# Public Services and Procurement Canada

Requisition No. **EZ899-192064**

DRAWINGS & SPECIFICATIONS
For
**Project No.: R.097979.001**
**Mission Medium Institution**
**Building A-K - Flooring Replacement**
**Room 102, 103, 104, 121**

**APPROVED BY:**

Regional Manager, AES — Date: 2018-10-31

Construction Safety Coordinator — Date: 2018-10-29

**TENDER:**

Project Manager — Date: 2018-10-31

Real Property Services Branch, Professional and Technical Services, Pacific Region
Room 219 - 800 Burrard Street, Vancouver, B.C. V6Z 0B9

**END OF SECTION**

## PART 1 GENERAL

### 1.1 SUMMARY OF WORK

.1 Work covered by Contract Documents:

.1 This Contract covers the following work at the Mission Medium Institution, bakery (RM#102), dishwashing (RM#103), kitchen (RM#104), and dinning (RM#121) with vestibule in the administration building A, 8751 Stave Lake Street, Mission BC V2V 4L8.

.1 Flooring replacement work must be carried out in at least 6 to 8 phases in order to maintain the kitchen and dining area functions for Correctional Service Canada (CSC). Contractor must fully complete one phase for occupancy before moving on to the next phase.

.2 Temporarily, remove kitchen equipment, seating, furniture and shelving for flooring replacement. Disconnect electrical and mechanical service lines for the removed equipment.

.3 Demolish and dispose existing floor finish. Prepare floor slab per new flooring material specification.

.4 Install new methyl methacrylate floor system with integrated cove base.

.5 Re-install the temporarily removed kitchen equipment, seating and shelving for flooring replacement work back to their original conditions.

.2 Work to be performed under this Contract includes, but not limited to, the following items covered further in the Contract documents:

.1 Provide a detailed work plan including a project schedule and phasing. This detailed work plan shall be submitted to the Departmental Representative for review to verify that there will be no interruption of service.

.2 Do not start work until all essential equipment is delivered to the site and the work can proceed without delays.

.3 Provide as-built drawings and closeout submittals.

.3 Contractor's Use of Premises:

.1 Contractor has limited use of site for work of this contract until Substantial Completion:

.1 Contractor use of premises for storage and access, as approved by the Departmental representative.

.2 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

.2 Vehicular access through the Sally Port will be restricted during the inmate "count" at breakfast, lunch and dinner hours. Confirm times with Departmental Representative. Delays may occur when entering and exiting the Institution with vehicles due to security situations and heavy traffic.

### 1.2 WORK RESTRICTIONS

.1 Notify Departmental Representative of intended interruption of power, communication and water services and provide schedule of interruption times.

.2 Where Work involves breaking into or connecting to existing services, give departmental Representative 48 hours of notice for necessary interruption of services throughout course of work. Keep duration of interruptions to a minimum. Coordinate interruptions with local authority having jurisdiction and local residences and businesses affected by the disruption.

.3 Provide for access by pedestrian and vehicular traffic on and around site where work is in progress.

.4 Construct barriers in accordance with Section Temporary Barriers and Enclosures.

.5 Security Requirements: refer to Section 01 14 10 - Security Requirements.

.6 Hours of work:

.1 Perform work after normal working hours of the Institution, from 6:00 PM to 5:30 AM next day morning, Monday through Friday except holidays.

.2 When it is necessary, arrange in advance with Departmental Representative to work inside of normal working hours, 7:00 AM to 7:00 PM.

## 1.3 CONSTRUCTION WORK SCHEDULE

.1 Commence work immediately upon official notification of acceptance of offer and complete the work within 12 weeks from the date of such notification.

.2 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Substantial Certificate and Final Certificate as defined times of completion are of essence of this contract.

.3 Submittal:

.1 Submit to Departmental Representative within 10 working days of Award of Contract, a Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of construction progress.

.2 Identify each trade or operation.

.3 Show dates for delivery of items requiring long lead time.

.4 Departmental Representative will review schedule and return one copy.

.5 Re-submit two (2) copies of finalized schedule to Departmental Representative within five (5) working days after return of reviewed preliminary copy.

.4 Project Scheduling Reporting:

.1 Update Project Schedule on bi-weekly basis reflecting activity changes and completions, as well as activities in progress.

.2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

.5 Project Meetings:

.1 Discuss Project Schedule at bi-weekly site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

.2 Weather related delays with their remedial measures will be discussed and negotiated.

.3 Before submitting first progress claim submit breakdown of Contract price in detail as directed by Departmental Representative and aggregating contract price. After approval by Departmental Representative cost breakdown will be used as basis for progress payments. Only PSPC paper work is acceptable. The suggested breakdowns are listed as follows:

.1 General conditions

.2 Bond and insurance

.3 Demolition and disposal of existing floor finish.

.4 Hazardous materials removal and abatement per section 02 81 01.

.5 MMA flooring

.6 Remove and re-install existing kitchen equipment, seating, furniture and shelving.

.7 Close-out submittals

## 1.4 SUBMITTAL PROCEDURES

.1 Administrative:

.1 Submit to Departmental Representative submittal listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.

.2 Work affected by submittal shall not proceed until review is complete.

.3 Present shop drawings, product data, samples and mock-ups in SI Metric units.

.4 Where items or information is not produced in SI Metric units converted values are acceptable.

.5 Review submittal prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittal not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.

.6 Notify Departmental Representative in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

.7 Verify field measurements and affected adjacent Work are coordinated.

.8 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative review of submittal.

.9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.

10 Keep one reviewed copy of each submission on site.

.2 Shop Drawings:

.1 Drawings to be originals prepared by Contractor, Subcontractor, Supplier or Distributor, which illustrate appropriate portion of work; showing fabrication, layout, setting or erection details as specified in appropriate sections.

.3 Product Data:

.1 Certain specification Sections specify that manufacturer's standard schematic drawings, catalogue sheets, diagrams, schedules, performance charts, illustrations and other standard descriptive data will be accepted in lieu of shop drawings, provided that the product concerned is clearly identified. Submit in sets, not as individual submissions.

.4 Samples:

.1 Submit samples in sizes and quantities specified.

.2 Where colour is criterion, submit full range of colours.

.3 Submit all samples as soon as possible after the contract is awarded, to facilitate production of complete colour scheme by the Departmental Representative.

.5 Mock-ups:

.1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.

.2 Construct in location as specified in specific Section.

.3 Prepare mock-ups for Departmental Representative' review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.

.4 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.

.5 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed and when.

.6 Progress Photographs:

.1 Provide construction photographs in accordance with procedures and submission requirements specified in this clause.

.2 Progress Photographs:

.1 Provide digital photographs with images of minimum 3.1 mega pixel resolution and stored in Jpeg format with minimal compression.

.2 Number of viewpoints: four (4), locations of viewpoints directed by Departmental Representative.

.3 Frequency: monthly, submitted on disk with monthly progress statement, sent via e-mail or as directed by Departmental Representative.

.4 Identify photos by location, date and sequential numbering system.

.3 Final Photographs:

.1 Provide digital photographs with images of minimum 3.1 mega pixel resolution and stored in Jpeg format with minimal compression. Where photos are e-mailed compression can be increased.

.2 Number of viewpoints:

.1 Interior of rooms and finishes for a total of 8.

.2 Locations of viewpoints determined by Departmental Representative.

.3 Submit final photographs in digital format on CD, before final acceptance of building.

.4 Label disks and identify with name and project number of project. Indicate exposure dates and viewpoints of each photo and photo number.

.7 Submission Requirements:

.1 Schedule submissions at least ten days before dates reviewed submissions will be needed.

.2 Submit number of copies of product data, shop drawings which Contractor requires for distribution plus four (4) copies which will be retained by Departmental Representative.

.3 Accompany submissions with transmittal letter in duplicate.

.4 Submit bond copies (hard copy) as directed by Departmental Representative.

.8 Coordination of Submissions:

.1 Review shop drawings, product data and samples prior to submission.

.2 Coordinate with field construction criteria.

.3 Verify catalogue numbers and similar data.

.4 Coordinate each submittal with requirements of the work of all trades and contract documents.

.5 Responsibility for errors and omissions in submittal is not relieved by Departmental Representative's review of submittal.

.6 Responsibility for deviations in submittal from requirements of Contract documents is not relieved by Departmental Representative's review of submittal, unless Departmental Representative gives written acceptance of specified deviations.

.7 Notify Departmental Representative, in writing at time of submission, of deviations in submittal from requirements of Contract documents.

.8 Make any changes in submissions which Departmental Representative may require consistent with Contract Documents and re-submit as directed by Departmental Representative.

.9 After Departmental Representative's review, distribute copies.

.10 Shop Drawings Review:

.1 Review of shop drawings by Public Services and Procurement Canada (PSPC) is for the sole purpose of ascertaining conformance with the general concept.

.2 The Departmental Representative's review does not mean that PSPC approves the detail design inherent in the shop drawings, responsibility remains with the contractor submitting same, and such review will not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and contract documents.

.3 Without restricting the generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation, and for co-ordination of the work of all subtrades.

## 1.5 HEALTH AND SAFETY

.1 Specified in Section 01 35 33.

## 1.6 ENVIRONMENTAL PROCEDURES

.1 Fires and burning of rubbish on site not permitted.

.2 Do not bury rubbish and waste materials on site unless approved by Departmental Representative.

.3 Do not dispose of waste or volatile materials such as oil, paint thinner or mineral spirits into waterways, storm or sanitary systems.

.4 Provide temporary drainage and pumping as necessary to keep excavations and site free from water during excavation and grading activities.

.5 Control disposal of run-off of water containing suspended materials or other harmful substances in accordance with local authority requirements. Construct settlement ponds and silt fences as required by the Provincial Environmental authority.

.6 Cover or wet down dry materials and rubbish to prevent blowing dust and debris.

.7 Under no circumstances dispose of rubbish or waste materials on adjoining property.

## 1.7 REGULATORY REQUIREMENTS

.1 References and Codes:

.1 Perform Work in accordance with National Building Code of Canada (NBCC2015) and where applicable British Columbia Building Code (BCBC2012) including all amendments up to bid closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.

.2 Meet or exceed requirements of:

.1 Contract documents.

.2 Specified standards, codes and referenced documents.

## 1.8 QUALITY CONTROL

.1 Inspection:

.1 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.

.2 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.

.3 Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Departmental Representative shall pay cost of examination and replacement.

.2 Procedures:

.1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.

.2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.

.3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

.3 Rejected Work:

.1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.

.2 Make good other Contractor's work damaged by such removals or replacements promptly.

.4 Reports:

.1 Submit (4) four copies of inspection and test reports to Departmental Representative.

.5 Tests and Mix Designs:

.1 Furnish test results and mix designs as may be requested.

.6 Mock-ups:

.1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.

.2 Construct in locations acceptable to Departmental Representative and as specified in specific Section.

.3 Prepare mock-ups for Departmental Representative review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.

.4 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.

.5 If requested, Departmental Representative will assist in preparing a schedule fixing dates for preparation.

.6 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed and when.

## 1.9 TEMPORARY UTILITIES

.1 Installation and Removal:

.1 Provide temporary utilities controls in order to execute work expeditiously.

.2 Remove from site all such work after use.

.2 Not Used.

.3 Water Supply:

.1 Existing permanent water supply system may be used for construction requirements provided that guarantees are not affected thereby. Replace damaged components.

.4 Temporary Power and Light:

.1 Existing electrical power and lighting may be used for construction purposes at no extra cost, provided that guarantees are not affected thereby and electrical components used for temporary power are replaced when damaged.

.5 Temporary Communication Facilities:

.1 Provide and pay for temporary telephone and fax hook up, line(s) necessary for own use.

.6 Fire Protection:

.1 Provide and maintain temporary fire protection equipment during performance of Work required by governing codes, regulations and bylaws.

## 1.10 CONSTRUCTION FACILITIES

.1 Installation and Removal:

.1 Provide construction facilities in order to execute work expeditiously.

.2 Remove from site all such work after use.

.2 Scaffolding:

.1 Design, construct and maintain scaffolding in rigid, secure and safe manner, in accordance with WorkSafeBC regulations and Section 01 35 33.

.2 Erect scaffolding independent of walls. Remove promptly when no longer required.

.3 Hoisting:

.1 Provide, operate and maintain hoists required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.

.2 Hoists to be operated by qualified operator.

.4 Site Storage/Loading:

.1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.

.2 Do not load or permit to load any part of Work with a weight or force that will endanger the Work.

.5 Construction Parking:

.1 Make good damage to existing roads used for access to project site.

.2 Build and maintain temporary access where required and provide snow removal during period of Work.

.3 Park vehicles outside perimeter fence in designated parking areas.

.6 Contractor's Site Office and enclosure:

.1 Provide a clearly marked and fully stocked first-aid case in a readily available location.

.2 Provide temporary fenced area to enclose site and operations.

.7 Equipment, Tools and Material Storage:

.1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.

.2 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.

.8 Sanitary Facilities:

.1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.

.2 Permanent facilities may be used on approval of Departmental Representative.

## 1.11 TEMPORARY BARRIERS AND ENCLOSURES

.1 Hoarding:

.1 Erect temporary site enclosure using new 1.8 m high temporary construction fencing. Provide lockable truck gate. Maintain fence in good repair.

.2 Enclosure of Structure:

.1 Provide temporary weathertight enclosures and protection for exterior openings until permanently enclosed. Design enclosures to withstand wind pressure. Provide lockable entry as required for moving personnel equipment and materials.

.2 Provide temporary enclosures to secure building from entry of unauthorized personnel during construction period.

.3 The temporary enclosure for the work area must be airtight and under negative air pressure with temporary ventilation system, and have adequate ventilation to preventing flooring resin oudor or demolition dust & debris into occupied spaces.

.3 Guardrails and Excavations:

.1 Provide secure, rigid guard rails and barricades around open edges of floors and roofs etc.

.2 Provide as required by governing authorities.

.4 Access to Site:

.1 Maintain immediate local access roads in clean condition used during work of this contract.

.5 Protection for Off-Site and CSC Property:

.1 Protect surrounding CSC property from damage during performance of Work.

.2 Be responsible for damage incurred.

.6 Protection of Building Finishes:

.1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.

.2 Provide necessary screens, covers, and hoardings.

.3 Confirm with Departmental Representative locations and installation schedule 3 days prior to installation.

.4 Be responsible for damage incurred due to lack of or improper protection.

## 1.12 COMMON PRODUCT REQUIREMENTS

.1 Reference Standards:

.1 If there is question as to whether any product or system is in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.

.2 Cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.

.3 Conform to latest date of issue of referenced standards in effect on date of submission of Bids, except where specific date or issue is specifically noted.

.2 Quality:

.1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.

.2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.

.3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.

.4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.

.5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

.6 The use of asbestos containing materials is prohibited in this project. Contractor shall provide a letter to the Departmental Representative prior to Substantial Completion confirming that asbestos containing materials are not used in this project.

.3 Storage, Handling and Protection:

.1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.

.2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.

.3 Store products subject to damage from weather in weatherproof enclosures.

.4 Store cementitious products clear of earth or concrete floors, and away from walls.

.5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.

.6 Store sheet materials, lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.

.7 Store flooring resin in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.

.8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.

.9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original.

.4 Transportation:

.1 Pay costs of transportation of products required in performance of Work.

.5 Manufacturer’s Instructions:

.1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.

.2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative may establish course of action.

.3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

.6 Quality of Work:

.1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.

.2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.

.3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

.7 Co-ordination:

.1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.

.2 Be responsible for coordination and placement of openings, sleeves and accessories.

8 Concealment:

.1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.

.2 Before installation, inform Departmental Representative if there is interference. Install as directed by Departmental Representative.

.9 Remedial Work:

.1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.

.2 Perform remedial work by specialists familiar with materials affected. Perform in a manner neither to damage nor to put at risk any portion of Work.

.10 Location of Fixtures:

.1 Site verify and record locations of fixtures, outlets, and mechanical and electrical connections before remove the existing kitchen equipment. Re-install equipment back after flooring installation to its original operational condition.

.2 Inform Departmental Representative of conflicting installation. Install as directed.

.3 Submit field drawings to indicate relative position of various services and equipment.

.11 Fastenings:

.1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.

.2 Prevent electrolytic action between dissimilar metals and materials.

.3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.

.4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.

.5 Keep exposed fastenings to a minimum, space evenly and install neatly.

.6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

.12 Fastenings - Equipment:

.1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.

.2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.

.3 Bolts may not project more than one diameter beyond nuts.

.4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

.13 Protection of Work in Progress:

.1 Prevent overloading of any part of building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of Departmental Representative.

.14 Existing Utilities:

.1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum of disturbance to pedestrian and vehicular traffic.

.2 Before commencing work, establish location and extent of service lines in areas of work and notify Departmental Representative of findings.

.3 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.

.4 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.

.5 Record locations of maintained, capped and re-routed services lines.

.15 Contractors Options for Selection of Products:

.1 Products specified by **"Prescriptive" specifications**: select any product meeting or exceeding specifications.

.2 Products specified under "**Acceptable Products**": select any one of the indicated manufacturers, or any other manufacturer meeting or exceeding the Prescriptive specifications and indicated Products.

.3 Products specified by performance and referenced standard: select any product meeting or exceeding the referenced standard.

.4 Products specified to meet particular design requirements or to match existing materials: use only material specified Approved Product. Alternative products may be considered provided full technical data is received in writing by Departmental Representative in accordance with “Instructions to Bidders".

.5 When products are specified by a referenced standard or by Performance specifications, upon request of Departmental Representative, obtain from manufacturer an independent laboratory report showing that the product meets or exceeds the specified requirements.

.16 Substitution after award of Contract:

.1 No substitutions are permitted without prior written approval of the Departmental Representative.

.2 Proposals for substitution may only be submitted after Contract award. Such request must include statements of respective costs of items originally specified and the proposed substitution.

.3 Proposals will be considered by the Departmental Representative if:

.1 products selected by tenderer from those specified are not available;

.2 delivery date of products selected from those specified would unduly delay completion of Contract, or

.3 alternative product to that specified, which is brought to the attention of and considered by Departmental Representative as equivalent to the product specified, and will result in a credit to the Contract amount.

.4 Should the proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on the project. Pay for design or drawing changes required as result of substitution.

.5 Amounts of all credits arising from approval of the substitutions will be determined by the Departmental Representative, and the Contract price will be reduced accordingly.

## 1.13 EXAMINATION AND PREPARATION

.1 Existing Services:

.1 Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.

.2 Remove abandoned service lines within 2 m of structures. Cap or otherwise seal lines at cut-off points as directed by Departmental Representative.

.2 Location of Equipment and Fixtures:

.1 Site verify and record location of equipment, fixtures and outlets.

.2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.

.3 Inform Departmental Representative of impending installation and obtain approval for actual location.

.4 Submit field drawings to indicate relative position of various services and equipment.

## 1.14 EXECUTION REQUIREMENTS

.1 Preparation:

.1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.

.2 After uncovering, inspect conditions affecting performance of Work.

.3 Beginning of cutting or patching means acceptance of existing conditions.

.4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.

.5 Provide protection from elements for areas which may be exposed by uncovering work; maintain excavations free of water.

.2 Execution:

.1 Execute cutting, fitting, and patching including excavation and fill, to complete Work.

.2 Fit several parts together, to integrate with other Work.

.3 Uncover Work to install ill-timed Work.

.4 Remove and replace defective and non-conforming Work.

.5 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.

.6 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.

.7 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.

.8 Cut rigid materials using purpose made saw or core drill. Pneumatic or impact tools not allowed on brittle materials without prior approval.

.9 Restore work with new products in accordance with requirements of Contract Documents.

.10 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

.11 At penetration of fire rated wall, ceiling, or floor construction, completely seal voids with firestopping material, full thickness of the construction element.

.12 Refinish surfaces to match adjacent finishes: For continuous surfaces refinish to nearest intersection; for an assembly, refinish entire unit.

.13 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

## 1.15 CLEANING

.1 Project Cleanliness:

.1 Maintain Work in tidy condition, free from accumulation of waste products and debris.

.2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site, unless approved by Departmental Representative.

.3 Clear snow and ice from access to building.

.4 Provide on-site containers for collection of waste materials and debris.

.5 Provide and use clearly marked separate bins for recycling. Refer to-Construction/Demolition Waste Management And Disposal.

.6 Clean interior areas prior to start of finish work, and maintain areas free of dust and other contaminants during finishing operations.

.7 Store volatile waste in covered metal containers, and remove from premises at end of each working day.

.8 Provide adequate ventilation during use of volatile or noxious substances and block existing mechanical supply and exhaust outlets within the work area. Use of building ventilation systems is not permitted for this purpose.

.9 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

.10 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

.2 Final Cleaning:

.1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.

.2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.

.3 Prior to final review, remove surplus products, tools, construction machinery and equipment.

.4 Remove stains, spots, marks and dirt from flooring work.

.5 Wax, seal, vacuum clean, shampoo or prepare floor finishes, as recommended by manufacturer.

.6 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.

.7 Remove snow and ice from access to building.

## 1.16 CONSTRUCTION/DEMOLITION WASTE MANAGEMENT AND DISPOSAL

.1 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and/or recyclable materials and waste.

.1 Separate non-salvageable materials from salvaged items.

.2 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

.3 Transport and deliver non-salvageable items to licensed disposal facility.

.2 Provide containers to deposit reusable and/or recyclable materials. Locate containers in locations, to facilitate deposit of materials without hindering daily operations. Provide containers to deposit reusable and/or recyclable materials.

.3 Collect, handle, store on-site and transport off-site, salvaged materials in separate condition. Transport to approved and authorized recycling facility and/or users of material for recycling.

.4 Locate waste and salvage bins on site as directed by Departmental Representative.

## 1.17 CLOSEOUT PROCEDURES

.1 Inspection and Declaration:

.1 Contractor's Inspection: Conduct an inspection of Work with all subcontractors, identify deficiencies and defects, and repair as required to conform to Contract Documents.

.2 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.

.3 Request Departmental Representative's Inspection.

.2 Inspection: Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.

.3 Substantial Completion: submit written certificate that following have been performed:

.1 Work has been completed and inspected for compliance with Contract Documents.

.2 Defects have been corrected and deficiencies have been completed.

.3 Equipment and systems have been tested, adjusted and balanced and are fully operational.

.4 Operation of systems have been demonstrated to Departments personnel.

.5 Work is complete and ready for Final Inspection.

.6 Asbestos containing materials are not used in this project.

.4 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

## 1.18 CLOSEOUT SUBMITTAL

.1 Record Drawings:

.1 As work progresses, maintain accurate records to show all deviations from the Contract Drawings. Note on as-built drawings as changes occur. At completion supply:

.1 Four (4) sets of CD's in AutoCad file format (version: 2010) and PDF format with all as-built information on the diskettes.

.2 Four (4) sets of printed as-built drawings.

.3 Submit one copy of check plots to Departmental Representative prior to final printing of as-built drawings.

.4 Departmental Representative will supply copies of the original AutoCad files.

.5 Retain original logo and title block on the as-built drawings. Contractor may place on the upper right-hand title block area a small company logo, the text "AS-BUILT" and the date.

.2 Operation and Maintenance Manuals:

.1 On completion of project submit to Departmental Representative four (4) CD R/ disk copies and four (4) paper copies (in loose leaf type binder) of Operation and Maintenance Manual, made up as follows:

.1 Provide maintenance manual on CDs using pdf, or other approved format for descriptive writing, page size images and page size drawings. Organize manuals into industry standard maintenance manual tabs with links in index to each descriptive section describing the component or maintenance procedure etc.

.2 Organize files into CSI Masterformat numbering system or other approved descriptive titles.

.3 Label disk "Operation and Maintenance Data", project name, date, names of Contractor, subcontractors, consultants and subconsultants.

.4 Include scanned guarantees, diagrams and drawings.

.5 Organize contents into applicable sections of work to parallel project specification break-down. Mark each section by labeled tabs (navigational buttons).

.6 Drawings, diagrams and manufacturer's literature must be legible.

.7 Refer to Mechanical and Electrical Divisions for specific details for Mechanical and Electrical data.

.3 Maintenance Materials, Special Tools and Spare Parts:

.1 Specific requirements for maintenance materials, tools and spare parts are specified in individual sections.

.2 Deliver maintenance materials, special tools and spare parts to Departmental Representative and store in designated area as directed by Departmental Representative.

.3 Prepare lists of maintenance materials, special tools and spare parts for inclusion in Manual specified in Clause 18.2.

.4 Maintenance materials:

.1 Deliver wrapped, identify on carton or package, colour, room number, system or area as applicable where item is used.

.5 Special tools:

.1 Assemble as specified;

.2 Include identifications and instructions on intended use of tools.

.6 Spare parts:

.1 Assemble parts as specified;

.2 Include part number, identification of equipment or system for which parts are applicable;

.3 Installation instructions;

.4 Name and address of nearest supplier.

.4 Warranties and Bonds:

.1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing in maintenance manual.

.2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

.3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.

.4 Except for items put into use with Departmental Representative's permission, leave date of beginning of time of warranty until the Date of Interim Completion is determined.

.5 Verify that documents are in proper form, contain full information, and are notarized.

.6 Retain warranties and bonds until time specified for submittal.

**END OF SECTION**

## PART 1 GENERAL

### 1.1 Purpose

.1 To ensure that both the construction project and the institutional operations may proceed without undue disruption or hindrance and that the security of the Institution is maintained at all times.

### 1.2 Purpose

.1 "Contraband" means:

.1 an intoxicant, including alcoholic beverages, drugs and narcotics

.2 a weapon or a component thereof, ammunition for a weapon, and anything that is designed to kill, injure or disable a person or that is altered so as to be capable of killing, injuring or disabling a person, when possessed without prior authorization,

.3 an explosive or a bomb or a component thereof,

.4 currency over any applicable prescribed limit, $25.00, and

.5 any item not described in paragraphs (a) to (d) that could jeopardize the security of a Penitentiary or the safety of persons, when that item is possessed without prior authorization.

.2 Unauthorized smoking and related article 1.15 herein the section means all smoking items including, but not limited to, cigarettes, cigars, tobacco, chewing tobacco, cigarette making machines, matches and lighters.

.3 "Commercial Vehicle" means any motor vehicle used for the shipment of material, equipment and tools required for the construction project.

.4 "CSC" means Correctional Service Canada.

.5 "Director" means Director or Warden of the Institution as applicable or their representative.

.6 "Construction employees" means persons working for the general contractor, the sub-contractors, equipment operators, material suppliers, testing and inspection companies and regulatory agencies.

.7 "Departmental Representative" means the Public Works and Government Services Canada representative defined in General Conditions.

.8 "Perimeter" means the fenced or walled area of the institution that restrains the movement of the inmates.

.9 "Construction zone" means the area, as indicated in the contract documents, that the contractor will be allowed to work". This area may or may not be isolated from the security area of the institution. Limits to be confirmed at construction start-up meeting.

### 1.3 Preliminary Proceedings

.1 At construction start-up meeting:

.1 Discuss the nature and extent of all activities involved in the Project.

.2 Establish mutually acceptable security procedures in accordance with this instruction and the institution's particular requirements.

.2 The Contractors' responsibilities:

.1 Ensure that all construction employees are aware of the CSC security requirements.

.2 Ensure that a copy of the CSC security requirements is always prominently on display at the job site.

.3 Co-operate with institutional personnel in ensuring that security requirements are observed by all construction employees.

**1.4 Construction Employees**

.1 Submit scanned copy of government issued ID for each employee to the Departmental Representative.

.2 Allow 10 working days for processing of security clearances. Employees will not be admitted to the Institution without a valid security clearance in place and a recent picture identification such as a provincial driver's license. Security clearances obtained from other CSC institutions are not valid at this institution except as approved otherwise.

.3 The Director may require that facial photographs may be taken of construction employees and these photographs may be displayed at appropriate locations in the institution or in an electronic database for identification purposes. The Director may require that Photo ID cards be provided for all construction workers. ID cards will then be left at the designated entrance to be picked upon arrival at the institution and shall be displayed prominently on the construction employees clothing at all time while employees are at the institution.

.4 Entry to Institutional Property will be refused to any person there may be reason to believe may be a security risk.

.5 Any person employed on the construction site will be subject to immediate removal from Institutional Property if they:

.1 appear to be under the influence of alcohol, drugs or narcotics.

.2 behave in an unusual or disorderly manner.

.3 are in possession of contraband.

**1.5 Vehicles**

.1 All unattended vehicles on CSC property must have windows closed; fuel caps locked, doors and trunks locked and keys removed. The keys must be securely in the possession of the owner or an employee of the company that owns the vehicle.

.2 The director may limit at any time the number and type of vehicles allowed within the Institution.

.3 Drivers of delivery vehicles for material required by the project will require security clearances and must remain with their vehicle the entire time that the vehicle is in the Institution. The director may require that these vehicles be escorted by Institutional staff or PSPC Construction Escorts while in the Institution.

.4 If the Director permits trailers to be left inside the secure perimeter of the Institution, the trailer doors must be locked at all times. All windows must be securely locked bars when left unoccupied. Cover all windows with expanded metal mesh. When not in use lock

all storage trailers located inside and outside the perimeter. All storage trailers inside and outside the perimeter must be locked when not in use.

### 1.6 Parking

.1 The parking area(s) to be used by construction employees will be designated by the Director. Parking in other locations will be prohibited and vehicles may be subject to removal.

### 1.7 Shipments

.1 To avoid confusion with the institution's own shipments, address all shipments of project material, equipment and tools in the Contractor's name and have a representative on site to receive any deliveries or shipments. CSC or PSPC staff will **NOT** accept receipt of deliveries or shipments of any material equipment or tools for the contractor.

### 1.8 Telephones

.1 The installation of telephones, facsimile machines and computers with Internet connections is not permitted within the Institution perimeter unless prior approved by the Director.

.2 The Director will ensure that approved telephones, facsimile machine and computers with Internet connections are located where they are not accessible to inmates. All computers will have an approved password protection that will stop an Internet connection to unauthorized personnel.

.3 Wireless cellular and digital telephones, including but not limited to devices for telephone messaging, pagers, Blackberries, PDAs, telephone used as 2-way radios are not permitted within the Institution unless approved by the Director. If wireless cellular telephones are permitted, the user will not permit their use by any inmate.

.4 The Director may approve but limit the use of 2-way radios.

### 1.9 Work Hours

.1 Work hours within the Institution are: conform to General Instructions Section 01 01 50.

.2 Work is not permitted during weekends and statutory holidays without the permission of the Director. A minimum of seven days advance notice will be required to obtain the required permission. In case of emergencies or other special circumstances, this advance notice may be waved by the Director.

### 1.10 Overtime Work

.1 Conform to Section 01 01 50.

.2 Provide 48 hours advance notice to Director for all work to be performed after normal working hours of the Institution. Notify Director immediately if emergency work is required, such as to complete a concrete pour or make the construction site safe and secure.

### 1.11 Tools and Equipment

.1 Maintain a complete list of all tools and equipment to be used during the construction project. Make this inventory available for inspection when required by the Institution.

.2 Throughout the construction project maintain up-to-date the list of tools and equipment specified above.

.3 Keep all tools and equipment under constant supervision, particularly power-driven and cartridge-driven tools, cartridges, files, saw blades, rod saws, wire, rope, ladders and any sort of jacking device.

.4 Store all tools and equipment in approved secure locations.

.5 Lock all tool boxes when not in use. Keys to remain in the possession of the employees of the contractor. Secure and lock scaffolding when not erected and when erected Secure in a manner agreed upon with the Institution designate.

.6 Report all missing or lost tools or equipment immediately to the Departmental Representative/Director.

.7 The Director will ensure that the security staff members carry out checks of the Contractor's tools and equipment against the list provided by the Contractor. These checks may be carried out at the following intervals:

.1 At the beginning and conclusion of every work day or shift upon entering and exiting the Institution.

.2 At any time when contractor is on Institution property.

.8 Certain tools/equipment such as cartridges and hacksaw blades are highly controlled items. The contractor will be given at the beginning of the day, a quantity that will permit one day's work. Used blades/cartridges will be returned to the Director's representative at the end of each day. Maintain up to date inventory of all used blades/cartridges.

.9 If propane or natural gas is used for heating the construction, the institution will require that the contractor supervise the construction site during non-working hours.

**1.12 Keys**

.1 Use standard construction cylinders for locks for his use during the construction period.

.2 Issue instructions to employees and sub-trades, as necessary, to ensure safe custody of the construction set of keys.

**1.13 Security Hardware**

.1 Turn over all removed security hardware to the Director of the Institution for disposal or for safekeeping until required for re-installation.

**1.14 Prescription Drugs**

.1 Employees of the contractor who are required to take prescription drugs during the workday shall obtain approval of the Director to bring a one day supply only into the Institution.

**1.15 Smoking Restrictions**

.1 Smoking is not permitted inside correctional facilities or outdoors within the perimeter of a correctional facility and persons must not possess unauthorized smoking items within the perimeter of a correctional facility.

.2 Persons in violation of this policy will be requested to immediately cease smoking or dispose of any unauthorized smoking items and, if they persist will be directed to leave the Institution.

.3 Smoking is permitted outside the perimeter of a correctional facility in an area designated by the Director.

**1.16 Contraband**

.1 Weapons, ammunition, explosives, alcoholic beverages, drugs and narcotics are prohibited on institutional property.

.2 The discovery of contraband on the construction site and the identification of the person(s) responsible for the contraband shall be reported immediately to the Director.

.3 Contractors should be vigilant with both their staff and the staff of their sub-contractors and suppliers that the discovery of contraband may result in cancellation of the security clearance of the affected employee. Serious infractions may result in the removal of the company from the Institution for the duration of the construction.

.4 Presence of arms and ammunition in vehicles of contractors, sub-contractors and suppliers or employees of these will result in the immediate cancellation of security clearances for the driver of the vehicle.

**1.17 Searches**

.1 All vehicles and persons entering institutional property may be subject to search.

.2 When the Director suspects, on reasonable grounds, that an employee of the Contractor is in possession of contraband, he may order that person to be searched.

.3 All employees entering the Institution may be subject to screening of personal effects for traces of contraband drug residue.

**1.18 Access and Removal from Institution Property**

.1 Construction personnel and commercial vehicles will not be admitted to the institution after normal working hours, unless approved by the Director.

**1.19 Movement Vehicles**

.1 Construction vehicles are not to leave the Institution until an inmate count is completed. Escorted commercial vehicles will be allowed to enter or leave the institution through the vehicle access gate during the following hours:

.1 AM: 0745 hrs. to 1100 hrs.

.2 PM: 1300hrs. to 1530 hrs.

.2 The contractor will advise the Director twenty four (24) hours in advance to the arrival on the site of heavy equipment such as concrete trucks, cranes, etc.

.3 Vehicles being loaded with soil or other debris, or any vehicle considered impossible to search, must be under continuous supervision by CSC staff or PSPC construction escorts working under the authority of the Director.

.4 Commercial vehicles will only be allowed access to institutional property when their contents are certified by the Contractor or his representative as being strictly necessary to the execution of the construction project.

.5 Vehicles will be refused access to institutional property if, in the opinion of the Director, they contain any article which may jeopardize the security of the institution. Arrange with Director for parking of contractor's vehicles at minimum security Institutions.

.6 Private vehicles of construction employees will not be allowed within the security wall or fence of medium or maximum security institutions without the authorization of the Director.

.7 With the approval of the Director, certain equipment may be permitted to remain on the construction site overnight or over the weekend. This equipment must be securely locked, with the battery removed. The Director may require that the equipment be secured with a chain and padlock to another solid object.

**1.20 Movement of Construction Employees on Institutional Property**

.1 Subject to the requirements of good security, the Director will permit the Contractor and his employees as much freedom of action and movement as is possible.

.2 However, notwithstanding paragraph above, the Director may:

.1 Prohibit or restrict access to any part of the institution.

.2 Require that in certain areas of the institution, either during the entire construction project or at certain intervals, construction employees only be allowed access when accompanied by a member of the CSC security staff or PSPC Construction Escort Officer.

.3 During the lunch and coffee/health breaks, all construction employees will remain within the construction site. Construction employees are not permitted to eat in the Institution cafeteria and dining room.

**1.21 Surveillance and Inspection**

.1 Construction activities and all related movement of personnel and vehicles will be subject to surveillance and inspection by CSC security staff members to ensure that established security requirements are met.

.2 CSC staff members will ensure that an understanding of the need to carry out surveillance and inspections, as specified above, is established among construction employees and maintained throughout the construction project.

**1.22 Stoppage of Work**

.1 The director may request at any time that the contractor, his employees, sub-contractors and their employees not enter or leave the work site immediately due to a security situation occurring within the Institution. The contractor's site supervisor will note the name of the staff member giving the instruction, the time of the request and obey the order as quickly as possible.

.2 The contractor shall advise the Departmental Representative of this interruption of the work within 24 hours.

**1.23 Contact with Inmates**

.1 Unless specifically authorized, it is forbidden to come into contact with inmates, to talk with them, to receive objects from them or to give them objects. Any employee doing any of the above will be removed from the site and his security clearance revoked.

.2 Digital cameras (or any other type) are not allowed on CSC property.

.3 Notwithstanding the above paragraph, if the director approves of the use of cameras, it is strictly forbidden to take pictures of inmates, of CSC staff members or of any part of the Institution other than those required as part of this contract.

## 1.24 Completion of Construction Project

.1 Upon completion of the construction project or, when applicable, the takeover of a facility, the Contractor shall remove all remaining construction material, tools and equipment that are not specified to remain in the Institution as part of the construction contract.

**END OF SECTION**

## PART 1 - GENERAL

### 1.1 References

.1 Government of Canada.

.1 Canada Labour Code - Part II

.2 Canada Occupational Health and Safety Regulations.

.2 National Building Code of Canada (NBC 2015):

.1 Part 8, Safety Measures at Construction and Demolition Sites.

.3 The Canadian Electric Code (as amended)

.4 Canadian Standards Association (CSA) as amended:

.1 CSA Z797-2009 Code of Practice for Access Scaffold

.2 CSA S269.1-1975 (R2003) Falsework for Construction Purposes

.3 CSA S350-M1980 (R2003) Code of Practice for Safety in Demolition of Structures

.4 CSA Z1006-10 Management of Work in Confined Spaces.

.5 CSA Z462- Workplace Electrical Safety Standard

.5 National Fire Code of Canada 2015 (as amended)

.1 Part 5 – Hazardous Processes and Operations and Division B as applicable and required.

.6 American National Standards Institute (ANSI):

.1 ANSI A10.3, Operations – Safety Requirements for Powder-Actuated Fastening Systems.

.7 Province of British Columbia:

.1 Workers Compensation Act Part 3-Occupational Health and Safety.

.2 Occupational Health and Safety Regulation

### 1.2 Related Sections

.1 Refer to the following current NMS sections as required:

.1 Section 01 01 50 General Instructions

.2 Section 02 81 01 Hazardous Materials and Abatement

### 1.3 Workers' Compensation Board Coverage

.1 Comply fully with the Workers' Compensation Act, regulations and orders made pursuant thereto, and any amendments up to the completion of the work.

.2 Maintain Workers' Compensation Board coverage during the term of the Contract, until and including the date that the Certificate of Final Completion is issued.

## 1.4 Compliance with Regulations

.1 PSPC may terminate the Contract without liability to PSPC where the Contractor, in the opinion of PSPC, refuses to comply with a requirement of the Workers' Compensation Act or the Occupational Health and Safety Regulations.

.2 It is the Contractor's responsibility to ensure that all workers are qualified, competent and certified to perform the work as required by the Workers' Compensation Act or the Occupational Health and Safety Regulations.

## 1.5 Submittals

.1 Submit to Departmental Representative submittals listed for review in accordance with Section 01 01 50.

.2 Work effected by submittal shall not proceed until review is complete.

.3 Submit the following:

.1 Health and Safety Plan.

.2 Copies of reports or directions issued by Federal and Provincial health and safety inspectors.

.3 Copies of incident and accident reports.

.4 Complete set of Material Safety Data Sheets (MSDS), and all other documentation required by Workplace Hazardous Materials Information System (WHMIS) requirements.

.5 Emergency Procedures.

.4 The Departmental Representative will review the Contractor's site-specific project Health and Safety Plan and emergency procedures, and provide comments to the Contractor within 10 days after receipt of the plan. Revise the plan as appropriate and resubmit to Departmental Representative.

.5 Medical surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of work, and submit additional certifications for any new site personnel to Departmental Representative.

.6 Submission of the Health and Safety Plan, and any revised version, to the Departmental Representative is for information and reference purposes only. It shall not:

.1 Be construed to imply approval by the Departmental Representative.

.2 Be interpreted as a warranty of being complete, accurate and legislatively compliant.

.3 Relieve the Contractor of his legal obligations for the provision of health and safety on the project.

## 1.6 Responsibility

.1 Assume responsibility as the Prime Contractor for work under this contract.

.2 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.

.3 Comply with and enforce compliance by employees with safety requirements of Contract documents, applicable Federal, Provincial, Territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

**1.7 Health and Safety Coordinator**

.1 The Health and Safety Coordinator (Registered Occupational Hygienist, Certified Industrial Specified Hygienist) must:

.1 Be responsible for completing all health and safety training, and ensuring that personnel that do not successfully complete the required training are not permitted to enter the site to perform work.

.2 Be responsible for implementing, daily enforcing, and monitoring the site specific Health and Safety Plan.

.3 Be on site during execution of work.

**1.8 General Conditions**

.1 Provide safety barricades and lights around work site as required to provide a safe working environment for workers and protection for pedestrian and vehicular traffic.

.2 Ensure that non-authorized persons are not allowed to circulate in designated construction areas of the work site.

.1 Provide appropriate means by use of barricades, fences, warning signs, traffic control personnel, and temporary lighting as required.

.2 Secure site at night time or provide security guard as deemed necessary to protect site against entry.

**1.9 Project/Site Conditions**

.1 Work at site will involve contact with:

.1 Multi-employer work site.

.2 Federal employees and general public.

.3 Energized electrical services.

.4 Working from heights

.5 Persons incarcerated in the federal institutional system

.6 Hazard Assessment Reports (Appendix A) and Hazardous material abatement per specification section 02 81 01.

.7 PSPC Pre-Construction Hazard Assessment Form (Appendix B).

**1.10 Utility Clearances**

.1 The Contractor is solely responsible for all utility detection and clearances prior to starting the work.

.2 The Contractor will not rely solely upon the Reference Drawings or other information provided for utility locations.

### 1.11 Regulatory Requirements

.1 Comply with specified codes, acts, bylaws, standards and regulations to ensure safe operations at site.

.2 In event of conflict between any provision of the above authorities, the most stringent provision will apply. When a dispute arise in determining the most stringent requirement, the Departmental Representative will advise on the course of action to be followed.

### 1.12 Work Permits

.1 Obtain specialty permit related to project before start of work.

### 1.13 Filing of Notice

.1 The General Contractor is to complete and submit a Notice of Project as required by Provincial authorities.

.2 Provide copies of all notices to the Departmental Representative.

### 1.14 Site Specific Health and Safety Plan

.1 Conduct a site-specific hazard assessment based on review of Contract documents, required work, and project site. Identify any known and potential health risks and safety hazards.

.2 Prepare and comply with a Site-Specific Health and Safety Plan based on hazard assessment, including, but not limited to, the following:

.1 Primary requirements:

.1 Contractor's safety policy.

.2 Identification of applicable compliance obligations.

.3 Definition of responsibilities for project safety/organization chart for project.

.4 General safety rules for project.

.5 Job-specific safe work, procedures.

.6 Inspection policy and procedures.

.7 Incident reporting and investigation policy and procedures.

.8 Occupational Health and Safety Committee/Representative procedures.

.9 Occupational Health and Safety meetings.

.10 Occupational Health and Safety communications and record keeping procedures.

.2 Summary of health risks and safety hazards resulting from analysis of hazard assessment, with respect to site tasks and operations which must be performed as part of the work.

.3 List hazardous materials to be brought on site as required by work.

.4 Indicate Engineering and administrative control measures to be implemented at the site for managing identified risks and hazards.

.5 Identify personal protective equipment (PPE) to be used by workers.

.6 Identify personnel and alternates responsible for site safety and health.

.7 Identify personnel training requirements and training plan, including site orientation for new workers.

.3 Develop the plan in collaboration with all subcontractors. Ensure that work/activities of subcontractors are included in the hazard assessment and are reflected in the plan.

.4 Revise and update Health and Safety Plan as required, and re-submit to the Departmental Representative.

.5 Departmental Representative's review: the review of Health and Safety Plan by Public Services and Procurement Canada (PSPC) shall not relieve the Contractor of responsibility for errors or omissions in final Health and Safety Plan or of responsibility for meeting all requirements of construction and Contract documents.

**1.15 Emergency Procedures**

.1 List standard operating procedures and measures to be taken in emergency situations. Include an evacuation plan and emergency contacts (i.e. names/telephone numbers) of:

.1 Designated personnel from own company.

.2 Regulatory agencies applicable to work and as per legislated regulations.

.3 Local emergency resources.

.4 Departmental Representative.

.2 Include the following provisions in the emergency procedures:

.1 Notify workers and the first-aid attendant, of the nature and location of the emergency.

.2 Evacuate all workers safely.

.3 Check and confirm the safe evacuation of all workers.

.4 Notify the fire department or other emergency responders.

.5 Notify adjacent workplaces or residences which may be affected if the risk extends beyond the workplace.

.6 Notify Departmental Representative.

.3 Provide written rescue/evacuation procedures as required for, but not limited to:

.1 Work at high angles.

.2 Work in confined spaces or where there is a risk of entrapment.

.3 Work with hazardous substances.

.4 Underground work.

.5 Work on, over, under and adjacent to water.

.6 Workplaces where there are persons who require physical assistance to be moved.

.4 Design and mark emergency exit routes to provide quick and unimpeded exit.

.5 Revise and update emergency procedures as required, and re-submit to the Departmental Representative.

**1.16 Hazardous Products**

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials, and regarding labeling and provision of Material Safety Data Sheets (MSDS) acceptable to the Departmental Representative and in accordance with the Canada Labour Code.

.2 Where use of hazardous and toxic products cannot be avoided:

.1 Advise Departmental Representative beforehand of the product(s) intended for use. Submit applicable MSDS and WHMIS documents as per Section 01 01 50.

.2 In conjunction with Departmental Representative, schedule to carry out work during "off hours" when tenants have left the building.

.3 Provide adequate means of ventilation for flooring installation.

.4 The contractor shall ensure that the product is applied as per manufacturers recommendations.

.5 The contractor shall ensure that only pre-approved products are brought onto the work site in an adequate quantity to complete the work.

**1.17 Asbestos Hazard**

.1 Carry out any activities involving asbestos in accordance with applicable Provincial Regulations.

.2 Removal and handling of asbestos will be performed as indicated in Division 2 specification, section 02 81 01.

**1.18 PCB Removals**

.1 Mercury-containing fluorescent tubes and ballasts which contain polychlorinated biphenyls (PCBs) are classified as hazardous waste.

.2 Remove, handle, transport and dispose of as indicated in Division 2 specification, section 02 81 01.

**1.19 Removal of Lead-Containing Paint**

.1 All paints containing TCLP lead concentrations above 5 ppm are classified as hazardous.

.2 Carry out demolition activities involving lead-containing paints in accordance with applicable provincial regulations and section 02 81 01.

.3 Work with lead containing paints shall be completed as per provincial and federal regulations.

**1.20 Electrical Safety Requirements**

.1 Comply with authorities and ensure that, when installing new facilities or modifying existing facilities, all electrical personnel are completely familiar with existing and new electrical circuits and equipment and their operation.

.1 Before undertaking any work, coordinate required energizing and de-energizing of new and existing circuits with Departmental Representative.

.2 Maintain electrical safety procedures and take necessary precautions to ensure safety of all personnel working under this Contract, as well as safety of other personnel on site.

**1.21 Electrical Lockout**

.1 Develop, implement and enforce use of established procedures to provide electrical lockout and to ensure the health and safety of workers for every event where work must be done on any electrical circuit or facility.

.2 Prepare the lockout procedures in writing, listing step-by-step processes to be followed by workers, including how to prepare and issue the request/authorization form. Have procedures available for review upon request by the Departmental Representative.

.3 Keep the documents and lockout tags at the site and list in a log book for the full duration of the Contract. Upon request, make such data available for viewing by Departmental Representative or by any authorized safety representative.

**1.22 Overloading**

.1 Ensure no part of work is subjected to a load which will endanger its safety or will cause permanent deformation.

**1.23 Falsework**

.1 Design and construct falsework in accordance with CSA S269.1-1975 (R2003).

**1.24 Scaffolding**

.1 Design, construct and maintain scaffolding in a rigid, secure and safe manner, in accordance with CSA Z797-2009 Code of Practice for Access Scaffold and BC Occupational Health and Safety Regulations.

**1.25 Confined Spaces**

.1 Carry out work in confined spaces in compliance with Provincial regulations.

**1.26 Power-Actuated Devices**

.1 Use powder-actuated devices in accordance with ANSI A10.3 only after receipt of written permission from the Departmental Representative.

**1.27 Fire Safety and Hot Work**

.1 Obtain Departmental Representative's authorization before any welding, cutting or any other hot work operations can be carried out on site.

.2 Hot work includes cutting/melting with use of torch, flame heating roofing kettles, or other open flame devices and grinding with equipment which produces sparks.

**1.28 Fire Safety Requirements**

.1 Store oily/paint-soaked rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.

.2 Handle, store, use and dispose of flammable and combustible materials in accordance with the National Fire Code of Canada.

.3 Portable gas and diesel fuel tanks are not permitted on most federal work sites. Approval from the Departmental Representative is required prior to any gas or diesel tank being brought onto the work site.

**1.29 Fire Protection and Alarm System**

.1 Fire protection and alarm systems shall not be:

.1 Obstructed.

.2 Shut off.

.3 Left inactive at the end of a working day or shift.

.2 Do not use fire hydrants, standpipes and hose systems for purposes other than firefighting.

.3 Be responsible/liable for costs incurred from the fire department, the building owner and the tenants, resulting from false alarms.

**1.30 Unforeseen Hazards**

.1 Should any unforeseen or peculiar safety-related factor, hazard or condition become evident during performance of the work, immediately stop work and advise the Departmental Representative verbally and in writing.

**1.31 Posted Documents**

.1 Post legible versions of the following documents on site:

.1 Health and Safety Plan.

.2 Sequence of work.

.3 Emergency procedures.

.4 Site drawing showing project layout, locations of the first-aid station, evacuation route and marshalling station, and the emergency transportation provisions.

.5 Notice of Project.

.6 Floor plans or site plans. Must be posted in a non-inmate access are and locked up when not being used.

.7 Notice as to where a copy of the Workers' Compensation Act and Regulations are available on the work site for review by employees and workers.

.8 Workplace Hazardous Materials Information System (WHMIS) documents.

.9 Material Safety Data Sheets (MSDS).

.10 List of names of Joint Health and Safety Committee members, or Health and Safety Representative, as applicable.

.2 Post all Material Safety Data Sheets (MSDS) on site, in a common area, visible to all workers and in locations accessible to tenants when work of this Contract includes construction activities adjacent to occupied areas.

.3 Postings should be protected from the weather, and visible from the street or the exterior of the principal construction site shelter provided for workers and equipment, or as approved by the Departmental Representative.

**1.32 Meetings**

.1 Attend health and safety pre-construction meeting and all subsequent meetings called by the Departmental Representative.

**1.33 Correction of Non-Compliance**

.1 Immediately address health and safety non-compliance issues identified by the Departmental Representative.

.2 Provide Departmental Representative with written report of action taken to correct non-compliance with health and safety issues identified.

.3 The Departmental Representative may issue a "stop work order" if non-compliance of health and safety regulations is not corrected immediately or within posted time. The General Contractor/subcontractors will be responsible for any costs arising from such a "stop work order".

## PART 2 - PRODUCTS

**2.1 Not Used**

## PART 3 - EXECUTION

**3.1 Not Used**

**END OF SECTION**

## PART 1 GENERAL

### 1.1 Related Sections

| | | |
|---|---|---|
| .1 | Section 01 01 50 | General Instructions |
| .2 | Section 01 35 33 | Health and Safety Requirements |
| .3 | Section 02 81 01 | Hazardous Materials and Abatement |

### 1.2 References

.1 Canadian Standards Association (CSA International)

.1 CSA S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.

.2 WorksafeBC

.1 Safe Handling of Asbestos, A Manual of Standard Practices.

### 1.3 Health and Safety

.1 Do construction occupational health and safety in accordance with Section 01 35 33 - Health and Safety Requirements.

### 1.4 Waste Management and Disposal

.1 Separate waste materials for reuse and recycling in accordance with 01 01 50 – General Instructions.

.2 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.3 Place materials defined as hazardous or toxic in designated containers.

.4 Handle and dispose of hazardous materials in accordance with CEPA, TDGA, Regional and Municipal regulations.

.5 Collect and separate plastic, paper packaging and corrugated cardboard in accordance with Waste Management Plan

.6 Fold up metal banding, flatten and place in designated area for recycling.

.7 Do not dispose of waste or volatile materials such as mineral spirits, oil petroleum based lubricant, or toxic cleaning solutions into storm or sanitary sewers. Ensure proper disposal procedures are maintained throughout project.

### 1.5 Environmental Protection

.1 Do not dispose of waste or volatile materials into watercourses, storm or sanitary sewers.

.2 Prevent extraneous materials from contaminating air beyond deconstruction area, by providing temporary enclosures during Work.

.3 Employ reasonable means necessary to protect salvaged materials from vandalism, theft, adverse weather, or inadvertent damage.

.4 Organize site and workers in matter which promotes efficient flow of materials through disassembly, processing, stockpiling, and removal.

.5 Remove and transport toxic or dangerous materials from site in accordance with authority having jurisdiction.

.6 Follow air monitoring requirements detailed in section 02 81 01.

### 1.5 Site Condition

.1 The existing site and buildings will be in use by Institution during work of this Contract. Maintain building access at all doorways and corridors.

.2 Investigate site and building to determine dismantling, processing and storage logistics required prior to beginning of Work.

.3 Develop strategy for deconstruction to facilitate optimum salvage of reusable and recyclable materials.

.4 Notify Departmental Representative before disrupting building access or services.

.5 Locate any existing conduit, rebar, etc. within floor or walls prior to drilling and/or coring. Contractor is responsible for repairing any such conduit, rebar, etc. that is damaged in the course of construction.

.6 Take preventative measures during demolition process and do not disturb pipe elbow insulation, duct mastic or other suspicious substance which may contain hazardous materials. Exercise caution when cutting existing duct insulation.

### 1.6 Hazardous Materials

.1 Refer hazardous material disposal and abatement to specification section 02 81 00, Hazardous Materials and Abatement.

## PART 2 PRODUCTS

### 2.1 Not Used

.1 Not used.

## PART 3 EXECUTION

### 3.1 Preparation

.1 Inspect site and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain.

.2 Locate and protect utilities. Preserve active utilities traversing site in operating condition.

.3 Notify and obtain approval of utility companies before starting demolition.

### 3.2 Protection

.1 Prevent movement, settlement, or damage to adjacent structures, utilities and parts of building to remain in place. Provide bracing and shoring required.

.2 Keep noise, dust, and inconvenience to occupants to minimum.

.3 Protect building systems, services and equipment.

.4 Provide temporary dust screens, covers, railings, supports and other protection as required.

.5 Do Work in accordance with Section 01 35 33 - Health and Safety Requirements.

.6 Prevent debris from blocking drainage which must remain in operation.

.7 Take precaution during demolition to protect all adjacent finished surfaces. Make good any damage to adjacent surfaces.

**3.3 Salvage**

.1 Refer to demolition drawings and specifications for items to be salvaged for reuse.

.2 Remove items to be reused and protect items from damage.

**3.4 Disposal**

.1 Dispose of removed materials, to appropriate recycling facilities except where specified otherwise, in accordance with authority having jurisdiction.

.2 The Owner reserves the option to request some or all existing equipment being removed and not required to be relocated to remain the property of the Owner. When directed by the Departmental Representative, remove such equipment and turn over to the Owner. Provide receipt verifying disposition of such equipment.

**END OF SECTION**

## Part 1 General

### 1.1 SUMMARY

.1 Comply with requirements of this Section when performing the following work:

.1 Removal and re-instatement of blue-painted baseboards.

.2 Removal of vinyl floor tiles, ceramic floor tiles and grout, and provide air monitoring for silica.

.3 Application of new MMA flooring and air monitoring for Total Volatile Organic Compounds (TVOCs).

.4 The Work consists of the removal and re-installation of all blue-painted baseboards in Room 121. The Work also consists of the removal of all non-asbestos-containing vinyl floor tiles, ceramic floor tiles and grout in Rooms 101, 102, 103, 104 and 121.

### 1.2 RELATED REQUIREMENTS

.1 Section 01 33 00 – Submittal Procedures

.2 Section 01 35 29.06 – Health and Safety Requirements

.3 Section 02 41 00.08 – Demolition for Minor Work.

.4 Section 09 91 00.08 – Painting for Minor Work.

### 1.3 REFERENCES

.1 Reports:

.1 HAZMAT ASSESSMENT REPORT REFERENCES (further referred to herein as the Assessment Report) – attached in the Appendix of the Project Specifications.

.2 Arcadis Report entitled *Hazardous Materials Assessment – Mission Medium Institution – Administration Building Kitchen (Unit A-K) – 8751 Stave Lake Street, Mission, British Columbia*, dated October 1, 2018.

.3 Stantec Report entitled *Hazardous Building Materials Assessment Appendix 5.1 Findings and Recommendations – Building A – Administration (849-14-RP)*, dated May 2017.

.2 Definitions:

.1 Dangerous Goods: product, substance, or organism specifically listed or meets hazard criteria established in Transportation of Dangerous Goods Regulations.

.2 Hazardous Material: product, substance, or organism used for its original purpose; and is either dangerous goods material that will cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into the environment.

.3 Hazardous waste: hazardous material no longer used for its original purpose and that is intended for recycling, treatment or disposal.

.4 Hazardous Building Material: component of a building or structure that will cause adverse impact to environment or adversely affect health of persons, animals, or plant life when altered, disturbed or removed during maintenance, renovation or demolition.

.5 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with a filter system capable of collecting and retaining fibres greater than 0.3 microns in any direction at 99.97% efficiency.

.6 Airlock: system for permitting ingress or egress without permitting air movement between work area and adjacent areas.

.7 Curtained doorway: arrangement of closures to allow ingress and egress from one room to another while permitting minimal air movement between rooms, typically constructed as:

.1 Place two overlapping sheets of polyethylene over existing or temporarily framed doorway, secure each along top of doorway, secure vertical edge of one sheet along one vertical side of doorway, and secure vertical edge of other sheet along opposite vertical side of doorway.

.2 Reinforce free edges pf polyethylene with duct tape and weight bottom edge to ensure proper closing.

.3 Overlap each polyethylene sheet at openings not less than 1.5m on each side.

.8 DOP test: testing method used to determine integrity of Negative Pressure unit using dioctyl phthalate (DOP) or other test agent HEPA-filter leak test,

.9 Negative pressure: system that extracts air directly from work area, filters such extracted air through High Efficiency Particulate Air filtering system, and discharges air directly outside work area to exterior of building.

.10 Differential Pressure Recorder: Instrument to monitor and record the differential pressure between the Work Area and Clean Areas.

.1 Sensitivity: 0.025 mm (0.001 inches) WC increments between +0.25 mm to -0.25 mm (+0.010 to 0.100 inches) WC.

.2 Accuracy: +/- 1%.

.3 Pressure alarms: audible high and low level alarm programmable within operating range.

.4 Printout: minimum 24 hr period at 15 minute intervals.

.11 Authorized Visitors: Departmental Representative or designated representative.

.12 Departmental Representative: an organization or individual retained by the Client to aid in project oversight on the Client's behalf, receive and review project submittals and conduct activities as described below.

.13 Polyethylene: polyethylene sheeting or rip-proof polyethylene sheeting with tape along edges, around penetrating objects over cuts and tears, and elsewhere as required to provide protection and isolation.

## 1.4 REFERENCE STANDARDS

.1 Canadian Environmental Protection Act,1999 (CEPA 1999)

.1 Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149).

.2 Department of Justice Canada

.1 Transportation of Dangerous Goods Act, 1992 (TDG Act) [1992], (c. 34).

.2 Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286).

.3 Health Canada / Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.4 National Research Council Canada Institute for Research in Construction (NRC-IRC)

.1 National Fire Code of Canada (2010).

.5 WorkSafe BC

.1 British Columbia's Occupational Health and Safety Regulation (BC Reg. 296/97, including amendments to date of work).

.2 Developing a Silica Exposure Control Plan.

.3 Lead-Containing Paints and Coatings, Preventing Exposure in the Construction Industry (2011).

.6 British Columbia Hazardous Waste Regulation (BC Reg. 63/88).

## 1.5 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 01 50 - Submittal Procedures.

.2 Product Data for hazardous materials to be used by the Contractor to complete the Work:

.1 Submit manufacturer's instructions, printed product literature and data sheets, and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Submit two copies of WHMIS MSDS in accordance with Section 01 35 33 - Health and Safety Requirements to Departmental Representative for each hazardous material required prior to bringing hazardous material on site.

.3 Submit site specific Exposure Control Plans (ECPs), including, but not limited to, silica and MMA/TVOCs, to Departmental Representative that identifies hazardous materials, usage, location, personal protective equipment requirements, and disposal arrangements. The ECPs must include all measures for the control of airborne dust and silica during the removal of the flooring, and the control of vapours/odours during the application of the MMA flooring.

.4 Construction/Demolition Waste Management:

.1 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating percentage of construction/demolition wastes were recycled or salvaged

.5 Low-Emitting Materials: submit listing of adhesives and sealants used in building, comply with VOC and chemical component limits or restrictions requirements.

.6 Provide proof of Contractor's General and Environmental Liability Insurance.

## 1.6 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle hazardous materials to be used by the Contractor to complete the Work in accordance with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver hazardous materials to be used by the Contractor to site in original factory packaging, labelled with manufacturer's name and address.

.3 Transport hazardous materials and wastes in accordance with Transportation of Dangerous Goods Act, Transportation of Dangerous Goods Regulations, and applicable provincial regulations.

.4 Storage and Handling Requirements:

.1 Co-ordinate storage of hazardous materials to be used by the Contractor to complete the Work with Departmental Representative and abide by internal requirements for labelling and storage of materials and wastes.

.2 Store and handle hazardous materials and wastes in accordance with applicable federal and provincial laws, regulations, codes, and guidelines.

.3 Store and handle flammable and combustible materials in accordance with National Fire Code of Canada requirements.

.4 Keep no more than 45 litres of flammable and combustible liquids such as gasoline, kerosene and naphtha for ready use.

.1 Store flammable and combustible liquids in approved safety cans bearing the Underwriters' Laboratory of Canada or Factory Mutual seal of approval.

.2 Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes requires the written approval of the Departmental Representative.

.5 Transfer of flammable and combustible liquids is prohibited within buildings.

.6 Transfer flammable and combustible liquids away from open flames or heat-producing devices.

.7 Solvents or cleaning agents must be non-flammable or have flash point above 38 degrees C.

.8 Store flammable and combustible waste liquids for disposal in approved containers located in safe, ventilated area. Keep quantities to minimum.

.9 Observe smoking regulations, smoking is prohibited in areas where hazardous materials are stored, used, or handled.

.10 Storage requirements for quantities of hazardous materials and wastes in excess of 5 kg for solids, and 5 litres for liquids:

.1 Store hazardous materials and wastes in closed and sealed containers.

.2 Label containers of hazardous materials and wastes in accordance with WHMIS.

.3 Store hazardous materials and wastes in containers compatible with that material or waste.

.4 Segregate incompatible materials and wastes.

.5 Ensure that different hazardous materials or hazardous wastes are stored in separate containers.

.6 Store hazardous materials and wastes in secure storage area with controlled access.

.7 Maintain clear egress from storage area.

.8 Store hazardous materials and wastes in location that will prevent them from spilling into environment.

.9 Have appropriate emergency spill response equipment available near storage area, including personal protective equipment.

.10 Maintain inventory of hazardous materials and wastes, including product name, quantity, and date when storage began.

.11 When hazardous waste is generated on site:

.1 Co-ordinate transportation and disposal with Departmental Representative.

.2 Comply with applicable federal, provincial and municipal laws and regulations for generators of hazardous waste.

.3 Use licensed carrier authorized by provincial authorities to accept subject material.

.4 Before shipping material obtain written notice from intended hazardous waste treatment or disposal facility it will accept material and it is licensed to accept this material.

.5 Label containers with legible, visible safety marks as prescribed by federal and provincial regulations.

.6 Only trained personnel handle, offer for transport, or transport dangerous goods.

.7 Provide photocopy of shipping documents and waste manifests to Departmental Representative.

.8 Track receipt of completed manifest from consignee after shipping dangerous goods. Provide photocopy of completed manifest to Departmental Representative.

.9 Report discharge, emission, or escape of hazardous materials immediately to Departmental Representative and appropriate provincial authority. Take reasonable measures to control release.

.12 Ensure personnel have been trained in accordance with Workplace Hazardous Materials Information System (WHMIS) requirements.

.13 Report spills or accidents immediately to Departmental Representative. Submit a written spill report to Departmental Representative within 24 hours of incident.

**1.7 PERSONNEL TRAINING**

.1 Provide Departmental Representative satisfactory proof that every worker has had instruction and training in hazards of silica exposure, in personal hygiene, in aspects of work procedures, and in use, cleaning, and disposal of respirators.

.2 Instruction and training related to respirators includes, as a minimum:

.1 Proper fitting of equipment.

.2 Inspection and maintenance of equipment.

.3 Disinfecting of equipment.

.4 Limitations of equipment.

.3 Instruction and training must be provided by competent, qualified person.

.4 Supervisory personnel to complete required training.

## Part 2 Products

**2.1 MATERIALS**

.1 Description:

.1 The Contractor shall provide all equipment and materials necessary to complete the work as outlined in this section.

.2 All equipment used shall be maintained in good condition and suitable for the task.

.3 Electrical equipment shall be CSA approved and properly grounded using ground fault panels.

.4 Provide product data and MSDS' for any chemical products proposed for use to the Departmental Representative for review and approval.

## Part 3 Execution

### 3.1 HAZARDOUS MATERIALS ABATEMENT

.1 Scope of Abatement Activities.

.1 Abatement shall be conducted to handle, alter, remove and/or dispose of hazardous building materials as identified in the Assessment Reports in accordance with applicable regulations, guidelines, standards and/or best practices for such work, where such identified hazardous building materials will be impacted (handled, altered, damaged, removed) by the Work.

.2 Contractor is responsible for reviewing plans, specifications and reports such that they understand the locations and amounts of hazardous materials that will be impacted by the Work of this contract, and such that appropriate plans and budgets can be included in their overall bids.

.3 For preparation of the Work Area:

.1 Remove and store items to be salvaged or reused.

.2 Protect and wrap items and transport to an area specified by the Departmental Representative.

.4 Work Area:

.1 Shut off and isolate HVAC system to prevent dust dispersal into other building areas. Conduct smoke tests to ensure duct work is airtight.

.2 Pre-clean fixed casework and equipment within Work Area, using HEPA vacuum and cover and seal with polyethylene sheeting and tape.

.3 Seal off openings with polyethylene sheeting and seal with tape.

.4 Protect all surfaces with polyethylene sheets.

.5 Install HEPA filter/fan units and establish negative pressure differential. All filter/fan units are to be exhausted directly outdoors.

.6 All electrical equipment must be intrinsically safe that does not present a fire or explosion hazard when used in an environment containing airborne VOC vapours.

.7 Maintain emergency fire exits or establish alternatives satisfactory to Authority having jurisdiction.

.8 Provide electrical power and shut off for operation of powered tools and equipment. Provide 24 volt safety lighting and ground fault interrupter circuits on power source for electrical tools, in accordance with CSA Standard.

.5 Do not start any work until:

.1 Arrangements have been made for disposal of waste.

.2 Tools, equipment, and materials waste containers are on site.

.3 Notifications have been completed and preparatory steps have been taken.

.4 The Departmental Representative has reviewed the Work Area enclosure and provided approval to proceed.

.6 The listing below is a summary of the identified hazardous building material categories and associated removal and disposal regulations, guidelines and/or standards.

.1 Lead-Containing Paints (LCPs)

.1 Lead has been identified in the blue paint applied to the baseboards, and in the white column and wall paint. It is not anticipated that the white wall and column paint will be disturbed.

.2 The Contractor shall carefully remove all sections of blue baseboard, intact, and temporarily store at a pre-determined location. When all work has been completed (removal of flooring and installation of new flooring), the baseboards are to be re-instated in their original locations.

.2 Silica

.1 Silica is assumed to be present in vinyl floor tiles, ceramic floor tiles and grout.

.2 The Contractor shall prepare and submit a silica ECP to the Departmental Representative for review and approval.

.3 The Contractor shall carefully remove all vinyl floor tiles, ceramic floor tiles and grout and place directly into appropriate containers for disposal. The vinyl floor tiles and underlying mastic do **not** contain asbestos.

.4 Ensure dust control measures are employed such that airborne silica dust concentrations do not exceed the exposure limit as stipulated by BC Reg. 296/97 (Cristobalite and Quartz – each 0.025 $mg/m^3$). This would include, but not be limited to, the following:

.1 Providing workers with respiratory protection

.2 Wetting the surface of the materials, use of water or dust suppressing agents to prevent dust emissions

.3 Providing workers with facilities to properly wash prior to exiting the work area.

.3 Inspection

.1 Perform inspection to confirm compliance with specification. Deviations from these requirements not approved in writing by Departmental Representative will result in work stoppage, at no cost to the Owner.

.2 Departmental Representative will inspect work for:

.1 Adherence to specific procedures and materials.

.2 Final cleanliness and completion.

.3 No additional costs will be allowed by the Contractor for additional labour or materials required to provide specified performance level.

.4 Silica Air Sampling – Work Area

.1 Silica air sampling will be conducted during the removal of the flooring as follows:

.1 Contractor to retain a third party company to conduct air monitoring for silica. Background samples will be collected prior to the start of the silica construction activities. The samples will be submitted to an approved laboratory for silica analysis. Daily, ambient air samples will be collected for the duration of the removal of the flooring. The samples will be sent to the same laboratory for silica analysis. The turnaround time for the silica analyses will be 24 hours. The Contractor shall provide

all laboratory results to the Departmental Representative as soon as they are available. The Contractor shall take immediate action to reduce the airborne levels of silica if they exceed the Action Level.

.5 TVOCs Monitoring – Work Area

.1 Contractor to retain a third party company to conduct sampling for total volatile organic compounds (TVOCs). Sampling will be conducted continuously during the application of the new MMA flooring as follows:

.1 Using a direct-reading instrument (such as a ppbRAE 3000, or equivalent), set up the monitor in a pre-determined location for continuous monitoring as directed by the Departmental Representative. The monitor will have data-logging capabilities. A second unit will also be used to take spot readings at various locations inside and outside the Work Area while the work is proceeding.

.2 At the start of the application of the MMA flooring, switch the monitor on. The monitor should be left in the data-logging mode, including times when no flooring work is underway, and up to the completion of the work.

.3 Review the TVOCs data on a regular basis each day. A guideline Action Level of 5,000 parts per billion (ppb) will be used for the comparison of the TVOCs results.

.4 If TVOCs levels exceed 5,000 ppb outside the Work Area at any time, the Contractor shall take all necessary steps to reduce the TVOCs levels to an acceptable level. Report any levels above 5,000 ppb to the Departmental Representative immediately. Submit results of all data-logging in a daily report.

## 3.2 CLEANING

.1 Progress Cleaning: Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

.3 Waste Management: separate waste materials for reuse and recycling.

.1 Dispose of hazardous waste materials in accordance with applicable federal and provincial acts, regulations, and guidelines.

.2 Recycle hazardous wastes for which there is approved, cost effective recycling process available.

.3 Send hazardous wastes to authorized hazardous waste disposal or treatment facilities.

.4 Burning, diluting, or mixing hazardous wastes for purpose of disposal is prohibited.

.5 Disposal of hazardous materials in waterways, storm or sanitary sewers, or in municipal solid waste landfills is prohibited.

.6 Dispose of hazardous wastes in timely fashion in accordance with applicable federal and provincial regulations.

.7 Minimize generation of hazardous waste to maximum extent practicable. Take necessary precautions to avoid mixing clean and contaminated wastes.

.8 Identify and evaluate recycling and reclamation options as alternatives to land disposal, such as:

.1 Hazardous wastes recycled in manner constituting disposal.

.2 Hazardous waste burned for energy recovery.

.3 Hazardous wastes with economically recoverable precious metals.

**END OF SECTION**

## PART 1 GENERAL

### 1.1 Section Includes

.1 Seamless Methyl-Methacrylate Acrylic (MMA) liquid-applied waterproof coating system to room 102, 103, 104 and 121 areas as indicated on drawings.

### 1.2 Related Sections

| | | |
|---|---|---|
| .1 | Section 01 01 50 | General Instructions |
| .2 | Section 02 41 99 | Demolition for Minor Work |
| .3 | Section 02 81 01 | Hazardous materials and Abatement |

### 1.3 Submittals

.1 Submittals to be in accordance with Section 01 01 50 – Submittal Procedures.

.2 Submit samples and manufacturer's installation instructions to the Departmental Representative for review.

.3 Submit copies of manufacturer's technical data, test reports, installation instructions and general recommendations.

.4 Submit three samples, 300mm x 300 mm, of Quartz broadcast for the specified colour of floor coatings to be applied on site with 7 days of award of contract.

.5 Submit maintenance data for incorporation into maintenance manuals. Include manufacturer's printed data covering the care, cleaning and maintenance of resinous finishes.

### 1.4 Quality Assurance

.1 Manufacturer must show a minimum 10 year history of manufacturing MMA products for the specified application

.2 Manufacturer's Technical Representative:

.1 To inspect the surfaces the coatings are applied to and confirm the Departmental Representative in writing is acceptable for the application of flooring.

.2 Carry out regular site inspections to ensure that the installation is in accordance with manufacturer’s printed installation instructions and all deficiencies are corrected.

.3 Coordinate site inspections with the Departmental Representative.

.4 Submit written inspection reports to the Departmental Representative covering quality of installation and acceptance of completed work of corrections required.

.3 Applicator Qualifications:

.1 Submit to the Departmental Representative, within 7 days of award of contract a written verification from the manufacturer that the applicator is qualified to install the specified products.

.2 Applicator must be trained by the Manufacturer in all phases of surface preparation and application of the specified flooring system(s).

.3 Applicator must have five year experience of installing the specified flooring system or has completed five projects using specified flooring materials.

.4 Acceptance Sample:

.1 Submit three minimum 300 x300mm square representative samples of the specified flooring system shall be prepared by the Manufacturer's representative and submitted to the Departmental Representative within 7 day of approved colour options.

.5 Bond Testing:

.1 Evaluate surface preparation by conducting Bond Tests at the site prior to application of the flooring system(s).

.2 Consult with Material Manufacturer for specific procedure.

## 1.5 Pre-Installation Conference

.1 Prior to commencement of Work on site, convene a pre-installation conference to be attended by the Contractor, coating Subcontractor, manufacturer's technical representative, Departmental Representative to review:

.1 Technical representative's schedule for reviewing Work.

.2 Quality Control Procedures.

.3 Product selections including colours, patterns, samples and mock-ups required, flooring accessories.

.4 Procedures and tests for verifying acceptability of substrate for application of products.

.5 Environmental requirements for installation.

.6 Installation procedures.

.7 Protected of finished Work.

## 1.6 Product Delivery, Storage and Handling

.1 Deliver all materials undamaged in the original manufacturer's containers with all labels and seals intact.

.2 Store material in a dry protected area, at a temperature of between $16^0$C to $32^0$C.

## 1.7 Project Conditions

.1 Do not apply coating until overhead mechanical and electrical work completed, tested and approved.

.2 Other coating, painting and finishing in areas to receive coating to be completed**.**

.3 Maintain an ambient air temperature of not less than $18^0$C and a floor temperature of not less than $16^0$C for at least seven (7) days prior to installation and for at least 48 hours after completion of work. Maintain relative humidity to not greater than 40%.

.4 Take moisture readings to ensure that substrates are within limits prescribed by the manufacturer.

.5 Comply with the requirements of Workplace Hazardous Materials Information System (WHMIS) regarding the use, handling, storage and disposal of hazardous material

.6 Continuously ventilate area where coating is being applied during and for 24 hours after installation through exterior openings. Seal the working area to the rest of building air tight during the MMA flooring installation period to prevent MMA resin oudor entering other functional spaces in the same building.

.7 Conduct hazardous material abatement and monitoring procedures per specification section 02 81 01.

### 1.8 Extra Materials

.1 Submit samples of each colour of decorative quartz broadcast for selection by Departmental Representative and provide a list showing a mixture percentage of decorative quartz broadcast of selected colour mix for maintenance purposes.

.2 Package, clearly label and store on Site in a location selected by the Departmental Representative.

### 1.9 Warranty

.1 Provide Departmental Representative with a two year warranty, covering both material and workmanship commencing from date of installation, in accordance with General Conditions.

## PART 2 PRODUCTS

### 2.1 Materials

.1 All MMA floor coating system components shall be products of the same manufacturer.

### 2.2 Floor Coating System

.1 Provide primers and accessories as required for a complete system.

.2 Seamless Methyl-Methacrylate base Acrylic liquid applied flooring system comprised of the following materials:

.1 Saturating Primer / Sealer: Solvent free, 2-componenet, 100% reactive, low viscosity primer.

.2 Covering: Methyl-Methacrylate Overlay and coating resin for use within the MMA flooring systems.

.3 Patching / Sloping: Solvent free, 2 component, 100% reactive resin formulated for roller applied coating and decorative flake or quartz flooring systems.

.4 Toping: Two (2) top coats of two components, solvent free, high performance, UV resistant, clear sealer in thickness required to provide 90% cover vinyl flakes and

providing medium mom-slip finish. Broadcasting brightly coloured, vinyl flakes per selected colours.

.5 Colour coordinated quartz broadcast aggregate – similar to SRC Degadur Decorative Quartz Aggregate Blend – Artic Ice CQ 13 for room 102, 103 and 104 (existing ceramic tile floor finish areas).

Quartz Aggregate Blend – River Rock CQ1 for room 121(existing vinyl floor tile finish areas).

### 2.3 Accepted Product

.1 "Degadur Methyl-Methacrylate Base Acrylic Liquid Coating System" as manufactured by BASF building System.

.2 Componenets of accepted system:

.1 Degadur R41 saturating Primer/sealer.

.2 Degadur R61 covering compound.

.3 Degadur R71 patching / sloping compound.

.4 Degadur 523 coving

.5 Degadur R61SL self-leveling material (composed of Degadur R61 and SRS filler SL)

.6 Degadur R71 colourless top coat resin.

## PART 3 EXECUTION

### 3.1 Preparation

.1 Patch and make good existing floor slab after minor demolition of existing flooring finishes. Use Degadur Polymer Concrete for repairing existing slab.

.2 The surface must be clean and dry, physically sound and free of contamination. Surfaces must be free of holes, voids or defects. Cracks and abrupt changes in surface profile must be corrected. Fins and projections must be removed. All curing compounds and sealers must be removed.

.3 Evaluate all surface preparation by conducting bond tests at strategic locations.

.4 Thoroughly clean substrates to receive coatings of deleterious material that would affect the proper bonding and performance of the floor coating free from loose particles; droppings, projections, grease, solvent, paint, and other foreign matter, and from other unsuitable conditions which would affect flooring work.

.5 Clean surfaces that are heavily contaminated with the appropriate degreaser, detergent, or other appropriate cleaner/surfactant followed by thoroughly rinsing with fresh water to remove the accumulation prior to mechanical cleaning efforts.

### 3.2 Protection

.1 Prevent movement, settlement, or damage to adjacent structures, utilities and parts of building to remain in place. Provide bracing and shoring required.

.2 Keep noise, dust, and inconvenience to occupants to minimum.

.3 Protect building systems, services and equipment.

.4 Provide temporary dust screens, covers, railings, supports and other protection as required.

.5 Do Work in accordance with Section 01 35 33 - Health and Safety and section 02 81 01 Hazardous materials and abatement Requirements.

.6 Prevent debris from blocking drainage which must remain in operation.

.7 Prevent decorative quartz broadcast into food processing equipment and drains.

.7 Take precaution during demolition to protect all adjacent finished surfaces. Make good any damage to adjacent surfaces.

### 3.3 Salvage

.1 Refer to demolition drawings and specifications for items to be salvaged for reuse.

.2 Remove items to be reused and protect items from damage.

### 3.4 Disposal

.1 Dispose of removed materials, to appropriate recycling facilities except where specified otherwise, in accordance with authority having jurisdiction.

.2 The Owner reserves the option to request some or all existing equipment being removed and not required to be relocated to remain the property of the Owner. When directed by the Departmental Representative, remove such equipment and turn over to the Owner. Provide receipt verifying disposition of such equipment.

**END OF SECTION**

# APPENDIX A

**Hazardous Materials Assessment**
**Mission Medium Institution**
**Administration Building Kitchen (Unit A-K)**

**Findings and Recommendations—**
**Building A—Administration (849-14-RP)**

ARCADIS Design & Consultancy for natural and built assets

Public Services and Procurement Canada

# Hazardous Materials Assessment
# Mission Medium Institution
# Administration Building Kitchen (Unit A-K)

## 8751 Stave Lake Street,
## Mission, British Columbia

October 1, 2018

702925-000

# HAZARDOUS MATERIALS ASSESSMENT MISSION MEDIUM INSTITUTION

8751 Stave Lake Street,

Mission, British Columbia

Paul Smith, B.Sc., IHT

Project Manager

Kenny Luong

Field Technologist

Wayne Cormack, M.Eng., CIH

Senior Consultant

Prepared for:

Ms. Amy Moizumi

Public Services and Procurement Canada

Environmental Services

Room 219-800 Burrard Street

Vancouver, British Columbia

V6Z 0B9

Prepared by:

**Arcadis Canada Inc.**

**121 Granton Drive, Suite 12**

**Richmond Hill, Ontario L4B 3N4**

**Tel 905 764 9380**

Our Ref.:

702925-000

Date:

October 1, 2018

# CONTENTS



# TABLES

# APPENDICES

# EXECUTIVE SUMMARY

Arcadis Canada Inc. (Arcadis) was retained by Public Services and Procurement Canada (PSPC) Pacific Region, on behalf of Correctional Service Canada (CSC), to conduct a hazardous materials assessment in the Administration Building Kitchen (Unit A-K) of the Mission Medium Institution, located at 8751 Stave Lake Street, Mission, BC. The Administration Building was built in 1976, but a major renovation to the kitchen occurred in 1998.

The kitchen and dining areas (Rooms 101, 102, 103, 104 and 121) will undergo flooring replacement. The existing flooring will be removed and replaced with methyl methacrylate (MMA). Ceramic tiles are present in Rooms 101, 102, 103 and 104, while vinyl floor tiles are present in Room 121.

In May 2017, Stantec conducted a non-destructive hazardous building materials assessment throughout the entire institution.

The purpose of the current assessment was to conduct a pre-renovation, destructive hazardous building materials assessment to supplement the initial Stantec survey. Mr. Kenny Luong visited the site on September 7, 2018 to conduct the hazardous materials assessment.

**Summary of Findings**

Asbestos

Based on visual observations and results of laboratory analyses of samples collected by Arcadis, no asbestos-containing materials were found to be present in the study area. If any materials which may contain asbestos, and which were not tested during the course of the hazardous materials assessment are discovered during any renovation activities, the work shall not proceed until such time as the required notifications have been made and an appropriate course of action is determined.

Lead

Lead was detected in both of the paint samples (white paint on concrete walls and blue paint on baseboards) collected by Arcadis. A risk assessment should be performed and an exposure control plan developed for lead-containing paint prior to renovation.

Silica

Materials observed in the study areas which would contain silica included levelling compound, grout, concrete slab/columns/walls and drywall panels behind wall fibre panels.

Prior to undertaking renovation activities, a silica exposure control plan (ECP) should be developed. The WorkSafe BC guidance document Developing a Silica Exposure Control Plan, provides guidance in controlling exposure to silica dust during construction/renovation activities.

Mould

No suspect mould was observed during the course of our site inspection.

# 1 INTRODUCTION

Arcadis Canada Inc. (Arcadis) was retained by Public Services and Procurement Canada (PSPC) Pacific Region, on behalf of Correctional Service Canada (CSC), to conduct a hazardous materials assessment in the Administration Building Kitchen (Unit A-K) of the Mission Medium Institution, located at 8751 Stave Lake Street, Mission, BC. The Administration Building was built in 1976, but a major renovation to the kitchen occurred in 1998.

The kitchen and dining areas (Rooms 101, 102, 103, 104 and 121) will undergo flooring replacement. The existing flooring will be removed and replaced with methyl methacrylate (MMA). Ceramic tiles are present in Rooms 101, 102, 103 and 104, while vinyl floor tiles are present in Room 121.

In May 2017, Stantec conducted a non-destructive hazardous building materials assessment throughout the entire institution.

The purpose of the current assessment was to conduct a pre-renovation, destructive hazardous building materials assessment to supplement the initial Stantec survey. Mr. Kenny Luong visited the site on September 7, 2018 to conduct the hazardous materials assessment.

## 1.1 Scope of Work

The scope of work for our investigation included:

- conducting a pre-renovation destructive hazardous building materials assessment of the above-mentioned area in the Administration Building Kitchen;
- obtaining additional representative bulk samples of materials which could contain asbestos, and paint chip samples;
- laboratory analyses of bulk samples for asbestos content and analysis of paint chip samples for lead content; and
- preparation of a report outlining the findings of the investigation.

Mr. Kenny Luong visited the site on September 7, 2018 to conduct the hazardous materials assessment.

# 2 BACKGROUND INFORMATION ON HAZARDOUS MATERIALS

Canada Labour Code

Requirements related to disclosing the presence of hazardous substances (including designated substances) in federal government buildings are specified in Part II of the Canada Labour Code, sections 124(1)y and 125(1)Z.14, which state that employers shall:

- "ensure that the activities of every person granted access to the work place do not endanger the health and safety of employees [Section y]; and
- take all reasonable care to ensure that all of the persons granted access to the workplace, other than the employer's employees, are informed of every known or foreseeable health or safety hazard to which they are likely to be exposed in the workplace. [Section Z.14]".

When construction or redevelopment work is undertaken by a company whose primary activity is construction or redevelopment work at the site of a federally-regulated employer, the provincial health and safety laws apply. The British Columbia Workers Compensation Act and Occupational Health and Safety Regulations (B.C. Reg. 296/97) would therefore apply to any construction work undertaken at the subject site.

## 2.1 Asbestos

Asbestos has been widely used in buildings, both in friable applications (materials which can be crumbled, pulverized or powdered by hand pressure, when dry) such as pipe and tank insulation, sprayed-on fireproofing and acoustic texture material and in non-friable manufactured products such as floor tile, gaskets, cement board and so on. The use of asbestos in friable applications was curtailed around the mid-1970s. The use of asbestos in certain non-friable materials continued beyond the mid-1970s.

### 2.1.1 Provincial Government Requirements

Control of exposure to asbestos is governed in British Columbia by B.C. Reg. 296/97 – Occupational Health and Safety Regulations. The WorkSafe BC publication *Safe Work Practices for Handling Asbestos* provides additional guidance.

B.C. Reg. 296/97 states that "asbestos-containing material" means the following:

(a) a manufactured article or other material, other than vermiculite insulation, that would be determined to contain at least 0.5% asbestos if tested in accordance with one of the prescribed methods.

(b) vermiculite insulation that would be determined to contain any asbestos if tested in accordance with the prescribed EPA method.

B.C. Reg. 296/97 prescribes certain requirements for asbestos management in buildings.

For on-going asbestos management in buildings, employers are required to:

- develop and implement an exposure control plan if a worker is or may be exposed to potentially harmful levels of asbestos;
- prepare an inventory (i.e., asbestos survey report) of all asbestos-containing materials in the workplace; keep the inventory at the workplace and keep the inventory current;
- ensure that a risk assessment is conducted by qualified person on asbestos-containing material identified in the inventory, with due regard for the condition of the material, its' friability, accessibility and likelihood of damage, and the potential for fibre release and exposure of workers;
- ensure that before a work activity that involves working with or in proximity to asbestos-containing material begins, the work activity is assessed by a qualified person and classified as a low, moderate or high risk activity;
- ensure that all friable asbestos-containing materials in the workplace are controlled by removal, enclosure or encapsulation so as to prevent the release of airborne asbestos fibre;
- prohibit any work that would disturb asbestos-containing material unless necessary precautions have been taken to protect workers;
- ensure that procedures for handling or using asbestos-containing material prevent or minimize the release of airborne asbestos fibres;
- ensure that the procedures for control, handling or use of asbestos are in accordance with procedures acceptable to the board;
- provide training for staff who are at risk of exposure to asbestos;

"Waste asbestos" is classified as a "hazardous waste" and is defined in the British Columbia Hazardous Waste Regulation (B.C. Reg. 63/88) as "a waste containing friable asbestos fibres or asbestos dust in a concentration greater than 1% by weight". Section 40, Part 6 of the regulation provides requirements for management of asbestos waste.

### 2.1.2 Federal Government Requirements

The PSPC *Asbestos Management Standard* dated June 5, 2017 sets out PSPC Real Property Branch's requirements regarding the operational and technical activities required to be carried out for the management of asbestos-containing material and enhances and supplements Part II of the Canada Labour Code – Occupational Health and Safety, as well as the Canada Occupational Health and Safety Regulations, Part X – Hazardous Substances, Subsection 10.19, Control of Hazards. This standard applies to buildings and engineering assets, both Crown-owned and leased, where PSPC is the custodian. The standard provides direction regarding asbestos surveys, laboratory analysis, assessment of asbestos-containing material, classification of asbestos-related work and asbestos work processes.

The PSPC *Asbestos Management Directive* dated June 5, 2017, outlines the responsibilities of Asset Managers, Property and Facility Managers, Project Managers, Regional Asbestos Coordinators and leasing representatives when asbestos-containing materials are present in the building inventory. The directive also provides the operational details of the activities required to be carried out for the management of asbestos-containing materials.

The PSPC Asbestos Management Standard and Asbestos Management Directive replace DP-057 Asbestos Management.

## 2.2 Lead

Lead is a heavy metal that can be found in construction materials such as paints, coatings, mortar, concrete, pipes, solder, packings, sheet metal, caulking, glazed ceramic products and cable splices. Lead has been used historically in exterior and interior paints.

The *Surface Coating Materials Regulations* (SOR/2016-193) made pursuant to the Canada Consumer Product Safety Act states that a surface coating material must not contain more than 90 mg/kg total lead. Health Canada defines a lead-containing surface coating as a paint or similar material that dries to a solid film that contains over 90 mg/kg dry weight of lead.

The National Plumbing Code allowed lead as an acceptable material for pipes until 1975 and in solder until 1986.

The British Columbia *Occupational Health and Safety Regulation* (B.C. Reg. 296/97) prescribes specific requirements for control of workplace exposure to lead. Employers are responsible for for completing a risk assessment and for developing and implementing an exposure control plan if workers are or may be exposed to lead. WorkSafeBC does not numerically define what would be considered a lead-containing paint or coating. In order to determine which controls and personal protective equipment would be required for a job, a qualified person must consider the lead level as part of the risk assessment. The WorkSafe BC publication *Lead-Containing Paints and Coatings, Preventing Exposure in the Construction Industry* provides guidance in the measures and procedures that should be followed when handling lead-containing paints and coatings during construction projects and states the following:

- *Information from the U.S. Occupational Safety and Health Administration (OSHA) suggests that the improper removal of lead paint containing 600 mg/kg lead results in airborne lead concentrations that exceed half of the exposure limit. This would trigger the requirement for an Exposure Control Plan (ECP) and safe work procedures.*
- *Lead concentrations as low as 90 mg/kg may present a risk to pregnant women and children. Any risk assessment should include for the presence of high risk individuals within the workplace.*

For building materials that are to be disposed at a landfill, all lead-based paints and associated substrates (concrete, plaster, wood, etc.) must undergo Toxicity Characteristic Leachate Properties (TCLP) testing to determine disposal procedures. The acceptable level for non-regulated disposal of lead-containing paint is less than 5 milligrams per litre (mg/L), as determined through analytical TCLP. The disposal of lead-

containing paint is regulated under the Federal *Transportation of Dangerous Goods Act* and by B.C. Regulation 63/88 – *Hazardous Waste Regulation*.

## 2.3 Silica

Silica exists in several forms of which crystalline silica is of most concern with respect to potential worker exposures. Quartz is the most abundant type of crystalline silica. Some commonly used construction materials containing silica include brick, refractory brick, concrete, concrete block, cement, mortar, rock and stone, sand, fill dirt, topsoil and asphalt containing rock or stone.

Employers in British Columbia are required to develop an exposure control plan (ECP) when workers are or may be exposed to airborne silica dust in excess of 50 percent of the exposure limit. The WorkSafe BC guidance document *Developing a Silica Exposure Control Plan* provides information on each of the required elements of an ECP, including safe work procedures for controlling exposure to silica during construction activities.

## 2.4 Mould

Moulds are forms of fungi that are found everywhere both indoors and outdoors all year round. Outdoors, moulds live in the soil, on plants and on dead and decaying matter. More than 1000 different kinds of indoor moulds have been found in buildings. Moulds spread and reproduce by making spores, which are all small and light-weight, able to travel through air, capable of resisting dry, adverse environmental conditions, and hence capable of surviving a long time. Moulds need moisture and nutrients to grow and their growth is stimulated by warm, damp and humid conditions.

Recommended work practices are outlined in the following document:

- *Mould Guidelines for the Canadian Construction Industry*. Standard Construction Document CCA 82 2004. Canadian Construction Association.

# 3 METHODOLOGY

## 3.1 Asbestos

Bulk sampling and analysis was performed in general accordance with the requirements specified in B.C. Reg. 296/97 and in the WorkSafe BC publication *Safe Work Practices for Handling Asbestos*.

Determination of the locations of asbestos-containing materials was made based on the results of bulk sample analyses, visual observations and physical characteristics of the applications as well as our knowledge of the uses of asbestos in building materials.

Analysis of bulk samples was performed following EPA Method 600/R-93/116 in conformity with the requirements specified in B.C. Reg. 296/97.

## 3.2 Lead

Samples of select, representative paint applications collected during the course of the site inspection were forwarded to the EMSL Canada Inc. laboratory in Mississauga, Ontario for analysis of lead content.

## 3.3 Silica

The presence of silica-containing materials observed during the course of our site inspection was documented. Silica is known to be a constituent of brick, concrete, cement, etc. Sampling and laboratory analysis are not required to make this determination.

## 3.4 Mould

The presence of any “suspect” mould observed during the course of our site inspection was documented. “Suspect” mould is typically a coloured, textured substance or discolouration or staining on a building material surface which, based on our experience, may be mould growth. The adjective “suspect” is used where the presence of mould has not been confirmed by laboratory analysis.

# 4 RESULTS AND DISCUSSION

## 4.1 Asbestos

During the course of our hazardous materials assessment, representative bulk samples of materials were collected by Arcadis staff. The samples were forwarded to EMSL Canada Inc. for asbestos analyses. EMSL holds a current Certificate of Accreditation for Bulk Asbestos Fibre Analysis under the Voluntary Accreditation Program (NVLAP). A floor plan showing sample locations is presented in Appendix A. The results of the bulk sample analyses for asbestos content are provided in Table 4.1, and the laboratory report is provided in Appendix B. Photographs are presented in Appendix C.

**Table 4.1**

**Summary of Results of Analyses of Bulk Samples for Asbestos Content**

**Mission Medium Institution**

**Administration Building Kitchen (Unit A-K)**

**September 2018**

| Sample No. | Location | Description | Asbestos Content |
|---|---|---|---|
| A1A | Cafeteria (Room 121), Southeast corner | (12” x 12”) white vinyl floor tile/mastic – vinyl portion | None Detected |
| A1A | Cafeteria (Room 121), Southeast corner | (12” x 12”) white vinyl floor tile/mastic – mastic portion | None Detected |
| A1B | Cafeteria (Room 121), Southwest corner | (12” x 12”) white vinyl floor tile/mastic – vinyl portion | None Detected |
| A1B | Cafeteria (Room 121), Southwest corner | (12” x 12”) white vinyl floor tile/mastic – mastic portion | None Detected |
| A1C | Cafeteria (Room 121), Northwest corner | (12” x 12”) white vinyl floor tile/mastic – vinyl portion | None Detected |
| A1C | Cafeteria (Room 121), Northwest corner | (12” x 12”) white vinyl floor tile/mastic – mastic portion | None Detected |
| A2A | Cafeteria (Room 121) East Exit | Grey levelling compound | None Detected |

| Sample No. | Location | Description | Asbestos Content |
|---|---|---|---|
| A2B | Cafeteria (Room 121), Southwest corner | Grey levelling compound | None Detected |
| A2C | Cafeteria (Room 121) Northwest corner | Grey levelling compound | None Detected |
| A3A | Kitchen (Room 121) East End | Ceramic tile seam grout | None Detected |
| A3B | Kitchen (Room 104) Centre | Ceramic tile seam grout | None Detected |
| A3C | Kitchen (Room 104) West Wall Base | Ceramic tile seam grout | None Detected |
| A4A | Kitchen (Room 104) East End | Ceramic tile base grout | None Detected |
| A4B | Kitchen (Room 104) Northwest | Ceramic tile base grout | None Detected |
| A4C | Kitchen (Room 104) West Wall Base | Ceramic tile base grout | None Detected |
| A5A | Kitchen (Room 104) Northwest Exit | Wall fibre panel | None Detected |
| A5B | Kitchen (Room 104) Northwest Exit | Wall fibre panel | None Detected |
| A5C | Kitchen (Room 104) Northwest Exit | Wall fibre panel | None Detected |
| A-VFT-15-tile | Unit A-K, Room 121 Dining Room | Vinyl floor tile, white with blue smears | None Detected (1) |
| A-VFT-15-mastic | Unit A-K, Room 121 Dining Room | Vinyl floor tile, white with blue smears | None Detected (1) |

NOTE:

(1) Sample obtained from *Appendix 5.1 – Findings and Recommendations – Building A – Administration (849-14-RP)* of Stantec Hazardous Building Materials Assessment report dated May 2017.

Based on visual observations and results of laboratory analyses of samples collected by Arcadis, no asbestos-containing materials were found to be present in the study areas.

PSPC provided Arcadis with copies of asbestos analysis laboratory reports from surveys conducted in the Administration Building Unit A-K by Stantec in 2017. Asbestos was not detected in the sample of vinyl floor tile and mastic collected by Stantec.

Asbestos may be present in materials which were not sampled during the course of the asbestos survey carried out by Arcadis, including, but not limited to, components of electrical equipment (e.g. electric wiring insulation, non-metallic sheathed cable, electrical panel partitions, arc chutes, high-grade electrical paper, etc.) and/or in locations that are presently inaccessible (e.g., in pipe chases, behind walls). Asbestos may also be present in the form of vermiculite insulation in cavities in concrete or cement block walls (used as in-fill insulation). Confirmatory testing of any such materials could be undertaken as the need arises (i.e., at the time of renovations) or the materials can be assumed to contain asbestos based on findings in adjacent areas.

If any materials which may contain asbestos and which were not tested during the course of the hazardous materials assessment are discovered during any renovation activities, the work shall not proceed until such time as the required notifications have been made and an appropriate course of action is determined.

## 4.2 Lead

Two samples of the typical paints were collected by Arcadis during the course of the investigation. The samples were submitted to EMSL Canada Inc. for analysis of lead content. The results of the analyses are presented in Table 4.2, and the laboratory report is provided in Appendix B.

Lead was detected above the guideline level referenced by WorkSafeBC of 600 mg/kg (600 ppm) and at levels above the Health Canada definition of lead paint (90 mg/kg) in both of the paint samples (white paint on concrete walls and blue paint on baseboards) collected by Arcadis collected from the Cafeteria (Room 121).

The paint applications were noted to be in good condition.

**Table 4.2**

**Summary of Results of Analyses of Paint Samples for Lead Content**

**Mission Medium Institution**

**Administration Building Kitchen (Unit A-K)**

**September 2018**

| Sample No. | Location | Description | Condition | Lead Content (ppm) |
|---|---|---|---|---|
| L1 | Room 121, southwest corner | White paint on concrete walls | Good | **3,700** |
| L2 | Room 121, southwest corner | Blue paint on baseboards | Good | **35,000** |

NOTES:

mg/kg - milligrams lead per kilogram paint.

1 mg/kg - 1 part per million (ppm).

## 4.3 Silica

Materials observed in the study areas which would contain silica included levelling compound, grout, concrete slab/columns/walls and drywall panels behind wall fibre panels.

The WorkSafe BC guidance document Developing a Silica Exposure Control Plan, provides guidance in controlling exposure to silica dust during construction/renovation activities.

## 4.4 Mould

No suspect mould was observed during the course of our site inspection.

# 5 RECOMMENDATIONS

We recommend the following on the basis of the findings of the hazardous material assessment outlined in this report:

1. If any materials which may contain asbestos, and which were not tested during the course of the hazardous materials assessment are discovered during any renovation activities, the work shall not proceed until such time as the required notifications have been made and an appropriate course of action is determined.
2. Ensure that a risk assessment is performed, and an exposure control plan is developed for lead-containing paint prior to renovation. The WorkSafeBC publication *Safe Work Practices for Handling Lead* provides information on exposure control plans, classification of lead paint abatement work and measures and procedures for specific lead paint and coating removal operations. For building materials that are to be disposed at a landfill, all lead-based paints and associated substrates (concrete, plaster, wood, etc.) must undergo Toxicity Characteristic Leachate Properties (TCLP) testing to determine disposal procedures. The acceptable level for non-regulated disposal of lead-containing paint is less than 5 mg/L as determined through analytical TCLP. The disposal of lead-containing paint is regulated under the Federal *Transportation of Dangerous Goods Act* and by the B.C. Regulation 63/88 – *Hazardous Waste Regulations*.
3. Prior to undertaking renovation activities, develop a silica exposure control plan (ECP). Employers in British Columbia are required to develop an ECP when workers are or may be exposed to airborne silica dust in excess of 50 percent of the exposure limit. The WorkSafe BC guidance document *Developing a Silica Exposure Control Plan* provides information on each of the required elements of an ECP, including safe work procedures for controlling exposure to silica during construction activities.

# 6 USE AND LIMITATIONS OF HAZARDOUS MATERIALS SURVEY REPORT

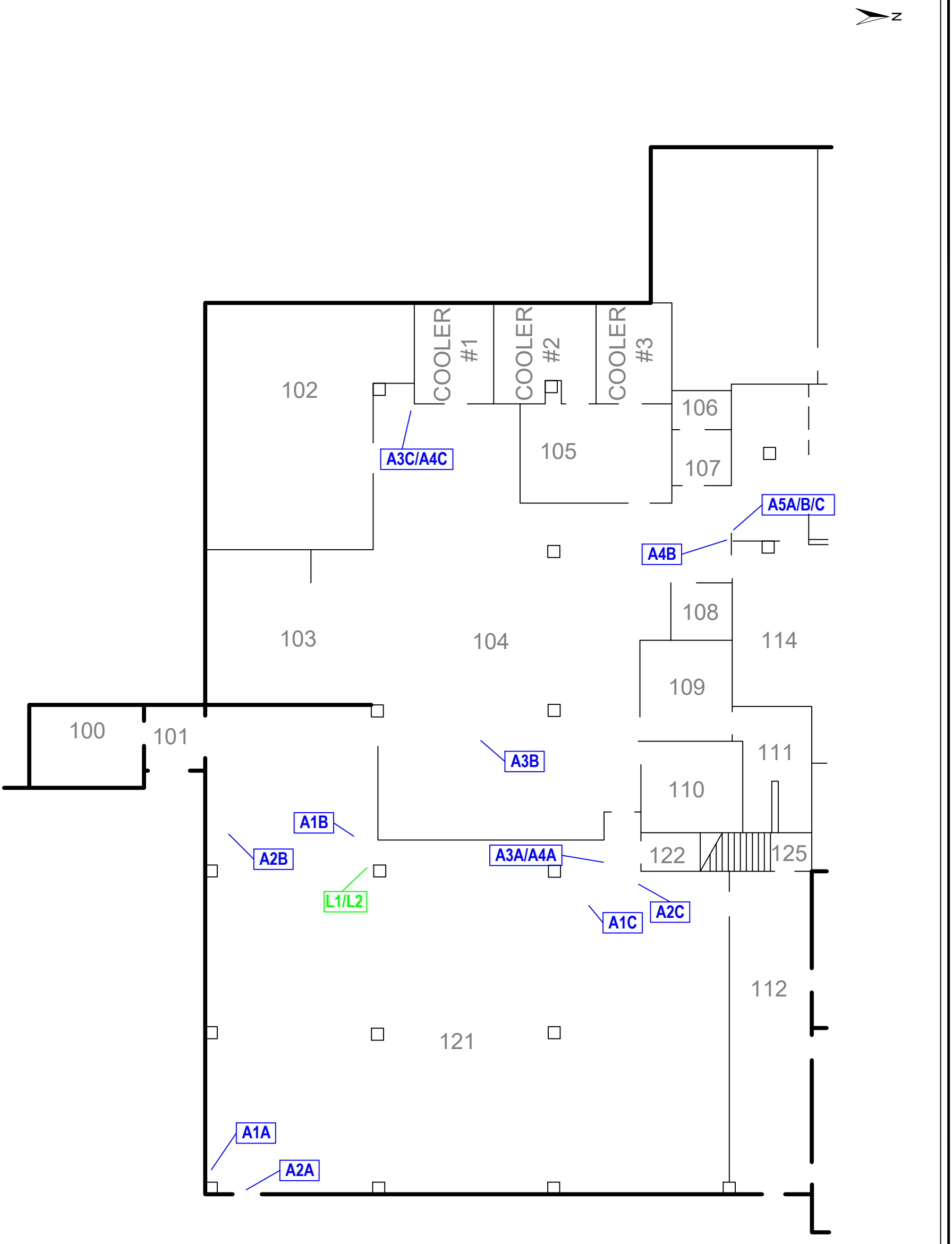
This report, prepared for Public Services and Procurement Canada, on behalf of Correctional Service Canada, does not provide certification or warranty, expressed or implied, that the investigation conducted by Arcadis identified all hazardous materials in the designated study areas. The work undertaken by Arcadis was directed to provide information on the presence of hazardous materials in building construction materials based on visual inspection of readily accessible areas of the designated study areas, and on the results of laboratory analysis of a limited number of bulk samples of material for asbestos content and laboratory analysis of a limited number of paint samples for lead content.

The material in this report reflects Arcadis' best judgment in light of the information available at the time of the investigation, which was performed on September 7, 2018.

This report was prepared by Arcadis for Public Services and Procurement Canada, on behalf of Correctional Service Canada. Any use which any other party makes of the report, or reliance on, or decisions to be based on it, is the responsibility of such parties.

# APPENDIX A

## Floor Plan




## LEGEND

L1 Paint Chip Sample Location

A1 Bulk Sample Location

N.T.S

| | |
|---|---|
| Title: | HAZARDOUS MATERIALS ASSESSMENT - MISSION MEDIUM INSTITUTION - ADMINISTRATION BUILDING KITCHEN |
| Project: | HAZARDOUS MATERIALS ASSESSMENT MOUNTAIN INSTITUTION |
| Client: | PUBLIC SERVICES AND PROCUREMENT CANADA |
| Project Number: 702925-000 | Drawn By: CB / Plot Size: 11X17" / Date: OCTOBER 2018 |
| ARCADIS | FIGURE 1 |

11x17 P G:\PROJECTS\702925\CAD\000.dwg

# APPENDIX B

## Laboratory Reports

# EMSL Canada Inc.

4506 Dawson Street Burnaby, BC V5C 4C1
Phone/Fax: (604) 757-3158 / (604) 757-4731
http://www.EMSL.com / vancouverlab@EMSL.com


EMSL Canada Order 691802408
Customer ID: 55DCSL97
Customer PO: 702358-051
Project ID:

**Attn:** Paul Smith
ARCADIS Canada Inc.
121 Granton Drive
Unit 12
Richmond Hill, ON L4B 3N4

**Proj:** 702358-051

Phone: (905) 882-5984
Fax: (905) 882-8962
Collected:
Received: 9/07/2018
Analyzed: 9/14/2018

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A1A-Floor Tile **Lab Sample ID:** **691802408-0001**
***Sample Description:*** Cafeteria Southeast Corner/12" White Vinyl Floor Tile/mastic

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| TEM Grav. Reduction | 9/14/2018 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A1A-Mastic **Lab Sample ID:** **691802408-0001A**
***Sample Description:*** Cafeteria Southeast Corner/12" White Vinyl Floor Tile/mastic

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A1B-Floor Tile **Lab Sample ID:** **691802408-0002**
***Sample Description:*** Cafeteria Southwest/12" White Vinyl Floor Tile/mastic

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| TEM Grav. Reduction | 9/14/2018 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A1B-Mastic **Lab Sample ID:** **691802408-0002A**
***Sample Description:*** Cafeteria Southwest/12" White Vinyl Floor Tile/mastic

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A1C-Floor Tile **Lab Sample ID:** **691802408-0003**
***Sample Description:*** Cafeteria Northwest/12" White Vinyl Floor Tile/Mastic

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| TEM Grav. Reduction | 9/14/2018 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A1C-Mastic **Lab Sample ID:** **691802408-0003A**
***Sample Description:*** Cafeteria Northwest/12" White Vinyl Floor Tile/Mastic

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A2A **Lab Sample ID:** **691802408-0004**
***Sample Description:*** Cafeteria East Exit/Grey Leveling Compound

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

# EMSL Canada Inc.

4506 Dawson Street Burnaby, BC V5C 4C1
Phone/Fax: (604) 757-3158 / (604) 757-4731
http://www.EMSL.com / vancouverlab@EMSL.com


EMSL Canada Order 691802408
Customer ID: 55DCSL97
Customer PO: 702358-051
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A2B **Lab Sample ID:** **691802408-0005**
***Sample Description:*** Cafeteria Southwest/Grey Leveling Compound

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A2C **Lab Sample ID:** **691802408-0006**
***Sample Description:*** Cafeteria Northwest/Grey Leveling Compound

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/13/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A3A **Lab Sample ID:** **691802408-0007**
***Sample Description:*** Kitchen East End/Ceramic Tile Seam Grout

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A3B **Lab Sample ID:** **691802408-0008**
***Sample Description:*** Kitchen Centre/Ceramic Tile Seam Grout

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A3C **Lab Sample ID:** **691802408-0009**
***Sample Description:*** Kitchen West Wall Base/Ceramic Tile Seam Grout

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/13/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A4A **Lab Sample ID:** **691802408-0010**
***Sample Description:*** Kitchen East End/Ceramic Tile Base Grout

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A4B **Lab Sample ID:** **691802408-0011**
***Sample Description:*** Kitchen Northwest/Ceramic Tile Base Grout

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/12/2018 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A4C **Lab Sample ID:** **691802408-0012**
***Sample Description:*** Kitchen West Wall Base/Ceramic Tile Base Grout

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 9/13/2018 | Gray | 0.0% | 100% | None Detected | |

# EMSL Canada Inc.

4506 Dawson Street Burnaby, BC V5C 4C1
Phone/Fax: (604) 757-3158 / (604) 757-4731
http://www.EMSL.com / vancouverlab@EMSL.com


EMSL Canada Order 691802408
Customer ID: 55DCSL97
Customer PO: 702358-051
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A5A ***Lab Sample ID:*** **691802408-0013**

***Sample Description:*** Kitchen Northwest Exit/Wall Fiber Panel

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 9/13/2018 | Gray/White | 20% | 80% | None Detected | |

***Client Sample ID:*** A5B ***Lab Sample ID:*** **691802408-0014**

***Sample Description:*** Kitchen Northwest Exit/Wall Fiber Panel

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 9/13/2018 | Gray/White | 20% | 80% | None Detected | |

***Client Sample ID:*** A5C ***Lab Sample ID:*** **691802408-0015**

***Sample Description:*** Kitchen Northwest Exit/Wall Fiber Panel

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 9/13/2018 | Gray/White | 15% | 85% | None Detected | |

**Analyst(s):**

| | |
|---|---|
| Chloe Huang | PLM (1)<br>PLM Grav. Reduction (9) |
| Kathleen Cruz | PLM (2)<br>PLM Grav. Reduction (3) |
| Matthew Davis | TEM Grav. Reduction (3) |

**Reviewed and approved by:**

Nicole Yeo, Laboratory Manager
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government.

Samples analyzed by EMSL Canada Inc. Burnaby, BC

Report amended: 09/24/201814:11:57 Replaces initial report from: 09/14/201815:37:18 Reason Code: Client-Change to Location

**EMSL Canada Inc.**
**2756 Slough Street, Mississauga, ON L4T 1G3**
Phone/Fax: (289) 997-4602 / (289) 997-4607
http://www.EMSL.com torontolab@emsl.com

| | |
|---|---|
| EMSL Canada Or | 551810738 |
| CustomerID: | 55DCSL97 |
| CustomerPO: | 702925-000 |
| ProjectID: | |

Attn: **Wayne Cormack**
**ARCADIS Canada Inc.**
**121 Granton Drive**
**Unit 12**
**Richmond Hill, ON L4B 3N4**

| | |
|---|---|
| Phone: | (905) 882-5984 |
| Fax: | (905) 882-8962 |
| Received: | 09/11/18 10:56 AM |
| Collected: | |

Project: **702925-000**

# Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

| *Client SampleDescription* | *Collected* | *Analyzed* | *Weight* | *RDL* | *Lead Concentration* |
|---|---|---|---|---|---|
| L1 | | 9/14/2018 | 0.2488 g | 80 ppm | 3700 ppm |
| *551810738-0001* | Site: Cafeteria<br>Desc: Concrete walls, White Paint | | | | |
| L2 | | 9/14/2018 | 0.2455 g | 1600 ppm | 35000 ppm |
| *551810738-0002* | Site: Cafeteria<br>Desc: Baseboards, Blue Paint | | | | |

Rowena Fanto, Lead Supervisor
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Environmental Testing Cert #2845.08

Report Amended: 09/21/2018 10:33:35 Replaces Report Amended: 09/21/2018 09:43:34. Reason Code: Client-Change to ProjectID

# APPENDIX C

## Photographs

## Project Photographs

Mission Medium Institution
Mission, BC

**Photo: 1**

**Date:**
September 7, 2018.

**Description:**
Sample A1C – Floor tile and mastic around the area has already been damaged and removed. Traces of mastic and leveling compound remaining.

**Location:**
Room 121.

**Photo: 2**

**Date:**
September 7, 2018.

**Description:**
Samples A3C & A4C – Ceramic tile seam grout, and ceramic tile base grout, previously damaged. Fibreglass panels on walls

**Location:**
Room 104.

## Project Photographs

Mission Medium Institution
Mission, BC

**Photo: 3**

**Date:**
September 7, 2018.

**Description:**
Sample A3B – Ceramic tile seam grout, previously damaged and removed.

**Location:**
Room 104.

**Photo: 4**

**Date:**
September 7, 2018.

**Description:**
Sample A5A/B/C – Wall fibre panel, previously damaged, exposing wall panel. Grey lower trim is rubber.

Sample A4B – Ceramic tile base grout.

**Location:**
Room 104.

## Project Photographs

Mission Medium Institution
Mission, BC

**Photo: 5**

**Date:**
September 7, 2018.

**Description:**
Sample A3A – ceramic tile seam grout.

**Location:**
Room 121.

**Photo: 6**

**Date:**
September 7, 2018.

**Description:**
Sample A4A – ceramic tile base grout, previously damaged.

**Location:**
Room 121.

## Project Photographs

Mission Medium Institution
Mission, BC

**Photo: 7**

**Date:**
September 7, 2018.

**Description:**
Sample A1B – white vinyl floor tile and mastic.
Sample L2 – blue paint on baseboards throughout cafeteria columns only.
Sample L1 – white paint on concrete walls.

**Location:**
Room 121.

**Photo: 8**

**Date:**
September 7, 2018.

**Description:**
Sample A1A – white vinyl floor tile and mastic.

**Location:**
Room 121.

## Project Photographs

Mission Medium Institution
Mission, BC

**Photo: 9**

**Date:**
September 7, 2018.

**Description:**
Sample A2A – grey leveling compound, existing damage.

**Location:**
Room 121.

**Photo: 10**

**Date:**
September 7, 2018.

**Description:**
Typical ceramic floor tiles.

**Location:**
Room 121.

## Project Photographs

Mission Medium Institution
Mission, BC

**Photo: 11**

**Date:**
September 7, 2018.

**Description:**
Sample A2B – grey leveling compound.

**Location:**
Room 121.

**Photo: 12**

**Date:**
September 7, 2018.

**Description:**
Sample A2C – grey leveling compound.

**Location:**
Room 121.

## Project Photographs

Mission Medium Institution
Mission, BC

**Photo:** 13

**Date:**
September 7, 2018.

**Description:**
Large portion of tile removed at south end.

**Location:**
Room 121, southwest corner.

**Photo: 14**

**Date:**
September 7, 2018.

**Description:**
Large portion of tile removed at south end.

**Location:**
Room 121, southwest corner.

Arcadis Canada Inc.

121 Granton Drive, Suite 12, Richmond Hill, Ontario L4B 3N4

Tel 905 764 9380

# Appendix 5.1 FINDINGS AND RECOMMENDATIONS— BUILDING A—ADMINISTRATION (849-14-RP)

Building A—Administration (subject building) was reportedly constructed in 1976 and has been assigned Real Property ID #1583. The typical structural components and finishes associated with this building consist of exterior panel siding, suspended ceiling tiles and drywall ceilings, drywall, cinder block, brick, cement, ceramic tile and wooden walls, concrete, vinyl floor tiles and vinyl sheet flooring.

The building is comprised of five separate units as indicted below, with applicable Real Property ID Numbers for reference:

- A-K—Administration Kitchen (1583)
- A-M—Administration (1584)
- A-P—Programs Corridor (1585)
- A-R—Recreation (1586)
- A-W—Administration West (1587)

The results of the assessment for each of the considered hazardous materials within the subject building are provided in the following sub-sections.

Floor plan drawings, which include locations of the samples collected during this assessment and locations of identified hazardous building materials (where practical), are attached to this Appendix.

## 5.1-1 ASBESTOS

The Previous Reports indicated the presence of the following ACMs:

- Drywall joint compound throughout
  - Per the Stantec Building A Reports, this ACM has been removed from rooms 207, 209, 210, 213, 214, 214c in the upper level gymnasium (Unit A-R, now identified as rooms R01 – R12).
  - Per the Arcadis Hobby Shop Report, this ACM was removed only in specific locations throughout rooms 248, 247A, B & C, 239 and 236 (Hobby Shop area) to allow for duct installation
- Vinyl floor tile within room 286, 247A, 247B, 247C, and 248
  - Based on drawings and room configurations room 285 and 286 have been renovated into a single room now known as room 286. Field observations made during this assessment indicate that the vinyl floor tile currently present in room 286 is visually similar to non-ACM tile sampled in room 287 (sample A-VFT-09). The previously identified vinyl floor tile may have been removed or may still be present under the existing floor tile.

  - The Arcadis Hobby Shop Report indicates that ACM vinyl floor tile is present under tables and lockers in room 248. As this could not be confirmed during the current assessment this ACM should be presumed still to be present.
- Floor tile mastic within various areas
- Gold air duct mastic within rooms 207, 210, 211 and 213 (Unit A-R, now identified as rooms R01–R12) was removed, per the Stantec Building A Reports, where it was identified to be present. This ACM is understood to be no longer present.

In addition to the above, Stantec identified and sampled various additional suspected ACMs and/or collected confirmatory samples of previously identified ACMs. The samples collected were submitted to EMSL for analysis of asbestos content and nature.

A summary of the materials sampled as part of the current assessment, along with the sample locations and analytical results is presented in Table 5.1-1, below. A copy of the certificate of analysis provided by EMSL for the suspected ACM samples submitted as part of this assessment is attached at the end of this Appendix.

### Table 5.1-1 Suspected ACM Sample Collection and Analysis Summary Building A—Administration

| Sample Number | Material Description | Sample Location | Result (%/type asbestos) |
|---|---|---|---|
| A-VSF-01 | Vinyl sheet flooring, beige pebble patterned | Unit A-M Room 269, B.F. washroom | None Detected |
| A-VSF-02 | Vinyl sheet flooring, yellow | Unit A-W Room 298, janitor closet | None Detected |
| A-VFT-01 | Vinyl floor tile, off-white with grey smears | Unit A-R Room 102, storage | None Detected |
| A-VFT-02 | Vinyl floor tile, white with blue & red smears | Unit A-R Room 107, equipment storage | None Detected |
| A-VFT-03 | Vinyl floor tile, light grey with blue streaks | Unit A-P Room 235, librarian | None Detected |
| A-VFT-04 | Vinyl floor tile, white with dark streaks | Unit A-P Room 227, library | None Detected |
| A-VFT-05 | Vinyl floor tile, off-white with blue spots | Unit A-P Room 233, office | None Detected |
| A-VFT-06-tile | Vinyl floor tile, white with dark spots | Unit A-P Room 240, canteen | None Detected |
| A-VFT-06-mastic | Mastic applied to white vinyl floor tile with dark spots | Unit A-P Room 240, canteen | None Detected |
| **A-VFT-07-tile** | **Vinyl floor tile, off-white with light grey streaks** | **Unit A-P Room 247, storage** | **0.33% Chrysotile (see 5.1-1.2)** |
| **A-VFT-07-mastic** | **Mastic applied to off-white vinyl floor tile with light grey streaks** | **Unit A-P Room 247, storage** | **1.2% Chrysotile** |
| **A-VFT-08-tile** | **Vinyl floor tile, beige with grey streaks** | **Unit A-M Room 272, storage** | **0.27% Chrysotile (see 5.1-1.2)** |

## Table 5.1-1 Suspected ACM Sample Collection and Analysis Summary Building A—Administration

| Sample Number | Material Description | Sample Location | Result (%/type asbestos) |
|---|---|---|---|
| **A-VFT-08-mastic** | **Mastic applied to beige vinyl floor tile with grey streaks** | **Unit A-M Room 272, storage** | **1% Chrysotile** |
| A-VFT-09-tile | Vinyl floor tile, grey/taupe | Unit A-M Room 287, admin. storage | None Detected |
| A-VFT-09-mastic | Mastic applied to grey/taupe vinyl floor tile | Unit A-M Room 287, admin. storage | None Detected |
| A-VFT-10-tile | Vinyl floor tile, white with faded grey streaks | Unit A-W Room 221, corridor | None Detected |
| A-VFT-10-mastic | Mastic applied to white vinyl floor tile with faded grey streaks | Unit A-W Room 221, corridor | None Detected |
| **A-VFT-11** | **Vinyl floor tile, dark beige with brown smears** | **Unit A-W Room 226, administration & discharge** | **0.98% Chrysotile** |
| A-VFT-12 | Vinyl floor tile, cream with brown smears | Unit A-W Room 226, administration & discharge | None Detected |
| A-VFT-13 | Vinyl floor tile, tan, cream & grey smears | Unit A-W Room 295, holding cell | None Detected |
| A-VFT-14-tile | Vinyl floor tile, white with many grey speckles | Unit A-K Room 120, electrical room | None Detected |
| A-VFT-14-mastic | Mastic applied to white vinyl floor tile with many grey speckles | Unit A-K Room 120, electrical room | None Detected |
| A-VFT-15-tile | Vinyl floor tile, white with blue smears | Unit A-K Room 121, dining room | None Detected |
| A-VFT-15-mastic | Mastic applied to white vinyl floor tile with blue smears | Unit A-K Room 121, dining room | None Detected |
| **A-VFT-16** | **Vinyl floor tile, light/dark beige lines** | **Unit A-W Room 209, electronics** | **0.57% Chrysotile** |
| A-FL-01A | Floor leveller, grey | Unit A-P Room 239, leather shop | None Detected |
| A-FL-01B | Floor leveller, grey | Unit A-P Room 239, leather shop | None Detected |
| A-FL-01C | Floor leveller, grey | Unit A-P Room 239, leather shop | None Detected |
| A-CT-01A | Suspended ceiling tile, 2'x4' pinhole & small fissure pattern | Unit A-P Room 227, library | None Detected |
| A-CT-01B | Suspended ceiling tile, 2'x4' pinhole & small fissure pattern | Unit A-P Room 227, library | None Detected |
| A-CT-01C | Suspended ceiling tile, 2'x4' pinhole & small fissure pattern | Unit A-P Room 227, library | None Detected |

## Table 5.1-1 Suspected ACM Sample Collection and Analysis Summary Building A—Administration

| Sample Number | Material Description | Sample Location | Result (%/type asbestos) |
|---|---|---|---|
| A-CT-02A | Suspended ceiling tile, 2'x4' pinhole & thick short fissure pattern | Unit A-P Room 250, nat. liason office | None Detected |
| A-CT-02B | Suspended ceiling tile, 2'x4' pinhole & thick short fissure pattern | Unit A-P Room 250, nat. liason office | None Detected |
| A-CT-02C | Suspended ceiling tile, 2'x4' pinhole & thick short fissure pattern | Unit A-P Room 250, nat. liason office | None Detected |
| A-CT-03A | Suspended ceiling tile, 2'x4' dense pinhole & fissure pattern | Unit A-M Room 291, B.F. men's washroom/shower | None Detected |
| A-CT-03B | Suspended ceiling tile, 2'x4' dense pinhole & fissure pattern | Unit A-M Room 291, B.F. men's washroom/shower | None Detected |
| A-CT-03C | Suspended ceiling tile, 2'x4' dense pinhole & fissure pattern | Unit A-M Room 291, B.F. men's washroom/shower | None Detected |
| A-CT-04A | Suspended ceiling tile, 2'x4' white | Unit A-M Room 274, boardroom | None Detected |
| A-CT-04B | Suspended ceiling tile, 2'x4' white | Unit A-M Room 274, boardroom | None Detected |
| A-CT-04C | Suspended ceiling tile, 2'x4' white | Unit A-M Room 274, boardroom | None Detected |
| A-CT-05A | Suspended ceiling tile, 2'x4' 8 square pinhole fissure pattern | Unit A-M Room 296, corridor | None Detected |
| A-CT-05B | Suspended ceiling tile, 2'x4'8 square pinhole fissure pattern | Unit A-M Room 296, corridor | None Detected |
| A-CT-05C | Suspended ceiling tile, 2'x4'8 square pinhole fissure pattern | Unit A-M Room 296, corridor | None Detected |
| A-CT-06A | Suspended ceiling tile, 2'x4' pinhole & long fissure pattern | Unit A-W Room 212, preventative security | None Detected |
| A-CT-06B | Suspended ceiling tile, 2'x4' pinhole & long fissure pattern | Unit A-W Room 212, preventative security | None Detected |
| A-CT-06C | Suspended ceiling tile, 2'x4' pinhole & long fissure pattern | Unit A-W Room 212, preventative security | None Detected |
| A-CT-07A | Suspended ceiling tile, 2'x4' white textured | Unit A-K Room 107, laundry/storage | None Detected |
| A-CT-07B | Suspended ceiling tile, 2'x4' white textured | Unit A-K Room 107, laundry/storage | None Detected |
| A-CT-07C | Suspended ceiling tile, 2'x4' white textured | Unit A-K Room 107, laundry/storage | None Detected |
| A-Plas-01A | Plaster applied to wall | Unit A-W Room 222, inmate washroom/change | None Detected |

## Table 5.1-1 Suspected ACM Sample Collection and Analysis Summary Building A—Administration

| Sample Number | Material Description | Sample Location | Result (%/type asbestos) |
|---|---|---|---|
| A-Plas-01B | Plaster applied to wall | Unit A-W Room 222, inmate washroom/change | None Detected |
| A-Plas-01C | Plaster applied to wall | Unit A-W Room 222, inmate washroom/change | None Detected |
| **A-WPC-01A** | **Window pane caulking, black, door to office** | **Unit A-P Room 235, librarian** | **3.2% Chrysotile** |
| **A-WPC-01B** | **Window pane caulking, black** | **Unit A-P Room 249, nat. brotherhood office** | **Positive Stop (Not Analyzed)** |
| **A-WPC-01C** | **Window pane caulking, black** | **Unit A-P Room 218, classroom #5** | **Positive Stop (Not Analyzed)** |
| **A-WPC-01D** | **Window pane caulking, black** | **Unit A-P Room 224, classroom #3** | **Positive Stop (Not Analyzed)** |
| **A-WPC-01E** | **Window pane caulking, black, perimeter window** | **Unit A-K Room 100, storage** | **Positive Stop (Not Analyzed)** |
| **A-DM-01A** | **Duct mastic applied to seams on HVAC, silver** | **Unit A-R Room 106, B.F. men's washroom** | **2.0% Chrysotile** |
| **A-DM-01B** | **Duct mastic applied to seams on HVAC, silver** | **Unit A-R Room 106, B.F. men's washroom** | **Positive Stop (Not Analyzed)** |
| **A-DM-01C** | **Duct mastic applied to seams on HVAC, silver** | **Unit A-R Room 106, B.F. men's washroom** | **Positive Stop (Not Analyzed)** |
| A-DM-02A | Duct mastic applied to seams on HVAC, dark grey | Unit A-K Room 120, electrical room | None Detected |
| A-DM-02B | Duct mastic applied to seams on HVAC, dark grey | Unit A-K Room 120, electrical room | None Detected |
| A-DM-02C | Duct mastic applied to seams on HVAC, dark grey | Unit A-K Room 120, electrical room | None Detected |
| A-VM-01A | Vent mastic, beige | Unit A-P Room 248, hobby/craft | None Detected |
| A-VM-01B | Vent mastic, beige | Unit A-P Room 248, hobby/craft | None Detected |
| A-VM-01C | Vent mastic, beige | Unit A-P Room 248, hobby/craft | None Detected |
| A-PFI-01 | Pipe fitting insulation, white cementitious applied to domestic water lines | Unit A-R Room 109, weight room | None Detected |
| A-PFI-02 | Pipe fitting insulation, white cementitious applied to 4" rainwater leader elbow | Unit A-W Room 233, visiting lounge | None Detected |
| A-PFI-03 | Pipe fitting insulation, white cementitious, applied to cold water line | Unit A-K Room 117, mechanical room | None Detected |

## Table 5.1-1 Suspected ACM Sample Collection and Analysis Summary Building A—Administration

| Sample Number | Material Description | Sample Location | Result (%/type asbestos) |
|---|---|---|---|
| **A-PSI-01A** | **Tank insulation, white cementitious applied to horizontal 8" tank** | **Unit A-K Room 117, mechanical room** | **2.0% Chrysotile** |
| **A-PSI-01B** | **Tank insulation, white cementitious applied to horizontal 8" tank** | **Unit A-K Room 117, mechanical room** | **Positive Stop (Not Analyzed)** |
| **A-PSI-01C** | **Tank insulation, white cementitious applied to horizontal 8" tank** | **Unit A-K Room 117, mechanical room** | **Positive Stop (Not Analyzed)** |
| A-PS-01A | Pipe sealant, white applied to natural gas line | Unit A-K Room 118, mechanical room | None Detected |
| A-PS-01B | Pipe sealant, white applied to natural gas line | Unit A-K Room 118, mechanical room | None Detected |
| A-PS-01C | Pipe sealant, white applied to natural gas line | Unit A-K Room 118, mechanical room | None Detected |
| A-PS-02A | Pipe sealant, blue applied to natural gas line | Unit A-K Room 118, mechanical room | None Detected |
| A-PS-02B | Pipe sealant, blue applied to natural gas line | Unit A-K Room 118, mechanical room | None Detected |
| A-PS-02C | Pipe sealant, blue applied to natural gas line | Unit A-K Room 118, mechanical room | None Detected |
| A-PP-01A | Red wall penetration putty | Unit A-K Room 118, mechanical room | None Detected |
| A-PP-01B | Red wall penetration putty | Unit A-K Room 118, mechanical room | None Detected |
| A-PP-01C | Red wall penetration putty | Unit A-K Room 118, mechanical room | None Detected |
| A-FM-01A | Flashing mastic, grey | Roof - north | None Detected |
| A-FM-01B | Flashing mastic, grey | Roof - northeast | None Detected |
| A-FM-01C | Flashing mastic, grey | Roof - southwest | None Detected |
| A-SM-01A | Seam mastic applied to the HVAC unit, clear painted grey | Roof - southeast | None Detected |
| A-SM-01B | Seam mastic applied to the HVAC unit, clear painted grey | Roof - southeast | None Detected |
| A-SM-01C | Seam mastic applied to the HVAC unit, clear painted grey | Roof - southeast | None Detected |
| A-RVM-01A | Roof vent mastic applied to J vents, black | Roof – east of courtyard | None Detected |
| A-RVM-01B | Roof vent mastic applied to J vents, black | Roof – east of courtyard | None Detected |

## Table 5.1-1 Suspected ACM Sample Collection and Analysis Summary Building A—Administration

| Sample Number | Material Description | Sample Location | Result (%/type asbestos) |
|---|---|---|---|
| A-RVM-01C | Roof vent mastic applied to J vents, black | Roof – east of courtyard | None Detected |
| A-RSM-01A | Roof seam mastic applied to bolts & seams of ducting | Roof - southeast | None Detected |
| A-RSM-01B | Roof seam mastic applied to bolts & seams of ducting | Roof - southeast | None Detected |
| A-RSM-01C | Roof seam mastic applied to bolts & seams of ducting | Roof - southeast | None Detected |
| A-RSM-02A | Roof seam mastic applied to rooftop ducting, grey | Roof - southeast | None Detected |
| A-RSM-02B | Roof seam mastic applied to rooftop ducting, grey | Roof - southeast | None Detected |
| A-RSM-02C | Roof seam mastic applied to rooftop ducting, grey | Roof - southeast | None Detected |
| A-RM-01A | Roof membrane, tar & gravel rollout | Roof - north | None Detected |
| A-RM-01B | Roof membrane, tar & gravel rollout | Roof - north | None Detected |
| A-RM-01C | Roof membrane, tar & gravel rollout | Roof - north | None Detected |
| A-SC-01A | Seam caulking applied to exterior window frames, light grey | Exterior – Unit A-W, outside of room 212 | None Detected |
| A-SC-01B | Seam caulking applied to exterior window frames, light grey | Exterior – Unit A-W, outside of room 218 | None Detected |
| A-SC-01C | Seam caulking applied to exterior window frames, light grey | Exterior – Unit A-W, outside of room 222 | None Detected |
| A-SC-02A | Seam caulking applied to exterior wall panels, white | Exterior – Unit A-M, outside of room 297 | None Detected |
| A-SC-02B | Seam caulking applied to exterior wall panels, white | Exterior - Unit A-M, outside of room 297 | None Detected |
| A-SC-02C | Seam caulking applied to exterior wall panels, white | Exterior - Unit A-M, outside of room 297 | None Detected |
| A-DC-01A | Door caulking applied between door frame and walls, cream | Exterior – Unit A-M, outside of room 221 | None Detected |
| A-DC-01B | Door caulking applied between door frame and walls, cream | Exterior - Unit A-M, outside of room 221 | None Detected |
| A-DC-01C | Door caulking applied between door frame and walls, cream | Exterior - Unit A-M, outside of room 221 | None Detected |
| A-SC-03A | Black seam caulking | Unit A-W, north exterior wall outside cooler #6 | None Detected |
| A-SC-03B | Black seam caulking | Unit A-W, north exterior wall outside cooler #6 | None Detected |

## Table 5.1-1 Suspected ACM Sample Collection and Analysis Summary Building A—Administration

| Sample Number | Material Description | Sample Location | Result (%/type asbestos) |
|---|---|---|---|
| A-SC-03C | Black seam caulking | Unit A-W, north exterior wall outside cooler #6 | None Detected |
| A-SC-04A | Black seam caulking | Unit A-K, east exterior wall outside room 100 between concrete and window frame | None Detected |
| A-SC-04B | Black seam caulking | Unit A-K, east exterior wall outside room 100 between concrete and window frame | None Detected |
| A-SC-04C | Black seam caulking | Unit A-K, east exterior wall outside room 100 between concrete and window frame | None Detected |
| A-PS-03A | White pipe sealant | Unit A-K, outside of room 120 on sprinkler system | None Detected |
| A-PS-03B | White pipe sealant | Unit A-K, outside of room 120 on sprinkler system | None Detected |
| A-PS-03C | White pipe sealant | Unit A-K,outside of room 120 on sprinkler system | None Detected |
| A-EPP-01A | White penetration putty | Unit A-K, north exterior wall outside room 113 | None Detected |
| A-EPP-01B | White penetration putty | Unit A-K, north exterior wall outside room 113 | None Detected |
| A-EPP-01C | White penetration putty | Unit A-K, north exterior wall outside room 113 | None Detected |
| A-EFM-01A | Black foundation mastic | East exterior wall outside of room 101, gym | None Detected |
| A-EFM-01B | Black foundation mastic | East exterior wall outside of room 101, gym | None Detected |
| A-EFM-01C | Black foundation mastic | East exterior wall outside of room 101, gym | None Detected |
| A-ES-01A | Clear sealant | Unit A-K, remnant above window on north exterior wall outside room 113 | None Detected |
| A-ES-01B | Clear sealant | Unit A-K, remnant above window on north exterior wall outside room 113 | None Detected |
| A-ES-01C | Clear sealant | Unit A-K, remnant above window on north exterior wall outside room 113 | None Detected |

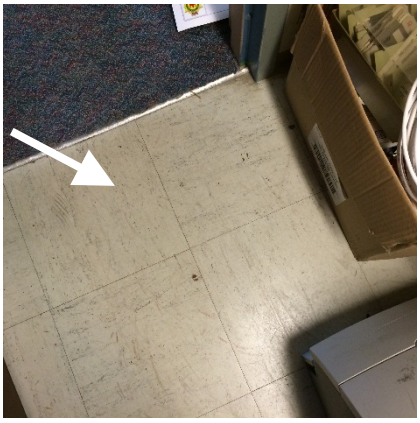
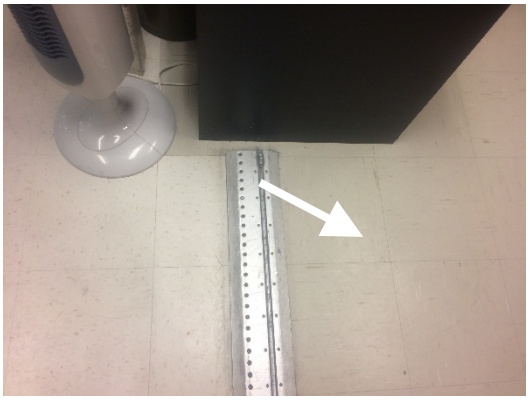
NOTE:
Bold, highlighted text indicates confirmed ACM

Based on our observations of building construction (estimated vintage of interior finishes and uniformity of building material use) and on our interpretations of the results of suspected ACM samples analysed through the current assessment along with our review of the information provided in the Previous Reports, the materials presented in Table 5.1-2, below were identified as ACMs.

## Table 5.1-2 Summary of Identified ACMs Building A—Administration

| Identified ACM Description and Condition Information | | Photo |
|---|---|---|
| **Mastic associated with floor tiles throughout (see 5.1-1.1)** | |  |
| Friability | Non-friable | |
| Condition | Good (concealed beneath floor tiles) | |
| Content | 0.5 – 1.25% (varies per report) | |
| **12"x12" off-white vinyl floor tile with light grey streaks within the following areas of Unit A-P**<br>• The storage rooms of Rooms 247A, 247B and 247C<br>• Under lockers and tables within room 248 hobby shop (Arcadis Hobby Shop report). | |  |
| Friability | Non-friable | |
| Condition | Good | |
| Content | Tile: 0.33% Chrysotile (see 5.1-1.2); 1% Chrysotile (Arcadis Hobby Shop report) | |

## Table 5.1-2 Summary of Identified ACMs Building A—Administration

| Identified ACM Description and Condition Information | | Photo |
|---|---|---|
| **12”x12” beige vinyl floor tile with grey streaks within Unit A-M, room 272, storage. (see 5.1-1.2)** | |  |
| Friability | Non-friable | |
| Condition | Good | |
| Content | Tile: 0.27% Chrysotile | |
| **12”x12” dark beige vinyl floor tile with brown smears within Unit A-W, room 226, administration and discharge.** | |  |
| Friability | Non-friable | |
| Condition | Good | |
| Content | 0.98% Chrysotile | |
| **12”x12” vinyl floor tile with light and dark beige lines within Unit A-W, room 209, electronics.** | |  |
| Friability | Non-friable | |
| Condition | Good | |
| Content | 0.57% Chrysotile | |

## Table 5.1-2 Summary of Identified ACMs Building A—Administration

| Identified ACM Description and Condition Information | | Photo |
|---|---|---|
| **Black window pane caulking applied to single pane windows and windows within doors throughout.** | |  |
| Friability | Non-friable | |
| Condition | Good | |
| Content | 3.2% Chrysotile | |
| **Silver (painted white in most locations) mastic applied to the seams of HVAC ducting throughout.** | |  |
| Friability | Non-friable | |
| Condition | Good | |
| Content | 2.0% Chrysotile | |
| **White cementitious insulation applied to horizontal 8" tank within Unit A-K, room 117, mechanical room.** | |  |
| Friability | Friable | |
| Condition | Good | |
| Content | 2.0% Chrysotile | |

**Table 5.1-2 Summary of Identified ACMs Building A—Administration**

| Identified ACM Description and Condition Information | | Photo |
|---|---|---|
| **Drywall joint compound applied to drywall walls and ceilings throughout.**<br>• This material has been removed from the interior partition walls of rooms 207, 209, 210, 213, 214, 214c (Unit A-R, now identified as rooms R01 – R12). | |  |
| Friability | Non-friable in situ, can be made friable during removal or if damaged | |
| Condition | Good | |
| Content | 0.5 - 5% Chrysotile (PGL report)<br>1 – 2% Chrysotile (Arcadis reports) | |

### 5.1-1.1 Vinyl Floor Tile Mastic

Vinyl floor tile mastic was identified as an ACM in various locations as indicated in both the PGL Report and the Arcadis Building A Report. As part of this assessment, Stantec collected additional samples of floor tile mastics in various locations and asbestos was detected in two of seven samples. Due to the concealed nature of vinyl floor tile mastic throughout, it is not practical to distinguish visually between asbestos-containing and non-asbestos-containing mastic. As such, mastic beneath vinyl floor tile throughout the subject building should be considered asbestos-containing, unless otherwise proven, through additional, potentially area-specific, analytical testing.

### 5.1-1.2 Vinyl floor tiles with less than 0.5% Asbestos

It should be noted that less than 0.5% chrysotile asbestos was detected in the samples of vinyl floor tile (off-white with light grey streaks and beige with grey streaks) collected from the storage rooms of Room 247 and Room 272 (A-VFT-07: 0.33% chrysotile and A-VFT-08: 0.27% chrysotile). Although the asbestos content in these tile samples is less than 0.5%, these floor tiles should be considered ACM, based on the following:

- The asbestos content in such floor tiles can be inconsistent, and may be found at concentrations greater than 0.5%, if additional sampling was conducted
- Information in the Previous Reports indicates the presence of ACM vinyl floor tiles in various locations, but without specific descriptions of the tile types—which may have been visually similar to the tiles in question.
- The mastic beneath the tiles is considered ACM, and the mastic will be difficult to separate from the tiles, increasing the overall asbestos content of the tile/mastic combination.

- The tile is present to a limited extent within the building (storage rooms within Room 247 and Room 272)

### 5.1-1.3 Potential Asbestos-Containing Vermiculite Insulation

As part of the assessment, Stantec assessed the subject building for areas where vermiculite insulation, a potential ACM, would likely be present. This included making note of attic spaces, floor cavities and masonry block or brick walls, which are typical areas where vermiculite is found. The following observations were made regarding the potential presence of vermiculite in the subject building:

- Some partition walls of the subject building are comprised of masonry (concrete) blocks. In most instances where masonry block walls were present, various holes, breaches and cracks were observed and no vermiculite was present. However, in those areas where other penetrations into the wall were not present, suitable location(s) for destructive assessment (drilling) that would not create disturbance to occupants or operations were not available. As such, the presence of this potential ACM cannot be ruled out without destructive testing.

## 5.1-2 LEAD

Lead is expected to be present in the following:

- Lead-acid batteries used in emergency lighting
- Older electrical wiring materials and sheathing
- Solder used on domestic water lines, in bell fittings of cast iron pipes, and in electrical equipment
- Ceramic tile glaze
- Vent and pipe flashings

The previous reports indicated the presence of the following LCPs:

- Grey/blue window bar paint
- Blue/red/white wall trim paint
- Grey/red door paint

In addition to the above, Stantec collected paint chip samples from the predominant suspected LCP applications within the subject building. A summary of the sample types, locations and analytical results is presented in Table 5.1-3, below. A copy of the certificate of analysis provided by EMSL for the suspected LCP samples submitted is attached to this Appendix.

## Table 5.1-3 Suspected LCP Sample Collection and Analysis Summary Building A—Administration

| Sample No. | Sample Colour/Substrate | Sample Location | Lab Result (ppm) |
|---|---|---|---|
| A-P-01 | Blue on concrete and wood walls | Unit A-R, Room 102, storage wall | <90 |
| A-P-02 | Purple/grey on concrete walls and bulkhead | Unit A-R, Room 103, stairwell wall | 150 |
| A-P-03 | Off-white/yellow on drywall walls | Unit A-R, Room R05, hallway wall | <140 |
| **A-P-04** | **Blue on steel columns** | **Unit A-R, Room 204A, SPO office** | **6,100** |
| A-P-05 | Beige/pink on drywall walls | Unit A-P, Room 250, nat. liaison office wall | <90 |
| A-P-06 | Red on open web steel joist | Unit A-P, Room 237, native crafts ceiling joist | <480 |
| A-P-07 | Blue/grey on drywall walls | Unit A-P, Room 239, leather shop wall | <90 |
| A-P-08 | Off-white on drywall | Unit A-P, Room 248, hobby/craft wall | <90 |
| A-P-09 | Blue trim on metal | Unit A-P, Room 226, office | <160 |
| **A-P-10** | **Blue on concrete pad** | **Unit A-M, Room 246, mechanical room, unit base** | **1,800** |
| **A-P-11** | **Grey on concrete floor** | **Unit A-M, Room 246, mechanical room floor** | **3,100** |
| A-P-12 | Light blue on drywall walls | Unit A-W, Room 218, IPSO wall | 150 |
| A-P-13 | Yellow on drywall walls | Unit A-M, Room 281, printer/photocopier wall | <90 |
| A-P-14 | Grey on concrete floor | Unit A-K, Room 115, dry storage floor | <90 |
| **A-P-15** | **Blue on concrete pads** | **Unit A-K, Room 118, mechanical room** | **4,400** |
| **A-P-16** | **Light green on drywall walls** | **Unit A-W, Room 204, corridor wall** | **780** |
| **A-P-17** | **Cream over red on structural steel** | **Unit A-W, Room 217, comm. equipment** | **2,300** |
| A-P-18 | Grey on metal siding | Exterior wall, north side | 350 |
| **A-P-19** | **Blue on metal handrail** | **Exterior hand rail outside vestibule 297** | **1,500** |
| A-P-20 | Grey on metal walls and door panel | Exterior walls and door panel outside room 120 | <90 |
| **A-P-21** | **Yellow on metal** | **Exterior natural gas piping outside room 120** | **88,000** |

## Table 5.1-3 Suspected LCP Sample Collection and Analysis Summary Building A—Administration

| Sample No. | Sample Colour/Substrate | Sample Location | Lab Result (ppm) |
|---|---|---|---|
| **A-P-22** | **Light blue on metal doors** | **Exterior double door on east side of gym** | **1,700** |
| **A-P-23** | **Dark blue on metal door** | **Exterior single door on east side of gym** | **2,000** |
| A-P-24 | Yellow on metal door | Exterior door on west side of gym | 570 |
| **A-P-25** | **Orange on metal handrail** | **Exterior handrail on south side of gym** | **62,000** |
| **A-P-26** | **Blue on metal door** | **Exterior door outside south side of room 219** | **3,600** |
| A-P-27 | Blue on drywall wall | Unit A-M, Room 241, parole boardroom wall | <90 |

NOTE:
Bold, highlighted text indicates confirmed LCP

Based on our observations and on our interpretations of suspected LCP sample analytical results, the paints presented in Table 5.1-4, below were identified as LCPs:

## Table 5.1-4 Summary of Identified LCPs Building A—Administration

| Identified LCP Description | | Photo |
|---|---|---|
| Paint colour | Blue |  |
| Substrate | Steel columns | |
| Location/approx. extent | Throughout | |
| Lead content | 6,100 ppm | |
| Condition | Good | |

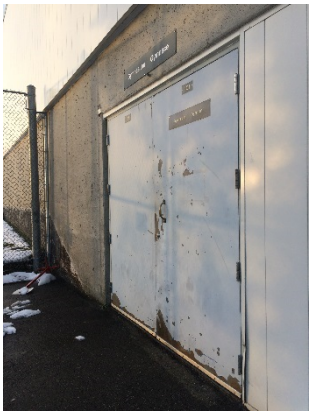
## Table 5.1-4 Summary of Identified LCPs Building A—Administration

| Identified LCP Description | | Photo |
|---|---|---|
| Paint colour | Blue |  |
| Substrate | Concrete pad | |
| Location/approx. extent | Unit A-M, Room 246, mechanical room | |
| Lead content | 1,800 ppm | |
| Condition | Poor (Flaking and peeling) | |
| Paint colour | Grey |  |
| Substrate | Concrete floor | |
| Location/approx. extent | Unit A-M, Room 246, mechanical room | |
| Lead content | 3,100 ppm | |
| Condition | Poor (Flaking and peeling) | |
| Paint colour | Blue |  |
| Substrate | Concrete pad | |
| Location/approx. extent | Unit A-K, Room 118, mechanical room | |
| Lead content | 4,400 ppm | |
| Condition | Poor (Flaking and peeling) | |

## Table 5.1-4 Summary of Identified LCPs Building A—Administration

| Identified LCP Description | | Photo |
|---|---|---|
| Paint colour | Light green |  |
| Substrate | Drywall | |
| Location/approx. extent | Unit A-W, Room 204, corridor wall | |
| Lead content | 780 ppm | |
| Condition | Good | |
| Paint colour | Cream (Red underneath) |  |
| Substrate | Structural Steel | |
| Location/approx. extent | Throughout | |
| Lead content | 2,300 ppm | |
| Condition | Good | |
| Paint colour | Blue |  |
| Substrate | Metal handrail | |
| Location/approx. extent | Around the exterior | |
| Lead content | 1,500 ppm | |
| Condition | Poor (Flaking and peeling) | |

## Table 5.1-4 Summary of Identified LCPs Building A—Administration

| Identified LCP Description | | Photo |
|---|---|---|
| Paint colour | Yellow |  |
| Substrate | Natural gas pipes | |
| Location/approx. extent | Throughout | |
| Lead content | 88,000 ppm | |
| Condition | Good | |
| Paint colour | Light blue |  |
| Substrate | Metal door | |
| Location/approx. extent | Exterior double door on east side of gym | |
| Lead content | 1,700 ppm | |
| Condition | Good with localized flaking and peeling | |
| Paint colour | Dark blue |  |
| Substrate | Metal door | |
| Location/approx. extent | Exterior single door on east side of gym | |
| Lead content | 2,000 ppm | |
| Condition | Good with localized flaking and peeling | |

## Table 5.1-4 Summary of Identified LCPs Building A—Administration

| Identified LCP Description | | Photo |
|---|---|---|
| Paint colour | Orange |  |
| Substrate | Metal handrail | |
| Location/approx. extent | Exterior handrail on south side of gym | |
| Lead content | 62,000 ppm | |
| Condition | Good | |
| Paint colour | Blue |   |
| Substrate | Metal door | |
| Location/approx. extent | Exterior door outside south side of room 219 | |
| Lead content | 3,600 ppm | |
| Condition | Good | |
| Paint colour | Grey/blue | No Photo Available |
| Substrate | Metal | |
| Location/approx. extent | Window bars | |
| Lead content | 5,500 ppm (Arcadis Cladding report) | |
| Condition | Good | |
| Paint colour | Blue/red/white | No Photo Available |
| Substrate | Various | |
| Location/approx. extent | Unit A-P, room 247C, storage, wall trim paint | |
| Lead content | 670 ppm (Arcadis Hobby Shop report) | |
| Condition | Fair | |

**Table 5.1-4 Summary of Identified LCPs Building A—Administration**

| Identified LCP Description | | Photo |
|---|---|---|
| Paint colour | Grey/red | No Photo Available |
| Substrate | Unknown | |
| Location/approx. extent | Unit A-P, room 247C, storage, Interior door | |
| Lead content | 10,000 ppm (Arcadis Hobby Shop report) | |
| Condition | Fair | |

## 5.1-3 POLYCHLORINATED BIPHENYLS

The fluorescent light fixtures throughout were observed to have high-efficiency light tubes. The ballasts within such fixtures are not suspected to contain PCBs. Based on the construction date of the subject building some older fluorescent light fixtures may be present in areas not assessed or interspersed amongst the observed high-efficiency lighting, and these ballasts may be PCB-containing.

PCBs may also be present in plastics, molded rubber parts, applied dried paints, coatings or sealants, caulking, adhesives, sound-deadening materials, insulation, or felt and fabric products such as gaskets.

## 5.1-4 MERCURY

Mercury vapour is present in the light tubes within the approximately 700 fluorescent light fixtures observed.

One thermostat with a mercury-containing switch was observed in Unit A-K, room 113, zone 5 yard post. The location of the thermostat is indicated on the floor plan drawing within this appendix.

Mercury may also be present in paints and adhesives.

## 5.1-5 MOULD

Observations pertaining to mould and/or moisture impacted building materials are summarized in the following table.

### Table 5.1-5 Mould/Moisture Observations Summary—December 20, 2016 849-14-RP Building A – Administration

| Building Area | Observation | Suspected Source of Moisture | Photo |
|---|---|---|---|
| Various locations throughout | Moisture stained suspended ceiling tiles | Pipe leaks |  |
| Unit A-P, Janitor room 232 | Suspect mould on drywall | Cleaning activities related to the slop sink |  |

## 5.1-6 OZONE-DEPLETING SUBSTANCES

The following equipment was identified by labels to have ODS-containing refrigerants:

- One rooftop Rheem air conditioning unit (R-22)
- Three rooftop Lennox HVAC units (R-22)
- Three rooftop York HVAC units (R-22)

Locations of the above-noted confirmed ODS-containing units are indicated on the attached drawings.

The following equipment was observed to contain non-ODS refrigerants:

- Three rooftop Carrier HVAC units (R-410A)
- One rooftop Engineered Air HVAC unit (R-410A)
- Two rooftop Mitsubishi HVAC units (R-410A)

## 5.1-7 SILICA

Silica is expected to be present in ceramic tiles, vinyl floor tiles, ceiling tiles, drywall, plaster, mortar, asphalt, cement, masonry block and concrete observed in various locations.

## 5.1-8 RECOMMENDATIONS

In general, identified hazardous building materials were observed to be in good condition and do not appear to require specific action to maintain compliance with applicable regulations for continued operations and maintenance. Refer to Section 5.0 of the main body of this report for applicable material-by-material general recommendations.

Additional building-specific recommendations to be considered are provided below.

### 5.1-8.1 Asbestos

If penetration into masonry wall cavities is required, and if void spaces or other penetrations are not present in that wall section/area to view whether there is insulation present within the cavity, investigation for the presence of potential asbestos-containing vermiculite will be necessary. This should only be completed by appropriately trained personnel with personal protective equipment (e.g. respiratory protection) and clean-up equipment (e.g. HEPA vacuum) appropriate for the task being performed. This can also be conducted by an outside consultant or contractor, if necessary.

### 5.1-8.2 Lead

Lead-containing paint observed in poor condition within the building should be cleaned-up and/or addressed to mitigate potential for additional deterioration and dispersal of lead-containing paint chips/dust. Consideration should be given to re-painting surfaces to mitigate the potential for additional deterioration and hazards associated with the lead-containing paint chips/dust that may be created. If re-painting is completed, appropriate precautions to protect workers and work areas from exposure to lead will be required during painting preparation activities (e.g. pre-scraping or sanding of surfaces).

Provisions for worker protection and waste disposal related to the above are included in Section 5.2 of the main body of this report.

## 5.1-8.5 Mould

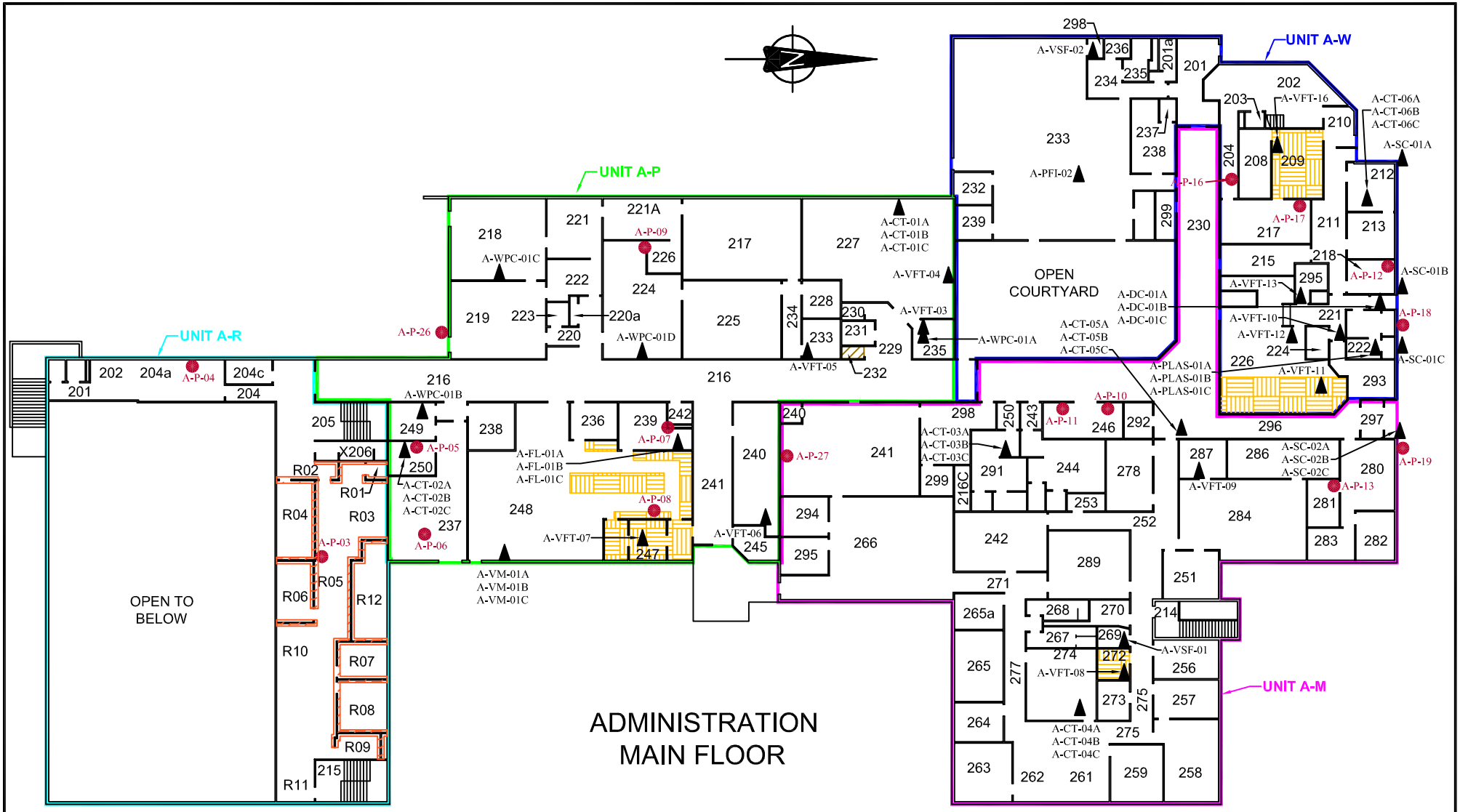
Documents published by Health Canada, Ontario Ministry of Health, American Industrial Hygiene Association (AIHA), American Conference of Governmental Industrial Hygienists (ACGIH) and others, provide guidance for interpreting the results of mold investigations. The Health Canada Guide states that:

> "Identifiable promoters of fungal growth require correction, and any visible fungi require removal."

To this end, Stantec recommends the following course of action within the subject building:

- Remove and replace moisture-stained ceiling tiles with new tiles. If staining re-appears on the new tiles, the source of moisture should be identified and corrected.
  - This work can be conducted by regular facility maintenance staff, if conducted prior to the onset of mould growth.
- Remove and dispose of approximately 2 square feet of drywall (and impacted underlying vapour retarder and insulation, if present) from the east wall of the Unit A-P Janitors room 232.
  - This work should be conducted by competent personnel, who are knowledgeable of potential hazards of mould exposure, using personal protective equipment and procedures in accordance with industry accepted practices for mould abatement (e.g., CCA 82). A specialized mould abatement contractor may be required.

An assessment to determine the likely source(s) of water staining/moisture intrusion should be undertaken. Issues leading to moisture impacts and/or mould growth should be identified and addressed prior to reinstating building materials to areas where mould abatement is conducted, to avoid the potential for re-wetting of new materials, and repeated mould growth.




**LEGEND**

- ▲ ASBESTOS BULK SAMPLE
- ● LEAD PAINT SAMPLE
- ACM VINYL FLOOR TILE
- SUSPECT MOULD
- NON-ACM PARTITION DRYWALL

**NOTES:**
1. **BLACK WINDOW PANE CAULKING THROUGHOUT IS ASBESTOS-CONTAINING.**
2. **SILVER DUCT MASTIC APPLIED TO HVAC SEAMS THROUGHOUT IS ASBESTOS-CONTAINING.**
3. **MASTIC ASSOCIATED WITH VINYL FLOOR TILES THROUGHOUT IS ASBESTOS-CONTAINING.**
4. THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

# FLOOR PLAN SHOWING HAZARDOUS BUILDING MATERIALS AND BULK SAMPLE LOCATIONS

CSC MISSION MEDIUM INSTITUTION
8751 STAVE LAKE STREET, MISSION, BC

**Client:** PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

| | |
|---|---|
| **Project No.:** | 123220769 |
| **Scale:** | N.T.S. |
| **Date:** | 17/05/11 |
| **Dwn. By:** | CD SL2017050192 VM/DM |
| **App'd By:** | TW |

**Dwg. No.:** 1.1

Stantec

| Unit A-P | | |
|---|---|---|
| Programs Corridor - Main Level | | |
| Rm. # | Name | Area m² |
| 216 | Corridor | 176.85 |
| 217 | Classroom #1 | 58.05 |
| 218 | Classroom #5 | 47.63 |
| 219 | Classroom #4 | 43.65 |
| 220 | Lobby | 10.49 |
| 220a | Electrical Room | 1.49 |
| 221 | Office #3 | 20.03 |
| 221a | Storage | 19.59 |
| 222 | Photocopy Room | 12.94 |
| 223 | Storage | 8.36 |
| 224 | Classroom #3 | 47.79 |
| 225 | Classroom #2 | 45.32 |
| 226 | Office | 6.72 |
| 227 | Library | 96.12 |
| 228 | Office | 8.87 |
| 229 | Vestibule | 11.66 |
| 230 | Washroom | 2.62 |
| 231 | B. F. Washroom | 4.78 |
| 232 | Janitor / Electrical | 1.77 |
| 233 | Office | 9.14 |
| 234 | Corridor | |
| 235 | Librarian | 10.05 |
| 236 | Hobby / Craft Office | 10.32 |
| 237 | Native Crafts | 49.64 |
| 238 | Inmate Committee | 13.69 |
| 239 | Leather Shop | 17.58 |
| 240 | Canteen | 33.87 |
| 241 | Corridor | 34.17 |
| 242 | Electrical Room | 3.21 |
| 245 | Barber | 8.46 |
| 247 | Storage | 22.14 |
| 248 | Hobby / Craft | 143.39 |
| 249 | Nat. Brotherhood Off. | 10.21 |
| 250 | Nat. Liaison Office | 10.03 |

| Unit A-W | | |
|---|---|---|
| Administration West - Main Level | | |
| Rm. # | Name | Area m² |
| 201 | Main Entrance | 21.13 |
| 201a | Men's Washroom | 7.19 |
| 202 | MCCP | 39.70 |
| 203 | Washroom | 2.47 |
| 204 | Corridor | 9.26 |
| 208 | Electronics | 13.20 |
| 209 | Electronics | 20.76 |
| 210 | MCCP Lobby | 7.72 |
| 211 | Corridor | 25.13 |
| 212 | Preventative Security | 14.63 |
| 213 | Preventative Security | 13.78 |
| 215 | Corridor | |
| 217 | Comm. Equipment | 24.10 |
| 218 | IPSO | 10.40 |
| 221 | Corridor | 13.79 |
| 222 | Inmate Wash./Change | 14.90 |
| 224 | Staff Washroom | 4.22 |
| 226 | Admission & Discharge | 74.22 |
| 232 | Interview Room | 7.66 |
| 233 | Visiting Lounge | 184.72 |
| 234 | Corridor | 12.91 |
| 235 | B. F. Female Washroom | 6.24 |
| 236 | Storage | 3.57 |
| 237 | V&C Washroom | 2.29 |
| 238 | V&C Office | 17.47 |
| 239 | Interview Room | |
| 293 | Transfer Coordinator | 14.82 |
| 295 | Holding Cell | 7.30 |
| 298 | Janitor's Closet | 2.10 |
| 299 | Screened Visits | 12.48 |

| Unit A-M | | |
|---|---|---|
| Administration - Main Level | | |
| Rm. # | Name | Area m² |
| 216c | Mechanical Shaft | 4.89 |
| 214 | Stair | 5.46 |
| 230 | Corridor | 75.38 |
| 231 | Corridor | 47.22 |
| 240 | Storage Closet | 2.72 |
| 241 | Parole Boardroom | 74.38 |
| 242 | Staff Lounge | 32.85 |
| 243 | Female Wash. Foyer | 3.80 |
| 244 | B. F. F. Wash. / Shower | 30.37 |
| 246 | Mechanical Room | 17.65 |
| 251 | Chief Admin. Services | 16.95 |
| 252 | Corridor | 31.25 |
| 253 | Network Room | 4.05 |
| 256 | IMS Office | 15.80 |
| 257 | Wardens Assistant | 15.48 |
| 258 | Warden | 28.43 |
| 259 | AW Manag. Services | 17.74 |
| 261 | AW Assistant | 15.19 |
| 262 | DW Assistant | 17.75 |
| 263 | Deputy Warden | 20.41 |
| 264 | CCO | 11.78 |
| 265 | Sentence Management | 21.42 |
| 265a | Coord. Case Manag. | 10.78 |
| 266 | Case Management | 84.29 |
| 267 | Female Washroom | 8.73 |
| 268 | Male Washroom | 8.26 |
| 269 | B. F. Washroom | 4.20 |
| 270 | Mech./Janitor Room | 5.96 |
| 271 | Corridor | 13.46 |
| 272 | Storage | 6.02 |
| 273 | Vault | 7.23 |
| 274 | Boardroom | 29.74 |
| 275 | Corridor | 25.99 |
| 276 | Corridor | 20.30 |
| 277 | Corridor | 17.30 |
| 278 | Operations Officer | 20.06 |
| 280 | Correctional Managers | 26.20 |
| 281 | Printer / Photocopier | 9.10 |
| 282 | AWO | 12.25 |
| 283 | CM Operations | 9.51 |
| 284 | Administration | 58.73 |
| 286 | Records Vault | 26.59 |
| 287 | Admin. Storage | 11.38 |

| Unit A-R | | |
|---|---|---|
| Recreation - Main Level Gymnasium | | |
| Rm. # | Name | Area m² |
| 201 | Storage / Electrical | 2.72 |
| 202 | Staff Washroom | 3.24 |
| 204 | Balcony | 28.74 |
| 204a | SPO Office | 38.81 |
| 204c | Social Program Office | 7.18 |
| 205 | Stair | 5.99 |
| 206 | Inmate Washroom | 9.37 |
| 215 | Stair | 7.05 |
| R01 | Janitor | 2.59 |
| R02 | Reception | 7.05 |
| R03 | Open Work Area | 33.61 |
| R04 | SPO | 19.68 |
| R05 | Copy / Print Area | 16.16 |
| R06 | Office | 13.91 |
| R07 | Office | 11.26 |
| R08 | Meeting Room | 15.59 |
| R09 | B. F. Staff Washroom | 8.59 |
| R10 | Open Work Area | 49.11 |
| R11 | File Area | 9.79 |
| R12 | Mechanical Room | 20.66 |

| Rm. # | Name | Area m² |
|---|---|---|
| 289 | Multi Purpose Room | 33.04 |
| 290 | Male Wash. Foyer | 3.88 |
| 291 | B. F. M. Wash./Shower | 25.45 |
| 292 | Storage | 6.62 |
| 294 | Office | 11.43 |
| 295 | Office | 11.04 |
| 296 | Corridor | 35.97 |
| 297 | North Entrance | 5.51 |
| 298 | Obs. Waiting Room | 23.37 |
| 299 | Observer Washroom | 6.10 |

## MAIN LEVEL

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

# GENERAL ROOM INFORMATION

CSC MISSION MEDIUM INSTITUTION

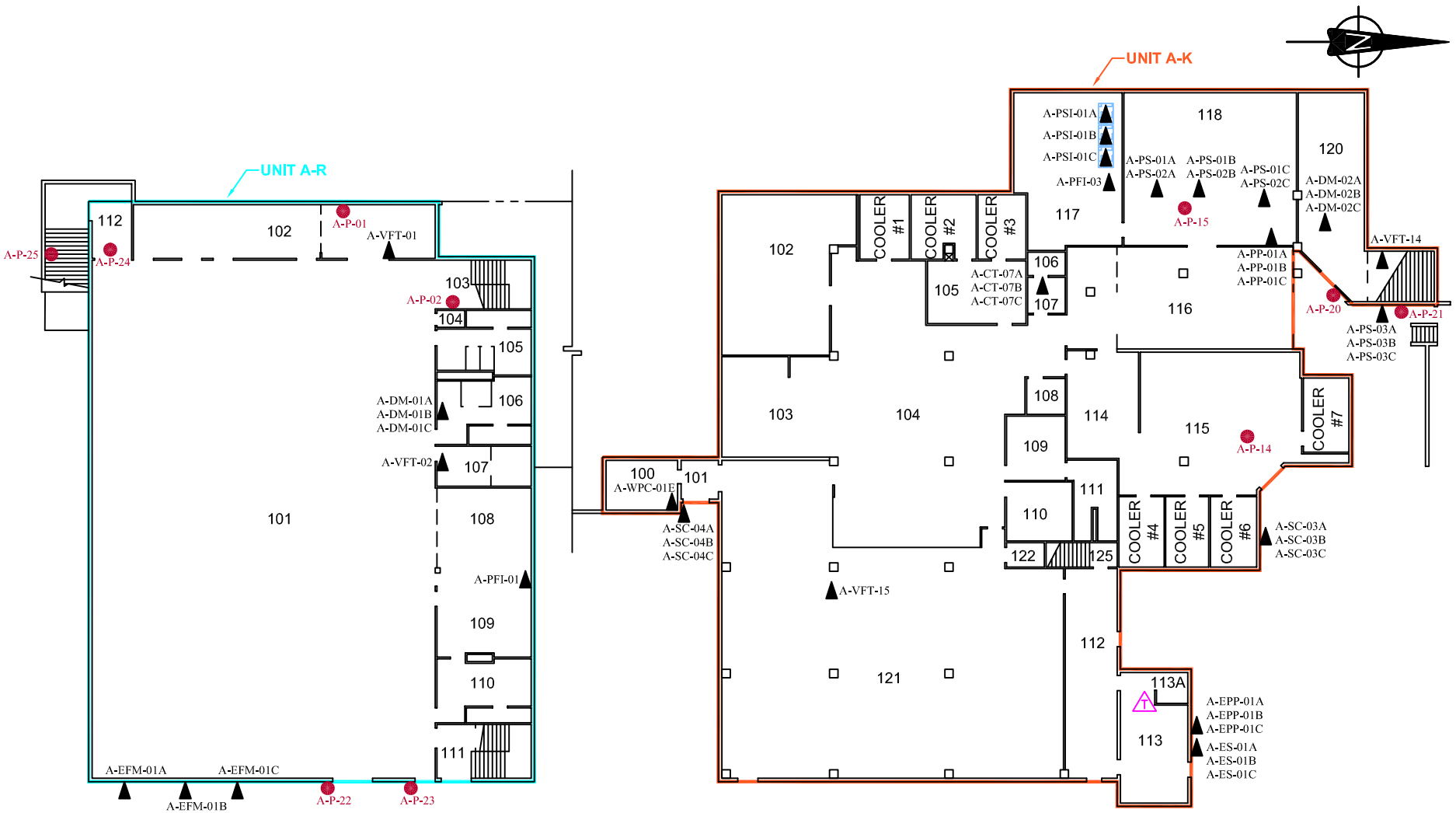
8751 STAVE LAKE STREET, MISSION, BC

**Client:** PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

| | |
|---|---|
| **Project No.:** | 123220769 |
| **Scale:** | N.T.S. |
| **Date:** | 17/03/29 |
| **Dwn. By:** | CD SL2017030297 VM/DM |
| **App'd By:** | TW |

**Dwg. No.:** 1.2

Stantec




# ADMINISTRATION
# LOWER FLOOR

**LEGEND**

- ASBESTOS BULK SAMPLE
- LEAD PAINT SAMPLE
- ACM TANK INSULATION
- MERCURY-CONTAINING THERMOSTAT

**NOTES:**
1. **BLACK WINDOW PANE CAULKING THROUGHOUT IS ASBESTOS-CONTAINING.**
2. **SILVER DUCT MASTIC APPLIED TO HVAC SEAMS THROUGHOUT IS ASBESTOS-CONTAINING.**
3. **DRYWALL JOINT COMPOUND APPLIED TO DRYWALL WALLS AND CEILINGS WAS PREVIOUSLY IDENTIFIED TO BE ASBESTOS-CONTAINING.**
4. **MASTIC ASSOCIATED WITH VINYL FLOOR TILES THROUGHOUT IS ASBESTOS-CONTAINING.**
5. THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

## FLOOR PLAN SHOWING HAZARDOUS BUILDING MATERIALS AND BULK SAMPLE LOCATIONS

CSC MISSION MEDIUM INSTITUTION
8751 STAVE LAKE STREET, MISSION, BC

**Client:** PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

| | |
|---|---|
| **Project No.:** | 123220769 |
| **Scale:** | N.T.S. |
| **Date:** | 17/05/11 |
| **Dwn. By:** | CD SL2017050193 VM/DM |
| **App'd By:** | TW |

**Dwg. No.:** 1.3

Stantec

| Unit A-R | | |
|---|---|---|
| Recreation - Lower Level Gymnasium | | |
| Rm. # | Name | Area m² |
| 101 | Gymnasium | 615.92 |
| 102 | Storage | 60.78 |
| 103 | Stair | 17.40 |
| 104 | Janitor | 2.05 |
| 105 | Women's Washroom | 20.73 |
| 106 | B. F. Men's Washroom | 23.27 |
| 107 | Equipment Storage | 14.09 |
| 108 | Weight Room | 27.22 |
| 109 | Weight Room | 29.61 |
| 110 | Storage Room | 22.88 |
| 111 | Stair | 18.18 |
| 112 | Exit | |

| Unit A-K | | |
|---|---|---|
| Kitchen - Lower Level | | |
| Rm. # | Name | Area m² |
| 100 | Storage | 14.73 |
| 101 | Lobby | 6.41 |
| 102 | Bakery | 67.95 |
| 103 | Dishwashing | 39.00 |
| 104 | Kitchen | 167.31 |
| 105 | Meat Cutting | 63.39 |
| 106 | Janitor | 3.24 |
| 107 | Laundry / Storage | 5.00 |
| 108 | B. F. Inmate Washroom / Shower | 5.24 |
| 109 | Staff Office | 13.76 |
| 110 | Chief of Food Services | |
| 111 | Staff Washroom | 12.68 |
| 112 | Corridor | 40.09 |
| 113 | Zone 5 Yard Post | 29.70 |
| 113a | Staff Washroom | 4.16 |
| 114 | Assembly Room | 25.35 |
| 115 | Dry Storage | 132.16 |
| 116 | Refrigeration/Mechanical | 81.29 |
| 117 | Mechanical Room | 58.22 |
| 118 | Mechanical Room | 95.33 |
| 120 | Electrical Room | 59.88 |
| 121 | Dining Room | 310.51 |
| 122 | Storage | 3.30 |

LOWER LEVEL

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

# GENERAL ROOM INFORMATION

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**Client:** PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

| | |
|---|---|
| **Project No.:** | 123220769 |
| **Scale:** | N.T.S. |
| **Date:** | 17/03/29 |
| **Dwn. By:** | CD SL2017030298 VM/DM |
| **App'd By:** | TW |

**Dwg. No.:** 1.4

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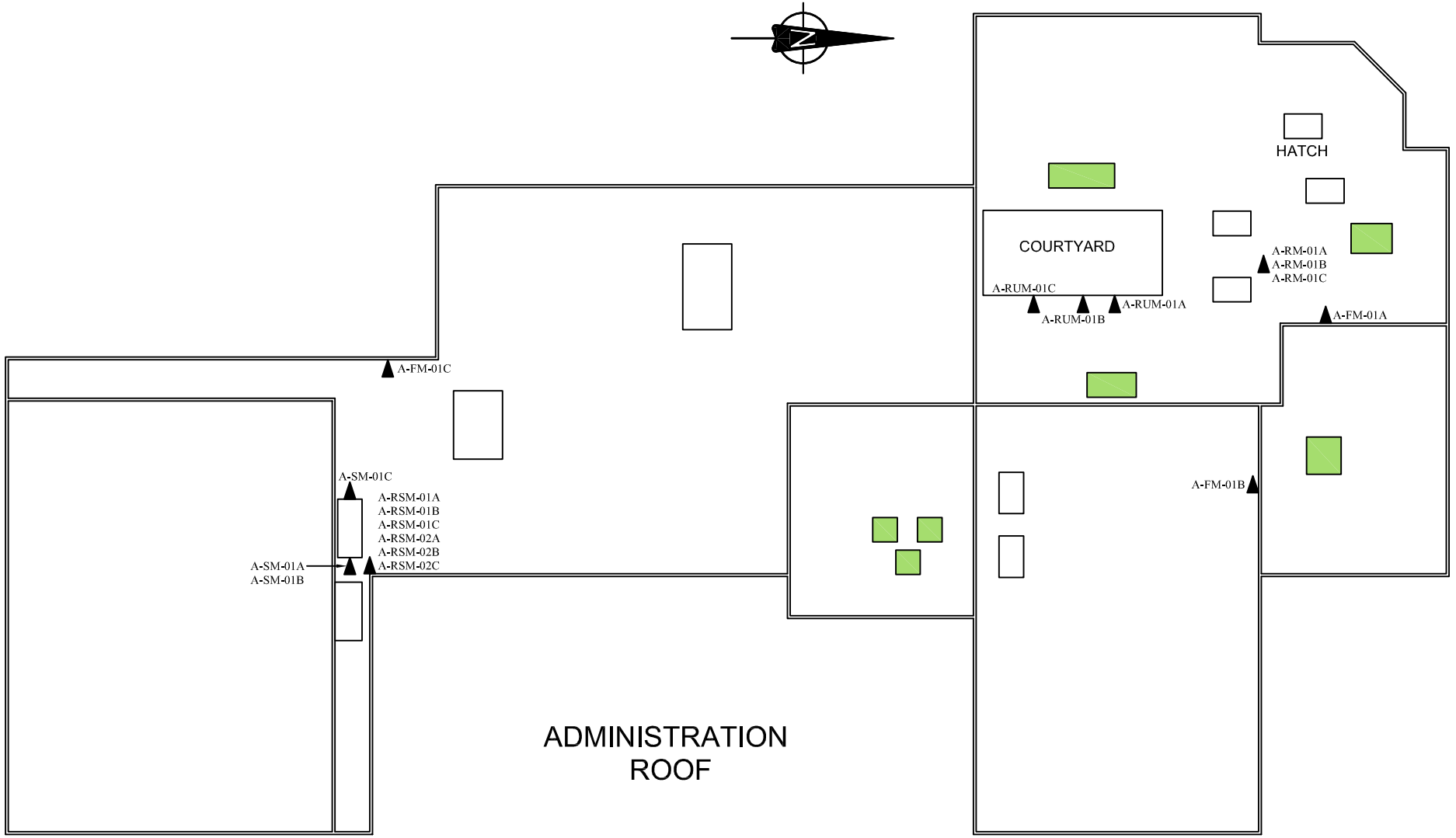


**LEGEND**

▲ ASBESTOS BULK SAMPLE

■ ODS-CONTAINING HVAC UNIT

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

# FLOOR PLAN SHOWING HAZARDOUS BUILDING MATERIALS AND BULK SAMPLE LOCATIONS

CSC MISSION MEDIUM INSTITUTION

8751 STAVE LAKE STREET, MISSION, BC

**Client:** PUBLIC WORKS AND GOVERNMENT SERVICES CANADA

| | |
|---|---|
| **Project No.:** | 123220769 |
| **Scale:** | N.T.S. |
| **Date:** | 17/05/11 |
| **Dwn. By:** | CD SL2017050194 PK/DM |
| **App'd By:** | TW |

**Dwg. No.:** 1.5

Stantec

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

**Attn:** Kim Wiese
Stantec Consulting, Ltd.
500 - 4730 Kingsway
Burnaby, BC V5H 0C6

Phone: (604) 412-3004
Fax:
Collected:
Received: 12/22/2016
Analyzed: 12/30/2016

**Proj:** 123220769 / ADMIN BUILDING

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-VSF-01 ***Lab Sample ID:*** **691601636-0001**

***Sample Description:*** UNIT A-M ROOM 269, B.F. WASHROOM/VINYL SHEET FLOORING, BEIGE PEBBLE PATTERNED

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Beige | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VSF-01 ***Lab Sample ID:*** **691601636-0002**

***Sample Description:*** UNIT A-W ROOM 298, JANITOR CLOSET/VINYL SHEET FLOORING, YELLOW

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Beige | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-01 ***Lab Sample ID:*** **691601636-0003**

***Sample Description:*** UNIT A-R ROOM 102, STORAGE/VINYL FLOOR TILE, OFF-WHITE WITH GREY SMEARS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | Recommend TEM |

***Client Sample ID:*** A-VFT-02 ***Lab Sample ID:*** **691601636-0004**

***Sample Description:*** UNIT A-R ROOM 107, EQUIPMENT STORAGE/VINYL FLOOR TILE, WHITE WITH BLUE & RED SMEARS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | Recommend TEM |

***Client Sample ID:*** A-VFT-03 ***Lab Sample ID:*** **691601636-0005**

***Sample Description:*** UNIT A-P ROOM 235, LIBRARIAN/VINYL FLOOR TILE, LIGHT GREY WITH BLUE STREAKS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-04 ***Lab Sample ID:*** **691601636-0006**

***Sample Description:*** UNIT A-P ROOM 227, LIBRARY/VINYL FLOOR TILE, WHITE WITH DARK STREAKS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-05 ***Lab Sample ID:*** **691601636-0007**

***Sample Description:*** UNIT A-W ROOM 233, VISITING LOUNGE/VINYL FLOOR TILE, OFF-WHITE WITH BLUE SPOTS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-VFT-06 ***Lab Sample ID:*** **691601636-0008**

***Sample Description:*** UNIT A-P ROOM 240, CANTEEN/VINYL FLOOR TILE, WHITE WITH DARK SPOTS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-06-Mastic ***Lab Sample ID:*** **691601636-0008A**

***Sample Description:*** UNIT A-P ROOM 240, CANTEEN/VINYL FLOOR TILE, WHITE WITH DARK SPOTS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-07-Floor Tile ***Lab Sample ID:*** **691601636-0009**

***Sample Description:*** UNIT A-P ROOM 247, STORAGE/VINYL FLOOR TILE, OFF-WHITE WITH LIGHT GREY STREAKS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 99.7% | **0.33% Chrysotile** | Recommend TEM |

***Client Sample ID:*** A-VFT-07-Mastic ***Lab Sample ID:*** **691601636-0009A**

***Sample Description:*** UNIT A-P ROOM 247, STORAGE/VINYL FLOOR TILE, OFF-WHITE WITH LIGHT GREY STREAKS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 98.8% | **1.2% Chrysotile** | |

***Client Sample ID:*** A-VFT-08-Floor Tile ***Lab Sample ID:*** **691601636-0010**

***Sample Description:*** UNIT A-M ROOM 272, STORAGE/VINYL FLOOR TILE, BEIGE WITH GREY STREAKS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 99.7% | **0.27% Chrysotile** | Recommend TEM |

***Client Sample ID:*** A-VFT-08-Mastic ***Lab Sample ID:*** **691601636-0010A**

***Sample Description:*** UNIT A-M ROOM 272, STORAGE/VINYL FLOOR TILE, BEIGE WITH GREY STREAKS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/22/2016 | Black | 0% | 99% | **1% Chrysotile** | |

***Client Sample ID:*** A-VFT-09-Floor Tile ***Lab Sample ID:*** **691601636-0011**

***Sample Description:*** UNIT A-M ROOM 287, ADMIN. STORAGE/VINYL FLOOR TILE, GREY/TAUPE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-09-Mastic ***Lab Sample ID:*** **691601636-0011A**

***Sample Description:*** UNIT A-M ROOM 287, ADMIN. STORAGE/VINYL FLOOR TILE, GREY/TAUPE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

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http://www.EMSL.com / vancouverlab@EMSL.com

EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-VFT-10-Floor Tile ***Lab Sample ID:*** **691601636-0012**

***Sample Description:*** UNIT A-W ROOM 221, CORRIDOR/VINYL FLOOR TILE, WHITE WITH FADED GREY STREAKS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-10-Mastic ***Lab Sample ID:*** **691601636-0012A**

***Sample Description:*** UNIT A-W ROOM 221, CORRIDOR/VINYL FLOOR TILE, WHITE WITH FADED GREY STREAKS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/22/2016 | Black | 0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-11 ***Lab Sample ID:*** **691601636-0013**

***Sample Description:*** UNIT A-W ROOM 226, ADMINISTRATION & DISCHARGE/VINYL FLOOR TILE, DARK BEIGE WITH BROWN SMEARS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 99.0% | **0.98% Chrysotile** | |

***Client Sample ID:*** A-VFT-12 ***Lab Sample ID:*** **691601636-0014**

***Sample Description:*** UNIT A-W ROOM 226, ADMINISTRATION & DISCHARGE/VINYL FLOOR TILE, CREAM WITH BROWN SMEARS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-13 ***Lab Sample ID:*** **691601636-0015**

***Sample Description:*** UNIT A-W ROOM 295, HOLDING CELL/VINYL FLOOR TILE, TAN, CREAM & GREY SMEARS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White/Various | 0.0% | 100% | None Detected | Recommend TEM |

***Client Sample ID:*** A-VFT-14-Floor Tile ***Lab Sample ID:*** **691601636-0016**

***Sample Description:*** UNIT A-K ROOM 120, ELECTRICAL ROOM/VINYL FLOOR TILE, WHITE WITH MANY GREY SPECKLES

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Beige | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-14-Mastic ***Lab Sample ID:*** **691601636-0016A**

***Sample Description:*** UNIT A-K ROOM 120, ELECTRICAL ROOM/VINYL FLOOR TILE, WHITE WITH MANY GREY SPECKLES

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-15-Tile ***Lab Sample ID:*** **691601636-0017**

***Sample Description:*** UNIT A-K ROOM 121, DINING ROOM/VINYL FLOOR TILE, WHITE WITH BLUE SMEARS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-VFT-15-Mastic ***Lab Sample ID:*** **691601636-0017A**

***Sample Description:*** UNIT A-K ROOM 121, DINING ROOM/VINYL FLOOR TILE, WHITE WITH BLUE SMEARS

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VFT-16 ***Lab Sample ID:*** **691601636-0018**

***Sample Description:*** UNIT A-W ROOM 209, ELECTRONICS/VINYL FLOOR TILE, LIGHT/DARK BEIGE LINES

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Beige | 0.0% | 99.4% | **0.57% Chrysotile** | |

***Client Sample ID:*** A-FL-01A ***Lab Sample ID:*** **691601636-0019**

***Sample Description:*** UNIT A-P ROOM 239, LEATHER SHOP/FLOOR LEVELLER, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 0% | 100% | None Detected | |

***Client Sample ID:*** A-FL-01B ***Lab Sample ID:*** **691601636-0020**

***Sample Description:*** UNIT A-P ROOM 239, LEATHER SHOP/FLOOR LEVELLER, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 0% | 100% | None Detected | |

***Client Sample ID:*** A-FL-01C ***Lab Sample ID:*** **691601636-0021**

***Sample Description:*** UNIT A-P ROOM 239, LEATHER SHOP/FLOOR LEVELLER, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 0% | 100% | None Detected | |

***Client Sample ID:*** A-CT-01A ***Lab Sample ID:*** **691601636-0022**

***Sample Description:*** UNIT A-P ROOM 227, LIBRARY/SUSPENDED CEILING TILE, 2'X4' PINHOLE & SMALL FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-01B ***Lab Sample ID:*** **691601636-0023**

***Sample Description:*** UNIT A-P ROOM 227, LIBRARY/SUSPENDED CEILING TILE, 2'X4' PINHOLE & SMALL FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-01C ***Lab Sample ID:*** **691601636-0024**

***Sample Description:*** UNIT A-P ROOM 227, LIBRARY/SUSPENDED CEILING TILE, 2'X4' PINHOLE & SMALL FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

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Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-CT-02A ***Lab Sample ID:*** **691601636-0025**

***Sample Description:*** UNIT A-P ROOM 250, NAT. LIASON OFFICE/SUSPENDED CEILING TILE, 2'X4' PINHOLE & THICK SHORT FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-02B ***Lab Sample ID:*** **691601636-0026**

***Sample Description:*** UNIT A-P ROOM 250, NAT. LIASON OFFICE/SUSPENDED CEILING TILE, 2'X4' PINHOLE & THICK SHORT FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-02C ***Lab Sample ID:*** **691601636-0027**

***Sample Description:*** UNIT A-P ROOM 250, NAT. LIASON OFFICE/SUSPENDED CEILING TILE, 2'X4' PINHOLE & THICK SHORT FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-03A ***Lab Sample ID:*** **691601636-0028**

***Sample Description:*** UNIT A-M ROOM 291, B.F. MEN'S WASHROOM/SHOWER/SUSPENDED CEILING TILE, 2'X4' DENSE PINHOLE & FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-03B ***Lab Sample ID:*** **691601636-0029**

***Sample Description:*** UNIT A-M ROOM 291, B.F. MEN'S WASHROOM/SHOWER/SUSPENDED CEILING TILE, 2'X4' DENSE PINHOLE & FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-03C ***Lab Sample ID:*** **691601636-0030**

***Sample Description:*** UNIT A-M ROOM 291, B.F. MEN'S WASHROOM/SHOWER/SUSPENDED CEILING TILE, 2'X4' DENSE PINHOLE & FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-04A ***Lab Sample ID:*** **691601636-0031**

***Sample Description:*** UNIT A-M ROOM 274, BOARDROOM/SUSPENDED CEILING TILE, 2'X4' WHITE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-04B ***Lab Sample ID:*** **691601636-0032**

***Sample Description:*** UNIT A-M ROOM 274, BOARDROOM/SUSPENDED CEILING TILE, 2'X4' WHITE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-CT-04C ***Lab Sample ID:*** **691601636-0033**

***Sample Description:*** UNIT A-M ROOM 274, BOARDROOM/SUSPENDED CEILING TILE, 2'X4' WHITE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-05A ***Lab Sample ID:*** **691601636-0034**

***Sample Description:*** UNIT A-M ROOM 296, CORRIDOR/SUSPENDED CEILING TILE, 2'X4'8 SQUARE PINHOLE FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-05B ***Lab Sample ID:*** **691601636-0035**

***Sample Description:*** UNIT A-M ROOM 296, CORRIDOR/SUSPENDED CEILING TILE, 2'X4'8 SQUARE PINHOLE FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-05C ***Lab Sample ID:*** **691601636-0036**

***Sample Description:*** UNIT A-M ROOM 296, CORRIDOR/SUSPENDED CEILING TILE, 2'X4'8 SQUARE PINHOLE FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-06A ***Lab Sample ID:*** **691601636-0037**

***Sample Description:*** UNIT A-W ROOM 212, PREVENTATIVE SECURITY/SUSPENDED CEILING TILE, 2'X4' PINHOLE & LONG FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-06B ***Lab Sample ID:*** **691601636-0038**

***Sample Description:*** UNIT A-W ROOM 212, PREVENTATIVE SECURITY/SUSPENDED CEILING TILE, 2'X4' PINHOLE & LONG FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-06C ***Lab Sample ID:*** **691601636-0039**

***Sample Description:*** UNIT A-W ROOM 212, PREVENTATIVE SECURITY/SUSPENDED CEILING TILE, 2'X4' PINHOLE & LONG FISSURE PATTERN

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-07A ***Lab Sample ID:*** **691601636-0040**

***Sample Description:*** UNIT A-K ROOM 107, LAUNDRY/STORAGE/SUSPENDED CEILING TILE, 2'X4' WHITE TEXTURED

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

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Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-CT-07B **Lab Sample ID:** **691601636-0041**

***Sample Description:*** UNIT A-K ROOM 107, LAUNDRY/STORAGE/SUSPENDED CEILING TILE, 2'X4' WHITE TEXTURED

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-CT-07C **Lab Sample ID:** **691601636-0042**

***Sample Description:*** UNIT A-K ROOM 107, LAUNDRY/STORAGE/SUSPENDED CEILING TILE, 2'X4' WHITE TEXTURED

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 80% | 20% | None Detected | |

***Client Sample ID:*** A-PLAS-01A **Lab Sample ID:** **691601636-0043**

***Sample Description:*** UNIT A-W ROOM 222, INMATE WASHROOM/CHANGE/PLASTER APPLIED TO WALL

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 0% | 100% | None Detected | |

***Client Sample ID:*** A-PLAS-01B **Lab Sample ID:** **691601636-0044**

***Sample Description:*** UNIT A-W ROOM 222, INMATE WASHROOM/CHANGE/PLASTER APPLIED TO WALL

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 0% | 100% | None Detected | |

***Client Sample ID:*** A-PLAS-01C **Lab Sample ID:** **691601636-0045**

***Sample Description:*** UNIT A-W ROOM 222, INMATE WASHROOM/CHANGE/PLASTER APPLIED TO WALL

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 0% | 100% | None Detected | |

***Client Sample ID:*** A-WPC-01A **Lab Sample ID:** **691601636-0046**

***Sample Description:*** UNIT A-W ROOM 235, B.F. FEMALE WASHROOM/WINDOW PANE CAULKING, BLACK, DOOR TO OFFICE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 96.8% | **3.2% Chrysotile** | |

***Client Sample ID:*** A-WPC-01B **Lab Sample ID:** **691601636-0047**

***Sample Description:*** UNIT A-P ROOM 249, NAT. BROTHERHOOD OFFICE/WINDOW PANE CAULKING, BLACK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | | | | Positive Stop (Not Analyzed) | |

***Client Sample ID:*** A-WPC-01C **Lab Sample ID:** **691601636-0048**

***Sample Description:*** UNIT A-P ROOM 218, CLASSROOM #5/WINDOW PANE CAULKING, BLACK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | | | | Positive Stop (Not Analyzed) | |

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## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-WPC-01D ***Lab Sample ID:*** **691601636-0049**

***Sample Description:*** UNIT A-P ROOM 224, CLASSROOM #3/WINDOW PANE CAULKING, BLACK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | | | Positive Stop (Not Analyzed) | | |

***Client Sample ID:*** A-WPC-01E ***Lab Sample ID:*** **691601636-0050**

***Sample Description:*** UNIT A-K ROOM 100, STORAGE/WINDOW PANE CAULKING, BLACK, PERIMETER WINDOW

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | | | Positive Stop (Not Analyzed) | | |

***Client Sample ID:*** A-DM-01A ***Lab Sample ID:*** **691601636-0051**

***Sample Description:*** UNIT A-R ROOM 106, B.F. MEN'S WASHROOM/DUCT MASTIC APPLIED TO SEAMS ON HVAC, SILVER

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 98.0% | **2.0% Chrysotile** | |

***Client Sample ID:*** A-DM-01B ***Lab Sample ID:*** **691601636-0052**

***Sample Description:*** UNIT A-R ROOM 106, B.F. MEN'S WASHROOM/DUCT MASTIC APPLIED TO SEAMS ON HVAC, SILVER

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/30/2016 | | | Positive Stop (Not Analyzed) | | |

***Client Sample ID:*** A-DM-01C ***Lab Sample ID:*** **691601636-0053**

***Sample Description:*** UNIT A-R ROOM 106, B.F. MEN'S WASHROOM/DUCT MASTIC APPLIED TO SEAMS ON HVAC, SILVER

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | | | Positive Stop (Not Analyzed) | | |

***Client Sample ID:*** A-DM-02A ***Lab Sample ID:*** **691601636-0054**

***Sample Description:*** UNIT A-K ROOM 120, ELECTRICAL ROOM/DUCT MASTIC APPLIED TO SEAMS ON HVAC, DARK GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-DM-02B ***Lab Sample ID:*** **691601636-0055**

***Sample Description:*** UNIT A-K ROOM 120, ELECTRICAL ROOM/DUCT MASTIC APPLIED TO SEAMS ON HVAC, DARK GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-DM-02C ***Lab Sample ID:*** **691601636-0056**

***Sample Description:*** UNIT A-K ROOM 120, ELECTRICAL ROOM/DUCT MASTIC APPLIED TO SEAMS ON HVAC, DARK GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

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## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-VM-01A **Lab Sample ID:** **691601636-0057**
***Sample Description:*** UNIT A-P ROOM 248, HOBBY/CRAFT/VENT MASTIC, BEIGE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Brown | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VM-01B **Lab Sample ID:** **691601636-0058**
***Sample Description:*** UNIT A-P ROOM 248, HOBBY/CRAFT/VENT MASTIC, BEIGE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Brown | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-VM-01C **Lab Sample ID:** **691601636-0059**
***Sample Description:*** UNIT A-P ROOM 248, HOBBY/CRAFT/VENT MASTIC, BEIGE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Brown | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-PFI-01 **Lab Sample ID:** **691601636-0060**
***Sample Description:*** UNIT A-R ROOM 109, WEIGHT ROOM/PIPE FITTING INSULATION, WHITE CEMENTITIOUS APPLIED TO DOMESTIC WATER LINES

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Beige | 65% | 35% | None Detected | |

***Client Sample ID:*** A-PFI-02 **Lab Sample ID:** **691601636-0061**
***Sample Description:*** UNIT A-W ROOM 233, VISITING LOUNGE/PIPE FITTING INSULATION, WHITE CEMENTITIOUS APPLIED TO 4" RAINWATER LEADER ELBOW

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Beige | 65% | 35% | None Detected | |

***Client Sample ID:*** A-PFI-03 **Lab Sample ID:** **691601636-0062**
***Sample Description:*** UNIT A-K ROOM 117, MECHANICAL ROOM/PIPE FITTING INSULATION, WHITE CEMENTITIOUS, APPLIED TO COLD WATER LINE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Beige | 65% | 35% | None Detected | |

***Client Sample ID:*** A-PSI-01A **Lab Sample ID:** **691601636-0063**
***Sample Description:*** UNIT A-K ROOM 117, MECHANICAL ROOM/TANK INSULATION, WHITE CEMENTITIOUS APPLIED TO HORIZONTAL 8" TANK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | White | 10% | 88% | **2% Chrysotile** | |

***Client Sample ID:*** A-PSI-01B **Lab Sample ID:** **691601636-0064**
***Sample Description:*** UNIT A-K ROOM 117, MECHANICAL ROOM/TANK INSULATION, WHITE CEMENTITIOUS APPLIED TO HORIZONTAL 8" TANK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | | | | Positive Stop (Not Analyzed) | |

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## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-PSI-01C **Lab Sample ID:** **691601636-0065**

***Sample Description:*** UNIT A-K ROOM 117, MECHANICAL ROOM/TANK INSULATION, WHITE CEMENTITIOUS APPLIED TO HORIZONTAL 8" TANK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | | | Positive Stop (Not Analyzed) | | |

***Client Sample ID:*** A-PS-01A **Lab Sample ID:** **691601636-0066**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/PIPE SEALANT, WHITE APPLIED TO NATURAL GAS LINE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | White | 0% | 100% | None Detected | |

***Client Sample ID:*** A-PS-01B **Lab Sample ID:** **691601636-0067**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/PIPE SEALANT, WHITE APPLIED TO NATURAL GAS LINE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | White | 0% | 100% | None Detected | |

***Client Sample ID:*** A-PS-01C **Lab Sample ID:** **691601636-0068**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/PIPE SEALANT, WHITE APPLIED TO NATURAL GAS LINE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-PS-02A **Lab Sample ID:** **691601636-0069**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/PIPE SEALANT, BLUE APPLIED TO NATURAL GAS LINE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Blue | 3.7% | 96.3% | None Detected | |

***Client Sample ID:*** A-PS-02B **Lab Sample ID:** **691601636-0070**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/PIPE SEALANT, BLUE APPLIED TO NATURAL GAS LINE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Blue | 3.8% | 96.2% | None Detected | |

***Client Sample ID:*** A-PS-02C **Lab Sample ID:** **691601636-0071**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/PIPE SEALANT, BLUE APPLIED TO NATURAL GAS LINE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Blue | 2% | 98% | None Detected | |

***Client Sample ID:*** A-PP-01A **Lab Sample ID:** **691601636-0072**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/RED WALL PENETRATION PUTTY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Red | 0.0% | 100% | None Detected | |

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## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-PP-01B ***Lab Sample ID:*** **691601636-0073**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/RED WALL PENETRATION PUTTY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Red | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-PP-01C ***Lab Sample ID:*** **691601636-0074**

***Sample Description:*** UNIT A-K ROOM 118, MECHANICAL ROOM/RED WALL PENETRATION PUTTY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Red | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-FM-01A ***Lab Sample ID:*** **691601636-0075**

***Sample Description:*** ROOF/FLASHING MASTIC, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-FM-01B ***Lab Sample ID:*** **691601636-0076**

***Sample Description:*** ROOF/FLASHING MASTIC, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-FM-01C ***Lab Sample ID:*** **691601636-0077**

***Sample Description:*** ROOF/FLASHING MASTIC, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SM-01A ***Lab Sample ID:*** **691601636-0078**

***Sample Description:*** ROOF/SEAM MASTIC APPLIED TO THE HVAC UNIT, CLEAR PAINTED GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SM-01B ***Lab Sample ID:*** **691601636-0079**

***Sample Description:*** ROOF/SEAM MASTIC APPLIED TO THE HVAC UNIT, CLEAR PAINTED GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SM-01C ***Lab Sample ID:*** **691601636-0080**

***Sample Description:*** ROOF/SEAM MASTIC APPLIED TO THE HVAC UNIT, CLEAR PAINTED GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

# EMSL Canada Inc.

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http://www.EMSL.com / vancouverlab@EMSL.com


EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-RVM-01A ***Lab Sample ID:*** **691601636-0081**

***Sample Description:*** ROOF/ROOF VENT MASTIC APPLIED TO J VENTS, BLACK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Brown | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RVM-01B ***Lab Sample ID:*** **691601636-0082**

***Sample Description:*** ROOF/ROOF VENT MASTIC APPLIED TO J VENTS, BLACK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Brown | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RVM-01C ***Lab Sample ID:*** **691601636-0083**

***Sample Description:*** ROOF/ROOF VENT MASTIC APPLIED TO J VENTS, BLACK

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Brown | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RSM-01A ***Lab Sample ID:*** **691601636-0084**

***Sample Description:*** ROOF/ROOF SEAM MASTIC APPLIED TO BOLTS & SEAMS OF DUCTING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RSM-01B ***Lab Sample ID:*** **691601636-0085**

***Sample Description:*** ROOF/ROOF SEAM MASTIC APPLIED TO BOLTS & SEAMS OF DUCTING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RSM-01C ***Lab Sample ID:*** **691601636-0086**

***Sample Description:*** ROOF/ROOF SEAM MASTIC APPLIED TO BOLTS & SEAMS OF DUCTING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RSM-02A ***Lab Sample ID:*** **691601636-0087**

***Sample Description:*** ROOF/ROOF SEAM MASTIC APPLIED TO ROOFTOP DUCTING, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RSM-02B ***Lab Sample ID:*** **691601636-0088**

***Sample Description:*** ROOF/ROOF SEAM MASTIC APPLIED TO ROOFTOP DUCTING, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-RSM-02C ***Lab Sample ID:*** **691601636-0089**

***Sample Description:*** ROOF/ROOF SEAM MASTIC APPLIED TO ROOFTOP DUCTING, GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RM-01A ***Lab Sample ID:*** **691601636-0090**

***Sample Description:*** ROOF/ROOF MEMBRANE, TAR & GRAVEL ROLLOUT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RM-01B ***Lab Sample ID:*** **691601636-0091**

***Sample Description:*** ROOF/ROOF MEMBRANE, TAR & GRAVEL ROLLOUT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-RM-01C ***Lab Sample ID:*** **691601636-0092**

***Sample Description:*** ROOF/ROOF MEMBRANE, TAR & GRAVEL ROLLOUT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-01A ***Lab Sample ID:*** **691601636-0093**

***Sample Description:*** EXTERIOR/SEAM CAULKING APPLIED TO EXTERIOR WINDOW FRAMES, LIGHT GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-01B ***Lab Sample ID:*** **691601636-0094**

***Sample Description:*** EXTERIOR/SEAM CAULKING APPLIED TO EXTERIOR WINDOW FRAMES, LIGHT GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-01C ***Lab Sample ID:*** **691601636-0095**

***Sample Description:*** EXTERIOR/SEAM CAULKING APPLIED TO EXTERIOR WINDOW FRAMES, LIGHT GREY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-02A ***Lab Sample ID:*** **691601636-0096**

***Sample Description:*** EXTERIOR/SEAM CAULKING APPLIED TO EXTERIOR WALL PANELS, WHITE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-SC-02B **Lab Sample ID:** **691601636-0097**

***Sample Description:*** EXTERIOR/SEAM CAULKING APPLIED TO EXTERIOR WALL PANELS, WHITE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-02C **Lab Sample ID:** **691601636-0098**

***Sample Description:*** EXTERIOR/SEAM CAULKING APPLIED TO EXTERIOR WALL PANELS, WHITE

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-DC-01A **Lab Sample ID:** **691601636-0099**

***Sample Description:*** EXTERIOR/DOOR CAULKING APPLIED BETWEEN DOOR FRAME AND WALLS, CREAM

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-DC-01B **Lab Sample ID:** **691601636-0100**

***Sample Description:*** EXTERIOR/DOOR CAULKING APPLIED BETWEEN DOOR FRAME AND WALLS, CREAM

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-DC-01C **Lab Sample ID:** **691601636-0101**

***Sample Description:*** EXTERIOR/DOOR CAULKING APPLIED BETWEEN DOOR FRAME AND WALLS, CREAM

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-03A **Lab Sample ID:** **691601636-0102**

***Sample Description:*** NORTH EXTERIOR WALL OUTSIDE COOLER #6/BLACK SEAM CAULKING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-03B **Lab Sample ID:** **691601636-0103**

***Sample Description:*** NORTH EXTERIOR WALL OUTSIDE COOLER #6/BLACK SEAM CAULKING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-03C **Lab Sample ID:** **691601636-0104**

***Sample Description:*** NORTH EXTERIOR WALL OUTSIDE COOLER #6/BLACK SEAM CAULKING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-SC-04A **Lab Sample ID:** **691601636-0105**
***Sample Description:*** EAST EXTERIOR WALL OUTSIDE ROOM 100 BETWEEN CONCRETE AND WINDOW FRAME/BLACK SEAM CAULKING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-04B **Lab Sample ID:** **691601636-0106**
***Sample Description:*** EAST EXTERIOR WALL OUTSIDE ROOM 100 BETWEEN CONCRETE AND WINDOW FRAME/BLACK SEAM CAULKING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Gray | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-SC-04C **Lab Sample ID:** **691601636-0107**
***Sample Description:*** EAST EXTERIOR WALL OUTSIDE ROOM 100 BETWEEN CONCRETE AND WINDOW FRAME/BLACK SEAM CAULKING

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-PS-03A **Lab Sample ID:** **691601636-0108**
***Sample Description:*** OUTSIDE OF ROOM 120 ON SPRINKLER SYSTEM/WHITE PIPE SEALANT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | White | 0% | 100% | None Detected | |

***Client Sample ID:*** A-PS-03B **Lab Sample ID:** **691601636-0109**
***Sample Description:*** OUTSIDE OF ROOM 120 ON SPRINKLER SYSTEM/WHITE PIPE SEALANT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | White | 0% | 100% | None Detected | |

***Client Sample ID:*** A-PS-03C **Lab Sample ID:** **691601636-0110**
***Sample Description:*** OUTSIDE OF ROOM 120 ON SPRINKLER SYSTEM/WHITE PIPE SEALANT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | White | 0% | 100% | None Detected | |

***Client Sample ID:*** A-EPP-01A **Lab Sample ID:** **691601636-0111**
***Sample Description:*** NORTH EXTERIOR WALL OUTSIDE ROOM 113/WHITE PENETRATION PUTTY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM | 12/28/2016 | Gray | 0% | 100% | None Detected | |

***Client Sample ID:*** A-EPP-01B **Lab Sample ID:** **691601636-0112**
***Sample Description:*** NORTH EXTERIOR WALL OUTSIDE ROOM 113/WHITE PENETRATION PUTTY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

***Client Sample ID:*** A-EPP-01C ***Lab Sample ID:*** **691601636-0113**

***Sample Description:*** NORTH EXTERIOR WALL OUTSIDE ROOM 113/WHITE PENETRATION PUTTY

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | White | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-EFM-01A ***Lab Sample ID:*** **691601636-0114**

***Sample Description:*** EAST EXTERIOR WALL OUTSIDE OF GYM/BLACK FOUNDATION MASTIC

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-EFM-01B ***Lab Sample ID:*** **691601636-0115**

***Sample Description:*** EAST EXTERIOR WALL OUTSIDE OF GYM/BLACK FOUNDATION MASTIC

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-EFM-01C ***Lab Sample ID:*** **691601636-0116**

***Sample Description:*** EAST EXTERIOR WALL OUTSIDE OF GYM/BLACK FOUNDATION MASTIC

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Black | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-ES-01A ***Lab Sample ID:*** **691601636-0117**

***Sample Description:*** REMNANT ABOVE WINDOW ON NORTH EXTERIOR WALL OUTSIDE ROOM 113/CLEAR SEALANT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Clear | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-ES-01B ***Lab Sample ID:*** **691601636-0118**

***Sample Description:*** REMNANT ABOVE WINDOW ON NORTH EXTERIOR WALL OUTSIDE ROOM 113/CLEAR SEALANT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Clear | 0.0% | 100% | None Detected | |

***Client Sample ID:*** A-ES-01C ***Lab Sample ID:*** **691601636-0119**

***Sample Description:*** REMNANT ABOVE WINDOW ON NORTH EXTERIOR WALL OUTSIDE ROOM 113/CLEAR SEALANT

| TEST | Analyzed Date | Color | Non-Asbestos Fibrous | Non-Asbestos Non-Fibrous | Asbestos | Comment |
|---|---|---|---|---|---|---|
| PLM Grav. Reduction | 12/30/2016 | Clear | 0.0% | 100% | None Detected | |

**EMSL Canada Inc.**

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EMSL Canada Order 691601636
Customer ID: 55JACQ30L
Customer PO: 123220769
Project ID:

## Test Report: Asbestos Analysis in Bulk Material for Occupational Health and Safety British Columbia Regulation 188/2011 via EPA 600/R-93/116 Method

**Analyst(s):**

| | |
|---|---|
| Jon Delos Santos | PLM Grav. Reduction (22) |
| Kathleen Cruz | PLM (27) |
| Natalie D'Amico | PLM Grav. Reduction (56) |
| Nicole Yeo | PLM (13) |

**Reviewed and approved by:**

Nicole Yeo, Laboratory Manager
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government.

Samples analyzed by EMSL Canada Inc. Burnaby, BC

Report amended: 03/06/201718:27:09 Replaces initial report from: 12/30/201616:47:44 Reason Code: DataEntry-Other (see report comment)

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| | |
|---|---|
| EMSL Canada Or | 551700077 |
| CustomerID: | 55JACQ30L |
| CustomerPO: | 123220769 |
| ProjectID: | |

Attn: **Steve Chou**
**Stantec Consulting, Ltd.**
**500 - 4730 Kingsway**
**Burnaby, BC V5H 0C6**

Phone: (604) 412-3004
Fax:
Received: 01/04/17 10:37 AM
Collected:

Project: **CSC MISSION/123220769 ADMIN**

# Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead Concentration* |
|---|---|---|---|---|
| A-P-01 | *551700077-0001* | | 1/9/2017 | <90 ppm |
| | Site: Unit A-R 102, storage<br>Desc: Blue on concrete and wood walls | | | |
| A-P-02 | *551700077-0002* | | 1/9/2017 | 150 ppm |
| | Site: Unit A-R 103, stairwell<br>Desc: Purple/grey on concrete walls | | | |
| A-P-03 | *551700077-0003* | | 1/9/2017 | <140 ppm |
| | Site: Unit A-R RO5, hallway<br>Desc: Off-white/ yellow on drywall<br>Insufficient sample to reach reporting limit. | | | |
| A-P-04 | *551700077-0004* | | 1/9/2017 | 6100 ppm |
| | Site: Unit A-R 204A, SPO office<br>Desc: Blue on steel columns | | | |
| A-P-05 | *551700077-0005* | | 1/9/2017 | <90 ppm |
| | Site: Unit A-P 250, nat. liaison office<br>Desc: Beige/pink on drywall | | | |
| A-P-06 | *551700077-0006* | | 1/9/2017 | <480 ppm |
| | Site: Unit A-P 237, native crafts<br>Desc: Red on open web steel joist<br>Insufficient sample to reach reporting limit. | | | |
| A-P-07 | *551700077-0007* | | 1/9/2017 | <90 ppm |
| | Site: Unit A-P 239, leather shop<br>Desc: Blue/grey on drywall | | | |
| A-P-08 | *551700077-0008* | | 1/9/2017 | <90 ppm |
| | Site: Unit A-P 248, hobby/ craft<br>Desc: Off-white on drywall | | | |
| A-P-09 | *551700077-0009* | | 1/9/2017 | <160 ppm |
| | Site: Unit A-P 226, office<br>Desc: Blue trim on metal<br>Insufficient sample to reach reporting limit. | | | |
| A-P-10 | *551700077-0010* | | 1/9/2017 | 1800 ppm |
| | Site: Unit A-M 246, unit base<br>Desc: Blue on HVAC | | | |

Rowena Fanto, Lead Supervisor
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Environmental Testing Cert #2845.08

Initial report from 01/11/2017 08:07:00

**EMSL Canada Inc.**
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| | |
|---|---|
| EMSL Canada Or | 551700077 |
| CustomerID: | 55JACQ30L |
| CustomerPO: | 123220769 |
| ProjectID: | |

Attn: **Steve Chou**
**Stantec Consulting, Ltd.**
**500 - 4730 Kingsway**
**Burnaby, BC V5H 0C6**

Phone: (604) 412-3004
Fax:
Received: 01/04/17 10:37 AM
Collected:

Project: **CSC MISSION/123220769 ADMIN**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead Concentration* |
|---|---|---|---|---|
| A-P-11 | *551700077-0011* | | 1/9/2017 | 3100 ppm |
| | Site: Unit A-M 246, mechanical room<br>Desc: Grey on concrete floor | | | |
| A-P-12 | *551700077-0012* | | 1/9/2017 | 150 ppm |
| | Site: Unit A-M 218, IPSO<br>Desc: Light blue on drywall | | | |
| A-P-13 | *551700077-0013* | | 1/9/2017 | <90 ppm |
| | Site: Unit A-M 281, printer/ photocopier<br>Desc: Yellow on drywall | | | |
| A-P-14 | *551700077-0014* | | 1/9/2017 | <90 ppm |
| | Site: Unit A-K 115, dry storage<br>Desc: Grey on concrete floor | | | |
| A-P-15 | *551700077-0015* | | 1/9/2017 | 4400 ppm |
| | Site: Unit A-K 118, mechanical room<br>Desc: Blue on concrete blocks | | | |
| A-P-16 | *551700077-0016* | | 1/9/2017 | 780 ppm |
| | Site: Unit A-W 204, corridor<br>Desc: Light green on drywall | | | |
| A-P-17 | *551700077-0017* | | 1/9/2017 | 2300 ppm |
| | Site: Unit A-W 217, comm. equipment<br>Desc: Cream over red on structural steel | | | |
| A-P-18 | *551700077-0018* | | 1/9/2017 | 350 ppm |
| | Site: Exterior walls<br>Desc: Grey on metal | | | |
| A-P-19 | *551700077-0019* | | 1/9/2017 | 1500 ppm |
| | Site: Exterior hand rail outside vestibule 297<br>Desc: Blue on metal | | | |
| A-P-20 | *551700077-0020* | | 1/9/2017 | <90 ppm |
| | Site: Exterior walls and door panel outside room 120<br>Desc: Grey on metal | | | |
| A-P-21 | *551700077-0021* | | 1/9/2017 | 88000 ppm |
| | Site: Exterior natural gas piping outside room 120<br>Desc: Yellow on metal | | | |

Rowena Fanto, Lead Supervisor
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Environmental Testing Cert #2845.08

Initial report from 01/11/2017 08:07:00

**EMSL Canada Inc.**
**2756 Slough Street, Mississauga, ON L9T 5N4**
Phone/Fax: 289-997-4602 / (289) 997-4607
http://www.EMSL.com torontolab@emsl.com

| | |
|---|---|
| EMSL Canada Or | 551700077 |
| CustomerID: | 55JACQ30L |
| CustomerPO: | 123220769 |
| ProjectID: | |

Attn: **Steve Chou**
**Stantec Consulting, Ltd.**
**500 - 4730 Kingsway**
**Burnaby, BC V5H 0C6**

Phone: (604) 412-3004
Fax:
Received: 01/04/17 10:37 AM
Collected:

Project: **CSC MISSION/123220769 ADMIN**

## Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

| *Client Sample Description* | *Lab ID* | *Collected* | *Analyzed* | *Lead Concentration* |
|---|---|---|---|---|
| A-P-22 | *551700077-0022* | | 1/9/2017 | 1700 ppm |
| | Site: Exterior double door on east side of gym<br>Desc: Light blue on metal | | | |
| A-P-23 | *551700077-0023* | | 1/9/2017 | 2000 ppm |
| | Site: Exterior single door on east side of gym<br>Desc: Dark blue metal | | | |
| A-P-24 | *551700077-0024* | | 1/9/2017 | 570 ppm |
| | Site: Exterior door on west side of gym<br>Desc: Yellow on metal | | | |
| A-P-25 | *551700077-0025* | | 1/9/2017 | 62000 ppm |
| | Site: Exterior handrail on south side of gym<br>Desc: Orange on metal | | | |
| A-P-26 | *551700077-0026* | | 1/9/2017 | 3600 ppm |
| | Site: Exterior door outside south side of room 219<br>Desc: Blue on metal | | | |
| A-P-27 | *551700077-0027* | | 1/9/2017 | <90 ppm |
| | Site: Unit A-M 241, parole boardroom<br>Desc: Blue on drywall | | | |

Rowena Fanto, Lead Supervisor
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.010 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Canada Inc. Mississauga, ON A2LA Accredited Environmental Testing Cert #2845.08

Initial report from 01/11/2017 08:07:00

# APPENDIX B
# PRE-CONSTRUCTION HAZARD ASSESSMENT FORM

Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

# PSPC PRELIMINARY HAZARD ASSESSMENT FORM

| | |
|---|---|
| Project Number: | R.097977.001 |
| Location: | Mission, British Columbia |
| Date: | 16-07-2018 |
| Work Place: | Mission Medium Institution |

**Site Specific Orientation Provided at Project Location** ☐ **Yes**

**Notice of Project Required** ☐ **Yes**

**NOTE:**
**PWGSC REQUIRES A Notice of Project FOR ALL CONSTRUCTION WORK RELATED ACTIVITIES**

**NOTE:**
**OHS law is made up of many municipal, provincial, and federal acts, regulations, bylaws and codes. There are also many other pieces of legislation in British Columbia that impose OHS obligations.**

**Important Notice: This hazard assessment has been prepared by PSPC for its own project planning process, and to inform the service provider of actual and potential hazards that may be encountered in performance of the work. PSPC does not warrant the completeness or adequacy of this hazard assessment for the project and the paramount responsibility for project hazard assessment rests with the service provider.**

| TYPES OF HAZARDS TO CONSIDER | Potential Risk for: | | | | COMMENTS |
|---|---|---|---|---|---|
| Examples:<br>Chemical, Biological, Natural, Physical, and Ergonomic<br><br>Listed below are common construction related hazards. Your project may include pre-existing hazards that are not listed. Contact the Regional Construction Safety Coordinator for assistance should this issue arise. | **PSPC, OGD's, or tenants** | | **General Public or other contractors** | | Note: When thinking about this pre-construction hazard assessment, remember a **hazard** is anything that may cause harm, such as chemicals, electricity, working from heights, etc; the **risk** is the chance, high or low, that somebody could be harmed by these and other hazards, together with an indication of how serious the harm could be. |
| | **Yes** | **No** | **Yes** | **No** | |

| **Typical Construction Hazards** | | | | | |
|---|---|---|---|---|---|
| Concealed/Buried Services (electrical, gas, water, sewer etc) | yes | | | | |
| Slip Hazards or Unsound Footing | yes | | | | |
| Working at Heights | yes | | | | |
| Working Over or Around Water | | no | | | |
| Heavy overhead lifting operations, mobile cranes etc. | yes | | | | |
| Marine and/or Vehicular Traffic (site vehicles, public vehicles, etc. | yes | | | | |
| Fire and Explosion Hazards | | no | | | |
| High Noise Levels | yes | | | | |
| Excavations | | no | | | |
| Blasting | | no | | | |



Canada

| | | | | | |
|---|---|---|---|---|---|
| Construction Equipment | yes | | | | |
| Pedestrian Traffic (site personnel, tenants, visitors, public) | yes | | | | |
| Multiple Employer Worksite | YES | | | | Contractor working in an occupied Federal Employee work place. |

| **Electrical Hazards** | | | | | **Comments** |
|---|---|---|---|---|---|
| Contact With Overhead Wires | | no | | | |
| Live Electrical Systems or Equipment | yes | | | | |
| **Other:** | | | | | |
| **Physical Hazards** | | | | | |
| Equipment Slippage Due To Slopes/Ground Conditions | | no | | | |
| Earthquake | yes | | | | |
| Tsunami | | no | | | |
| Avalanche | | no | | | |
| Forest Fires | yes | | | | |
| Fire and Explosion Hazards | | no | | | |
| Working in Isolation | | no | | | |
| Working Alone | | no | | | |
| Violence in the Workplace | yes | | | | |
| High Noise Levels | yes | | | | |
| Inclement weather | yes | | | | |
| High Pressure Systems | | no | | | |
| **Other:** | | | | | |
| **Hazardous Work Environments** | | | | | |
| Confined Spaces / Restricted Spaces PSPC employees do not enter confined space. | n/a | n/a | | | If available, provide the contractor with the existing confined space assessment(s) for information only. Contractor must perform their own confined space assessment as per provincial regulations. |
| Suspended / Mobile Work Platforms | | no | | | |
| Other: | | | | | |
| **Biological Hazards** | | | | | |
| Mould Proliferations | | no | | | |
| Accumulation of Bird or Bat Guano | TBD | | | | |
| Bacteria / Legionella in Cooling Towers / Process Water | | no | | | |
| Rodent / Insect Infestation | TBD | | | | |
| Poisonous Plants | | no | | | |
| Sharp or Potentially Infectious Objects in Wastes | yes | | | | |
| Wildlife | yes | | | | |
| **Chemical Hazards** | | | | | |
| Asbestos Materials on Site | yes | | | | See Appendix A |
| Designated Substance Present | | no | | | |
| Chemicals Used in work | | no | | | |

| | | | | | |
|---|---|---|---|---|---|
| Lead in paint | yes | | | | See Appendix A |
| Mercury in Thermostats or Switches | n/a | n/a | | | |
| Application of Chemicals or Pesticides | | no | | | |
| PCB Liquids in Electrical Equipment | | no | | | |
| Radioactive Materials in Equipment | | no | | | |
| **Other:** | | | | | |
| **Contaminated Sites Hazards** | | | | | |
| Hazardous Waste | | no | | | |
| Hydrocarbons | | no | | | |
| Metals | | no | | | |
| Other: | | no | | | |

| **Security Hazards** | | | | | **Comments** |
|---|---|---|---|---|---|
| Risk of Assault | yes | | | | None reported |
| **Other:** | | | | | |
| **Other Hazards** | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| **Other Compliance and Permit Requirements[1]** | **YES** | **NO** | **Notes / Comments[2]** |
|---|---|---|---|
| **Is a Building Permit required?** | | | |
| **Is an Electrical permit required?** | | | |
| **Is a Plumbing Permit required?** | | | |
| **Is a Sewage Permit required?** | | | |
| **Is a Dumping Permit required?** | | | |
| **Is a Hot Work Permit required?** | | | |
| **Is a Permit to Work required?** | | | Mandatory for ALL AFD managed work sites. |
| **Is a Confined Space Entry Permit required?** | | | Mandatory |
| **Is a Confined Space Entry Log required** | | | Mandatory |
| **Discharge Approval for treated water required** | | | |

**Notes:**

(1) Does not relieve Service Provider from complying with all applicable federal, provincial, and municipal laws and regulations.

(2) TBD means To Be Determined by Service Provider.

| **Service Provider Acknowledgement: We confirm receipt and review of this Pre-Project Hazard Assessment and acknowledge our responsibility for conducting our own assessment of project hazards, and taking all necessary protective measures (which may exceed those cited herein) for performance of the work.** | | | |
|---|---|---|---|
| **Service Provider Name** | | | |
| **Signatory for Service Provider** | | **Date Signed** | |
| **RETURN EXECUTED DOCUMENT TO PSPC DEPARTMENTAL REPRESENTATIVE PRIOR TO ANY WORK COMMENCING** | | | |