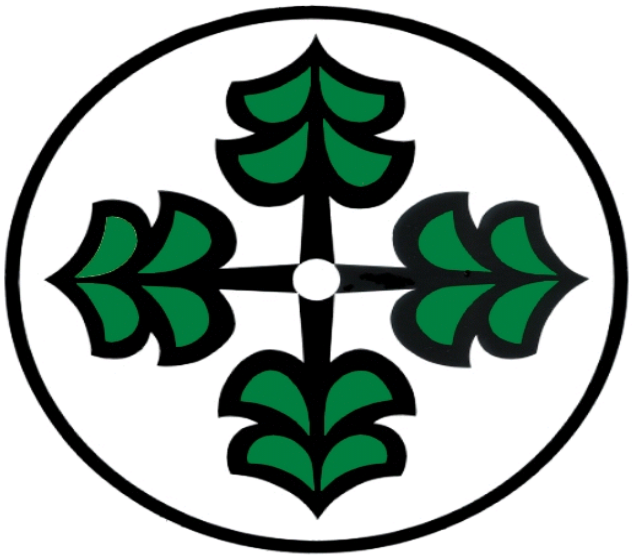


CITY OF PORT ALBERNI

SOMASS DEMOLITION – PLANER MILL - BUILDING # 8

REQUEST FOR PROPOSALS # 026-23

Issued: **September 21, 2023**

PART I - INSTRUCTIONS TO BIDDERS

1. The City of Port Alberni (CPA) is issuing this Request for Proposal (RFP) to obtain innovative Proposals from Bidders to partner with the City in the demolition and recovery efforts for various buildings on the former Somass Division Sawmill site.

2. Proposals should be received no later than **October 18, 2023 at 3:00 local time**.

3. All questions regarding this Request for Proposal (RFP) should be directed to Evan Borovica, by email at **purchasing@portalberni.ca**, seven days prior to closing date to allow sufficient time to send a response to all Bidders. If questions are received after this time, they will not be answered.

4. Bidders are solely responsible for any costs or expenses incurred related to the preparation and submission of proposals.

5. Proposals must be submitted electronically in PDF format on or before the closing date and time. Alternatively, a hard copy is permitted and would require the Bidder to submit two copies. The proposal must be submitted with the proposer's name and address and **RFP # 026-23 – SOMASS DEMOLITION – PLANER MILL (BUILDING # 8)** clearly marked on the envelope, addressed to:

   City of Port Alberni
   Attention: Evan Borovica. Project Manager
   4850 Argyle Street
   Port Alberni, BC, V9Y 1V8

   Note: Because of its sensitive email security system, the City cannot accept responsibility for delivery/receipt of email, so please follow up if you do not receive a response.

6. The successful Bidder shall at all times indemnify and save harmless the CPA and/or any of its officers, employees or agents from and against all claims and demands, losses, costs, damages, actions, legal fees, or other proceedings by whomsoever made, brought or prosecuted, in any manner based upon, occasioned by or attributable to the execution of this assignment, or any action taken or things done or maintained by virtue of this assignment or the exercise in any manner of rights except claims for damages resulting from the negligence of any officer, servant or agent of the CPA while acting within the scope of their duties of employment.

7. The RFP must clearly show the complete company name, nearest location to the CPA, and name and telephone number of the primary contact person for the project.

8. The RFP must identify other organizations to which the company and/or team members have provided a similar service. The CPA may contact those organizations for references and use that information to evaluate the expected level of service.

9. Unless authorized by the CPA in writing, the Bidder shall not add or subtract key team members to or from the project team. Where key team members are added, resumes shall be provided for the CPA's approval **prior** to commencement.

10. As a public body, the CPA is subject to the BC *Freedom of Information and Protection of Privacy Act*. The parties agree and consent to the disclosure of this Agreement as a matter of public record and acknowledge that applicable laws may require disclosure of information provided by one party to the other party pursuant to, or in connection with this Agreement.

11. Unless specifically outlined in the RFP, the services or any part thereof may not be sub-contracted, transferred or assigned to another firm, person or company without the prior written authorization of the CPA.

12. The CPA reserves the right to not proceed with the assignment or to reduce or expand the scope of the project as necessary.

13. Bidders shall submit their Proposals on the Proposal Form included in the RFP. The Proposal Form is the only part of the document that has to be submitted. All pages of the Proposal Form, including the final sheet with the signature block, should be returned. By submission of a Proposal, the bidder acknowledges receipt of any and all addenda issued by CPA. Alteration, qualification or omission to the Proposal Form may render the Proposal liable for rejection by the City of Port Alberni. The bidder should initial all erasures or corrections to its entries on the Proposal Form.

14. The RFP must include hourly rates for all labour and equipment required to complete the services. CPA will require a detailed work plan for any services required under this RFP prior to any work commencing. The Bidder with the lowest hourly rates will not necessarily be awarded the project. If RFPs exceed the CPA's budget, the CPA may elect to negotiate a "partial scope work" with any Bidder to achieve budget.

15. The CPA reserves the right to accept any or none of the RFPs submitted and will evaluate RFP submissions based on "best value" considering the submission requirements outlined in Section 18, and general quality of the RFP. Proposals will be evaluated as follows:

    -

    a. Approach to demolition works including (30 points):
        i. Potential revenue sharing, or provide salvage material;
        ii. Cost reduction strategies;
        iii. Disposals plans including waste diversion.
    b. Project Team including subtrades that would be used (30 points):
        i. qualification,
        ii. relevant experience,
        iii. equipment and emissions
    c. Cost (30 points)
    d. Community Benefit (10 points)

16. If the work is awarded, the CPA will provide a Purchase Order to complete the works in accordance with this RFP and the successful Bidder's proposal. The successful Bidder will also be required to enter into an agreement with the City.

17. The Proposal may include alternatives as optional but these should be clearly identified independently of the scope outlined.

18. <u>Proposal Format</u>

    The Proposal should include the following information:

    a) Title page, including Bidder's name, address, telephone number and other contact information,

    b) Outline of approaches to the demolition works including any special considerations,

c) Project team including team members' qualifications.

d) An outline of relevant experience completed by the Bidder.

e) Hourly rate structure for key team members and equipment.

f) A revenue sharing plan for salvage materials (i.e. scrap metal) removed from the site for recovery of funds.

g) A disposal plan, outlining the approach to disposal of materials that cannot recover funds. Indicate your approach to diverting waste away from landfill wherever possible.

h) Information regarding the Bidders insurance policies.

19. RFP Evaluations

The CPA reserves the right to accept any or none of the Proposals submitted and will evaluate Proposals based on "best value" in accordance with section 15 and according to the information requested in Section 18.

20. Award of the work is subject to funds being legally available.

21. Data Exchange Agreement

All data provided to the Bidder to support the Services being carried out under this Agreement are provided on and subject to the following terms and conditions:

(a) Copyright – the Bidder acknowledges and agrees that copyright for all data transferred from the CPA to the Bidder belongs to the CPA. The CPA will retain title to all data provided and any copies made of the data.

(b) Conditions of Use – the Bidder is entitled to use the data only to provide the Services and support the Project. The Bidder may not use the data for purposes not directly related to the provision of the Services or the Project without first receiving written consent from the CPA.

(c) Outside Agencies - the Bidder acknowledges that data sourced from outside agencies may require a separate data sharing agreement with said agency. The Bidder will acknowledge the source for any data utilized, and agrees that the copyright for any data shared by other agencies belongs to said agencies.

(d) Transfer of Data – the Bidder will transfer all data related to this Project, including without limitation, all photographs, excel tables, drawings, and other requested data, immediately upon receiving a request from the CPA. The Bidder may not sell, transfer, copy, loan, or gift any of the data to another party for any reason without first receiving written consent from the CPA.

(e) Conditions of Data Retention – the Bidder may keep the data used to support the Project in its files where: (i) required by law; (ii) required by professional obligations; or (iii) required by best management practices, with the proviso that both the data and the Bidder are bound by and subject to the terms and conditions of this Agreement. This clause will survive expiry or sooner termination of this Agreement.

(f) Confidentiality – without limiting the Bidder's confidentiality obligations set about above, the Bidder will maintain confidentiality of all information, documentation, and data provided by the

CPA during the course of carrying out the Project unless written consent from the CPA is provided, or as required by law or by an authority having jurisdiction.

(g) No Warranty – the Bidder understands that all data, whether digital, hardcopy, or in any other format, is provided by the CPA "as is" and the CPA provides no warranty of any kind, either express or implied, nor guarantees whatsoever the accuracy and completeness of the data or their fitness for any purpose. It is the Bidder's responsibility to ask for updated data where required. In no event will the CPA be liable to the Bidder or any other party for losses or damages, including any loss of profits, lost savings, or other incidental or consequential damages arising out of the data, or the Bidder's use or inability to use the data, even if the CPA has been advised of the possibility of such damages. The Bidder hereby releases the Released Parties from all losses or damages associated with the data, and agrees not to sue or make any claim against the Released Parties in respect of the data.

PART II – TERMS OF REFERENCE

A. INTRODUCTION & BACKGROUND INFORMATION

In August 2021, the City of Port Alberni successfully completed the purchase of a remarkable 43-acre parcel of waterfront land where the Somass Division sawmill formerly operated. Refer to Appendix 1 – Somass Division sawmill site.

Guided by Council's Strategic Plan (2023-2027) which identifies the highest and best use of the waterfront for active lifestyles as key goals, City Council and staff are now embarking on a process that supports the redevelopment of the Somass Lands in a manner consistent with this plan.

Remediating and repurposing these lands in a way that reflects the changing nature of our vibrant community is key to the City's success, and there is much interest on the part of Port Alberni residents, businesses and developers in their future.

The selected Bidder will be required to provide all necessary materials, labour, tools and equipment to remove asbestos-containing, contaminated and all hazardous materials from, and to demolish and dispose of buildings and site improvements.

Once the hazardous materials have been removed the CPA will have an opportunity to review the interior of the buildings and may identify unique materials to be salvaged.

The Bidder will be responsible for acquiring the demolition permit for this property and ensuring that all services to the building have been disconnected prior to demolition.

B. OBJECTIVES

The City is seeking to enter a strategic partnership with a provider that will support the City's efforts to deconstruct, salvage and recover materials from various buildings on the Somass Division sawmill site. The City's ideal partner will offer innovative ideas to get as close to net zero waste as possible in deconstructing and removing salvage materials from the site. Further, the City hopes to achieve a revenue neutral (or near revenue neutral) solution by maximizing proceeds provided by salvage materials.

The City initially intends work with the successful bidder to deconstruct the Planer Mill Warehouse building which can be viewed in Appendix 2 – Planer Mill Warehouse. Subject to satisfactory performance of the successful Bidder, the City shall reserve the right to work with the successful Bidder to deconstruct any other buildings on the site.

The Scope of Service may include but not be limited to:

- Site review & options analysis;
- Obtaining demolition permit(s)
- Assisting with decommissioning of site services;
- Hazard Materials assessment, abatement and site monitoring;
- Structure demolition;
- Revenue recovery; and
- Site grading.

The successful Bidder will be the prime contractor in the delineated area within the work zone required. The contractor will work with the City's Project Manager to establish the prime contractor's work zone. Any damage caused by the contractor (environmental, structures or material will be remediated or corrected), and/or site security (if required) at the prime contractor's expense.

The successful Bidder will work with City of Port Alberni staff to achieve the following goals:

- Achieving a circular economy and preserving landfill airspace;
- Maximizing revenue opportunities of salvage materials to minimize or eliminate costs to the City of Port Alberni; and
- Striving for a "net zero" waste approach to demolition of the site, understanding that true "net zero" waste may not be achievable.

Each Bidder should address the above objectives in the Proposal by including these concepts where appropriate.

The Planer Mill Warehouse – Building #8 will have the roofing material removed down to the shiplap on the following roof sections (see hazardous materials report in Appendix 3):

- 8C
- 8D
- 8E
- 8F
- 8G
- 8H

The roofing on the following sections of the Planer mill will still have the roofing materials in place in the following sections (see hazardous materials report in Appendix 3):

- 8A
- 8B
- 8J
- 8K
- 8L

C. INVOICING

Invoices shall be submitted electronically to **accounts_payable@portalberni.ca** and shall have the following information in the email body or subject line:

Attention: Evan Borovica, Project Manager
Project Number: Somass Building demo
Purchase Order Number: TBA

All invoices shall have the following information contained either on the invoice or on an attached page:

- CPA project title and project number,
- name of CPA project manager,
- date of invoice and period the invoice covers, and
- a table including the columns below.

	Amount of this Invoice	Prior Invoiced	Original Budget	Revised Budget	Total Invoiced
Task 1					
Task 2					
Totals					

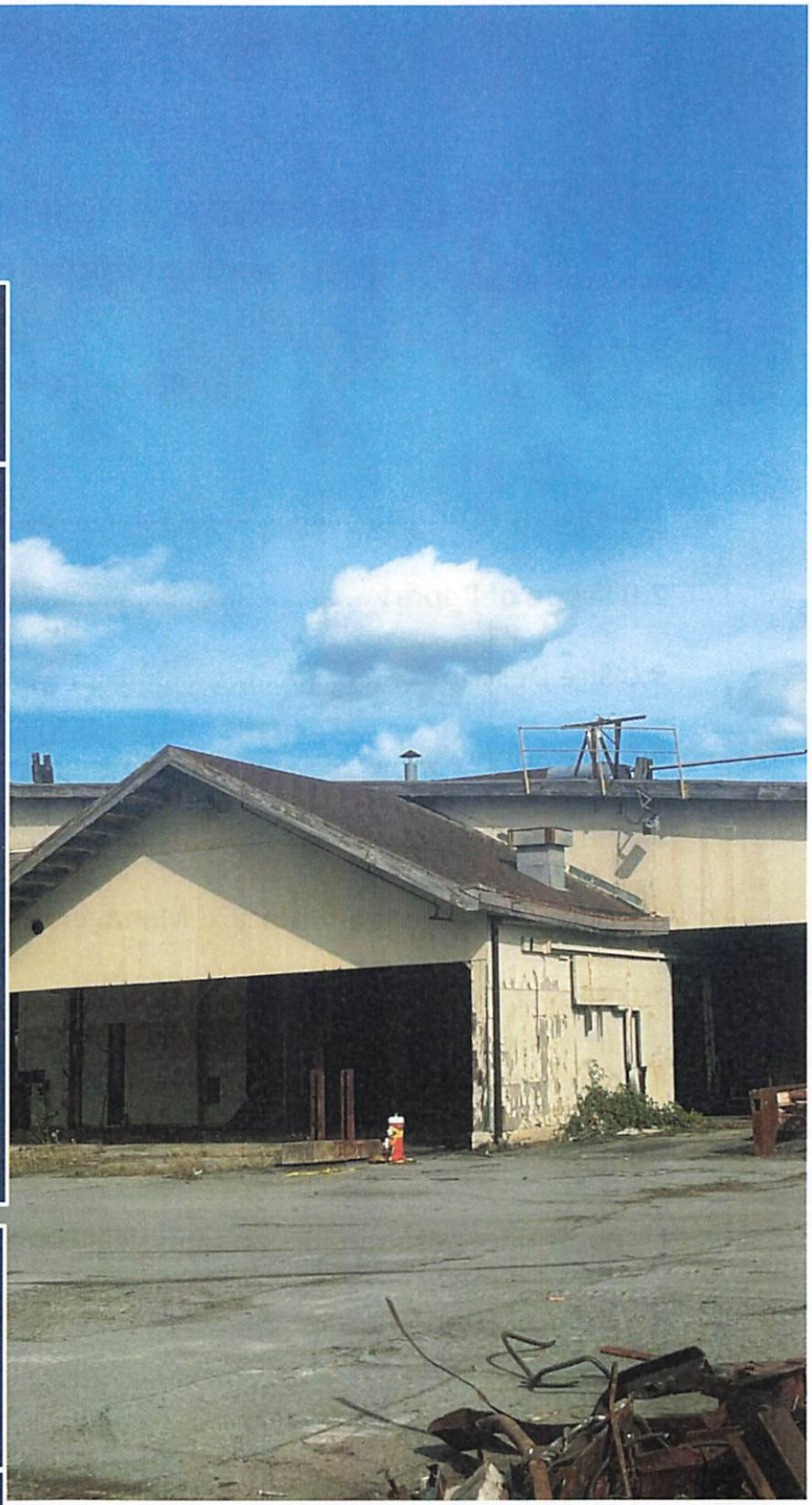
Appendix 1 – Somass Division Sawmill Site

Appendix 2 – Planer Mill Warehouse

Appendix 3

E0400-879 Hazmat Report – Somass Sawmill – Planer Mill - Building 8

HAZARDOUS MATERIALS SURVEY REPORT



Site Address:

Building 8 – Main Warehouse

3500 Harbour Road

Port Alberni, BC

Prepared For:

City of Port Alberni

Evan Borovica

September 2023

File No.: E0400-879

Prepared by:
Mikayla Drapeau, B.Sc.
Reviewed by:
Johanne Picard, B.Sc., RPIH

Lewkowich Engineering Associates Ltd.

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250-756-3831 (Fax)
www.lewkowich.com
geotech@lewkowich.com

Permit to Practice Number: 1001802

LEA Lewkowich Engineering Associates Ltd.

TABLE OF CONTENTS

1.0 Introduction

This report presents the results of the demolition hazardous materials survey conducted on Building 8 located at 3500 Harbour Road in Port Alberni, BC, by LEA Environmental Health & Safety. The field work was conducted by Johanne Picard B.Sc., RPIH (EPA-AHERA #13-0407) and Mikayla Drapeau B.Sc. (AHERA #R23-0798-Al-O). The purpose of this investigation is to identify and quantify hazardous building materials as described in Section 5.0 of this report, and to assess related occupational health and environmental hazards potentially presented during renovation, demolition, or relocation of the structure. All work was conducted in accordance with the requirements of BC OHS Regulation Section 20.112 & related Guidelines.

1.1 Summary of Findings: Hazardous materials present on the site are summarized in the following table:

Table 1.1.1 – Summary of Hazardous Materials

Material Type	Location(s)	Report Section
Asbestos	Roofing	5.1
Lead	Interior and Exterior Paint	5.2
Arsenic	None	5.3
Mercury	Fluorescent Light Tubes	5.4
PCBs	Potentially in Fluorescent Light Ballasts	5.5
Petroleum	None	5.6
Hazardous Products	None	5.6
UFFI	None	5.7
Ozone-Depleting	None	5.8
Silica	Concrete	5.9
Radioactive	None	5.10
Bio-Hazard	None	5.11

All of these materials must be removed or contained prior to general demolition or commencement of construction work. General Risk Assessments and recommendations for handling and disposal are discussed in Section 6.0 of this report.

2.0 Scope of Report

An assessment was conducted on one structure located on the site. The scope of research for this report was limited to:

- a review of available information respecting the history and uses of the building;
- a visual reconnaissance of the site and inspection of the building;
- analysis of twenty-four samples for Asbestos analysis;
- screening of two paint samples for Lead content via XRF.

3.0 Site Description

The structure is wood/metal-frame constructed industrial building dating prior to 1990[1]. Occupied area of the building is 700± m^2. The floors are concrete/asphalt. The exterior finish is wood siding. Roofing consists of asphalt materials.

4.0 Site Survey

We attended the site on January 26th, 2023. The purpose of this visit was to:

- conduct a visual reconnaissance of structures on the property;
- obtain samples of suspect materials for laboratory analysis;
- obtain photo documentation.

The building interior and exterior were visually inspected. At the time of our inspection the building was unoccupied and in fair condition, with walls, ceilings, and floors intact. As such, our inspection can be characterized as 'semi-intrusive' in nature.

5.0 Survey Results

5.1 Asbestos-Containing Materials (ACM): Suspect or typically Asbestos-containing materials (ACM) were sampled as described in the appended Certificate of Analysis. Sampling was conducted in accordance with industry standards and principles of good occupational hygiene practice. The requisite number of representative bulk samples collected for each material type is outlined in the appended excerpt from the WorkSafe BC publication 'Safe Work Practices for Handling Asbestos' (BK27).

Asbestos containing materials are summarized in the following table:

Table 5.1.1 – Summary of Asbestos-Containing Materials

Sample No.	Location(s)	Material	Asbestos Content	Area (ft^2) [1,2]
E0400-879-15c	Building 8C	Roofing	Chrysotile 1-5%	61,500±
E0400-879-15d	Building 8C	Roofing	Chrysotile 5-10%	Included Above
E0400-879-15f	Building 8C	Roofing	Chrysotile 1-5%	Included Above
E0400-879-16c	Building 8D	Roofing	Chrysotile 5-10%	3400±
E0400-879-20d	Building 8H	Roofing	Chrysotile 5-10%	9000±
E0400-879-20e	Building 8H	Roofing	Chrysotile 1-5%	Included Above
E0400-879-20g	Building 8H	Roofing	Chrysotile 10-15%	Included Above

Note 1: N/E = Not Established, N/A = Not Applicable

Note 2: Area quoted is approximate, based on observable materials, and therefore may not include hidden ACM. It is the abatement contractors' responsibility to confirm reported quantities.

Asbestos sample locations described in Table 5.1.1 do not represent delineated areas that can be considered separate from other areas of the building. All main roofing on the building must be considered Asbestos-containing. Addition and overhang roofing may be excluded. See diagram.

[1] Source: BC Assessment and/or City Building Permit data, Anecdotal (Owner/Contractor)

Asbestos containing cement pipes may be present underground in older buildings and have not been investigated.

5.2 Lead-Containing Materials: Based on the age of the building, it is possible that coatings containing Lead in excess of 90 ppm are present. Analysis for Lead content in paints and ceramic tile was therefore undertaken.

Sample examination was conducted in accordance with analytical methods adapted from EPA Method 6200 and ASTM F2853-10 using an X-ray Fluorescence (XRF) analyzer, in-situ, or ex-situ as indicated on the appended Certificate of Analysis.

Lead-based materials are summarized in the following table:

Table 5.2.1 – Summary of Lead-Containing Materials

Test No.	Sample Description	Location	Lead Content	Remarks
22	Blue Paint on Metal	Building 8 - Blue Machine	Positive	2000 - 5000 ppm
23	Bare Metal	Building 8 - Blue Machine	Positive	600 - 2000 ppm

Note: the yellow siding throughout the property has been previously identified as lead-containing.

Paints, coatings and ceramics described in Table 5.2.1 as Lead-containing are not delineated materials that can be considered separate from those in other areas of the building. All coatings or materials of similar appearance or colour throughout the building must be considered Lead-containing, unless specifically stated otherwise in this report.

Samples determined as non-detect (ND) by XRF examination may be subject to confirmatory laboratory analysis.

Also note that the local landfill authority may require additional Toxicity Characteristic Leaching Procedure (TCLP) data before accepting material as 'Non-Hazardous Waste' as defined by the BC Hazardous Waste Regulations. TCLP analysis is not an automatic component of the HMS report, and it is the responsibility of the building owner or the owner's agent to arrange for this additional testing with LEA.

Due to the age of the building, other suspect Lead-containing products may be present.

5.3 Arsenic-Containing Materials: Arsenic-containing or CCA treated lumber was not observed in the building.

5.4 Mercury-Containing Products: Mercury-containing fluorescent lights/bulbs were not observed throughout the property.

5.5 Polychlorinated Biphenyl Products (PCBs): Light ballasts potentially containing PCBs were observed. Light fixtures were not disassembled to inspect for PCB-containing ballasts.

5.6 Bulk Petroleum and Hazardous Products: Bulk Petroleum and Hazardous Products were not present in the building.

5.7 Urea Formaldehyde Foam Insulation (UFFI): Based on visual (non-invasive) inspection of the structure, UFFI is not expected to be present.

5.8 Ozone-Depleting Substances: Potential sources of ozone-depleting substances (ODS) were not observed in the building.

5.9 Silica Products: Silica-containing materials on the site that will or potentially will be affected by the site works include: Concrete.

5.10 Radioactive Materials: Smoke alarms containing a radioactive source were not observed in the building.

5.11 Bio-Hazardous Substances and Materials: Fungal contamination was not evident in the building. Contamination may however be present on hidden building fabric and components, or occur in exposed areas where chronic water incursions occur.

6.0 Risk Assessment and Hazard Management

Note: The Risk Assessment provided here is general in nature. Further risk assessment based on the specific material(s), area(s) and proposed method(s) of remediation must be obtained before proceeding with remediation.

6.1 Asbestos-Containing Materials: The materials described as Asbestos containing in Section 5.1 must be removed or safely contained by a qualified Asbestos remediation contractor prior to general demolition. 'Moderate Risk' procedures as described in the WorkSafe BC publication Safe Work Practices for Handling Asbestos (BK27), must be followed for removal of roofing. (Occupational safety hazard – Moderate)

Asbestos sample locations described in Table 5.1.1 do not represent delineated areas that can be considered separate from other areas the building. All main roofing on the building must be considered Asbestos-containing. Addition and overhang roofing may be excluded. See diagram.

The contaminated waste must be disposed of in a secure landfill. Sections 6.1 through 6.32 of the Regulations and related Guidelines (G6.1 through G6.32) also provide information regarding Asbestos-specific requirements.

6.2 Lead-Containing Materials: The materials described as Lead containing in Section 5.2 must be removed or safely contained by a qualified remediation contractor prior to general demolition. Although Lead content may be reported as <90 ppm, any level of Lead in these materials may present a significant exposure risk to workers, depending on the type and condition of the material(s) & upon the method(s) of removal and handling. If work disturbing Lead-containing materials is undertaken, a Risk Assessment, Exposure Control Plan and related Safe Work Procedures will be required to ensure exposure is kept to levels 'As Low as Reasonably Achievable'. (Occupational safety hazard assuming no dry stripping – Low to Moderate)

Dry stripping of coatings (ie. abrasive blasting or grinding), or destructive removal of ceramic tile or similar materials should be avoided where possible. (Occupational safety hazard–Moderate to High)

Lead flashing and plumbing components should be removed intact before general demolition and transferred to a segregated waste container.

Respecting Lead, Arsenic, Mercury and other heavy metals, please note that the local landfill authority may require additional Toxicity Characteristic Leaching Procedure (TCLP) data before accepting material as 'Non-Hazardous Waste' as defined by the BC Hazardous Waste Regulations.

TCLP analysis is not an automatic component of the HMS report, and it is the responsibility of the building owner or the owner's agent to arrange for this additional testing with LEA.

Lead contaminated material must be separated from common waste, but may be land-filled as non-hazardous waste assuming that leachable Lead (as determined by the TCLP analysis) is <5 mg/l.

6.3 Mercury-Containing Electrical Apparatus: Mercury containing switches should be removed intact for proper disposal. Fluorescent light bulbs/tubes should be removed intact for re-use or for disposal at an approved receiving facility. (Occupational safety hazard – Low)

Mercury is designated as an ALARA substance. Employers are required under Section 5.54 of the Occupational Health and Safety Regulation (OHSR) to develop an exposure control plan (ECP) when workers are, or may be, exposed to airborne concentrations of this material in excess of the Action Limit. (50% of the Permissible Exposure Limit)

6.4 Suspect PCB-Containing Light Ballasts: Fluorescent fixtures should be removed intact. Ballasts confirmed as PCB-containing should be drummed, and transported off-site for proper disposal. (Occupational safety hazard – Low)

6.5 Silica-Containing Products: A respirable crystalline Silica Exposure Control Plan (ECP) must be developed & implemented for the site. The ECP should contain procedures for: Housekeeping, Decontamination, Ventilation in buildings and machines, and Hygiene & Dust Control (Occupational safety hazard - Moderate to High)

6.6 Additional Regulatory Requirements (as required):

6.6.1 Notice of Project: As required by Section 20.2 of the Occupational Health and Safety (OHS) Regulation (B.C. Reg. 296/97), a Notice of Project must be filed with WorkSafe BC at least 48 hours prior to commencement of work.

This can be completed online at: https://online.worksafebc.com/anonymous/NOP/default.asp

Supporting documentation for the NOP must include: (1) this Hazardous Materials Survey Report (2) site-specific Risk Assessments; (3) Safe Work Procedures (SWP's) for the proposed work as described in Part 6 of the Regulation; (4) a site Asbestos Exposure Control Plan (AECP); (5) a site Lead Exposure Control Plan (LECP); (6) a Mould ECP; and (7) a site Silica Exposure Control Plan (SECP).

6.6.2 Confirmation Letter: As required by Section 20.112 (8) of the BC OHS Regulations, a Confirmation Letter completed by a 'Qualified Person' may be required to certify proper removal or containment and final disposition of hazardous waste.

The foregoing must be completed before commencement of general demolition & may be required by the governing municipal authority before issuance of a Demolition Permit.

WARNING

Should work expose new suspect or confirmed ACM or other hazardous materials or conditions, work must stop subject to additional investigation and confirmatory sampling.

7.0 Report Use and Limitations

In preparing this report LEA Environmental Health & Safety reviewed historical records, conducted interviews with certain private and public officials, and conducted an on-site visual inspection of the property. We examined and relied upon documents referenced in the report and have relied on oral statements made by certain individuals but we have not conducted an independent examination of the facts contained in referenced materials and statements.

LEA Environmental Health & Safety assumes the genuineness of the documents and that the information provided in documents or statements is true and accurate.

LEA Environmental Health & Safety has prepared this report in a professional manner, using that level of skill and care normally exercised for similar projects under similar conditions by reputable and competent consultants and in accordance with our normal terms and conditions.

LEA Environmental Health & Safety shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the report was prepared.

We also note that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth here are applicable only to the facts and conditions as described at the time of this report.

The methods employed for collection and analysis of samples are those of the American Conference of Governmental Industrial Hygienists (ACGIH), the National Institute for Occupational Safety and Health (NIOSH), provincial WCB, and/or other accepted scientific practices.

The data and commentary presented herein reflects these standards, however no other warranty is offered or implied respecting the acceptance of this report by any Regulatory authority.

Conclusions and recommendations were made within the operative constraints of the scope, budget, and schedule for this project. We believe the conclusions stated herein to be factual, but no guarantee is made or implied.

Lewkowich Engineering Associates Ltd., or LEA Environmental Health & Safety (LEA) shall not be named as the 'Consulting Firm' on any WSBC Notice of Project (NOP) and/or Risk Assessment(s) and/or Safe Work Procedure(s) unless we are actually engaged as the Project Consultant prior to commencement of work.

If LEA is engaged solely as the air monitoring agency, this distinction must be clearly indicated in the project documentation.

The information and opinions expressed in the Report, or any document forming part of the Report, are for the sole benefit of the Client. NO OTHER PARTY MAY USE OR RELY UPON THE REPORT OR ANY PORTION THEREOF WITHOUT OUR WRITTEN CONSENT AND SUCH USE SHALL BE ON SUCH TERMS AND CONDITIONS AS WE MAY EXPRESSLY APPROVE. The contents of the Report remain our copyright property. Any use which a third party makes of the Report, are the sole responsibility of such third parties.

We accept no responsibility for independent conclusions, interpretations, interpolations and/or decisions of the Client, or others who may come into possession of the Report, or any part thereof, which may be based on information contained in the Report, or for damages suffered by any third party resulting from use of the Report without our express written permission.

Preparation of this HMS Report is a limited undertaking, and does not constitute our automatic acceptance of responsibility for any project work beyond the provision of this report. LEA accepts no responsibility or liability for actions, interpretations, or abatement, demolition, disposal or construction activities by the Client or any other party, whether based on this report or not, unless we are specifically engaged at the outset of work as Project Consultant.

7.1 Professional Statement

Lewkowich Engineering Associates Ltd. (LEA Environmental Health & Safety) certifies that the persons signing this statement have demonstrable relevant experience, are 'qualified persons' as defined under BC OHSR Section 6.1, and are familiar with the work carried out on the site.

8.0 Closure

We thank you for the opportunity to be of service. Should you have any questions, or require further information, please contact the undersigned at (250) 756-0355.

Yours truly,

LEA ENVIRONMENTAL HEALTH & SAFETY

Prepared by:

Mikayla Drapeau, B.Sc.

EPA-AHERA Building Inspector #R23-0798-AI-O

E-mail: mdrapeau@lewkowich.com

Reviewed by:

Johanne Picard, B.Sc., RPIH

EPA-AHERA Building Inspector #13-0407
EPA Certified Lead Risk Assessor #CLR13-0009

E-mail: jpicard@lewkowich.com

Appendix I
Potential Contaminants and Physical Hazards

i) Asbestos-Containing Materials: Asbestos containing building materials (ACBM or ACM) – defined by WorkSafe BC as containing at least 0.5% Asbestos, and >0% in vermiculite insulation may potentially be present in structural and mechanical components of the structure.

The common use of potential friable ACM in construction decreased dramatically in the mid-1980's due to public pressure, although ACM is occasionally found in building materials and equipment installed as late as 1990.

Also, the sale and use of products containing Asbestos (except the crocidolite form) remains legal in Canada. Typical suspect building products include vinyl flooring, plaster, drywall joint compound, ceiling texture, ceiling tiles and Transite board. Typical mechanical products include pipe insulation, duct tape, duct mastic, gaskets in cast iron bell and spigot pipe joints, and Transite cement pipe.

These materials do not typically pose any great hazard except during removal, demolition or work that requires disturbance of the material.

ii) Lead-Containing Materials: Prior to 1976, Lead content in consumer coatings was unregulated. After that date, Lead content in interior paint was limited to <5000 ppm (0.5%) by weight under the federal Hazardous Products Act (HPA).

Exterior paint however was not regulated until 2005, when the HPA was amended to limit Lead in all paint to <600 ppm (0.06%) by weight.

In late 2011 the HPA was again amended to limit Lead content in all consumer coatings to <90 ppm (0.009%).

Other potential Lead-containing building materials include plumbing solder, old pipes, tile glazing and roof and window flashing. The National Plumbing Code of Canada allowed the use of Lead solder in pipes until 1986. Brass fittings may also contain Lead.

Lead is an ALARA substance and is listed as a 2A and 2B carcinogen (probably and possibly, respectively, carcinogenic to humans) by the International Agency for Research on Cancer (IARC). ALARA means 'as low as reasonably achievable'. The ALARA principle applies to Lead, which means that although the BC Occupational Health & Safety Regulation specifies exposure limits for Lead, worker exposures to Lead in paints and coatings must be kept as low as reasonably achievable.

iii) Arsenic-Containing Materials: Arsenic has a long history of use as a pesticide due to its toxic properties. Arsenical pesticides including Chromated Copper Arsenate (CCA), when applied with high pressure to wood, serve to extend the structural life of the material by making it resistant to mould, rot and insect infestation. These materials have the potential to leach arsenic into the soil. Arsenic may also be found in paints.

Workers should be protected when handling treated wood containing arsenic to minimize the potential for exposure through direct skin contact or inhalation of dusts and fumes. Arsenic-containing materials must be disposed of in accordance with the BC Ministry of Environment Regulations.

iv) Mercury-Containing Products: Mercury may be present in electrical apparatus including Mercury switches in thermostats, high-output fluorescent lighting, and compact fluorescent light bulbs. These devices present a low risk of exposure to workers, assuming that the component is undamaged.

v) Polychlorinated Biphenyl Products: Polychlorinated biphenyls (PCBs) are a family of 209 compounds, called congeners, produced commercially as Aroclors by chlorination of biphenyl. The Aroclor mixtures were marketed for use in electrical transformers, capacitors, heat transfer systems, and hydraulic systems. Lower quantities were used in voltage regulators, adhesives, caulking compounds, inks, lubricants, paints, sealants, carbonless copy paper, coatings, electrical switches, plasticizers, circuit breakers, dust control agents, and older fluorescent lighting fixtures. Aroclors were used in paint formulations as drying oils (resins) and plasticizer or softening agents (liquids). [2]

The federal Environmental Contaminants Act, 1976, prohibited the use of PCBs in heat transfer and electrical apparatus installed after September 1, 1977, and in transformers and capacitors installed after July 1, 1980.

In addition, storage and disposal of PCB waste materials is regulated. The current Canadian Environmental Protection Act limits permissible levels of PCB releases to 2 mg/kg (2 ppm) for a liquid containing PCB's, and 50 mg/kg (50 ppm) for a solid containing PCB's.

For paints and coatings, "a person may manufacture, export, import, offer for sale, sell, process and use a colouring pigment containing PCBs produced incidentally if the concentration of the PCBs is less than 50 mg/kg." [3]

vi) Bulk Petroleum and Hazardous Products: Above-ground and under-ground storage tanks (ASTs & USTs respectively) containing petroleum product, may introduce contamination into soil and groundwater through leaks or spills. These tanks must be observed and checked over time to ensure that these events do not occur. Evidence of leaks must be investigated, and any potential contamination remediated. Aside from the environmental impacts, petroleum vapours emanating from contaminated soils and/or groundwater may percolate through soils beneath building slabs and foundations, entering the building and exposing occupants to airborne hydrocarbon contaminants.

The Canadian Council of Ministers of the Environment (CCME) publishes a Code of Practice for the safe management of ASTs and USTs.

Products and substances defined as 'hazardous' under the Hazardous Products Act and Hazardous Products Regulations (HPR) are regulated under federal and provincial WHMIS 2015 Regulations.

vii) Urea Formaldehyde Foam Insulation (UFFI): UFFI is a type of insulation that was widely used in the 1970's for insulating and retrofitting industrial, commercial, and older residential buildings. UFFI is a low-density foam that has the appearance and consistency of shaving cream and becomes stiff and self-supporting when it dries or cures (hardens).

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[2] 'Inadvertent Polychlorinated Biphenyls in Commercial Paint Pigments', 2009, Dingfei Hu & Keri C. Hornbuckle

[3] SOR/2008-273 Section 11 (1)

The insulation is typically made on-site where the urea formaldehyde-based resin is mixed with a catalyst and water and foamed in place in walls or used for block fill. The foam can be forced through small openings and delivered to the entire area of any cavity before it cures.

The use of a urea formaldehyde-based resin in the manufacture of UFFI can lead to the release of formaldehyde gas during the curing process and afterwards. Formaldehyde emissions do, however, decrease over time.

UFFI may also deteriorate when wet, can release increased amounts of formaldehyde if installed incorrectly. As well, there is a related concern that the moist foam could support mould growth, which could in turn adversely affect the health of the occupants.

Urea Formaldehyde Foam Insulation has been prohibited from installation, and sale or importation into Canada under the Hazardous Products Act since December 1980. The prohibition includes all urea formaldehyde-based thermal insulation, melamine urea, and other urea formaldehyde resins.

viii) Ozone-Depleting Substances: Ozone-depleting substances (ODS) are commonly found as refrigerants, aerosol propellants, cleaning solvents, and in some polyurethane building products. The federal Ozone-Depleting Substances Regulations (1998) amended controls on production and consumption of chlorofluorocarbons, halons, carbon tetrachloride and methyl chloroform.

In 2016, these regulations were replaced by the Ozone-Depleting Substances and Halocarbon Alternatives Regulations (ODSHAR). Ozone-depleting substances are also regulated provincially under the Ozone Depleting Substances and Other Halocarbons Regulation.

ix) Silica Products: Silica is the basic component of sand and rock. The best known and most abundant type of crystalline silica is quartz.

Prolonged breathing of crystalline silica dust may lead to pulmonary disease including Silicosis, a scarring and hardening of lung tissue caused when particles of crystalline silica are inhaled and become embedded in the lung. Initially, workers with silicosis may have no symptoms. However, as the disease progresses a worker may experience shortness of breath, severe cough, or weakness. These symptoms can worsen over time and lead to progressive debilitation and death.

Crystalline silica is found in a wide variety of products, however the activities where exposure to airborne respirable silica dust are of most concern include: [4]

- Mining, drilling, blasting, crushing, excavation or disruption of rock, sand, dirt or soil;
- Cutting, grinding, sanding, jackhammering, chipping, demolition or blasting of silica-containing construction materials such as concrete, cement, asphalt, mortar, grout, plaster & drywall, masonry, tiles, brick, and refractory brick;
- Abrasive blasting with silica-containing materials.

Silica is an ALARA substance and is listed as an ACGIH A2, and International Agency for Research on Cancer (IARC) Notation 1 carcinogen (respectively 'confirmed' and 'carcinogenic to humans').

[4] Source: ARHCA Code of Practice for Respirable Crystalline Silica

The ALARA principle applies to Silica, which means that although the B. C. Occupational Health & Safety Regulation specifies an eight-hour Exposure Limit (EL) of 0.025 mg/m^3 for Silica, worker exposures must be kept as low as reasonably achievable.

x) Radioactive Materials: Smoke alarms commonly contain small sealed radioactive sources in the form of Americium (Am^{241}). These materials are sealed into a metal case within the smoke detector and must not be damaged or tampered with. The Canadian Nuclear Safety Commission (CNSC) and the Canadian *Nuclear Safety Act* regulate radioactive materials. Smoke detectors intended for disposal must be handled in accordance with CNSC regulations, and are considered to pose a hazard if disposed of as, or with, common rubbish.

xi) Bio-Hazardous Substances and Materials: Bio-hazards can include any organism or their byproducts that may present a health hazard to workers who come in contact with them.

One such hazard is the presence of pathogenic fungus ('mould') on wet building fabrics and materials, within voids and/or in areas with above normal Relative Humidity. One pathogenic genera, *Histoplasma capsulatum* occurs in bird roosts and areas inhabited by bats.

The related disease, Histoplasmosis primarily affects the lungs. Occasionally, other organs are affected (disseminated histoplasmosis), which can be fatal if untreated.

Hantavirus may be present in rodent-infected areas. Hantavirus pulmonary syndrome (HPS) is a deadly disease which can be contracted by persons in contact with infected rodents or their urine and droppings.

Baylisascaris procyonis is an intestinal roundworm commonly found in raccoon feces, with wide distribution across North America. A recent study in southwestern BC indicated that the number of raccoons infected with *B. procyonis* was 61%. The parasite can cause severe human neurological disease or even death if ingested.

Adult raccoons infected with *Baylisascaris* shed eggs that mature into infective larvae; these larvae remain viable for years, and can withstand harsh weather and decontamination. After ingestion, larvae migrate through the host to the brain in particular, but also the eyes and viscera. The most common vehicles for ingestion include soil, wood, leaves, bark, sand and stones, in addition to direct ingestion of raccoon feces.

Finally, substances and paraphernalia associated with the manufacture or use of contraband narcotics can present a health risk to workers. Potential hazards may include exposure to sharps (e.g. needles and syringes), as well as infectious exposure to blood borne diseases (e.g. HIV and Hepatitis), and contact with acutely or chronically toxic chemical substances.

Appendix II

Excerpt from WorkSafeBC Safe Work Practices for Handling Asbestos (BK27)

Bulk material sample collection guide

Type of material	Area of homogeneous material*	Minimum number of bulk samples to be collected**	Minimum recommended quantity per sample
Surfacing materials, including textured coatings, drywall mud, plasters, and stucco	Less than 90 m^2 (approximately 1,000 sq. ft.)	At least 3 samples of each type of surfacing material	50 cm^3 (3 cu. in.); for drywall mud, sample the mud only—do not include the drywall or tape
	Between 90 and 450 m^2 (approx. 5,000 sq. ft.)	At least 5 samples of each type of surfacing material	
	Greater than 450 m^2	At least 7 samples of each type of surfacing material	
Sprayed insulation and blown-in insulation, including sprayed fireproofing	Less than 90 m^2 (approx. 1,000 sq. ft.)	At least 3 samples	50 cm^3 (3 cu. in.)
	Between 90 and 450 m^2 (approx. 5,000 sq. ft.)	At least 5 samples	
	Greater than 450 m^2	At least 7 samples	
Loose vermiculite insulation (including vermiculite insulation within concrete masonry units, or CMUs)	Less than 90 m^2 (approx. 1,000 sq. ft.)	At least 3 samples	4 L (1 gal.); collect from the top to the bottom of the application to get a representative sample
	Between 90 and 450 m^2 (approx. 5,000 sq. ft.)	At least 5 samples	
	Greater than 450 m^2	At least 7 samples	
Ceiling tiles	Less than 90 m^2 (approx. 1,000 sq. ft.)	At least 3 samples	5 cm x 5 cm (2 in. x 2 in.)
	Between 90 and 450 m^2 (approx. 5,000 sq. ft.)	At least 5 samples	
	Greater than 450 m^2	At least 7 samples	
Flooring, including vinyl sheet flooring (and backing) and floor tiles	Any size	At least 1 sample per flooring type in each room (and 1 from each layer of flooring)	5 cm x 5 cm (2 in. x 2 in.)

Type of material	Area of homogeneous material*	Minimum number of bulk samples to be collected**	Minimum recommended quantity per sample
Levelling compounds and mortars	Any size	At least 3 samples	50 cm^3 (3 cu. in.)
Asbestos ropes, gaskets, wires, etc.	Any size	At least 1 sample	5 linear cm (2 linear in.) or 5 cm x 5 cm (2 in. x 2 in.)
Mechanical insulation, including duct taping, pipe insulation, elbows, and boiler/tank or vessel insulation	Any size	At least 3 samples	50 cm^3 (3 cu. in.); all layers must be collected down to the pipe, tank, or vessel
Mastics and putties, including duct mastic (around penetrations) and window putty	Any size	At least 3 samples	15 cm^3 (1 cu. in.)
Roofing materials, including felting and shingles	Less than 90 m^2 (approx. 1,000 sq. ft.)	At least 1 sample (each layer of material must be sampled)	5 cm x 5 cm (2 in. x 2 in.); collect all layers, down to the sheathing
	Between 90 and 450 m^2 (approx. 5,000 sq. ft.)	At least 2 samples (each layer of material must be sampled)	
	Greater than 450 m^2	At least 3 samples (each layer of material must be sampled)	
Asbestos cement (transite) board and pipe	Any size	At least 1 sample	5 cm x 5 cm (2 in. x 2 in.)
Other sprayed materials	Any size	At least 1 sample per type of material	1 full, small Ziploc bag
Other non-friable products	Any size	At least 1 sample per type of material	5 cm x 5 cm (2 in. x 2 in.)

* Homogeneous material is considered uniform in texture and appearance, was installed at one time, and is likely to be of only one type of material or formulation.

** If the material is assumed to contain asbestos, samples do not have to be collected. The professional judgment of a qualified person can be used to reduce the number of bulk samples of homogeneous materials. If fewer samples than the minimum recommended number are collected, surveyors should document the rationale for their position in the survey report.

Lewkowich Engineering Associates Ltd.

2023-09-19

Bulk Asbestos Certificate of Analysis

Project #: E0400-879	Client: City of Port Alberni	Site Address: Building 8 - 3500 Harbour Road, Port Alberni, BC	Sampled By: Client

Analyzed in accordance with NIOSH 9002 Asbestos (Bulk) by PLM

(Note: Estimated Limit of Detection (LOD) is <1% asbestos)

Legend:

ND Not Detected

* *Positive result may be due to contamination from adjacent ACM layer*

Lab Sample #	Sample Description	Location	Phase Description	Phase %	Asbestos Type	Asbestos %	Other Material Type	Other Material	Analyst
E0400-879-13	Roofing	8A	Tar	20	NO	ND	Fibrous(Cellulose)/Non-Fibrous(1/99)	100	LC
			Fibrous Tar	20	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Wood	35	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-14a	Roofing	8B	Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	4	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Fibrous Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Wood	60	NO	ND	Fibrous(Cellulose)	100	LC
			Paint - White	1	NO	ND	Non-Fibrous	100	LC
E0400-879-14b	Roofing	8B	Aggregate - Large Rounded	10	NO	ND	Non-Fibrous	100	LC
			Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Fibrous Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	2	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Fibrous Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	2	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Wood	70	NO	ND	Fibrous(Cellulose)	100	LC
			Paint - White	1	NO	ND	Non-Fibrous	100	LC
E0400-879-15a	Roofing	8C	Aggregate - Brown	5	NO	ND	Non-Fibrous	100	LC
			Tar	10	NO	ND	Non-Fibrous	100	LC
			Fibrous Mesh - White	5	NO	ND	Fibrous(Glass)/Non-Fibrous(90/10)	100	LC
			Tar	10	NO	ND	Fibrous(Glass)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	10	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	10	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Wood	20	NO	ND	Fibrous(Cellulose)	100	LC

Lewkowich Engineering Associates Ltd.

Bulk Asbestos Certificate of Analysis

Project #: E0400-879	Client: City of Port Alberni	Site Address: Building 8 - 3500 Harbour Road, Port Alberni, BC	Sampled By: Client

Analyzed in accordance with NIOSH 9002 Asbestos (Bulk) by PLM
(Note: Estimated Limit of Detection (LOD) is <1% asbestos)

Legend:
ND Not Detected
* *Positive result may be due to contamination from adjacent ACM layer*

Lab Sample #	Sample Description	Location	Phase Description	Phase %	Asbestos Type	Asbestos %	Other Material Type	Other Material	Analyst
E0400-879-15b	Roofing	8C	Aggregate - Grey/Tan	10	NO	ND	Non-Fibrous	100	LC
			Tar	10	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	10	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	20	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Wood	25	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-15c	Roofing	8C	Tar	30	NO	ND	Fibrous(Glass/Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	45	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Mastic - Black	25	**YES - Chrysotile**	**1-5**	Non-Fibrous	95-99	LC
E0400-879-15d	Roofing	8C	**Mastic - Black**	30	**YES - Chrysotile**	**5-10**	Fibrous(Cellulose)/Non-Fibrous(10/90)	90-95	LC
			Fibrous Tar	40	**YES - Chrysotile***	**Trace-1**	Fibrous(Cellulose)/Non-Fibrous(20/80)	99	LC
			Tar	30	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
E0400-879-15e	Roofing	8C	Tar	25	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	40	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	25	NO	ND	Fibrous(Cellulose)/Non-Fibrous(2/98)	100	LC
			Aggregate - Fine, Black	10	NO	ND	Non-Fibrous	100	LC
E0400-879-15f	Roofing	8C	**Tar**	25	**YES - Chrysotile**	**1-5**	Fibrous(Cellulose)/Non-Fibrous(10/90)	95-99	LC
			Fibrous Tar	40	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	20	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Aggregate - Fine	15	NO	ND	Non-Fibrous	100	LC
E0400-879-16a	Roofing	8D	Aggregate - Grey/Tan	15	NO	ND	Non-Fibrous	100	LC
			Tar	15	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	20	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	20	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	15	NO	ND	Fibrous(Cellulose/Synthetic)/Non-Fibrous(5/95)	100	LC
E0400-879-16b	Roofing	8D	Tar	30	NO	ND	Fibrous(Cellulose/Glass)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	40	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Aggregate - Fine, Black	30	NO	ND	Non-Fibrous	100	LC
E0400-879-16c	Roofing	8D	**Mastic**	30	**YES - Chrysotile**	**5-10**	Fibrous(Cellulose)/Non-Fibrous(10/90)	90-95	LC
			Fibrous Tar	40	**YES - Chrysotile**	**1-5**	Fibrous(Cellulose)/Non-Fibrous(80/20)	95-99	LC
			Tar	30	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC

Lewkowich Engineering Associates Ltd.

Bulk Asbestos Certificate of Analysis

Project #: E0400-879	Client: City of Port Alberni	Site Address: Building 8 - 3500 Harbour Road, Port Alberni, BC	Sampled By: Client

Analyzed in accordance with NIOSH 9002 Asbestos (Bulk) by PLM

(Note: Estimated Limit of Detection (LOD) is <1% asbestos)

Legend:

ND Not Detected

* *Positive result may be due to contamination from adjacent ACM layer*

Lab Sample #	Sample Description	Location	Phase Description	Phase %	Asbestos Type	Asbestos %	Other Material Type	Other Material	Analyst
E0400-879-17	Roofing	8E	Aggregate - Grey/Tan	15	NO	ND	Non-Fibrous	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(2/98)	100	LC
			Fibrous Tar	20	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	10	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	20	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	10	NO	ND	Fibrous(Synthetic/Cellulose)/Non-Fibrous(5/95)	100	LC
			Wood	15	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-18	Roofing	8F	Aggregate - Brown	15	NO	ND	Non-Fibrous	100	LC
			Tar	5	NO	ND	Non-Fibrous	100	LC
			Fibrous Mesh	2	NO	ND	Fibrous(Glass)/Non-Fibrous(90/10)	100	LC
			Tar	4	NO	ND	Fibrous(Glass)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	30	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	3	NO	ND	Fibrous(Synthetic/Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	30	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Tar	5	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Plastic Film	1	NO	ND	Non-Fibrous	100	LC
			Wood	5	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-19	Roofing	8G	Aggregate - Brown	10	NO	ND	Non-Fibrous	100	LC
			Tar	5	NO	ND	Non-Fibrous	100	LC
			Fibrous Mesh	5	NO	ND	Fibrous(Glass)/Non-Fibrous(95/5)	100	LC
			Tar	10	NO	ND	Fibrous(Glass/Synthetic)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Synthetic)/Non-Fibrous(2/98)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	15	NO	ND	Fibrous(Cellulose/Synthetic)/Non-Fibrous(5/95)	100	LC
			Wood	20	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-20a	Roofing	8H	Aggregate - Grey	10	NO	ND	Non-Fibrous	100	LC
			Tar	5	NO	ND	Fibrous(Synthetic)/Non-Fibrous(1/99)	100	LC
			Fibrous Tar	10	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Glass/Synthetic)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Synthetic)/Non-Fibrous(2/98)	100	LC
			Wood	50	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-20b	Roofing	8H	Aggregate - Grey/Tan	10	NO	ND	Non-Fibrous	100	LC
			Tar	5	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose/Synthetic)/Non-Fibrous(2/98)	100	LC
			Wood	40	NO	ND	Fibrous(Cellulose)	100	LC

Lewkowich Engineering Associates Ltd.

Bulk Asbestos Certificate of Analysis

Project #: E0400-879	Client: City of Port Alberni	Site Address: Building 8 - 3500 Harbour Road, Port Alberni, BC	Sampled By: Client

Analyzed in accordance with NIOSH 9002 Asbestos (Bulk) by PLM
(Note: Estimated Limit of Detection (LOD) is <1% asbestos)

Legend:
ND Not Detected
* *Positive result may be due to contamination from adjacent ACM layer*

Lab Sample #	Sample Description	Location	Phase Description	Phase %	Asbestos Type	Asbestos %	Other Material Type	Other Material	Analyst
E0400-879-20c	Roofing	8H	Aggregate - Grey/Tan	5	NO	ND	Non-Fibrous	100	LC
			Tar	3	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	2	NO	ND	Fibrous(Synthetic)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	10	NO	ND	Fibrous(Synthetic)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Synthetic)/Non-Fibrous(2/98)	100	LC
			Wood	60	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-20d	Roofing	8H	Tar	15	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	30	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	15	**YES - Chrysotile**	**5-10**	Fibrous(Cellulose)/Non-Fibrous(5/95)	90-95	LC
			Fibrous Tar	30	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
E0400-879-20e	Roofing	8H	Tar	25	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	45	NO	ND	Fibrous(Cellulose)/Non-Fibrous(65/35)	100	LC
			Tar	30	**YES - Chrysotile**	**1-5**	Fibrous(Cellulose)/Non-Fibrous(5/95)	95-99	LC
E0400-879-20f	Roofing	8H	Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	25	NO	ND	Fibrous(Cellulose/Synthetic)/Non-Fibrous(70/30)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	20	NO	ND	Fibrous(Cellulose)/Non-Fibrous(70/30)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Wood	25	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-20g	Roofing	8H	Tar	10	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	30	NO	ND	Fibrous(Cellulose)/Non-Fibrous(60/40)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Tar	10	**YES - Chrysotile**	**10-15**	Fibrous(Cellulose)/Non-Fibrous(10/90)	85-90	LC
			Fibrous Tar	30	NO	ND	Fibrous(Cellulose)/Non-Fibrous(70/30)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
E0400-879-21a	Roofing	8I	Aggregate - Grey	20	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	45	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	30	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Aggregate - Fine	5	NO	ND	Non-Fibrous	100	LC
E0400-879-21b	Roofing	8I	Aggregate - Rust/Tan/Black	25	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	65	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Aggregate - Fine	10	NO	ND	Non-Fibrous	100	LC
E0400-879-21c	Roofing	8I	Aggregate - Rust/Tan/Black	25	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	65	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Aggregate - Fine	10	NO	ND	Non-Fibrous	100	LC

Lewkowich Engineering Associates Ltd.

2023-09-19

Bulk Asbestos Certificate of Analysis

Project #: E0400-879	Client: City of Port Alberni	Site Address: Building 8 - 3500 Harbour Road, Port Alberni, BC	Sampled By: Client

Analyzed in accordance with NIOSH 9002 Asbestos (Bulk) by PLM
(Note: Estimated Limit of Detection (LOD) is <1% asbestos)

Legend:
ND Not Detected
* *Positive result may be due to contamination from adjacent ACM layer*

Lab Sample #	Sample Description	Location	Phase Description	Phase %	Asbestos Type	Asbestos %	Other Material Type	Other Material	Analyst
E0400-879-22	Roofing	8J	Aggregate - Large Rounded	20	NO	ND	Non-Fibrous	100	LC
			Tar	2	NO	ND	Non-Fibrous	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	15	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	3	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous - Black	10	NO	ND	Fibrous(Cellulose)/Non-Fibrous(90/10)	100	LC
E0400-879-23	Roofing	8K	Aggregate - Large Rounded	10	NO	ND	Non-Fibrous	100	LC
			Tar	3	NO	ND	Fibrous(Cellulose)/Non-Fibrous(15/85)	100	LC
			Fibrous Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	3	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	4	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(85/15)	100	LC
			Tar	5	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Wood	60	NO	ND	Fibrous(Cellulose)	100	LC
E0400-879-24	Roofing	8L	Aggregate - Large Rounded	10	NO	ND	Non-Fibrous	100	LC
			Tar	1	NO	ND	Fibrous(Cellulose)/Non-Fibrous(10/90)	100	LC
			Fibrous Tar	4	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	1	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	4	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	1	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	4	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	1	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Fibrous Tar	3	NO	ND	Fibrous(Cellulose)/Non-Fibrous(80/20)	100	LC
			Tar	1	NO	ND	Fibrous(Cellulose)/Non-Fibrous(5/95)	100	LC
			Wood	70	NO	ND	Fibrous(Cellulose)	100	LC

Lewkowich Engineering Associates Ltd.

2023-09-19

Field Portable XRF Certificate of Analysis

Project #: E0434-289.1	Client: Bowerman Construction Ltd.	Site Address: 3500 Harbour Road, Port Alberni, BC	In-situ ☑	Ex-situ ☐

Analyzed in accordance with analytical methods adapted from EPA Method 6200 and ASTM F2853-10

Note: HPA defines lead based paint (LBP) as coating exceeding 90 ppm (0.009%) Lead content by weight

Legend: POSITIVE - Lead-content (> LOD for XRF) ND - Non Detect (< LOD for XRF)

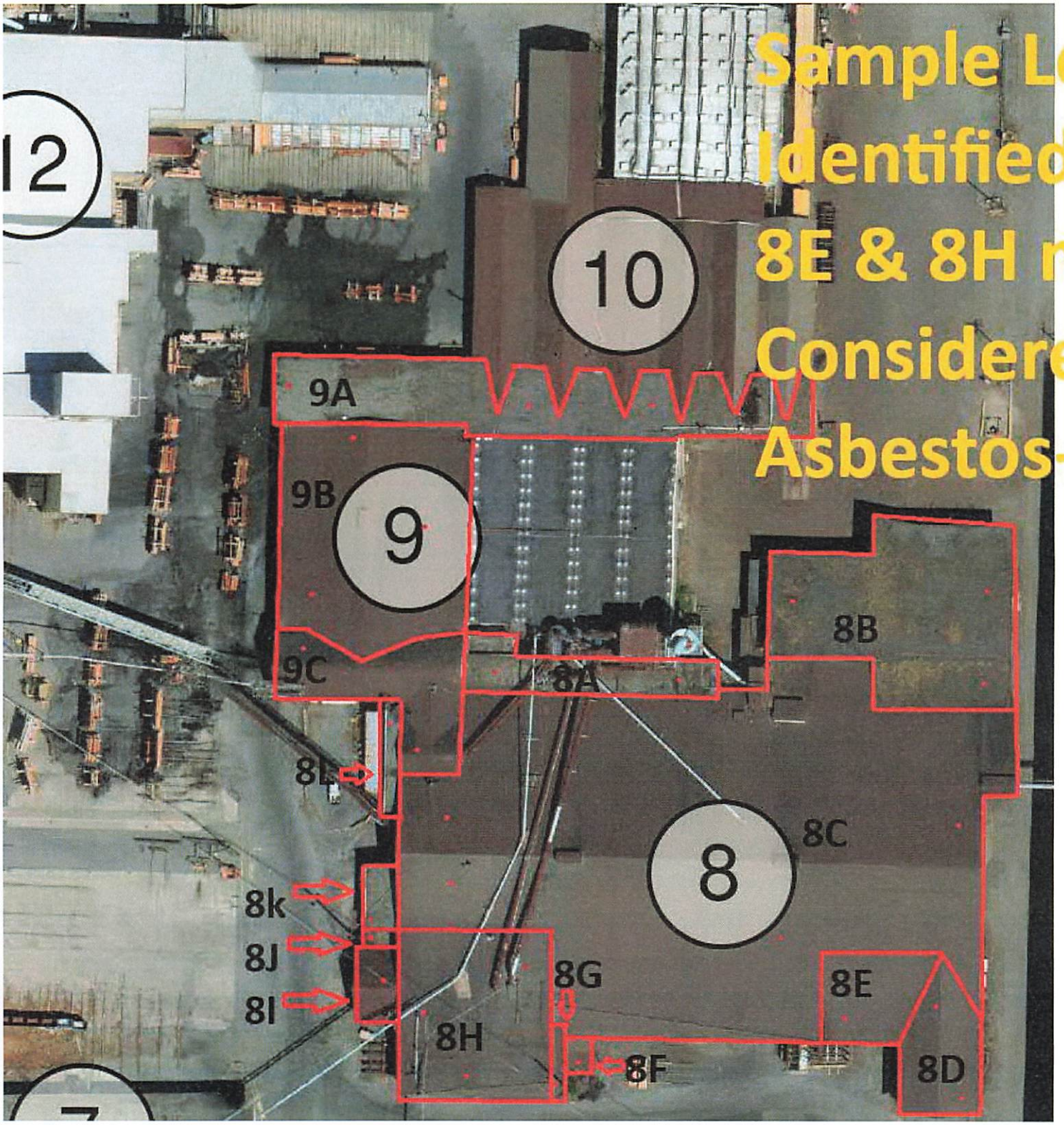
Test #	Sample Description	Location	Date	Time	Element	Lead Content	Remarks	Analyst
22	Blue Paint on Metal	Building 8 - Blue Machine	15-Dec-22	12:20:36	Lead	POSITIVE	2000 - 5000 ppm	JP
23	Bare Metal	Building 8 - Blue Machine	15-Dec-22	12:21:22	Lead	POSITIVE	600 - 2000 ppm	JP

Instrument	Olympus DS4000	Calibration Check	Date	15-Dec-22	Time	9:24:07	PASS	JP

LEA Environmental Health & Safety

1900 Boxwood Road, Nanaimo, BC V9S 5Y2 (250) 756-0355

Natural Resources Canada
NDT Certification No.: 16518



Sample Locations Identified as 8C, 8D, 8E & 8H must be Considered Asbestos-Containing