Pre-Demolition Hazardous Materials Investigation Of 21 Johnston Bridge Loop, Quesnel, BC



Prepared for

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Executive Summary

Cascadia OHS (Cascadia) was engaged by **the City of Quesnel** to carry out a destructive predemolition hazardous materials investigation at 21 Johnston Bride Loop, Quesnel, BC. This investigation was conducted prior to the planned demolition of a number of buildings at the site. This investigation was carried out on June 4th, 2021. This investigation is intended to identify the locations and types of hazardous materials that are present in the buildings that will be demolished.

The site of this investigation is the current Public Works Facility for the City of Quesnel. There are a total of seven (7) buildings on the property that will be demolished. **This report is limited to just two (2) of those buildings – known as Site B**. All accessible areas of the buildings were inspected. Invasive sampling was carried out.

The following hazardous materials were reviewed:

Material	Description	Recommendation
Asbestos	Drywall joint compound	Modified High Risk asbestos abatement procedures
	Sheet vinyl flooring	High Risk asbestos abatement procedures
	Vermiculite insulation	Modified Moderate Risk asbestos abatement procedures Personal Protective Equipment during demolition Asbestos Exposure Control Plan
Lead	Lead containing paints are present	Personal Protective Equipment during demolition Lead Exposure Control Plan
Silica	Assumed to be present in concrete, cement, plaster and possibly drywall joint compound	Personal Protective Equipment during demolition Silica exposure control plan
Mercury	Fluorescent light tubes observed	Remove for proper disposal
Hantavirus - Rodent Droppings	None observed	No action necessary
Arsenic	Pressure treated wood not observed	No action necessary
Radioactive Materials	Smoke detectors observed	Remove for recovery & disposal
Mould	None observed	No action necessary
PCBs	Fluorescent light fixtures observed	Remove for proper disposal
Ozone Depleting Substances	Refrigerator observed in Building 1	Remove for recovery & disposal
Urea Formaldehyde Foam Insulation	None observed	No action necessary
Above Ground Storage Tanks (AGST)	None observed	No action necessary
Leachable Lead	Not conducted	TCLP Lead Leachate analysis required
Other Hazardous Materials	Synthetic fiberglass insulation observed	Personal Protective Equipment during demolition Remove for proper disposal

Note: Renovation or demolition activities will require protective measures. Materials may be encountered during work activities that are not identified in this report. If this happens, work must stop in those areas until the materials are properly identified.



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1.0 Introduction

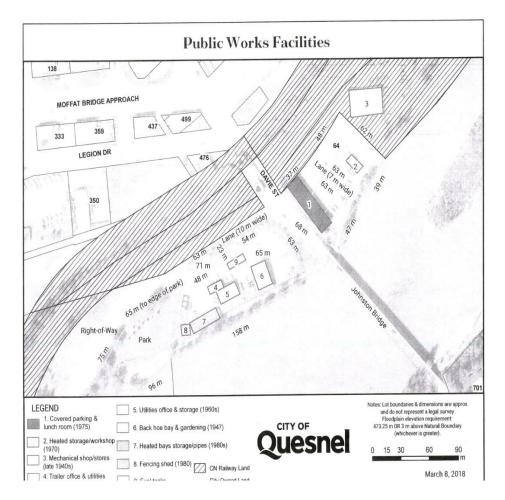
Cascadia OHS (Cascadia) was engaged by **the City of Quesnel** to carry out a destructive predemolition hazardous materials investigation at 21 Johnston Bride Loop, Quesnel, BC. This investigation was conducted prior to the planned demolition of a number of buildings at the site. This investigation was carried out on June 4th, 2021. This investigation is intended to identify the locations and types of hazardous materials that are present in the buildings that will be demolished.

The site of this investigation is the current Public Works Facility for the City of Quesnel. There are a total of seven (7) buildings on the property that will be demolished. This report is limited to just two (2) of those buildings – known as Site B. All accessible areas of the buildings were inspected. Invasive sampling was carried out.

Employee personal items, furniture, office equipment, tools and contents in storage were not assessed.

The City of Quesnel has divided the demolition project into two (2) separate phases. The first phase, the main priority for the client, involves what the client designated to Cascadia as 'Site A' and consists of buildings 4, 5, 6, 7, and 8. Site A assessment was completed January 21st, 2021. **The second phase, 'Site B', consists of buildings 1 and 2 and is the focus of this report.** Building 3, Mechanical Shop/Stores, sits on land owned by CN Railway and may be demolished at later date and is not included in the scope of this report. Below is an overhead view of the City of Quesnel Public Works Facilities with the buildings scheduled for demolition identified.





The scope of this pre-demolition hazardous materials survey is limited to two (2) of the seven (7) buildings: Buildings 1 and 2 – or Site B. On June 4th, 2021, Buildings 1 and 2 were unoccupied during the survey.

This hazardous materials survey was limited to construction materials and components. No below-grade waterworks or plumbing systems or other sub-surface materials were included in the scope of this investigation.

Materials assumed to not contain asbestos during this hazardous materials survey include wood and wood composite materials, carpeting, metals, concrete/cement, and synthetic plastics.

Visual identification of hazardous materials was carried out. Representative samples of building materials were collected for asbestos testing. Paint samples were collected for determination of lead content. Samples of building materials were collected for leachable lead testing.



Building Descriptions – Site B (See Appendix 1 for photographs)

Building 1 - Covered Parking & Lunchroom

Constructed in 1975 this is a wood and concrete masonry block (cinderblock) framed building with a flat torch on roof which was applied in the last five years. The approximate footprint of the building is eight thousand (8,000) square feet. The building is used primarily as covered parking and a staff lunchroom but also contains bay areas for servicing large vehicles. The building consists of a large open area for covered parking with a stairway to a storage room, a lunchroom and adjacent first aid room, men's land ladies washrooms, two (2) large bay areas with an small office above. The cinderblock cavities were inspected for the presence of vermiculite insulation and was confirmed to be present.

Exterior finishes: painted wood stairs and window/door trim, painted concrete masonry blocks, flat torch on roof

Interior finishes: painted wood panel walls and ceilings, gypsum board walls and ceilings, textured ceiling, ceiling tiles, sheet vinyl flooring, concrete flooring, synthetic fibre insulation

Building 2 – Heated Storage/Workshop

Constructed in the 1970 this concrete masonry block framed building with a corrugated metal roof. The building has an approximate footprint of seven hundred (700) square feet. **The cinderblock cavities were inspected for the presence of vermiculite insulation, and none was observed.** The structure is primarily used as a storage area.

Exterior finishes: Painted concrete cinderblocks, painted wooden window and door trim

Interior finishes: Painted concrete cinderblocks, painted wood ceiling panels, painted wooden window and door trim, synthetic fibre insulation



2.0 Hazardous Materials

Hazardous materials are present in a large number of common building materials. These materials must be managed effectively to prevent exposure to workers and other persons, or they must be removed. In situations where work activities such as renovations and demolition will affect hazardous materials they must be removed prior to the start of work or appropriate control measures need to be implemented to ensure that workers are not exposed, and that contamination is not spread throughout the work and adjacent areas.

WorkSafeBC has established regulations regarding the handling and management of a number of hazardous materials along with guidelines for other hazardous materials. Other materials are regulated by environmental laws.

Materials that must comply with WorkSafeBC regulations include:

Asbestos

5. Hantavirus

2. Lead

6. Arsenic

3. Silica

7. Radioactive materials

4. Mercury

Materials that WorkSafeBC has established guidelines for include:

1. Mould

Materials that must comply with environmental regulations:

Polychlorinated biphenyls

4. Urea formaldehyde foam insulation

Ozone depleting substances

5. Fuel oil storage tanks

3. Leachable metals

2.1 Materials Subject to WorkSafeBC Regulations

2.1.1 Asbestos

Asbestos is a very common component of building materials. Most asbestos containing materials went out of use in the early 1980s. However, WorkSafeBC has determined that buildings constructed up to 1990 may contain asbestos and must be inspected prior to the start of renovation or demolition activities.

Asbestos becomes a hazard when it is disturbed and airborne dust is created. Caution must be taken to ensure that asbestos containing materials are not disturbed. Asbestos exposure is known to have a number of health effects including asbestosis, lung cancer and mesothelioma.

Asbestos has been used in approximately 3000 manufactured products and is commonly found in residential structures in:

- Floor products (sheet flooring and floor tiles)
- Drywall filler compounds
- Plasters (usually in buildings constructed prior to 1930)
- Textured ceiling applications
- Duct tape (on heating system ducting and around forced air registers)
- Vermiculite



- Caulking and putties (on windows and doors and in levelling compounds)
- Cement products (siding and shingles as well as underground drainage pipes)
- · Roofing felts and papers
- Pipe insulation (on piping, boilers and hot water tanks)

WorkSafeBC defines an asbestos containing material as one containing 0.5% or more asbestos by weight. Vermiculite is considered to be asbestos containing if any asbestos is present. WorkSafeBC has designated asbestos as an ALARA substance. This means that exposures to this material must be kept "as low as reasonably achievable". Section 5.54 of the Occupational Health and Safety Regulation states that employers are required to develop and implement an exposure control plan when workers may be exposed to airborne concentrations of asbestos greater than 50% of the exposure limit.

All asbestos waste must be handled, transported and disposed of in accordance with current Ministry of Environment and Climate Change Strategy regulations.

2.1.2 Lead

Lead has been commonly used in paints and coatings. Coatings manufactured prior to 1970 are likely to contain high concentrations of lead. In the late 1970s, Canada restricted the concentration of lead in consumer paints to 5000 ppm. These restrictions did not apply to exterior paints. The acceptable level of lead in consumer paints was last reduced by the Federal government in 2010 to a concentration of 90 ppm. Lead can still be added to certain classes of paint, if the display panel carries a warning. Lead in paint concentration is not regulated when used in commercial or industrial worksites.

Lead becomes a hazard when painted surfaces are disturbed and airborne dust is created. Caution must be taken to ensure that lead containing materials are not disturbed. Lead exposure is known to have a number of health effects including damage to the central and peripheral nervous systems. It also affects the uptake of oxygen in the blood and can accumulate in bones. Lead is toxic to both male and female reproductive system and can have damaging effects to a developing fetus. Lead exposures can also occur when lead products are touched and lead contamination is ingested (eaten).

Lead is used in plumbing fixtures. Flashings and other products found on roofs may be made of pure lead. Lead has also been used in solders. This may be found on plumbing lines as well as on electrical equipment.

WorkSafeBC has designated lead as an ALARA substance. This means that exposures to this material must be kept "as low as reasonably achievable". An employer must not permit workers to engage in a work activity or lead process that may expose workers to lead dust, fumes or mist unless a risk assessment has first been completed by a qualified person. If the risk assessment indicates potential for lead exposure, an exposure control plan meeting the requirements of Section 5.54 of the Occupational Health and Safety Regulation must be developed.

Waste materials with lead based paint on them may have special disposal requirements (See Section 2.3.5). Lead paint that has been removed from building materials requires leachate testing to determine the appropriate method of disposal.



2.1.3 Silica

Silica is the second most common mineral on earth. It is found almost everywhere. It appears in two (2) main forms - amorphous and crystalline. Amorphous silica is not generally considered to be a significant hazard. Crystalline silica is known to have a number of health effects including silicosis. The definition of respirable crystalline silica (RCS) includes the quartz, crystalline silica and cristobalite.

RCS becomes a hazard when it is disturbed and airborne dust is created. Caution must be taken to ensure that silica containing materials are not disturbed.

Crystalline silica is present in a number of common building materials. These include:

• Plasters Stucco

Cement Drywall Filler Compounds

Sand/gravel Granite

As with lead, WorkSafeBC has designated crystalline silica as an ALARA substance which means that exposures to this material must be kept "as low as reasonably achievable". Likewise, an employer must not permit workers to engage in a work activity or silica process that may expose workers to respirable crystalline silica dust unless a risk assessment has first been completed by a qualified person. If the risk assessment indicates potential for RCS exposure, an exposure control plan meeting the requirements of Section 5.54 of the Occupational Health and Safety Regulation must be developed.

2.1.4 Mercury

Mercury is a metal that is liquid at room temperatures and vaporizes at low temperatures. Mercury has a number of industrial uses. It is also found in thermostats, thermometers and inside fluorescent light tubes.

Mercury has a significant toxic effect on the central nervous system and can cause disease and even death. Mercury becomes a hazard when it is released into the environment. Significant concentrations of mercury can be present at room temperature because it vaporizes at low temperatures. This can occur when mercury thermometers or thermostat bulbs are broken or when fluorescent light tubes are broken.

WorkSafeBC has designated mercury as an ALARA substance. This means that exposures to this material must be kept "as low as reasonably achievable". Section 5.54 of the Occupational Health and Safety Regulation states that employers are required to develop and implement an exposure control plan when workers may be exposed to airborne concentrations of mercury greater than 50% of the exposure limit.

All mercury waste requires disposal in accordance with current Ministry of Environment and Climate Change Strategy requirements.

2.1.5 Hantavirus

Hantavirus is associated with Hantavirus Pulmonary Syndrome. This disease is contracted by coming into contact with the droppings or urine of infected rodents. It can also be contracted by being bitten or scratched by infected rodents.



WorkSafeBC states that employers are required to develop and implement an exposure control plan when workers may be exposed to potentially contaminated rodent droppings.

It should be noted that diseases are associated from contact with other animal droppings, most notably Histoplasmosis, from contact with infected bird droppings.

There are no special disposal requirements for uninfected animal droppings.

2.1.6 Arsenic

Arsenic is a metal that is sometimes used in pesticides. It is also found in pressure treated wood products.

Exposures can occur when arsenic containing materials are disturbed and dust becomes airborne. Sawdust from cutting pressure treated wood or burning these materials can result in significant airborne arsenic concentrations.

Disposal of arsenic waste must be in accordance with current Ministry of Environment and Climate Change Strategy requirements.

2.1.7 Radioactive Materials

Radioactive materials are commonly found in smoke detectors. A small amount of radioactive materials (²⁴¹Americium) is sealed in a metal case inside smoke detectors. This metal case must remain undisturbed to prevent exposure to radioactive materials.

Some ceramic tiles and forms of granite have also been found to contain radioactive materials. Radon is a naturally occurring gas created during the decay of other radioactive materials.

Waste smoke detectors must be disposed of in accordance with Canadian Nuclear Safety Commission requirements.

2.2 Materials Subject to WorkSafeBC Guidelines

2.2.1 Mould

Mould is prevalent throughout our environment. It occurs naturally with mould spores being present everywhere. Mould is nature's way of breaking down and recycling materials. Mould spores require moisture and a food source to begin growing. Water leaks (even very minor leaks) and moisture accumulation are usually sufficient for mould to begin growing.

Exposure to mould spores most often results in allergy type responses in susceptible individuals. These are similar in nature to "hayfever" and can include runny eyes and noses and throat irritation. In more extreme cases, exposure to mould spores can result in "pneumonia-like" responses.

WorkSafeBC has not established exposure levels for airborne mould spores. WorkSafeBC does provide guidelines for dealing with mould contamination. These guidelines are included in the Indoor Air Quality regulation guidelines.



There are no special disposal requirements for mould waste.

2.3 Materials Controlled by Environmental Regulations

2.3.1 Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are regulated by both Provincial and Federal regulations. Fluorescent light ballasts containing PCBs must be treated as PCB waste and stored and disposed of in accordance with current regulations. Fluorescent light fixtures removed during demolition, construction or maintenance activities must be inspected for the presence of PCBs.

Each ballast identified as containing PCBs must be sent to a licenced facility in accordance with current regulatory requirements.

2.3.2 Ozone Depleting Substances

Ozone depleting substances (ODS) and chlorofluorocarbons are commonly found in older refrigerators and air conditioning units. They are sometimes found in fire suppression systems. Environmental regulations restrict the release of these compounds into the environment.

When systems or equipment contains ODS are set for disposal all the ODS must be collected for recycling or disposal by a licenced contractor.

2.3.3 Urea Formaldehyde Foam Insulation

Urea formaldehyde foam insulation (UFFI) was used as a retrofit insulation in older buildings. The expanding foam would be sprayed into wall and ceiling cavities to provide additional insulation in older buildings. It was most commonly used in residential settings.

Over time, in the presence of moisture, the insulation can break down and release formaldehyde gas. This insulating material was banned in 1978. Many older buildings contain UFFI.

There are no special disposal requirements for UFFI waste.

2.3.4 Fuel Oil Storage Tanks

Fuel oil storage tanks (above and below ground) are found in many houses and commercial buildings. The tanks can corrode and leak as they age. Spills often occur during tank filling and create contamination.

Tanks in use must be monitored to ensure that spillage and contamination does not occur. Tanks no longer in use must be removed for disposal and the surrounding soil checked for contamination.

2.3.5 Leachable Metals

The BC Ministry of Environment and Climate Change Strategy regulates the disposal of some waste materials based on the leachability of metals and other compounds from the waste.



Testing may have to be carried out on materials removed from the building before they can be sent for disposal. This will depend on where the waste is being sent.

Within the Capital Regional District, disposal of painted waste materials at the Hartland landfill requires toxicity characteristic leaching procedure (TCLP) to determine leachable lead concentrations prior to acceptance as construction waste.

2.3.6 Other Materials

A number of hazardous materials may be present in a building that will be affected by renovations or demolition. These can include:

- Propane or butane cylinders
- Paint
- Solvents

- Toxic or corrosive products
- Other flammable materials



3.0 Results and Recommendations

Buildings 1 and 2 were inspected for the presence of a variety of hazardous materials. WorkSafeBC requirements specify that precautions are necessary when handling these materials. The necessary precautions will depend on the disposition of each hazardous material.

Trained qualified contractors need to be hired to carry out remedial work on hazardous materials. All general demolition work should be carried out by workers wearing respirators and disposable coveralls.

Copies of this report must be provided to contractors engaged to work in the building.

Notices of Project must be submitted in accordance to WorkSafeBC requirements.

Materials may be encountered during work activities that are not identified in this report. If this happens, work must stop in those areas until the materials are properly identified.

3.1 Asbestos

A total of twenty-four (24) representative bulk samples of such materials as drywall joint compound, window putty, textured ceilings, sheet vinyl flooring, mastic, insulating materials, ceiling tiles and mortar were collected from the two (2) buildings. The following asbestos containing materials were identified:

Table 1: Summary of Asbestos Containing Materials

Location	Description	Asbestos Type & Percentage	Approximate Quantity *	Removal Requirements
Building 1 – Lunchroom Ceiling	Drywall Joint Compound	Chrysotile 1%	1,000 square feet	Modified High risk work procedures
Building 1 – Lunchroom Floor – Bottom Layer	Sheet Vinyl Flooring	Chrysotile 65%	1,000 square feet	High risk work procedures
Building 1 – Lunchroom Cinderblock Walls	Vermiculite Insulation	Actinolite 1%	2,500 square feet	Modified Moderate risk work procedures

^{*}Quantities of identified asbestos containing materials are an estimate of observable asbestos-containing materials. Concealed or inaccessible materials may not have been included in this estimate. It is the responsibility of the abatement contractor to ensure accurate measurements.

Results of asbestos sample analysis and sample identification and locations are attached in Appendix 2.



The removal of **asbestos containing drywall joint filler** should be conducted using **Modified**, **High Risk** asbestos abatement procedures. These procedures must be utilized by a qualified contractor and include as a minimum requirement:

- HEPA-equipped Powered air purifying respiratory (PAPR) protection and disposable Tyvek coveralls;
- · Application of water to the asbestos debris materials being disturbed;
- Isolation of the work area;
- HEPA equipped negative air unit for dust suppression purposes;
- Air monitoring as per WorkSafeBC requirements.

The removal of **asbestos containing sheet vinyl flooring** should be conducted using **High Risk** asbestos abatement procedures. These procedures must be utilized by a qualified contractor and include as a minimum requirement:

- HEPA-equipped Powered air purifying respiratory (PAPR) protection and disposable Tyvek coveralls;
- · Application of water to the asbestos debris materials being disturbed;
- Isolation of the work area;
- HEPA equipped negative air unit for dust suppression purposes;
- Shower:
- Air monitoring as per WorkSafeBC requirements.

The removal of asbestos containing vermiculite should be conducted using **Modified Moderate Risk** asbestos abatement procedures. These procedures must be utilized by a qualified contractor and include as a minimum requirement:

- HEPA-equipped Powered air purifying respiratory (PAPR) protection and disposable Tyvek coveralls:
- Application of water to the asbestos debris materials being disturbed;
- Isolation of the work area;
- HEPA equipped negative air unit for dust suppression purposes;
- Filing of a "Notice of Project" with WorkSafeBC prior to significant disturbance of asbestoscontaining materials; and
- Shower and;
- Air monitoring as per WorkSafeBC requirements.

Despite the destructive nature of this investigation the possibility exists that unidentified, suspected asbestos containing building materials may exist. If discovered during demolition activities, all work should stop in that area and the material should be tested for the presence of asbestos.

Some waste receivers will not accept waste depending on when the hazmat report was completed. If the length of time between report completion and abatement exceeds the time limit established by the waste receiver, then additional testing may be required.

Prior to the performance of any work that may disturb asbestos containing materials it is a regulatory requirement that a qualified person perform a Risk Assessment. This requirement is in compliance with the WorkSafeBC Occupational Health & Safety Regulation *Part 6 "Substance Specific Requirements"*; specifically Section 6.6 subsections (1), (2), (3), & (4).



3.2 Lead

The currently allowable level of lead in paint is set by Health Canada under the Canada Consumer Protection Act, Surface Coating Materials Regulation (SOR 2005-09). Under this regulation the maximum allowable concentration of lead in paint sold to consumers is 0.009% (90 mg/kg). WorkSafeBC considers paint which contains lead at concentrations greater than 0.009% to present a potential health hazard, if it is removed incorrectly. Lead testing was carried out on eighteen (18) paint samples collected from drywall, wood window/door trim, cinderblocks and interior and exterior wood siding. Of the eighteen (18) paint samples analyzed, nine (9) samples were determined to be lead containing paint with concentrations greater than 90 mg/kg found. All samples determined to be lead-containing are bolded in Table 2, below.

Table 2: Summary of Lead in Paint

	Table 2: Summary of		
Location	Description	Lead Content (mg/kg)	Health Canada Definition for Lead-Containing Paint (mg/kg)
Building 1 - Parking Area - Stairway to Storage Area	Bright Green	<mark>736</mark>	
Building 1 - Parking Area - Stairway to Storage Area	Flat Dark Green	13.0	
Building 1 - Exterior of First Aid Room - Wood Panels	White	<5.0	
Building 1 - Exterior Cinder Blocks	White	<mark>4,100</mark>	
Building 1 - Exterior - Lunchroom Door	Dark Green	<mark>280</mark>	
Building 1 - Exterior - Bay Doors	White	34.8	
Building 1 - Lunchroom Ceiling	Textured White	<5.0	90
Building 1 - Locker Room/First Aid Room Walls	Pale Blue	<5.0	30
Building 1 - First Aid Room - Furnace Room Door Trim	Grey	<5.0	
Building 1 - Men's Washroom Walls	Dark Blue	<mark>1,170</mark>	
Building 1 - Interior of Bay Doors	Pale Yellow	<mark>423</mark>	
Building 1 - Ladies Washroom Wall and Door Trim	Dark Grey	<5.0	
Building 2 - Exterior Cinderblocks	White	<5.0	
Building 2 - Exterior Wood Panels	White	<mark>2,650</mark>	



Location	Description	Lead Content (mg/kg)	Health Canada Definition for Lead-Containing Paint (mg/kg)
Building 2 - Exterior Trim	Dark Green	<mark>891</mark>	
Building 2 - Interior Door Trim	Dark Grey	<mark>461</mark>	90
Building 2 - Interior Door Trim	White	6.7	90
Building 2 - Interior Wood Ceiling Panels	Off-White	<mark>224</mark>	

mg/kg = milligrams per kilogram.

All of the bright green coloured paint on the parking area stairway to the storage area of Building 1 should be considered to be lead containing.

All of the white coloured paint on exterior cinderblocks of Building 1 should be considered to be lead containing.

All of the dark green coloured paint on the exterior doors and trim of Building 1 should be considered to be lead containing.

All of the dark blue coloured paint in the men's washroom of Building 1 should be considered to be lead containing.

All of the pale yellow coloured paint on the interior bay doors of Building 1 should be considered to be lead containing.

All of the white coloured paint on the exterior wood panels of Building 2 should be considered to be lead containing.

All of the dark green coloured paint on exterior window and door trim of Building 2 should be considered to be lead containing.

All of the dark grey coloured paint on interior window and door trim of Building 2 should be considered to be lead containing.

All of the off-white coloured paint on the interior wooden ceiling panels of Building 2 should be considered to be lead containing.

Any untested painted surfaces are presumed lead-containing unless sampled and found to be non-lead containing. Lead may be present as solder on any remaining plumbing systems and may be present on other fixtures such as flashings or roof vents.

WorkSafeBC regulation requires that an employer not permit workers to engage in a work activity that may expose workers to lead dust, fumes or mist unless a risk assessment has first been completed by a qualified person. If the risk assessment indicates potential for lead exposure, an exposure control plan meeting the requirements of Section 5.54 of the Occupational Health and Safety Regulation must be in place and implemented prior to commencing work. The Regulation also requires that lead in air samples be collected at the beginning of work tasks to ensure proper control methods are employed to control lead dust exposures.



< = result is less than the limit of detection.

^{*}substrate/matrix interference possible

In order to control worker exposure to lead paint particulate, any demolition, cutting, burning, grinding, sanding or other disturbance of identified lead painted surfaces should be conducted following appropriate safe work procedures. Procedures will vary depending on the nature of the work but should consider, as a minimum, the following:

- Use of Half face respirators equipped with P100 class filters, disposable Tyvek™ or equivalent coveralls and work gloves;
- Segregation of the work area by the use of barrier tape and warning placards;
- Use of drop sheets and tarps to prevent spread of lead-containing dust;
- Use of HEPA filter equipped vacuum cleaner(s);
- Thorough washing before eating, drinking or smoking;
- Application of water to the materials being disturbed;
- Filing of a "Notice of Project" with WorkSafeBC prior to significant disturbance of leadcontaining paint; and,
- Air monitoring during disturbance of lead-containing paint

Under the BC Hazardous Waste Regulation materials with identified lead-based paint destined for disposal at a licensed landfill facility must be tested for leachability to determine if they should be handled as a hazardous waste.

3.3 Leachable Metals

The BC Ministry of Environment and Climate Change Strategy regulates the disposal of some waste materials based on the leachability of metals and other compounds from the waste.

Under the BC Hazardous Waste Regulation materials with lead paint concentrations over 0.01 wt% (100ppm) destined for disposal at a licensed landfill facility must be tested for leachability to determine if they should be handled as a hazardous waste.

No samples for leachable lead were collected during this investigation.

Consult the waste disposal facility for disposal requirements prior to disposal. Prior to demolition it is the responsibility of the client or the contractor to have samples collected by a qualified person and analyzed using the toxicity characteristic leachate procedure (TCLP).

3.4 Silica

Silica testing was not carried out, but this material will be present in concrete, cement, mortar, ceramic tile and plaster products and possibly in drywall filler compounds.

Precautions must be put in place during demolition and renovation activities to ensure that workers are not exposed to silica containing dust and debris. WorkSafeBC regulation requires that contractors working with silica-based containing materials have a Silica Exposure Control Plan in place including site specific work procedures prior to work commencing.

In order to control worker exposure to silica dust, any abrasive blasting, jackhammering, chipping, drilling, cutting, sawing or other disturbance of identified concrete, plaster or drywall walls or cementitious products should be conducted following appropriate safe work procedures. Procedures will vary depending on the nature of the work but should consider, as a minimum, the following:



- Use of Half-face respirators equipped with P100 class filters, disposable Tyvek™ or equivalent coveralls and work gloves;
- Continuous application of water spraying to materials being disturbed;
- Use of drop sheets and tarps to prevent spread of silica-containing dust;
- Use of HEPA filter equipped vacuum(s);
- HEPA equipped negative air unit for dust suppression purposes (recommended); and
- Air monitoring as per WorkSafeBC requirements.

3.5 Mercury

Fluorescent light tubes were observed throughout Building 1. Used light tubes and compact fluorescent bulbs must be sent for proper disposal.

Mercury containing thermostats were observed in Building 1. Care must be taken to ensure that the glass bulb containing mercury is not damaged. All thermostats taken out of service must be sent for proper disposal or recycling.

3.6 Hantavirus (and other Animal Droppings)

Rodent droppings were not observed during this investigation.

If discovered during demolition activities, it is recommended that all personnel conducting work in areas where rodent droppings are present wear, at a minimum, half face respirator fitted with HEPA filtered P100 cartridges, disposable suits and impermeable gloves and eye protection and that use of HEPA filtered negative air cabinets and HEPA filtered vacuums be employed.

WorkSafeBC regulation requires that contractors handling/cleaning animal and rodent feces have a Hantavirus Exposure Control Plan in place including site specific work procedures prior to work commencing.

3.7 Arsenic

Pressure treated wood was not observed during this investigation. If pressure treated wood is discovered during demolition activities, it must be disposal of appropriately and not be burned.

3.8 Radioactive Materials

Smoke detectors were observed in Building 1 during this investigation.

Smoke detectors must be sent for disposal in accordance with Canadian Nuclear Safety Commission requirements when they are taken out of service.

3.9 Mould

Mould was not observed during this investigation. If mould is encountered during demolition activities, precautions must be taken to ensure that workers are not exposed to mould spores.

Fungal contamination may be present within wall or ceiling cavities or in wooden subfloors or foundations. During demolition activities, precautions must be taken to ensure that workers are not exposed to potential mould spores which would include, as a minimum, half face respirator



fitted with HEPA filtered P100 cartridges, disposable suits and impermeable gloves and eye protection and that use of HEPA filtered negative air cabinets and HEPA filtered vacuums be employed.

3.10 Polychlorinated Biphenyls

Fluorescent light ballasts were observed throughout Building 1 during this investigation. If PCBs are present the ballasts must be transported to an acceptable waste storage facility.

3.11 Ozone Depleting Substances

During this investigation one (1) refrigerator was observed in the lunchroom area of Building 1.

This item may contain chlorofluorocarbons. This material must be removed for recycling or disposal when the units are taken out of service.

3.12 Urea Formaldehyde Foam Insulation

Urea Formaldehyde Foam Insulation was not observed during this investigation. This material is not suspected of being present.

3.13 Fuel Oil Storage Tanks

Fuel oil storage tanks (above ground) that would be disturbed by the planned demolition activities were not observed during the investigation.

3.14 Other Materials

The following miscellaneous hazardous materials were identified on the property. These must be removed for disposal, or recycling, in accordance with current regulations.

Synthetic fibre insulation exists in wall and ceiling cavities of both Building 1 and Building 2. Removal of these materials should be conducted wearing proper respiratory protection and protective clothing including impermeable gloves, eye protection and half-face respiratory protection equipped with P-100 particulate filters.

Employee personal items, furniture, office equipment, tools and contents in storage were not assessed.

3.15 Abatement Clearance Documentation

In order to comply with BC Workers Compensation Board Occupational Health & Safety Regulation Part 20.112(8) a qualified person (Cascadia OHS) must conduct a final inspection after all of the hazardous materials identified in this report have been safely contained or removed. Once all of the hazardous materials have been removed and the final inspection has been completed a written clearance letter can be provided.

Should asbestos abatement be undertaken by unqualified persons (i.e. homeowners), the work area will require aggressive air clearance sampling. This air sampling will extend to any adjacent



areas that have not been isolated from the hazard and potential contamination. Clearance letters, required to document removal of asbestos for issuance of building permits and contractors hired to work in the space, will not be granted subject to failure of this testing. The owner/client is responsible for the additional fees incurred for these services.

4.0 Closure

This document was prepared for the exclusive use of our client, the **City of Quesnel**. All conclusions and recommendations are based upon conditions at the site at the time of this investigation. All conclusions and recommendations are based upon professional opinions. These opinions are in accordance with accepted industrial hygiene assessment standards and practices and comply with current WorkSafeBC requirements.

All conclusions and recommendations made in this report are based on conditions at the time of inspection. Changes may occur over time that will require a re-evaluation of the site.

All work was carried out based on the Scope of Work that was agreed upon with the client prior to the start of work, constraints imposed by the client and availability of access to the site. A Stage 1 Preliminary Site Investigation was not part of the scope of work.

No warranty or guarantee, whether expressed or implied, are made with respect to the data or the reported findings, observations, and conclusions, which are based solely upon site conditions at the time of the investigation.

This report may not be used, relied upon, copied, published, or quoted by any party without the written consent of Cascadia OHS. Other parties reading this report must independently verify the completeness and accuracy of this report and its contents.

This report is not intended as a Scope of Work for tender or bidding purposes. Any use of this report in that fashion is at the sole discretion and liability of the Owner.

Corey Arnett, B.Sc. Field Technician

Field Investigation & Report

Glenn Wong, D. Tech Chem Regional Manager Report Review

ght(



Appendix 1

Photographs



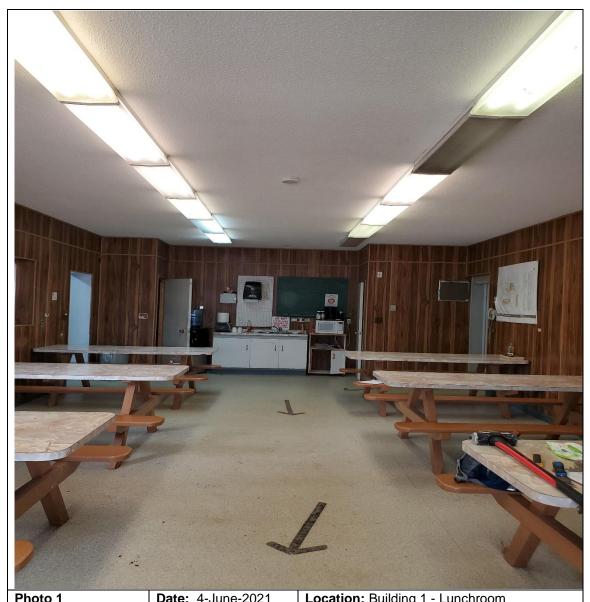


Photo 1 Date: 4-June-2021 Location: Building 1 - Lunchroom

Description: View showing asbestos containing drywall joint compound on the ceiling as well as a smoke detector and fluorescent lights/ballasts

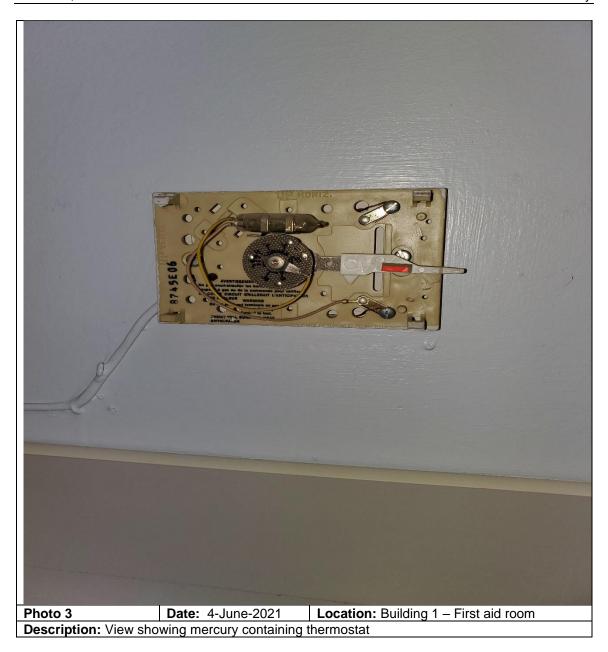




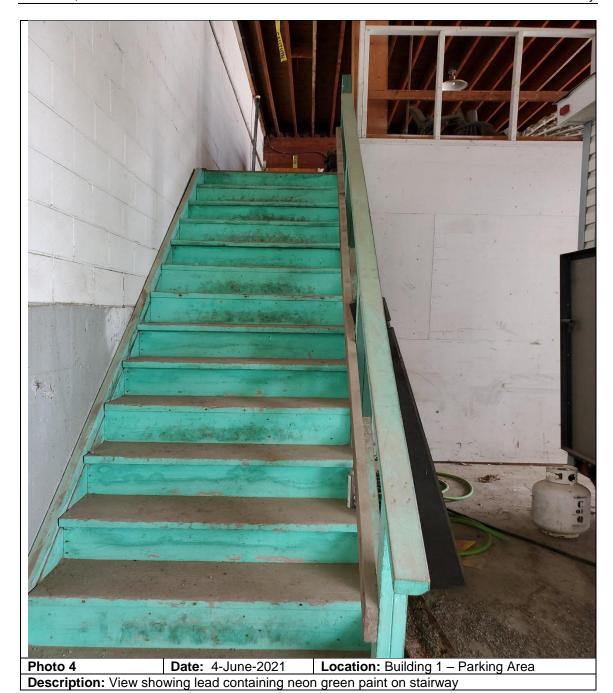
Photo 2 Date: 4-June-2021 Location: Building 1 - Exterior of lunchroom/first aid room

Description: View showing cinderblocks with asbestos containing vermiculite insulation











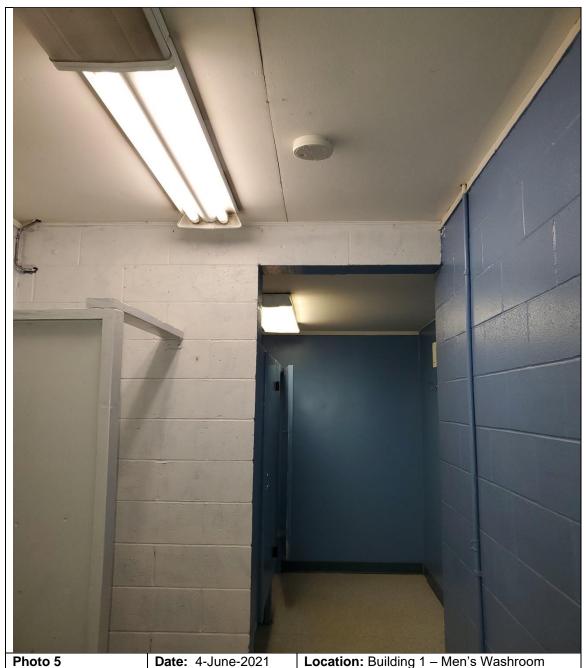


Photo 5 Date: 4-June-2021 Location: Building 1 – Men's Washroom Description: View showing lead containing dark blue paint and smoke detector and fluorescent light tubes and ballast





Photo 6 Date: 4-June-2021 Location: Building 1 – Vehicle Service Bay Description: View showing lead containing pale yellow paint and fluorescent lights and ballast



Appendix 2

Laboratory Results

Cascadia OHS Bulk Sample Report

ALS Laboratories Lead in Paint/TCLP Analysis #VA21B1484





Project #: 2080

Client:

Site:

PO#:

City of Quesnel

21 Johnson Bridge Loop, Quesnel

Sampled by: CA

Date Sampled:

4-June-2021

Analyst: GW 1962 Quinn St. South Prince George, BC 250.563.8484

gwong@cascadiaohs.ca

Sample #	Location	Material	Analysis Date	Layer	Description	%	Asbestos	%	Other Materials	%
1	Building 1 - Interior of Lunch Room Door	Window Putty	7-June-2021	1	Soft Dark Brown Putty	100	None Detected	-	Cellulose Fiberglass Non-fibrous	2 1 97
2	Building 1 - Interior of Lunch Room Door	Window Putty	7-June-2021	1	Soft Dark Brown Putty	100	None Detected	-	Cellulose Fiberglass Non-fibrous	2 1 97
3	Building 1 - Interior of Lunch Room Door	Window Putty	7-June-2021	1	Soft Dark Brown Putty	100	None Detected	-	Cellulose Fiberglass Non-fibrous	2 1 97
				1	White Paint 1	15	None Detected	-	Non-fibrous	100
	Building 1 - Lunch	Textured Ceiling/		2	White Chalky Mix with Perlite	25	None Detected	-	Cellulose Non-fibrous	5 95
4	Room Ceiling	Drywall Joint	7-June-2021	3	White Paint 2	10	None Detected	-	Non-fibrous	100
		Compound		4	Tan Chalky Mix	25	Chrysotile	1	Cellulose Non-fibrous	1 98
				5	Tan Paper	25	None Detected	-	Cellulose	100
				1	White Paint 1	15	None Detected	-	Non-fibrous	100
	Building 1 - Lunch	Textured Ceiling/		2	White Chalky Mix with Perlite	25	None Detected	-	Cellulose Non-fibrous	5 95
5	Room Ceiling	Drywall Joint	7-June-2021	3	White Paint 2	10	None Detected	-	Non-fibrous	100
		Compound		4	Tan Chalky Mix	25	Chrysotile	1	Cellulose Non-fibrous	1 98
				5	Tan Paper	25	None Detected	-	Cellulose	100



Sample #	Location	Material	Analysis Date	Layer	Description	%	Asbestos	%	Other Materials	%
				1	White Paint 1	15	None Detected	-	Non-fibrous	100
	Building 1 - Lunch	Textured Ceiling/		2	White Chalky Mix with Perlite	25	None Detected	-	Cellulose Non-fibrous	5 95
6	Room Ceiling	Drywall Joint	7-June-2021	3	White Paint 2	10	None Detected	-	Non-fibrous	100
		Compound		4	Tan Chalky Mix	25	Chrysotile	1	Cellulose Non-fibrous	1 98
				5	Tan Paper	25	None Detected	-	Cellulose	100
7	Building 1 - Lunch Room Floor - Top	Sheet Vinyl	7-June-2021	1	Cream and Grey Stones Pattern Vinyl	75	None Detected	-	Non-fibrous	100
	Layer	Flooring		2	White Fibre Backing	25	None Detected	-	Cellulose Fiberglass	55 45
	Building 1 - Lunch			1	Amber Mastic	10	None Detected	-	Cellulose Synthetics Non-fibrous	3 2 95
8	Room Floor - Bottom Layer	Sheet Vinyl Flooring	7-June-2021	2	Tan and Olive Mosaic Pattern Vinyl	60	None Detected	-	Non-fibrous	100
				3	Tan Fibre Backing	30	Chrysotile	65	Cellulose Non-fibrous	25 10
	Building 1 - First	Observation d		1	Tan, Sage and Brown Mosaic Pattern Vinyl	65	None Detected	-	Non-fibrous	100
9	Aid Room Floor	Sheet Vinyl Flooring	7-June-2021	2	Tan Fibre Backing	35	None Detected	-	Cellulose Synthetics Fiberglass Non-fibrous	30 20 15 35
10	Building 1 - Ladies Washroom Floor	Sheet Vinyl	7-June-2021	1	Tan and Grey Mosaic Pattern Vinyl	65	None Detected	-	Non-fibrous	100
		Flooring		2	Tan Fibre Backing	35	None Detected	-	Synthetics Non-fibrous	35 65



Sample #	Location	Material	Analysis Date	Layer	Description	%	Asbestos	%	Other Materials	%
				1	Light Blue/Beige/White Paint	15	None Detected	-	Non-fibrous	100
11	Building 1 - First Aid Room Walls	Drywall Joint	7-June-2021	2	White Chalky Mix 1	20	None Detected	-	Cellulose Non-fibrous	1 99
		Compound		3	Tan Paper	20	None Detected	-	Cellulose	100
				4	White Chalky Mix 2	10	None Detected	-	Cellulose Non-fibrous	3 97
				5	Tan/Beige Paper	35	None Detected	-	Cellulose	100
				1	Light Blue/Beige/White Paint	15	None Detected	-	Non-fibrous	100
12	Building 1 - First Aid Room Walls	Drywall Joint Compound	7-June-2021	2	White Chalky Mix	30	None Detected	-	Cellulose Non-fibrous	1 99
		·		3	Cream Fibre Mesh Weave	20	None Detected	-	Fiberglass	100
				4	Tan Paper	35	None Detected	-	Cellulose	100
				1	Light Blue/Beige/White Paint	15	None Detected	-	Non-fibrous	100
13	Building 1 - First	Drywall Joint	7-June-2021	2	White Chalky Mix 1	20	None Detected	-	Cellulose Non-fibrous	1 99
	Aid Room Walls	Compound		3	Tan Paper	20	None Detected	-	Cellulose	100
				4	White Chalky Mix 2	10	None Detected	-	Cellulose Non-fibrous	3 97
				5	Tan/Beige Paper	35	None Detected	-	Cellulose	100
14	Building 1 - Lunch Room Furnace Room Duct Joints	Mastic	7-June-2021	1	Soft Red Vinyl	100	None Detected	-	Synthetics Cellulose Non-fibrous	1 2 97
15	Building 1 - Lunch Room Exterior Cinderblock Walls	Insulation	7-June-2021	1	Loose Beige Micaceous Mix	100	Actinolite	1	Non-fibrous	99



Sample #	Location	Material	Analysis Date	Layer	Description	%	Asbestos	%	Other Materials	%
16	Building 1 - Ladies Washroom Drop	Ceiling Tile	7-June-2021	1	White Paint	15	None Detected	-	Non-fibrous	100
10	Ceiling	Celling The	7-50He-2021	2	Tan Fibre Mat	85	None Detected	-	Cellulose	100
17	Building 1 - Ladies Washroom Drop	Ceiling Tile	7-June-2021	1	White Paint	15	None Detected	-	Non-fibrous	100
	Ceiling			2	Tan Fibre Mat	85	None Detected	-	Cellulose	100
18	Building 1 - Ladies Washroom Drop	Ceiling Tile	7-June-2021	1	White Paint	15	None Detected	-	Non-fibrous	100
10	Ceiling	Centrig Tile	7-5une-2021	2	Tan Fibre Mat	85	None Detected	-	Cellulose	100
	Building 1 -			1	White Paint	15	None Detected	-	Non-fibrous	100
19	Exterior Cinderblock Walls	Mortar	7-June-2021	2	Beige Chalky Mix with Aggregates	85	None Detected	-	Non-fibrous	100
	Building 1 -			1	White Paint	15	None Detected	-	Non-fibrous	100
20	Exterior Cinderblock Walls	Mortar	7-June-2021	2	Beige Chalky Mix with Aggregates	85	None Detected	-	Non-fibrous	100
	Building 1 -			1	White Paint	15	None Detected	-	Non-fibrous	100
21	Exterior Cinderblock Walls	Mortar	7-June-2021	2	Beige Chalky Mix with Aggregates	85	None Detected	-	Non-fibrous	100
	Building 2 -			1	White Paint	10	None Detected	-	Non-fibrous	100
22	Exterior Cinderblock Walls	Mortar	7-June-2021	2	Beige Chalky Mix with Aggregates	90	None Detected	-	Non-fibrous	100
22	Building 2 - Exterior	Mortor	7 June 2021	1	White Paint	15	None Detected	-	Non-fibrous	100
23	Cinderblock Walls	Mortar	7-June-2021	2	Beige Chalky Mix with Aggregates	85	None Detected	-	Non-fibrous	100
24	Building 2 - Exterior	Mortar	7-June-2021	1	White Paint	15	None Detected	-	Non-fibrous	100
	Cinderblock Walls	WUTAI	7-June-2021	2	Beige Chalky Mix with Aggregates	85	None Detected	-	Non-fibrous	100



Cascadia OHS Chain of Custody

GASCADIA OH

CASCADIA PROJECT #:	#: 2080	SAMPLE ANALYSIS:				
PROJECT ADDRESS:		ASBESTOS BULK] <u>F</u>	,,,		FUNGAL
CONTACT NAME:	Chris Cohen	NEXT DAY RUSH		AIR CLEARANCE		NEXT DAY RUSH
DATE SAMPLED:	04-Jun-21	SAME DAY RUSH				
REPORT RESULTS BY: PHONE PLEASE SUBMIT	.TS BY: PHONE EMAIL EMAIL ADDRESS: ccoben@quesnel.ca	quesnel.ca		SPECIAL INSTRUCTIONS:		
SAMPLE Floor	SAMPLE Floor LOCATION / ROOM MATERIAL	SAMPLE MATERIAL	FLOW RATE (L/MIN)		NOTES	ES
_	Building 1 - Interior of Lunch Room Door	WP				
2	Building 1 - Interior of Lunch Room Door	WP				
ω	Building 1 - Interior of Lunch Room Door	WP				
4	Building 1 - Lunch Room Ceiling	TC				
51	Building 1 - Lunch Room Ceiling	TC				
6	Building 1 - Lunch Room Ceiling	ТС				
7	Building 1 - Lunch Room Floor - Top Layer	SVF				
8	Building 1 - Lunch Room Floor - Bottom Layer	SVF				
9	Building 1 - First Aid Room Floor	SVF				
10	Building 1 - Ladies Washroom Floor	SVF				
11	Building 1 - First Aid Room Walls	DJC				
12	Building 1 - First Aid Room Walls	DJC				
13	Building 1 - First Aid Room Walls	DJC				
14	Building 1 - Lunch Room Furnace Room Duct Joints	Mastic				
15	Building 1 - Lunch Room Exterior Cinderblock Walls	INS		Vermiculite		
16	Building 1 - Ladies Washroom Drop Ceiling	СТ				
17	Building 1 - Ladies Washroom Drop Ceiling	СТ				
18	Building 1 - Ladies Washroom Drop Ceiling	СТ				
19	Building 1 - Exterior Cinderblock Walls	Mortar				
20	Building 1 - Exterior Cinderblock Walls	Mortar				
21	Building 1 - Exterior Cinderblock Walls	Mortar				
22	Building 2 - Exterior Cinderblock Walls	Mortar				
Trywall Joint Compound (DJ	Drywall Joint Compound (DJC), Plaster (P), Window Putty (WP), Textured Ceiling (TC), Ceiling Tile (CT), Vinyl Floor Tile (VFT), Sheet Vinyl Flooring (SVF), Mastic (M), Pipe Insulation (PI), Poper (CP), Duct Tape (DT), Cement (C), Grout (Gr), Vermiculite (V), Construction Paper (CP), Duct Tape (DT)	(VFT), Sheet Vinyl Flooring (SVF) Grout (Gr), Vermiculite (V), Constr	, Mastic (M) uction Paper	, Pipe Insulation (PI), Pipe Elbow (PE), Stucco (S), r (CP), Duct Tape (DT)	elbow (PE), Sti	JCCO (S),
RELINQUISHED BY:	DATE: 7-June-2021	RECEIVED BY:	ED BY:			DATE:
Page 1 of 2		CUSTODY SEAL INTACT?	NTACT?	WES I NO INIT	INITIALS:	DATE: SVV

Cascadia OHS Chain of Custody

CASCADIA OHS

SULK FLOW RATE (L/MIN)	ASI REG AIR C	DLAR 24HR CLEARANCE CLEARANCE
CASCADIA PROJECT #: 2080 PROJECT ADDRESS: 21 Johnson Bridge Loop, Quesnel ASBESTOS BUCLIENT: 21 Johnson Bridge Loop, Quesnel REGULAR (5-DAY) CONTACT NAME: Chris Coben Net DAY RUSH DATE SAMPLED: PHONE MAIL EMAIL ADDRESS: ccoben@quesnel.ca PLEASE SUBMIT EACH FLOORING LAYER AS A SEPARATE SAMPLE ASBESTOS BUILDING: A SEPARATE SAMPLE LOCATION / ROOM MATERIAL 23 Building 2 - Exterior Cinderblock Walls Building 2 - Exterior Cinderblock Walls Building 2 - Exterior Cinderblock Walls Mortar Mortar		BULK ASBESTOS AIR REGULAR 24HR AIR CLEARANCE SPECIAL INSTRUCTIONS: FLOW RATE (L/MIN)
		S: ASBESTOS AIR REGULAR 24HR AIR CLEARANCE SPECIAL INSTRUCTIONS: FLOW RATE (L/MIN)
	FUNGAL REGULAR (3-DAY) NEXT DAY RUSH	



CERTIFICATE OF ANALYSIS

Work Order : VA21B1484

Client : Cascadia OHS

Contact : Glenn Wong

Address : Unit 2-1962 Quinn Street South

Prince George BC Canada V2N 1X5

Telephone : 250.563.8484

Project : 2080

PO : ----

Sampler : ---

Site : Cascadia OHS - General Pricing 2016

Quote number : Q52102

No. of samples received : 18

No. of samples analysed : 18

Page : 1 of 4

Laboratory : Vancouver - Environmental

Account Manager : Hilary Woods

Address : 8081 Lougheed Highway

Burnaby BC Canada V5A 1W9

Telephone : +1 604 253 4188

Date Samples Received : 08-Jun-2021 08:25

Date Analysis Commenced : 14-Jun-2021

Issue Date : 15-Jun-2021 18:29

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

C-O-C number

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories Position Laboratory Department

Robin Weeks Team Leader - Metals Metals, Burnaby, British Columbia

Page : 2 of 4
Work Order : VA21B1484
Client : Cascadia OHS

Project : 2080



General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances

LOR: Limit of Reporting (detection limit).

Unit	Description
mg/kg	milligrams per kilogram

<: less than.

>: greater than.

Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

 Page
 : 3 of 4

 Work Order
 : VA21B1484

 Client
 : Cascadia OHS

Project : 2080



Analytical Results

Sub-Matrix: Paint Chips		Cl	ient sample ID	L1	L2	L3	L4	L5	
(Matrix: Soil/Solid)									
	Client sampling date / time		04-Jun-2021	04-Jun-2021	04-Jun-2021	04-Jun-2021	04-Jun-2021		
Analyte	CAS Number	Method	LOR	Unit	VA21B1484-001	VA21B1484-002	VA21B1484-003	VA21B1484-004	VA21B1484-005
						Result	Result	Result	Result
Metals									
lead	7439-92-1	E494.Pb	5.0	mg/kg	736	13.0	<5.0	4100	280

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Paint Chips		Cli	ient sample ID	L6	L7	L8	L9	L10	
(Matrix: Soil/Solid)									
		Client sampling date / ti			04-Jun-2021	04-Jun-2021	04-Jun-2021	04-Jun-2021	04-Jun-2021
Analyte	CAS Number	Method	LOR	Unit	VA21B1484-006	VA21B1484-007	VA21B1484-008	VA21B1484-009	VA21B1484-010
					Result	Result	Result	Result	Result
Metals									
lead	7439-92-1	E494.Pb	5.0	mg/kg	34.8	<5.0	<5.0	<5.0	1170

Please refer to the General Comments section for an explanation of any qualifiers detected.

Analytical Results

Sub-Matrix: Paint Chips			L11	L12	L13	L14	L15		
(Matrix: Soil/Solid)									
Client sampling date / time 04					04-Jun-2021	04-Jun-2021	04-Jun-2021	04-Jun-2021	04-Jun-2021
Analyte	CAS Number	Method	LOR	Unit	VA21B1484-011	VA21B1484-012	VA21B1484-013	VA21B1484-014	VA21B1484-015
					Result	Result	Result	Result	Result
Metals									
lead	7439-92-1	E494.Pb	5.0	mg/kg	423	<5.0	<5.0	2650	891

Please refer to the General Comments section for an explanation of any qualifiers detected.

Page : 4 of 4
Work Order : VA21B1484
Client : Cascadia OHS

Project : 2080



Analytical Results

Sub-Matrix: Paint Chips		Cli	ient sample ID	L16	L17	L18	 	
(Matrix: Soil/Solid)								
	Client sampling date / time 04				04-Jun-2021	04-Jun-2021	04-Jun-2021	
Analyte	CAS Number	Method	LOR	Unit	VA21B1484-016	VA21B1484-017	VA21B1484-018	
					Result	Result	Result	
Metals								
lead	7439-92-1	E494.Pb	5.0	mg/kg	461	6.7	224	

Please refer to the General Comments section for an explanation of any qualifiers detected.

Chain of Custody (COC) / Analytical Request Form

COC Number: 20 -



www.alsglobal.com

Canada Toll Free: 1 800 668 9878

Page / of 2_

Report To	Contact and company name below will appear on the final report	Reports / Recipients				T		Tuman	ound Time (Т					_						
Company:	Cascadia OHS	Select Report F	<u>`</u>	EXCEL E	DD (DICITAL)	77.00	Routine [R] if received by 3pm M-F no surcharges apply														
Contact:	Glenn Wong	┫ `	Reports with COA				4 day [P4] if received by 3pm M-F - 20% rush surcharge minimum														
Phone:	250-563-8484	-1	ilts to Criteria on Report	,			3 day [P3] if received by 3pm M-F - 25% rush surcharge minimum								AFFIX ALS BARCODE LABEL HERE						
	Company address below will appear on the final report	Select Distributi		MAIL			2 day [P2] if received by 3pm M-F - 50% rush surcharge minimum								(ALS use only)						
Street:	Unit #2 - 1962 Quinn Street South	Email 1 or Fax gwong@cascadiaohs.ca						day [E] if received by 3pm M-F - 100% rush surcharge minimum ame day [E2] if received by 10am M-S - 200% rush surcharge. Additional													
City/Province:	Prince George, BC	Email 2	fee	fees may apply to rush requests on weekends, statutory holidays and non- routine tests—																	
Postal Code:	V2N 1X5	Email 3											Bro intermity (b) Bitch a despen pink								
Invoice To	Same as Report To		Invoice R	ecipients		1		For all tests with rush TATs requested, please contact your AM to confirm availability.													
	Copy of Invoice with Report	Select Invoice D	Distribution: 🕢 🗈	MAIL MAIL	FAX			-			nalysis	Request						\neg			
Company:	Cascadia OHS	Email 1 or Fax	kpiner@cascadiad	ohs.ca		2				Ċ	3										
Contact:	Kelsey Piner	Email 2				1世					\perp]	8	notes)			
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ALS Sample #	Sample Identification and/or Coordinates		Date	Time	Sample Type	NUMBER	Lead in					ŀ				₹	EXTENDE	호			
(ALS use only)	(This description will appear on the report)		(dd-mmm-yy)	(hh;mm)					. <u></u> l .	J.	1 1.	پ داد د	ŝ	Ω	ısı						
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	L3		4-Jun-21		Paint		R Work C						r Refe	erence							
	L4		4-Jun-21		Paint		R			T	V	A21	IB:	148	34						
	L5		4-Jun-21		Paint		R			T.	•	• •		_							
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Chain of Custody (COC) / Analytical Request Form



Canada Toll Free: 1 800 668 9878

COC Number: 20 -

Page 2 of 2

Report To	Contact and company name below will appear on the final report	or on the final report Reports / Recipients					,	Turnaround Time (TAT) Requested								П																			
Company:	Cascadia OHS	Select Report F	ormat: PDF		DD (DIGITAL)	√ Rot	utine fR	1 if rece	ived by	3pm M	1-F - no	surcha	arges ap	oly									- 1												
Contact:	Glenn Wong	_	Reports with COA				_	-	-	-			surcharg		imum								- 1												
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Street:	Unit #2 - 1962 Quinn Street South	Email 1 or Fax	gwong@cascadia	ohs.ca		Sam	ne day i	E21 if	received	by 10a	am M-S	- 2009	% rush s tatutory	urcha	rge. Ac	ddition	ıt						- 1												
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Invoice To	Same as Report To		Invoice Recipients					For all tests with rush TATs requested, please contact your AM to confirm availability.																											
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Company:	Cascadia OHS	Email 1 or Fax	kpiner@cascadiac	hs.ca		3S		ln	dicate F	iltered	(F), Pres	erved	(P) or F	iltered	and F	reserv	ed (F/F) belov	v			0	်စွ												
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