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Subject	Hazardous Material Assessment
Site Address	100C Mackenzie Rd. Fort Chipewyan, Alberta
For	Alberta Forestry and Parks
Inspection Date	August 13, 2026
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SUMMARY OF FINDINGS

Table 1.

Issue	Results/Comments	Recommendations	Estimated Quantity
Asbestos	Laboratory analysis Laboratory analysis confirmed 2% chrysotile asbestos in joint compound associated with the Bedroom 3 walls, Living Room walls, and Main Ceiling. Attic vermiculite insulation was reported as containing ≤1% actinolite asbestos. Other representative materials sampled were reported as containing no asbestos detected.	Maintain identified ACMs within the building hazardous materials inventory and communicate their locations to contractors and workers. The attic vermiculite should be managed as a restricted-area friable ACM and should not be disturbed except under appropriate asbestos controls. Prior to renovation, repair, demolition, or intrusive work affecting identified ACMs, complete appropriate asbestos abatement, or controlled removal in accordance with Alberta OHS requirements. Additional sampling should be completed where work will disturb previously concealed or uncharacterized materials.	Attic vermiculite: approximately 645 ft ³ subject to confirmation of the field estimate. Joint compound: present at Bedroom 3 walls, Living Room walls and Main Ceiling; total surface area not quantified.
Lead	Nine representative paint-chip samples were analyzed. Lead concentrations above 90 ppm were identified in Bedroom 3 white paint – 1,000 ppm; Basement furnace white paint – 970 ppm; and Exterior trim brown paint – 4,300 ppm. Remaining samples were reported below the laboratory reporting limit of 64 ppm. Plumbing systems were visually inspected where accessible. The majority of the original plumbing lines appear to have been replaced with PEX piping.	Implement a site-specific lead exposure control plan in accordance with the Alberta Occupational Health and Safety Code. Utilize appropriate engineering controls, dust suppression, housekeeping, restricted work areas, and respiratory protection where required. Conduct exposure monitoring where there is a reasonable potential for airborne lead exposure. Prior to disposal, representative painted demolition waste should undergo TCLP analysis, where required by the receiving landfill, to determine waste classification and landfill acceptance requirements.	Exact quantity not determined. Lead-containing coatings confirmed on selected Bedroom 3 surfaces, basement furnace components and exterior brown trim. Suspect lead-containing plumbing components also present.



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Mercury	Six T12 fluorescent lamps were observed in the basement recreation room and one compact light bulb was observed in the basement furnace room. Fluorescent lighting of this type should be treated as mercury-containing. No mercury thermostats, thermometers, gauges, switches, relays or similar readily identifiable devices were observed. Concealed components within the furnace were not dismantled or assessed.	Remove mercury-containing lamps intact prior to demolition or renovation. Do not crush or intentionally break lamps. Manage removed lamps through an appropriate mercury lamp recycling or hazardous waste program. Suspect concealed mercury-containing mechanical controls encountered during future work should be identified before disposal.	6 T12 fluorescent tubes plus 1 compact lamp/bulb
Silica	Crystalline silica is presumed to be present in building materials including ceramic products, tile/grout/mortar, drywall, cementitious parging, concrete/cement footings and asphalt shingles. No silica bulk sampling was conducted.	Work that may disturb silica-containing materials should follow safe work procedures when cutting or grinding concrete, cement, concrete block walls, and other items containing crystalline silica. All applicable provincial and federal regulations and OHS guidelines pertaining to Silica should be followed during renovation activities, including respiratory protection.	Present throughout various cementitious, masonry and silica-containing building materials. Exact quantity not determined.
Radioactive Materials	No ionization smoke detectors, self-illuminated exit signs, radio-luminescent devices, industrial gauges, laboratory equipment, medical devices or other visibly identifiable radioactive materials were observed within accessible areas.	No specific removal action is required based on the accessible areas assessed. If an unidentified device bearing a radiation warning label or otherwise suspected of containing a radioactive source is encountered during intrusive work, stop work locally and have the device evaluated prior to handling or disposal.	None identified.
Ozone Depleting Substances	No refrigeration or air-conditioning equipment containing chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), or other regulated refrigerants was identified within the building at the time of the assessment.	Decommissioning of equipment containing ODS must be handled in accordance with the Alberta ODS and Halocarbon Regulations and Environment Canada's Ozone-Depleting Substances Regulation, 1998, and the 2016 update to <i>The Canadian Environmental Protection Act, Ozone Depleting Substances and Halocarbon Alternatives Regulation</i> .	None identified.
PCB	Fluorescent lighting equipment was observed in the basement. The accessible fixture/ballast	Prior to disposal, verify ballast manufacturer, model and date code where possible. Where	3 fluorescent light ballasts;



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	information indicated an apparent 1982 date, but no clearly legible "NON-PCB," "No PCBs," or equivalent marking was present. PCB status therefore could not be conclusively established, and the ballast(s) should be treated as suspect PCB-containing equipment pending verification. No leaking dielectric fluid was observed.	PCB-free status cannot be reliably established, segregate and manage the ballast(s) as potentially PCB-containing pending characterization and disposal determination in accordance with the federal PCB Regulations.	
Biohazards/ Mould	No widespread visible mould growth or significant surface microbial amplification was identified. A localized area of abnormal softness and cracking was observed at the lake-facing Living Room exterior wall, which may indicate concealed moisture-related deterioration. No significant accumulations of rodent droppings or nesting materials were observed; however, concealed microbial or pest contamination cannot be ruled out within inaccessible cavities.	No general mould remediation is recommended based solely on accessible conditions. Intrusive work should incorporate appropriate dust and exposure controls. Should concealed mould growth, significant water-damaged materials, or rodent contamination be encountered during demolition, work practices should be modified to incorporate additional exposure controls in accordance with the Alberta Occupational Health and Safety Code and IICRC S520.	No significant visible microbial or rodent contamination quantified. Localized suspect moisture-related deterioration at lake-facing Living Room wall.
Miscellaneous chemicals	No miscellaneous chemical containers, paint cans, unidentified chemical products or similar small-volume chemical products were observed within accessible areas during the assessment.	Dispose of hazardous waste and hazardous recyclables in accordance with the <i>Environmental Protection and Enhancement Act</i> and the Waste Control Regulation in addition to the Alberta User Guide for Waste Managers	None identified.



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1.0 INTRODUCTION AND SCOPE OF ASSESSMENT

Pure Air Solutions Services Ltd. was retained by Alberta Forestry and Parks to conduct a hazardous materials assessment of the residential structure located at 100C Mackenzie Road, Fort Chipewyan, Alberta. The site assessment was completed on August 13, 2026, by Raya O'Rorke of Pure Air Solutions Services Ltd.

The objective of the assessment was to identify, characterize, and document hazardous building materials present or reasonably suspected to be present within the structure and to establish a practical hazardous materials inventory for future property management purposes. The assessment was undertaken to provide Alberta Forestry and Parks with information to support hazardous materials disclosure in the event of a future property sale and to facilitate the appropriate planning and management of hazardous materials prior to future renovation, alteration, repair, demolition, or other activities having the potential to disturb existing building materials.

The assessment was conducted with consideration of the applicable requirements of the Alberta Occupational Health and Safety Act, Occupational Health and Safety Regulation, and Occupational Health and Safety Code, including the requirements applicable to the identification, assessment, communication, and control of hazardous materials that may be encountered or disturbed during work activities. Particular consideration was given to Part 4 – Chemical Hazards, Biological Hazards and Harmful Substances of the Alberta Occupational Health and Safety Code and the requirements applicable to the identification and management of asbestos-containing and other hazardous building materials.

The findings presented within this report are intended to establish a building-specific hazardous materials inventory and management resource identifying the location, type, condition, and, where applicable, analytical classification of hazardous materials encountered within accessible and reasonably investigable structural and building components. This information may be relied upon to inform future project planning, contractor hazard communication, hazardous materials management, and the determination of appropriate controls prior to work having the potential to disturb identified or presumed hazardous materials.

The assessment was not undertaken as an ongoing occupancy or routine maintenance assessment, nor was it intended to involve indiscriminate destructive investigation of otherwise intact building systems or assemblies. The assessment incorporated visual inspection, professional judgment, representative bulk sampling of suspect materials where



reasonably accessible and safe to obtain, and laboratory analysis, as applicable. Sampling locations and materials were selected to provide representative information regarding suspect hazardous building materials while avoiding unnecessary property damage and unreasonable risk to assessment personnel.

At the time of the assessment, electrical and water services remained active within the structure. Certain building systems, concealed assemblies, and components could therefore not be destructively accessed or sampled where doing so could reasonably result in electrical contact, uncontrolled water release, mechanical or other safety hazards, or significant and unnecessary damage to otherwise intact property. Such limitations included, but were not limited to, destructive investigation of energized electrical wiring and associated components, concealed services, and the dismantling, stripping, cutting, coring, or penetration of piping, mechanical assemblies, and other building systems solely for the purpose of obtaining representative samples.

Accordingly, the assessment should be considered comprehensive with respect to hazardous materials that were visible, accessible, and reasonably investigable within the defined scope at the time of inspection but should not be interpreted as confirmation that hazardous materials are absent from concealed, inaccessible, energized, enclosed, or otherwise unassessed components. The absence of a material from the analytical results or hazardous materials inventory shall not, in itself, constitute confirmation that the material is non-hazardous where it was not specifically accessed, sampled, or otherwise sufficiently characterized during the assessment.

Where suspect materials or components could not be safely accessed, exposed, or sampled, such materials should remain unassessed or presumed hazardous, as applicable, until sufficient information is available to establish their composition. Prior to future renovation, alteration, demolition, intrusive repair, or other work that may disturb previously inaccessible or concealed building components, additional targeted assessment and sampling should be undertaken where warranted. Such investigation should occur only after affected electrical, plumbing, mechanical, or other systems have been appropriately isolated, de-energized, drained, exposed, or otherwise rendered safe for intrusive investigation.

The hazardous materials information established through this assessment should be maintained by the property owner and reviewed in conjunction with the scope of any future work. Where proposed work may disturb a material identified as hazardous, presumed hazardous, or not previously assessed, the material should be appropriately



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evaluated and managed prior to disturbance in accordance with applicable regulatory requirements and accepted occupational hygiene practices. Changes to the building, removal or encapsulation of identified materials, subsequent sampling results, or discovery of previously concealed hazardous materials should be documented so that the building hazardous materials information remains current and suitable for future planning and disclosure purposes.

Pure Air Solutions Services Ltd. was not provided with previous hazardous materials assessment reports, hazardous materials inventories, abatement records, or other documentation establishing the historical presence, removal, encapsulation, or management of hazardous building materials within the structure. Accordingly, the findings and conclusions presented herein are based upon the conditions observed at the time of the assessment, information made available to Pure Air Solutions Services Ltd., representative sampling of accessible suspect materials, and the associated laboratory analytical results. No representation is made regarding concealed or inaccessible conditions that could not reasonably or safely be investigated within the defined scope of the assessment.

Table 1. Building Structural Components

Description Item	Details
Use	100C Mackenzie Rd. St. building
Number of Floors	One story with a basement
Total Area	1,400 square feet
Year of Construction	Not provided at the time of the assessment
Structure	Wood frame construction, Hempcrete foundation blocks, concrete footings
Exterior Cladding	Vinyl siding
HVAC	Force air furnace, no a/c
Roof	Angled asphalt
Flooring	Concrete slab-on-grade flooring within the basement, with areas of elevated wood-framed platform flooring, finished main level with vinyl plank.



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Interior Walls	Structural wood framing, drywall, wood panelling
Ceilings	Structural wood framing, drywall
Occupancy at Time of Assessment	Building was unoccupied during assessment

The hazardous materials building assessment was conducted to identify designated hazardous materials that may be encountered during the planned renovations of the structure. In support of this assessment, Pure Air Solutions Services Ltd. completed the following services:

- Collections of Asbestos Bulk Materials (ACM);
- Collection of suspect Lead Based Paint (LBP);
- Visual survey of miscellaneous hazardous materials such as polychlorinated biphenyls (PCB), mercury, Ozone-depleting substances (ODS), radioactive materials, and possible biological hazards in the areas where HVAC renovations are scheduled to occur.

The following Designated Substances are not typically found in building materials in a composition/state that is hazardous and were not included in this assessment:

- Arsenic
- Acrylonitrile
- Benzene
- Coke oven emissions
- Vinyl chloride monomer
- Ethylene oxide
- Isocyanates

The assessment, as completed, was of sufficient depth and scope to provide screening-level identification and documentation of hazardous building materials for the purposes of supporting Alberta Forestry and Parks' property sale disclosure requirements and due diligence obligations, and to provide relevant hazardous materials information for consideration prior to the planning and scheduling of future renovation objectives. The



assessment was intended to establish reasonable knowledge of hazardous materials identified or suspected to be present within accessible and reasonably investigable building components so that such materials may be appropriately disclosed, evaluated, and managed prior to future disturbance.

2.0 METHODOLOGY

A comprehensive room-by-room hazardous materials assessment was conducted throughout all accessible areas of the building to identify suspect hazardous building materials that may be encountered during the proposed demolition activities. The assessment consisted of a systematic visual inspection of building finishes, structural components, mechanical systems, and architectural assemblies, followed by representative bulk sampling of suspect homogeneous materials in accordance with recognized occupational hygiene practices, the Alberta Occupational Health and Safety Code, and applicable industry guidance.

The investigation incorporated a combination of visual inspection and selective intrusive investigation where necessary to adequately characterize accessible building materials. Representative samples were collected from homogeneous material groups based on observable characteristics, including material composition, colour, texture, age, installation method, and application. Where homogeneous materials extended throughout multiple areas of the building, representative sampling was undertaken to characterize the material as a whole, thereby minimizing unnecessary disturbance while maintaining confidence in the assessment findings.

The assessment incorporated a level of destructive investigation considered appropriate for the objectives of a pre-demolition hazardous materials survey. Intrusive investigation was undertaken where necessary to characterize suspect materials that were reasonably accessible; however, extensive dismantling or disassembly of intact building systems and equipment was not performed where representative sampling of accessible materials provided sufficient information to identify the principal hazardous materials likely to be encountered during demolition. Additional destructive investigation beyond that required to characterize accessible homogeneous materials was not considered warranted, as it would have resulted in unnecessary damage to intact building components, increased worker exposure to physical and environmental hazards during the inspection process, and provided limited additional value to the overall characterization of hazardous materials within the structure.



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Reasonable efforts were made to assess the composition of wall, ceiling, floor, and roofing assemblies through accessible locations and selective intrusive inspection where practical. However, concealed materials located behind finished surfaces, within enclosed mechanical or electrical equipment, beneath multiple construction layers, within structural cavities, or inside inaccessible building assemblies were not routinely exposed where access required extensive demolition or equipment disassembly. This methodology is consistent with accepted hazardous materials survey practices, which rely on representative sampling of accessible homogeneous materials rather than complete deconstruction of every building assembly prior to demolition. Consequently, previously concealed materials that become exposed during demolition and differ in appearance, age, composition, or construction from those assessed should be considered suspect until evaluated by a qualified hazardous materials consultant.

The findings presented in this report apply only to the building materials that were visible and reasonably accessible at the time of the assessment. Should previously concealed or unidentified materials be encountered during demolition activities, work should cease within the immediate area until the materials have been appropriately assessed and, where necessary, sampled and analysed to determine whether hazardous materials are present.

Sampling was performed in a manner intended to minimize unnecessary damage to the building while obtaining representative samples suitable for laboratory analysis. Where practical, samples were collected from inconspicuous locations, including closets, concealed corners, behind removable trim, above suspended ceiling systems, and along material edges, thereby reducing cosmetic impacts without compromising the representativeness of the samples collected.

Throughout the investigation, Pure Air Solutions Services Ltd. utilized proprietary cloud-based field data management software to document and catalogue observed building materials, sample locations, and field observations. Information recorded included homogeneous material classifications, material descriptions, sample identification numbers, photographic documentation, laboratory analytical results, and spatial locations within the building. This digital inventory provides a comprehensive and traceable record of the assessment, supporting demolition planning, hazardous materials management, regulatory compliance, and future verification activities.



2.1 ASBESTOS SAMPLE COLLECTION

Suspected potential ACM were visually identified and sampled in accordance with the sampling protocols outlined in the Alberta Asbestos Abatement Manual, AAAM, 2019; 7.1. Bulk sampling of materials suspected to contain asbestos was conducted and samples were submitted to an independent laboratory for analyses and classification via the bulk PLM NIOSH 9002; EPA 600/R-93/116; EPA 600/R-04/004 method.

All bulk asbestos containing materials samples are analysed by polarized light microscopy via the NIOSH 9002 (<1%), PLM, conducted by EMSL located in Calgary, Alberta, an independent laboratory, and Member of CALA, A2LA, AIHA, Bulk Asbestos Proficiency Analytical Testing, NVlap and Laboratory Quality Assurance Program.

A chain of custody, COC, is initiated to assign pertinent information to all samples suspected of containing asbestos. Typically, the date, type of sampling media, requested analysis methodology, sample collection location, sample measurement, and name of the person in care and control of the sample, and other relative assessment information is recorded. The COC is attached to the sample and the sample is sent to the laboratory. Analysis is returned with a copy of the COC specifying the condition of the sample at the time it was logged, the requested analysis, and signature of the attending lab technician.

2.2 LEAD-BASED PAINT (LBP) AND OTHER LEAD PRODUCTS SAMPLE COLLECTION

Sampling for lead-based paint was conducted. Samples of suspect paint were collected and sent for analysis via the Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)* method. Where lead-containing painted materials are intended for disposal, additional waste characterization (e.g., TCLP testing) may be required to determine the appropriate waste classification and disposal requirements. The need for such testing should be determined based on the intended waste stream, disposal facility acceptance criteria, and applicable regulatory requirements, rather than solely on the lead concentration identified in the coating.

All lead-based paint and other lead product samples are analysed by EMSL Analytical Inc. in Calgary, Alberta, an independent laboratory, and Member of the American Industrial Hygiene Association, AIHA, Bulk Asbestos Proficiency Analytical Testing, BAPAT, Laboratory Quality Assurance Program.



During the site inspection, it was visually identified that various plumbing components appeared to consist of lead-based plumbing pipe flanges and soldered copper pipes. These materials were not sampled but are typically lead containing and should be collected and disposed as lead containing materials.

A chain of custody, COC, is initiated to assign pertinent information to all samples suspected of containing Lead Typically, the date, type of sampling media, requested analysis methodology, sample collection location, sample measurement, and name of the person in care and control of the sample, and other relative assessment information is recorded. The COC is attached to the sample and the sample is sent to the laboratory. Analysis is returned with a copy of the COC specifying the condition of the sample at the time it was logged, the requested analysis, and signature of the attending lab technician.

2.3 MERCURY

A visual assessment was conducted to identify potential mercury-containing equipment (MCE) within accessible areas of the building. Equipment evaluated included fluorescent lighting (T-type, F-type, U-bend, and compact fluorescent lamps), mercury vapour and other high-intensity discharge lamps, mercury-containing thermostats, thermal switches, tilt switches, pressure- and vacuum-sensing devices, gauges, manometers, relays, float switches, level controls, electrical control devices, older appliances, mechanical and HVAC components, medical or laboratory equipment (where applicable), and other specialty equipment that historically may contain elemental mercury. Any confirmed or suspected mercury-containing equipment identified during the assessment was documented to facilitate appropriate removal, handling, recycling, or disposal prior to renovation or demolition activities.

2.4 SILICA

Crystalline silica is a presumed component of the following materials:

- Poured or pre-cast concrete
- Ceramic tiles and grout and mortar
- Drywall
- Ceiling tiles

2.5 RADIOACTIVE MATERIALS

A visual inspection was conducted throughout all accessible areas of the building to identify potential radioactive materials and radiation-producing equipment. The assessment



included the evaluation of ionization smoke detectors, tritium-containing exit signs, industrial gauges, radio-luminescent devices, and other specialty equipment that may contain sealed radioactive sources. Any confirmed or suspected radioactive materials observed during the assessment were documented for appropriate management prior to renovation or demolition.

2.6 OZONE DEPLETING SUBSTANCES

Visual inspections throughout all accessible areas in the building were conducted for CFC's, Halon, HFC; HCFC. Visible presence of potential ozone depleting substances was noted where observed.

2.7 POLYCHLORINATED BIPHENYLS (PCBS)

The building was visually assessed for the presence of PCBs in fluorescent light ballasts. Suspected PCB-containing light ballasts were inspected and compared to the criteria found in the Environment Canada Report EPS 2/CC/2 (revised) August 1991, Identification of Lamp Ballasts Containing PCBs to assess their likelihood of being PCB-containing. Transformer fluids were not assessed as part of this survey as no transformers were found on site.

2.8 BIOHAZARDS/ VISIBLE MOULD

Visual inspections throughout accessible areas in the building were conducted. Visible presence of biohazardous items such as animal carcasses, animal traps or insect infestations and/or mould on building materials was noted where observed.

2.9 MISCELLANEOUS CHEMICALS

Visual inspections throughout accessible areas in the building were conducted. Visible presence of chemicals was noted where observed.

3.0 FINDINGS

3.1. ASBESTOS BULK SAMPLE RESULTS

100C Mackenzie Road, Fort Chipewyan, Alberta



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Sample ID	Sample Location / Description	Material / Appearance	Asbestos Result	Photographs
A001	Kitchen walls	Joint compound / White	None Detected	
A002	Bathroom walls	Joint compound / White	None Detected	
A003	Bedroom 1 walls	Joint compound / White	None Detected	
A004	Bedroom 2 walls	Joint compound / White	None Detected	
A005	Bedroom 3 walls	Joint compound / Beige	2% Chrysotile	
A006 - JDWC 1	Living room walls	Joint compound / White	None Detected	



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Sample ID	Sample Location / Description	Material / Appearance	Asbestos Result	Photographs
A006 - JDWC 2	Living room walls	Joint compound / Beige	2% Chrysotile	
A007	Main ceiling	Joint compound / Beige	2% Chrysotile	
A008	Kitchen caulking	Caulking / White	None Detected	
A009	Exterior shingles	Shingles and tar paper / Black	None Detected	
A010 - Parging 1	Exterior parging	Cementitious parging / Gray	None Detected	
A010 - Parging 2	Exterior parging	Cementitious parging / Beige	None Detected	



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Sample ID	Sample Location / Description	Material / Appearance	Asbestos Result	Photographs
A011	Basement recreation room walls	Joint compound / White	None Detected	
A012	Basement ceiling patches	Joint compound / White	None Detected	
A013	Hempcrete blocks	Hempcrete / Gray-Tan	None Detected	
Vermiculite Sample	Vermiculite insulation	Vermiculite / Various-Gold	<1% Actinolite	

* Highlighted results indicate asbestos fibres were identified in the sample(s) collected from the areas listed above.

The EMSL PLM report identifies 2% chrysotile in A005, A006-JDWC 2, and A007, with the remaining listed bulk samples reported as none detected. The separate vermiculite analysis reported <1% actinolite. For A007, EMSL also noted that no texture was present in the submitted sample and the analyzed material was joint compound only. A copy of the independent laboratory analytical report is provided in Appendix III for reference.



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3.2. LEAD PAINT CHIP SAMPLE RESULTS

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Sample ID	Sample Location / Description	Material / Appearance	Analyzed Weight (g)	Lead Result	Photographs
L001	Kitchen	White painted surface	0.2553 g	<64 ppm	
L002	Bathroom	White painted surface	0.2613 g	<64 ppm	
L003	Bedroom 1	White painted surface	0.2532 g	<64 ppm	
L004	Bedroom 2	White painted surface	0.2561 g	<64 ppm	
L005	Bedroom 3	White painted surface	0.2547 g	1,000 ppm	
L006	Exterior trim	White painted surface	0.2543 g	<64 ppm	



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Sample ID	Sample Location / Description	Material / Appearance	Analyzed Weight (g)	Lead Result	Photographs
L007	Basement furnace	White painted surface	0.2623 g	970 ppm	
L008	Basement recreation room	White painted surface	0.2558 g	<64 ppm	
L009	Exterior trim	Brown painted surface	0.2628 g	4,300 ppm	

* Highlighted results indicate lead levels in excess of Canadian Federally regulated guidelines of 0.009% wt.

EMSL analyzed nine (9) submitted paint-chip samples using Flame AAS under SW-846 3050B/7000B methodology. The laboratory reporting limit was 64 ppm, and results reported as "<64 ppm" indicate lead was not detected at or above that reporting limit.



The highest reported lead concentration was 4,300 ppm in Sample L009, Exterior Trim - Brown, followed by 1,000 ppm in L005, Bedroom 3 - White, and 970 ppm in L007, Basement Furnace – White. A copy of the independent laboratory analytical report is provided in the Appendices for reference.

Plumbing systems were visually inspected where accessible. Most of the the original plumbing lines appear to have been replaced with PEX piping. Toilets and appliances were not removed in inspect for lead flanges etc.

3.3. MERCURY

A visual, non-destructive inspection was conducted to identify accessible building materials, fixtures, and mechanical or electrical equipment with the potential to contain elemental mercury or mercury-containing components. A total of six (6) T12 fluorescent light tubes were observed within ceiling-mounted fixtures in the basement recreation room, and a single compact light bulb in the basement furnace room. Fluorescent lamps of this type should be considered mercury-containing and appropriately managed during future removal, renovation, or disposal activities.

No mercury-containing thermostats, thermometers, barometers, manometers, switches, relays, or other readily identifiable mercury-containing control devices were observed within the accessible areas of the building at the time of the assessment.

The assessment did not include destructive or intrusive investigation of mechanical or electrical equipment for the sole purpose of identifying concealed mercury-containing components. In particular, the forced-air furnace and its associated internal controls were not dismantled or disassembled as part of the assessment. A previous building inspection completed in February 2018 identified the heating system as a York propane-fired forced-air furnace and reported an estimated age of approximately 22 years at the time of that inspection. This would suggest an approximate age dating to the mid-1990s; however, the previous inspection did not provide documentation confirming the furnace's actual manufacture, installation, or replacement date. Accordingly, the age of the furnace should be considered approximate and unverified.

As the internal furnace controls were not disassembled or comprehensively assessed, the presence or absence of concealed mercury-containing switches, sensors, relays, or other control components could not be conclusively determined. The previous inspection similarly identified limitations associated with evaluation of internal furnace



components and noted that complete inspection of certain components would require disassembly of the furnace case.

Accordingly, the absence of visually identified mercury-containing components should not be interpreted as confirmation that all concealed mechanical or electrical components are mercury-free. Prior to future servicing, replacement, renovation, or decommissioning of the furnace or other mechanical and electrical equipment, manufacturer information and equipment specifications should be reviewed where reasonably available. Any unidentified switches, sensors, relays, controls, or other components suspected of containing mercury should be appropriately identified, characterized, and managed prior to disposal.

3.4. SILICA

Sampling was not completed for crystalline silica; however, silica is a presumed component of the following materials found on site:

- Ceramic appliances, flooring tiles and grout and mortar
- Drywall
- Cement parging and mortar
- Cement footings
- Asphalt shingles.

3.5. RADIOACTIVE MATERIALS

A visual inspection was conducted to identify materials and equipment with the potential to contain naturally occurring or manufactured radioactive materials. Based on the accessible areas inspected during the assessment, no evidence was identified of radioactive materials or equipment commonly associated with licensed or exempt radioactive sources.

Specifically, no ionization smoke detectors, self-illuminated exit signs, radio-luminescent clocks or instrument dials, industrial gauges, laboratory equipment, medical devices, or other equipment known to contain radioactive isotopes were observed. As this assessment was limited to a visual inspection of accessible areas, concealed radioactive sources cannot be entirely ruled out. Should previously concealed devices or materials bearing radiation warning labels or otherwise suspected of containing radioactive materials be encountered during renovation and/or demolition, work should cease in



the immediate area until the materials have been evaluated and managed in accordance with the requirements of the Canadian Nuclear Safety Commission (CNSC) and applicable provincial legislation.

3.6. OZONE DEPLETING SUBSTANCES

A visual inspection was conducted to identify equipment with the potential to contain ozone-depleting substances (ODS) or regulated halocarbons. No refrigeration or air-conditioning equipment containing chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), or other regulated refrigerants was identified within the building at the time of the assessment.

Should materials suspected to contain ozone depleting substances be discovered, they should be removed and managed in accordance with the manufacturer's recommendations and applicable federal and provincial environmental regulations before renovation and/or demolition activities commence.

3.7. POLYCHLORINATED BIPHENYLS (PCBS)

A visual inspection was conducted to identify accessible building materials, electrical equipment, and components with the potential to contain polychlorinated biphenyls (PCBs). Particular consideration was given to fluorescent lighting ballasts, capacitors, transformers, and other electrical components historically manufactured using PCB-containing dielectric fluids or materials.

Fluorescent lighting fixtures were observed within the building. The accessible fixture identification label indicated an apparent date of 1982; however, the associated ballast did not display a clearly legible "NON-PCB," "No PCBs," or equivalent manufacturer marking confirming that the ballast was manufactured without PCBs. As the apparent date falls within the transitional period following the phase-out of PCB use in new products in Canada, the date alone is not considered sufficient evidence to conclusively establish the PCB status of the ballast. Accordingly, where manufacturer documentation or other reliable information cannot confirm that the ballast is PCB-free, the ballast should be considered suspect for PCB-containing components for management purposes until appropriately characterized or otherwise verified.



The assessment was visual and non-destructive in nature and did not include dismantling of fluorescent fixtures, opening of ballast housings, or destructive examination of capacitors and other sealed electrical components. Consequently, the absence of visible leakage, deterioration, or PCB-specific labelling should not be interpreted as confirmation that the inspected electrical components are free of PCBs. Prior to removal, replacement, renovation, or other work requiring disturbance or disposal of the fluorescent lighting assemblies, the ballast manufacturer, model number, date code, and available technical information should be reviewed where practicable. Where PCB status cannot be reliably established, the ballast should be segregated and managed as potentially PCB-containing pending appropriate characterization and disposal determination.

No leaking dielectric fluids or other readily apparent evidence of PCB contamination was observed in association with the accessible electrical equipment at the time of the assessment. No additional oil-filled transformers, large capacitors, hydraulic equipment, or similar equipment visibly indicative of PCB-containing dielectric fluids were identified within the accessible areas inspected.

With respect to building materials, no caulking, glazing compounds, or sealants specifically suspected of containing PCBs were submitted for laboratory analysis as part of this assessment. Accordingly, no analytical determination regarding PCB content in building sealants was made, and the absence of PCB-containing sealants should not be inferred solely from this assessment. Where future intrusive work identifies previously concealed or uncharacterized sealants for which the age or composition is uncertain, additional assessment should be considered where warranted by the proposed scope of disturbance.

3.8. BIOHAZARDS/ MOULD

A visual inspection was conducted to identify evidence of biological hazards and moisture-related conditions, including visible mould growth, chronic moisture intrusion, water staining, deterioration of building finishes, and other conditions that may be conducive to microbial amplification. At the time of the assessment, no widespread visible fungal growth, water staining, swelling of baseboards, or other overt evidence of significant historical or active water damage was observed on accessible interior finishes however it appears the interior of the house was recently re-painted all the same colour of white which may coverup indicator areas.



Notwithstanding the absence of visible surface staining or generalized water damage, a localized area of concern was identified along the exterior perimeter wall facing south, towards the lake. During the asbestos survey and associated assessment of building materials, portions of this wall were observed to be soft to the touch, suggesting possible loss of material integrity that may be consistent with historical or concealed moisture exposure within the wall assembly. A visible crack was also noted beneath the front living room window. Based on its location and the condition of the surrounding wall materials, the cracking is suspected to be potentially associated with moisture-related swelling, movement, or deterioration within the concealed wall cavity. The precise cause could not be confirmed without further intrusive investigation.

As the assessment did not include destructive opening of wall cavities for the purpose of evaluating concealed moisture conditions, the absence of visible mould growth or water staining on exposed surfaces should not be interpreted as confirmation that concealed moisture damage or microbial amplification is absent. Where building materials exhibit abnormal softness, cracking, deformation, or other physical deterioration, concealed materials may have been exposed to moisture even where no visible staining is present at the finished surface.

The building also exhibited conditions consistent with prolonged vacancy and general deterioration, including debris accumulation, exposed structural elements, unfinished or partially accessible assemblies, and areas that may provide harborage for rodents or other pests. Although no significant accumulations of rodent droppings, nesting materials, or other biological contaminants were observed during the assessment, biological contamination may be present within concealed wall cavities, attic spaces, crawlspaces, or other inaccessible areas and may only become apparent during future intrusive work.

Future renovation, demolition, or other activities involving disturbance of the affected perimeter wall or other concealed building assemblies should therefore proceed with consideration for the potential presence of concealed moisture-damaged materials, fungal growth, settled spores, rodent excreta, nesting materials, and other biological contaminants. Appropriate dust-control and exposure-control measures should be implemented where disturbance may generate airborne particulate. Workers should utilize personal protective equipment appropriate to the hazards identified through the project-specific hazard assessment, including suitable respiratory protection where airborne particulate exposure is reasonably anticipated.



Personnel undertaking intrusive work should remain vigilant for concealed fungal growth, visibly deteriorated or water-damaged materials, abnormal odours, rodent contamination, or other biological hazards as building assemblies are opened. Where significant concealed fungal amplification, extensive moisture damage, or substantial rodent contamination is identified, the affected work should be reassessed and appropriate containment, exposure-control, cleaning, or remediation procedures implemented prior to continued disturbance, consistent with applicable Alberta occupational health and safety requirements and recognized occupational hygiene and microbial remediation practices.

3.9. MISCELLANEOUS CHEMICALS

A visual inspection was conducted to identify miscellaneous hazardous materials, chemical products, and potentially hazardous substances that may require specialized handling, characterization, or disposal prior to future renovation or demolition activities. At the time of the assessment, no miscellaneous chemical containers, paint cans, unidentified chemical products, or other small-volume consumer or maintenance products of concern were observed within the accessible areas of the building.

Notwithstanding the conditions observed at the time of the assessment, previously unidentified chemical products or containers may be encountered during future property cleanout, renovation, intrusive work, or demolition activities. Where the identity, composition, or hazard classification of a material cannot be reasonably established through the original product label, manufacturer information, or an applicable Safety Data Sheet (SDS), the material should be considered potentially hazardous and should not be disturbed, combined, transferred, or disposed of until it has been appropriately identified or characterized.

Any hazardous chemical products subsequently identified should be segregated and removed from affected work areas prior to activities that may damage, rupture, or otherwise disturb their containers. Storage, handling, transportation, and disposal should be completed in accordance with the applicable requirements of Alberta's *Environmental Protection and Enhancement Act*, *Waste Control Regulation*, and any other regulatory requirements applicable to the classification, transportation, and disposal of the material.

Personnel required to handle unidentified or potentially hazardous chemical products should complete an appropriate hazard assessment and utilize personal protective



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equipment commensurate with the reasonably anticipated hazards. Unidentified containers should not be opened, mixed, punctured, emptied, consolidated, or otherwise disturbed solely for the purpose of determining their contents. Where the nature of a material cannot be safely established, further assessment or characterization by a qualified person should be completed prior to handling or disposal.

4.0 GENERAL COMMENTS, SCOPE RECOMMENDATIONS AND REGULATIONS

The following comments apply to the analysis as reported.

4.1. ASBESTOS

Based on the laboratory analytical results and visual observations made during the assessment, asbestos-containing materials (ACMs) were identified within the structure. Laboratory analysis identified 2% chrysotile asbestos in joint compound associated with the Bedroom 3 walls, Living Room walls, and Main Ceiling, while the attic vermiculite insulation was reported as containing $\leq 1\%$ actinolite asbestos. Other representative materials submitted for analysis, including joint compounds from the Kitchen, Bathroom, Bedrooms 1 and 2, Basement Recreation Room and Basement Ceiling Patches, as well as the Kitchen caulking, exterior shingles and tar paper, exterior cementitious parging, and hempcrete blocks, were reported as containing no asbestos detected. The variability in analytical results between visually similar building finishes indicates that material composition is not uniform throughout the structure and that the presence or absence of asbestos cannot be reliably determined by visual appearance alone. Accordingly, the boundaries between asbestos-containing and non-asbestos-containing materials cannot be definitively established based solely on observed construction finishes. Where future renovation, repair, or other intrusive work extends beyond specifically characterized materials or locations, additional representative sampling should be undertaken prior to disturbance to confirm the asbestos status of the affected materials.

At the time of the assessment, the asbestos-containing joint compounds and associated building finishes were observed to be generally intact and in good condition, without significant visible damage, deterioration, delamination, or other conditions indicating an immediate potential for fibre release during normal undisturbed conditions.



Accordingly, these materials do not presently require removal solely on the basis of their observed condition. The identified ACMs should, however, be incorporated into the building's hazardous materials inventory and appropriately communicated to any employer, contractor, or worker who may undertake work having the potential to disturb the affected materials.

The vermiculite insulation within the attic represents the principal friable asbestos concern identified during the assessment. Due to the loose-fill and readily disturbed nature of the material, the attic should be designated and managed as a restricted area, with access limited to appropriately trained and authorized personnel. The vermiculite should not be disturbed, displaced, vacuumed, redistributed, or otherwise handled except under appropriate asbestos work procedures and controls. Any work requiring entry into, contact with, or disturbance of the vermiculite-containing attic insulation should be subject to a task-specific hazard assessment and the applicable asbestos requirements of the Alberta Occupational Health and Safety Code.

Although the identified asbestos-containing wall and ceiling finishes were generally observed to be in good condition, a localized condition of concern was identified at the south-facing Living Room exterior wall. During intrusive sampling of the wall finish, the underlying wall assembly was observed to be abnormally soft when penetrated for collection of the asbestos bulk sample. A crack was also observed beneath the front Living Room window. While no corresponding water staining, swollen baseboards, visible fungal growth, or other overt evidence of active water damage was observed at the finished surface, the reduced integrity of the wall assembly and localized cracking may be consistent with concealed moisture-related deterioration. The extent and cause of this condition could not be established without further intrusive investigation.

Where future investigation, repair, or renovation of the affected Living Room wall requires disturbance or removal of the asbestos-containing joint compound, asbestos abatement will be required prior to or in conjunction with intrusive work affecting the ACM. Removal should be limited to the extent reasonably necessary to permit safe access to and evaluation of the underlying wall assembly unless broader removal is otherwise warranted by the condition encountered. Following appropriate asbestos control, the concealed wall cavity should be evaluated for moisture intrusion, deterioration, microbial amplification, and any deficiencies associated with the exterior building envelope.



The attic insulation should similarly be addressed where future work is required to correct insulation deficiencies, investigate the attic assembly, access concealed services, or otherwise disturb areas containing vermiculite. Such work should be planned on the basis that the vermiculite contains asbestos and should incorporate appropriate asbestos abatement procedures before unrestricted disturbance of the insulation or underlying building components occurs.

At this time, removal of all identified ACMs throughout the structure is not recommended solely on the basis of their presence. Materials that remain intact, stable, and unlikely to be disturbed may generally remain *in situ*, subject to appropriate identification, documentation, access control where warranted, and management through the building's hazardous materials management plan. Prior to future renovation, repair, maintenance, or other intrusive work, the proposed scope should be reviewed against the hazardous materials inventory to determine whether identified or presumed ACMs will be disturbed and whether asbestos abatement or additional targeted assessment is required.

Any asbestos abatement undertaken as a result of future renovation, insulation upgrades, moisture investigation, or building repairs should be completed by appropriately trained and qualified personnel using work procedures, containment, respiratory protection, decontamination, waste handling, and occupational hygiene controls appropriate to the risk classification and nature of the work in accordance with applicable Alberta occupational health and safety requirements.

4.2. LEAD

Lead-containing paint coatings identified during this assessment should be managed in accordance with the Alberta Occupational Health and Safety Code and recognized occupational hygiene practices for the control of lead exposures during demolition activities. Any activity capable of disturbing lead-containing coatings, including demolition, cutting, grinding, drilling, or mechanical processing, should be planned to minimize the generation of lead-containing dust and debris.

A site-specific lead exposure control plan should be developed prior to commencing renovation and/or demolition activities. Appropriate engineering controls, including wet methods where practical, local exhaust ventilation (where feasible), restricted access zones, housekeeping procedures utilizing HEPA-filtered equipment, and suitable personal protective equipment, including respiratory protection where required, should



be implemented to maintain worker exposures As Low As Reasonably Practicable (ALARP) and below applicable occupational exposure limits. Workers involved in activities capable of generating airborne lead should receive appropriate training, and exposure monitoring should be conducted where there is a reasonable potential for significant airborne lead exposure.

Where lead-containing painted materials are intended for disposal, additional waste characterization (e.g., TCLP testing) may be required to determine the appropriate waste classification and disposal requirements. The need for such testing should be determined based on the intended waste stream, disposal facility acceptance criteria, and applicable regulatory requirements, rather than solely on the lead concentration identified in the coating.

Where practical, lead acid batteries, lead solder pipes and painted materials removed from service should be recycled or managed in accordance with applicable waste management and environmental regulations.

4.3. MERCURY

Mercury containing products were visually identified at the time of the inspection, in six (6) fluorescent light tubes located in the basement recreational area and a single compact fluorescent light bulb in the furnace room. Mercury-containing thermostats were not visually identified at the time of the inspection.

Fluorescent lamps and associated lighting components should be carefully removed prior to renovation or demolition activities. Care must be taken during handling and removal to prevent damage or breakage of the lamps, as breakage may release mercury vapour and phosphor powder and may require specialized clean-up procedures. Lamps should not be intentionally broken, crushed, or dismantled, and liquid mercury should not be separated from lamp components.

Fluorescent lamps and other mercury-containing lighting equipment removed from service should be collected and recycled through an approved mercury recycling program. Mercury-containing materials are classified as hazardous waste and must be managed and disposed of in accordance with the Waste Control Regulation under the Environmental Protection and Enhancement Act (Alberta Regulation 192/96) and applicable provincial waste management requirements.



4.4. SILICA

Disturbance of silica-containing products during renovation activities may result in excessive exposures to airborne silica. Cutting, grinding, drilling or renovation of materials containing silica should be completed only with proper respiratory protection and other worker safety precautions that comply with per Occupational Health and Safety Act, Regulations and Code, Province of Alberta.

4.5. RADIOACTIVE MATERIALS

No labelled radioactive materials, radiation-emitting devices, or other components suspected of containing regulated radioactive material were identified within the accessible areas assessed at the time of the hazardous materials assessment. Notwithstanding the conditions observed, previously concealed or unidentified devices may be encountered during future renovation, maintenance, removal, or other intrusive activities. Should a labelled, damaged, unusual, or otherwise suspected radioactive device or component be discovered, work within the immediately affected area should cease and the material should not be dismantled, opened, damaged, discarded, or otherwise disturbed until it has been evaluated by a qualified radiation protection professional and an appropriate management or disposal pathway has been established.

Where an ordinary, intact ionization-type residential smoke alarm is encountered, the device should remain intact and should not be dismantled for the purpose of removing or accessing its radioactive source. Prior to disposal, the property owner or contractor should confirm the applicable acceptance requirements of the local municipal waste management facility or other authorized waste program, particularly given the remote location of Fort Chipewyan. Where available and practicable, manufacturer take-back or other approved collection programs may also be utilized.

Any batteries associated with smoke alarms or similar devices should be removed and managed separately in accordance with applicable battery recycling or waste-management requirements. Disposal of an intact smoke alarm should proceed only after confirming that the receiving waste facility or applicable municipal program accepts the device in the condition presented.



The presence of a radiation warning label, damaged source-containing device, unusual industrial instrument, or other component for which the radioactive status cannot be readily determined should not be treated as ordinary municipal waste. Such materials should be isolated from unnecessary access and assessed by an appropriately qualified radiation professional before further handling, transportation, or disposal. This recommendation is intended to provide a precautionary management framework should previously unidentified radioactive materials be encountered and does not indicate that radioactive materials were identified within the structure during the assessment.

4.6. OZONE-DEPLETING SUBSTANCES

A visual inspection was conducted to identify equipment, appliances, containers, and other materials with the potential to contain ozone-depleting substances (ODS) or regulated halocarbons. At the time of the assessment, no ODS-containing or suspected ODS-containing materials or equipment were identified within the accessible areas of the building.

No refrigerators, freezers, fire extinguishers, aerosol containers, air-conditioning units, or other appliances or equipment commonly associated with refrigerants, halons, chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), or other regulated halocarbons were observed during the assessment.

Accordingly, no specific ODS removal or management requirements were identified based on the conditions observed at the time of inspection. Should previously concealed, stored, or subsequently introduced equipment or containers suspected of containing refrigerants or other regulated halocarbons be encountered during future renovation, property cleanout, or other intrusive activities, the material should be appropriately identified and managed in accordance with applicable regulatory requirements prior to disposal.

Equipment that may contain regulated refrigerants or halocarbon-based agents must be managed in accordance with the Alberta Ozone-Depleting Substances and Halocarbon Alternatives Regulation, as well as the federal Ozone-Depleting Substances and Halocarbon Alternatives Regulations under the *Canadian Environmental Protection Act (CEPA)*. Prior to removal, recycling, or disposal of equipment that may contain regulated substances, a certified refrigeration technician or qualified service provider should be



engaged to properly recover and manage any refrigerants or halocarbon agents present, in accordance with applicable environmental regulations.

4.7. PCB

Three (3) non-magnetic fluorescent light ballasts with a manufacturing date of 1982 were identified in the basement. The light ballasts did not indicate 'Non-PCB' or 'PCB containing' and therefore should be treated as containing based on age. The light ballasts should be sorted on site by qualified personnel based on the date of the manufacture with reference to the published documentation 'Identification of lamp ballasts containing PCB's' by Environment Canada. Environment Canada indicates that should PCB containing fluorescent light ballasts (FLB) be found, they must be barreled appropriately, labelled, manifested, and transported to an approved destruction facility in accordance with Canada's Environmental Protection Act. As of current, there is only one location in Alberta.

4.8. BIOHAZARDOUS MATERIALS/ MOULD

Any biological contamination identified during demolition should be removed concurrently with demolition activities and managed as contaminated demolition waste. Workers should utilize appropriate respiratory protective equipment (RPE) and personal protective equipment (PPE) based on the anticipated exposure hazards. Dust generation should be minimized through the implementation of appropriate engineering controls, including dust suppression techniques and work practices designed to reduce the release and migration of bioaerosols. Disposal of biohazardous waste should be completed in accordance with applicable provincial regulations and the receiving landfill's waste acceptance criteria.

4.9. MISCELLANEOUS CHEMICALS

Miscellaneous chemicals were not identified at the time of the inspection. Should chemicals such as paints, cleaning products etc. be identified prior to renovations, they should be collected, characterized where required, and managed for disposal or recycling in accordance with applicable regulatory requirements. Prior to renovations and/or demolition, Hazardous wastes and hazardous recyclables should be managed in accordance with the *Environmental Protection and Enhancement Act*, the *Waste Control Regulation*, and any other applicable provincial requirements.



5.0 USE OF THE REPORT

In order to accurately understand the suggestions, recommendations and/or opinions expressed herein, reference must be made to the whole of the report. Pure Air Solutions Services cannot be held responsible for use of any party of portions of the report without reference to the entire generated report. No other party may use or rely upon the report or any portion thereof without Pure Air Solutions Services written consent and such use shall be on terms and conditions that Pure Air Solutions Services expressly approves in advance. At no time shall excerpts, or information be selectively removed from this report for any reason unless explicitly authorized by Pure Air Solutions Services management in written form. Pure Air Solutions Services accepts no responsibility whatsoever for any direct or indirect damages suffered by any third party resulting from the use of this report. This includes responsibility for payment for services rendered and pursuit of damages for errors, omissions or negligence by those parties in carry out their work practices.

6.0 GENERAL LIMITATIONS

The survey as completed was of sufficient depth to provide only a screening for the purpose of establishing abatement priorities for proposed renovation objectives as requested by the client, on August 13, 2026. The survey was not of sufficient depth to provide a complete and accurate scope for areas outside the listed areas sampled. As a result, all materials will be assumed to be asbestos or lead containing until analytically proven otherwise. In addition, due to the nature of building construction, some limitations exist as to the possible extent and accuracy of this survey based on the ability to access materials safely minimizing further exposure at the time of the assessment on August 13, 2026. Further limitations include any inconsistencies in the use of materials during construction or later repairs or renovations that result in deviations from the general pattern. However, without sampling every square foot of wall, every linear foot of pipe covering, every ceiling tile, etc., it is not possible to rule out such limitations. As this is not a practical approach, the survey was completed based on the collection of a limited number of visually similar materials. Every effort was made to collect these samples from typical or representative materials.

The collection of data, quantification of any damage, and confirmation of existing conditions is limited by the surveyor's ability to access and visually inspect conditions at



each inspection location. The collection of data above lay-in ceilings, above fixed or mechanically fastened ceilings, or from within concealed cavities, or shafts, is therefore limited by the availability and location of access points, hatches, etc.

The field observations, measurements, and analysis are considered sufficient in detail and scope to form a reasonable basis for a preliminary screening of this property to aid in health risk exposure concerns. Pure Air Solutions Services warrants that the findings and conclusions contained herein have been expressed in accordance with generally accepted asbestos hazard evaluation methods, for the site referenced in this report for the Province of Alberta.

These evaluation methods have been developed to provide the client with information regarding apparent indications of existing or potentially hazardous conditions relating to the property and are necessarily limited to the conditions observed and information available at the time of the site visit. There is a distinct possibility that conditions may exist which could not be reasonably identified within the scope of the assessment, or which were not apparent during the site visit. Pure Air Solutions Services believes that the information collected during the survey period concerning this property is reliable. However, Pure Air Solutions Services cannot warrant or guarantee that the information provided is complete or accurate beyond the current asbestos consulting industry standards including other areas excluded from the proposed scope. No other warranties are implied or expressed.

7.0 DEVIATIONS IN SAMPLE RESULTS

Due to the replacement of individual building materials over the course of a building's life or due to the installation of visually similar texture coats, wall or ceiling plasters (for example) it is possible that individual building surfaces may not be characteristic of the samples collected. Every effort was made to collect samples from typical materials such as these.

8.0 WARRANTY OF TITLE, WASTE OWNERSHIP

No warranty is expressed or implied as to final site condition. This report provides an analysis and assessment of materials tested and is based on the information provided to Pure Air Solutions including photographs provided in which case there are additional photos not provided in this report of the sample locations. The client maintains all responsibility and liability for the environmental conditions on-site. At no time shall



Pure Air Solutions assume ownership or title for any hazardous or contaminated materials which exist at or have been removed from the site including all claims, third party claims, penalties, fines, losses, damages, demands, disputes, liability including solicitor-client costs arising in part or in whole as a result of services provided by Pure Air Solutions to the client, regardless of any act or omission on part of Pure Air Solutions.

9.0 LIMITATION OF LIABILITY

The client agrees to limit the liability of Pure Air Solutions for all claims which may arise out of the acts, errors(s) and omission(s) of Pure Air Solutions in performing the services under this agreement to the amount of the total fees actually paid to Pure Air Solutions within the anniversary date of work performed prior annual year. Pure Air Solutions shall not be held accountable under any circumstance for the lost revenues, loss of use of property, lost profits or loss of capital and any other direct or indirect consequential and punitive damages regarding this location past the completion of the services requested in this agreement. The client agrees that Pure Air Solutions will not be held accountable upon completion of requested services regardless of whether a claim is brought against Pure Air Solutions for breach of contract or tort.

10.0 CLOSURE

This report is based on observations and collected data from the property located at 100C Mackenzie Rd. In Fort Chipewyan, AB on August 13, 2026 . The conclusions made in this report are not a certification of the site's air quality. The report was prepared for the pre-demolition hazardous material assessment for as described to Pure Air Solutions Services by the client the Government of Alberta Forestry and Parks. The applicability and reliability of the findings, recommendations, suggestions, or opinions expressed in the documents, subject to the limitations provided herein, are only valid to the extent that there has been no material alterations or variations from any of the said descriptions provided to Pure Air Solutions Services, including the extent that this report expressly addresses proposed development, design objectives and purposes. The findings, evaluations, recommendations, suggestions, and conclusions stated in this final report have been made based on conditions in existence at the time of sampling, site inspection and ability to access additional materials safely. Pure Air Solutions Services has relied on good faith upon representations and information provided by the client concerning the site and therefore accepts no responsibility for any errors, deficiency,



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misstatements, fraudulent acts of persons providing information to Pure Air Solutions Services, omissions, or inaccuracies regarding the dismantling of the building. We are entitled to rely on such representations, information and instructions and are not required to carry out investigations to determine truth or accuracy of such representations, information, and instructions. Services performed by Pure Air Solutions Services are for the benefit of the client, therefore the client agrees to hold the company Pure Air Solutions Services harmless and to indemnify and defend us from and against all claims arising through such hiring's to the extent that the client would incur had they hired such services directly.

Regards,

Report Prepared By:

Raya O'Rourke B.A CIE
Indoor Environmental Consultant

Pure Air Solutions

Report Reviewed By:

Dylan Roscovich MPH, ROH
Principal, Principal, Occupational &
Environmental Health
ExposureWorks

END OF REPORT

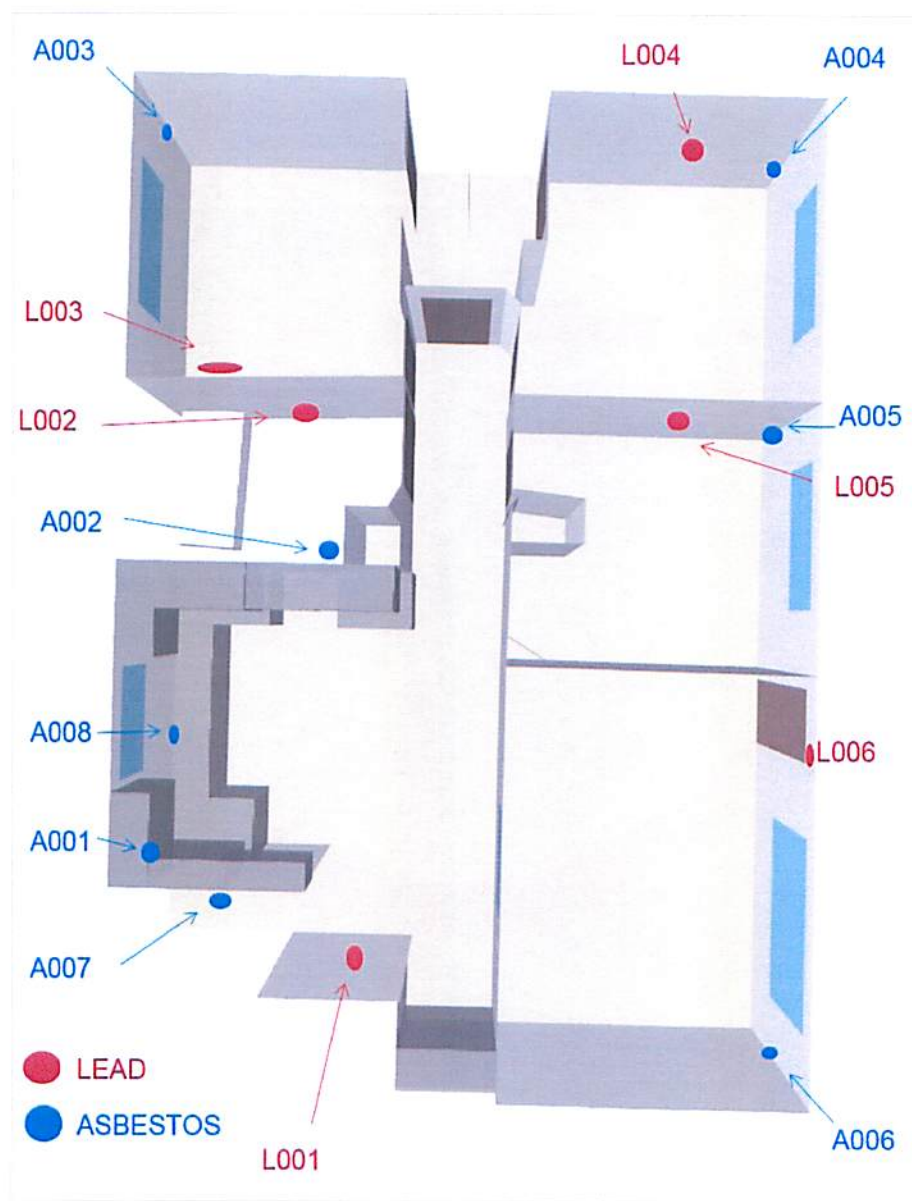


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11.0 APPENDIX I: DRAWINGS – 100C MACKENZIE RD. ST. FORT CHIPEWYAN

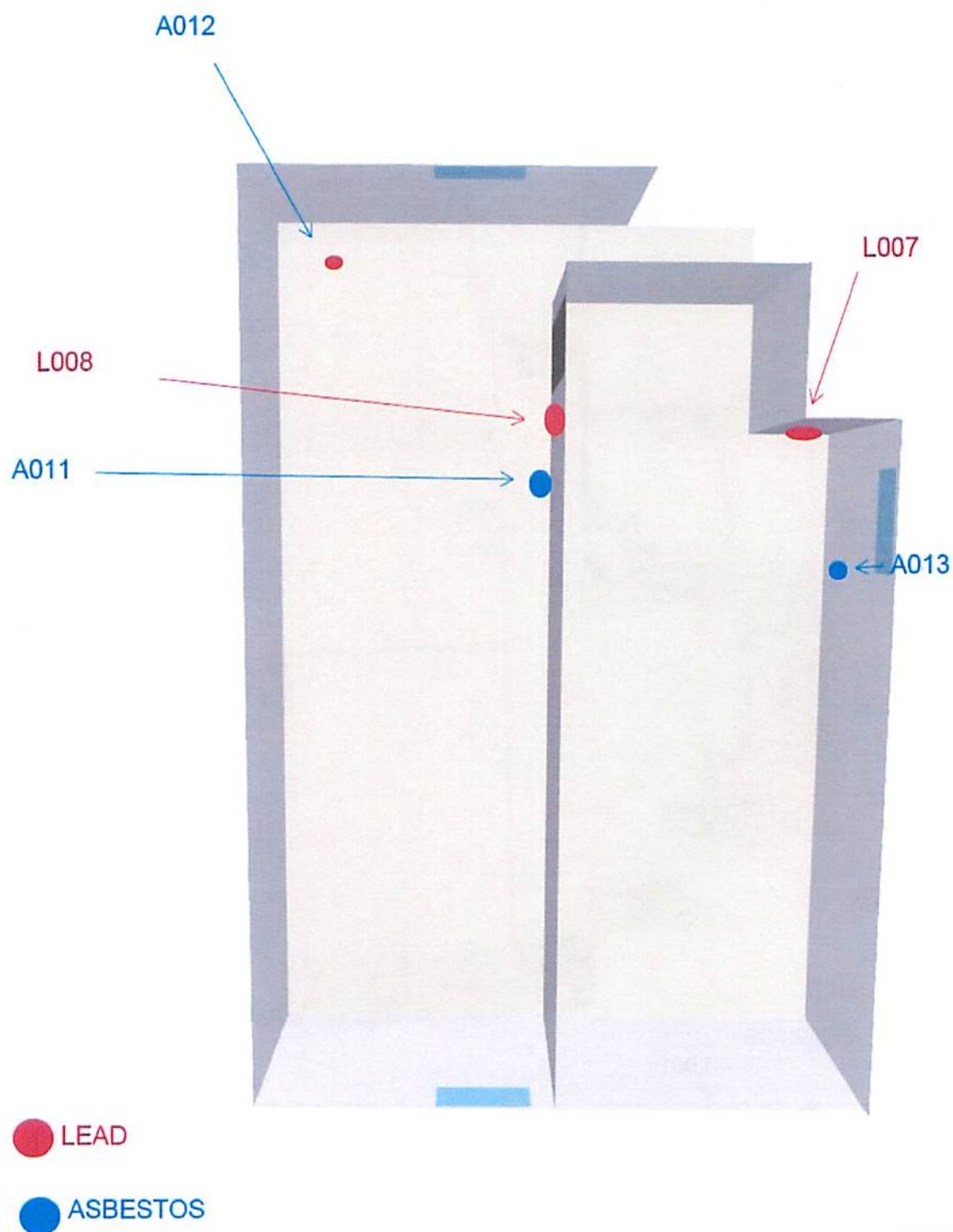




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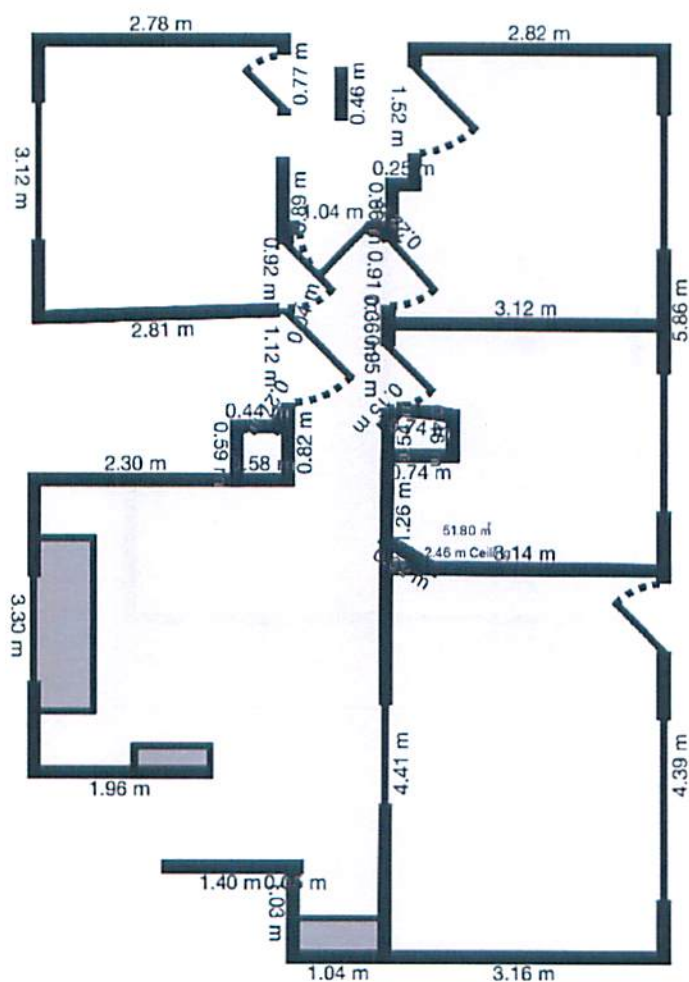
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LIDAR SCAN
MAIN LEVEL



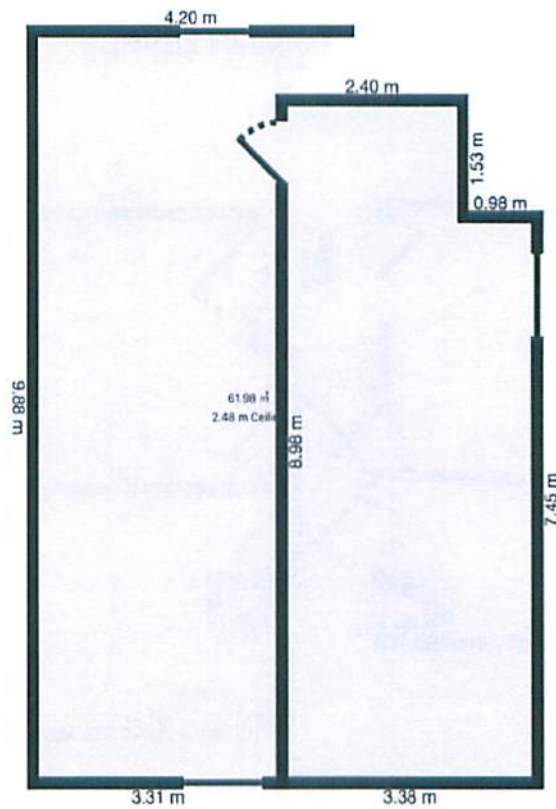


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LIDAR SCAN BASEMENT LEVEL





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12.0 APPENDIX II: ADDITIONAL PHOTOGRAPHS – 100C MACKENZIE RD. ST. FORT CHIPEWYAN



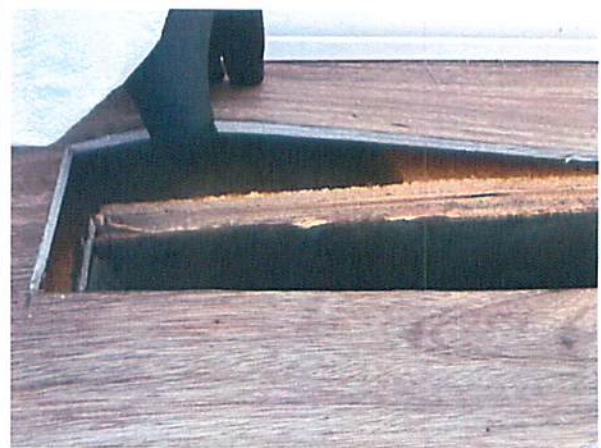
Photograph of underside of kitchen sink for possible asbestos coatings. None found. August 13, 2026



Photograph of lack of cleaning supplies or solvents/ miscellaneous chemicals. August 13, 2026



Photograph of inspection of the flooring in bathroom for stratified layers of potentially hidden ACM flooring. August 13, 2026



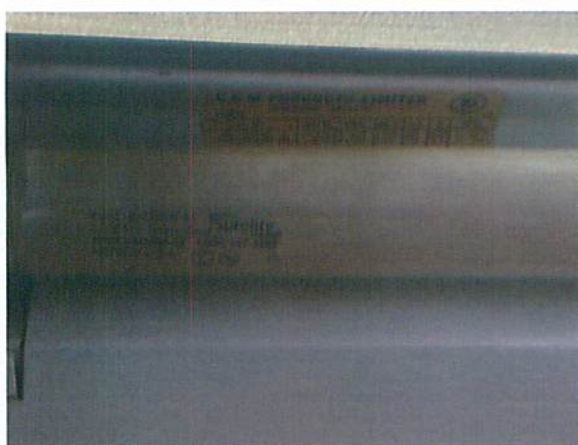
Photograph of inspection of the flooring in livingroom for stratified layers of potentially hidden ACM flooring. August 13, 2026



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Photograph of fluorescent light tubes found in basement and ballast stickers indicating installation of 1982. August 13, 2026



Photograph of unpainted section exposing true composition of foundation to be hempcrete blocks. Blocks were core assessed and found to be solid. August 13, 2026



Photograph of core assessment in hempcrete blocks. Block composition turns to clay when drilling. August 13, 2026



Photograph showing sections of unfinished drywall in basement behind wood panelling. August 13, 2026



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Photograph of solid wood interior doors. The doors were not observed to bear fire-rating labels or other markings indicative of a fire-rated assembly and were therefore not suspected of containing an asbestos-containing core. August 13, 2026



Photograph of the basement ceiling assembly showing gypsum wallboard and strapping installed over seams. Accessible wallboard seams were inspected and found to be unfinished, with no joint compound apparent along the inspected seams. Localized areas of patching were observed and were representatively sampled as part of the hazardous materials assessment to confirm asbestos content. August 13, 2026



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Photograph of visual inspection area of basement ceiling seams. August 13, 2026



Photograph of digital thermostat. August 13, 2026



Photograph of exterior vinyl siding and Cementous parging. June23, 2026



Photograph of Styrofoam insulation between sheathing and vinyl siding. Insulation section was removed to assess for possible ACM stucco exterior however only Tyvek paper on sheathing found. June23, 2026



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13.0 APPENDIX III: ASBESTOS ANALYTICAL CERTIFICATES – 100C MACKENZIE RD. ST. FORT CHIPEWYAN



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Customer ID: 55PUAR42
Customer PO:
Project ID:

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Phone: (403) 801-3969

Fax:

Received Date: 08/19/2026 10:45 AM

Analysis Date: 08/19/2026 - 08/20/2026

Collected Date:

Project: 100C MACKENZIE FORT CHIPEWYAN

Test Report: Asbestos Analysis of Bulk Materials via AHERA Method 40CFR 763 Subpart E Appendix E supplemented with EPA 600/R-93/116 using Polarized Light Microscopy

Sample	Description	Appearance	Non-Asbestos		Asbestos
			% Fibrous	% Non-Fibrous	% Type
A001	KITCHEN WALLS - JDWC	White Non-Fibrous Homogeneous		30% Perlite 70% Non-fibrous (Other)	None Detected
652612271-0001					
A002	BATH WALLS - JDWC	White Non-Fibrous Homogeneous		5% Mica 5% Perlite 90% Non-fibrous (Other)	None Detected
652612271-0002					
A003	BED 1 WALLS - JDWC	White Non-Fibrous Homogeneous		2% Mica 20% Perlite 78% Non-fibrous (Other)	None Detected
652612271-0003					
A004	BED 2 WALLS - JDWC	White Non-Fibrous Homogeneous		2% Mica 20% Perlite 78% Non-fibrous (Other)	None Detected
652612271-0004					
A005	BED 3 WALLS - JDWC	Beige Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
652612271-0005					
A006 - JDWC 1	LIVING WALLS	White Non-Fibrous Homogeneous		30% Perlite 70% Non-fibrous (Other)	None Detected
652612271-0006					
A006 - JDWC 2	LIVING WALLS	Beige Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
652612271-0006A					
A007 - JDWC	MAIN CEILING - JDWC / TEXT	Beige Non-Fibrous Homogeneous		98% Non-fibrous (Other)	2% Chrysotile
652612271-0007					
No texture in sample submitted - JDWC only.					
A008	KITCHEN CAULKING - CAULKING	White Non-Fibrous Homogeneous		100% Non-fibrous (Other)	None Detected
652612271-0008					
A009	EXT. SHINGLES - SHINGLES + TAR PAPER	Black Fibrous Homogeneous	15% Cellulose	85% Non-fibrous (Other)	None Detected
652612271-0009					
A010 - Parging 1	EXT. PARGING - CEMENTOUS PARGING	Gray Non-Fibrous Homogeneous		20% Quartz 80% Non-fibrous (Other)	None Detected
652612271-0010					
A010 - Parging 2	EXT. PARGING - CEMENTOUS PARGING	Beige Non-Fibrous Homogeneous		15% Quartz 85% Non-fibrous (Other)	None Detected
652612271-0010A					
A011	BASE, REC WALLS - JDWC	White Non-Fibrous Homogeneous		5% Mica 95% Non-fibrous (Other)	None Detected
652612271-0011					
A012	BASE, CEILING PATCHES - JDWC	White Non-Fibrous Homogeneous		5% Mica 95% Non-fibrous (Other)	None Detected
652612271-0012					
A013	HEMPCRETE BLOCKS - HEMPCRETE	Gray/Tan Fibrous Homogeneous	30% Cellulose	70% Non-fibrous (Other)	None Detected
652612271-0013					

Initial report from: 08/20/2026 12:07:47

ASB_PLM_0008_0002 - 2.31 Printed: 8/20/2026 10:07 AM

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<http://www.EMSL.com> / CalgaryLab@EMSL.com

EMSL Canada Order: 652612271

Customer ID: 55PUAR42

Customer PO:

Project ID:

Analyst(s)

Clarisa Jimenez (7)

Jodie Mercer (8)

Jefferson Salvador, Laboratory Manager
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volume and area, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and meet method specifications unless otherwise noted. The above analyses were performed in general compliance with Appendix E to Subpart E of 40 CFR (previously EPA 800/8-4-020 "In-situ Method") but augmented with procedures outlined in the 1995 ("final") version of the method. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the federal government. Non-halide organically bound materials present a problem matrix and therefore EMSL recommends gravimetric reduction prior to analysis. Unless requested by the client, leaking materials manufactured with multiple layers (i.e. linoleum, wallboard, etc.) are reported as a single sample. Estimation of uncertainty is available on request.

Samples analyzed by EMSL Canada Inc. Calgary, AB NVLAP Lab Code 500100-0

Initial report from: 05/20/2026 12:07:47



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14.0 APPENDIX IV: LEAD ANALYTICAL CERTIFICATES – 100C MACKENZIE RD. ST. FORT CHIPEWYAN



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EMSL Canada Or 652612270
CustomerID: 55PUAR42
CustomerPO:
ProjectID:

Attn: **Raya O'Rorke**
Pure Air Solutions
117 Singer Drive
Anzac, AB T0P 1J0

Phone: (403) 801-3969
Fax:
Received: 8/19/2026 10:45 AM
Collected:

Project: 100C MACKENZIE FORT CHIPEWYAN

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	Lab ID	Collected	Analyzed	Weight	Lead Concentration
L001	652612270-0001	8/19/2026		0.2553 g	<64 ppm
	Site: KITCHEN WHITE				
L002	652612270-0002	8/19/2026		0.2613 g	<64 ppm
	Site: BATHROOM WHITE				
L003	652612270-0003	8/19/2026		0.2532 g	<64 ppm
	Site: BED 1 WHITE				
L004	652612270-0004	8/19/2026		0.2561 g	<64 ppm
	Site: BED 2 WHITE				
L005	652612270-0005	8/19/2026		0.2547 g	1000 ppm
	Site: BED 3 WHITE				
L006	652612270-0006	8/19/2026		0.2543 g	<64 ppm
	Site: EXTERIOR WHITE TRIM				
L007	652612270-0007	8/19/2026		0.2623 g	970 ppm
	Site: BASEMENT FURNACE WHITE				
L008	652612270-0008	8/19/2026		0.2558 g	<64 ppm
	Site: BASEMENT REC ROOM WHITE				
L009	652612270-0009	8/19/2026		0.2628 g	4300 ppm
	Site: EXTERIOR TRIM BROWN				


Jefferson Salvador, Laboratory Manager
or other approved signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. *Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.0064% wt based on the minimum sample weight per our SOP. ** (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.
Samples analyzed by EMSL Canada Inc. Calgary, AB CALA Accreditation #A3942

Initial report from 08/20/2026 09:59:12

Test Report ChmSnglePmvnQC-7.32.3 Printed: 8/20/2026 9:59:12 AM

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15.0 APPENDIX V: ALBERTA INFRASTRUCTURE TECHNICAL BULLETIN - ASBESTOS MANAGEMENT.

Government of Alberta ■
Infrastructure

TECHNICAL BULLETIN

TECHNICAL SERVICES BRANCH

ISSUE No. 20B

REVISED, SEPTEMBER 2013

ASBESTOS CONTAINING MATERIALS FOUND IN BUILDINGS

CATEGORY	DESCRIPTION	ASBESTOS %	DATE OF MANUFACTURE	USE	FRIABILITY
CEMENT LIKE PRODUCTS	Millboard	40 – 50	1930 – 1995	Industrial type siding, heat shields, water proofing	Low
	Roof Tiles	20 – 30	1930 – 1985	Roof Finish	Low
	Cement Pipe	20 – 30	1935 – 1995	Subterranean Water Pipes	Low
	Siding and shingles	20 - 40	Until 1985	Domestic and Comercial Cladding	Low
	Mortars	1 - 10	Until 1985	Brick or concrete block mortar	Low
ROOFING	Shingles	1 – 5	1971 – 1985	Asphalt Roof Shingles	Low
	Roofing Felts	10 – 15	1910 – 1985	Built-Up Roofing	Low
	Slip Layers	70 – 80	Until 1985	Base layer for Built-Up Roofing	Low to Moderate
TEXTILES	Woven Cloth	90 – 100	1910 – 1985	Fire Blankets Stage/Welding Curtains Isolation Joints in Ductwork Heat Shields Fire Hoses Gland Packing	Low to Moderate
Other	Caulking	20 – 30	1930 – 1985	For Flowability in mastic	Low
	Coatings	5 – 15	1900 – 1985	Roof – Coatings and Air Barriers	Low
	Brake/Clutch Linings	30 – 40	1920 – 1995	Elevator Motors Mechanical Plant	Low
	Filters	50 – 70	1930 – 1985	Cooling Towers Humidifiers	Low to Moderate
	Gaskets	20 – 60	1900 – 1985	Mechanical Equipment	Low to Moderate
	Vinyl Wallpaper & Textured Paints	5 – 10	Until 1985	Decorative Wallcovering	Low
	Fire Doors	50 – 70	Until 1985	Fire Rating	Low to High but enclosed within wood or steel door.

Continued.



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Alberta Infrastructure Technical Bulletin - Asbestos Management; Issue No. 2B – Revised, September 2013

ASBESTOS CONTAINING MATERIALS FOUND IN BUILDINGS

CATEGORY	DESCRIPTION	ASBESTOS %	DATE OF MANUFACTURE	USE	FRIABILITY
CEILINGS, WALL, & TEXTURES	Drywall Taping Compounds	1 - 10	1950 - 1985	Gypsum wall or ceiling board edge treatment	Low to Moderate
	Sprayed on texture or troweled on texture	1 - 95	1935 - 1985	Fire resistance acoustic treatment thermal insulation condensation control	Moderate to High
	Ceiling Tiles	1 - 10	1960 - 1985	acoustical suspended ceiling finish	Moderate to High
	Plaster brown or finish coat, stucco, drywall joint cement	2 - 10	1930 - 1985	Wall - Ceiling finish rough or smooth	Low
FLOORING	Vinyl Asbestos (V.A.) Tile	30 - 50	1950 - 1985	Hard wearing floor covering	Low
	Resilient Sheet	30 - 50	1950 - 1985	Backing layer to vinyl facing	Moderate to High
	Concrete Levelling Compounds	1 - 10	1950 - 1985	Concrete floor leveller and fin- ished flooring	Moderate to High
	Asphalt/Asbestos Tile	20 - 30	1920 - 1985	Roof or exterior walls finish	Low
MECHANICAL	Rigid block insulation	40 - 60	1926 - 1985	Boiler or pipework insulation	Moderate to High
	Paper like insulation	50 - 70	1910 - 1985	Pipework insulation	Moderate
	Insulating Cement	10 - 80	1949 - 1985	Pipework insulation at elbows and fittings	Moderate to High
	Corrugated paper sheets	70 - 80	1925 - 1985	Duct and pipe insulation	Moderate
	Insulating Cement Parging	10 - 80	1910 - 1985	Duct parging or pipe insulation applied over glass fiber	Moderate to High
ELECTRICAL	Wire Insulation	90 - 100	1910 - 1985	High heat applications	Moderate
	Insulator Board	40 - 60	1930 - 1985	Electrical insulation	Low
	Reflective Layers	70 - 90	Until 1985	Heat resistant incandescent light reflector	Low



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16.0 APPENDIX VI: WORKS CITED

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