

HAZARDOUS MATERIALS SURVEY REPORT

Site Address:

Somass Silo

3500 Harbour Road

Port Alberni, BC

Prepared For:

City of Port Alberni

C/O Mathews West Developments Ltd.

November 2025

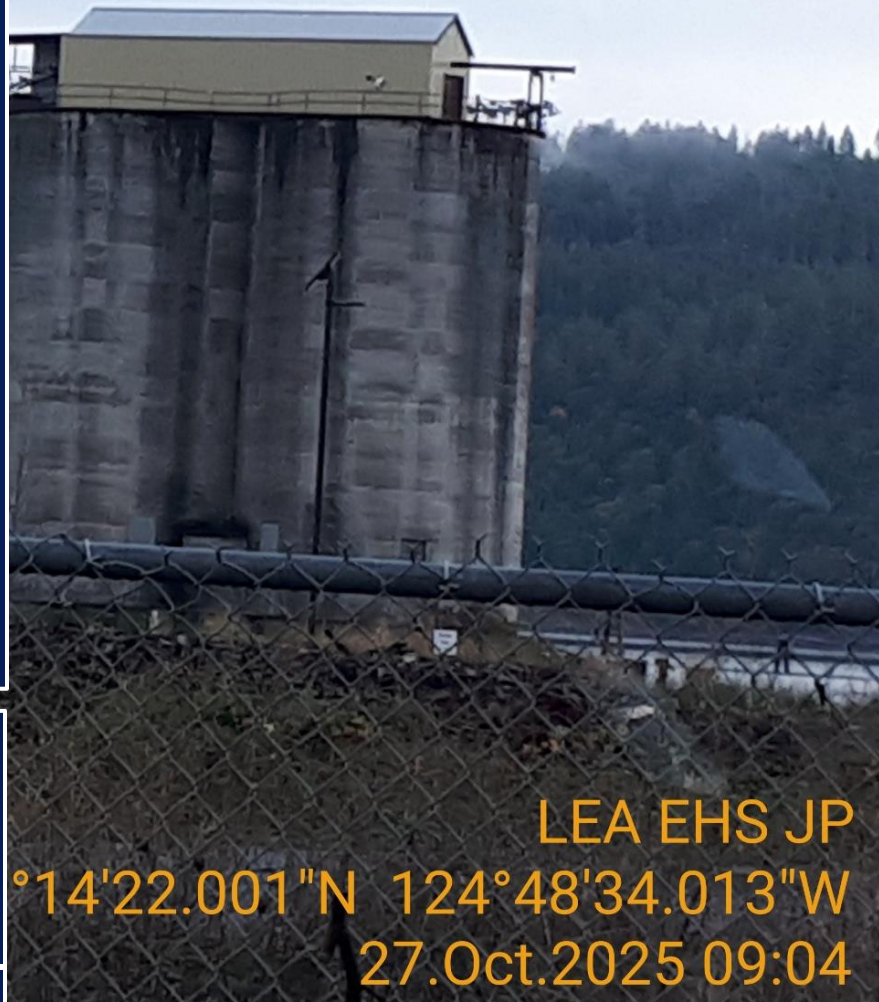
File No.: E0434-809

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WorkSafeBC Asbestos Licence: AAL-00001199



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Engineering
Associates Ltd.



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1.0 Introduction

This report presents the results of the demolition hazardous materials survey conducted on the property located at 3500 Harbour Road, Port Alberni, BC, by LEA Environmental Health & Safety. The field work was conducted by Johanne Picard B.Sc., RPIH (ASB-10002597) and Andrea Stennes (ASB-10002818). 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

Hazard	Material Type / Location(s)	Report Section
Asbestos	Window Putty Interior, Black Mastic on Exterior Concrete Wall of Silo	5.1
Lead	Blue/Green Paint on Metal Stairs, Red Paint on Metal Safety Cage, Yellow Paint on Metal Safety Railing	5.2
Silica	Concrete	5.3
Arsenic	None Observed	5.4
Mercury	Compact Fluorescent Light (CFL) Bulb	5.5
PCBs	Suspect Electrical Panels, Control Panels, Circuit Breakers	5.6
Petroleum	None Observed	5.7
Hazardous Products	Pressure-Treated Lumber Outside Silo	5.7
UFFI	None Observed	5.8
Ozone-Depleting	None Observed	5.9
Radioactive	None Observed	5.10
Bio-Hazard	Bird Carcasses, Rodent Droppings, Human Feces	5.11

All of these materials must be removed or safely 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 (the Silo) 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
- a review of previous *Bulk Asbestos Certificate of Analysis*, prepared by LEA, dated December 20, 2023. See attached.
- screening of three paint samples for Lead content via XRF

We note that the scope of our investigation was limited by the building conditions, including but not limited to structural hazards, inaccessible areas of the building(s), debris & rubbish. Therefore, hazardous materials may be present in areas not seen.

3.0 Site Description

The structure is a concrete silo with a rooftop metal shed constructed in the mid-1940s. The structure houses mechanical equipment, a metal spiral staircase and chutes. Floors include concrete and metal grate. Interior walls of the rooftop structure consist of wood and open steel beams. The exterior of the silo is concrete; shed is metal cladding with metal roof. Windows are metal frame. Services are disconnected.

4.0 Site Survey

LEA attended the site on October 27, 2025. The purpose of this visit was to:

- conduct a visual reconnaissance of silo structure 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 vacant and in poor-fair condition, with slight damage to the walls. As such, our inspection can be characterized as semi-intrusive in nature.

We note that the areas listed in the following table could not be accessed for sampling:

Table 4.1 – Summary of Inaccessible Areas

Location	Materials	Comments
Mechanical Equipment	Suspect asbestos-containing mechanical gaskets, ropes, and belts, incandescent light insulation, electrical wire casing, brakes and cement pipes	Suspected to be Concealed – if suspect material encountered, testing may be required
Silo Interior and Exterior	Suspect lead-containing emergency light batteries and electrical wiring	Suspected to be Concealed – if suspect material encountered, testing may be required
Underground Tunnel	Unknown	

Suspect materials must be further investigated prior to disturbance or demolition.

5.0 Survey Results

5.1 Asbestos-Containing Materials (ACM): Suspect or typical ACM were sampled and analyzed previously in December 2023 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 WorkSafeBC publication 'Safe Work Practices for Handling Asbestos' (BK27).

ACM are summarized in the following table:

Table 5.1.1 – Summary of Asbestos-Containing Materials

Sample No.	Sample Description	Sample Location	Asbestos Content	Quantity ¹
E0434-372.9-1a, b, c	Off-White Window Putty	Silo Interior Window	Chrysotile 1-3%	3 Windows
E0434-372.9-3a, b, c	Black Mastic	Silo Exterior	Chrysotile 15-30%	Throughout

Note 1: Area quoted is approximate. 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 window putty/mastic and black mastic throughout the building must be considered asbestos-containing.

Older style light fixtures were observed, however, were not disassembled to inspect the light fixture gasket.

Asbestos containing cement pipes and/or drain tile 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 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	Sample Location	Lead Content	Quantity ¹
#2	Blue/green paint on metal stairs	Silo Interior	> 5 %	All Metal
#3	Red paint on metal safety cage	Silo Interior	5000-10000 ppm	All Metal
#4	Yellow paint on metal safety railing	Silo Interior	> 5 %	All Metal

Note 1: Area quoted is approximate. It is the abatement contractors' responsibility to confirm reported quantities.

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 painted metal 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. Note: A positive result on metal items may not necessarily indicate a positive in the coating. Further analysis may be required.

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.

5.3 Silica Products: Silica-containing materials that will or potentially be affected by demolition work includes concrete ceilings, walls, and floor.

5.4 Arsenic-Containing Materials: Arsenic-containing or CCA treated lumber was not observed on site.

5.5 Mercury-Containing Products: Mercury-containing compact fluorescent lights (CFL) bulbs were observed.

5.6 Polychlorinated Biphenyl Products (PCBs): Materials suspected to be PCB-containing were observed including electrical panels, control panels and circuit breakers.

5.7 Bulk Petroleum and Hazardous Products: Bulk Petroleum was not observed. Pressure-treated lumber with creosote and/or other chemical preservatives were observed outside the silo structure.

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

5.9 Ozone-Depleting Substances: Potential sources of ozone-depleting substances (ODS) were not observed.

5.10 Radioactive Materials: Products containing radioactive materials such as smoke alarms were not observed.

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.

Other bio-hazardous materials were observed including rodent droppings, bird carcasses and human feces.

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 as required.

Due to the condition of the building and hazards reported, entry into the building is not recommended without proper PPE.

6.1 Asbestos-Containing Materials: The materials described as Asbestos-containing in Section 5.1 must be removed or safely contained by a WorkSafeBC Certified Asbestos Abatement contractor prior to general demolition. 'Moderate Risk' procedures as described in the WorkSafeBC publication Safe Work Practices for Handling Asbestos (BK27), must be followed for removal of all putties and mastics. Suspect mechanical gaskets, ropes, and belts, incandescent light insulation, electrical wire casing, brakes and cement pipes may also be removed following Moderate procedures if encountered. (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 of the building. All window putty/mastic and black mastic throughout the building must be considered asbestos-containing unless proven otherwise.

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 contractor who is experienced with safe practices for handling lead 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'. For more information see WorkSafeBC publication BK 159 "Safe Work Practices for Handling Lead". (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)

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 as leachable lead is an environmental concern. Consult with the receiving disposal facility to determine if the test is required.

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 Silica-Containing Products: The materials described as Silica-containing in Section 5.3 must be removed using precautions to minimize the generation of dust and to prevent exposure to respirable crystalline silica dust. A 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).

6.4 Mercury-Containing Electrical Apparatus: Mercury containing Compact Fluorescent Light (CFL) bulbs 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).

6.5 Suspect PCB-Containing Products: PCB products should be removed intact and transported off-site for proper disposal. (Occupational safety hazard – Low)

6.6 Bulk Petroleum and Hazardous Products: Pressure-treated lumber containing chemical preservatives should be removed intact and separated from general waste for proper disposal. (Occupational safety hazard assuming no dry stripping – Low)

6.7 Biohazardous Materials: Personal protective equipment including gloves and a respirator should be worn where workers are exposed to bird carcasses, rodent droppings and/or human feces. (Occupational safety hazard - Low)

6.8 Additional Regulatory Requirements (as required):

6.8.1 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 abatement 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; and as required, (4) a site Asbestos Exposure Control Plan (AECPP); (5) a site Lead Exposure Control Plan (LECP); (6) a site Silica Exposure Control Plan (SECP); and (7) a Mould Exposure Control Plan.

6.8.2 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.

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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:

A handwritten signature in blue ink, appearing to read 'Janine', is shown on a light-colored, textured background.

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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.

In 2018, Canada prohibited the import, sale, use, and manufacture of asbestos containing products. 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) 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 is of most concern include: ¹

- 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').

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/m³ for Silica, worker exposure must be kept as low as reasonably achievable.

iv) 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.

v) 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.

vi) 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.

¹ Source: ARHCA Code of Practice for Respirable Crystalline Silica

² 'Inadvertent Polychlorinated Biphenyls in Commercial Paint Pigments', 2009, Dingfei Hu & Keri C. Hornbuckle
HMSR Rev.27 ©2024

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

vii) 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.

viii) 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).

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.

³ SOR/2008-273 Section 11 (1)

ix) 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.

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.

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Appendix II

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

PROJECT: Somass Silo - 3500 Harbour Road, Port Alberni, BC
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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 × 5 cm (2 in. × 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 × 5 cm (2 in. × 2 in.)
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 × 5 cm (2 in. × 2 in.)

PROJECT: Somass Silo - 3500 Harbour Road, Port Alberni, BC
 FILE NO.: E0434-809
 DATE: November 6, 2025



Type of material	Area of homogeneous material*	Minimum number of bulk samples to be collected**	Minimum recommended quantity per sample
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 × 5 cm (2 in. × 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 × 5 cm (2 in. × 2 in.)
Other sprayed materials	Any size	At least 1 sample per type of material	1 full, small zip-lock bag
Other non-friable products	Any size	At least 1 sample per type of material	5 cm × 5 cm (2 in. × 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.

** 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.

Bulk Asbestos Certificate of Analysis

Project #: E0434-372.9	Client: City of Port Alberni	Site Address: Somass Silo - 3500 Harbour Road, Port Alberni, BC	Sampled By: LEA (MD)
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Analyzed in accordance with NIOSH 9002 Asbestos (Bulk) by PLM

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

Legend:

ND Not Detected

Lab Sample #	Sample Description	Location	Phase Description	Phase %	Asbestos Type	Asbestos %	Other Material Type	Other Material	Analyst
E0434-372.9-1a	Window Putty	Silo Window Interior	Off White Mix	100	YES - Chrysotile	1-3	Fibrous(Glass)/Non-Fibrous(1/99)	97-99	LC
E0434-372.9-1b	Window Putty	Silo Window Interior	Off White Mix	100	YES - Chrysotile	1-3	Fibrous(Glass)/Non-Fibrous(1/99)	97-99	LC
E0434-372.9-1c	Window Putty	Silo Window Interior	Off White Mix	100	YES - Chrysotile	Trace-1	Fibrous(Glass)/Non-Fibrous(1/99)	99	LC
E0434-372.9-2a	Window Mastic	Silo Window Exterior	Paint - Off White White Mix	10 90	NO NO	ND ND	Non-Fibrous Non-Fibrous	100 100	LC LC
E0434-372.9-2b	Window Mastic	Silo Window Exterior	White Mix	100	NO	ND	Non-Fibrous	100	LC
E0434-372.9-2c	Window Mastic	Silo Window Exterior	White Mix	100	NO	ND	Non-Fibrous	100	LC
E0434-372.9-3a	Black Mastic	Silo On Exterior	Mastic - Black	100	YES - Chrysotile	25-30	Non-Fibrous	70-75	LC
E0434-372.9-3b	Black Mastic	Silo On Exterior	Mastic - Black	100	YES - Chrysotile	20-25	Non-Fibrous	75-80	LC
E0434-372.9-3c	Black Mastic	Silo On Exterior	Mastic - Black Cementitious - Light Grey	15 85	YES - Chrysotile	15-20	Non-Fibrous	80-85	LC
E0434-372.9-4a	Parging	Exterior Patch	Cementitious - Grey	100	NO	ND	Non-Fibrous	100	LC
E0434-372.9-4b	Parging	Exterior Patch	Cementitious - Grey	100	NO	ND	Non-Fibrous	100	LC
E0434-372.9-4c	Parging	Exterior Patch	Cementitious - Grey	100	NO	ND	Non-Fibrous	100	LC
E0434-372.9-5a	Concrete	Exterior Finish	Cementitious - Light Grey	100	NO	ND	Non-Fibrous	100	LC
E0434-372.9-5b	Concrete	Exterior Finish	Cementitious - Light Grey	100	NO	ND	Non-Fibrous	100	LC
E0434-372.9-5c	Concrete	Exterior Finish	Cementitious - Light Grey	100	NO	ND	Non-Fibrous	100	LC

Field Portable XRF Certificate of Analysis

Project #: E0434-809	Client: City of Port Alberni, C/O Mathews West Developments Ltd	Site Address: 3500 Harbour Road, Port Alberni, BC	In-situ ☒	Ex-situ ☐
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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) 1 % = 10000 ppm
ND Non Detect (< LOD for XRF)

Test #	Sample Description	Location	Date	Time	Element	Lead Content	Remarks	Analyst
2	Blue/Green Paint on Metal	Silo Interior, Stairs	27-Oct-25	8:59:53	Lead	POSITIVE	> 5%	JP
3	Red Paint on Metal	Silo Interior, Cage	27-Oct-25	9:01:43	Lead	POSITIVE	5000 - 10000 ppm	JP
4	Yellow Paint on Metal	Silo Interior, Railing	27-Oct-25	9:03:17	Lead	POSITIVE	> 5%	JP

Instrument	Olympus DS4000	Calibration Check	Date	27-Oct-25	Time	8:27:02	PASS	JP
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South Face



LEA EHS AS
Oct 27, 2025 10:13AM

North Face



LEA EHS AS
Oct 27, 2025 10:06AM



LEGEND:

A – Asbestos Sample Locations
Green – Negative/Not-Containing
Red – Positive/Containing

Title: Silo - Somass Mill, Port Alberni, BC

Project NO.		Date	REV
E0434-809	NTS	27-Oct-25	0
PREPARED BY:	JP	PAGE	1 OF 1

Site Photos

Project Number	E0434-809	Surveyor Name	LEA (JP/AS)
Date	27-Oct-25	Site Location	3500 Harbour Road, Port Alberni, BC



Figure 1. Asbestos-Containing Off-White Window Putty - Interior.



Figure 2. Asbestos-Containing Black Mastic on Exterior Concrete Wall of Silo.

Site Photos

Project Number	E0434-809	Surveyor Name	LEA (JP/AS)
Date	27-Oct-25	Site Location	3500 Harbour Road, Port Alberni, BC



Figure 3. Lead-Containing Coatings/Metal on Interior Structures



Figure 4. Mercury-Containing Compact Fluorescent Light

Site Photos

Project Number	E0434-809	Surveyor Name	LEA (JP/AS)
Date	27-Oct-25	Site Location	3500 Harbour Road, Port Alberni, BC



Figure 5. Pressure-Treated Lumber Containing Chemical Preservatives



Figure 6. Bio-Hazardous Bird Carcass and Droppings