to determine the potential for soil and/or groundwater contamination, if deemed necessary by the site receiving the waste.

If the lead paints are to be separated or removed from the building materials by means of sanding, scraping, abrading, torch cutting, blasting, etc., more stringent work procedures would apply. For example, where steel building materials with lead containing paints and primers are to be torch cut, the affected lead paint/ primer must be removed by a qualified abatement contractor so that the torch cutting can be conducted without risk of combusting and/or overheating the adjoining lead paint/primer that remain in place. The removed lead paints/primers, depending on lead concentrations and leachate results, may become a Hazardous Waste and therefore must be disposed of in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

5.4 MERCURY

Prior to demolition of a building, the mercury containing light tubes/bulbs must first be removed, and be salvaged, recycled, or disposed of, in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

5.5 STORED CHEMICALS, OTHER HAZARDOUS MATERIALS, AND CONTROLLED WASTE MATERIALS

Stored Chemicals

Prior to demolition of a building or structure, stored chemicals, ozone depleting substances within refrigeration equipment, and radioactive equipment must first be removed, and be recycled or disposed of,

in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

Treated Wood/Timbers
Where wood treated with chromated copper arsenate (CCA) and/or creosote (provincially regulated controlled waste materials) are affected by a project, the work must be preformed by a qualified contractor in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation. Disposal/recycling of treated wood must be performed in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation.

Chromated copper arsenate (CCA) is a wood preservative that has been used for timber treatment since the mid-1930's. It is a mix of chromium, copper, and arsenic formulated as oxides or salts, and is recognizable for the greenish tint it imparts to timber.

Creosotes are a category of carbonaceous chemicals formed by the distillation of various tars, and by pyrolysis of plant-derived material, such as wood or fossil fuel. They are typically used as preservatives or antiseptics. Some creosote types were used historically as a treatment for components of seagoing and outdoor wood structures to prevent rot (e.g., bridgework and railroad ties). The two main kinds recognized in industry are coal-tar creosote and wood-tar creosote. It is the coal-tar variety, having stronger and more toxic properties, that has chiefly been used as a preservative for wood.

Bird Droppings
Bird droppings which can cause infectious disease and/or respiratory disease in humans should be removed as biohazardous waste by a qualified abatement contractor in accordance with the Workers' Compensation Board of BC Occupational Health and Safety Regulation, prior to unprotected trades performing work in or conducting selective demolition of the buildings and structures. In lieu of removing droppings, workers shall wear respirators and protective clothing while in contaminated areas of the buildings and structures, and while conducting selective demolition of the buildings and structures.

5.6 SILICA

Where cementitious building materials that are suspected of containing silica in crystalline form are directly impacted by the project (i.e. drill, cut, or abrade), the work should be performed in a controlled manner to avoid the release of crystalline silica dust. Cutting, drilling, or otherwise disturbing these building materials must be performed by a qualified contractor's trained personnel in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation.

5.7 NON-ASBESTOS GYPSUM BOARD

Prior to demolition of a building, the gypsum board with no asbestos finishes (a provincially regulated construction waste) must first be removed by a qualified contractor in accordance with the Workers' Compensation Board of British Columbia Occupational Health and Safety Regulation, and be recycled or disposed of in accordance with the BC Ministry of Environment - Environmental Management Act - Hazardous Waste Regulation. Landfills are issued operational certificates from the BC Ministry of Environment, and for local landfills and others their certificate specifies that gypsum board cannot be accepted for disposal, and therefore local depots offer recycling services.

6.0 OWNER'S RESPONSIBILITIES

For the remediation of hazardous building materials, contract specifications, quality control, and final acceptance of the work remain the responsibility of the Owner. In order to ensure that the Owner has acted in a responsible manner, and to ensure regulatory board compliance, it is recommended that the work and project air monitoring be performed by a qualified and properly insured (with proof of necessary asbestos inclusion rider) Hazardous Materials Abatement Contractor. As well, the abatement contractor upon completing the work shall have their "Qualified Person" inspect the worksite in its entirety to confirm that asbestos and other hazardous building materials have been properly removed, then promptly provide the Owner with a signed Letter of Completion. Project Documentation should also be provided including, but not necessarily limited to, a Notice of Project for work involving Asbestos, Risk Assessment, Exposure Control Plan, and Site Specific Work Procedures, Worker Respirator Fit Test Forms/Logs and Training Acknowledgement Forms, Certification of DOP Testing of HEPA Filtered Equipment used on site, Air Sample Results, Material Safety Data Sheets (MSDS) for products used on site, Transportation Waybills, and Waste Manifest Forms.

7.0 APPROXIMATE QUANTITIES FOR HAZARDOUS MATERIALS

The following approximate quantities for hazardous materials are provided as a means to satisfy the requirements of WorkSafeBC, and are provided for reference only. Contractors shall be responsible for verifying quantities for the purpose of bidding the work.

ASBESTOS CONTAINING MATERIALS	APPROXIMATE QUANTITIES
Confirmed Asbestos Containing Materials	
Asbestos Floor Tiles	170 square feet
Asbestos Filling Compounds and Affected Gypsum Board	250 square feet
Asbestos Firestop Putty at Electrical Cable Wall/Floor and Telephone Cabinet Penetrations	60 locations
Asbestos Pipe Thread Compounds at Fittings of Mechanical Piping and Associated Equipment	650 fittings
Assumed Asbestos Containing Materials (future destructive testing required)	
Assumed Asbestos Flooring Materials	1,320 square feet
Assumed Asbestos Filling Compounds and Affected Gypsum Board	4,390 square feet
Assumed Asbestos Sealants Concealed in Windows and Doors with Windows	24
Assumed Asbestos Gaskets Concealed at Metal Tubes, Hatches, Motors, Etc.	40 locations
Assumed Asbestos Roofing Membranes, Felts, Mastics, and Patching Compounds	Not Determined
Assumed Asbestos Caulkings, Sealants, and Mastics at Flashings, Mounted Equipment, Roof Penetrations, Etc.	Not Determined
OTHER HAZARDOUS MATERIALS	
Potential PCB Containing Ballasts/Capacitors	103 fixtures
Lead Paints, Coatings, & Primers to be Removed for Torch Cutting	80 locations
Mercury Containing Light Tubes/Bulbs	170
CONTROLLED WASTE MATERIALS	
Creosote and Chromated Copper Arsenate (CCA) Treated Wood Pylons, Pilings, Timbers, and Rail Ties	Not Determined
NON-ASBESTOS GYPSUM BOARD	
Gypsum Board with No Asbestos Finishes	4,390 square feet

8.0 SUMMARY OF HAZARDOUS MATERIALS AND ESTIMATED BUDGETS

The following is a **summary of confirmed and assumed hazardous materials and estimated contractor budgets** for removal and disposal/recycle. The estimated budgets are based on current 2016 market conditions with the work being performed by a qualified Hazardous Materials Abatement Contractor during a single phase project to be conducted in conjunction with demolition and/or modification of the buildings and structures.

ASBESTOS CONTAINING MATERIALS	REMOVAL & DISPOSAL
Confirmed Asbestos Containing Materials	
Asbestos Floor Tiles	$ 500.00
Asbestos Filling Compounds and Affected Gypsum Board	$ 2,150.00
Asbestos Firestop Putty at Electrical Cable Wall/Floor and Telephone Cabinet Penetrations	$ 1,200.00
Asbestos Pipe Thread Compounds at Fittings of Mechanical Piping and Associated Equipment	$ 19,500.00
Assumed Asbestos Containing Materials	
Assumed Asbestos Flooring Materials	$ 4,650.00
Assumed Asbestos Filling Compounds and Affected Gypsum Board	$ 12,000.00
Assumed Asbestos Sealants Concealed in Windows and Doors with Windows	$ 1,700.00
Assumed Asbestos Gaskets Concealed at Metal Tubes, Hatches, Motors, Etc.	$ 2,400.00
Assumed Asbestos Roofing Membranes, Felts, Mastics, and Patching Compounds (see Note below)	Not Determined
Assumed Asbestos Caulkings, Sealants, and Mastics at Flashings, Mounted Equipment, Roof Penetrations, Etc. (see Note below)	Not Determined
OTHER HAZARDOUS MATERIALS	
Determination and Disposal of PCB Containing Ballasts/Capacitors (excluding costs for lift devices to gain access)	$ 2,000.00
Lead Paints & Primers to be Removed for Torch Cutting of Metal Surfaces, if and when necessary	$ 24,000.00
Lead Paints & Primers Remaining Attached to Metal Building Materials for Recycle	No Extra Cost
Lead Paints & Primers Remaining Attached to Wood Building Materials for Recycle/Disposal, Dependent on Future TCLP (lead leachate) Results (as deemed necessary by receiving site)	Not Determined
Mercury Containing Light Bulbs/Tubes for Recycle (excluding costs for lift devices to gain access)	$ 440.00
Stored Chemicals for Recycle/Disposal including Refrigeration Equipment and Radioactive Equipment for Recycle or Disposal	$ 3,500.00
Bird Droppings for Disposal as Biohazardous Waste, as necessary	Not Applicable
CONTROLLED WASTE MATERIALS	
Creosote and Chromated Copper Arsenate (CCA) Treated Wood Pylons, Pilings, Timbers, and Rail Ties for Disposal	Not Determined
NON-ASBESTOS GYPSUM BOARD	
Gypsum Board with No Asbestos Finishes for recycle (dependent upon results of destructive testing in the Lunchroom Building)	$ 3,300.00
ESTIMATED BUDGET FOR FUTURE DESTRUCTIVE TESTING BY ASTECH CONSULTANTS LTD.	
Interface with Client, Travel Time, Site Investigation/Destructive Testing (with safe roof access and patching of sample locations where necessary provided by Owner and/or Owner's Roofer), Laboratory Analysis of Asbestos Bulk Samples, and Preparation of Revised Written Reports	$ 2,400.00
SUBTOTAL	**$ 79,740.00**
10% CONTINGENCY	**$ 7,974.00**
ESTIMATED TOTAL (excluding GST)	**$ 87,714.00**

Note: In order to avoid damaging the envelopes of the buildings, fibrated roofing materials (membranes, felts, mastics, caulkings, sealants, and patching compounds) have not been sampled as part of this survey format, and are to be sampled once the buildings are no longer being utilized and prior to disturbing the materials in any manner. Although these materials are listed in the report as fibrated building materials with

the potential to contain asbestos, it is our experience that multi-layered roofing systems installed on buildings of this age and nature did not normally utilize asbestos fibres. With this in mind, a budget of $3.50 to $4.50 per square foot for removal of asbestos containing roofing materials has not yet been applied.

We hope you have found the above information useful. If you have any questions, or require clarification please contact this office.

Tom Farrell
Astech Consultants Ltd.
Ref: 15830HE01R.RK

ASBESTOS BULK SAMPLE REPORT

Date: September 1, 2016

Client: **FIBRECO EXPORT INC.**

Location: **Fibreco North Van Terminal**
1209 McKeen Avenue
North Vancouver, BC

Comments:
1) Analyzed as per NIOSH 9002, except for Vermiculite as per EPA/600/R-04/004.
2) WCB defines asbestos containing material as 0.5% or more asbestos, with the exception of Vermiculite which is defined as "any asbestos".
3) Sample(s) will be disposed of after 90 days, unless the Client requests otherwise.

Sample(s) Collected on July 5, 2016

				Non-Asbestos	Asbestos
Sample	**Location**	**Description**	**Layer: Colour**	**% Type**	**% Type**
15830BS01	Lunchroom Building - Main Floor - Lunchroom	Sheet Flooring	1: Beige	100% Non-Fibrous	None Detected
15830BS02	Lunchroom Building - Main Floor - Lunchroom	Sheet Flooring Adhesive	2: Cream	60% Cellulose 40% Non-Fibrous	None Detected
15830BS03	Lunchroom Building - Main Floor - Lunchroom	Flooring Adhesive Residue (beneath Wood Sub-floor)	3: Cream	100% Non-Fibrous	None Detected
15830BS04	Lunchroom Building - Main Floor - Lunchroom	Sealant (in Exterior Vinyl Door Window)	1: Grey	100% Non-Fibrous	None Detected
15830BS05	Lunchroom Building - Main Floor - Lunchroom	Paint 2' X 4' Ceiling Tile (Small Fissures)	1: White 2: Beige	40% Cellulose 20% Glass 40% Non-Fibrous	None Detected
15830BS06	Lunchroom Building - Main Floor - Lunchroom	Caulking (at Exterior Vinyl Window)	1: Off-White	100% Non-Fibrous	None Detected
15830BS07	Lunchroom Building - Main Floor - Lunchroom	Paint Filling Compound on Gypsum Board (Wall)	1: White 2: White	100% Non-Fibrous	None Detected
15830BS08	Lunchroom Building - Main Floor - Ladies' Washroom/Shower Room	Filling Compound Residue (Third Layer)	1: Off-White	5% Cellulose 95% Non-Fibrous	None Detected

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				Non-Asbestos	Asbestos
Sample	**Location**	**Description**	**Layer: Colour**	**% Type**	**% Type**
15830BS09	Lunchroom Building - Main Floor - Ladies' Washroom/Shower Room	Caulking (at Cove Base)	1: Off-White	100% Non-Fibrous	None Detected
15830BS10	Lunchroom Building - Main Floor - Ladies' Washroom/Shower Room	Caulking (at Shower Enclosure)	1: Off-White	100% Non-Fibrous	None Detected
15830BS11	Lunchroom Building - Main Floor - Ladies' Washroom/Shower Room	Paint Filling Compound on Gypsum Board (Wall)	1: White 2: White	5% Cellulose 95% Non-Fibrous	None Detected
15830BS12	Lunchroom Building - Main Floor - Ladies' Washroom/Shower Room	Paint Spray Applied Texture Coat (Ceiling)	1: White 2: White	5% Cellulose 95% Non-Fibrous	None Detected
15830BS13	Lunchroom Building - Main Floor - Men's Washroom/Shower Room	Ceramic Floor Tile Grout	1: Red	100% Non-Fibrous	None Detected
15830BS14	Lunchroom Building - Main Floor - Men's Washroom/Shower Room	Ceramic Floor Tile Mortar	2: Grey	100% Non-Fibrous	None Detected
15830BS15	Lunchroom Building - Main Floor - Locker Room	Paint Spray Applied Texture Coat (Ceiling)	1: White 2: White	5% Cellulose 95% Non-Fibrous	None Detected
15830BS16	Lunchroom Building - Main Floor - Men's Washroom/Shower Room	Ceramic Wall Tile Grout	1: Beige	100% Non-Fibrous	None Detected
15830BS17	Lunchroom Building - Main Floor - Men's Washroom/Shower Room	Ceramic Wall Tile Adhesive	2: Off-White	100% Non-Fibrous	None Detected
15830BS18	Lunchroom Building - Main Floor - Men's Washroom/Shower Room	Paint Spray Applied Texture Coat (Ceiling)	1: White 2: White	5% Cellulose 95% Non-Fibrous	None Detected
15830BS19	Rotary Dumper - Exterior	Coating (on Steel Deck Plate)	1: Yellow	2% Cellulose 98% Non-Fibrous	None Detected
15830BS20	Portable Wood Checker Shed (at north end of Rotary Dumper) - Exterior	Caulking (at White Vinyl Window)	1: Off-White	100% Non-Fibrous	None Detected
15830BS21	Portable Wood Checker Shed (at north end of Rotary Dumper) - Exterior - Rooftop	Rolled Roofing Shingle	1: Black & Green	20% Cellulose 20% Glass 60% Non-Fibrous	None Detected

Analyst(s): Irene Wang, Jesse James

Sample(s) Collected on July 7, 2016

				Non-Asbestos	Asbestos
Sample	**Location**	**Description**	**Layer: Colour**	**% Type**	**% Type**
15830BS22	MCC #1 Building - Main Floor - Electrical Room	Firestop Putty (at Electrical Cable Penetration on Wall, North)	1: Light Grey	10% Cellulose 90% Non-Fibrous	None Detected
15830BS23	MCC #1 Building - Main Floor - Electrical Room	Firestop Putty (at Electrical Cable Penetration, North Wall)	1: Dark Grey	80% Non-Fibrous	**20% Chrysotile**
15830BS24	MCC #1 Building - Main Floor - Electrical Room	Firestop Caulking (at Electrical Cable Penetration, West Wall)	1: White	100% Non-Fibrous	None Detected
15830BS25	MCC #1 Building - Second Floor - Control Room	Firestop Grout Parging (on Concrete Block Wall)	1: Grey	1% Cellulose 99% Non-Fibrous	None Detected
15830BS26	MCC #1 Building - Second Floor - Control Room	Paint Filling Compound on Gypsum Board (Ceiling)	1: Beige 2: Beige	5% Cellulose 92% Non-Fibrous	**3% Chrysotile**
15830BS27	MCC #1 Building - Second Floor - Control Room	12" Floor Tile	1: Cream & Beige	98% Non-Fibrous	**2% Chrysotile**
15830BS28	MCC #1 Building - Second Floor - Control Room	Floor Tile Adhesive	2: Black	5% Cellulose 95% Non-Fibrous	None Detected
15830BS29	MCC #1 Building - Second Floor - Control Room	Cove Base	1: Black	100% Non-Fibrous	None Detected
15830BS30	MCC #1 Building - Second Floor - Control Room	Cove Base Adhesive	2: Beige	100% Non-Fibrous	None Detected
15830BS31	MCC #1 Building - Exterior	Caulking (at Metal Window Frame)	1: Brown	100% Non-Fibrous	None Detected
15830BS32	MCC #1 Building - Exterior	Caulking (at Metal Window Frame)	1: Black	100% Non-Fibrous	None Detected
15830BS33	MCC #1 Building - Second Floor - Control Room	Sealant (in Exterior Brown Metal Window, East)	1: Black	100% Non-Fibrous	None Detected
15830BS34	MCC #1 Building - Second Floor - Control Room	Sealant (in Exterior Brown Metal Window, North)	1: Black	100% Non-Fibrous	None Detected
15830BS35	MCC #1 Building - Second Floor - Control Room	Sealant (in Exterior Brown Metal Window, East)	1: Black	100% Non-Fibrous	None Detected
15830BS36	MCC #1 Building - Exterior	Caulking (at Metal Frame of Door, East)	1: Grey	100% Non-Fibrous	None Detected
15830BS37	MCC #1 Building - Main Floor - Electrical Room	Firestop Grout (at Patch on Wall)	1: Grey	100% Non-Fibrous	None Detected

Analyst(s): Irene Wang

Sample(s) Collected on July 22, 2016

				Non-Asbestos	Asbestos
Sample	**Location**	**Description**	**Layer: Colour**	**% Type**	**% Type**
15830BS38	Lunchroom Building - Second Floor - Hallway	Sheet Flooring	1: Brown Wood Grain	10% Cellulose 90% Non-Fibrous	None Detected
15830BS39	Lunchroom Building - Second Floor - Hallway	Sheet Flooring (beneath Wood)	2: Blue	100% Non-Fibrous	None Detected
15830BS40	Lunchroom Building - Second Floor - Hallway	Flooring Adhesive	3: Cream	2% Cellulose 98% Non-Fibrous	None Detected
15830BS41	Lunchroom Building - Second Floor - Hallway	Caulking (at Wood Trim Wall)	1: Off-White	2% Cellulose 98% Non-Fibrous	None Detected
15830BS42	Lunchroom Building - Second Floor - Foremans' Office	Sealant (in Exterior White Metal Window)	1: Grey	100% Non-Fibrous	None Detected
15830BS43	Lunchroom Building - Second Floor - Foremans' Office	Caulking (at Exterior White Metal Window)	1: Off-White	1% Cellulose 99% Non-Fibrous	None Detected
15830BS44	Lunchroom Building - Second Floor - Lunchroom	Sealant (in Exterior White Vinyl Window)	1: Grey	100% Non-Fibrous	None Detected
15830BS45	Lunchroom Building - Second Floor - Washroom/Shower Area	Paint Spray Applied Texture Coat (Ceiling)	1: White 2: White	15% Cellulose 85% Non-Fibrous	None Detected
15830BS46	Lunchroom Building - Second Floor - Washroom/Shower Area	Paint Spray Applied Texture Coat (Ceiling)	1: White 2: White	15% Cellulose 85% Non-Fibrous	None Detected
15830BS47	Lunchroom Building - Exterior - Lower Sloped Rooftop, West	Roofing Shingle	1: Black	45% Glass 55% Non-Fibrous	None Detected
15830BS48	Lunchroom Building - Exterior - Lower Sloped Rooftop, West	Roofing Mastic	2: Black	1% Cellulose 99% Non-Fibrous	None Detected
15830BS49	Lunchroom Building - Exterior	Caulking (at Exterior Vinyl Window)	1: Grey	1% Cellulose 99% Non-Fibrous	None Detected
15830BS50	Lunchroom Building - Exterior	Felt (at Concrete Piling beneath Wood Column)	1: Black	99% Cellulose 1% Non-Fibrous	None Detected
15830BS51	Lunchroom Building - Exterior	Sealant (at Electrical Penetration, Southwest Corner)	1: Black	2% Cellulose 98% Non-Fibrous	None Detected
15830BS52	Lunchroom Building - Exterior	Caulking (at Joint of Wood Wall, West)	1: Off-White	2% Cellulose 98% Non-Fibrous	None Detected
15830BS53	Lunchroom Building - Exterior	Wall Construction Paper (beneath Wood)	1: Black	99% Cellulose 1% Non-Fibrous	None Detected
15830BS54	D.P.V. House #5 (adjacent Conveyor CV15) - Exterior	Firestop Putty (at Electrical Wall Penetration, South)	1: Grey	20% Cellulose 80% Non-Fibrous	None Detected
15830BS55	D.P.V. House #5 (adjacent Conveyor CV15) - Exterior	Caulking (at Screw Head of Metal Cladding)	1: Cream	1% Cellulose 99% Non-Fibrous	None Detected

Analyst(s): Jessica Young

Sample(s) Collected on July 27, 2016

				Non-Asbestos	Asbestos
Sample	**Location**	**Description**	**Layer: Colour**	**% Type**	**% Type**
15830BS56	D.P.V. #5 (adjacent Conveyor CV15) - Exterior	Caulking (at Metal Door Hinge)	1: Off-White	100% Non-Fibrous	None Detected
15830BS57	D.P.V. House #5 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Grey	3% Cellulose 97% Non-Fibrous	None Detected
15830BS58	D.P.V. House #5 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Off-White	3% Cellulose 97% Non-Fibrous	None Detected
15830BS59	D.P.V. House #5 - Interior	Gasket (at Flange of Mechanical Piping)	1: Black	100% Non-Fibrous	None Detected
15830BS60	D.P.V. House #6 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Blue	3% Cellulose 97% Non-Fibrous	None Detected
15830BS61	D.P.V. House #6 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Light Grey	99% Non-Fibrous	**1% Tremolite**
15830BS62	D.P.V. House #6 - Interior	Gasket (at Valve Body of Sprinkler Piping)	1: Black	100% Non-Fibrous	None Detected
15830BS63	D.P.V. House #6 - Exterior	Firestop Putty (at Electrical Wall Penetration)	1: Grey	25% Cellulose 75% Non-Fibrous	None Detected
15830BS64	D.P.V. House #6 - Exterior - Rooftop	Rolled Shingle	1: Black	55% Cellulose 45% Non-Fibrous	None Detected
15830BS65	D.P.V. House #6 - Exterior - Rooftop	Roofing Mastic	2: Black	2% Cellulose 2% Glass 96% Non-Fibrous	None Detected
15830BS66	Fire Hose Shed (adjacent D.P.V. House #6) - Exterior - Rooftop	Rolled Shingle	1: Black	55% Cellulose 45% Non-Fibrous	None Detected
15830BS67	Fire Hose Hsed (adjacent D.P.V. House #6) - Exterior - Rooftop	Roofing Mastic	2: Black	2% Cellulose 2% Glass 96% Non-Fibrous	None Detected
15830BS68	Conveyor CV21 (near Waterside Loader) - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Black	2% Cellulose 98% Non-Fibrous	None Detected
15830BS69	Conveyor CV21 (near Waterside Loader) - Interior	Rolled Shingle (at Wood Cover Over Electrical Switch Panel)	1: Black	55% Cellulose 45% Non-Fibrous	None Detected
15830BS70	Conveyor CV21 (near Waterside Loader) - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Blue & Off-White	99% Non-Fibrous	**1% Tremolite**
15830BS71	Conveyor CV21 (near Waterside Loader) - Interior	Woven Textile Gasket (at Electrical Cabinet)	1: Beige	65% Cellulose 20% Synthetic 20% Non-Fibrous	None Detected
15830BS72	D.P.V. House #7 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Cream	100% Non-Fibrous	None Detected
15830BS73	D.P.V. House #7 - Exterior	Pipe Thread Compound (at Pipe Fitting)	1: Off-White	99% Non-Fibrous	**1% Tremolite**

Analyst(s): Jesse James

Sample(s) Collected on August 8, 2016

				Non-Asbestos	Asbestos
Sample	**Location**	**Description**	**Layer: Colour**	**% Type**	**% Type**
15830BS74	MCC #5 Building - Exterior	Firestop Putty (at Electrical Switch Wall Penetration)	1: Grey	25% Cellulose 75% Non-Fibrous	None Detected
15830BS75	Wood Checkers Shed (adjacent MCC #5 Building)	Sealant Tape (in Exterior Brown Metal Window)	1: Black	5% Cellulose 95% Non-Fibrous	None Detected
15830BS76	Ship Loading Structure & Boom	Membrane (on Floor at Mid-Level)	1: Black & Grey	75% Synthetic 25% Non-Fibrous	None Detected
15830BS77	Ship Loading Structure & Boom	Caulking (at Mid-Level)	1: Grey	3% Cellulose 97% Non-Fibrous	None Detected
15830BS78a	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Sealant (in Exterior Brown Metal Window)	1: Black	3% Cellulose 97% Non-Fibrous	None Detected
15830BS78b	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Sealant (in Exterior Brown Metal Window)	1: Black	3% Cellulose 97% Non-Fibrous	None Detected
15830BS78c	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Sealant (in Exterior Brown Metal Window)	1: Black	100% Non-Fibrous	None Detected
15830BS79a	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Sealant (in Window of Exterior Door)	1: Off-White	100% Non-Fibrous	None Detected
15830BS79b	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Sealant (in Window of Exterior Door)	1: Off-White	100% Non-Fibrous	None Detected
15830BS79c	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Sealant (in Window of Exterior Door)	1: Off-White	100% Non-Fibrous	None Detected
15830BS80a	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Caulking (at Exterior Wood Wall)	1: Off-White	100% Non-Fibrous	None Detected
15830BS80b	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Caulking (at Exterior Wood Wall)	1: Off-White	100% Non-Fibrous	None Detected
15830BS80c	Ship Loading Structure & Boom - Operator's Booth (at Mid-Level)	Caulking (at Exterior Wood Wall)	1: Off-White	100% Non-Fibrous	None Detected
15830BS81	Ship Loading Structure & Boom - Upper Level	Gasket (at Flange of Motor Housing)	1: Grey	60% Cellulose 40% Non-Fibrous	None Detected
15830BS82	Ship Loading Structure & Boom - Upper Level	Paint Gasket (at Flange of Metal Hatch adjacent Large Motor)	1: Yellow 2: Black	100% Non-Fibrous	None Detected
15830BS83	Ship Loading Structure & Boom - Upper Level	Gasket (at Flange of Large Diameter Metal Conveying Tube, North Side)	1: Black	100% Non-Fibrous	None Detected

				Non-Asbestos	Asbestos
Sample	**Location**	**Description**	**Layer: Colour**	**% Type**	**% Type**
15830BS84	Ship Loading Structure & Boom - Upper Level	Gasket (at Flange of Large Diameter Metal Conveying Tube, South Side)	1: Black	100% Non-Fibrous	None Detected
15830BS85	Waterside Barge Loader	Pipe Thread Compound (at Pipe Fitting)	1: Blue	99% Non-Fibrous	**1% Tremolite**
15830BS86	Waterside Barge Loader	Pipe Thread Compound (at Pipe Fitting)	1: Blue	99% Non-Fibrous	**1% Tremolite**
15830BS87	MCC #2 Building - Interior	Firestop Putty (at Telephone Cabinet Penetration)	1: Grey	70% Cellulose	**30% Chrysotile**
15830BS88	MCC #2 Building - Interior	Firestop Putty (at Electrical Floor Penetration at Pipe Sleeve)	1: Grey	8% Cellulose 92% Non-Fibrous	None Detected
15830BS89	MCC #2 Building - Exterior	Paint Caulking (at Metal Door Frame)	1: Beige 2: Grey	100% Non-Fibrous	None Detected
15830BS90	D.P.V. House #8 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Black	98% Non-Fibrous	**2% Chrysotile**
15830BS91	D.P.V. House #8 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Black	98% Non-Fibrous	**2% Chrysotile**
15830BS92	D.P.V. House #8 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Grey	100% Non-Fibrous	None Detected
15830BS93	D.P.V. House #8 - Exterior	Mastic (at Mechanical Plastic Jacket)	1: Black	15% Cellulose 85% Non-Fibrous	None Detected
15830BS94	D.P.V. House #8 - Exterior	Mastic Tape (at Mechanical Plastic Jacket)	1: Black	5% Cellulose 95% Non-Fibrous	None Detected
15830BS95	Wood Checkers Shed (Intertek Testing Services)	Paint Caulking (at Exterior Brown Metal Window Metal Flashing)	1: Grey 2: White	100% Non-Fibrous	None Detected
15830BS96	Wood Checkers Shed - (Intertek Testing Services) - Interior	Sealant (in Metal Door Window)	1: Grey	3% Cellulose 97% Non-Fibrous	None Detected
15830BS97	D.P.V. House #9 - Interior	Pipe Thread Compound (at Pipe Fitting)	1: Grey	100% Non-Fibrous	None Detected

Analyst(s): Jesse James

AIHA PAT Programs LLC American Industrial Hygiene Association (AIHA) Bulk Asbestos Proficiency Analytical Testing (BAPAT)
Astech Consultants Ltd. Laboratory Participant ID# 200542

LEAD (in Paint) BULK SAMPLE REPORT

Date: September 1, 2016

Client: **FIBRECO EXPORT INC.**

Location: **Fibreco North Van Terminal**
1209 McKeen Avenue
North Vancouver, BC

Comments:
1) Analyzed by X-Ray Fluorescence (XRF) with direct read PPM.
2) Sample results report lead only.
3) WCB defines lead-containing surface coating material as a paint or other similar material that dries to a solid film that contains over 90 PPM (90 mg/kg or 90 μg/g or 0.009%) dry weight of lead.
4) Samples will be disposed of after 25 days, unless the client requests otherwise.
5) < means less than.

Sample(s) Collected on July 5, 2016

Bulk Sample # 15830LS01 : **Lunchroom Building - Main Floor - Lunchroom**
Sample Type : Paint (White) (on Wood Floor)
Result : <5.8 PPM

Bulk Sample # 15830LS02 : **Lunchroom Building - Main Floor - Lunchroom**
Sample Type : Paint (White) (on Gypsum Board Wall)
Result : <8 PPM

Bulk Sample # 15830LS03 : **Lunchroom Building - Main Floor - Ladies' Washroom/Shower Room**
Sample Type : Paint (Off-White) (on Wood Cove Base)
Result : <5.3 PPM

Bulk Sample # 15830LS04 : **Lunchroom Building - Main Floor - Men's Washroom/Shower Room**
Sample Type : Glazing Finish (on Ceramic Wall Tile)
Result : **485 PPM**

Bulk Sample # 15830LS05 : **Rotary Dumper**
Sample Type : Paint (Cream on Orange) (on Round Metal Handrail Around Pit)
Result : **4,540 PPM**

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Bulk Sample # 15830LS06 : **Rotary Dumper**
Sample Type : Paint (Cream on Cream) (on Structural Steel Column at Southeast Corner Around Pit)
Result : **248 PPM**

Bulk Sample # 15830LS07 : **Rotary Dumper**
Sample Type : Paint (Yellow) (on Square Handrail)
Result : <7 PPM

Bulk Sample # 15830LS08 : **Rotary Dumper**
Sample Type : Paint (Cream) (on Structural Steel Column/Neck Plate)
Result : **367 PPM**

Bulk Sample # 15830LS09 : **Rotary Dumper**
Sample Type : Paint/Coating (Yellow) (on Steel Deck Plate)
Result : 23 PPM

Bulk Sample # 15830LS10 : **Rotary Dumper**
Sample Type : Paint (Cream on Blue) (on Plate Steel on Wall of Dumper)
Result : **442 PPM**

Bulk Sample # 15830LS11 : **Portable Wood Checkers Shed (at North End of Rotary Dumper) - Exterior**
Sample Type : Paint (Cream) (on Wood Trim)
Result : 25 PPM

Analyst: Gina Foley

Sample(s) Collected on July 7, 2016

Bulk Sample # 15830LS12 : **MCC #1 Building - Second Floor - Control Room**
Sample Type : Paint (Cream) (on Wood Windowsill)
Result : 56 PPM

Bulk Sample # 15830LS13 : **MCC #1 Building - Exterior**
Sample Type : Paint (Cream on Cream) (on Exterior Metal Door)
Result : **984 PPM**

Bulk Sample # 15830LS14 : **MCC #1 Building - Exterior**
Sample Type : Paint (Cream on Cream) (on Metal Stairs)
Result : **97 PPM**

Analyst: Gina Foley

Sample(s) Collected on July 27, 2016

Bulk Sample # 15830LS15 : **Lunchroom Building - Exterior Room**
Sample Type : Paint (Cream on Green) (on Wood Wall)
Result : 52 PPM

Bulk Sample # 15830LS16 : **Lunchroom Building - Exterior Room**
Sample Type : Paint (Cream) on Primer (Red) (on Metal Ladder)
Result : **163 PPM**

Bulk Sample # 15830LS17 : **Rotary Dumper (Below Grade)**
Sample Type : Paint (Cream) on Primer (Red) (on Structural Steel Beam)
Result : **9,367 PPM**

Bulk Sample # 15830LS18 : **Conveyor CV15 (adjacent Rotary Dumper)**
Sample Type : Paint (Cream) on Primer (Red & Grey) (on Structural Steel)
Result : **2,210 PPM**

Bulk Sample # 15830LS19 : **Conveyor CV15 (adjacent Rotary Dumper)**
Sample Type : Paint (Cream on Cream) on Primer (Grey) (on Conveyor Structural Steel)
Result : **334 PPM**

Bulk Sample # 15830LS20 : **Conveyor CV15 (adjacent Rotary Dumper)**
Sample Type : Paint (Yellow) (on Metal Bollard at Mid Point)
Result : **22,200 PPM**

Analyst: Gina Foley

Sample(s) Collected on July 29, 2016

Bulk Sample # 15830LS21 : **D.P.V. House #5 (adjacent Conveyor CV15) - Exterior**
Sample Type : Paint (Cream) (on Metal Wall)
Result : **95 PPM**

Bulk Sample # 15830LS22 : **D.P.V. House #6 (at Conveyor CV21) - Exterior**
Sample Type : Paint (Red) (on Wood Trim)
Result : **43,200 PPM**

Bulk Sample # 15830LS23 : **Conveyor CV21 (at Waterside Loader)**
Sample Type : Primer (Red) (on Structural Steel Column)
Result : **162 PPM**

Bulk Sample # 15830LS24 : **Conveyor CV21 (at Waterside Loader)**
Sample Type : Primer (Red) on Paint (Cream) (on Column of Catwalk)
Result : 22 PPM

Bulk Sample # 15830LS25 : **Waterside Loader (at Conveyor CV21)**
Sample Type : Paint (Yellow) on Paint (Red) (on Large Round Metal Railing at Entrance)
Result : **2,066 PPM**

Bulk Sample # 15830LS26 : **Waterside Loader (at Conveyor CV21)**
Sample Type : Primer (Red) (on Metal Wall)
Result : **141 PPM**

Bulk Sample # 15830LS27 : **Waterside Loader (at Conveyor CV21)**
Sample Type : Paint (Black) (on Metal Wall)
Result : 12 PPM

Bulk Sample # 15830LS28 : **Conveyor CV22**
Sample Type : Paint (Cream) on Primer (Red) (on Structural Steel Near D.P.V.#7)
Result : **180 PPM**

Bulk Sample # 15830LS29 : **Metal Electrical Shed (at Conveyor CV22) - Exterior**
Sample Type : Paint (Cream) on Primer (Red) (on Metal Rooftop)
Result : **1,146 PPM**

Analyst: Gina Foley

Sample(s) Collected on August 8, 2016

Bulk Sample # 15830LS30 : **MCC #5 Building - Exterior**
Sample Type : Paint (Cream) (on Concrete Wall)
Result : <6 PPM

Bulk Sample # 15830LS31 : **Ship Loader Structure & Boom**
Sample Type : Paint (Yellow) (on Steel Support at Boom)
Result : **85,600 PPM**

Bulk Sample # 15830LS32 : **Ship Loader Structure & Boom**
Sample Type : Paint (Grey) on Primer (Red) (on Secondary Steel Column at Mid-Level)
Result : **4,380 PPM**

Bulk Sample # 15830LS33 : **Ship Loader Structure & Boom**
Sample Type : Paint (Yellow on Cream) (on Secondary Steel Column at Mid-Level)
Result : **42,700 PPM**

Bulk Sample # 15830LS34 : **Ship Loader Structure & Boom**
Sample Type : Paint (Yellow) on Primer (Red) (on Large Structural Steel Column at Upper Level)
Result : **21,200 PPM**

Bulk Sample # 15830LS35 : **Ship Loader Structure & Boom**
Sample Type : Paint (Yellow) on Primer (Red) (on Large Structural Steel Column at Mid-Level)
Result : **20,320 PPM**

Bulk Sample # 15830LS36 : **Waterside Barge Loader (at Conveyor CV22)**
Sample Type : Paint (Yellow on White & Green) (on Handrail)
Result : **3,575 PPM**

Bulk Sample # 15830LS37 : **Waterside Barge Loader (at Conveyor CV22)**
Sample Type : Paint (Cream) on Primer (Red) (on Large Diameter Round Steel Colum at Loader)
Result : **619 PPM**

Bulk Sample # 15830LS38 : **D.P.V. House #8 - Interior**
Sample Type : Paint (Red on Blue) (on Large Valve)
Result : **6,281 PPM**

Bulk Sample # 15830LS39 : **D.P.V. House #8 - Exterior**
Sample Type : Paint (Cream) (on Metal Cladding/Trim)
Result : **1,114 PPM**

Bulk Sample # 15830LS40 : **Wood Checkers Shed (Intertek Testing Services) - Exterior**
Sample Type : Paint (Cream) (on Wood Wall)
Result : 14 PPM

Bulk Sample # 15830LS41 : **Conveyor CV2/CV3**
Sample Type : Paint (Cream) (on Corrugated Metal Cladding Ceiling)
Result : **12,600 PPM**

Bulk Sample # 15830LS42 : **Conveyor CV2/CV3**
Sample Type : Paint (Cream on Yellow) on Primer (Red) (on Stair Railing)
Result : **2,659 PPM**

Bulk Sample # 15830LS43 : **Conveyor CV2**
Sample Type : Paint (Cream) on Primer (Red) (on Structural Steel Column)
Result : **412 PPM**

Bulk Sample # 15830LS44 : **Cradle Structure**
Sample Type : Paint (Yellow) on Primer (Grey) (on Structural Steel Column)
Result : $<$9 PPM

Analyst: Gina Foley