NEWFOUNDLAND AND LABRADOR HYDRO

PRE-DEMOLITION HBMA, FORMER CONSTRUCTION CAMP SITES, TL228, NL

MARCH 15, 2023

CONFIDENTIAL

PRE-DEMOLITION HBMA, FORMER CONSTRUCTION CAMP SITES, TL228, NL

NEWFOUNDLAND AND LABRADOR HYDRO

DRAFT
CONFIDENTIAL

PROJECT NO.: TE22104005.2000
DATE: MARCH 15, 2023

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EXECUTIVE SUMMARY

WSP E&I Canada Limited (WSP), was retained by Newfoundland and Labrador Hydro (Hydro) to conduct a Pre-Demolition Hazardous Building Materials Assessment (HBMA) of four (4) former construction camp sites (Camp 50, Camp 98, Rainy Lake Camp and Glover Island Camp) located along Transmission Line 228 (TL228) which spans from Corner Brook to Buchans, NL, herein referred to as the "sites". This assessment was required to provide Hydro with an evaluation of known and potential hazardous building materials in the cabins and other related infrastructure at the sites that are slated for demolition, herein referred to as the "site buildings".

TL228 is a 230 kilovolt (kV) transmission line which connects the Massey Drive Terminal Station and the Buchans Terminal Station. As the former construction camps have not been in use within the past several years, Hydro plans to decommission these sites.

The objectives of the Pre-Demolition HBMA were to determine if hazardous building materials are present in the site buildings and to identify the condition and approximate quantity of these materials. The scope of work for the Pre-Demolition HBMA was completed in accordance with WSP's workplan entitled, "*Professional Services for Four (4) Construction Camp Sites, Transmission Line 228, Corner Brook to Buchans, Newfoundland and Labrador and One (1) Hydroelectric Facility Site, Venams Bight, Newfoundland and Labrador – Workplan for Phase I/II Environmental Site Assessment and Pre-Demolition Hazardous Building Materials Assessment*". It is important to note that the Phase I/II Environmental Site Assessment is provided under separate report cover.

This HBMA report is structured in the following manner:

Table 1.1 Report Structure

SECTION	DESCRIPTION	APPENDICES
1.0	Introduction	A1 to B1
2.0	Findings – Camp 50 Site	A2 to D2
3.0	Findings – Camp 98 Site	A3 to D3
4.0	Findings – Rainy Lake Camp Site	A4 to D4
5.0	Findings – Glover Island Camp Site	A5 to D5
6.0	Closure and Limitations	A6 to B6
7.0	References	

For reporting purposes, the findings, conclusions and recommendations for future actions, where warranted, for each site has been provided in a separate section within the report. It is also important to note that the report has been structured such that each section, excluding the references section, includes a separate table of contents.

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APPENDICES

1 INTRODUCTION

WSP E&I Canada Limited (WSP), was retained by Newfoundland and Labrador Hydro (Hydro) to conduct a Pre-Demolition Hazardous Building Materials Assessment (HBMA) of four (4) former construction camp sites (Camp 50, Camp 98, Rainy Lake Camp and Glover Island Camp) located along Transmission Line 228 (TL228) which spans from Corner Brook to Buchans, NL, herein referred to as the "sites". This assessment was required to provide Hydro with an evaluation of known and potential hazardous building materials in the cabins and other related infrastructure at the sites that are slated for demolition, herein referred to as the "site buildings".

1.1 BACKGROUND

TL228 is a 230 kilovolt (kV) transmission line which connects the Massey Drive Terminal Station and the Buchans Terminal Station. As the former construction camps have not been in use within the past several years, Hydro plans to decommission these sites.

1.2 SITE DESCRIPTION

The four former construction camp sites are situated between the City of Corner Brook and the Town of Buchans in Central Newfoundland (refer to Figure 1.1, Appendix A1). The camp sites are currently accessible by either all terrain vehicle (ATV) or helicopter.

1.2.1 CAMP 50

Camp 50 site is comprised of an accommodations cabin and an outhouse (refer to Photos 1 to 4, Appendix B1). The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 71.5 m^2 (7.3 m x 9.8 m). The floor plan of the cabin consists of a kitchen/dining area, a sleeping area and a washroom area. The outhouse is a one-storey, rectangular structure with a footprint area of approximately 3.2 m^2 (1.8 m x 1.8 m).

Camp 50 is used to provide accommodations to Hydro workers when maintaining power lines outside of town. The accommodations cabin was built in 1985. The building is a wood frame structure on a concrete block foundation with a brick exterior and an asphalt shingle peaked roof. The interior ceiling, floor and walls are constructed from plywood. There is an attic space in which a wind turbine and end gable vents provide ventilation.

1.2.2 CAMP 98

Camp 98 site is comprised of an accommodations cabin and an outhouse (refer to Photos 5 to 8, Appendix B1). The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 71.5 m^2 (7.3 m x 9.8 m). The floor plan of the cabin consists of a kitchen/dining area, a sleeping area and a washroom area. The outhouse is a one-storey, rectangular structure with a footprint area of approximately 3.8 m^2 (1.8 m x 2.1 m).

Camp 98 is used to provide accommodations to Hydro workers when maintaining power lines outside of town. The accommodations cabin was built in 1985. The building is a wood frame structure on a concrete block foundation with a brick exterior and an asphalt shingle peaked roof. The interior ceiling, floor and walls are constructed from plywood. There is an attic space in which a wind turbine and end gable vents provide ventilation.

1.2.3 RAINY LAKE CAMP

Rainy Lake Camp site is comprised of an accommodations cabin and an outhouse (refer to Photos 9 to 12, Appendix B1). The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 71.5 m^2 (7.3 m x 9.8 m). The floor plan of the cabin consists of a kitchen/dining area, a sleeping

area and a washroom area. The outhouse is a one-storey, rectangular structure with a footprint area of approximately 2.7 m^2 (1.5 m x 1.8 m).

Rainy Lake Camp is used to provide accommodations to Hydro workers when maintaining power lines outside of town. The building is a wood frame structure on a concrete block foundation with a brick exterior and an asphalt shingle peaked roof. The interior ceiling, floor and walls are constructed from plywood. There is an attic space in which a wind turbine and end gable vents provide ventilation.

1.2.4 GLOVER ISLAND CAMP

Glover Island Camp site is comprised of an accommodations cabin and an outhouse (refer to Photos 13 to 16, Appendix B1). The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 53.9 m^2 (11.0 m x 4.9 m). The floor plan of the cabin consists of a kitchen/dining area, a sleeping area and a washroom area. The outhouse is a one-storey, rectangular structure with a footprint area of approximately 3.8 m^2 (1.8 m x 2.1 m).

Glover Island Camp is used to provide accommodations to Hydro workers when maintaining power lines outside of town. The accommodations cabin was built in 1985. The building is a wood frame structure on a treated wood foundation with a pressed wood siding exterior and an asphalt shingle peaked roof. The interior ceiling, floor and walls are constructed from plywood. There is an attic space in which end gable vents provide ventilation. The attic space consists of a plywood peaked roof with fibreglass insulation.

1.3 REPORT STRUCTURE

This HBMA report is structured in the following manner:

- Section 1.0: Introduction
- Section 2.0: Findings – Camp 50
- Section 3.0: Findings – Camp 98
- Section 4.0: Findings – Rainy Lake Camp
- Section 5.0: Findings – Glover Island Camp
- Section 6.0: Closure and Limitations
- Section 7.0: References

For reporting purposes, the findings, conclusions and recommendations for future actions, where warranted, for each site has been provided in a separate section within the report. It is also important to note that the report has been structured such that each section, excluding the references section, includes a separate table of contents.

1.4 OBJECTIVES

The objectives of the Pre-Demolition HBMA were to determine if hazardous building materials are present in the site buildings and to identify the condition and approximate quantity of these materials.

1.5 SCOPE OF WORK

The scope of work for the HBMA, as per WSP's workplan[1] included:

- Preparing a site-specific Health and Safety Plan (HASP) and submitting the plan to Hydro.

[1] Wood (now WSP). May 31, 2022. Professional Services for Five (5) Construction Camp Sites, Transmission Line 204, Grand Falls-Windsor to Bay D'Espoir, Newfoundland and Labrador – Workplan for Phase I/II Environmental Site Assessment and Pre-Demolition Hazardous Building Materials Assessment. Prepared for Newfoundland and Labrador Hydro, Environmental Services.

- Conducting a site reconnaissance to visually inspect potential hazardous building materials within the site buildings, including:
  - Asbestos-containing materials (ACMs);
  - Lead-based paint (LBP) and other lead-containing materials or equipment;
  - Mercury-based paint (MBP) and other mercury-containing materials or equipment;
  - Polychlorinated biphenyl (PCB)-based paint and other PCB-containing materials;
  - Treated timber materials;
  - Urea formaldehyde foam insulation (UFFI);
  - Suspected visible mould growth (SVG); and
  - Other potentially hazardous building materials and equipment.
- Inspecting all accessible thermostats to assess the presence or absence of mercury-containing switches.
- Documenting the number and type of fluorescent light fixtures identified during the assessment.
- Documenting the location of any fire-rated doors identified during the assessment.
- Documenting the location of ozone depleting substance (ODS)-containing appliances and equipment identified during the assessment.
- Performing cavity inspections to attempt to identify any hidden and potentially hazardous building materials that may be concealed by walls or ceiling systems.
- Sampling and laboratory testing of suspected ACMs to confirm the presence or absence of asbestos fibres.
- Sampling and laboratory testing of paint to determine the concentrations of lead and mercury, and if warranted based on the concentrations of lead and mercury, laboratory testing of paint for lead and mercury leachate using the Toxicity Characteristic Leaching Procedure (TCLP) to determine proper disposal options for painted materials.
- Sampling and laboratory testing of paint and other suspected PCB-containing materials to determine the concentrations of PCBs.
- Sampling and laboratory testing of suspected mould impacted materials to confirm the presence or absence of mould.
- Depending on the type of chemical treatment applied, sampling and laboratory testing of treated timber materials to determine the concentrations of “pressure treated” inorganic preservatives, creosote or chlorophenolic formulations using the TCLP to determine proper disposal options for treated timber materials.
- Preparing a written report documenting the methodologies and findings of the Pre-Demolition HBMA, with recommendations for handling and disposal of any identified hazardous materials.

The findings of the Pre-Demolition HBMA were based on the interpretation of data from the areas investigated and analytical results pertaining to specific samples collected and tested. It is possible that materials exist that could not be reasonably identified within the scope of the work or which were not apparent or accessible during the site visit.

Sampling of potential PCB-containing electrical cables or equipment was not included in the scope of work for the Pre-Demolition HBMA.

1.6 ENVIRONMENTAL REGULATORY FRAMEWORK

The federal and provincial governments in Canada have prepared and/or adopted numerous acts, regulations, guidelines, policies, and procedures related to the protection of the environment and the investigation of sites containing hazardous building materials. Regulations and guidelines that were used to evaluate analytical results for samples of suspected hazardous materials collected during this assessment are discussed in the following sections.

1.6.1 ASBESTOS-CONTAINING MATERIALS

There are over 3,000 ACMs that are commercially available, which can be divided into two broad categories: friable and non-friable. Friable ACMs are defined as materials that can be crumbled, pulverized and reduced to powder when dry using hand pressure. Typical friable materials include acoustical or decorative spray applications, fireproofing and thermal insulation. Non-friable ACMs are hard or manufactured products such as floor tiles, fire blankets, pre-formed manufactured cementitious insulation and wallboards, pipes, and siding, wherein the asbestos fibres are bound to the substrate. Although a product may be considered non-friable when new, the product may release fine dust when disturbed (e.g., deterioration, removal, renovation) and the free dust is considered friable.

Asbestos products are subject to various prohibitions and restrictions under Provincial and Federal legislation. While ACMs are still manufactured globally and were available for limited use in Canada prior to 2019, the building products available since the late 1980s to early 1990s tend to be low risk, non-friable materials. Buildings constructed between 1986 and 1990 are unlikely to contain high risk ACMs such as mechanical or spray applied insulation and newer buildings (post-1992) are less likely to contain non-friable ACMs.

In October 2018, new and more stringent Federal regulations were finalized in Canada which prohibit the import, sale and use of asbestos, as well as the manufacture, import, sale and use of products containing asbestos, with a limited number of exclusions. These new regulations, entitled "*Prohibition of Asbestos and Asbestos Products Regulations*", officially came into force on December 30, 2018 and repeal the former *Asbestos Products Regulations*. However, these regulations do not apply to asbestos that is integrated into a structure or infrastructure if the integration occurred before the day on which these regulations came into force.

The legislative requirements for safe handling of ACMs in workplaces in the Province of NL are currently provided in the *NL Asbestos Abatement Regulations (Reg. 111/98)*, under the *NL Occupational Health and Safety Act*. In accordance with these Provincial regulations, all buildings constructed during the period when asbestos was readily used in construction must have a written assessment and management plan (where applicable) for potential ACMs. The *NL Asbestos Abatement Regulations* define materials containing greater than 1% asbestos by dry weight as ACMs. It is also important to consider, in the event that asbestos is detected in a material at a level less than 1%, while it is not considered a regulated ACM under these Provincial regulations, the material would be subject to control measures under the *NL Occupational Health and Safety Regulations*.

In addition to the *NL Asbestos Abatement Regulations (Reg. 111/98)*, there are Provincial guidance documents available for low risk (Type I) and moderate risk (Type II) asbestos abatement. These guidelines were issued by the NL Occupational Health and Safety (OHS) Division in July 2010 and are entitled, "*Low Risk Asbestos Abatement Projects*" and "*Moderate Risk Asbestos Abatement Projects*". High risk asbestos abatement activities or those outside the scope of these guidelines are still required to follow the *NL Asbestos Abatement Regulations (Reg. 111/98)*.

The NL OHS Division may also require additional controls than those included in these guidance documents. All asbestos abatement projects require the completion of a risk assessment by a competent individual and the work procedures must be modified accordingly.

1.6.2 LEAD IN PAINT

Lead compounds have been used in paint as pigment and durability additives since the early 1800s. The *Surface Coating Material Regulations*, under the *Canada Consumer Product Safety Act*, state that a surface coating material must not contain more than 90 mg/kg total lead when a dried sample is tested in accordance with a method that conforms to good laboratory practices. These regulations define a surface coating material as a paint or other similar material, with or without pigment, that dries to a solid film after it is applied to a surface but does not include material that becomes a part of the substrate. It is important to consider, in the event that lead is detected in paint or other surface coating materials at a concentration less than 90 mg/kg, while it is not considered a LBP in accordance with the *Surface Coating Material Regulations*, the paint would be subject to control measures under the *NL Occupational Health and Safety Regulations*.

Prior to the *Canada Consumer Product Safety Act*, lead in surface coating materials was regulated under the *Federal Hazardous Products Act*. In 1976, the *Liquid Coating Materials Regulations*, under the *Hazardous Products Act*, restricted the lead content of paints and other liquid coatings on furniture, household products, children's products, and exterior and interior surfaces of any building frequented by children to 0.5% by weight (5,000 mg/kg). In order to determine disposal options, the former *Hazardous Products Act* criterion of 5,000 mg/kg lead in paint is typically used as a Provincial disposal guideline to determine whether or not paint samples should be submitted for leachate analysis. Paint samples that contain less than 5,000 mg/kg are not likely to be leachable, and therefore, may be disposed of at an approved landfill facility, pending landfill and Provincial regulatory approval. Paint samples with lead concentrations in excess of 5,000 mg/kg should be subjected to leachability testing.

The NL Department of Environment (currently the NL Department of Environment and Climate Change (ECC)), 2003 Guidance Document for Leachable Toxic Waste, Testing and Disposal (GD-PPD-26.1) guideline of 5.00 mg/L lead should be used to assess the results of the leachability testing to determine disposal options for any
lead-containing paint to be removed during renovation or demolition activities. Any paints that require disposal and exceed the lead leachate guideline are considered to be leachable toxic waste and must be disposed of at an approved hazardous waste disposal site and not a landfill disposal site.

1.6.3 MERCURY IN PAINT

Mercury compounds have been used in paint as anti-microbial additives up until the 1990s. The *Surface Coating Material Regulations*, under the *Canada Consumer Product Safety Act*, state that a surface coating material must not contain more than 10 mg/kg total mercury when a dried sample is tested in accordance with a method that conforms to good laboratory practices. It is important to consider, in the event that mercury is detected in paint or other surface coating materials at a concentration less than 10 mg/kg, while it is not considered a MBP under the *Surface Coating Material Regulations*, the paint would be subject to control measures under the *NL Occupational Health and Safety Regulations*.

In order to determine disposal options, the Canadian Council of Ministers of the Environment (CCME) Canadian Soil Quality Guidelines (CSQG) criterion of 50 mg/kg for mercury in soil at an industrial site is typically used as a Provincial disposal guideline to determine whether or not paint samples should be submitted for leachate analysis. Paint samples with a mercury concentration of less than 50 mg/kg are not likely to be leachable, and therefore, may be disposed of at an approved landfill facility, pending landfill and Provincial regulatory approval. Paint samples with a mercury concentration in excess of 50 mg/kg should be subjected to leachability testing.

The NL Department of Environment (currently the NL ECC), 2003 Guidance Document for Leachable Toxic Waste, Testing and Disposal (GD-PPD-26.1) guideline of 0.10 mg/L mercury should be used to assess the results of the leachability testing to determine disposal options for any mercury-containing paint to be removed during renovation or demolition activities. Any paints that require disposal and exceed the mercury leachate guideline are considered to be leachable toxic waste and must be disposed of at an approved hazardous waste disposal site and not a landfill disposal site.

1.6.4 PCBS IN PAINT AND OTHER MATERIALS

PCBs were used in paint as plasticizers and corrosion resistance additives from the 1950s to the 1970s.

Analytical results for PCBs in paint and/or other materials (i.e., caulking, sealants, tar, etc.) were compared to the CCME CSQG criterion of 33 mg/kg for PCBs in soil at an industrial site. The Federal HPA does not include any assessment criteria for PCBs in paint.

In order to determine disposal options for paint and/or other suspected PCB-containing materials, concentrations of PCBs in building materials should be compared to the criterion of 50 mg/kg for PCB solid provided in the NL Department of ECC, 2003 Guidance Document for Leachable Toxic Waste, Testing and Disposal (GD-PPD-26.1) and the Federal Transportation of Dangerous Goods (TDG) Regulations. Any building materials

(i.e., paints, caulking, etc.) that require disposal and exceed the PCB solid criterion must be disposed of at an approved hazardous waste disposal site and not a landfill disposal site.

1.6.5 MOULD IMPACTED MATERIALS

There are currently no regulations in Canada specifically covering exposure to mould, and there are no occupational exposure limits that define acceptable levels of mould exposure without adverse health effects. However, Section 4 of the *NL Occupational Health and Safety Act* states that an employer shall ensure, where it is reasonably practicable, the health, safety and welfare of his or her workers, and Section 42 of the *NL Occupational Health and Safety Regulations* states that an employer shall monitor the use or presence of substances at the workplace that may be hazardous to the health and safety of workers. This includes exposure to moulds and other biological matter. Since there are no clear regulatory limits for determining an acceptable exposure limit to moulds, there is no numerical guideline for determining safe or unsafe concentrations of surface mould growth. Therefore, interpretation of sampling results is subjective.

Although there are currently no regulations for mould remediation practices, there are mould assessment and remediation guidelines available in Canada. The Canadian Construction Association (CCA)[2] and the Environmental Abatement Council of Canada (EACC)[3] have developed guidelines that are intended to provide safe work practices for workers involved in mould abatement/remediation. In recent years remediation strategies have been based (in part) on the quantity of mould observed, assuming that potential exposure increases with an increase in overall mould concentrations. The risk criteria used during this assessment was based on the 2015 EACC guidelines.

1.6.6 TREATED WOOD CHEMICALS

The chemicals that are used to protect and preserve wood products from insect attack and fungal decay may pose risks to human health and the environment. Depending on the wood treatment used, treated wood materials may be considered hazardous waste upon disposal.

In order to determine disposal options for treated wood materials, depending on the type of chemical treatment applied, treated wood samples should be subjected to leachability testing. The NL Department of ECC (formerly NL Department of Environment), 2015 Guidance Document for Treated Wood Waste Disposal (GD-PPD-075.1) landfill disposal standards should be used to assess the results of leachability testing to determine disposal options for any treated wood waste (TWW) to be removed during any disturbance, demolition or renovation activities. Any TWW that requires disposal and exceeds the applicable landfill disposal standards is considered to be leachable toxic waste and must be disposed of at an approved hazardous waste disposal site and not a landfill disposal site.

1.7 METHODOLOGY

The following sections present the methodology of the document review, visual inspection (intrusive and non-intrusive), bulk material and paint sampling, laboratory analytical program, and QA/QC program for the HBMA.

The site inspection and sampling for the Pre-Demolition HBMA were conducted by WSP personnel on July 6 and 8, 2022. WSP was accompanied by a representative of Hydro (Mr. Shane Jackson) during the site visits.

1.7.1 VISUAL INSPECTION

A site reconnaissance was conducted to visually inspect potential hazardous building materials, including potential ACMs, LBPs, MBPs, and other potential hazardous building materials and equipment. The inspection

[2] CCA. 2018. Mould Guidelines for the Canadian Construction Industry.
[3] EACC. 2015. EACC Mould Abatement Guidelines, Edition 3.

also included searching for visible signs or evidence of water staining/damage, excess moisture/infiltration and mould growth, and identifying potential sources of ODS. Thermostats (if present) were visually inspected by removing the casings and checking for the presence of mercury-containing switches. In addition, a survey of fire-rated doors was completed, which included searching for fire-rating labels located on the hinge side or top edge of doors and on the hinge side of door frames.

Intrusive cavity inspections were performed (where possible) at pre-selected locations throughout the site buildings by opening ceiling access hatches (attics), and where necessary, by cutting holes in the plywood surfaces of walls/ceilings/floors to create openings for visual inspection and to allow access to sample any suspected hazardous building materials, if identified.

1.7.2 BULK MATERIAL SAMPLING AND LABORATORY ANALYTICAL PROGRAM

Building materials suspected of containing asbestos were sampled by removing a 2.0 cm by 2.0 cm piece of material (where possible) and placing the sampled materials into Glad® or Ziploc® plastic bags.

Building materials suspected of being impacted by mould growth were sampled by placing a section of clear plastic tape on the surface of the material and placing the tape lift sampled materials into Glad® or Ziploc® plastic bags.

Building materials suspected of containing PCBs (e.g., caulking) were sampled by cutting and removing a 2.0 cm long piece of material (where possible) and placing the sampled materials into Glad® or Ziploc® plastic bags.

Building materials suspected of containing wood preservatives were sampled by cutting off sections of the material (where possible) using a reciprocating saw and placing the sampled materials into Glad® or Ziploc® plastic bags.

Bulk material samples suspected of containing asbestos were submitted to the EMSL Canada Inc. (EMSL) laboratory located in Mississauga, Ontario (ON) for the analysis of asbestos using Polarized Light Microscopy (PLM) with dispersion staining. The analysis was conducted in accordance with the United States Environmental Protection Agency (USEPA) Method EPA 600/R-93/116 (Method for the Determination of Asbestos in Bulk Building Materials). EMSL is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and the American Industrial Hygiene Association (AIHA) for bulk asbestos fibre analysis by PLM.

Bulk material samples suspected of being impacted by mould growth were submitted to the EMSL laboratory located in Mississauga, ON for direct microscopic examination (DME) to identify the type of mould to the genus level. EMSL is an AIHA Environmental Microbiology Proficiency Analytical Testing (EMPAT) program participant.

Bulk material samples suspected of containing PCBs were submitted to the AGAT Laboratories (AGAT) branch located in St. John's, NL for the analysis of PCBs. The analysis of PCBs was conducted in accordance with EPA Method 8082A (SW-846) using gas chromatography (GC).

Bulk material samples suspected of containing wood preservatives were submitted to the AGAT laboratory branch located in St. John's, NL for the analysis of TCLP analyses of arsenic, chromium, benzo(a)pyrene and pentachlorophenol.

1.7.3 PAINT SAMPLING AND LABORATORY ANALYTICAL PROGRAM

Paint samples were collected from painted surfaces by cutting out a section of painted wood or by scraping areas of flaking paint from hard surfaces using clean knives and scrapers. Samples were collected down to bare substrate (e.g., drywall, concrete and wood) and in most instances included the substrate (e.g., wood and drywall paper). A minimum of 15 grams (where possible) of paint was obtained from each sampling location and the samples were placed in Glad® or Ziploc® plastic bags.

Paint samples were submitted to the AGAT Laboratories (AGAT) laboratory located in Dartmouth, Nova Scotia (NS) for the analysis of lead and mercury. The lead analysis was conducted in accordance with the EPA 6020A/3050B (SW-846), method analysis for metals using inductively coupled plasma – mass spectrometry (ICP-MS) and acid digestion. The mercury analysis was conducted in accordance with EPA methods 245.5 and SM3112B using cold vapour atomic absorption spectroscopy (CV/AAS). AGAT is accredited under the Standards Council of Canada (SCC) to perform analysis of lead and mercury in paint.

Paint samples were also submitted to the AGAT branch located in St. John's, NL for the analysis of lead, mercury, and PCBs. The analyses of lead, mercury and was conducted in accordance with EPA 6020A using inductively coupled plasma – mass spectrometry (ICP-MS). The analysis of PCBs was conducted in accordance with EPA Method 8082A (SW-846) using GC. AGAT is accredited under the Standards Council of Canada (SCC) to perform analysis of lead, mercury and PCBs in paint samples.

1.8 QUALITY ASSURANCE / QUALITY CONTROL PROGRAM

Laboratory blanks, duplicates and quality control (QC) standard samples were analyzed to assess the reliability of the analyses. In order to minimize cross contamination during sampling, a field quality assurance / quality control (QA/QC) program was implemented, which included the following measures:

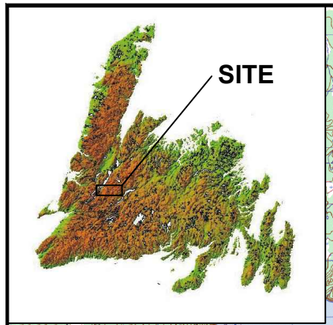
- Latex or nitrile gloves were worn during sampling (i.e., new pair of gloves used for each sample).
- All sampling equipment was thoroughly cleaned prior to sampling to ensure that samples were unaffected by cross-contamination from previous samples.
- Blind field duplicates of bulk materials and paint were collected to assess the reliability of the analyses.
- Each sample was photographed, given a unique sample ID and logged onto a chain of custody form before shipment to the laboratory.

The laboratories utilized have extensive QA/QC programs in place to ensure that reliable results are consistently obtained. Some of the specific laboratory QA/QC measures include:

- Chain of Custody and sample integrity inspection.
- Strict documentation control and files.
- Trained personnel prepare and analyze samples according to Standard Operating Procedures (SOPs).
- All analytical methods are based on accepted procedures and are fully validated prior to use.
- Precision is monitored by performing replicate analysis of samples.
- Accuracy is verified by analyzing spiked samples and reference materials.
- Instrument calibration integrity is ensured by analyzing calibration check standards within each run sequence.
- Extensive use is made of reference material for routine procedure evaluation.
- Highest available purity analytical standards.
- Predefined analytical sequences ensure all results are traceable to calibration and QC data.
- Hard copy reports displaying all of the required data are generated for each instrument.
- Analytical results are determined only from instrument responses that fall within the calibration range.
- Acceptable QC performance must be demonstrated prior to data authorization.
- On-going method and instrument performance records are maintained for all analysis.
- A full-time QA Scientist evaluates the QA program on an on-going basis.

APPENDIX

A FIGURES



GLOVER ISLAND CAMP

RAINY LAKE CAMP

CAMP 98

CAMP 50

NOTES:

THIS DRAWING BASED ON 1:50,000 TOPOGRAPHIC MAPS 12 A/13, 12 A/14 AND 12 A/15.

THIS DRAWING IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION IN SUPPORT OF THIS REPORT.

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
3. THIS FIGURE IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION OF THE STUDY AREA IN SUPPORT OF THIS REPORT.
4. ALL LOCATIONS, DIMENSIONS, AND ORIENTATIONS ARE APPROXIMATE.
5. THIS FIGURE SHOULD NOT BE USED FOR PURPOSES OTHER THAN THOSE OUTLINED ABOVE.
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Client: newfoundland labrador hydro, a nalcor energy company

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wood.

Drawn by: T. Rideout

Approved by: L. Wiseman

Scale: NTS

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 228, NL and Mini-Hydroelectric Facility Site, Venams Bight, NL

Title: Site Location Plan

Date: September 2022

Project No. TE22104005

Rev. No. 0

Figure No. 1.1

APPENDIX

B PHOTOGRAPHIC RECORD

Photo 1: View of Camp 50 Site.

Photo 2: View of Camp 50 Site.

Photo 3: View of accomodations cabin at Camp 50.

Photo 4: View of the outhouse at Camp 50.

Photo 5: View of Camp 98 Site.

Photo 6: View of Camp 98 Site.

Photo 7: View of accomodations cabin at Camp 98.

Photo 8: View of the outhouse at Camp 98.

Photo 9: View of Rainy Lake Camp Site.

Photo 10: View of Rainy Lake Camp Site.

Photo 11: View of accomodations cabin at Rainy Lake Camp.

Photo 12: View of the outhouse at Rainy Lake Camp.

Photo 13: View of Glover Island Camp Site.

Photo 14: View of Glover Island Camp Site.

Photo 15: View of accomodations cabin at Glover Island Camp.

Photo 16: View of the outhouse at Glover Island Camp.

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APPENDICES

2 CAMP 50 SITE

Camp 50 site is located along Transmission Line 228 (TL228), a 230 kilovolt (kV) transmission line which connects the Massey Drive Terminal Station and the Buchans Terminal Station (refer to Figure 2.1, Appendix A2). Camp 50 site is comprised of an accommodations cabin and an outhouse.

2.1 BUILDING DESCRIPTION

The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 71.5 m2 (7.3 m x 9.8 m) (refer to Photos 1 to 4, Appendix B2). The floor plan of the cabin consists of a kitchen/dining area, a sleeping area and a washroom area (refer to Figure 2.2, Appendix A2). The foundation of the accommodations cabin consists of concrete blocks. The structure of the accommodations cabin consists of wood framing. The exterior walls on the accommodations cabin are finished with brick and the roof is finished with asphalt shingles. The window and exterior door openings on the accommodations cabin are barricaded with metal covers for security purposes. Interior wall and ceiling finishes in the accommodations cabin consists of painted plywood. Floors/floor finishes consist of painted plywood. Fluorescent and incandescent lighting was observed on the interior of the cabin. The accommodations cabin is not currently heated (formerly heated by oil stove and wood stove).

The outhouse is a one-storey, rectangular structure with a footprint area of approximately 3.2 m2 (1.8 m x 1.8 m) (refer to Figure 2.2, Appendix A2 and Photo 11, Appendix B2). The structure of the outhouse consists of wood framing. The foundation of the outhouse consists of a concrete pad. The exterior walls on the outhouse are finished with painted plywood and the roof is finished with asphalt shingles. Interior wall and ceiling finishes in the outhouse consist of painted and unpainted plywood. Floor finishes consist of unpainted plywood. The outhouse does not contain any lighting or heating.

A description of the accommodations cabin is outlined in Table 2.1 and a description of the outhouse is outlined in Table 2.2. Photographs of the site buildings are provided in Appendix B2.

Table 2.1 Site Building Description – Accommodations Cabin

BUILDING NAME	ACCOMMODATIONS CABIN	PHOTO NO. (APPENDIX B2)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	1 to 4
Crawl Space (Yes/No)	Yes	10
Attic (Yes/No)	Yes	9
Type of Structure	Wood Frame	10
Type of Foundation	Cinder Blocks	17
Exterior	Brick	1 to 4
Window/Door Frames	Painted Metal and Wood	1 to 6
Exterior Doors	Painted Metal	2
Roofing Materials	Asphalt Shingles	3
Interior Walls Finishes	Painted Plywood	5 to 8
Interior Ceiling Finishes	Painted Plywood	5 to 7
Floor Finishes	Painted Plywood	5 to 8

BUILDING NAME	ACCOMMODATIONS CABIN	PHOTO NO. (APPENDIX B2)
Interior Doors	NA	-
Interior Lighting	Fluorescent and Incandescent	5
Exterior Lighting	Incandescent	2
Heating	Not Heated (Former Oil Stove and Wood Stove)	5
Building Name	Accommodations Cabin	Photo No. (Appendix B2)

Table 2.2 Site Building Description – Outhouse

BUILDING NAME	OUTHOUSE	PHOTO NO. (APPENDIX B2)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	11
Crawl Space (Yes/No)	No	-
Attic (Yes/No)	No	-
Type of Structure	Wood Frame	11
Type of Foundation	Concrete	22
Exterior	Unpainted Plywood	11
Window/Door Frames	Painted Wood	11
Exterior Doors	Painted Plywood	11
Roofing Materials	Asphalt Shingles	21
Interior Walls Finishes	Painted and Unpainted Plywood	11
Interior Ceiling Finishes	Unpainted Plywood	11
Floor Finishes	Unpainted Plywood	11
Interior Doors	NA	-
Interior Lighting	NA	-
Exterior Lighting	NA	-
Heating	NA	-

2.2 FINDINGS

The findings documented in this section are based on observations made by WSP personnel at the time of the site visit on July 19, 2022 and the results of laboratory analyses of samples collected from Camp 50. During the Pre-Demolition HBMA site visit, WSP personnel were accompanied by a representative of Hydro (Mr. Shane Jackson). Copies of room-by-room inspection sheets for the accommodations cabin and outhouse are provided in Appendix D2. Photos of the samples collected from the accommodations cabin and outhouse during the site visits are provided in Appendix B2.

2.2.1 ASBESTOS-CONTAINING MATERIALS (ACMS)

There are over 3,000 ACMs that are commercially available, which can be divided into two broad categories: friable and non-friable. ACMs were discontinued from use in Canada in the late 1970s/early 1980s, although non-friable asbestos is still found in many more recent buildings.

During the Pre-Demolition HBMA site visit, nine (9) building material samples (C50 AS-1 to C50 AS-9), plus one (1) blind field duplicate (C50 AS-DUP1), were collected from the accommodations cabin and two (2) building material samples (C50 AS-10 and C50 AS-11) were collected from the outhouse (refer to Photos 12 to 22, Appendix B2) and analyzed for asbestos content. Bulk sample descriptions and asbestos analytical results are summarized in Table C2.1, Appendix C2. Sample locations and analytical results are graphically illustrated in Figure 2.2, Appendix A2.

FRIABLE MATERIALS

Friable ACMs are defined as materials that can be crumbled, pulverized and reduced to powder when dry using hand pressure. Typical friable materials include acoustical or decorative spray applications, fireproofing and thermal insulation.

SPRAY-APPLIED FIREPROOFING, INSULATION AND TEXTURE FINISHES

There were no spray-applied fireproofing, insulation or texture finishes observed in the accommodations cabin or outhouse during the Pre-Demolition HBMA site visit; therefore, no samples of these materials were collected for analysis.

BUILDING AND THERMAL SYSTEM INSULATION

During the Pre-Demolition HBMA site visit, fiberglass batt insulation was observed in the attic and walls of the accommodations cabin (refer to Photos 9 and 12, Appendix B2). Thermal system insulation was not observed at Camp 50.

One (1) sample of tar paper backing on the building insulation (C50 AS-1) was collected from a wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 12, Appendix B2). Asbestos was not detected in the tar paper sample.

One (1) sample of foil wrap was collected from a wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 13, Appendix B2). Asbestos was not detected in the foil wrap sample.

NON-FRIABLE AND POTENTIALLY FRIABLE MATERIALS

Non-friable ACMs are hard or manufactured products such as floor tiles, fire blankets, pre-formed manufactured cementitious insulation and wallboards, pipes, and siding, wherein the asbestos fibres are bound to the substrate. Note that although a product may be considered non-friable when new, the product may release fine dust when disturbed (e.g., deterioration, removal, renovations) and the free dust is considered friable.

CEILING TILE

There were no ceiling tiles observed at Camp 50 during the Pre-Demolition HBMA site visit; therefore, no samples of ceiling tile were collected for analysis.

DRYWALL JOINT COMPOUND

There was no drywall joint compound observed at Camp 50 during the Pre-Demolition HBMA site visit; therefore, no samples of drywall joint compound were collected for analysis.

VINYL FLOORING PRODUCTS AND MASTICS

There was no vinyl flooring or products observed at Camp 50 during the Pre-Demolition HBMA site visit; therefore, no samples of vinyl flooring or products were collected for analysis.

BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

There were no baseboard, carpet or stair tread adhesives/mastics observed at Camp 50 during the Pre-Demolition HBMA site visit; therefore, no samples of these types of adhesives/mastics were collected for analysis.

ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, one (1) sample of asphalt shingle with tar paper and another asphalt shingle (C50 AS-7) and one (1) sample of asphalt shingle with tar paper (C50 AS-8) were collected from the roof of the accommodations cabin and one (1) sample of asphalt shingle with tar paper (C50 AS-10) was collected from the roof of the outhouse and analyzed for asbestos content (refer to Photos 18, 19 and 21, Appendix B2). Asbestos was detected in C50 AS-10-Shingle at a concentration of 0.30% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), this material is not considered asbestos-containing materials. Asbestos was not detected in the other roofing material samples.

It is important to note that, due to height constraints, no samples of building materials around roof penetrations (e.g., caulking or sealants around vents or chimneys) or roof seams were collected for analysis (refer to Photo 3, Appendix B2).

CAULKING/SEALANT

One (1) sample of caulking (C50 AS-9), plus one (1) blind field duplicate (C50 AS-DUP1; duplicate of C50 AS-9), was collected from a wall inside of the accommodations cabin and analyzed for asbestos content (refer to Photo 20, Appendix B2). Asbestos was not detected in the caulking samples.

MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

During the Pre-Demolition HBMA site visit, two (2) samples of brick and mortar (C50 AS-4 and C50 AS-5) were collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photos 15 and 16, Appendix B2). Asbestos was not detected in the brick and mortar samples.

During the Pre-Demolition HBMA site visit, one (1) sample of cinder block and mortar (C50 AS-6) was collected from the concrete foundation of the accommodations cabin and one (1) sample of concrete

(C50 AS-11) was collected from the concrete pad of the outhouse and analyzed for asbestos content (refer to Photos 17 and 22, Appendix B2). Asbestos was not detected in the cinder block/mortar and concrete samples.

FIRE-RATED DOORS

Fire-rated doors and door frames were not observed during the Pre-Demolition HBMA site visit.

OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, one (1) sample of particle board with tar paper backing (C50 AS-3) was collected from a wall in the accommodations cabin and analyzed for asbestos content (refer to Photo 14, Appendix B2). Asbestos was not detected in the particle board/tar paper sample.

During the Pre-Demolition HBMA site visit, two (2) samples of countertop mastics (C75 AS-3 and

C75 AS-4) were collected from the accommodations cabin and analyzed for asbestos content (refer to Photos 15 and 16, Appendix B2). Asbestos was not detected in the countertop mastic samples.

Other potential ACMs were observed (or suspected to be present) and were not sampled due to the nature of the materials and/or hazards associated with sampling these materials. These materials included, but are not limited to, electrical and mechanical components and insulators such as wiring and gaskets, caulking or sealants around or along roof seams, vent pipes, chimneys, electrical conduits or other penetrations, and undercoatings on sinks.

Other possible hidden and inaccessible ACMs have the potential to be present within the accommodations cabin or outhouse but were not identified during the Pre-Demolition HBMA site visit. These possible ACMs could include concrete leveling compound (existing concrete foundation), possible fireproofing materials in the wall or ceiling cavities, piping/pipe joint sealants/gaskets and packing associated with cast iron pipe joints, fire rated structures or building materials, vapour barriers in walls, interior heat resistant components or gaskets inside appliances or prefabricated chimneys, and underground infrastructure or piping.

2.2.2 PAINT ADDITIVES

Lead compounds have been used in paint as pigment and durability additives since the early 1800s. Mercury compounds have been used in paint as anti-microbial additives up until the 1990s. PCBs have been used in paint as plasticizers and corrosion resistance additives from the 1950s to the 1970s.

During the Pre-Demolition HBMA site visit, three (3) samples (C50 PS-1 to C50 P-S3), plus one (1) blind field duplicate (C50 PS-DUP1), were collected from painted surfaces of the accommodations cabin and two (2) samples (C50 PS-4 and C50 PS-5) were collected from painted surfaces of the outhouse and analyzed for lead, mercury and PCB content (refer to Photos 21, 23 and 24, Appendix B2). Paint sample descriptions and lead, mercury and PCBs analytical results are summarized in Tables C2.2 to C2.4, Appendix C2. Sample locations and analytical results are graphically illustrated in Figure 2.2, Appendix A2.

LEAD IN PAINT

The concentrations of lead in the three (3) samples (C50 PS-1 to C50 PS-3), plus one (1) blind field duplicate (C50 PS-DUP1; duplicate of C50 PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (C50 PS-4 and C50 PS-5) collected from the painted surfaces of the outhouse ranged from 26 mg/kg to 175 mg/kg (refer to Table C2.2, Appendix C2). One (1) paint sample (C50 PS-2) contained lead at a concentration above the Federal HPA criterion of 90 mg/kg and below the former Federal HPA criterion of 5,000 mg/kg. The concentrations of lead in the other five (5) samples were below the Federal HPA criterion (90 mg/kg).

MERCURY IN PAINT

The concentrations of mercury in the three (3) samples (C50 PS-1 to C50 PS-3), plus one (1) blind field duplicate (C50 PS-DUP1; duplicate of C50 PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (C50 PS-4 and C50 PS-5) collected from the painted surfaces of the outhouse ranged from non-detect (<0.03 mg/kg) to 2.01 mg/kg, and therefore were below the Federal HPA criterion (10 mg/kg) (refer to Table C2.3, Appendix C2).

PCBS IN PAINT

The concentrations of PCBs in the three (3) samples (C50 PS-1 to C50 PS-3), plus one (1) blind field duplicate (C50 PS-DUP1; duplicate of C50 PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (C50 PS-4 and C50 PS-5) collected from the painted surfaces of the outhouse were non-detect (<0.5 mg/kg), and therefore were below the applicable criterion for PCB solid (50 mg/kg) (refer to Table C2.4, Appendix C2).

2.2.3 UREA FORMALDEHYDE FOAM INSULATION (UFFI)

Visual indicators suggesting the potential presence of UFFI were not observed at Camp 50. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photos 9 and 12, Appendix B2). Since the original date of construction of Camp 50 was 1985, it is not likely that UFFI is present in the cabin.

2.2.4 SUSPECTED VISIBLE MOULD GROWTH (SVG)

WSP inspected the interior areas of the accommodations cabin and outhouse for visual or olfactory evidence of suspected mould. SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin during the Pre-Demolition HBMA site visit. One (1) sample (C50 M-1) of the suspect mould material was collected from the surfaces of a wall for laboratory analysis to confirm the presence/absence of mould (refer to Figure 2.2, Appendix A2).

The results of mould analysis determined that tape lift sample C50 M-1 contained Cladosporium mould (refer to Table C2.5, Appendix C2).

2.2.5 MERCURY-CONTAINING THERMOSTATS

Thermostats were not identified inside the accommodations cabin at Camp 50 during the Pre-Demolition HBMA site visit.

2.2.6 PCB-CONTAINING LIGHT BALLASTS

Two fluorescent light fixtures were observed on the interior of the accommodations cabin during the Pre-Demolition HBMA site visit (refer to Photos 5 and 25, Appendix B2). The labels on the fluorescent light fixtures indicated that the ballasts were manufactured by Sola Canada. According to the August 1991 Environment Canada document entitled, Identification of Lamp Ballasts Containing PCBs, Report EPS 2/CC/2 (revised), any ballast manufactured by Sola Canada in 1980 or later does not contain PCBs. Therefore, since the accommodations cabin was constructed in 1985, it is assumed that the fluorescent light ballasts do not contain PCBs.

2.2.7 POTENTIAL SOURCES OF ODS AND HALOCARBONS

During the Pre-Demolition HBMA, no potential sources of ODS were identified within the accommodations cabin.

Fire extinguishers were not observed at Camp 50 during the Pre-Demolition HBMA site visit.

2.2.8 OTHER POTENTIALLY HAZARDOUS BUILDING MATERIALS OR SUBSTANCES

Other potentially hazardous building materials or substances identified during this assessment are presented in the following sections.

LEAD-CONTAINING MATERIALS AND EQUIPMENT

Lead is typically associated with plumbing solder and older pipe materials (e.g., cast iron pipe joints), as well as products such as radiation protective shielding and lead-acid batteries. Lead can also be present in steel and iron primer, industrial electrical jacketing, roof flashing and tank linings.

No suspected lead-containing materials and equipment were identified during the Pre-Demolition HBMA site visit.

MERCURY-CONTAINING MATERIALS AND EQUIPMENT

Fluorescent light fixtures were observed on the interior of the accommodations cabin during the Pre-Demolition HBMA site visit. The light tubes and bulbs in fluorescent light fixtures often contain limited quantities of mercury in a powder or vapour form.

PCB-CONTAINING MATERIALS AND EQUIPMENT

According to the USEPA, PCBs may be present in caulking used in windows, door frames, masonry columns and other building materials in buildings built or renovated between 1950 and 1979. In addition, and as mentioned previously, insulating fluids and cooling oils in electrical equipment (i.e., transformers, fluorescent light ballasts, capacitors, etc.) often contained PCBs until around 1980.

No suspected PCB-containing materials and equipment were identified during the Pre-Demolition HBMA site visit.

TREATED WOOD CHEMICALS

The chemicals that are used to protect and preserve wood products from insect attack and fungal decay may pose risks to human health and the environment. Depending on the wood treatment used, treated wood may be considered a hazardous waste upon disposal. The NL Department of Environment and Conservation (currently the NL ECC), 2015 Guidance Document for Treated Wood Waste Disposal

(GD-PPD-075.1) provides landfill disposal standards for “pressure treated” inorganic preservatives (i.e., arsenic and chromium) and creosote (i.e., total cresol and benzo(a)pyrene) and chlorophenolic (i.e., pentachlorophenol) formulations used to preserve wood. These landfill disposal standards for treated wood waste (TWW) are used to assess the results of leachability testing to determine disposal options for treated wood to be removed during renovation or demolition activities.

Treated wood was not identified at Camp 50 during the Pre-Demolition HBMA site visit.

SILICA

According to the CPWR – The Center for Construction Research and Training, many common construction materials contain silica including, asphalt, brick, cement, concrete, drywall, grout, mortar, stone, sand and tile. The dust created by cutting, grinding, drilling or otherwise disturbing these materials can contain crystalline silica particles.

Based on the Pre-Demolition HBMA site visit, silica is expected to be present in the concrete, mortar and asphalt shingles used in the construction of the accommodations cabin and outhouse. Silica may also be present in the brick and mortar used in other construction materials of the accommodations cabin.

RADIOACTIVE MATERIALS

A smoke detector was observed in the accommodations cabin during the Pre-Demolition HBMA site visit (refer to Photo 26, Appendix B2). Smoke detectors may contain very small amounts of radioactive material (i.e., Americium 241). Smoke alarms that use radioactive material incorporated in an ionization chamber are called "ion chamber smoke alarms".

2.3 CONCLUSIONS AND RECOMMENDATIONS

Based on observations made and information gathered during the Pre-Demolition HBMA, the following conclusions and recommendations are made with respect to the potential and actual presence of hazardous building materials at Camp 50.

2.3.1 ACMS

Results of the asbestos sampling and analytical program revealed that building materials sampled at the time of the Pre-Demolition HBMA were non-detect (<0.1%) for asbestos, with the exception of shingles from the roof of the outhouse which contained 0.30% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), the roofing materials (shingles) are not considered asbestos-containing materials.

Other potential ACMs were observed (or suspected to be present) and were not sampled due to the nature of the materials and/or hazards associated with sampling these materials. These materials included, but are not limited to:

— Electrical and mechanical components and insulators such as wiring and gaskets.

- Caulking or sealants around or along roof seams, vent pipes, chimneys, electrical conduits or other penetrations.
- Undercoatings on sinks.

Other possible hidden and inaccessible ACMs have the potential to be present within the buildings at Camp 50 but were not identified during the Pre-Demolition HBMA site visit. These possible ACMs could include concrete leveling compound (existing concrete foundation), possible fireproofing materials in the wall or ceiling cavities, piping/pipe joint sealants/gaskets and packing associated with cast iron pipe joints, fire rated structures or building materials, vapour barriers in walls, interior heat resistant components or gaskets inside appliances or prefabricated chimneys, and underground infrastructure or piping.

If other potential ACMs that were not sampled as part of this assessment are encountered in the future, these materials should be treated as ACMs or samples should be collected and tested to verify asbestos content. This should be done as soon as these materials are encountered and before these materials are disturbed. This includes materials that are currently concealed by walls and ceiling systems.

In accordance with the NL Asbestos Abatement Regulations (Reg. 111/98), which provide the legislative requirements for safe handling of ACMs in workplaces in the Province of NL, the following is recommended:

- Safe work procedures shall be established.
- All buildings constructed during the period when asbestos was readily used in construction (generally prior to the early 1980s) or any buildings that are suspected as having asbestos must have a written assessment and management plan (where applicable) for potential ACMs.
- Materials suspected of containing asbestos are required to be handled as ACMs, until analysis by a competent laboratory determines whether or not it does contain asbestos.
- Prior to general demolition, all ACMs must be safely removed from the building and disposed of in accordance with appropriate environmental guidelines by an asbestos abatement contractor registered with the Occupational Health and Safety (OHS) Division of Service NL.
- Most work involving ACMs (i.e., disturbance, removal and encapsulation) must be conducted by a contractor registered with the OHS Division of Service NL.
- ACMs in good condition should be inspected on an annual basis.
- ACMs in poor condition should be removed from the building and transported off-site for proper disposal.
- Workers should don adequate respiratory protection and personal protective equipment (PPE) when working with ACMs.

Prior to the removal and/or abatement of any identified ACMs (or any other hazardous building materials), an abatement plan including technical specifications should be designed, prepared and supervised by a qualified professional and should be undertaken by qualified trades, in accordance with applicable standards. Activities involving the disturbance and/or removal of ACMs should be carried out in a manner that ensures asbestos fiber concentrations do not exceed the applicable American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV). ACMs can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.

2.3.2 LEAD, MERCURY AND PCBS IN PAINT

Results of the paint sampling and analytical program revealed the following:

- Lead and Leachable Lead in Paint
  - The concentrations of lead in the three (3) samples (C50 PS-1 to C50 PS-3), plus one (1) blind field duplicate (C50 PS-DUP1; duplicate of C50 PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (C50 PS-4 and C50 PS-5) collected from the painted surfaces of the outhouse ranged from 26 mg/kg to 175 mg/kg.
  - One (1) paint sample (C50 PS-2) contained lead at a concentration above the Federal HPA criterion of 90 mg/kg and below the former Federal HPA criterion of 5,000 mg/kg; therefore, this paint is considered to be a LBP but is not likely to be leachable for lead.

    - The concentrations of lead in the other five (5) paint samples were below the Federal HPA criterion (90 mg/kg); therefore, these paints are not considered to be LBPs and are not likely to be leachable for lead.
- Mercury and Leachable Mercury in Paint
    - The concentrations of mercury in the three (3) samples (C50 PS-1 to C50 PS-3), plus one (1) blind field duplicate (C50 PS-DUP1; duplicate of C50 PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (C50 PS-4 and C50 PS-5) collected from the painted surfaces of the outhouse ranged from non-detect (<0.03 mg/kg) to 2.01 mg/kg, and therefore were below the Federal HPA criterion (10 mg/kg). These paints are not considered to be MBPs and are not likely to be leachable for mercury.
- PCBs in Paint
    - PCBs were not detected (<0.5 mg/kg) in the three (3) samples (C50 PS-1 to C50 PS-3), plus one (1) blind field duplicate (C50 PS-DUP1; duplicate of C50 PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (C50 PS-4 and C50 PS-5) collected from the painted surfaces of the outhouse, and therefore, were below the applicable criterion for PCB solid (50 mg/kg).

Based on the paint sample analytical results, the paint samples collected from accommodations cabin and outhouse are not likely to be leachable for lead or mercury, and do not contain PCBs. Should disposal be required (e.g., renovation or demolition activities), the paints analyzed for lead, mercury and PCB content may be disposed of at an approved landfill facility, pending landfill and Provincial regulatory approval.

There are potential adverse human health impacts associated with disturbing (e.g., scraping, sanding, burning, etc.) lead-containing paint finishes, due to the potential for dust, mist or fumes to be released and inhaled or ingested by workers. As a precautionary measure, WSP recommends handling these paint finishes, as follows:

- In areas of minor peeling or flaking, the paint should be removed using wet scraping techniques.
- In areas of extensive peeling and flaking, the paint should be removed and more extensive particulate control measures may be required.
- In areas where lead-containing paint finishes are present and in poor condition, an experienced contractor should be utilized for renovating, decommissioning or demolition activities.
- Prior to renovation, dismantling or demolition activities, all areas of extensive peeling and flaking of lead-containing paint finishes and paint debris/dust should be removed and/or remediated to ensure that building occupants/workers are protected from associated dust/particulate.
- Procedures should be implemented to ensure that workers and anyone present in and around areas being renovated, dismantled or demolished are protected. The contractor should also ensure that dust generation and migration is minimized.
- Precautions should be taken to prevent/reduce exposure to paint dust during any disturbance of lead-containing paint finishes, such as wetting the surface of the materials to prevent dust emissions, donning respiratory protection, and cleaning tools and clothing prior to exiting work areas.
- Where possible, lead-containing paint finishes should be removed from metal surfaces prior to welding or cutting these materials.

If potential lead, mercury or PCB containing paint finishes that were not sampled during this assessment are encountered in future, prior to any disturbance or removal, samples should be obtained and tested to verify concentrations of lead, mercury and PCBs. This includes materials that are currently concealed by walls and ceiling systems.

Any disturbance or removal of lead, mercury or PCB-containing paint finishes that may generate dust or respirable aerosols must conform to the Federal and Provincial OHS Regulations. All work should be carried out by individuals wearing proper PPE. The type of respiratory protection and control measures to be implemented during the removal of these types of paint finishes should be determined by a qualified person and based on the risk level of a particular work activity (i.e., scraping, sanding, abrasive blasting, etc.). Activities involving the disturbance and/or removal of lead, mercury or PCB-containing paint finishes should be carried out in a manner that ensures paint dust concentrations do not exceed the applicable ACGIH TLVs.

2.3.3 MOULD

SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin. One (1) suspected mould sample (C50 M-1) was collected from the surfaces of a wall for laboratory analysis. The sample confirmed the presence of Cladosporium mould.

During demolition, precautions should be taken to prevent/reduce exposure to mould spores during any disturbance/demolition of mould impacted materials, such as donning appropriate respiratory protection, and cleaning tools and clothing prior to exiting work areas.

2.3.4 POTENTIAL MERCURY-CONTAINING MATERIALS/EQUIPMENT

Four (4) mercury-containing fluorescent light tubes were observed in the accommodations cabins.

Should disposal be required, mercury-containing equipment should be removed intact and returned to the manufacturer for recycling or disposed of at an approved hazardous waste disposal facility. The disturbance, control or disposal of mercury-containing materials/equipment should be carried out in accordance with applicable criteria/regulations. The presence/absence of mercury in these materials should be confirmed through a contractor or consultant prior to disturbance or disposal of these materials. Typically, these materials are sent to a recycling or hazardous waste disposal facility and not a landfill.

2.3.5 SILICA CONTAINING MATERIALS

Silica is expected to be present in the concrete, mortar and asphalt shingles used in the construction of the accommodations cabin and outhouse. Silica may also be present in the brick and mortar used in the construction of the accommodations cabin. Precautions should be taken to prevent/reduce exposure to silica dust during any disturbance/ demolition of silica-containing products, such as wetting the surface of the materials to prevent dust emissions, donning respiratory protection, and cleaning tools and clothing prior to exiting work areas. Activities involving the disturbance and/or demolition of silica-containing materials should be carried out in a manner that ensures silica dust concentrations do not exceed the applicable ACGIH TLV.

2.3.6 POTENTIAL RADIOACTIVE MATERIALS

A smoke detector observed may contain very small amounts of radioactive material (i.e., Americium 241). Smoke alarms that use radioactive material incorporated in an ionization chamber are called "ion chamber smoke alarms". The smoke detector should be removed intact, stored in a properly labeled container and transported, as per TDG regulations, to a licensed disposal facility.

2.3.7 SUMMARY OF FINDINGS

Hazardous building materials identified at Camp 50 during this Pre-Demolition HBMA and disposal options, if required, are summarized in Table 2.3. Conclusions and recommendations made with respect to the potential and actual presence of hazardous building materials within the accommodations cabin and outhouse are provided in Section 2.3 and should be reviewed in conjunction with Table 2.3.

Table 2.3 Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
ACMs	NL Asbestos Abatement Regulations (Reg. 111/98)	None identified. Note that other possible hidden and inaccessible ACMs have the potential to be present within the accommodations cabin and outhouse but were not identified during the Pre-Demolition HBMA site visit.	ACMs cannot be disposed of at a Construction & Demolition Site; however, these materials can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility. The transportation and disposal of asbestos should be conducted in accordance with the NL Asbestos Abatement Regulations (Reg. 111/98) and with Standard Operating Procedures (SOPs) for disposal of ACMs at the landfill.
LBPs	Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Surface Coating Materials Regulations (SOR/2016-193)	LBP (grey) on plywood floor in accommodations cabin.	Paints that were analyzed for lead and contained <5,000 mg/kg lead, may be disposed of at a Regional Solid Waste Disposal Facility (landfill), provided permission is obtained from the landfill.
Potential UFFI	Federal HPA (R.S.1985, c. H-3)	None Identified.	UFFI is permitted to be bagged and transported to an approved WDS and disposed in the special waste area of the site.

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Mould	Mould Guidelines for the Canadian Construction Industry, Canadian Construction Industry (CCI), 2018; Mould Abatement Guidelines, Environmental Abatement Council of Canada (EACC), 2015	Mould growth present on interior of accommodations cabin.	All mould impacted materials may be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.
Potential ODS	Federal Halocarbon Regulations (SOR/2003-289)	None identified.	Materials containing ODS should be received by a contractor or facility that has the proper approvals to remove, handle and/or dispose of ODS. The remaining materials can be disposed of at a recycling facility, provided permission is obtained from the facility.
Potential Lead-Containing Materials/ Equipment	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301)	None identified.	Lead-containing materials and equipment can be disposed of at a metal recycling or hazardous waste disposal facility, in accordance with applicable regulations. The transportation and disposal of hazardous lead-containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Potential Mercury-Containing Materials/ Equipment	Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Products Containing Mercury Regulations (SOR/2014-254)	Four (4) mercury-containing fluorescent light tubes are present inside accommodations cabin.	Mercury-containing materials and equipment can be disposed of at a recycling or hazardous waste disposal facility, in accordance with applicable regulations. The transportation and disposal of hazardous mercury-containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.
Potential PCB-Containing Materials/ Equipment	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Federal TDG Act (1992, c. 34) Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301) PCB Regulations (SOR/2008-273) PCB Waste Export Regulations (SOR/97-109) Regulations Amending the PCB Regulations (SOR/2010-57)	None identified.	Any PCB-containing materials and equipment should be handled, decontaminated, transported and disposed of as per current Federal and Provincial acts and regulations. Any PCB-containing materials and equipment requiring removal from the building should be transported and disposed of by a registered hazardous waste transporter in accordance with applicable regulations. The transportation and disposal of PCB containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Silica-Containing Materials	NL OHS Act (RSNL1990 Chapter O-3) NL OHS Regulations (5/12)	Concrete, cinder block and mortar, brick and mortar, and asphalt shingles.	These materials can be disposed of at a Regional Solid Waste Disposal Facility (landfill).
Potential Radioactive Materials	Federal TDG Act (1992, c. 34)	One (1) suspected smoke detector.	Smoke detectors that contain low level radioactive materials must be transported, as per Federal TDG Regulations, to a licensed disposal facility.

APPENDIX

A2 FIGURES

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
3. THIS FIGURE IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION OF THE STUDY AREA IN SUPPORT OF THIS REPORT.
4. ALL LOCATIONS, DIMENSIONS, AND ORIENTATIONS ARE APPROXIMATE.
5. THIS FIGURE SHOULD NOT BE USED FOR PURPOSES OTHER THAN THOSE OUTLINED ABOVE.
6. THIS FIGURE CONTAINS INTELLECTUAL PROPERTY OF NEWFOUNDLAND LABRADOR HYDRO AND MAY NOT BE REPRODUCED OR COPIED WITHOUT THEIR WRITTEN CONSENT.

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wood.

Drawn by: T. Rideout

Approved by: L. Wiseman

Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 228, NL and Mini-Hydroelectric Facility Site, Venams Bight, NL

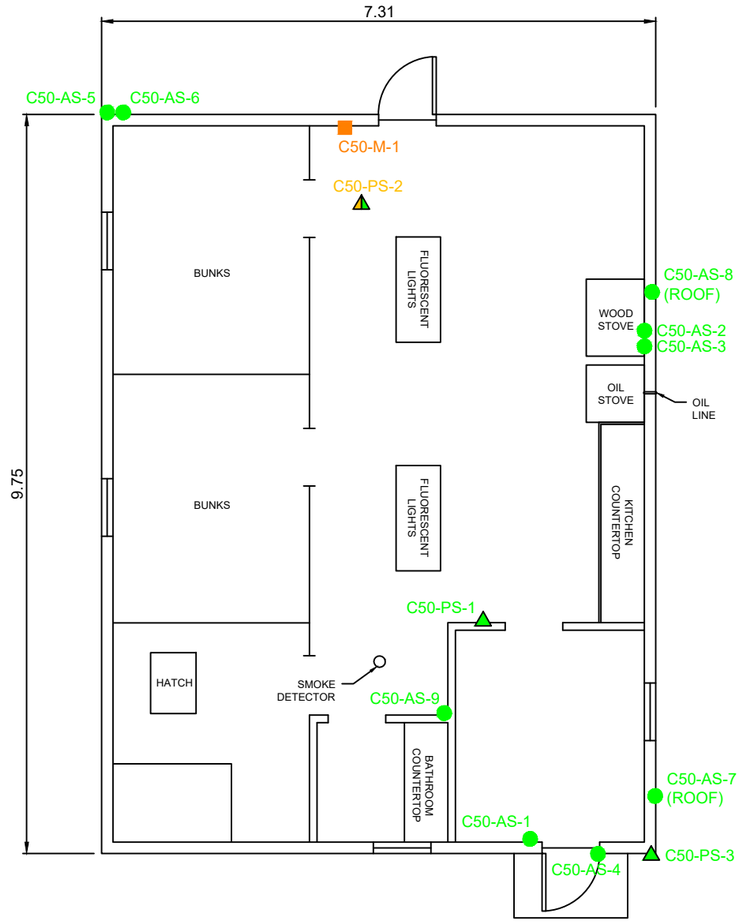
Title: Site Location Plan - Camp 50

Date: September 2022

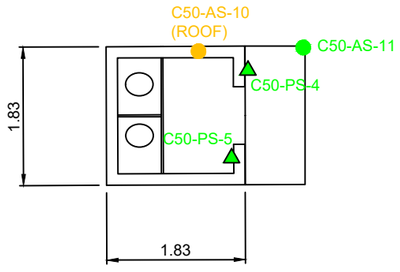
Project No. TE22104005.2000

Rev. No. 0

Figure No. 2.1



ACCOMMODATIONS CABIN



OUTHOUSE

SCALE
0m 2m 4m

LEGEND:

- ASBESTOS SAMPLE LOCATION - ASBESTOS NOT DETECTED
- ASBESTOS SAMPLE LOCATION - RESULTS < 1% FOR ASBESTOS
- PAINT SAMPLE LOCATION - NO CRITERIA EXCEEDANCES FOR LEAD OR MERCURY OR PCBs WHERE APPLICABLE
- PAINT SAMPLE LOCATION - RESULTS EXCEED 90 mg/kg AND LESS THAN 5000 mg/kg FOR LEAD AND NO CRITERIA EXCEEDANCES FOR MERCURY OR PCBs WHERE APPLICABLE
- MOULD GROWTH DETECTED - LOW

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
3. THIS FIGURE IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION OF THE STUDY AREA IN SUPPORT OF THIS REPORT.
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Drawn by: T. Rideout

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Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 228, NL and Mini-Hydroelectric Facility Site, Venams Bight, NL

Title: Sample Location Plan - Camp 50

Date: September 2022

Project No. TE22104005.2000

Rev. No. 0

Figure No. 2.2

APPENDIX

B2 PHOTOGRAPHIC RECORD

Photo 1: View of the accommodations cabin at Camp 50 site.

Photo 2: View of the accommodations cabin at Camp 50 site.

Photo 3: View of the accommodations cabin at Camp 50 site.

Photo 4: View of the accommodations cabin at Camp 50 site.

Photo 5: View of the dining area inside the accommodations cabin at Camp 50.

Photo 6: View of the kitchen area inside the accommodations cabin at Camp 50.

Photo 7: View of the sleeping area inside the accommodations cabin at Camp 75.

Photo 8: View of the washroom inside the accommodations cabin at Camp 50.

Photo 9: View of the attic in the accommodations cabin at Camp 50.

Photo 10: View of the crawl space beneath the accommodations cabin at Camp 50.

Photo 11: View of the outhouse at Camp 50 site.

Photo 12: View of bulk material sample C50 AS-1, tar paper, cabin interior.

Photo 13: View of bulk material sample C50 AS-2, foil wrap, cabin interior.

Photo 14: View of bulk material sample C50 AS-3, particle board, cabin interior.

Photo 15: View of bulk material sample C50 AS-4, brick and mortar, cabin exterior.

Photo 16: View of bulk material sample C50 AS-5, brick and mortar, cabin exterior.

Photo 17: View of bulk material sample C50 AS-6, cinder block and mortar, cabin exterior.

Photo 18: View of bulk material sample C50 AS-7, shingle and tar paper, cabin exterior.

Photo 19: View of bulk material sample C50 AS-8, shingle and tar paper, cabin exterior.

Photo 20: View of bulk material sample C50 AS-9, caulking, cabin interior.

Photo 21: View of bulk material sample C50 AS-10, shingle and tar paper, outhouse exterior. Note: paint samples C50 PS-4 and C50 PS5.

Photo 22: View of bulk material sample C50 AS-11, concrete, outhouse exterior.

Photo 23: View of paint sample C50 PS-1, wall, cabin interior.

Photo 24: View of paint sample C5 PS-3, roof, cabin exterior.

Photo 25: View of fluorescent light ballast inside the accomodations cabin.

Photo 26: View of smoke detector inside the accomodations cabin.

APPENDIX

C2 SAMPLE AND ANALYTICAL SUMMARY TABLES

Table C2-1: Bulk Sample Descriptions and Asbestos Analytical Results (Camp 50)

Sample ID	Room Description	Photo No.	Sample Location	Sample Description	Layers Analyzed	Analytical Result
C50-AS1-Tar Paper	Cabin - Kitchen/Dining Area	12	Wall	Tar paper backing on fibreglass insulation	Tar paper	ND
C50-AS1-Fibreglass					Fibreglass	ND
C50 AS-2	Cabin - Kitchen/Dining Area	13	Wall	Foil wrap	Foil wrap	ND
C50 AS-3-Tar Paper	Cabin - Kitchen/Dining Area	14	Wall	Particle board	Tar paper	ND
C50 AS-3-Fibreboard					Fibreboard	ND
C50 AS-4-Brick	Cabin - Exterior	15	Wall	Brick and mortar	Brick	ND
C50 AS-4-Mortar					Mortar	ND
C50 AS-5-Brick	Cabin - Exterior	16	Wall	Brick and mortar	Brick	ND
C50 AS-5-Mortar					Mortar	ND
C50 AS-6-Cinder Block	Cabin - Exterior	17	Foundation	Cinder block and mortar	Cinder block	ND
C50 AS-6-Mortar					Mortar	ND
C50 AS-7-Shingle 1	Cabin - Exterior	18	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
C50 AS-7-Tar Paper					Tar paper	ND
C50 AS-7-Shingle 2					Asphalt shingle	ND
C50 AS-8-Shingle	Cabin - Exterior	19	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
C50 AS-8-Tar Paper					Tar paper	ND
C50 AS-9	Cabin - Kitchen/Dining Area	20	Wall	Caulking	Caulking	ND
C50 AS-DUP1					Caulking	ND
C50 AS-10-Shingle	Outhouse - Exterior	21	Roof	Asphalt shingle with tar paper	Asphalt shingle	**0.30% Chrysotile**
C50 AS-10-Tar Paper					Tar paper	ND
C50 AS-11	Outhouse - Exterior	22	Foundation	Concrete	Concrete	ND

Notes:

C50 AS-DUP1 is a blind field duplicate of C50 AS-9

ND: Non-detect (<0.1 %)

Bold and underlined value indicates asbestos was detected but is below 1% by dry weight.

ACM: Asbestos containing material

Shaded value exceeds 1% asbestos by dry weight and is considered to be an ACM as outlined in the Newfoundland and Labrador Asbestos Abatement Regulations (Reg. 111/98).

Table C2-2: Paint Sample Descriptions and Lead Analytical Results (Camp 50)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
C50 PS-1	Cabin - Kitchen/Dining Area	23	Wall	Wood Trim	White paint on wood (sample includes wood)	10	82
C50 PS-2	Cabin - Kitchen/Dining Area	-	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	**175**
C50 PS-3	Cabin - Exterior	24	Roof	Wood	White paint on wood (sample includes wood)	10	40
C50 PS-DUP1						10	33
C50 PS-4	Outhouse - Exterior	21	Wall	Wood	Grey paint on wood (sample includes wood)	10	26
C50 PS-5	Outhouse - Interior	21	Wall	Wood	White paint on wood (sample includes wood)	10	65

Notes:

C50 PS-DUP1 is a blind field duplicate of C50 PS-3

<X: Non-Detect

RDL: Reportable Detection Limit

HPA: Hazardous Products Act

Bold and underlined value exceeds Federal HPA criterion (90 mg/kg).

Shaded value exceeds former Federal HPA criterion (5,000 mg/kg).

Table C2-3: Paint Sample Descriptions and Mercury Analytical Results (Camp 50)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
C50 PS-1	Cabin - Kitchen/Dining Area	23	Wall	Wood Trim	White paint on wood (sample includes wood)	0.03	2.01
C50 PS-2	Cabin - Kitchen/Dining Area	-	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	0.25
C50 PS-3	Cabin - Exterior	24	Roof	Wood	White paint on wood (sample includes wood)	0.03	0.06
C50 PS-DUP1						0.03	0.06
C50 PS-4	Outhouse - Exterior	21	Wall	Wood	Grey paint on wood (sample includes wood)	0.03	<0.03
C50 PS-5	Outhouse - Interior	21	Wall	Wood	White paint on wood (sample includes wood)	0.03	<0.03

Notes:

C50 PS-DUP1 is a blind field duplicate of C50 PS-3

<X: Non-Detect

RDL: Reportable Detection Limit

HPA: Hazardous Products Act

CCME: Canadian Council of Ministers of the Environment

CSQG: Canadian Soil Quality Guideline

Bold and underlined value exceeds Federal HPA criterion (10 mg/kg).

Shaded value exceeds CCME CSQG for an industrial site (50 mg/kg).

Table C2-4: Paint Sample Descriptions and PCB Analytical Results (Camp 50)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
C50 PS-1	Cabin - Kitchen/Dining Area	23	Wall	Wood Trim	White paint on wood (sample includes wood)	0.5	<0.5
C50 PS-2	Cabin - Kitchen/Dining Area	-	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
C50 PS-3	Cabin - Exterior	24	Roof	Wood	White paint on wood (sample includes wood)	0.5	<0.5
C50 PS-DUP1						0.5	<0.5
C50 PS-4	Outhouse - Exterior	21	Wall	Wood	Grey paint on wood (sample includes wood)	0.5	<0.5
C50 PS-5	Outhouse - Interior	21	Wall	Wood	White paint on wood (sample includes wood)	0.5	<0.5

Notes:

C50 PS-DUP1 is a blind field duplicate of C50 PS-3

<X: Non-Detect

RDL: Reportable Detection Limit

NL MAE: Newfoundland and Labrador Department of Municipal Affairs and Environment

TDG: Transportation of Dangerous Goods

Shaded value exceeds the criterion for PCB solid provided in the NL MAE Leachable Toxic Waste, Testing and Disposal Guidance Document and the TDG Regulations (50 mg/kg).

Table C2-5: Bulk Sample Descriptions and Mould Analytical Results (Camp 50)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
C50 M-1	Tape lift	Cabin - Wall	*Cladosporium*	Low

Notes:

Category	Count/Area Analyzed
Rare	1 to 10
Low	11 to 100
Medium	101 to 1000
High	>1000

APPENDIX

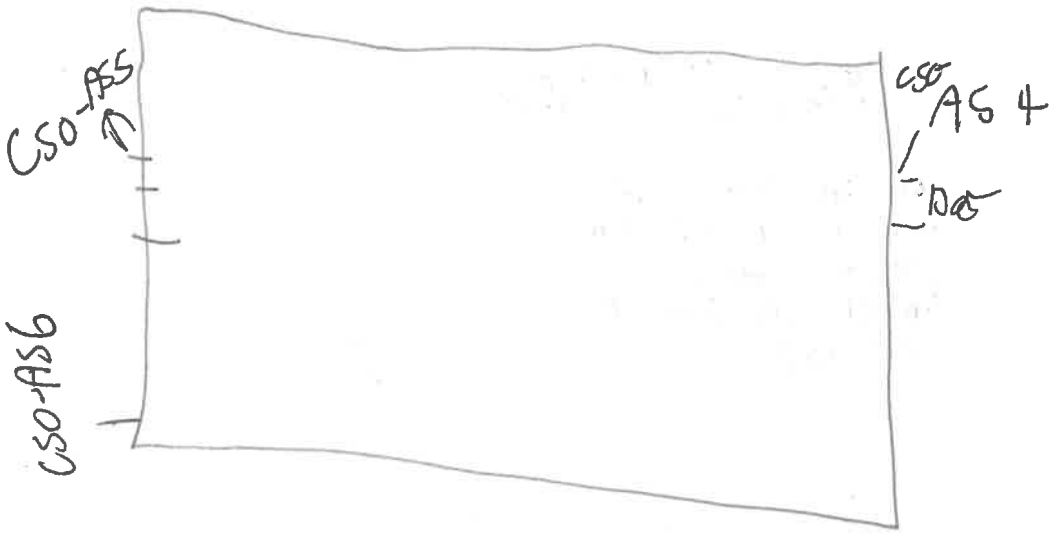
D2 ROOM-BY-ROOM INSPECTION SHEET

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Camp 50			Exterior:	32 x 24 x 15 Peak

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Cinderblock foundation plus morter ~ 3 Blocks Deep	F		Block + Mortar CSO-AS6
Walls	Red Brick + morter - New build is same but newer bricks, diff shingles	F		Old Brick + Mortar CSO-AS5 (OBTM) New BTM CSO-AS[illegible]
Ceiling	Shingle on Shingle on tar on paper (OLD) Old: Shingle on Shingle (Same) built for on tar paper	Both poor		Old = CSO-AS7 New = CSO-AS8
Paint	Floor Wall Ceiling Doors Windows Other Trim Eaves: White on wood			Trim = CSO-PS3
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)				
Piping / Electrical / Mechanical Equipment				
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	1 incandescent on new side of build			
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Whirly Bird on roof (Not spinning) Chimney has been modified			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:


CSO-AS5
CSO-AS6
CSO
AS 4
Da

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Camp 50			Out house	6x6x7

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	concrete block foundation			Shingle: C50-A5 Block: C50-A6
Walls	Plywood walls grey paint Interior: White on Plywood			
Ceiling	Shingles on tar on wood			
Paint	Floor Wall Interior: White on Plywood Ceiling Doors exterior wall: grey on plywood Windows Other			Grey: C50-P54 White: C50-P55
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Polybead in Roof Pink fibreglass in wood			
Piping / Electrical / Mechanical Equipment				
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)				
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

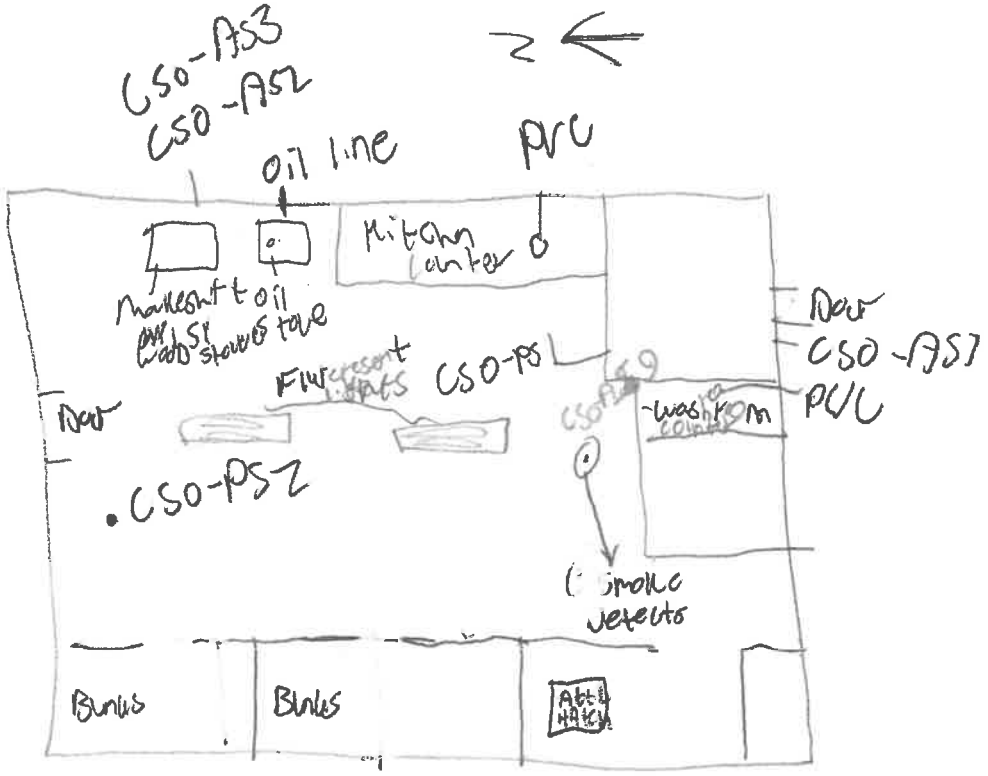
Notes/Comments:

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Camp 50			Interior	32 x 24 x 8 Ceiling 15 peak

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	grey on Plywood. Floor compromised in new section	P		
Walls	Glossy white on green on Plywood	F top		
Ceiling	Glossy white on green on Plywood	F		
Paint	Floor grey on plywood Wall glossy white on plywood green Ceiling glossy white on plywood green Doors one unpainted one factory powder grey Windows N/A Other Trim glossy white over green on wood			Floor: C50-PS2 Trim: C50-PS1
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Foil on pink fiberglass insulation on black particle board (new) Old: tar paper paper backing over fiberglass (pink)			New: C50-AS2 (pink) Old: C50-AS1 C50-AS3 = Particle board
Piping / Electrical / Mechanical Equipment	line ran for oil stove PVC pipe for grey water in washroom and kitchen			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Sola Select Serial #: 570 - 3025	Leaking / Other	Total #: 2 # Checked: 2	Suspect PCBs: Check
Lighting (Incandescent, HID, etc.)				
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs Attic (saudering, pipes batteries, exit/ emerg lighting,)	Pink insulation			
Mould / Water Staining	Materials and area impacted Minor mould growth on walls C50-M1	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: Caulking interior corner walls: C50-AS9 HVAC (e.g., electric baseboard heater, window-mounted A/C unit) 1 Battery oper Smoke Detector			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums 1 makeshift wood stove 1 oil stove (coleman) see photo			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:



21 w Cabin coords

0498105 mE
5409616 mN

Ballast
SolaSelect
570-302S
x 2

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APPENDICES

3 CAMP 98 SITE

Camp 98 site is located along Transmission Line 228 (TL228), a 230 kilovolt (kV) transmission line which connects the Massey Drive Terminal Station and the Buchans Terminal Station (refer to Figure 3.1, Appendix A3). Camp 98 site is comprised of an accommodations cabin and an outhouse.

3.1 BUILDING DESCRIPTIONS

The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 71.5 m2 (7.3 m x 9.8 m) (refer to Photos 1 to 4, Appendix B3). The floor plan of the cabin consists of a kitchen/dining area, a sleeping area and a washroom area (refer to Figure 3.2, Appendix A3). The foundation of the accommodations cabin consists of concrete blocks. The structure of the accommodations cabin consists of wood framing. The exterior walls on the accommodations cabin are finished with brick and the roof is finished with asphalt shingles. The window and exterior door openings on the accommodations cabin are barricaded with metal covers for security purposes. Interior wall and ceiling finishes in the accommodations cabin consists of painted plywood. Floors/floor finishes consist of painted plywood. Incandescent lighting was observed on the interior and exterior of the cabin. Fluorescent lighting was also observed on the interior of the cabin. The accommodations cabin is not currently heated (former oil stove).

The outhouse is a one-storey, rectangular structure with a footprint area of approximately 3.8 m2 (1.8 m x 2.1 m) (refer to Figure 3.2, Appendix A3 and Photo 11, Appendix B3). The structure of the outhouse consists of wood framing. The foundation of the outhouse consists of concrete. The exterior walls on the outhouse are finished with painted plywood (weathered) and the roof is finished with asphalt shingles. Interior wall and ceiling finishes in the outhouse consist of painted plywood. Floor finishes consist of painted plywood. The outhouse does not contain any lighting or heating.

A description of accommodations cabin is outlined in Table 3.1 and a description of the outhouse is outlined in Table 3.2. Photographs of the buildings are provided in Appendix B3.

Table 3.1 Site Building Description – Accommodations Cabin

BUILDING NAME	ACCOMMODATIONS CABIN	PHOTO NO. (APPENDIX B3)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	1 to 4
Crawl Space (Yes/No)	Yes	10
Attic (Yes/No)	Yes	9
Type of Structure	Wood Frame	9 and 10
Type of Foundation	Concrete Blocks	10
Exterior	Brick	1 to 4
Window/Door Frames	Painted Metal and Wood	1, 5 and 8
Exterior Doors	Painted Metal	1 and 3
Roofing Materials	Asphalt Shingles	4
Interior Walls Finishes	Painted Plywood	5 to 8
Interior Ceiling Finishes	Painted Plywood	6 and 8
Floor Finishes	Painted Plywood	7 and 8

BUILDING NAME	ACCOMMODATIONS CABIN	PHOTO NO. (APPENDIX B3)
Interior Doors	NA	-
Interior Lighting	Incandescent and Fluorescent	5 and 8
Exterior Lighting	Incandescent	3
Heating	Not Heated (former oil stove)	-

Table 3.2 Site Building Description - Outhouse

BUILDING NAME	OUTHOUSE	PHOTO NO. (APPENDIX B3)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	11
Crawl Space (Yes/No)	No	-
Attic (Yes/No)	No	-
Type of Structure	Wood Frame	11
Type of Foundation	Concrete	11
Exterior	Painted Plywood (weathered)	11
Window/Door Frames	Painted Wood	11
Exterior Doors	Painted Plywood	-
Roofing Materials	Asphalt Shingles	-
Interior Walls Finishes	Painted Plywood	11
Interior Ceiling Finishes	Painted Plywood	11
Floor Finishes	Painted Plywood	11
Interior Doors	NA	-
Interior Lighting	NA	-
Exterior Lighting	NA	-
Heating	NA	-

3.2 FINDINGS

The findings documented in this section are based on observations made by WSP personnel at the time of the site visit on July 19, 2022 and the results of laboratory analyses of samples collected from Camp 98. During the Pre-Demolition HBMA site visit, WSP personnel were accompanied by a representative of Hydro (Mr. Shane Jackson). Copies of room-by-room inspection sheets for the accommodations cabin and outhouse are provided in Appendix D3. Photos of the samples collected from the accommodations cabin and outhouse during the site visit are provided in Appendix B3.

3.2.1 ASBESTOS-CONTAINING MATERIALS (ACMS)

There are over 3,000 ACMs that are commercially available, which can be divided into two broad categories: friable and non-friable. ACMs were discontinued from use in Canada in the late 1970s/early 1980s, although non-friable asbestos is still found in many more recent buildings.

During the Pre-Demolition HBMA site visit, 10 building material samples (C98 AS-1 to C98 AS-9 and C98 AS-12), plus one (1) blind field duplicate (C98 AS-DUP1), were collected from the accommodations cabin and two (2) building material samples (C98 AS-10 and C98 AS-11) were collected from the outhouse and analyzed for asbestos content (refer to Photos 12 to 23, Appendix B2). Bulk sample descriptions and asbestos analytical results are summarized in Table C3.1, Appendix C3. Sample locations and analytical results are graphically illustrated in Figure 3.2, Appendix A3.

FRIABLE MATERIALS

Friable ACMs are defined as materials that can be crumbled, pulverized and reduced to powder when dry using hand pressure. Typical friable materials include acoustical or decorative spray applications, fireproofing and thermal insulation.

SPRAY-APPLIED FIREPROOFING, INSULATION AND TEXTURE FINISHES

There were no spray-applied fireproofing, insulation or texture finishes observed in the accommodations cabin or outhouse during the Pre-Demolition HBMA site visit; therefore, no samples of these materials were collected for analysis.

BUILDING AND THERMAL SYSTEM INSULATION

During the Pre-Demolition HBMA site visit, fiberglass insulation was observed in the attic and walls of the accommodations cabin (refer to Photos 9 and 14, Appendix B3). Thermal system insulation was not observed at Camp 98.

One (1) sample of tar paper backing on the building insulation (C98 AS-3) was collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 14, Appendix B3). One (1) sample of foil paper (C98 AS-12) was also collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 23, Appendix B3). Asbestos was not detected in the tar paper and foil paper samples.

NON-FRIABLE AND POTENTIALLY FRIABLE MATERIALS

Non-friable ACMs are hard or manufactured products such as floor tiles, fire blankets, pre-formed manufactured cementitious insulation and wallboards, pipes, and siding, wherein the asbestos fibres are bound to the substrate. Note that although a product may be considered non-friable when new, the product may release fine dust when disturbed (e.g., deterioration, removal, renovations) and the free dust is considered friable.

CEILING TILE

There were no ceiling tiles observed at Camp 98 during the Pre-Demolition HBMA site visit; therefore, no samples of ceiling tile were collected for analysis.

DRYWALL JOINT COMPOUND

There was no drywall joint compound observed at Camp 98 during the Pre-Demolition HBMA site visit; therefore, no samples of drywall joint compound were collected for analysis.

VINYL FLOORING PRODUCTS AND MASTICS

There was no vinyl flooring or products observed at Camp 98 during the Pre-Demolition HBMA site visit; therefore, no samples of vinyl flooring or products were collected for analysis.

BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

There were no baseboard, carpet or stair tread adhesives/mastics observed at Camp 98 during the Pre-Demolition HBMA site visit; therefore, no samples of these types of adhesives/mastics were collected for analysis.

ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, two (2) samples of asphalt shingle with tar paper (C98 AS-8 and C98 AS-9) were collected from the roof of the accommodations cabin and one (1) sample of asphalt shingle (C98 AS-10) was collected from the roof of the outhouse and analyzed for asbestos content (refer to Photos 19, 20 and 21, Appendix B3). Asbestos was not detected in the roofing material samples.

It is important to note that, due to height constraints, no samples of building materials around roof penetrations (e.g., caulking or sealants around vents or chimneys) or roof seams were collected for analysis (refer to Photos 2 and 4, Appendix B3).

CAULKING/SEALANT

There were no caulking/sealants observed at Camp 98 during the Pre-Demolition HBMA site visit; therefore, no samples of caulking/sealants were collected for analysis.

MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

During the Pre-Demolition HBMA site visit, one (1) sample of brick and mortar (C98 AS-5) and one (1) sample of brick (C98 AS-6) were collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photos 16 and 17, Appendix B3). Asbestos was not detected in the brick and mortar samples.

During the Pre-Demolition HBMA site visit, one (1) sample of cinder block and mortar (C98 AS-7) was collected from the concrete foundation of the accommodations cabin and one (1) sample of concrete (C98 AS-11) was collected from the foundation of the outhouse and analyzed for asbestos content (refer to Photos 18 and 22, Appendix B3). Asbestos was not detected in the cinder block/mortar and concrete samples.

FIRE-RATED DOORS

Fire-rated doors and door frames were not observed during the Pre-Demolition HBMA site visit.

OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, one (1) sample of particle board with tar paper backing (C98 AS-4), plus one (1) blind field duplicate (C98 AS-DUP1; duplicate of C98 AS-4), was collected from a wall in the accommodations cabin and analyzed for asbestos content (refer to Photo 15, Appendix B2). Asbestos was not detected in the particle board/tar paper samples.

During the Pre-Demolition HBMA site visit, two (2) samples of countertop mastics (C98 AS-1 and C98 AS-2) were collected from the accommodations cabin and analyzed for asbestos content (refer to Photos 12 and 13, Appendix B3). Asbestos was not detected in the countertop mastic samples.

Other potential ACMs were observed (or suspected to be present) and were not sampled due to the nature of the materials and/or hazards associated with sampling these materials. These materials included, but are not limited to, electrical and mechanical components and insulators such as wiring and gaskets, caulking or sealants around or along roof seams, vent pipes, chimneys, electrical conduits or other penetrations, and undercoatings on sinks (refer to Photos 29 and 30, Appendix B3).

Other possible hidden and inaccessible ACMs have the potential to be present within the accommodations cabin or outhouse but were not identified during the Pre-Demolition HBMA site visit. These possible ACMs could include concrete leveling compound (existing concrete foundation), possible fireproofing materials in the wall or ceiling cavities, piping/pipe joint sealants/gaskets and packing associated with cast iron pipe joints, fire rated

structures or building materials, vapour barriers in walls, interior heat resistant components or gaskets inside appliances or prefabricated chimneys, and underground infrastructure or piping.

3.2.2 PAINT ADDITIVES

Lead compounds have been used in paint as pigment and durability additives since the early 1800s. Mercury compounds have been used in paint as anti-microbial additives up until the 1990s. PCBs have been used in paint as plasticizers and corrosion resistance additives from the 1950s to the 1970s.

During the Pre-Demolition HBMA site visit, four (4) samples (C98 PS-1 to C98 PS-4), plus one (1) blind field duplicate (C98 PS-DUP1), were collected from painted surfaces of the accommodations cabin and two (2) samples (C98 PS-5 and C98 PS-6) were collected from the painted surfaces of the outhouse and analyzed for lead, mercury and PCB content (refer to Photos 24 to 28, Appendix B3). Paint sample descriptions and lead, mercury and PCBs analytical results are summarized in Tables C3.2 to C3.4, Appendix C3. Sample locations and analytical results are graphically illustrated in Figure 3.2, Appendix A3.

LEAD IN PAINT

The concentrations of lead in the four (4) samples (C98 PS-1 to C98 PS-4), plus one (1) blind field duplicate (C98 PS-DUP1; duplicate of C98 PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (C98 PS-5 and C98 PS-6) collected from the outhouse ranged from non-detect (<10 mg/kg) to 283 mg/kg (refer to Table C3.2, Appendix C3). One (1) paint sample (C98 PS-3) contained lead at a concentration above the Federal HPA criterion of 90 mg/kg and below the former Federal HPA criterion of 5,000 mg/kg (refer to Photo 26, Appendix B3). The concentrations of lead in the other six (6) samples were below the Federal HPA criterion (90 mg/kg).

MERCURY IN PAINT

The concentrations of mercury in the four (4) samples (C98 PS-1 to C98 PS-4), plus one (1) blind field duplicate (C98 PS-DUP1; duplicate of C98 PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (C98 PS-5 and C98 PS-6) collected from the outhouse ranged from 0.07 mg/kg to 6.81 mg/kg and therefore, were below the Federal HPA criterion (10 mg/kg) (refer to Table C3.3, Appendix C3).

PCBS IN PAINT

The concentrations of PCBs in the four (4) samples (C98 PS-1 to C98 PS-4), plus one (1) blind field duplicate (C98 PS-DUP1; duplicate of C98 PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (C98 PS-5 and C98 PS-6) collected from the outhouse were non-detect (<0.5 mg/kg), and therefore, were below the applicable criterion for PCB solid (50 mg/kg) (refer to Table C3.4, Appendix C3).

3.2.3 UREA FORMALDEHYDE FOAM INSULATION (UFFI)

Visual indicators suggesting the potential presence of UFFI were not observed at Camp 98. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photos 8 and 9, Appendix B3). Since the original date of construction of Camp 98 was 1985, it is not likely that UFFI is present in the cabin.

3.2.4 SUSPECTED VISIBLE MOULD GROWTH (SVG)

WSP inspected the interior areas of the accommodations cabin and outhouse for visual or olfactory evidence of suspected mould. SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin during the Pre-Demolition HBMA site visit. One (1) sample (C98 M-1) of the suspect mould material was collected from the surfaces of a wall for laboratory analysis to confirm the presence/absence of mould (refer to Figure 3.2, Appendix A3).

The results of mould analysis determined that tape lift sample C98 M-1 contained Cladosporium mould with hyphal fragments (refer to Table C3.5, Appendix C3).

3.2.5 MERCURY-CONTAINING THERMOSTATS

Thermostats were not identified inside the accommodations cabin at Camp 98 during the Pre-Demolition HBMA site visit.

3.2.6 PCB-CONTAINING LIGHT BALLASTS

Two fluorescent light fixtures were observed on the interior of the accommodations cabin during the Pre-Demolition HBMA site visit. The labels on the fluorescent light fixtures indicated that the ballasts were manufactured by Canadian General Electric (CGE). According to the August 1991 Environment Canada document entitled, Identification of Lamp Ballasts Containing PCBs, Report EPS 2/CC/2 (revised), if the final letter in the CGE manufacturer's code is an E the ballast does not contain PCBs. Since the manufacturer's code on the CGE ballasts was noted as 17A240E, it is assumed that the fluorescent light ballasts do not contain PCBs (refer to Photo 31, Appendix B3).

3.2.7 POTENTIAL SOURCES OF ODS AND HALOCARBONS

During the Pre-Demolition HBMA site visit, a potential source of ODS was identified within the accommodations cabin. Results of the ODS inspection is summarized in Table 3.3.

Table 3.3 Potential Sources of ODS

ITEM	MANUFACTURER	MODEL (SERIAL NO.)	LOCATION OBSERVED	PHOTO NO. (APPENDIX B3)	REFRIGERANT	POTENTIAL ODS
Freezer	Wood's	E251	Kitchen Area	32	R12	Yes

Based on observations made during the site visit, ODSs are present in the accommodations cabin in the form of refrigerant R12 contained within the freezer (refer to Photo 32, Appendix B3). This refrigerant (R12) is a hydrochlorofluorocarbon (HCFC) and is regulated under the Federal Halocarbon Regulations.

Fire extinguishers were not observed at Camp 98 during the Pre-Demolition HBMA site visit.

3.2.8 OTHER POTENTIALLY HAZARDOUS BUILDING MATERIALS OR SUBSTANCES

Other potentially hazardous building materials or substances identified during this assessment are presented in the following sections.

LEAD-CONTAINING MATERIALS AND EQUIPMENT

Lead is typically associated with plumbing solder and older pipe materials (e.g., cast iron pipe joints), as well as products such as radiation protective shielding and lead-acid batteries. Lead can also be present in steel and iron primer, industrial electrical jacketing, roof flashing and tank linings.

No suspected lead-containing materials and equipment were identified during the Pre-Demolition HBMA site visit.

MERCURY-CONTAINING MATERIALS AND EQUIPMENT

Fluorescent light fixtures were observed on the interior of the accommodations cabin during the Pre-Demolition HBMA site visit. The light tubes and bulbs in fluorescent light fixtures often contain limited quantities of mercury in a powder or vapour form.

PCB-CONTAINING MATERIALS AND EQUIPMENT

According to the USEPA, PCBs may be present in caulking used in windows, door frames, masonry columns and other building materials in buildings built or renovated between 1950 and 1979. In addition, and as mentioned previously, insulating fluids and cooling oils in electrical equipment (i.e., transformers, fluorescent light ballasts, capacitors, etc.) often contained PCBs until around 1980.

No suspected PCB-containing materials and equipment were identified during the Pre-Demolition HBMA site visit.

TREATED WOOD CHEMICALS

The chemicals that are used to protect and preserve wood products from insect attack and fungal decay may pose risks to human health and the environment. Depending on the wood treatment used, treated wood may be considered a hazardous waste upon disposal. The NL Department of Environment and Conservation (currently the NL MAE), 2015 Guidance Document for Treated Wood Waste Disposal (GD-PPD-075.1) provides landfill disposal standards for “pressure treated” inorganic preservatives (i.e., arsenic and chromium) and creosote (i.e., total cresol and benzo(a)pyrene) and chlorophenolic (i.e., pentachlorophenol) formulations used to preserve wood. These landfill disposal standards for treated wood waste (TWW) are used to assess the results of leachability testing to determine disposal options for treated wood to be removed during renovation or demolition activities.

Treated wood was not identified at Camp 98 during the Pre-Demolition HBMA site visit.

SILICA

According to the CPWR – The Center for Construction Research and Training, many common construction materials contain silica including, asphalt, brick, cement, concrete, drywall, grout, mortar, stone, sand and tile. The dust created by cutting, grinding, drilling or otherwise disturbing these materials can contain crystalline silica particles.

Based on the Pre-Demolition HBMA site visit, silica is expected to be present in the concrete, mortar and asphalt shingles used in the construction of the accommodations cabin and outhouse. Silica may also be present in the brick and mortar used in the construction of the accommodations cabin.

RADIOACTIVE MATERIALS

A smoke detector was observed in the accommodations cabin during the Pre-Demolition HBMA site visit (refer to Photo 33, Appendix B3). Smoke detectors observed may contain very small amounts of radioactive material (i.e., Americium 241). Smoke alarms that use radioactive material incorporated in an ionization chamber are called "ion chamber smoke alarms".

3.3 CONCLUSIONS AND RECOMMENDATIONS

Based on observations made and information gathered during the Pre-Demolition HBMA, the following conclusions and recommendations are made with respect to the potential and actual presence of hazardous building materials at Camp 98.

3.3.1 ACMS

Results of the asbestos sampling and analytical program revealed that all building materials sampled at the time of the Pre-Demolition HBMA were non-detect (<0.1%) for asbestos.

Other potential ACMs were observed (or suspected to be present) and were not sampled due to the nature of the materials and/or hazards associated with sampling these materials. These materials included, but are not limited to:

- Electrical and mechanical components and insulators such as wiring and gaskets.
- Caulking or sealants around or along roof seams, vent pipes, chimneys, electrical conduits or other penetrations.

— Undercoatings on sinks.

Other possible hidden and inaccessible ACMs have the potential to be present within the buildings at Camp 98 but were not identified during the Pre-Demolition HBMA site visit. These possible ACMs could include concrete leveling compound (existing concrete foundation), possible fireproofing materials in the wall or ceiling cavities, piping/pipe joint sealants/gaskets and packing associated with cast iron pipe joints, fire rated structures or building materials, vapour barriers in walls, interior heat resistant components or gaskets inside appliances or prefabricated chimneys, and underground infrastructure or piping.

If other potential ACMs that were not sampled as part of this assessment are encountered in the future, these materials should be treated as ACMs or samples should be collected and tested to verify asbestos content. This should be done as soon as these materials are encountered and before these materials are disturbed. This includes materials that are currently concealed by walls and ceiling systems.

In accordance with the NL Asbestos Abatement Regulations (Reg. 111/98), which provide the legislative requirements for safe handling of ACMs in workplaces in the Province of NL, the following is recommended:

— Safe work procedures shall be established.
— All buildings constructed during the period when asbestos was readily used in construction (generally prior to the early 1980s) or any buildings that are suspected as having asbestos must have a written assessment and management plan (where applicable) for potential ACMs.
— Materials suspected of containing asbestos are required to be handled as ACMs, until analysis by a competent laboratory determines whether or not it does contain asbestos.
— Prior to general demolition, all ACMs must be safely removed from the building and disposed of in accordance with appropriate environmental guidelines by an asbestos abatement contractor registered with the Occupational Health and Safety (OHS) Division of Service NL.
— Most work involving ACMs (i.e., disturbance, removal and encapsulation) must be conducted by a contractor registered with the OHS Division of Service NL.
— ACMs in good condition should be inspected on an annual basis.
— ACMs in poor condition should be removed from the building and transported off-site for proper disposal.
— Workers should don adequate respiratory protection and personal protective equipment (PPE) when working with ACMs.

Prior to the removal and/or abatement of any identified ACMs (or any other hazardous building materials), an abatement plan including technical specifications should be designed, prepared and supervised by a qualified professional and should be undertaken by qualified trades, in accordance with applicable standards. Activities involving the disturbance and/or removal of ACMs should be carried out in a manner that ensures asbestos fiber concentrations do not exceed the applicable American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV). ACMs can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.

3.3.2 LEAD, MERCURY AND PCBS IN PAINT

Results of the paint sampling and analytical program revealed the following:

— Lead and Leachable Lead in Paint
    — The concentrations of lead in the four (4) samples (C98 PS-1 to C98 PS-4), plus one (1) blind field duplicate (C98 PS-DUP1; duplicate of C98 PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (C98 PS-5 and C98 PS-6) collected from the outhouse ranged from non-detect (<10 mg/kg) to 283 mg/kg.
    — One (1) paint sample (C98 PS-3) contained lead at a concentration above the Federal HPA criterion of 90 mg/kg and below the former Federal HPA criterion of 5,000 mg/kg; and therefore, this paint is considered to be a LBP but is not likely to be leachable for lead.
    — The concentrations of lead in the other six (6) paint samples were below the Federal HPA criterion (90 mg/kg); and therefore, these paints are not considered to be LBPs and are not likely to be leachable for lead.

- Mercury and Leachable Mercury in Paint
    - The concentrations of mercury in the four (4) samples (C98 PS-1 to C98 PS-4), plus one (1) blind field duplicate (C98 PS-DUP1; duplicate of C98 PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (C98 PS-5 and C98 PS-6) collected from the outhouse ranged from 0.07 mg/kg to 6.81 mg/kg and therefore, were below the Federal HPA criterion (10 mg/kg). These paints are not considered to be MBPs and are not likely to be leachable for mercury.
- PCBs in Paint
    - PCBs were not detected (<0.5 mg/kg) in the four (4) samples (C98 PS-1 to C98 PS-4), plus one (1) blind field duplicate (C98 PS-DUP1; duplicate of C98 PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (C98 PS-5 and C98 PS-6) collected from the outhouse, and therefore, were below the applicable criterion for PCB solid (50 mg/kg).

Based on the paint sample analytical results, the paint samples collected from accommodations cabin and outhouse are not likely to be leachable for lead or mercury, and do not contain PCBs. Should disposal be required (e.g., renovation or demolition activities), the paints analyzed for lead, mercury and PCB content may be disposed of at an approved landfill facility, pending landfill and Provincial regulatory approval.

There are potential adverse human health impacts associated with disturbing (e.g., scraping, sanding, burning, etc.) lead-containing paint finishes, due to the potential for dust, mist or fumes to be released and inhaled or ingested by workers. As a precautionary measure, WSP recommends handling these paint finishes, as follows:

- In areas of minor peeling or flaking, the paint should be removed using wet scraping techniques.
- In areas of extensive peeling and flaking, the paint should be removed and more extensive particulate control measures may be required.
- In areas where lead-containing paint finishes are present and in poor condition, an experienced contractor should be utilized for renovating, decommissioning or demolition activities.
- Prior to renovation, dismantling or demolition activities, all areas of extensive peeling and flaking of lead-containing paint finishes and paint debris/dust should be removed and/or remediated to ensure that building occupants/workers are protected from associated dust/particulate.
- Procedures should be implemented to ensure that workers and anyone present in and around areas being renovated, dismantled or demolished are protected. The contractor should also ensure that dust generation and migration is minimized.
- Precautions should be taken to prevent/reduce exposure to paint dust during any disturbance of lead-containing paint finishes, such as wetting the surface of the materials to prevent dust emissions, donning respiratory protection, and cleaning tools and clothing prior to exiting work areas.
- Where possible, lead-containing paint finishes should be removed from metal surfaces prior to welding or cutting these materials.

If potential lead, mercury or PCB containing paint finishes that were not sampled during this assessment are encountered in future, prior to any disturbance or removal, samples should be obtained and tested to verify concentrations of lead, mercury and PCBs. This includes materials that are currently concealed by walls and ceiling systems.

Any disturbance or removal of lead, mercury or PCB-containing paint finishes that may generate dust or respirable aerosols must conform to the Federal and Provincial OHS Regulations. All work should be carried out by individuals wearing proper PPE. The type of respiratory protection and control measures to be implemented during the removal of these types of paint finishes should be determined by a qualified person and based on the risk level of a particular work activity (i.e., scraping, sanding, abrasive blasting, etc.). Activities involving the disturbance and/or removal of lead, mercury or PCB-containing paint finishes should be carried out in a manner that ensures paint dust concentrations do not exceed the applicable ACGIH TLVs.

3.3.3 MOULD

SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin. One (1) suspected mould sample (C98 M-1) was collected from the surfaces of a wall for laboratory analysis. The samples confirmed the presence of Cladosporium mould.

During demolition, precautions should be taken to prevent/reduce exposure to mould spores during any disturbance/demolition of mould impacted materials, such as donning appropriate respiratory protection, and cleaning tools and clothing prior to exiting work areas.

3.3.4 POTENTIAL ODS

Based on observations made during the site visit, ODSs are present in the accommodations cabin in the form of refrigerant R12 contained in a freezer. This refrigerant (R12) is a HCFC and is regulated under the Federal Halocarbon Regulations.

ODS should be removed by an approved contractor prior to disposing of any cooling and/or refrigeration equipment. The use, storage, operation, maintenance, decommissioning, and disposal of ODS containing equipment, in general, is regulated at both a Provincial and Federal level and must comply with the most recent NL Halocarbon Regulations and the Federal Halocarbon Regulations. The status of the potential ODS containing equipment should be confirmed through a mechanical contractor or consultant.

3.3.5 POTENTIAL MERCURY-CONTAINING MATERIALS/EQUIPMENT

Four (4) mercury-containing fluorescent light tubes were observed in the accommodations cabins.

Should disposal be required, mercury-containing equipment should be removed intact and returned to the manufacturer for recycling or disposed of at an approved hazardous waste disposal facility. The disturbance, control or disposal of mercury-containing materials/equipment should be carried out in accordance with applicable criteria/regulations. The presence/absence of mercury in these materials should be confirmed through a contractor or consultant prior to disturbance or disposal of these materials. Typically, these materials are sent to a recycling or hazardous waste disposal facility and not a landfill.

3.3.6 SILICA CONTAINING MATERIALS

Silica is expected to be present in the concrete, mortar and asphalt shingles used in the construction of the accommodations cabin and outhouse. Silica may also be present in the brick and mortar used in the construction of the accommodations cabin. Precautions should be taken to prevent/reduce exposure to silica dust during any disturbance/demolition of silica-containing products, such as wetting the surface of the materials to prevent dust emissions, donning respiratory protection, and cleaning tools and clothing prior to exiting work areas. Activities involving the disturbance and/or demolition of silica-containing materials should be carried out in a manner that ensures silica dust concentrations do not exceed the applicable ACGIH TLV.

3.3.7 POTENTIAL RADIOACTIVE MATERIALS

A smoke detector observed may contain very small amounts of radioactive material (i.e., Americium 241). Smoke alarms that use radioactive material incorporated in an ionization chamber are called "ion chamber smoke alarms". The smoke detector should be removed intact, stored in a properly labeled container and transported, as per TDG regulations, to a licensed disposal facility.

3.3.8 SUMMARY OF FINDINGS

Hazardous building materials identified at Camp 98 during this Pre-Demolition HBMA and disposal options, if required, are summarized in Table 3.4. Conclusions and recommendations made with respect to the potential and actual presence of hazardous building materials within the accommodations cabin and outhouse are provided in Section 3.3 and should be reviewed in conjunction with Table 3.4.

Table 3.4 Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

AZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
ACMs	NL Asbestos Abatement Regulations (Reg. 111/98)	None Identified. Note that other possible hidden and inaccessible ACMs have the potential to be present within the accommodations cabin and outhouse, but were not identified during the Pre-Demolition HBMA site visit.	ACMs cannot be disposed of at a Construction & Demolition Site; however, these materials can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility. The transportation and disposal of asbestos should be conducted in accordance with the NL Asbestos Abatement Regulations (Reg. 111/98) and with Standard Operating Procedures (SOPs) for disposal of ACMs at the landfill.
LBPs	Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Surface Coating Materials Regulations (SOR/2016-193)	LBP (grey) on plywood floor of accommodations cabin.	Paints that were analyzed for lead and contained <5,000 mg/kg lead, may be disposed of at a Regional Solid Waste Disposal Facility (landfill), provided permission is obtained from the landfill owner/operator.
Potential UFFI	Federal HPA (R.S.1985, c. H-3)	None Identified	UFFI is permitted to be bagged and transported to an approved WDS and disposed in the special waste area of the site.
Mould	Mould Guidelines for the Canadian Construction Industry, Canadian Construction Industry (CCI), 2018; Mould Abatement Guidelines, Environmental Abatement Council of Canada (EACC), 2015	Mould growth present on interior of accommodations cabin.	All mould impacted materials may be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.

AZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Potential ODS	Federal Halocarbon Regulations (SOR/2003-289)	R12 refrigerant in freezer.	Materials containing ODS should be received by a contractor or facility that has the proper approvals to remove, handle and/or dispose of ODS. The remaining materials can be disposed of at a recycling facility, provided permission is obtained from the facility.
Potential Lead-Containing Materials/ Equipment	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301)	None identified.	Lead-containing materials and equipment can be disposed of at a metal recycling or hazardous waste disposal facility, in accordance with applicable regulations. The transportation and disposal of hazardous lead-containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.
Potential Mercury-Containing Materials/ Equipment	Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Products Containing Mercury Regulations (SOR/2014-254)	Four (4) mercury-containing fluorescent light tubes are present inside accommodations cabin.	Mercury-containing materials and equipment can be disposed of at a recycling or hazardous waste disposal facility, in accordance with applicable regulations. The transportation and disposal of hazardous mercury-containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.

AZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Potential PCB-Containing Materials/ Equipment	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Federal TDG Act (1992, c. 34) Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301) PCB Regulations (SOR/2008-273) PCB Waste Export Regulations (SOR/97-109) Regulations Amending the PCB Regulations (SOR/2010-57)	None identified.	Any PCB-containing materials and equipment should be handled, decontaminated, transported and disposed of as per current Federal and Provincial acts and regulations. Any PCB-containing materials and equipment requiring removal from the building should be transported and disposed of by a registered hazardous waste transporter in accordance with applicable regulations. The transportation and disposal of PCB containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.
Silica-Containing Materials	NL OHS Act (RSNL1990 Chapter O-3) NL OHS Regulations (5/12)	Concrete, cinder block and mortar, brick and mortar, and asphalt shingles.	These materials can be disposed of at a Regional Solid Waste Disposal Facility (landfill).
Potential Radioactive Materials	Federal TDG Act (1992, c. 34)	One (1) suspected smoke detector.	Smoke detectors that contain low level radioactive materials must be transported, as per Federal TDG Regulations, to a licensed disposal facility.

APPENDIX

A3 FIGURES

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
3. THIS FIGURE IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION OF THE STUDY AREA IN SUPPORT OF THIS REPORT.
4. ALL LOCATIONS, DIMENSIONS, AND ORIENTATIONS ARE APPROXIMATE.
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Wood
Environment & Infrastructure Solutions Canada Limited
36 Pippy Place
St. John's, NL A1B 4A5
709-722-7023

wood.

Drawn by: T. Rideout

Approved by: L. Wiseman

Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 228, NL and Mini-Hydroelectric Facility Site, Venams Bight, NL

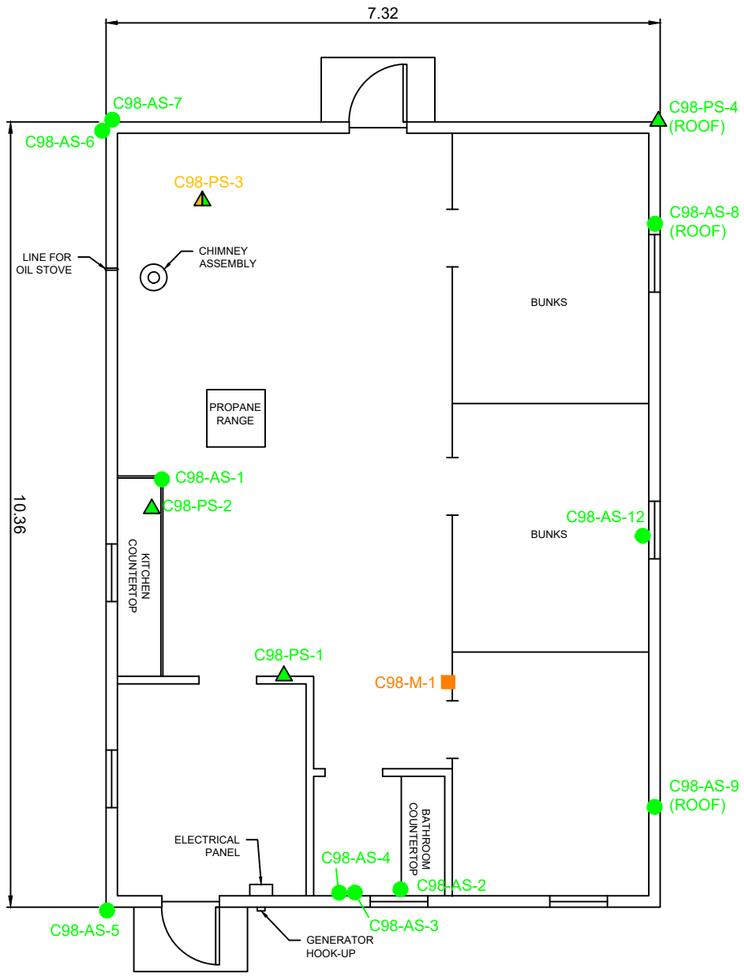
Title: Site Location Plan - Camp 98

Date: September 2022

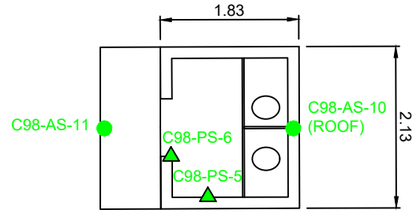
Project No. TE22104005.2000

Rev. No. 0

Figure No. 3.1



ACCOMMODATIONS CABIN



OUTHOUSE

SCALE
0m 2m 4m

LEGEND:

- ASBESTOS SAMPLE LOCATION - ASBESTOS NOT DETECTED
- PAINT SAMPLE LOCATION - NO CRITERIA EXCEEDANCES FOR LEAD OR MERCURY OR PCBs WHERE APPLICABLE
- PAINT SAMPLE LOCATION - RESULTS EXCEED 90 mg/kg AND LESS THAN 5000 mg/kg FOR LEAD AND NO CRITERIA EXCEEDANCES FOR MERCURY OR PCBs WHERE APPLICABLE
- MOULD GROWTH DETECTED - LOW

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
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Date: September 2022

Project No. TE22104005.2000

Title: Sample Location Plan - Camp 98

Rev. No. 0

Figure No. 3.2

APPENDIX

B3 PHOTOGRAPHIC RECORD

Photo 1: View of the accommodations cabin at Camp 98.

Photo 2: View of the accommodations cabin at Camp 98.

Photo 3: View of the accommodations cabin at Camp 98.

Photo 4: View of the accommodations cabin at Camp 98.

Photo 5: View of the kitchen area of the accommodations cabin at Camp 98.

Photo 6: View of the dining area of the accommodations cabin at Camp 98.

Photo 7: View of the washroom of the accommodations cabin at Camp 98.

Photo 8: View of the sleeping area of the accommodations cabin at Camp 98.

Photo 9: View of the attic in the accommodations cabin at Camp 98.

Photo 10: View of the crawl space beneath the accommodations cabin at Camp 98.

Photo 11: View of the outhouse at Camp 98.

Photo 12: View of bulk material sample C98 AS-1, countertop mastic, cabin interior.

Photo 13: View of bulk material sample C98 AS-2, countertop mastic, cabin interior.

Photo 14: View of bulk material sample C98 AS-3, tar paper, cabin interior.

Photo 15: View of bulk material sample C98 AS-4, particle board, cabin interior.

Photo 16: View of bulk material sample C98 AS-5, brick and mortar, cabin exterior.

Photo 17: View of bulk material sample C98 AS-6, brick and mortar, cabin exterior.

Photo 18: View of bulk material sample C98 AS-7, cinder block and mortar, cabin exterior.

Photo 19: View of bulk material sample C98 AS-8, shingle, cabin exterior.

Photo 20: View of bulk material sample C98 AS-9, shingle, cabin exterior.

Photo 21: View of bulk material sample C98 AS-10, shingle, outhouse exterior.

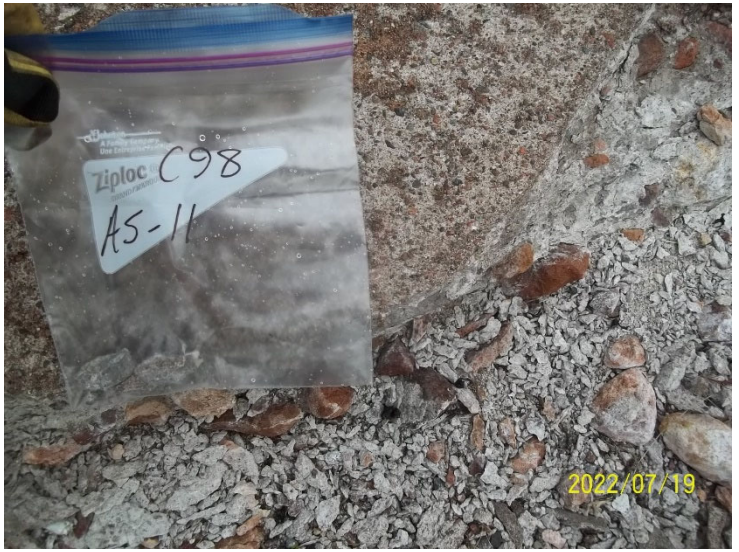


Photo 22: View of bulk material sample C98 AS-11, concrete, outhouse exterior.

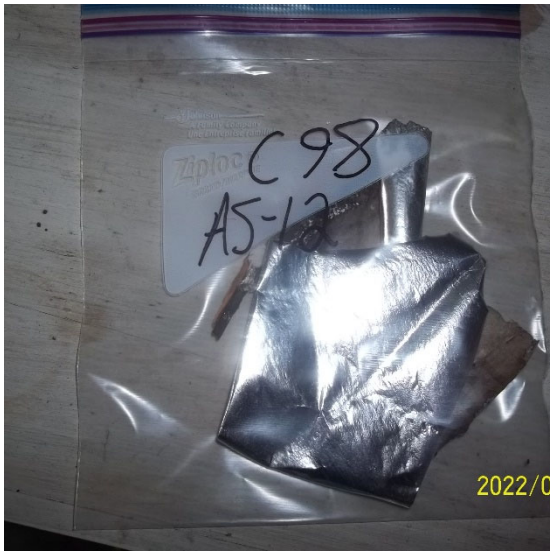


Photo 23: View of bulk material sample C98 AS-12, foil paper, cabin interior.

Photo 24: View of paint sample C98 PS-1, wall, cabin interior.

Photo 25: View of paint sample C98 PS-2, wall, cabin interior.

Photo 26: View of paint sample C98 PS-3, floor, cabin interior.

Photo 27: View of paint sample C98 PS-5, wall, outhouse interior.

Photo 28: View of paint sample C98 PS-6, wall, outhouse interior.

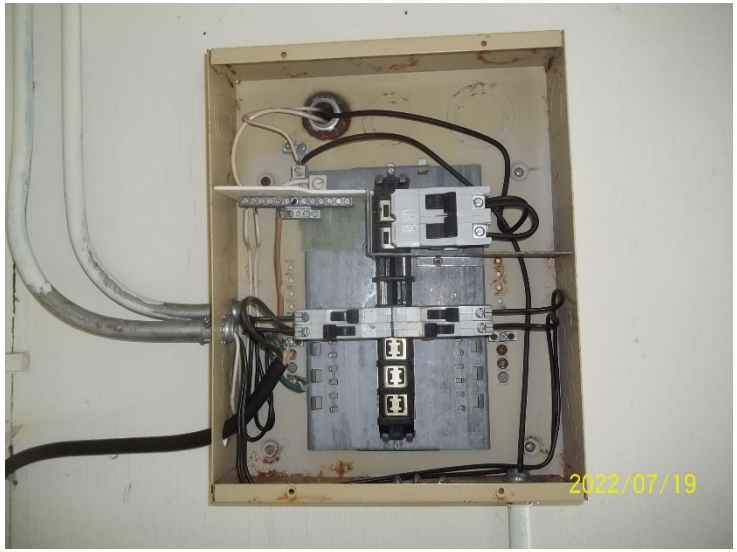


Photo 29: View of electrical panel, cabin interior.

Photo 30: View of undercoating on sinks, cabin interior.

Photo 31: View of fluorescent light ballast inside the accommodations cabin.

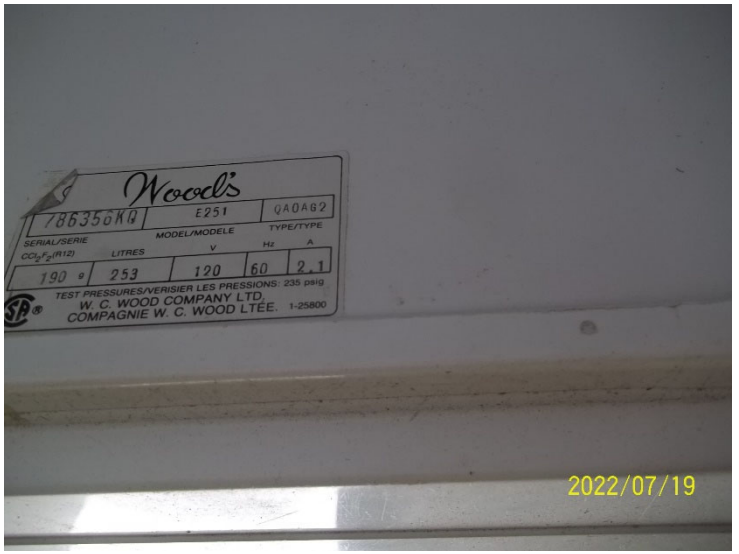


Photo 32: View of freezer label.

Photo 33: View of smoke detector inside the accommodations cabin.

APPENDIX

C3 SAMPLE AND ANALYTICAL SUMMARY TABLES

Table C3-1: Bulk Sample Descriptions and Asbestos Analytical Results (Camp 98)

Sample ID	Room Description	Photo No.	Sample Location	Sample Description	Layers Analyzed	Analytical Result
C98 AS-1	Cabin - Kitchen Area	12	Countertop	Countertop mastic	Mastic	ND
C98 AS-2	Cabin - Washroom Area	13	Countertop	Countertop mastic	Mastic	ND
C98 AS-3-Tar Paper	Cabin - Kitchen/Dining Area	14	Wall	Tar paper with fibreglass insulation	Tar paper	ND
C98 AS-3-Fibreglass					Fibreglass	ND
C98 AS-4-Tar Paper	Cabin - Kitchen/Dining Area	15	Wall	Particle board with tar paper	Tar paper	ND
C98 AS-DUP1-Tar Paper					Tar paper	ND
C98 AS-4-Fibreboard					Fibreboard	ND
C98 AS-DUP1-Fibreboard					Fibreboard	ND
C98 AS-5-Brick	Cabin - Exterior	16	Wall	Brick and mortar	Brick	ND
C98 AS-5-Mortar					Mortar	ND
C98 AS-6-Brick	Cabin - Exterior	17	Wall	Brick and mortar	Brick	ND
C98 AS-7-Mortar 1	Cabin - Exterior	18	Foundation	Cinder block and mortar	Mortar 1	ND
C98 AS-7-Mortar 2					Mortar 2	ND
C98 AS-8-Shingle	Cabin - Exterior	19	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
C98 AS-8-Tar Paper					Tar paper	ND
C98 AS-9-Shingle	Cabin - Exterior	20	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
C98 AS-9-Tar Paper					Tar paper	ND
C98 AS-10	Outhouse - Exterior	21	Roof	Asphalt shingle	Asphalt shingle	ND
C98 AS-11	Outhouse - Exterior	22	Foundation	Concrete	Concrete	ND
C98 AS-12	Cabin - Sleeping Area	23	Wall	Foil paper	Foil paper	ND

Notes:

C98 AS-DUP1 is a blind field duplicate of C98 AS-4

ND: Non-detect (<0.1 %)

Bold and underlined value indicates asbestos was detected but is below 1% by dry weight.

ACM: Asbestos containing material

Shaded value exceeds 1% asbestos by dry weight and is considered to be an ACM as outlined in the Newfoundland and Labrador Asbestos Abatement Regulations (Reg. 111/98).

Table C3-2: Paint Sample Descriptions and Lead Analytical Results (Camp 98)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
C98 PS-1	Cabin - Kitchen/Dining Area	24	Wall	Plywood	White paint on plywood (sample includes plywood)	10	62
C98 PS-2	Cabin - Kitchen/Dining Area	25	Wall	Wood	White paint on wood (sample includes wood)	10	40
C98 PS-DUP1						10	27
C98 PS-3	Cabin - Kitchen/Dining Area	26	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	**283**
C98 PS-4	Cabin - Exterior	-	Roof	Wood	White paint on wood (sample includes wood)	10	<10
C98 PS-5	Outhouse - Interior	27	Wall	Wood	White paint on wood (sample includes wood)	10	20
C98 PS-6	Outhouse - Interior	28	Door Frame	Wood	Grey paint on wood (sample includes wood)	10	30

Notes:

C98 PS-DUP1 is a blind field duplicate of C98 PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

HPA: Hazardous Products Act

Bold and underlined value exceeds Federal HPA criterion (90 mg/kg).

Shaded value exceeds former Federal HPA criterion (5,000 mg/kg).

Table C3-3: Paint Sample Descriptions and Mercury Analytical Results (Camp 98)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
C98 PS-1	Cabin - Kitchen/Dining Area	24	Wall	Plywood	White paint on plywood (sample includes plywood)	0.03	6.81
C98 PS-2	Cabin - Kitchen/Dining Area	25	Wall	Wood	White paint on wood (sample includes wood)	0.03	0.08
C98 PS-DUP1						0.03	0.07
C98 PS-3	Cabin - Kitchen/Dining Area	26	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	1.12
C98 PS-4	Cabin - Exterior	-	Roof	Wood	White paint on wood (sample includes wood)	0.03	0.49
C98 PS-5	Outhouse - Interior	27	Wall	Wood	White paint on wood (sample includes wood)	0.03	6.72
C98 PS-6	Outhouse - Interior	28	Door Frame	Wood	Grey paint on wood (sample includes wood)	0.03	0.33

Notes:

C98 PS-DUP1 is a blind field duplicate of C98 PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

HPA: Hazardous Products Act

CCME: Canadian Council of Ministers of the Environment

CSQG: Canadian Soil Quality Guideline

Bold and underlined value exceeds Federal HPA criterion (10 mg/kg).

Shaded value exceeds CCME CSQG for an industrial site (50 mg/kg).

Table C3-4: Paint Sample Descriptions and PCB Analytical Results (Camp 98)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
C98 PS-1	Cabin - Kitchen/Dining Area	24	Wall	Plywood	White paint on plywood (sample includes plywood)	0.5	<0.5
C98 PS-2	Cabin - Kitchen/Dining Area	25	Wall	Wood	White paint on wood (sample includes wood)	0.5	<0.5
C98 PS-DUP1						0.5	<0.5
C98 PS-3	Cabin - Kitchen/Dining Area	26	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
C98 PS-4	Cabin - Exterior	-	Roof	Wood	White paint on wood (sample includes wood)	0.5	<0.5
C98 PS-5	Outhouse - Interior	27	Wall	Wood	White paint on wood (sample includes wood)	0.5	<0.5
C98 PS-6	Outhouse - Interior	28	Door Frame	Wood	Grey paint on wood (sample includes wood)	0.5	<0.5

Notes:

C98 PS-DUP1 is a blind field duplicate of C98 PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

NL MAE: Newfoundland and Labrador Department of Municipal Affairs and Environment

TDG: Transportation of Dangerous Goods

Shaded value exceeds the criterion for PCB solid provided in the NL MAE Leachable Toxic Waste, Testing and Disposal Guidance Document and the TDG Regulations (50 mg/kg).

Table C3-5: Bulk Sample Descriptions and Mould Analytical Results (Camp 98)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
C98 M-1	Tape lift	Cabin - Wall	*Cladosporium*	Low
			Hyphal fragment	Rare

Notes:

Category	Count/Area Analyzed
Rare	1 to 10
Low	11 to 100
Medium	101 to 1000
High	>1000

APPENDIX

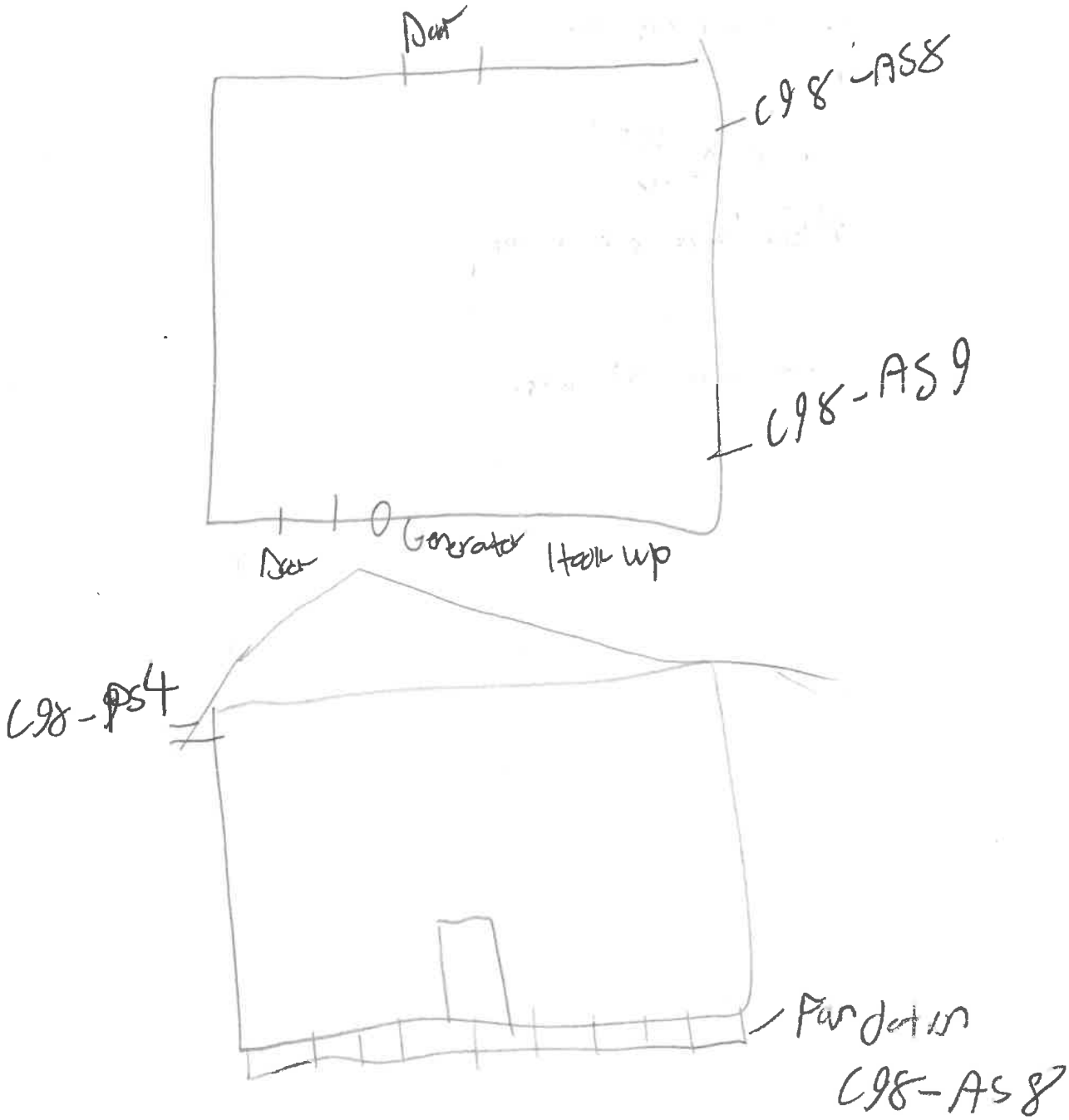
D3 ROOM-BY-ROOM INSPECTION SHEET

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
C98			Extn	34x24x15 Peak

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Cinder block foundation + Parge 3 cinder blocks Deep.	Flop		C98-AS8 = Cinder bl
Walls	Red Brick / mortar. New Section built on with Similar Materials	F		OLD Brick C98-AS5 New Brick C98-AS6
Ceiling	NEW: Black Shingle on tar on 2 layers of tar Paper OLD: Black Shing on tar on tar ppr			New Shingle: C98-AS7 OLD Shingle; C98-AS9
Paint	Floor Wall Ceiling Doors Windows Other Trim: White on wood			
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)				
Piping / Electrical / Mechanical Equipment				
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)				
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:

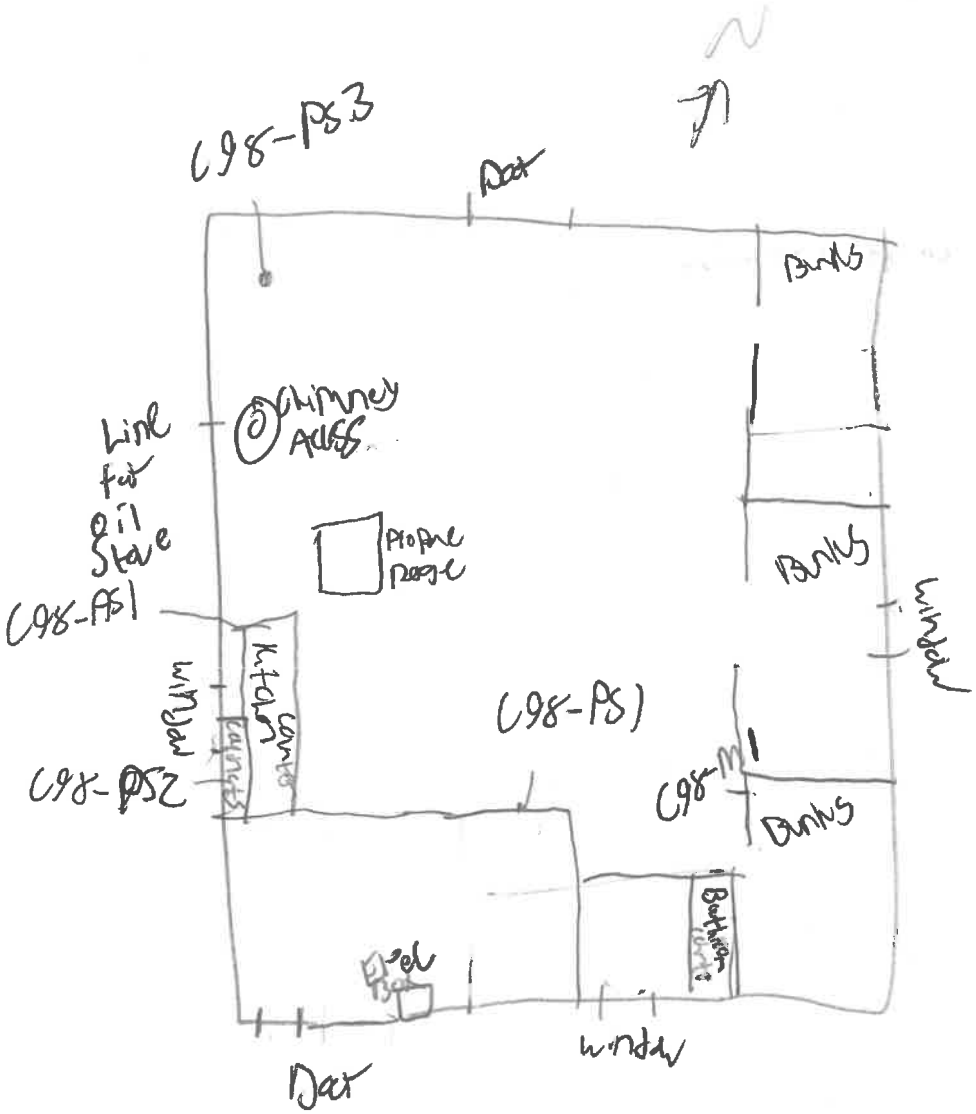

Door
C98-AS8
C98-AS9
Door
Generator Hook up
C98-PS4
Partition
C98-AS8

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Camp 98			Interior	32 x 24 x 8 ceiling is Peak

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Greyish on Plywood compromised in entrance.	F to P		
Walls	glossy white on Plywood	F to P		
Ceiling	glossy white on Plywood same as walls	F to P		
Paint	Floor grey on plywood Wall glossy white on plywood Ceiling glossy white on plywood (see walls) Doors Windows Other Cabinets: white on green on plywood			C98-PS1 = white wall C98-PS2 = Cubbard C98-PS3 = Floor,
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Tar Paper over Pink Fiberglass over Particleboard with tar paper new: foil on tar paper on Pink insulation over Particle board			C98-AS3 = Tar Paper/Pink Fiberglass NW = C98-AS12
Piping / Electrical / Mechanical Equipment	Electrical wiring for lighting plus panel box			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: CGE Gold label Serial #: 17A240E	Leaking / Other 1 Leaking	Total #: 2 # Checked: 2	Suspect PCBs: Check
Lighting (Incandescent, HID, etc.)	1 Battery Oped Smoke Detector 5 incandescent light			
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted Minor mould on Dividers for bunks. = C98-M1	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers Adhesive	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit) Kitchen counter: Faux wood laminate on Plywood = C98-AS1 Bathroom counter: Brown marble laminate counter top Adhesive = C98-AS2 Prefab Chimney.			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Brentwood propane Range 30 inch Fawcett Atlantic Oil Stove M#1308-ID Deep freeze: Wood company model E251 1 mini electric heater 3 unit			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:


C98-PS3
Door
Bunks
Link for oil Stove
Chimney Access
Propane Range
C98-PS1
Kitchen Counter
Window
C98-PS2
C98-PS
C98-M
Bunks
Window
Bathroom Counter
Door
Window

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Camp 98			Outhouse	6ft x 7ft x 7ft

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Concrete block Foundation Interior floor blue on plywd			C98-AS11
Walls	Interior white on plywood Exterior: Blue/grey on Plywood			
Ceiling	Shingles with tar on Plywood			Shingle: C98-AS1
Paint	Floor Wall Ceiling Doors Windows Other — See Above			White Paint C98-P Grey Paint = C98-P
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink foam insulation			
Piping / Electrical / Mechanical Equipment	PVC Pipe vent.			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)				
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:

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APPENDICES

4 RAINY LAKE CAMP

Rainy Lake Camp site is located along Transmission Line 228 (TL228), a 230 kilovolt (kV) transmission line which connects the Massey Drive Terminal Station and the Buchans Terminal Station (refer to Figure 4.1, Appendix A4). Camp 98 site is comprised of an accommodations cabin and an outhouse.

4.1 BUILDING DESCRIPTIONS

The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 71.5 m^2 (7.3 m x 9.8 m) (refer to Photos 1 to 4, Appendix B4). The floor plan of the cabin consists of a kitchen/dining area, a sleeping area and a washroom area (refer to Figure 4.2, Appendix A4). The foundation of the accommodations cabin consists of concrete blocks. The structure of the accommodations cabin consists of wood framing. The exterior walls on the accommodations cabin are finished with brick and the roof is finished with asphalt shingles. The window and exterior door openings on the accommodations cabin are barricaded with metal covers for security purposes. Interior wall and ceiling finishes in the accommodations cabin consists of painted plywood. Floors/floor finishes consist of painted plywood. Incandescent and fluorescent lighting was observed on the interior of the cabin. The accommodations cabin is not currently heated (formerly heated by oil stove).

The outhouse is a one-storey, rectangular structure with a footprint area of approximately 2.7 m^2 (1.5 m x 1.8 m) (refer to Photo 7, Appendix B4). The structure of the outhouse consists of wood framing. The foundation of the outhouse consists of concrete blocks. The exterior walls on the outhouse are finished with painted plywood and the roof is finished with asphalt shingles. Interior wall and ceiling finishes in the outhouse consist of painted plywood. Floor finishes consist of painted plywood. The outhouse does not contain any lighting or heating.

A description of accommodations cabin is outlined in Table 4.1 and a description of the outhouse is outlined in Table 4.2. Photographs of the buildings are provided in Appendix B4.

Table 4.1 Site Building Description – Accommodations Cabin

BUILDING NAME	ACCOMMODATIONS CABIN	PHOTO NO. (APPENDIX B4)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	1 to 4
Crawl Space (Yes/No)	Yes	6
Attic (Yes/No)	Yes	5
Type of Structure	Wood Frame	5
Type of Foundation	Concrete Blocks	6
Exterior	Brick	1 to 4
Window/Door Frames	Painted Metal and Wood	1, 2 and 4
Exterior Doors	Painted Metal	4
Roofing Materials	Asphalt Shingles	2 and 3
Interior Walls Finishes	Painted Plywood	14
Interior Ceiling Finishes	Painted Plywood	21
Floor Finishes	Painted Plywood	18
Interior Doors	NA	-

BUILDING NAME	ACCOMMODATIONS CABIN	PHOTO NO. (APPENDIX B4)
Interior Lighting	Fluorescent and Incandescent	21
Exterior Lighting	Incandescent	4
Heating	Not Heated (Former Oil Stove)	-

Table 4.2 Site Building Description - Outhouse

BUILDING NAME	OUTHOUSE	PHOTO NO. (APPENDIX B4)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	7
Crawl Space (Yes/No)	No	-
Attic (Yes/No)	No	-
Type of Structure	Wood Frame	7
Type of Foundation	Concrete Blocks	-
Exterior	Painted Plywood (Weathered)	7
Window/Door Frames	Painted Wood	7
Exterior Doors	Painted Plywood	-
Roofing Materials	Asphalt Shingles	-
Interior Walls Finishes	Painted Plywood	15
Interior Ceiling Finishes	Painted Plywood	-
Floor Finishes	Painted Plywood	-
Interior Doors	NA	-
Interior Lighting	NA	-
Exterior Lighting	NA	-
Heating	NA	-

4.2 FINDINGS

The findings documented in this section are based on observations made by WSP personnel at the time of the site visit on July 20, 2022 and the results of laboratory analyses of samples collected from Rainy Lake Camp. During the Pre-Demolition HBMA site visit, WSP personnel were accompanied by a representative of Hydro (Mr. Shane Jackson). Copies of room-by-room inspection sheets for the accommodations cabin and outhouse are provided in Appendix D4. Photos of the samples collected from the accommodations cabin and outhouse during the site visits are provided in Appendix B4.

4.2.1 ASBESTOS-CONTAINING MATERIALS (ACMS)

There are over 3,000 ACMs that are commercially available, which can be divided into two broad categories: friable and non-friable. ACMs were discontinued from use in Canada in the late 1970s/early 1980s, although non-friable asbestos is still found in many more recent buildings.

During the Pre-Demolition HBMA site visit, nine (9) building material samples (RLC AS-1 to RLC AS-8 and RLC AS-10), plus one (1) blind field duplicate (RLC AS-DUP1), were collected from the accommodations cabin and two (2) building material samples (RLC AS-9 and RLC AS-11) were collected from the outhouse and analyzed for asbestos content (refer to Photos 8 to 16, Appendix B4). Bulk sample descriptions and asbestos analytical results are summarized in Table C4.1, Appendix C4. Sample locations and analytical results are graphically illustrated on Figure 4.2, Appendix A4.

FRIABLE MATERIALS

Friable ACMs are defined as materials that can be crumbled, pulverized and reduced to powder when dry using hand pressure. Typical friable materials include acoustical or decorative spray applications, fireproofing and thermal insulation.

SPRAY-APPLIED FIREPROOFING, INSULATION AND TEXTURE FINISHES

There were no spray-applied fireproofing, insulation or texture finishes observed in the accommodations cabin or outhouse during the Pre-Demolition HBMA site visit; therefore, no samples of these materials were collected for analysis.

BUILDING AND THERMAL SYSTEM INSULATION

During the Pre-Demolition HBMA site visit, fiberglass insulation was observed in the attic and walls of the accommodations cabin (refer to Photo 5, Appendix B4). Thermal system insulation was not observed at Rainy Lake Camp.

One (1) sample of foil paper backing on the building insulation (RLC AS-8), plus one (1) blind field duplicate (RLC AS-DUP1; duplicate of RLC AS-8), was collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 14, Appendix B4). Asbestos was not detected in the foil paper samples.

NON-FRIABLE AND POTENTIALLY FRIABLE MATERIALS

Non-friable ACMs are hard or manufactured products such as floor tiles, fire blankets, pre-formed manufactured cementitious insulation and wallboards, pipes, and siding, wherein the asbestos fibres are bound to the substrate. Note that although a product may be considered non-friable when new, the product may release fine dust when disturbed (e.g., deterioration, removal, renovations) and the free dust is considered friable.

CEILING TILE

There were no ceiling tiles observed at Rainy Lake Camp during the Pre-Demolition HBMA site visit; therefore, no samples of ceiling tile were collected for analysis.

DRYWALL JOINT COMPOUND

There was no drywall joint compound observed at Rainy Lake Camp during the Pre-Demolition HBMA site visit; therefore, no samples of drywall joint compound were collected for analysis.

VINYL FLOORING PRODUCTS AND MASTICS

There was no vinyl flooring or products observed at Rainy Lake Camp during the Pre-Demolition HBMA site visit; therefore, no samples of vinyl flooring or products were collected for analysis.

BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

There were no baseboard, carpet or stair tread adhesives/mastics observed at Rainy Lake Camp during the Pre-Demolition HBMA site visit; therefore, no samples of these types of adhesives/mastics were collected for analysis.

ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, one (1) sample of shingle (RLC AS-6) was collected from the roof of the accommodations cabin and one (1) sample of shingle (RLC AS-9) was collected from the roof of the outhouse and analyzed for asbestos content (refer to Photos 13 and 15, Appendix B4). Asbestos was not detected in the roofing material samples collected from the accommodations cabin and outhouse.

It is important to note that, due to height and safety constraints, no samples of roofing, building materials around roof penetrations (e.g., caulking or sealants around vents, chimneys or electrical conduit) or roof seams were collected from the accommodations cabin for analysis.

CAULKING/SEALANT

Two (2) samples of caulking (RLC AS-3 and RLC AS-10) was collected from interior and exterior walls of the accommodations cabin and analyzed for asbestos content (refer to Photos 10 and 16, Appendix B4). Asbestos was detected in RLC AS-3 and RLC AS-10 at a concentration of <0.25% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), this material is not considered an asbestos-containing material.

MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

During the Pre-Demolition HBMA site visit, one (1) sample of brick and mortar (RLC AS-4) was collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photo 11, Appendix B4). Asbestos was not detected in the brick and mortar sample.

During the Pre-Demolition HBMA site visit, one (1) sample of cinder block and mortar (RLC AS-5) was collected from the concrete foundation of the accommodations cabin and one (1) sample of concrete (RLC AS-11) was collected from the concrete pad at the entrance to the outhouse and analyzed for asbestos content (refer to Photo 12, Appendix B4). Asbestos was not detected in the concrete and cinder block and mortar samples.

FIRE-RATED DOORS

Fire-rated doors and door frames were not observed during the Pre-Demolition HBMA site visit.

OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, one (1) sample of particle board with tar backing (RLC AS-7) was collected from a wall in the accommodations cabin and analyzed for asbestos content. Asbestos was not detected in the particle board sample.

During the Pre-Demolition HBMA site visit, two (2) samples of countertop mastics (RLC AS-1 and RLC AS-2) were collected from the accommodations cabin and analyzed for asbestos content (refer to Photos 8 and 9, Appendix B4). Asbestos was not detected in the countertop mastic samples.

Other potential ACMs were observed (or suspected to be present) and were not sampled due to the nature of the materials and/or hazards associated with sampling these materials. These materials included, but are not limited to, electrical and mechanical components and insulators such as wiring and gaskets, caulking or sealants around or along roof seams, vent pipes, chimneys, electrical conduits or other penetrations, and undercoatings on sinks (refer to Photos 1 and 2, Appendix B4).

Other possible hidden and inaccessible ACMs have the potential to be present within the accommodations cabin but were not identified during the Pre-Demolition HBMA site visit. These possible ACMs could include

concrete leveling compound (existing concrete foundation), possible fireproofing materials in the wall or ceiling cavities, piping/pipe joint sealants/gaskets and packing associated with cast iron pipe joints, fire rated structures or building materials, vapour barriers in walls, interior heat resistant components or gaskets inside appliances, wood/oil stoves and prefabricated chimneys, and underground infrastructure or piping.

4.2.2 PAINT ADDITIVES

Lead compounds have been used in paint as pigment and durability additives since the early 1800s. Mercury compounds have been used in paint as anti-microbial additives up until the 1990s. PCBs have been used in paint as plasticizers and corrosion resistance additives from the 1950s to the 1970s.

During the Pre-Demolition HBMA site visit, two (2) samples (RLC PS-1 and RLC PS-2), plus one (1) blind field duplicate (RLC PS-DUP1), were collected from painted surfaces of the accommodations cabin and two (2) samples (RLC PS-3 and RLC PS-4) were collected from painted surfaces of the outhouse and analyzed for lead, mercury and PCB content (refer to Photos 17 to 20, Appendix B4). Paint sample descriptions and lead, mercury and PCBs analytical results are summarized in Tables C4.2 to C4.4, Appendix C4. Sample locations and analytical results are graphically illustrated on Figure 4.2, Appendix A4.

LEAD IN PAINT

The concentrations of lead in the two (2) samples (RLC PS-1 and RLC PS-2), plus one (1) blind field duplicate (RLC PS-DUP1; duplicate of RLC PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (RLC PS-3 and RLC PS-4) collected from the outhouse ranged from 26 mg/kg to 45 mg/kg, and therefore, were below the Federal HPA criterion (90 mg/kg) (refer to Table C4.2, Appendix C4).

MERCURY IN PAINT

The concentrations of mercury in the two (2) samples (RLC PS-1 and RLC PS-2), plus one (1) blind field duplicate (RLC PS-DUP1; duplicate of RLC PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (RLC PS-3 and RLC PS-4) collected from the outhouse ranged from non-detect (<0.03 mg/kg) to 0.06 mg/kg, and therefore, were below the Federal HPA criterion (10 mg/kg) (refer to Table C4.3, Appendix C4).

PCBS IN PAINT

The concentrations of PCBs in the two (2) samples (RLC PS-1 and RLC PS-2), plus one (1) blind field duplicate (RLC PS-DUP1; duplicate of RLC PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (RLC PS-3 and RLC PS-4) collected from the outhouse were non-detect (<0.5 mg/kg), and therefore, were below the applicable criterion for PCB solid (50 mg/kg) (refer to Table C4.4, Appendix C4).

4.2.3 UREA FORMALDEHYDE FOAM INSULATION (UFFI)

Visual indicators suggesting the potential presence of UFFI were not observed at Rainy Lake Camp. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photo 5, Appendix B4). Since the original date of construction of Rainy Lake Camp was 1985, it is not likely that UFFI is present in the cabin.

4.2.4 SUSPECTED VISIBLE MOULD GROWTH (SVG)

WSP inspected the interior areas of the accommodations cabin and outhouse for visual or olfactory evidence of suspected mould. SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin during the Pre-Demolition HBMA site visit. One (1) sample (RLC M-1) of the suspect mould material was collected from the surfaces of a wall for laboratory analysis to confirm the presence/absence of mould (refer to Figure 4.2, Appendix A4).

The results of mould analysis determined that tape lift sample RLC M-1 contained Aspergillus/Penicillium and Cladosporium mould with hyphal fragments (refer to Table C4.5, Appendix C4).

4.2.5 MERCURY-CONTAINING THERMOSTATS

Thermostats were not identified inside the accommodations cabin at Rainy Lake Camp during the Pre-Demolition HBMA site visit.

4.2.6 PCB-CONTAINING LIGHT BALLASTS

Two fluorescent light fixtures were observed on the interior of the accommodations cabin during the Pre-Demolition HBMA site visit. The labels on the fluorescent light fixtures indicated that the ballasts were manufactured by Canadian General Electric (CGE). According to the August 1991 Environment Canada document entitled, Identification of Lamp Ballasts Containing PCBs, Report EPS 2/CC/2 (revised), if the final letter in the CGE manufacturer's code is an E the ballast does not contain PCBs. Since the manufacturer's code on the CGE ballasts was noted as 17A240E, it is assumed that the fluorescent light ballasts do not contain PCBs (refer to Photos 22, Appendix B4).

4.2.7 POTENTIAL SOURCES OF ODS AND HALOCARBONS

During the Pre-Demolition HBMA, a potential source of ODS was identified within the accommodations cabin. Results of the ODS inspection is summarized in Table 4.3.

Table 4.3 Potential Sources of ODSs

ITEM	MANUFACTURER	MODEL (SERIAL NO.)	LOCATION OBSERVED	PHOTO NO. (APPENDIX B4)	REFRIGERANT	POTENTIAL ODS
Freezer	General Freezer	GC9L	Kitchen Area	23	R12	Yes

Based on observations made during the site visit, ODSs are present in the accommodations cabin in the form of refrigerant R12 contained in a freezer (refer to Photo 23, Appendix B4). This refrigerant (R12) is a hydrochlorofluorocarbon (HCFC) and is regulated under the Federal Halocarbon Regulations.

Fire extinguishers were not observed at Rainy Lake Camp during the Pre-Demolition HBMA site visit.

4.2.8 OTHER POTENTIALLY HAZARDOUS BUILDING MATERIALS OR SUBSTANCES

Other potentially hazardous building materials or substances identified during this assessment are presented in the following sections.

LEAD-CONTAINING MATERIALS AND EQUIPMENT

Lead is typically associated with plumbing solder and older pipe materials (e.g., cast iron pipe joints), as well as products such as radiation protective shielding and lead-acid batteries. Lead can also be present in steel and iron primer, industrial electrical jacketing, roof flashing and tank linings.

No suspected lead-containing materials and equipment were identified during the Pre-Demolition HBMA site visit.

MERCURY-CONTAINING MATERIALS AND EQUIPMENT

Fluorescent light fixtures were observed on the interior of the accommodations cabin during the Pre-Demolition HBMA site visit. The light tubes and bulbs in fluorescent light fixtures often contain limited quantities of mercury in a powder or vapour form.

PCB-CONTAINING MATERIALS AND EQUIPMENT

According to the USEPA, PCBs may be present in caulking used in windows, door frames, masonry columns and other building materials in buildings built or renovated between 1950 and 1979. In addition, and as mentioned previously, insulating fluids and cooling oils in electrical equipment (i.e., transformers, fluorescent light ballasts, capacitors, etc.) often contained PCBs until around 1980.

No suspected PCB-containing materials and equipment were identified during the Pre-Demolition HBMA site visit.

TREATED WOOD CHEMICALS

The chemicals that are used to protect and preserve wood products from insect attack and fungal decay may pose risks to human health and the environment. Depending on the wood treatment used, treated wood may be considered a hazardous waste upon disposal. The NL Department of Environment and Conservation (currently the NL MAE), 2015 Guidance Document for Treated Wood Waste Disposal (GD-PPD-075.1) provides landfill disposal standards for "pressure treated" inorganic preservatives (i.e., arsenic and chromium) and creosote (i.e., total cresol and benzo(a)pyrene) and chlorophenolic (i.e., pentachlorophenol) formulations used to preserve wood. These landfill disposal standards for treated wood waste (TWW) are used to assess the results of leachability testing to determine disposal options for treated wood to be removed during renovation or demolition activities.

Treated wood was not identified at Rainy Lake Camp during the Pre-Demolition HBMA site visit.

SILICA

According to the CPWR – The Center for Construction Research and Training, many common construction materials contain silica including, asphalt, brick, cement, concrete, drywall, grout, mortar, stone, sand and tile. The dust created by cutting, grinding, drilling or otherwise disturbing these materials can contain crystalline silica particles.

Based on the Pre-Demolition HBMA site visit, silica is expected to be present in the concrete, mortar and asphalt shingles used in the construction of the accommodations cabin and outhouse. Silica may also be present in the brick and mortar used in the construction of the accommodations cabin.

RADIOACTIVE MATERIALS

Smoke detectors were not observed at Rainy Lake Camp during the Pre-Demolition HBMA site visit.

4.3 CONCLUSIONS AND RECOMMENDATIONS

Based on observations made and information gathered during the Pre-Demolition HBMA, the following conclusions and recommendations are made with respect to the potential and actual presence of hazardous building materials at Rainy Lake Camp.

4.3.1 ACMS

Results of the asbestos sampling and analytical program revealed that building materials sampled at the time of the Pre-Demolition HBMA were non-detect (<0.1%) for asbestos, with the exception of caulking on the interior and exterior of the accommodations cabin which contained <0.25% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), the caulking is not considered an asbestos-containing material.

Other potential ACMs were observed (or suspected to be present) and were not sampled due to the nature of the materials and/or hazards associated with sampling these materials. These materials included, but are not limited to:

- Electrical and mechanical components and insulators such as wiring and gaskets.
- Caulking or sealants around or along roof seams, vent pipes, chimneys, electrical conduits or other penetrations.
- Undercoatings on sinks.

Other possible hidden and inaccessible ACMs have the potential to be present within the buildings at Rainy Lake Camp but were not identified during the Pre-Demolition HBMA site visit. These possible ACMs could include concrete leveling compound (existing concrete foundation), possible fireproofing materials in the wall or ceiling cavities, piping/pipe joint sealants/gaskets and packing associated with cast iron pipe joints, fire rated structures or building materials, vapour barriers in walls, interior heat resistant components or gaskets inside appliances, wood/oil stoves and prefabricated chimneys, and underground infrastructure or piping.

If other potential ACMs that were not sampled as part of this assessment are encountered in the future, these materials should be treated as ACMs or samples should be collected and tested to verify asbestos content. This should be done as soon as these materials are encountered and before these materials are disturbed. This includes materials that are currently concealed by walls and ceiling systems.

In accordance with the NL Asbestos Abatement Regulations (Reg. 111/98), which provide the legislative requirements for safe handling of ACMs in workplaces in the Province of NL, the following is recommended:

- Safe work procedures shall be established.
- All buildings constructed during the period when asbestos was readily used in construction (generally prior to the early 1980s) or any buildings that are suspected as having asbestos must have a written assessment and management plan (where applicable) for potential ACMs.
- Materials suspected of containing asbestos are required to be handled as ACMs, until analysis by a competent laboratory determines whether or not it does contain asbestos.
- Prior to general demolition, all ACMs must be safely removed from the building and disposed of in accordance with appropriate environmental guidelines by an asbestos abatement contractor registered with the Occupational Health and Safety (OHS) Division of Service NL.
- Most work involving ACMs (i.e., disturbance, removal and encapsulation) must be conducted by a contractor registered with the OHS Division of Service NL.
- ACMs in good condition should be inspected on an annual basis.
- ACMs in poor condition should be removed from the building and transported off-site for proper disposal.
- Workers should don adequate respiratory protection and personal protective equipment (PPE) when working with ACMs.

Prior to the removal and/or abatement of any identified ACMs (or any other hazardous building materials), an abatement plan including technical specifications should be designed, prepared and supervised by a qualified professional and should be undertaken by qualified trades, in accordance with applicable standards. Activities involving the disturbance and/or removal of ACMs should be carried out in a manner that ensures asbestos fiber concentrations do not exceed the applicable American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV). ACMs can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.

4.3.2 LEAD, MERCURY AND PCBS IN PAINT

Results of the paint sampling and analytical program revealed the following:

- Lead and Leachable Lead in Paint
    - The concentrations of lead in the two (2) samples (RLC PS-1 and RLC PS-2), plus one (1) blind field duplicate (RLC PS-DUP1; duplicate of RLC PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (RLC PS-3 and RLC PS-4) collected from the outhouse ranged from 26 mg/kg to 45 mg/kg.
    - The concentrations of lead in all five (5) paint samples were below the Federal HPA criterion (90 mg/kg); and therefore, these paints are not considered to be LBPs and are not likely to be leachable for lead.

- Mercury and Leachable Mercury in Paint
    - The concentrations of mercury in the two (2) samples (RLC PS-1 and RLC PS-2), plus one (1) blind field duplicate (RLC PS-DUP1; duplicate of RLC PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (RLC PS-3 and RLC PS-4) collected from the outhouse ranged from non-detect (<0.03 mg/kg) to 0.06 mg/kg, and therefore, were below the Federal HPA criterion (10 mg/kg). These paints are not considered to be MBPs and are not likely to be leachable for mercury.
- PCBs in Paint
    - PCBs were not detected (<0.5 mg/kg) in the two (2) samples (RLC PS-1 and RLC PS-2), plus one (1) blind field duplicate (RLC PS-DUP1; duplicate of RLC PS-2), collected from painted surfaces of the accommodations cabin and two (2) samples (RLC PS-3 and RLC PS-4) collected from the outhouse, and therefore, were below the applicable criterion for PCB solid (50 mg/kg).

Based on the paint sample analytical results, the paint samples collected from accommodations cabin and outhouse are not likely to be leachable for lead or mercury, and do not contain PCBs. Should disposal be required (e.g., renovation or demolition activities), the paints analyzed for lead, mercury and PCB content may be disposed of at an approved landfill facility, pending landfill and Provincial regulatory approval.

There are potential adverse human health impacts associated with disturbing (e.g., scraping, sanding, burning, etc.) lead, mercury or PCB-containing paint finishes, due to the potential for dust, mist or fumes to be released and inhaled or ingested by workers. Given that lead-based paint was identified at the site, as a precautionary measure, WSP recommends handling these paint finishes, as follows:

- In areas of minor peeling or flaking, the paint should be removed using wet scraping techniques.
- In areas of extensive peeling and flaking, the paint should be removed and more extensive particulate control measures may be required.
- In areas where lead-containing paint finishes are present and in poor condition, an experienced contractor should be utilized for renovating, decommissioning or demolition activities.
- Prior to renovation, dismantling or demolition activities, all areas of extensive peeling and flaking of lead-containing paint finishes and paint debris/dust should be removed and/or remediated to ensure that building occupants/workers are protected from associated dust/particulate.
- Procedures should be implemented to ensure that workers and anyone present in and around areas being renovated, dismantled or demolished are protected. The contractor should also ensure that dust generation and migration is minimized.
- Precautions should be taken to prevent/reduce exposure to paint dust during any disturbance of lead-containing paint finishes, such as wetting the surface of the materials to prevent dust emissions, donning respiratory protection, and cleaning tools and clothing prior to exiting work areas.
- Where possible, lead-containing paint finishes should be removed from metal surfaces prior to welding or cutting these materials.

If potential lead, mercury or PCB containing paint finishes that were not sampled during this assessment are encountered in future, prior to any disturbance or removal, samples should be obtained and tested to verify concentrations of lead, mercury and PCBs. This includes materials that are currently concealed by walls and ceiling systems.

Any disturbance or removal of lead, mercury or PCB-containing paint finishes that may generate dust or respirable aerosols must conform to the Federal and Provincial OHS Regulations. All work should be carried out by individuals wearing proper PPE. The type of respiratory protection and control measures to be implemented during the removal of these types of paint finishes should be determined by a qualified person and based on the risk level of a particular work activity (i.e., scraping, sanding, abrasive blasting, etc.). Activities involving the disturbance and/or removal of lead, mercury or PCB-containing paint finishes should be carried out in a manner that ensures paint dust concentrations do not exceed the applicable ACGIH TLVs.

4.3.3 MOULD

SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin. One (1) sample (RLC M-1) of the suspect mould material was collected from the surfaces of a wall for laboratory analysis. The sample confirmed the presence of Aspergillus/Penicillium and Cladosporium mould.

During demolition, precautions should be taken to prevent/reduce exposure to mould spores during any disturbance/demolition of mould impacted materials, such as donning appropriate respiratory protection, and cleaning tools and clothing prior to exiting work areas.

4.3.4 POTENTIAL ODS

Based on observations made during the site visit, ODSs are present in the accommodations cabin in the form of refrigerant R12 contained in a freezer. This refrigerant (R12) is a HCFC and is regulated under the Federal Halocarbon Regulations.

Ozone depleting substances (ODS), if present, should be removed by an approved contractor prior to disposing of any cooling and/or refrigeration equipment. The use, storage, operation, maintenance, decommissioning, and disposal of ODS containing equipment, in general, is regulated at both a Provincial and Federal level and must comply with the most recent NL Halocarbon Regulations and the Federal Halocarbon Regulations. The status of the potential ODS containing equipment should be confirmed through a mechanical contractor or consultant.

4.3.5 SILICA CONTAINING MATERIALS

Silica is expected to be present in the concrete, mortar and asphalt shingles used in the construction of the accommodations cabin and outhouse. Silica may also be present in the brick and mortar used in the construction of the accommodations cabin. Precautions should be taken to prevent/reduce exposure to silica dust during any disturbance/ demolition of silica-containing products, such as wetting the surface of the materials to prevent dust emissions, donning respiratory protection, and cleaning tools and clothing prior to exiting work areas. Activities involving the disturbance and/or demolition of silica-containing materials should be carried out in a manner that ensures silica dust concentrations do not exceed the applicable ACGIH TLV.

4.3.6 SUMMARY OF FINDINGS

Hazardous building materials identified at Rainy Lake Camp during this Pre-Demolition HBMA and disposal options, if required, are summarized in Table 4.4. Conclusions and recommendations made with respect to the potential and actual presence of hazardous building materials within the accommodations cabin and outhouse are provided in Section 4.3 and should be reviewed in conjunction with Table 4.4.

Table 4.4 Summary of Disposal Options for Confirmed and Potential Hazardous Buildings Materials

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
ACMs	NL Asbestos Abatement Regulations (Reg. 111/98)	None identified. Note that other possible hidden and inaccessible ACMs have the potential to be present within the accommodations building but were not identified during the Pre-Demolition HBMA site visit.	ACMs cannot be disposed of at a Construction & Demolition Site; however, these materials can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility. The transportation and disposal of asbestos should be conducted in accordance with the NL Asbestos Abatement Regulations (Reg. 111/98) and with Standard Operating Procedures (SOPs) for disposal of ACMs at the landfill.
LBPs	Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Surface Coating Materials Regulations (SOR/2016-193)	None Identified.	Paints that were analyzed for lead and contained <5,000 mg/kg lead, may be disposed of at a Regional Solid Waste Disposal Facility (landfill), provided permission is obtained from the landfill owner/operator.
Potential UFFI	Federal HPA (R.S.1985, c. H-3)	None Identified.	UFFI is permitted to be bagged and transported to an approved WDS and disposed in the special waste area of the site.
Mould	Mould Guidelines for the Canadian Construction Industry, Canadian Construction Industry (CCI), 2018; Mould Abatement Guidelines, Environmental Abatement Council of Canada (EACC), 2015	Mould growth present on interior of accommodations cabin.	All mould impacted materials may be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.
Potential ODS	Federal Halocarbon Regulations (SOR/2003-289)	R12 refrigerant in freezer.	Materials containing ODS should be received by a contractor or facility that has the proper approvals to remove, handle and/or dispose of ODS. The remaining materials can be disposed of at a recycling facility, provided permission is obtained from the facility.

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Potential Lead-Containing Materials/ Equipment	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301)	None identified.	Lead-containing materials and equipment can be disposed of at a metal recycling or hazardous waste disposal facility, in accordance with applicable regulations. The transportation and disposal of hazardous lead-containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.
Potential Mercury-Containing Materials/ Equipment	Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Products Containing Mercury Regulations (SOR/2014-254)	Four (4) mercury-containing fluorescent light tubes are present inside accommodations cabin.	Mercury-containing materials and equipment can be disposed of at a recycling or hazardous waste disposal facility, in accordance with applicable regulations. The transportation and disposal of hazardous mercury-containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Potential PCB-Containing Materials/ Equipment	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Federal TDG Act (1992, c. 34) Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301) PCB Regulations (SOR/2008-273) PCB Waste Export Regulations (SOR/97-109) Regulations Amending the PCB Regulations (SOR/2010-57)	None identified.	Any PCB-containing materials and equipment should be handled, decontaminated, transported and disposed of as per current Federal and Provincial acts and regulations. Any PCB-containing materials and equipment requiring removal from the building should be transported and disposed of by a registered hazardous waste transporter in accordance with applicable regulations. The transportation and disposal of PCB containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.
Silica-Containing Materials	NL OHS Act (RSNL1990 Chapter O-3) NL OHS Regulations (5/12)	Concrete, cinder block and mortar, brick and mortar, and asphalt shingles.	These materials can be disposed of at a Regional Solid Waste Disposal Facility (landfill).
Potential Radioactive Materials	Federal TDG Act (1992, c. 34)	None Identified.	Smoke detectors that contain low level radioactive materials must be transported, as per Federal TDG Regulations, to a licensed disposal facility.

APPENDIX

A4 FIGURES

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
3. THIS FIGURE IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION OF THE STUDY AREA IN SUPPORT OF THIS REPORT.
4. ALL LOCATIONS, DIMENSIONS, AND ORIENTATIONS ARE APPROXIMATE.
5. THIS FIGURE SHOULD NOT BE USED FOR PURPOSES OTHER THAN THOSE OUTLINED ABOVE.
6. THIS FIGURE CONTAINS INTELLECTUAL PROPERTY OF NEWFOUNDLAND LABRADOR HYDRO AND MAY NOT BE REPRODUCED OR COPIED WITHOUT THEIR WRITTEN CONSENT.

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Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 228, NL and Mini-Hydroelectric Facility Site, Venams Bight, NL

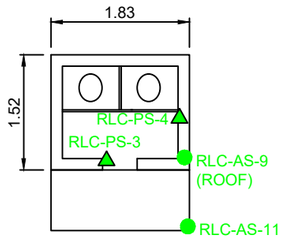
Title: Site Location Plan - Rainy Lake Camp

Date: October 2022

Project No. TE22104005.2000

Rev. No. 0

Figure No. 4.1



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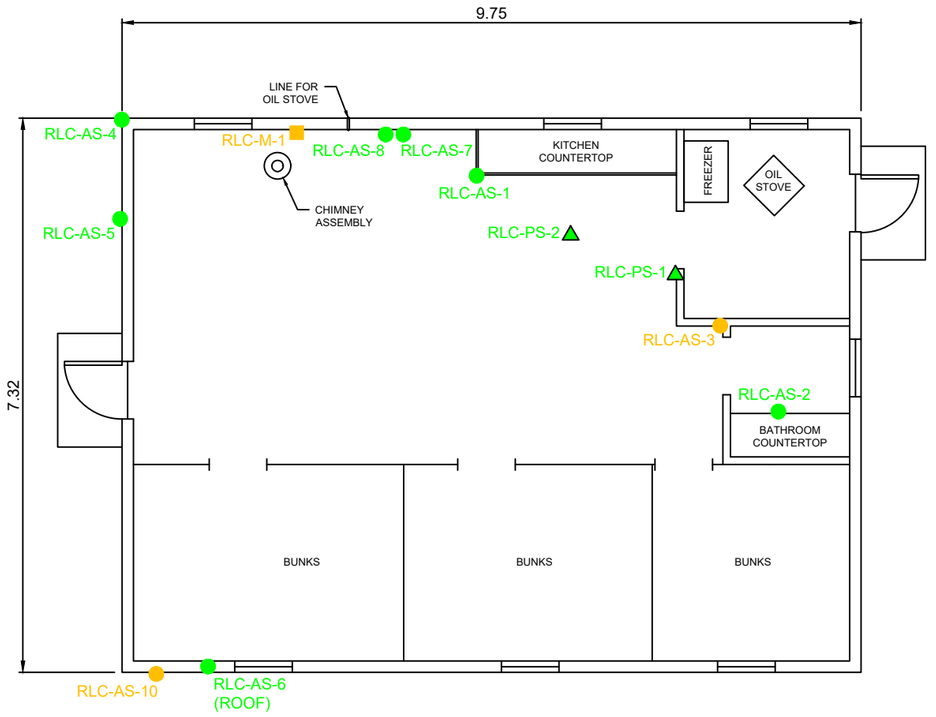

ACCOMMODATIONS CABIN

SCALE
0m 2m 4m

LEGEND:

- ASBESTOS SAMPLE LOCATION - ASBESTOS NOT DETECTED
- ASBESTOS SAMPLE LOCATION - RESULTS < 1% FOR ASBESTOS
- PAINT SAMPLE LOCATION - NO CRITERIA EXCEEDANCES FOR LEAD OR MERCURY OR PCBs WHERE APPLICABLE
- MOULD GROWTH DETECTED - RARE

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
3. THIS FIGURE IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION OF THE STUDY AREA IN SUPPORT OF THIS REPORT.
4. ALL LOCATIONS, DIMENSIONS, AND ORIENTATIONS ARE APPROXIMATE.
5. THIS FIGURE SHOULD NOT BE USED FOR PURPOSES OTHER THAN THOSE OUTLINED ABOVE.
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Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 228, NL and Mini-Hydroelectric Facility Site, Venams Bight, NL

Title: Sample Location Plan - Rainy Lake Camp

Date: October 2022

Project No. TE22104005.2000

Rev. No. 0

Figure No. 4.2

APPENDIX

B4 PHOTOGRAPHIC RECORD

Photo 1: View of the accommodations cabin at Rainy Lake Camp.

Photo 2: View of the accommodations cabin at Rainy Lake Camp.

Photo 3: View of the accommodations cabin at Rainy Lake Camp.

Photo 4: View of the accommodations cabin at Rainy Lake Camp.

Photo 5: View of the attic in the accomodations cabin at Rainy Lake Camp.

Photo 6: View of the crawl space beneath the accomodations cabin at Rainy Lake Camp.

Photo 7: View of the outhouse at Rainy Lake Camp.

Photo 8: View of bulk material sample RLC AS-1, countertop mastic, cabin interior.

Photo 9: View of bulk material sample RLC AS-2, countertop mastic, cabin interior.

Photo 10: View of bulk material sample RLC AS-3, caulking, cabin interior.

Photo 11: View of bulk material sample RLC AS-4, brick and mortar, cabin interior.

Photo 12: View of bulk material sample RLC AS-5, cinder block and mortar, cabin exterior.

Photo 13: View of bulk material sample RLC AS-6, shingle, cabin exterior.

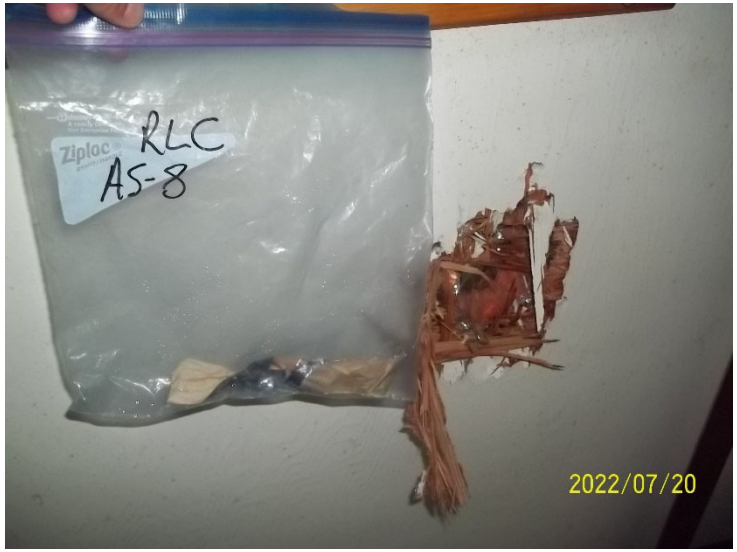


Photo 14: View of bulk material sample RLC AS-8, foil paper, cabin exterior.

Photo 15: View of bulk material sample RLC AS-9, shingle, outhouse exterior.

Photo 16: View of bulk material sample RLC AS-10, caulking, cabin exterior.

Photo 17: View of paint sample RLC PS-1, wall, cabin interior.

Photo 18: View of paint sample RLC PS-2, floor, cabin interior.

Photo 19: View of paint sample RLC PS-3, wall, outhouse interior.

Photo 20: View of paint sample RLC PS-4, trim, outhouse interior.

Photo 21: View of fluorescent light fixtures, cabin interior.

Photo 22: View of fluorescent light ballast, cabin interior.

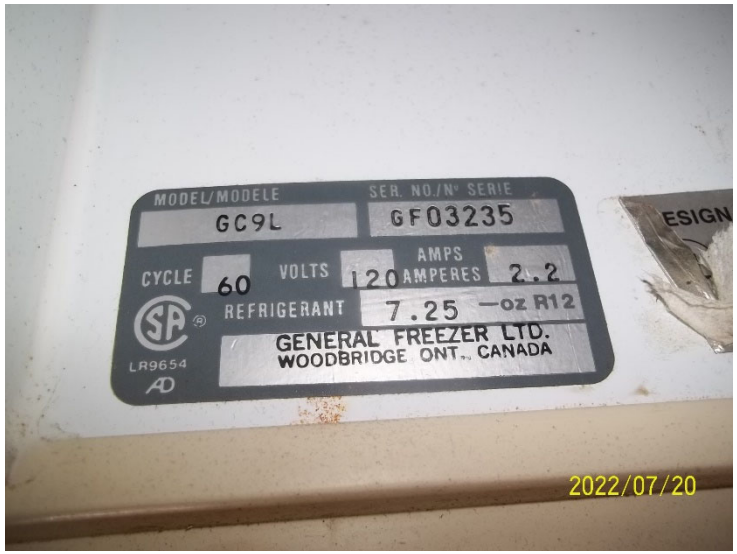


Photo 23: View of freezer label, cabin interior.

APPENDIX

C4 SAMPLE AND ANALYTICAL SUMMARY TABLES

Table C4-1: Bulk Sample Descriptions and Asbestos Analytical Results (Rainy Lake Camp)

Sample ID	Room Description	Photo No.	Sample Location	Sample Description	Layers Analyzed	Analytical Result
RLC AS-1-Red Mastic	Cabin - Kitchen Area	8	Countertop	Countertop mastic	Mastic	ND
RLC AS-1-Tan Mastic					Mastic	ND
RLC AS-2	Cabin - Washroom Area	9	Countertop	Countertop mastic	Mastic	ND
RLC AS-3	Cabin - Kitchen/Dining Area	10	Wall	Caulking	Caulking	**<u><0.25% Chrysotile</u>**
RLC AS-4-Brick	Cabin - Exterior	11	Wall	Brick and mortar	Brick	ND
RLC AS-4-Mortar					Mortar	ND
RLC AS-5-Concrete Block	Cabin - Exterior	12	Foundation	Cinder block and mortar	Cinder block	ND
RLC AS-5-Mortar					Mortar	ND
RLC AS-6	Cabin - Exterior	13	Roof	Asphalt shingle	Asphalt shingle	ND
RLC AS-7-Tar Paper	Cabin - Kitchen/Dining Area	-	Wall	Particle board with tar paper	Tar paper	ND
RLC AS-7-Fibreboard					Fibreboard	ND
RLC AS-8	Cabin - Kitchen/Dining Area	14	Wall	Foil paper	Foil paper	ND
RLC AS-DUP1					Foil paper	ND
RLC AS-9	Outhouse - Exterior	15	Roof	Asphalt shingle	Asphalt shingle	ND
RLC AS-10	Cabin - Exterior	16	Wall	Caulking	Caulking	**<u><0.25% Chrysotile</u>**
RLC AS-11	Outhouse - Exterior	-	Foundation	Concrete pad	Concrete	ND

Notes:

RLC AS-DUP1 is a blind field duplicate of RLC AS-8

ND: Non-detect (<0.1 %)

Bold and underlined value indicates asbestos was detected but is below 1% by dry weight.

ACM: Asbestos containing material

Shaded value exceeds 1% asbestos by dry weight and is considered to be an ACM as outlined in the Newfoundland and Labrador Asbestos Abatement Regulations (Reg. 111/98).

Table C4-2: Paint Sample Descriptions and Lead Analytical Results (Rainy Lake Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
RLC PS-1	Cabin - Kitchen/Dining Area	17	Wall	Wood	White paint on wood (sample includes wood)	10	30
RLC PS-2	Cabin - Kitchen/Dining Area	18	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	26
RLC PS-DUP1						10	26
RLC PS-3	Outhouse - Interior	19	Door Frame	Wood	Grey paint on wood (sample includes wood)	10	33
RLC PS-4	Outhouse - Interior	20	Wall	Wood Trim	White paint on wood trim (sample includes wood)	10	45

Notes:

RLC PS-DUP1 is a blind field duplicate of RLC PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

HPA: Hazardous Products Act

Bold and underlined value exceeds Federal HPA criterion (90 mg/kg).

Shaded value exceeds former Federal HPA criterion (5,000 mg/kg).

Table C4-3: Paint Sample Descriptions and Mercury Analytical Results (Rainy Lake Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
RLC PS-1	Cabin - Kitchen/Dining Area	17	Wall	Wood	White paint on wood (sample includes wood)	0.03	0.06
RLC PS-2	Cabin - Kitchen/Dining Area	18	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	<0.03
RLC PS-DUP1						0.03	<0.03
RLC PS-3	Outhouse - Interior	19	Door Frame	Wood	Grey paint on wood (sample includes wood)	0.03	<0.03
RLC PS-4	Outhouse - Interior	20	Wall	Wood Trim	White paint on wood trim (sample includes wood)	0.03	<0.03

Notes:

RLC PS-DUP1 is a blind field duplicate of RLC PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

HPA: Hazardous Products Act

CCME: Canadian Council of Ministers of the Environment

CSQG: Canadian Soil Quality Guideline

Bold and underlined value exceeds Federal HPA criterion (10 mg/kg).

Shaded value exceeds CCME CSQG for an industrial site (50 mg/kg).

Table C4-4: Paint Sample Descriptions and PCB Analytical Results (Rainy Lake Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
RLC PS-1	Cabin - Kitchen/Dining Area	17	Wall	Wood	White paint on wood (sample includes wood)	0.5	<0.5
RLC PS-2	Cabin - Kitchen/Dining Area	18	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
RLC PS-DUP1						0.5	<0.5
RLC PS-3	Outhouse - Interior	19	Door Frame	Wood	Grey paint on wood (sample includes wood)	0.5	<0.5
RLC PS-4	Outhouse - Interior	20	Wall	Wood Trim	White paint on wood trim (sample includes wood)	0.5	<0.5

Notes:

RLC PS-DUP1 is a blind field duplicate of RLC PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

NL MAE: Newfoundland and Labrador Department of Municipal Affairs and Environment

TDG: Transportation of Dangerous Goods

Shaded value exceeds the criterion for PCB solid provided in the NL MAE Leachable Toxic Waste, Testing and Disposal Guidance Document and the TDG Regulations (50 mg/kg).

Table C4-5: Bulk Sample Descriptions and Mould Analytical Results (Rainy Lake Camp)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
RLC M-1	Tape lift	Cabin - Wall	*Aspergillus/Penicillium*	Rare
			Cladosporium	Rare
			Hyphal fragment	Rare

Notes:

Category	Count/Area Analyzed
Rare	1 to 10
Low	11 to 100
Medium	101 to 1000
High	>1000

APPENDIX

D4 ROOM-BY-ROOM INSPECTION SHEETS

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Bear Lake Outpost Camp			Outhouse	6x5x7

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	concrete Block with Mortar	F to P		RLC-AS 11
Walls	Exterior: Grey on Plywood Interior: White on Plywood	P		Shingle RLC-AS 9
Ceiling	AS Felt Shingle with tar on wood. Plywood interior White	P		
Paint	Floor Grey on plywood Wall White on Plywood Ceiling Doors exter: Grey on plywood Windows Other door: Grey on plywood	P		Interior wall: RLC-PS 10 exterior/door: RLC-PS 3
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink fiberglass insulation Payleaf in floor.			
Piping / Electrical / Mechanical Equipment	PVC pipe for venting			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	1 incandescent			
Thermostats	Manufacturer Dial Colour Casing Shape Wall/Floor Mounted		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

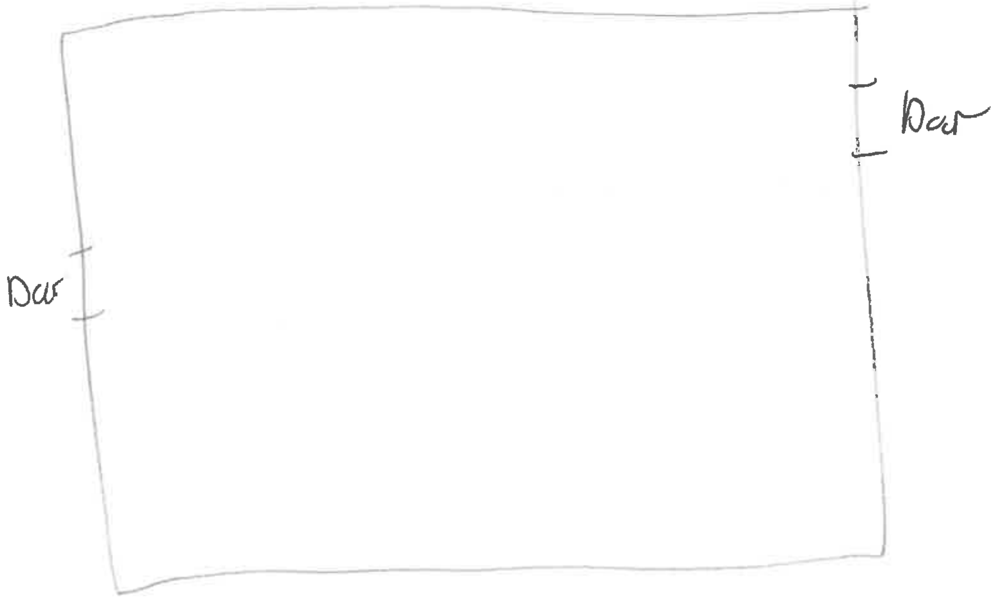
Notes/Comments:

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Rainy Lake Camp			Exterior	

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Concrete Block foundation with mortar 7 possibly 8' Deep	F		Block + Mortar RLC-AS5
Walls	Red Brick + mortar Caulking along eave	F		Brick: RLC-AS4 + Mortar Caulking: RLC-AS10
Ceiling	Asphalt Shingles with tar on tar Paper on wood	P		Shingle: RLC-AS6
Paint	Floor Wall Ceiling Doors Windows Other			
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink batt insulation in attic			
Piping / Electrical / Mechanical Equipment				
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)				
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Whirly Bird missing off Roof Pre fab Chimney			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:


Dar
Dar

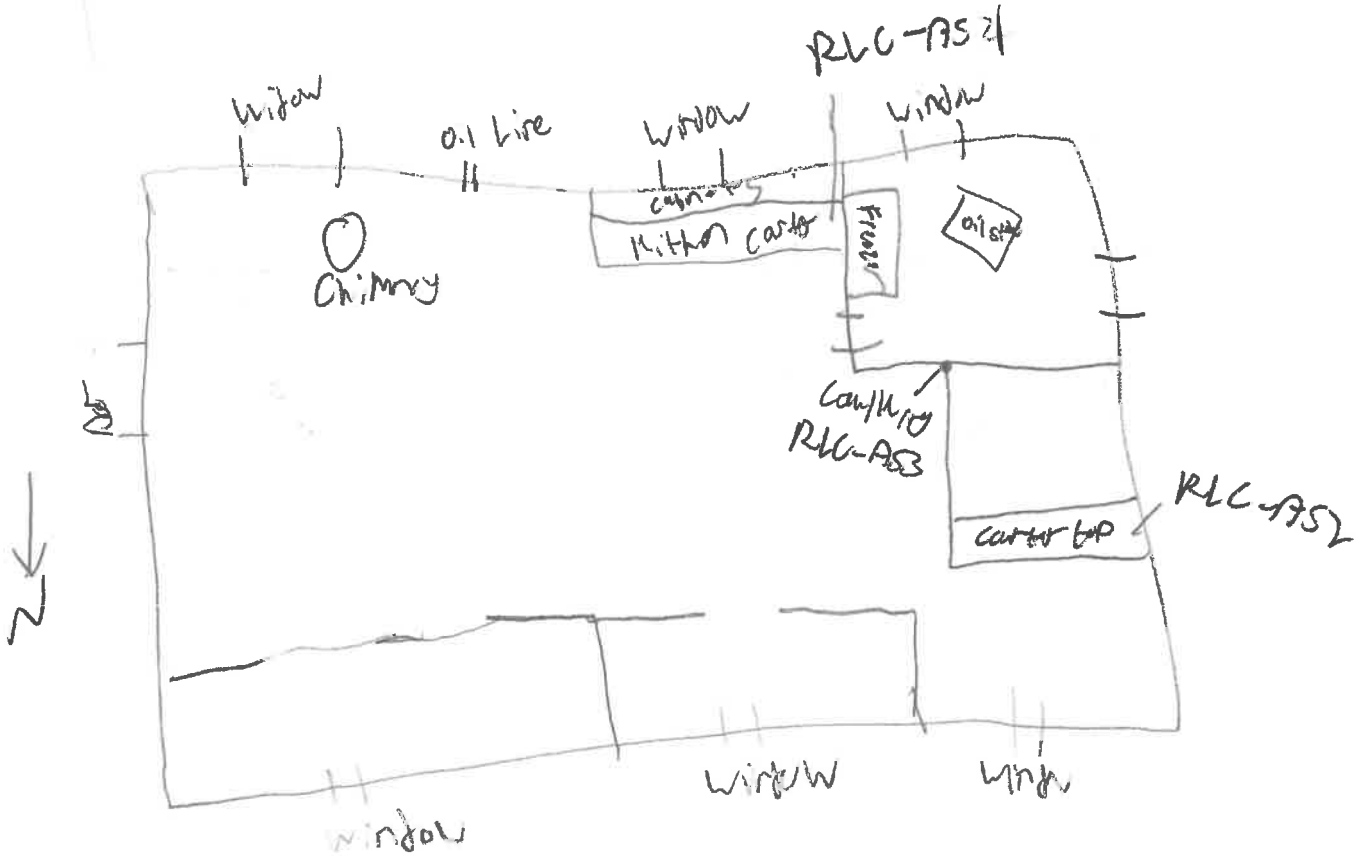

Top
RLC-AS10
RLC-AS6
RLC-AS4

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Rainy lake camp			Interior	32 x 24 x 8 / 15 peak

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	grey on white on plywood	P		
Walls	glossy white on plywood. Caulking noted in corner near washroom	F to P		
Ceiling	glossy white on plywood	F to P		
Paint (wrap paper loose)	Floor grey on white plywood / white Wall glossy white on plywood Ceiling see walls Doors faded powder grey on metal Windows same as walls Other Cabinets: glossy white			Wall: RLC-PS1 Floor: RLC-PS2
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	foil on pink fiberglass on tar paper with tar on particle board.			particle board = RLC-A Foil wrap = RLC
Piping / Electrical / Mechanical Equipment	Electrical wiring with generator hook up. PVC pipe for grey water in kitchen/Bath			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: CGE gold label Serial #: 17'AZ40E	Leaking / Other NO	Total #: 2 # Checked: 2	Suspect PCBs: Check
Lighting (Incandescent, HID, etc.)	6 incandescent Bat op smoke detector missing			
Thermostats	Manufacturer / Colour / Shape / Wall/Floor Mounted / Dial / Casing 1 wired but already removed		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted Moderate mould growth on walls/ceiling. Rodent droppings, dead rodent.	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): 1 freezer general freezer model # GC9L 7.25 oz of R12 Windows: 1 oil stove Fawcet Atlantic model # 1308-10 HVAC (e.g., electric baseboard heater, window-mounted A/C unit) No caulking on sinks			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Counter top kitchen: Brown/white marble laminate + adhesive. RLC-AS1 Counter top Bath: off white/green marble laminate + adhesive RLC-AS2			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:



RLC-PS1
PS2

RLC-AS1
RLC-AS2
RLC-AS3

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APPENDICES

5 GLOVER ISLAND CAMP SITE

Glover Island Camp site is located along Transmission Line 228 (TL228), a 230 kilovolt (kV) transmission line which connects the Massey Drive Terminal Station and the Buchans Terminal Station (refer to Figure 5.1, Appendix A5). Glover Island Camp site is comprised of an accommodations cabin and an outhouse.

5.1 BUILDING DESCRIPTION

The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 53.9 m^2 (4.9 m x 11.0 m) (refer to Photos 1 to 4, Appendix B5). The floor plan of the cabin consists of a kitchen/dining area, a sleeping area and a washroom area (refer to Figure 5.2, Appendix A5). The foundation of the accommodations cabin consists of treated wood posts. The structure of the accommodations cabin consists of wood framing. The exterior walls on the accommodations cabin are finished with particle board siding and the roof is finished with asphalt shingles. The window and exterior door openings on the accommodations cabin are barricaded with metal grates for security purposes. Interior wall and ceiling finishes in the accommodations cabin consists of painted plywood. Floors/floor finishes consist of painted plywood. Propane and incandescent lighting was observed on the interior of the cabin. The accommodations cabin is not currently heated (formerly heated by oil stove).

The outhouse is a one-storey, rectangular structure with a footprint area of approximately 3.8 m^2 (1.8 m x 2.1 m) (refer to Figure 5.2, Appendix A5 and Photo 11, Appendix B5). The structure of the outhouse consists of wood framing. The foundation of the outhouse consists of wood. The exterior walls on the outhouse are finished with painted plywood and the roof is finished with asphalt shingles. Interior wall and ceiling finishes in the outhouse consist of painted panel board. Floor finishes consist of painted plywood. The outhouse does not contain any lighting or heating.

A description of the accommodations cabin is outlined in Table 5.1 and a description of the outhouse is outlined in Table 5.2. Photographs of the site buildings are provided in Appendix B5.

Table 5.1 Site Building Description – Accommodations Cabin

BUILDING NAME	ACCOMMODATIONS CABIN	PHOTO NO. (APPENDIX B5)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	1 to 4
Crawl Space (Yes/No)	No	2
Attic (Yes/No)	Yes	10
Type of Structure	Wood Frame	10
Type of Foundation	Treated Wood Posts	2 and 32
Exterior	Painted Particle Board	1 to 4
Window/Door Frames	Painted Metal and Wood	1 to 4, 7, 8 and 9
Exterior Doors	Painted Metal	7
Roofing Materials	Asphalt Shingles	2
Interior Walls Finishes	Painted Plywood	5 to 9
Interior Ceiling Finishes	Painted Plywood	6 and 7
Floor Finishes	Painted Plywood	5 and 9
Interior Doors	NA	-

BUILDING NAME	ACCOMMODATIONS CABIN	PHOTO NO. (APPENDIX B5)
Interior Lighting	Propane and Incandescent	6
Exterior Lighting	Incandescent	-
Heating	Not Heated (Former Oil Stove)	-

Table 2.2 Site Building Description – Outhouse

BUILDING NAME	OUTHOUSE	PHOTO NO. (APPENDIX B5)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	11
Crawl Space (Yes/No)	No	-
Attic (Yes/No)	No	-
Type of Structure	Wood Frame	11
Type of Foundation	Wood	-
Exterior	Painted Plywood (Weathered)	23
Window/Door Frames	Painted Wood	23
Exterior Doors	Painted Plywood (Weathered)	23
Roofing Materials	Asphalt Shingles	23
Interior Walls Finishes	Painted Panel Board	29
Interior Ceiling Finishes	Painted Panel Board	29
Floor Finishes	Painted Plywood	-
Interior Doors	NA	-
Interior Lighting	NA	-
Exterior Lighting	NA	-
Heating	NA	-

5.2 FINDINGS

The findings documented in this section are based on observations made by WSP personnel at the time of the site visit on July 18 and 20, 2022 and the results of laboratory analyses of samples collected from Glover Island Camp. During the Pre-Demolition HBMA site visit, WSP personnel were accompanied by a representative of Hydro (Mr. Shane Jackson). Copies of room-by-room inspection sheets for the accommodations cabin and outhouse are provided in Appendix D5. Photos of the samples collected from the accommodations cabin and outhouse during the site visits are provided in Appendix B5.

5.2.1 ASBESTOS-CONTAINING MATERIALS (ACMS)

There are over 3,000 ACMs that are commercially available, which can be divided into two broad categories: friable and non-friable. ACMs were discontinued from use in Canada in the late 1970s/early 1980s, although non-friable asbestos is still found in many more recent buildings.

During the Pre-Demolition HBMA site visit, eleven (11) building material samples (GIC AS-1 to GIC AS-11), plus one (1) blind field duplicate (GIC AS-DUP1), were collected from the accommodations cabin and one (1) building material sample (GIC AS-12) was collected from the outhouse (refer to Photos 12 to 23, Appendix B5) and analyzed for asbestos content. Bulk sample descriptions and asbestos analytical results are summarized in Table C5-1, Appendix C5. Sample locations and analytical results are graphically illustrated in Figure 5.2, Appendix A5.

FRIABLE MATERIALS

Friable ACMs are defined as materials that can be crumbled, pulverized and reduced to powder when dry using hand pressure. Typical friable materials include acoustical or decorative spray applications, fireproofing and thermal insulation.

SPRAY-APPLIED FIREPROOFING, INSULATION AND TEXTURE FINISHES

There were no spray-applied fireproofing, insulation or texture finishes observed in the accommodations cabin or outhouse during the Pre-Demolition HBMA site visit; therefore, no samples of these materials were collected for analysis.

BUILDING AND THERMAL SYSTEM INSULATION

During the Pre-Demolition HBMA site visit, fiberglass batt insulation was observed in the attic and walls of the accommodations cabin (refer to Photo 10, Appendix B2). Thermal system insulation was not observed at Glover Island Camp.

One (1) sample of tar paper backing on the building insulation (GIC AS-7) was collected from a wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 18, Appendix B5). Asbestos was not detected in the tar paper sample.

NON-FRIABLE AND POTENTIALLY FRIABLE MATERIALS

Non-friable ACMs are hard or manufactured products such as floor tiles, fire blankets, pre-formed manufactured cementitious insulation and wallboards, pipes, and siding, wherein the asbestos fibres are bound to the substrate. Note that although a product may be considered non-friable when new, the product may release fine dust when disturbed (e.g., deterioration, removal, renovations) and the free dust is considered friable.

CEILING TILE

There were no ceiling tiles observed at Glover Island Camp during the Pre-Demolition HBMA site visit; therefore, no samples of ceiling tile were collected for analysis.

DRYWALL JOINT COMPOUND

There was no drywall joint compound observed at Glover Island Camp during the Pre-Demolition HBMA site visit; therefore, no samples of drywall joint compound were collected for analysis.

VINYL FLOORING PRODUCTS AND MASTICS

There was no vinyl flooring or products observed at Glover Island Camp during the Pre-Demolition HBMA site visit; therefore, no samples of vinyl flooring or products were collected for analysis.

BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

There were no baseboard, carpet or stair tread adhesives/mastics observed at Glover Island Camp during the Pre-Demolition HBMA site visit; therefore, no samples of these types of adhesives/mastics were collected for analysis.

ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, one (1) sample of asphalt shingle with flashing (GIC AS-3) and one (1) sample of asphalt shingle with tar felt and tar paper (GIC AS-4) were collected from the roof of the accommodations cabin and one (1) sample of asphalt shingle with tar paper (GIC AS-12) was collected from the roof of the outhouse and analyzed for asbestos content (refer to Photos 14, 15 and 23, Appendix B5). Asbestos was detected in GIC AS-3-Flashing at a concentration of 40% chrysotile asbestos. Asbestos was also detected in GIC AS-4-Shingle, GIC AS-4-Tar Felt and GIC AS-4-Tar Paper at concentrations of 1.8% chrysotile asbestos, <0.25% chrysotile asbestos and <0.25% chrysotile asbestos, respectively. According to the NL asbestos abatement regulations (Reg. 111/98), the flashing in GIC AS-3 and the shingle in GIC AS-4 are considered asbestos-containing materials. Asbestos was not detected in the other roofing material samples.

It is important to note that, due to height constraints, no samples of building materials around roof penetrations (e.g., caulking or sealants around vents or chimneys) or roof seams were collected for analysis (refer to Photo 2, Appendix B5).

CAULKING/SEALANT

Three (3) samples of caulking (GIC AS-9, GIC AS-10 and GIC AS-11) were collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photos 20, 21 and 22, Appendix B5). Asbestos was not detected in the caulking samples.

One (1) sample of putty (GIC AS-8) was collected from around a pipe penetration in the floor of the accommodations cabin and analyzed for asbestos content (refer to Photo 19, Appendix B5). Asbestos was detected in GIC AS-8 at a concentration of 9.7% chrysotile asbestos.

MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

There was no mortar, grout or other cementitious materials observed at Glover Island Camp during the Pre-Demolition HBMA site visit; therefore, no samples of mortar, grout or other cementitious materials were collected for analysis.

FIRE-RATED DOORS

Fire-rated doors and door frames were not observed during the Pre-Demolition HBMA site visit.

OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, one (1) sample of particle board with caulking and tar paper (GIC AS-1) and one (1) sample of particle board (GIC AS-2), plus one (1) blind field duplicate (GIC AS-DUP1; duplicate of GIC AS-2), were collected from an exterior wall of the accommodations cabin and analyzed for asbestos content (refer to Photos 12 and 13, Appendix B5). Asbestos was not detected in the particle board/caulking/tar paper samples.

During the Pre-Demolition HBMA site visit, two (2) samples of countertop mastics (GIC AS-5 and GIC AS-6) were collected from the accommodations cabin and analyzed for asbestos content (refer to Photos 16 and 17, Appendix B5). Asbestos was not detected in the countertop mastic samples.

Other potential ACMs were observed (or suspected to be present) and were not sampled due to the nature of the materials and/or hazards associated with sampling these materials. These materials included, but are not limited to, electrical and mechanical components and insulators such as wiring and gaskets, caulking or sealants around or along roof seams, vent pipes, chimneys, electrical conduits or other penetrations, and undercoatings on sinks.

Other possible hidden and inaccessible ACMs have the potential to be present within the accommodations cabin or outhouse but were not identified during the Pre-Demolition HBMA site visit. These possible ACMs could include possible fireproofing materials in the wall or ceiling cavities, piping/pipe joint sealants/gaskets and packing associated with cast iron pipe joints, fire rated structures or building materials, vapour barriers in walls,

interior heat resistant components or gaskets inside appliances or prefabricated chimneys, and underground infrastructure or piping.

5.2.2 PAINT ADDITIVES

Lead compounds have been used in paint as pigment and durability additives since the early 1800s. Mercury compounds have been used in paint as anti-microbial additives up until the 1990s. PCBs have been used in paint as plasticizers and corrosion resistance additives from the 1950s to the 1970s.

During the Pre-Demolition HBMA site visit, six (6) samples (GIC PS-1 to GIC PS-6), plus one (1) blind field duplicate (GIC PS-DUP1), were collected from painted surfaces of the accommodations cabin and one (1) sample (GIC PS-7) was collected from painted surfaces of the outhouse and analyzed for lead, mercury and PCB content (refer to Photos 24 to 29, Appendix B5). Paint sample descriptions and lead, mercury and PCBs analytical results are summarized in Tables C5-2 to C5-4, Appendix C5. Sample locations and analytical results are graphically illustrated in Figure 5.2, Appendix A5.

LEAD IN PAINT

The concentrations of lead in the six (6) samples (GIC PS-1 to GIC PS-6), plus one (1) blind field duplicate (GIC PS-DUP1; duplicate of GIC PS-2), collected from painted surfaces of the accommodations cabin and one (1) sample (GIC PS-7) collected from the painted surfaces of the outhouse ranged from non-detect (<10 mg/kg) to 176 mg/kg (refer to Table C5-2, Appendix C5). Two (2) paint samples (GIC PS-DUP1; duplicate of GIC PS-2 and GIC PS-4) contained lead at concentrations above the Federal HPA criterion of 90 mg/kg and below the former Federal HPA criterion of 5,000 mg/kg. The concentrations of lead in the other six (6) samples were below the Federal HPA criterion (90 mg/kg).

MERCURY IN PAINT

The concentrations of mercury in the six (6) samples (GIC PS-1 to GIC PS-6), plus one (1) blind field duplicate (GIC PS-DUP1; duplicate of GIC PS-2), collected from painted surfaces of the accommodations cabin and one (1) sample (GIC PS-7) collected from the painted surfaces of the outhouse ranged from non-detect (<0.03 mg/kg) to 1.82 mg/kg, and therefore were below the Federal HPA criterion (10 mg/kg) (refer to Table C5-3, Appendix C5).

PCBS IN PAINT

The concentrations of PCBs in the six (6) samples (GIC PS-1 to GIC PS-6), plus one (1) blind field duplicate (GIC PS-DUP1; duplicate of GIC PS-2), collected from painted surfaces of the accommodations cabin and one (1) sample (GIC PS-7) collected from the painted surfaces of the outhouse were non-detect (<0.5 mg/kg), and therefore were below the applicable criterion for PCB solid (50 mg/kg) (refer to Table C2-4, Appendix C5).

5.2.3 UREA FORMALDEHYDE FOAM INSULATION (UFFI)

Visual indicators suggesting the potential presence of UFFI were not observed at Glover Island Camp. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photo 10, Appendix B5). Since the original date of construction of Glover Island Camp was 1985, it is not likely that UFFI is present in the cabin.

5.2.4 SUSPECTED VISIBLE MOULD GROWTH (SVG)

WSP inspected the interior areas of the accommodations cabin and outhouse for visual or olfactory evidence of suspected mould. SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin during the Pre-Demolition HBMA site visit. One (1) sample (GIC M-1) of the suspect mould material was collected from the surfaces of a cabinet for laboratory analysis to confirm the presence/absence of mould (refer to Figure 5.2, Appendix A5).

The results of mould analysis determined that tape lift sample GIC M-1 contained *Cladosporium* mould with hyphal fragments (refer to Table C5-5, Appendix C5).

5.2.5 MERCURY-CONTAINING THERMOSTATS

Thermostats were not identified inside the accommodations cabin at Glover Island Camp during the Pre-Demolition HBMA site visit.

5.2.6 PCB-CONTAINING LIGHT BALLASTS

Two fluorescent light fixtures were observed on the interior of the accommodations cabin during the Pre-Demolition HBMA site visit (refer to Photo 33, Appendix B5). The ballasts in the fluorescent light fixtures were not accessible; therefore, it is unknown whether the fluorescent light ballasts, if present, contain PCBs.

5.2.7 POTENTIAL SOURCES OF ODS AND HALOCARBONS

During the Pre-Demolition HBMA, potential sources of ODS were identified within the accommodations cabin. Results of the ODS inspection is summarized in Table 5.3.

Table 5.3 Potential Sources of ODSs

ITEM	MANUFACTURER	MODEL (SERIAL NO.)	LOCATION OBSERVED	PHOTO NO. (APPENDIX B5)	REFRIGERANT	POTENTIAL ODS
Refrigerator	Dometic	9282702	Kitchen Area	34	Ammonia	No
Freezer	Polaris	GC7	Storage Area	-	Unknown	Yes

It is important to note that the type of refrigerant present in the freezer was not able to be identified at the time of the site reconnaissance; therefore, there is potential for ODS to be present in the freezer.

Fire extinguishers were not observed at Glover Island Camp during the Pre-Demolition HBMA site visit.

5.2.8 OTHER POTENTIALLY HAZARDOUS BUILDING MATERIALS OR SUBSTANCES

Other potentially hazardous building materials or substances identified during this assessment are presented in the following sections.

LEAD-CONTAINING MATERIALS AND EQUIPMENT

Lead is typically associated with plumbing solder and older pipe materials (e.g., cast iron pipe joints), as well as products such as radiation protective shielding and lead-acid batteries. Lead can also be present in steel and iron primer, industrial electrical jacketing, roof flashing and tank linings.

No suspected lead-containing materials and equipment were identified during the Pre-Demolition HBMA site visit.

MERCURY-CONTAINING MATERIALS AND EQUIPMENT

Fluorescent light fixtures were observed on the interior of the accommodations cabin during the Pre-Demolition HBMA site visit. The light tubes and bulbs in fluorescent light fixtures often contain limited quantities of mercury in a powder or vapour form.

PCB-CONTAINING MATERIALS AND EQUIPMENT

According to the USEPA, PCBs may be present in caulking used in windows, door frames, masonry columns and other building materials in buildings built or renovated between 1950 and 1979. In addition, and as mentioned previously, insulating fluids and cooling oils in electrical equipment (i.e., transformers, fluorescent light ballasts, capacitors, etc.) often contained PCBs until around 1980.

As mentioned previously, two fluorescent light fixtures were observed on the interior of the accommodations cabin (refer to Photo 33, Appendix B5). The ballasts in the fluorescent light fixtures were not accessible; therefore, it is unknown whether the fluorescent light ballasts, if present, contain PCBs.

TREATED WOOD CHEMICALS

The chemicals that are used to protect and preserve wood products from insect attack and fungal decay may pose risks to human health and the environment. Depending on the wood treatment used, treated wood may be considered a hazardous waste upon disposal. The NL Department of Environment and Conservation (currently the NL ECC), 2015 Guidance Document for Treated Wood Waste Disposal (GD-PPD-075.1) provides landfill disposal standards for "pressure treated" inorganic preservatives (i.e., arsenic and chromium) and creosote (i.e., total cresol and benzo(a)pyrene) and chlorophenolic (i.e., pentachlorophenol) formulations used to preserve wood. These landfill disposal standards for treated wood waste (TWW) are used to assess the results of leachability testing to determine disposal options for treated wood to be removed during renovation or demolition activities.

During the Pre-Demolition HBMA site visit, suspected "pressure treated" inorganic (i.e., chromated copper arsenate (CCA)) preservatives appear to have been applied to wood that was used in the deck for the accommodations cabin. In addition, suspected creosote preservatives appear to have been applied to wood used as the foundation posts for the accommodations cabin. Three (3) samples of treated wood (GIC PT-1, GIC PT-2 and GIC PT-3) were collected from the deck and foundation and analyzed for treated wood parameter leachates to determine whether or not the treated wood would be considered hazardous waste upon removal from the site, if required. The bulk sample description and leachable treated wood parameter analytical results are summarized in Table C5-6, Appendix C5. The sample location and analytical results are graphically illustrated in Figure 5.2, Appendix A5.

The concentrations of arsenic leachate (12.4 mg/L) and chromium leachate (9.03 mg/L) detected in treated wood sample GIC PT-1 were above the TCLP landfill disposal standards for arsenic leachate (2.5 mg/L) and chromium leachate (5.0 mg/L) provided in the NL Department of Environment and Conservation (currently the NL ECC), 2015 Guidance Document for Treated Wood Waste Disposal (GD-PPD-075.1). The concentrations of all other leachable treated wood parameters were below the applicable TCLP landfill disposal standards.

SILICA

According to the CPWR – The Center for Construction Research and Training, many common construction materials contain silica including, asphalt, brick, cement, concrete, drywall, grout, mortar, stone, sand and tile. The dust created by cutting, grinding, drilling or otherwise disturbing these materials can contain crystalline silica particles.

Based on the Pre-Demolition HBMA site visit, silica is expected to be present in the asphalt shingles used in the construction of the accommodations cabin and outhouse.

RADIOACTIVE MATERIALS

Smoke detectors were not observed at Glover Island Camp during the Pre-Demolition HBMA site visit.

BIRD AND ANIMAL FECES

Bird and/or animal droppings/feces were observed in several areas throughout the interior of the accommodations cabin (refer to Photos 5, 8, 16 and 33, Appendix B5).

5.3 CONCLUSIONS AND RECOMMENDATIONS

Based on observations made and information gathered during the Pre-Demolition HBMA, the following conclusions and recommendations are made with respect to the potential and actual presence of hazardous building materials at Glover Island Camp.

5.3.1 ACMS

Results of the asbestos sampling and analytical program revealed building materials containing greater than 1% asbestos by dry weight, which are considered to be ACMs, are present in the form of non-friable roofing flashing and non-friable asphalt shingles on the roof of the accommodations cabin and non-friable putty on the interior of the accommodations cabin.

The asbestos-containing flashing and asphalt shingles visible on the roof of the accommodations cabin (covering an area of approximately 72 m^2), as observed from the ground surface, appeared to be generally intact and in fair condition. The asbestos-containing putty visible in several locations on the interior of the accommodations cabin also appeared to be generally intact and in fair condition.

Other potential ACMs were observed (or suspected to be present) and were not sampled due to the nature of the materials and/or hazards associated with sampling these materials. These materials included, but are not limited to:

- Electrical and mechanical components and insulators such as wiring and gaskets.
- Caulking or sealants around or along roof seams, vent pipes, chimneys, electrical conduits or other penetrations.
- Undercoatings on sinks.

Other possible hidden and inaccessible ACMs have the potential to be present within the buildings at Camp 50 but were not identified during the Pre-Demolition HBMA site visit. These possible ACMs could include possible fireproofing materials in the wall or ceiling cavities, piping/pipe joint sealants/gaskets and packing associated with cast iron pipe joints, fire rated structures or building materials, vapour barriers in walls, interior heat resistant components or gaskets inside appliances or prefabricated chimneys, and underground infrastructure or piping.

If other potential ACMs that were not sampled as part of this assessment are encountered in the future, these materials should be treated as ACMs or samples should be collected and tested to verify asbestos content. This should be done as soon as these materials are encountered and before these materials are disturbed. This includes materials that are currently concealed by walls and ceiling systems.

In accordance with the NL Asbestos Abatement Regulations (Reg. 111/98), which provide the legislative requirements for safe handling of ACMs in workplaces in the Province of NL, the following is recommended:

- Safe work procedures shall be established.
- All buildings constructed during the period when asbestos was readily used in construction (generally prior to the early 1980s) or any buildings that are suspected as having asbestos must have a written assessment and management plan (where applicable) for potential ACMs.
- Materials suspected of containing asbestos are required to be handled as ACMs, until analysis by a competent laboratory determines whether or not it does contain asbestos.
- Prior to general demolition, all ACMs must be safely removed from the building and disposed of in accordance with appropriate environmental guidelines by an asbestos abatement contractor registered with the Occupational Health and Safety (OHS) Division of Service NL.
- Most work involving ACMs (i.e., disturbance, removal and encapsulation) must be conducted by a contractor registered with the OHS Division of Service NL.
- ACMs in good condition should be inspected on an annual basis.
- ACMs in poor condition should be removed from the building and transported off-site for proper disposal.
- Workers should don adequate respiratory protection and personal protective equipment (PPE) when working with ACMs.

Prior to the removal and/or abatement of any identified ACMs (or any other hazardous building materials), an abatement plan including technical specifications should be designed, prepared and supervised by a qualified professional and should be undertaken by qualified trades, in accordance with applicable standards. Activities involving the disturbance and/or removal of ACMs should be carried out in a manner that ensures asbestos fiber concentrations do not exceed the applicable American Conference of Governmental Industrial Hygienists

(ACGIH) threshold limit value (TLV). ACMs can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.

5.3.2 LEAD, MERCURY AND PCBS IN PAINT

Results of the paint sampling and analytical program revealed the following:

- Lead and Leachable Lead in Paint
  - The concentrations of lead in the six (6) samples (GIC PS-1 to GIC PS-6), plus one (1) blind field duplicate (GIC PS-DUP1; duplicate of GIC PS-2), collected from painted surfaces of the accommodations cabin and one (1) sample (GIC PS-7) collected from the painted surfaces of the outhouse ranged from non-detect (<10 mg/kg) to 176 mg/kg.
  - Two (2) paint samples (GIC PS-DUP1; duplicate of GIC PS-2 and GIC PS-4) contained lead at concentrations above the Federal HPA criterion of 90 mg/kg and below the former Federal HPA criterion of 5,000 mg/kg; therefore, these paints are considered to be LBPs but are not likely to be leachable for lead.
  - The concentrations of lead in the other six (6) paint samples were below the Federal HPA criterion (90 mg/kg); therefore, these paints are not considered to be LBPs and are not likely to be leachable for lead.
- Mercury and Leachable Mercury in Paint
  - The concentrations of mercury in the six (6) samples (GIC PS-1 to GIC PS-6), plus one (1) blind field duplicate (GIC PS-DUP1; duplicate of GIC PS-2), collected from painted surfaces of the accommodations cabin and one (1) sample (GIC PS-7) collected from the painted surfaces of the outhouse ranged from non-detect (<0.03 mg/kg) to 1.82 mg/kg, and therefore were below the Federal HPA criterion (10 mg/kg). These paints are not considered to be MBPs and are not likely to be leachable for mercury.
- PCBs in Paint
  - PCBs were not detected (<0.5 mg/kg) in the six (6) samples (GIC PS-1 to GIC PS-6), plus one (1) blind field duplicate (GIC PS-DUP1; duplicate of GIC PS-2), collected from painted surfaces of the accommodations cabin and one (1) sample (GIC PS-7) collected from the painted surfaces of the outhouse, and therefore, were below the applicable criterion for PCB solid (50 mg/kg).

Based on the paint sample analytical results, the paint samples collected from accommodations cabin and outhouse are not likely to be leachable for lead or mercury, and do not contain PCBs. Should disposal be required (e.g., renovation or demolition activities), the paints analyzed for lead, mercury and PCB content may be disposed of at an approved landfill facility, pending landfill and Provincial regulatory approval.

There are potential adverse human health impacts associated with disturbing (e.g., scraping, sanding, burning, etc.) lead-containing paint finishes, due to the potential for dust, mist or fumes to be released and inhaled or ingested by workers. As a precautionary measure, WSP recommends handling these paint finishes, as follows:

- In areas of minor peeling or flaking, the paint should be removed using wet scraping techniques.
- In areas of extensive peeling and flaking, the paint should be removed and more extensive particulate control measures may be required.
- In areas where lead-containing paint finishes are present and in poor condition, an experienced contractor should be utilized for renovating, decommissioning or demolition activities.
- Prior to renovation, dismantling or demolition activities, all areas of extensive peeling and flaking of lead-containing paint finishes and paint debris/dust should be removed and/or remediated to ensure that building occupants/workers are protected from associated dust/particulate.
- Procedures should be implemented to ensure that workers and anyone present in and around areas being renovated, dismantled or demolished are protected. The contractor should also ensure that dust generation and migration is minimized.
- Precautions should be taken to prevent/reduce exposure to paint dust during any disturbance of lead-containing paint finishes, such as wetting the surface of the materials to prevent dust emissions, donning respiratory protection, and cleaning tools and clothing prior to exiting work areas.

— Where possible, lead-containing paint finishes should be removed from metal surfaces prior to welding or cutting these materials.

If potential lead, mercury or PCB containing paint finishes that were not sampled during this assessment are encountered in future, prior to any disturbance or removal, samples should be obtained and tested to verify concentrations of lead, mercury and PCBs. This includes materials that are currently concealed by walls and ceiling systems.

Any disturbance or removal of lead, mercury or PCB-containing paint finishes that may generate dust or respirable aerosols must conform to the Federal and Provincial OHS Regulations. All work should be carried out by individuals wearing proper PPE. The type of respiratory protection and control measures to be implemented during the removal of these types of paint finishes should be determined by a qualified person and based on the risk level of a particular work activity (i.e., scraping, sanding, abrasive blasting, etc.). Activities involving the disturbance and/or removal of lead, mercury or PCB-containing paint finishes should be carried out in a manner that ensures paint dust concentrations do not exceed the applicable ACGIH TLVs.

5.3.3 MOULD

SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin. One (1) suspected mould sample (GIC M-1) was collected from the surfaces of a cabinet for laboratory analysis. The sample confirmed the presence of *Cladosporium* mould.

During demolition, precautions should be taken to prevent/reduce exposure to mould spores during any disturbance/demolition of mould impacted materials, such as donning appropriate respiratory protection, and cleaning tools and clothing prior to exiting work areas.

5.3.4 POTENTIAL ODS

Based on observations made during the site visit, ODSs are potentially present in the accommodations cabin in the form of an unknown refrigerant contained in a freezer.

ODS should be removed by an approved contractor prior to disposing of any cooling and/or refrigeration equipment. The use, storage, operation, maintenance, decommissioning, and disposal of ODS containing equipment, in general, is regulated at both a Provincial and Federal level and must comply with the most recent NL Halocarbon Regulations and the Federal Halocarbon Regulations. The status of the potential ODS containing equipment should be confirmed through a mechanical contractor or consultant.

5.3.5 POTENTIAL MERCURY-CONTAINING MATERIALS/EQUIPMENT

Two (2) mercury-containing fluorescent light tubes were observed in the accommodations cabins.

Should disposal be required, mercury-containing equipment should be removed intact and returned to the manufacturer for recycling or disposed of at an approved hazardous waste disposal facility. The disturbance, control or disposal of mercury-containing materials/equipment should be carried out in accordance with applicable criteria/regulations. The presence/absence of mercury in these materials should be confirmed through a contractor or consultant prior to disturbance or disposal of these materials. Typically, these materials are sent to a recycling or hazardous waste disposal facility and not a landfill.

5.3.6 POTENTIAL PCB-CONTAINING MATERIALS/EQUIPMENT

Two fluorescent light fixtures were observed on the interior of the accommodations cabin. The ballasts in the fluorescent light fixtures were not accessible; therefore, it is unknown whether the fluorescent light ballasts, if present, contain PCBs.

Should disposal be required, the PCB content in suspected equipment should be confirmed prior to disposal. Any leaking light ballasts identified, whether PCB containing or not, should be removed and replaced to avoid potential concerns with electrical equipment in the future. All ballasts that are removed should be placed in a

proper storage container(s). Leaks or stained areas should be cleaned and/or removed in accordance with applicable regulations or industry standards.

All PCB-containing materials and equipment should be handled, decontaminated, transported and disposed of as per current Federal and Provincial acts and regulations. Any PCB-containing equipment requiring removal from the building should be transported and disposed of by a registered hazardous waste transporter in accordance with applicable regulations.

5.3.7 TREATED WOOD MATERIALS

"Pressure treated" inorganic (i.e., CCA) preservatives appear to have been applied to wood that was used in the deck and foundation for the accommodations cabin. Based on the TCLP analytical results, one of the composite samples of treated wood collected from the deck does not meet the conditions stipulated to obtain regulatory approval from the NL ECC for landfill disposal (i.e., the concentrations of arsenic leachate and chromium leachate detected in the treated wood from the deck are at levels that are considered to be hazardous). Consideration should be given to presenting the analytical results for the treated wood samples collected during this assessment to the NL ECC for review to determine, if based on the receiving environment and the amount of waste to be disposed, regulatory approval for disposal of the treated wood waste (TWW) in a lined landfill is possible. If an approved lined landfill facility will not accept the TWW, then these materials must be disposed of at a hazardous waste treatment facility.

5.3.8 SILICA CONTAINING MATERIALS

Silica is expected to be present in the asphalt shingles used in the construction of the accommodations cabin and outhouse. Precautions should be taken to prevent/reduce exposure to silica dust during any disturbance/ demolition of silica-containing products, such as wetting the surface of the materials to prevent dust emissions, donning respiratory protection, and cleaning tools and clothing prior to exiting work areas. Activities involving the disturbance and/or demolition of silica-containing materials should be carried out in a manner that ensures silica dust concentrations do not exceed the applicable ACGIH TLV.

5.3.9 BIRD AND ANIMAL FECES

Bird and/or animal droppings/feces were observed in several areas throughout the interior of the accommodations cabin. Workers should don proper PPE to prevent/reduce exposure to potential microbiological contaminants (e.g., bacteria, viruses, etc.) often associated with bird or animal droppings/feces while working within the immediate area of the droppings/feces or during any disturbance/demolition of building materials that may be impacted by the bird or animal droppings/feces.

5.3.10 SUMMARY OF FINDINGS

Hazardous building materials identified at Glover Island Camp during this Pre-Demolition HBMA and disposal options, if required, are summarized in Table 5.4. Conclusions and recommendations made with respect to the potential and actual presence of hazardous building materials within the accommodations cabin and outhouse are provided in Section 5.3 and should be reviewed in conjunction with Table 5.4.

Table 5.4 Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
ACMs	NL Asbestos Abatement Regulations (Reg. 111/98)	Non-friable roofing flashing and non-friable asphalt shingles on the roof of the accommodations cabin and non-friable putty on the interior of the accommodations cabin. Note that other possible hidden and inaccessible ACMs have the potential to be present within the accommodations cabin and outhouse but were not identified during the Pre-Demolition HBMA site visit.	ACMs cannot be disposed of at a Construction & Demolition Site; however, these materials can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility. The transportation and disposal of asbestos should be conducted in accordance with the NL Asbestos Abatement Regulations (Reg. 111/98) and with Standard Operating Procedures (SOPs) for disposal of ACMs at the landfill.
LBPs	Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Surface Coating Materials Regulations (SOR/2016-193)	LBP (light green) on wood trim and plywood walls in accommodations cabin. LBP (grey) on plywood floor in accommodations cabin.	Paints that were analyzed for lead and contained <5,000 mg/kg lead, may be disposed of at a Regional Solid Waste Disposal Facility (landfill), provided permission is obtained from the landfill.
Potential UFFI	Federal HPA (R.S.1985, c. H-3)	None Identified.	UFFI is permitted to be bagged and transported to an approved WDS and disposed in the special waste area of the site.

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Mould	Mould Guidelines for the Canadian Construction Industry, Canadian Construction Industry (CCI), 2018; Mould Abatement Guidelines, Environmental Abatement Council of Canada (EACC), 2015	Mould growth present on interior of accommodations cabin.	All mould impacted materials may be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.
Potential ODS	Federal Halocarbon Regulations (SOR/2003-289)	Unknown refrigerant in freezer.	Materials containing ODS should be received by a contractor or facility that has the proper approvals to remove, handle and/or dispose of ODS. The remaining materials can be disposed of at a recycling facility, provided permission is obtained from the facility.
Potential Lead-Containing Materials/ Equipment	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301)	None identified.	Lead-containing materials and equipment can be disposed of at a metal recycling or hazardous waste disposal facility, in accordance with applicable regulations. The transportation and disposal of hazardous lead-containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Potential Mercury-Containing Materials/ Equipment	Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Products Containing Mercury Regulations (SOR/2014-254)	Two (2) mercury-containing fluorescent light tubes are present inside accommodations cabin.	Mercury-containing materials and equipment can be disposed of at a recycling or hazardous waste disposal facility, in accordance with applicable regulations. The transportation and disposal of hazardous mercury-containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.
Potential PCB-Containing Materials/ Equipment	Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149) Federal TDG Act (1992, c. 34) Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Interprovincial Movement of Hazardous Waste Regulations (SOR/2002-301) PCB Regulations (SOR/2008-273) PCB Waste Export Regulations (SOR/97-109) Regulations Amending the PCB Regulations (SOR/2010-57)	The ballasts in two fluorescent light fixtures inside the accommodations cabin were not accessible; therefore, it is unknown whether the fluorescent light ballasts, if present, contain PCBs.	Any PCB-containing materials and equipment should be handled, decontaminated, transported and disposed of as per current Federal and Provincial acts and regulations. Any PCB-containing materials and equipment requiring removal from the building should be transported and disposed of by a registered hazardous waste transporter in accordance with applicable regulations. The transportation and disposal of PCB containing materials and equipment should be conducted in accordance with the Federal TDG Act and with SOPs for disposal of hazardous waste at the disposal or recycling facility.

Treated Wood Materials	Guidance Document for Treated Wood Waste Disposal (GD-PPD-075.1)	“Pressure treated” inorganic (i.e., CCA) preservatives appear to have been applied to wood that was used in the deck and foundation for the accommodations cabin.	For relatively large quantities of TWW from commercial sources (i.e., generally greater than 1,000 kg), the Guidance Document for Treated Wood Waste Disposal (GD-PPD-075) states that TWW generated by commercial operators shall be evaluated by the operator to determine if it meets the definition of hazardous waste. In accordance with the guidance document, prior to disposal, TWW should be analyzed for the appropriate preservative and the results compared to the applicable landfill disposal standards as provided in Table 1 of the Guidance Document for Treated Wood Waste Disposal (GD-PPD-075). Treated wood that was analyzed for the appropriate preservative and the results were below the applicable landfill disposal standards, may be disposed of at a Regional Solid Waste Disposal Facility (landfill), provided permission is obtained from the landfill. For treated wood that was analyzed for the appropriate preservative and the results were above the applicable landfill disposal standards, consideration should be given to presenting the analytical results for the treated wood samples collected during this assessment to the NL ECC for review to determine, if based on the receiving environment and the amount of waste to be disposed, regulatory approval for disposal of the TWW in a lined landfill is possible. If an approved lined landfill facility will not accept the TWW, then these materials must be disposed of at a hazardous waste treatment facility.

HAZARDOUS MATERIAL	APPLICABLE ACTS, REGULATIONS OR GUIDANCE DOCUMENTS	DESCRIPTION AND LOCATION	DISPOSAL
Silica-Containing Materials	NL OHS Act (RSNL1990 Chapter O-3) NL OHS Regulations (5/12)	Asphalt shingles.	These materials can be disposed of at a Regional Solid Waste Disposal Facility (landfill).
Potential Radioactive Materials	Federal TDG Act (1992, c. 34)	None identified.	Smoke detectors that contain low level radioactive materials must be transported, as per Federal TDG Regulations, to a licensed disposal facility.
Bird and Animal Feces	EACC Mould Abatement Guidelines, Edition 3 (2015))	Bird and animal feces is present inside the accommodations cabin.	Materials contaminated with bird and animal feces may be disposed of at a Regional Solid Waste Disposal Facility, provided permission is obtained from the landfill owner/operator.

APPENDIX

A5. FIGURES

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
3. THIS FIGURE IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION OF THE STUDY AREA IN SUPPORT OF THIS REPORT.
4. ALL LOCATIONS, DIMENSIONS, AND ORIENTATIONS ARE APPROXIMATE.
5. THIS FIGURE SHOULD NOT BE USED FOR PURPOSES OTHER THAN THOSE OUTLINED ABOVE.
6. THIS FIGURE CONTAINS INTELLECTUAL PROPERTY OF NEWFOUNDLAND LABRADOR HYDRO AND MAY NOT BE REPRODUCED OR COPIED WITHOUT THEIR WRITTEN CONSENT.

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Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 228, NL and Mini-Hydroelectric Facility Site, Venams Bight, NL

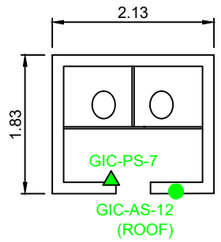
Title: Site Location Plan - Glover Island Camp

Date: October 2022

Project No. TE22104005.2000

Rev. No. 0

Figure No. 5.1



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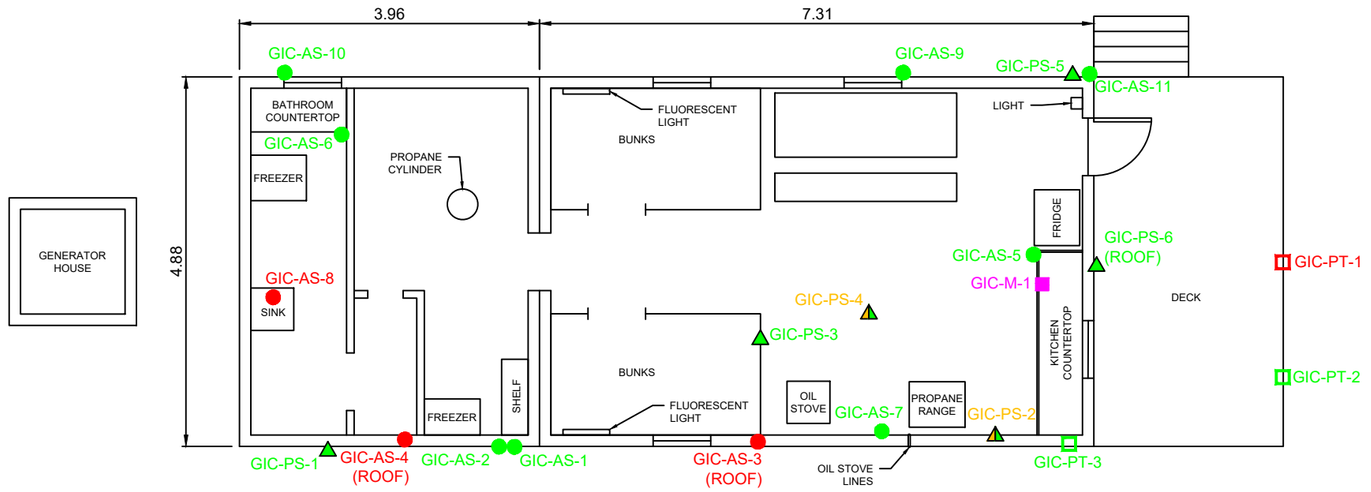

ACCOMMODATIONS CABIN

SCALE
0m 2m 4m

LEGEND:

- ASBESTOS SAMPLE LOCATION - ASBESTOS NOT DETECTED
- ASBESTOS SAMPLE LOCATION - RESULTS > 1% FOR ASBESTOS
- PAINT SAMPLE LOCATION - NO CRITERIA EXCEEDANCES FOR LEAD OR MERCURY OR PCBs WHERE APPLICABLE
- PAINT SAMPLE LOCATION - RESULTS EXCEED 90 mg/kg AND LESS THAN 5000 mg/kg FOR LEAD AND NO CRITERIA EXCEEDANCES FOR MERCURY OR PCBs WHERE APPLICABLE
- MOULD GROWTH DETECTED - MEDIUM
- TREATED WOOD SAMPLE LOCATION - NO CRITERIA EXCEEDANCES FOR TCLP
- TREATED WOOD SAMPLE LOCATION - TCLP CONCENTRATION EXCEEDS COLUMN 2 TCLP LIMITS PROVIDED IN THE TWW DISPOSAL GUIDANCE DOCUMENT

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
3. THIS FIGURE IS INTENDED TO SHOW RELATIVE LOCATIONS AND CONFIGURATION OF THE STUDY AREA IN SUPPORT OF THIS REPORT.
4. ALL LOCATIONS, DIMENSIONS, AND ORIENTATIONS ARE APPROXIMATE.
5. THIS FIGURE SHOULD NOT BE USED FOR PURPOSES OTHER THAN THOSE OUTLINED ABOVE.
6. THIS FIGURE CONTAINS INTELLECTUAL PROPERTY OF NEWFOUNDLAND LABRADOR HYDRO AND MAY NOT BE REPRODUCED OR COPIED WITHOUT THEIR WRITTEN CONSENT.

Client: newfoundland labrador hydro, a nalcor energy company

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Drawn by: T. Rideout

Approved by: L. Wiseman

Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 228, NL and Mini-Hydroelectric Facility Site, Venams Bight, NL

Date: October 2022

Project No. TE22104005.2000

Title: Sample Location Plan - Glover Island Camp

Rev. No. 0

Figure No. 5.2

APPENDIX

B5. PHOTOGRAPHIC RECORD

Photo 1: View of the accommodations cabin at Glover Island Camp site.

Photo 2: View of the accommodations cabin at Glover Island Camp site.

Photo 3: View of the accommodations cabin at Glover Island Camp site.

Photo 4: View of the accommodations cabin at Glover Island Camp site.

Photo 5: View of the kitchen area inside the accommodations cabin at Glover Island Camp.

Photo 6: View of the kitchen area inside the accommodations cabin at Glover Island Camp.

Photo 7: View of the kitchen area inside the accommodations cabin at Glover Island Camp.

Photo 8: View of the sleeping area inside the accommodations cabin at Glover Island Camp.

Photo 9: View of the washroom area inside accommodations cabin at Glover Island Camp.

Photo 10: View of the attic inside the accommodations cabin at Glover Island Camp.

Photo 11: View of the outhouse at Glover Island Camp site.

Photo 12: View of bulk material sample GIC AS-1, particle board with tar paper and caulking, cabin exterior.

Photo 13: View of bulk material sample GIC AS-2, particle board, cabin exterior.

Photo 14: View of bulk material sample GIC AS-3, shingle and flashing, cabin exterior. **40% Chrysotile asbestos.**

Photo 15: View of bulk material sample GIC AS-4, shingle, tar felt and tar paper, cabin exterior. **1.8% Chrysotile asbestos.**

Photo 16: View of bulk material sample GIC AS-5, countertop mastic, cabin interior.

Photo 17: View of bulk material sample GIC AS-6, countertop mastic, cabin interior.

Photo 18: View of bulk material sample GIC AS-7, fibreglass and tar paper, cabin interior.

Photo 19: View of bulk material sample GIC AS-8, putty, cabin interior.
9.7% Chrysotile asbestos.

Photo 20: View of bulk material sample GIC AS-9, caulking, cabin exterior.

Photo 21: View of bulk material sample GIC AS-10, caulking, cabin exterior.

Photo 22: View of bulk material sample GIC AS-11, caulking, cabin exterior.

Photo 23: View of bulk material sample GIC AS-12, shingle, outhouse exterior.

Photo 24: View of paint sample GIC PS-1, wall, cabin exterior.

Photo 25: View of paint sample GIC PS-2, wall, cabin interior.

Photo 26: View of paint sample GIC PS-3, wall, cabin interior.

Photo 27: View of paint sample GIC PS-4, floor, cabin interior.

Photo 28: View of paint sample GIC PS-5, wall, cabin exterior.

Photo 29: View of paint sample GIC PS-7, wall, outhouse interior.
Note: sample was mislabeled.

Photo 30: View of treated wood sample GIC PT-1, cabin exterior.

Photo 31: View of treated wood sample GIC PT-2, cabin exterior.

Photo 32: View of treated wood sample GIC PT-3, cabin exterior .

Photo 33: View of fluorescent light fixture in sleeping area of the accomodations cabin.

Photo 34: View of refrigerator located on the interior of the accomodations cabin.

APPENDIX

C5. SAMPLE AND ANALYTICAL SUMMARY TABLES

Table C5-1: Bulk Sample Descriptions and Asbestos Analytical Results (Glover Island Camp)

Sample ID	Room Description	Photo No.	Sample Location	Sample Description	Layers Analyzed	Analytical Result
GIC AS-1-Tar Paper	Cabin - Exterior	12	Wall	Particle board with caulking and tar paper	Tar paper	ND
GIC AS-1-Caulk					Caulking	ND
GIC AS-1-Fibreboard					Fibreboard	ND
GIC AS-2	Cabin - Exterior	13	Wall	Particle board	Fibreboard	ND
GIC AS-DUP1					Fibreboard	ND
GIC AS-3-Shingle	Cabin - Exterior	14	Roof	Asphalt shingle and flashing	Asphalt Shingle	ND
GIC AS-3-Flashing					Flashing	40% Chrysotile
GIC AS-4-Shingle	Cabin - Exterior	15	Roof	Asphalt shingle, tar felt and tar paper	Asphalt Shingle	1.8%Chrysotile
GIC AS-4-Tar Felt					Tar felt	**<0.25% Chrysotile**
GIC AS-4-Tar Paper					Tar paper	**<0.25% Chrysotile**
GIC AS-5	Cabin - Kitchen Area	16	Countertop	Countertop mastic	Mastic	ND
GIC AS-6	Cabin - Washroom Area	17	Countertop	Countertop mastic	Mastic	ND
GIC AS-7-Tar Paper	Cabin - Kitchen/Dining Area	18	Wall	Tar paper and fibreglass	Tar paper	ND
GIC AS-7-Fibreglass					Fibreglass	ND
GIC AS-8	Cabin - Washroom Area	19	Floor	Putty	Putty	9.7% Chrysotile
GIC AS-9	Cabin - Exterior	20	Window	Caulking	Caulking	ND
GIC AS-10	Cabin - Exterior	21	Window	Caulking	Caulking	ND
GIC AS-11	Cabin - Exterior	22	Wall	Caulking	Caulking	ND
GIC AS-12-Shingle	Outhouse - Exterior	23	Roof	Asphalt shingle and tar paper	Asphalt Shingle	ND
GIC AS-12-Tar Paper					Tar paper	ND

Notes:

GIC AS-DUP1 is a blind field duplicate of GIC AS-2

ND: Non-detect (<0.1 %)

Bold and underlined value indicates asbestos was detected but is below 1% by dry weight.

ACM: Asbestos containing material

Shaded value exceeds 1% asbestos by dry weight and is considered to be an ACM as outlined in the Newfoundland and Labrador Asbestos Abatement Regulations (Reg. 111/98).

Table C5-2: Paint Sample Descriptions and Lead Analytical Results (Glover Island Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
GIC PS-1	Cabin - Exterior	24	Wall	Particle Board	White paint on particle board (sample includes loose paint)	10	<10
GIC PS-2	Cabin - Kitchen/Dining Area	25	Wall	Wood trim	Light green paint on wood trim (sample includes wood)	10	82
GIC PS-DUP1						10	**96**
GIC PS-3	Cabin - Sleeping Area	26	Wall	Wood trim	White paint on wood trim (sample includes wood)	10	33
GIC PS-4	Cabin - Kitchen/Dining Area	27	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	**176**
GIC PS-5	Cabin - Exterior	28	Wall	Particle Board	Brown paint on particle board (sample includes particle board)	10	<10
GIC PS-6	Cabin - Exterior	-	Roof	Wood trim	White paint on wood trim (sample includes wood)	10	70
GIC PS-7	Outhouse - Interior	29	Wall	Wood trim	Grey paint on wood trim (sample includes wood)	10	28

Notes:

GIC PS-DUP1 is a blind field duplicate of GIC PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

HPA: Hazardous Products Act

Bold and underlined value exceeds Federal HPA criterion (90 mg/kg).

Shaded value exceeds former Federal HPA criterion (5,000 mg/kg).

Table C5-3: Paint Sample Descriptions and Mercury Analytical Results (Glover Island Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
GIC PS-1	Cabin - Exterior	24	Wall	Particle Board	White paint on particle board (sample includes loose paint)	0.03	<0.03
GIC PS-2	Cabin - Kitchen/Dining Area	25	Wall	Wood trim	Light green paint on wood trim (sample includes wood)	0.03	0.26
GIC PS-DUP1						0.03	0.30
GIC PS-3	Cabin - Sleeping Area	26	Wall	Wood trim	White paint on wood trim (sample includes wood)	0.03	0.46
GIC PS-4	Cabin - Kitchen/Dining Area	27	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	1.34
GIC PS-5	Cabin - Exterior	28	Wall	Particle Board	Brown paint on particle board (sample includes particle board)	0.03	0.03
GIC PS-6	Cabin - Exterior	-	Roof	Wood trim	White paint on wood trim (sample includes wood)	0.03	1.82
GIC PS-7	Outhouse - Interior	29	Wall	Wood trim	Grey paint on wood trim (sample includes wood)	0.03	0.11

Notes:

GIC PS-DUP1 is a blind field duplicate of GIC PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

HPA: Hazardous Products Act

CCME: Canadian Council of Ministers of the Environment

CSQG: Canadian Soil Quality Guideline

Bold and underlined value exceeds Federal HPA criterion (10 mg/kg).

Shaded value exceeds CCME CSQG for an industrial site (50 mg/kg).

Table C5-4: Paint Sample Descriptions and PCB Analytical Results (Glover Island Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
GIC PS-1	Cabin - Exterior	24	Wall	Particle Board	White paint on particle board (sample includes loose paint)	0.5	<0.5
GIC PS-2	Cabin - Kitchen/Dining Area	25	Wall	Wood trim	Light green paint on wood trim (sample includes wood)	0.5	<0.5
GIC PS-DUP1						0.5	<0.5
GIC PS-3	Cabin - Sleeping Area	26	Wall	Wood trim	White paint on wood trim (sample includes wood)	0.5	<0.5
GIC PS-4	Cabin - Kitchen/Dining Area	27	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
GIC PS-5	Cabin - Exterior	28	Wall	Particle Board	Brown paint on particle board (sample includes particle board)	0.5	<0.5
GIC PS-6	Cabin - Exterior	-	Roof	Wood trim	White paint on wood trim (sample includes wood)	0.5	<0.5
GIC PS-7	Outhouse - Interior	29	Wall	Wood trim	Grey paint on wood trim (sample includes wood)	0.5	<0.5

Notes:

GIC PS-DUP1 is a blind field duplicate of GIC PS-2

<X: Non-Detect

RDL: Reportable Detection Limit

NL MAE: Newfoundland and Labrador Department of Municipal Affairs and Environment

TDG: Transportation of Dangerous Goods

Shaded value exceeds the criterion for PCB solid provided in the NL MAE Leachable Toxic Waste, Testing and Disposal Guidance Document and the TDG Regulations (50 mg/kg).

Table C5-5: Bulk Sample Descriptions and Mould Analytical Results (Glover Island Camp)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
GIC M-1	Tape lift	Cabin - Cabinets	*Cladosporium*	Medium
			Hyphal fragment	Rare

Notes:

Category	Count/Area Analyzed
Rare	1 to 10
Low	11 to 100
Medium	101 to 1000
High	>1000

Table C5-6: Bulk Sample Descriptions and Leachable Treated Wood Parameter Analytical Results (Glover Island Camp)

		Data			Guidelines		
Sample ID		GIC PT-1	GIC PT-2	GIC PT-3	ENVC Guidance Document Treated Wood Waste Disposal Amended September 2015 (GD-PPD-075.1)		ENVC Guidance Document Leachable Toxic Waste, Testing and Disposal Revised November 2003 (GD-PPD-26.1)
Sample Location		Deck	Deck	Deck			
Detailed Material Description		Treated Wood	Treated Wood	Treated Wood			
Location (Photo No.)		30	31	32			
Parameters	**RDL (mg/L)**	(mg/L)	(mg/L)	(mg/L)	Column 2: TCLP Limits (CEPA) (mg/L)	Column 3: Double TCLP Limits (mg/L)	Schedule II (Interprovincial Movement of Hazardous Waste Regulations (pending)) (mg/L)
Arsenic Leachate	0.02	**12.4**	0.06	0.41	2.5	5	2.5
Chromium Leachate	0.02	**9.03**	0.05	0.12	5	10	5
2,3,4,6-Tetrachlorophenol	0.001	<0.001	<0.001	<0.001	-	-	-
2,4,6-Trichlorophenol	0.0004	<0.0004	<0.0004	<0.0004	-	-	0.50
2,4-D	0.0003	<0.0003	<0.0003	<0.0003	-	-	10
Pentachlorophenol	0.001	<0.001	<0.001	<0.001	6	12	6
Cresols Leachate	0.012	<0.012	<0.012	<0.012	200	400	200
o-Cresol Leachate	0.004	<0.004	<0.004	<0.004	-	-	200
Meta & Para-Cresol Leachate	0.008	<0.008	<0.008	<0.008	-	-	200
Benzo(a)pyrene Leachate	0.001	<0.001	<0.001	<0.001	0.001	0.002	0.00

Notes:

RDL: Reportable detection limit
ENVC: Newfoundland and Labrador Department of Environment and Conservatior
TCLP: Toxicity Characteristic Leaching Procedure
CEPA: Canadian Environmental Protection Act
TWW: Treated Wood Waste
-: Value Not Established
Shaded results indicate that TCLP concentration exceeds Column 2 TCLP limits provided in the TWW Disposal Guidance Document
Bold results indicate that TCLP concentration exceeds Schedule II TCLP limits provided in the Leachable Toxic Waste Guidance Documen
Underlined results indicate that TCLP concentration exceeds Column 3 TCLP limits provided in the TWW Disposal Guidance Document

APPENDIX

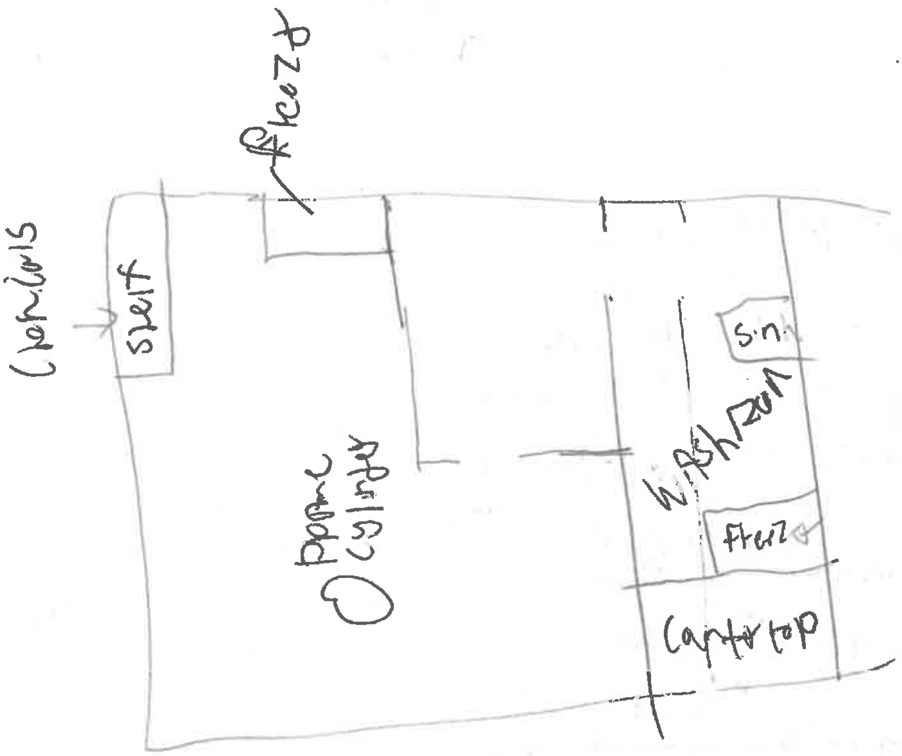
D5. ROOM-BY-ROOM INSPECTION SHEET

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Grover Island Corp			New Section Interior	12 x 16 x 8

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Grey on Plywood	F to P		
Walls	White on Plywood similar to Drywall	F to P		
Ceiling	White on Plywood	F to P		
Paint	Floor Grey on plywood Wall White on plywood Ceiling White on plywood Doors White on doors Windows White on wood Other			Floor: See OID Floor Wall: See OID Drywall
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink fiberglass insulation. Nothing noted on floor Yellow Fiberglass Attic			
Piping / Electrical / Mechanical Equipment				
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	2 in conference			
Thermostats	Manufacturer N/A Dial Colour Casing Shape Wall/Floor Mounted		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted Same as OID	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit) Plumbers Putty in Bathroom Sink: GEC-ASB			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Bathroom Cantop off White laminate + Adhesive: GEC-1 freezer Polaris: GCT			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:


Chemicals
Shelf
Freezer
Propane cylinder
Washroom
S.n.
Freez
Countertop

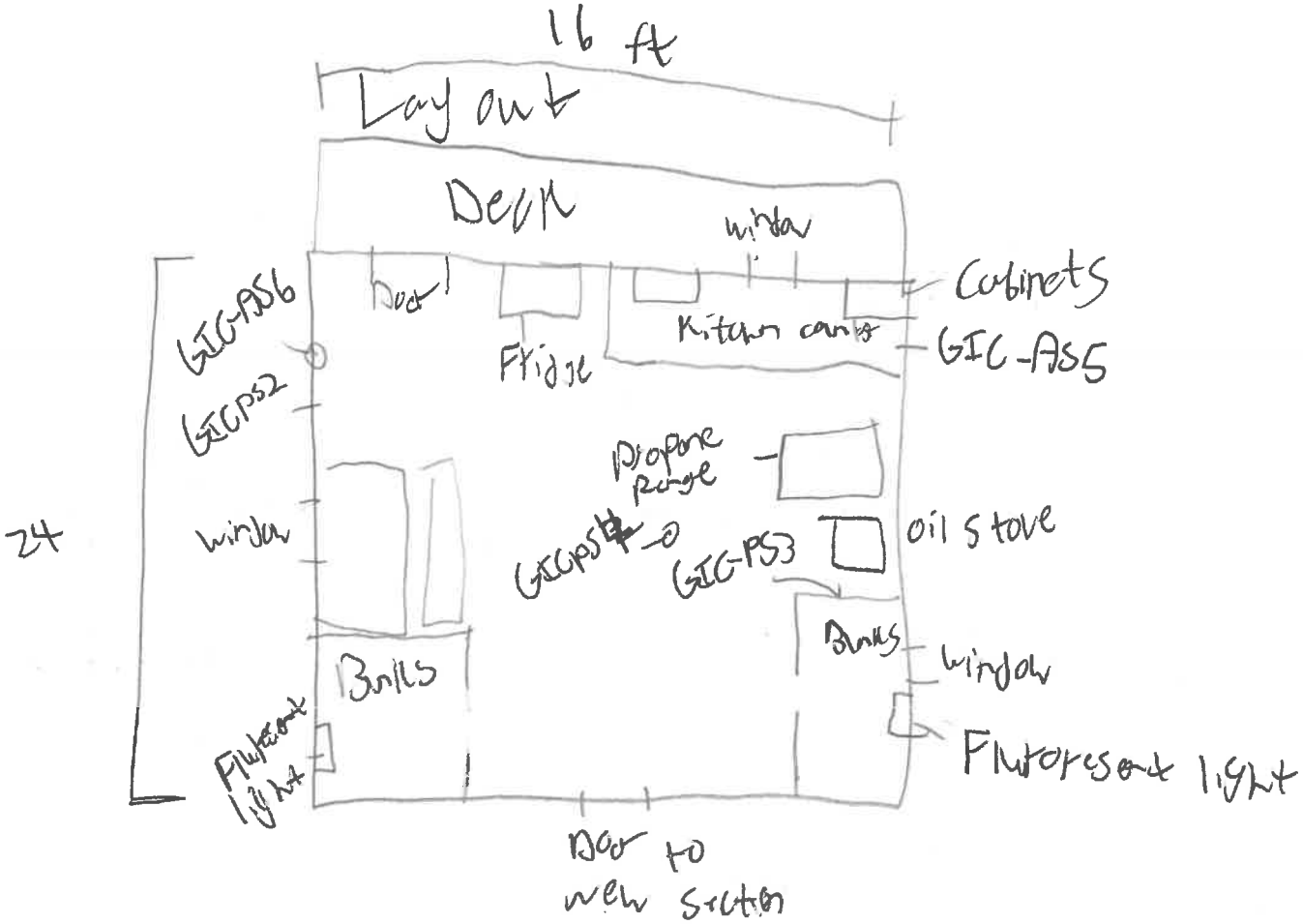
Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Glover Island camp			OID, Section Interior	24 x 16 x 8

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	green grey on light grey on plywood	F to P		
Walls	green on plywood with walls in bunk section white on green on plywood	F to P		
Ceiling	green on plywood. over bunks is white on green on plywood.	F to P		
Paint	Floor grey on light grey on plywood Wall green on plywood / white on tongue Ceiling see above Doors factory powder white on metal Windows same as walls Other Bunk Dividers: white on plywood	in Bunks F to P		Wall = GIC-PS2 Bunk Dividers = GIC-PS3 Floor: GIC-PS4
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	tar paper, paper backing over pink fibreglass over wood. Both walls / floors			tar paper = GIC-AS1
Piping / Electrical / Mechanical Equipment	Electrical wires for generator for sink/bath to grey water tank outside	propane + oil line		
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: well-lite Serial #: FL-46 mini fluorescent bars in rooms no ballast	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	2 propane lights 4 incandescents			
Thermostats	Manufacturer Dial Colour Casing Shape Wall/Floor Mounted		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted mould and signs of animal intrusion GIC-MV	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums White marble countertop laminate / Adhesive kitchen: GIC-AS5 Antenna runs to interior			

Oil stove: Enterprise model # 2021
Propane Range: CNI
1 Dometic fridge propane # 9282702

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:


16 ft
Layout
Deck
window
Cabinets
Door
GIC-AS6
GICPS2
Fridge
Kitchen counter
GIC-AS5
Propane range
24
window
GICPS1
GIC-PS3
oil stove
Bunks
Bunks
window
Fluorescent light
Fluorescent light
Door to new section

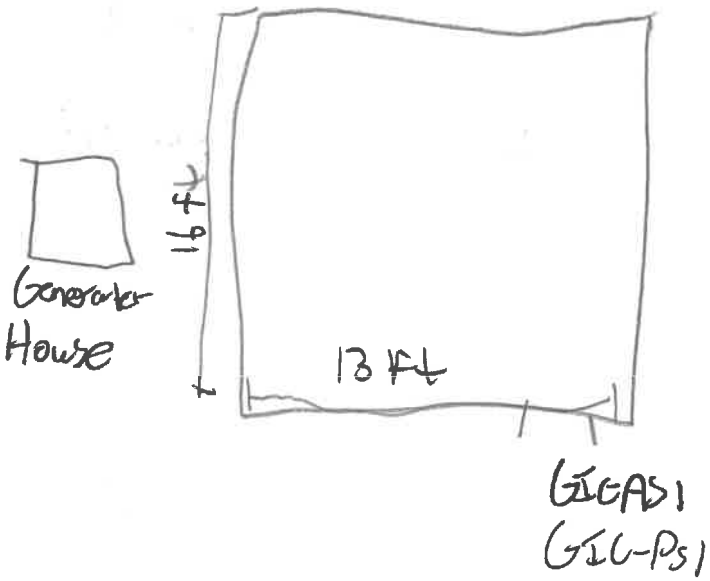
Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Flower Island Comp			Exterior (New)	13 x 16 x 15Ft 8Ft Ceiling Peak

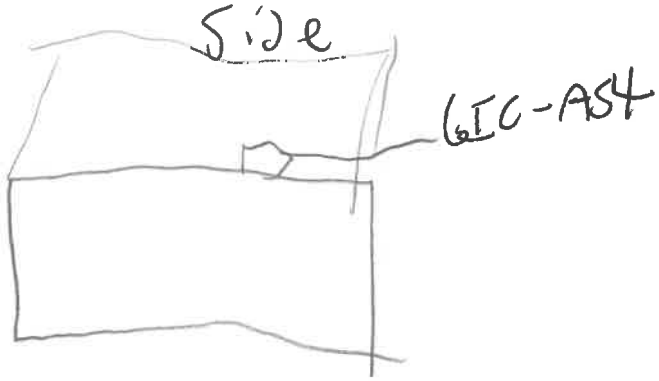
	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Raised wooden truck on Creosote Posts. Plywood underneath	P		Creosote Timbers GIC-PT3
Walls	White Particle board over tar paper over wood	P		GIC-PS1 = particle board to
Ceiling	Shingle on tar on tar paper on wood.	P		GIC-PS2 = Shingle/tar Paper
Paint	Floor Wall White on Particle board Ceiling Doors Trim; White on roof Trim Windows Other Grey on Joist	P		Wall = GIC-PS1 Trim = GIC-PS6
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)				
Piping / Electrical / Mechanical Equipment	Grey water line out side from new build			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)				
Thermostats	Manufacturer Dial Colour Casing Shape Wall/Floor Mounted		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit) Pressure treated posts for Deck = GIC-PT1			Creosote timbers post for
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Pressure treated posts (Deck) GIC-PT2 Caulking around windows (All sections) GIC-PS9 Siding caulking = GIC-PS11 (Hard Primer			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:

TOP





Have Check for others

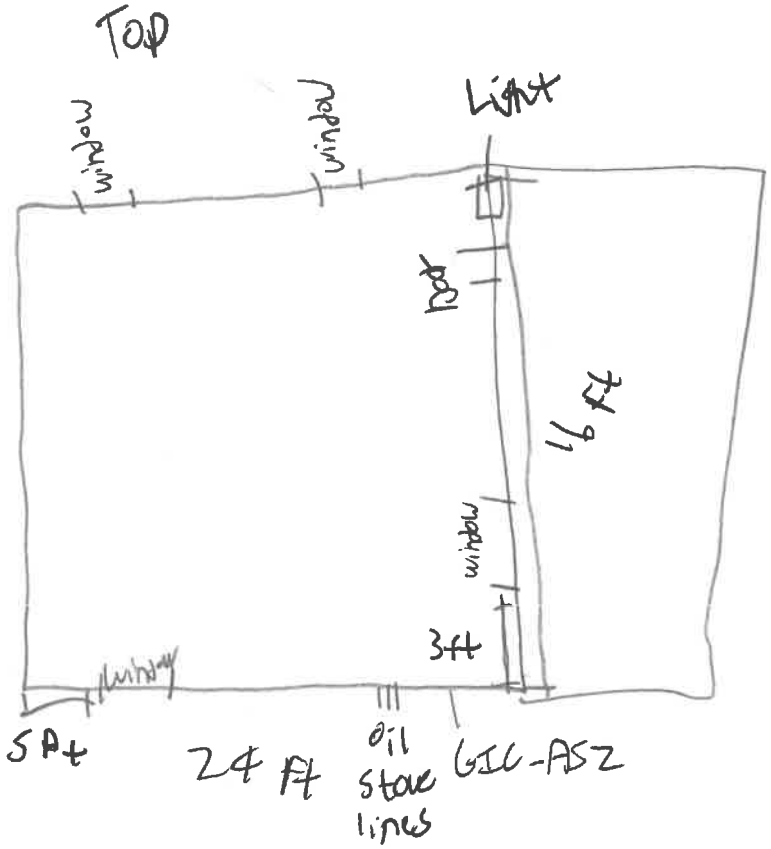
PS1
AS1
AS2

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Glacier Island camp			Exterior (old)	24 x 16

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Raised wooden floor on creosote timbers			~~[illegible]~~
Walls	Particle board [illegible] both sections on plywood Old: Red on [illegible] PB shingles; New: [illegible]	F.		GIC-AS2 = Red particle GIC-PS5 = (good) painted PU.
Ceiling	Shingle and tar on wood	P		GIC-AS3
Paint	Floor Wall Ceiling Doors Windows Other			
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)				
Piping / Electrical / Mechanical Equipment	Oil stove lines portruding from cabin.			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	1 incandescent on exterior over Door.			
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Caulking (windows) = GIC-AS10			

Legend: PS (paint sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); LCM (lead-containing material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ACT (acoustic ceiling tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

Notes/Comments:


Top
window
window
Light
door
7ft 9 in
window
3ft
window
5ft
24 ft
oil stove lines
GIC-AS2

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Grover Island Camp			Outhouse	6 x 7 x 7

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Plywood (grey)			
Walls	Interior: white on plywood Exterior grey on plywood	P		
Ceiling	Interior white paint plywood ceiling			Shingle = GIC-AS12
Paint	Floor grey on plywood Wall Ceiling N/A Doors grey on plywood Windows Other			Floor/Door = GIC-PS7
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	pink insulation Poly bead in Door			
Piping / Electrical / Mechanical Equipment	Wiring for electrical			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)				
Thermostats	Manufacturer Colour Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums			

...t sample); VPS (visual reference to PS); AS (asbestos sample); VAS (visual reference to AS); FS (fungal sample); ...g material); ACM (asbestos-containing material); DJC (drywall joint compound); VFT (vinyl floor tile – specify 1 x 1', 9 x 9"); ...g tile – specify pattern e.g. speckled); LF (linear feet); SF (square feet).

...ents:

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APPENDICES

6 CLOSURE AND LIMITATIONS

This report was prepared for the exclusive use of Newfoundland and Labrador Hydro. The findings of this report are based solely on the conditions of the site buildings encountered at the time of the site visit, and are limited by the availability of information at the time of the Pre-Demolition HBMA, lack of accessibility to areas within the buildings, project scope and budget. The findings of this assessment are based on the interpretation of data from a limited number of areas investigated and analytical results pertaining to specific samples. It is possible that materials exist which could not be reasonably identified within the scope of the Pre-Demolition HBMA or which were not apparent or accessible during the site visit. This Report is also subject to the further limitations contained in Appendix B6.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of the third party. Should additional parties require reliance on this report, written authorization from WSP is required. With respect to third parties, WSP has no liability or responsibility for losses of any kind whatsoever, including direct or consequential financial effects on transactions or property values, or requirements for follow-up actions and costs. This assessment has been carried out using commercially reasonable best efforts consistent with the level and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

Except when otherwise specified, WSP disclaims any obligation to update this report for events taking place, or with respect to information that becomes available to WSP after the time during which WSP conducted the hazardous building materials assessment.

In evaluating the property, WSP has relied in good faith on information provided by other individuals noted in this report. WSP has assumed that the information provided is factual and accurate. In addition, some of the findings in this report are based upon information provided by the current owner/occupant. WSP accepts no responsibility for any deficiency, misstatement or inaccuracy contained in this report as a result of omissions, misinterpretations or fraudulent acts of persons interviewed or contacted.

WSP makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and change. Such interpretations and regulatory changes should be reviewed with legal counsel.

We trust that the information presented in this report meets your current requirements. Should you have any questions, or concerns, please do not hesitate to contact the undersigned.

Respectfully Submitted,

WSP E&I Canada Limited

Prepared By:	**Reviewed By:**
Draft	**Draft**
Lori Wiseman, P.Eng.	Bill Chew, B.Sc., CET
Senior Geo-Environmental Engineer	Senior Air Quality Scientist

APPENDIX

A6. LABORATORY CERTIFICATES OF ANALYSES

APPENDIX

Camp 50

EMSL Canada Inc.

2756 Slough Street Mississauga, ON L4T 1G3
Phone/Fax: (289) 997-4602 / (289) 997-4607
http://www.EMSL.com / torontolab@emsl.com

EMSL Canada Order 552212219
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Attn: Lori Wiseman
Wood E&IS Canada Ltd
PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5

Phone: (709) 722-7023
Fax: (709) 722-7353
Collected:
Received: 8/09/2022
Analyzed: 8/16/2022

Proj: Pre-Demo HBMA TL22/TE22104005

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: C50 AS-1-Tar Paper **Lab Sample ID:** **552212219-0001**
Sample Description: Camp 50 Wall/Tar paper - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C50 AS-1-Fibreglass **Lab Sample ID:** **552212219-0001A**
Sample Description: Camp 50 Wall/Tar paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Pink	85.0%	15.0%	None Detected	

Client Sample ID: C50 AS-2 **Lab Sample ID:** **552212219-0002**
Sample Description: Camp 50 Wall/Foil wrap

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Silver/Beige	5.0%	95.0%	None Detected	

Client Sample ID: C50 AS-3-Tar Paper **Lab Sample ID:** **552212219-0003**
Sample Description: Camp 50/Particle board backing - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C50 AS-3-Fibreboard **Lab Sample ID:** **552212219-0003A**
Sample Description: Camp 50/Particle board backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Brown	70.0%	30.0%	None Detected	

Client Sample ID: C50 AS-4-Brick **Lab Sample ID:** **552212219-0004**
Sample Description: Camp 50 Exterior Wall/Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Red	0.0%	100.0%	None Detected	

Client Sample ID: C50 AS-4-Mortar **Lab Sample ID:** **552212219-0004A**
Sample Description: Camp 50 Exterior Wall/Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Gray	0.0%	100.0%	None Detected	

EMSL Canada Inc.

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http://www.EMSL.com / torontolab@emsl.com

EMSL Canada Order 552212219
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: C50 AS-5-Brick **Lab Sample ID:** **552212219-0005**
Sample Description: Camp 50 Exterior Wall/Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Red	0.0%	100.0%	None Detected	

Client Sample ID: C50 AS-5-Mortar **Lab Sample ID:** **552212219-0005A**
Sample Description: Camp 50 Exterior Wall/Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: C50 AS-6-Cinder Block **Lab Sample ID:** **552212219-0006**
Sample Description: Camp 50 Foundation/Cider Block and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: C50 AS-6-Mortar **Lab Sample ID:** **552212219-0006A**
Sample Description: Camp 50 Foundation/Cider Block and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: C50 AS-7-Shingle 1 **Lab Sample ID:** **552212219-0007**
Sample Description: Camp 50 Roof/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	White/Black/Green	0.0%	100%	None Detected	

Client Sample ID: C50 AS-7-Tar Paper **Lab Sample ID:** **552212219-0007A**
Sample Description: Camp 50 Roof/Black Shingle - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C50 AS-7-Shingle 2 **Lab Sample ID:** **552212219-0007B**
Sample Description: Camp 50 Roof/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black/Green	0.0%	100%	None Detected	

Client Sample ID: C50 AS-8-Shingle **Lab Sample ID:** **552212219-0008**
Sample Description: Camp 50 Roof/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Gray/Black	0.0%	100%	None Detected	

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EMSL Canada Order 552212219
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: C50 AS-8-Tar Paper ***Lab Sample ID:*** **552212219-0008A**

Sample Description: Camp 50 Roof/Black Shingle - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C50 AS-9 ***Lab Sample ID:*** **552212219-0009**

Sample Description: Camp 50 Wall/Caulking

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Peach	0.0%	100%	None Detected	

Client Sample ID: C50 AS-10-Shingle ***Lab Sample ID:*** **552212219-0010**

Sample Description: Camp 50 Outhouse/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Gray/Black	0.0%	99.7%	**0.30% Chrysotile**	Result includes a small amount of inseparable attached material

Client Sample ID: C50 AS-10-Tar Paper ***Lab Sample ID:*** **552212219-0010A**

Sample Description: Camp 50 Outhouse/Black Shingle - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C50 AS-11 ***Lab Sample ID:*** **552212219-0011**

Sample Description: Camp 50 Outhouse/Concrete block

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: C50 AS-DUP1 ***Lab Sample ID:*** **552212219-0012**

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	White	0.0%	100%	None Detected	

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EMSL Canada Order 552212219
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Analyst(s):

Caroline Allen PLM (10)
PLM Grav. Reduction (11)

Reviewed and approved by:

Matthew Davis or other approved signatory
or Other Approved Signatory

Samples analyzed by EPA 600/R-93/116 consistent with NLR 111/98. The estimated limit of detection for non-detect samples is <0.1%. 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. Estimation of uncertainty available upon request. This report is a summary of multiple methods of analysis, fully compliant reports are available upon request. A combination of PLM and TEM analysis may be necessary to ensure consistently reliable detection of asbestos. This report must not be used to claim product endorsement by NVLAP of any agency or the U.S. Government.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 08/16/202219:45:12

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD
36 PIPPY PLACE
St. John's, NL A1B4A5
(709) 722-5062
ATTENTION TO: Lori Wiseman
PROJECT:
AGAT WORK ORDER: 22K928323
SOIL ANALYSIS REVIEWED BY: Corey Curl, Senior Technician
TRACE ORGANICS REVIEWED BY: Dylan McCarthy, Trace Organics Lab Technician
DATE REPORTED: Aug 19, 2022
PAGES (INCLUDING COVER): 8
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
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- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
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Dartmouth, Nova Scotia
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Certificate of Analysis

AGAT WORK ORDER: 22K928323

PROJECT:

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Lead In Paint (ICP-OES)

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		C50-PS1	C50-PS2	C50-PS3	C50-PS4	C50-PS5	C50-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19
Parameter	**Unit**	**G / S**	**RDL**	**4161409**	**4161411**	**4161412**	**4161413**	**4161414**	**4161415**
Lead in Paint	mg/kg		10	82	175	40	26	65	33
Total Sample Mass	g			0.4858	0.5804	0.4506	0.4684	0.4951	0.5346

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Corey Curl

AGAT Laboratories
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Dartmouth, Nova Scotia
CANADA B3B 1M2
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FAX (902)468-8924
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22K928323

PROJECT:

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Mercury in Paint

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		C50-PS1	C50-PS2	C50-PS3	C50-PS4	C50-PS5	C50-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19
Parameter	Unit	G / S	RDL	4161409	4161411	4161412	4161413	4161414	4161415
Mercury	mg/kg		0.03	2.01	0.25	0.06	<0.03	<0.03	0.06

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Corey Curl

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11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
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Certificate of Analysis

AGAT WORK ORDER: 22K928323

PROJECT:

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Total Polychlorinated Biphenyls in Paint

DATE RECEIVED: 2022-08-01 **DATE REPORTED: 2022-08-19**

		SAMPLE DESCRIPTION:		C50-PS1	C50-PS2	C50-PS3	C50-PS4	C50-PS5	C50-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19
Parameter	**Unit**	**G / S**	**RDL**	**4161409**	**4161411**	**4161412**	**4161413**	**4161414**	**4161415**
Total PCBs	mg/kg		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate	**Unit**	**Acceptable Limits**							
Decachlorobiphenyl	%	60-140		87	88	85	91	84	79

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA **AGAT WORK ORDER: 22K928323**

PROJECT: **ATTENTION TO: Lori Wiseman**

SAMPLING SITE: **SAMPLED BY:**

Soil Analysis

RPT Date: Aug 19, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead In Paint (ICP-OES)															
Lead in Paint	4161981		32	40	NA	< 10	111%	80%	120%	98%	80%	120%	105%	70%	130%
Mercury in Paint															
Mercury	4161489		0.33	0.33	1.3%	< 0.03	85%	70%	130%	NA	70%	130%	103%	70%	130%

Certified By: Corey Curl

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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA **AGAT WORK ORDER: 22K928323**

PROJECT: **ATTENTION TO: Lori Wiseman**

SAMPLING SITE: **SAMPLED BY:**

Trace Organics Analysis

RPT Date: Aug 19, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Polychlorinated Biphenyls in Paint															
Total PCBs	1	BS DUP	0.7	0.7	NA	< 0.5	105%	60%	140%	139%	60%	140%	136%	60%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Total Polychlorinated Biphenyls in Paint															
Total PCBs	1	BS DUP	0.6	0.5	NA	< 0.5	109%	60%	140%	125%	60%	140%	107%	60%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:

AGAT Laboratories

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FAX (902)468-8924
http://www.agatlabs.com

Method Summary

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA **AGAT WORK ORDER: 22K928323**

PROJECT: **ATTENTION TO: Lori Wiseman**

SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Lead in Paint	MET-121-6103 and MET-121-6113	SM 3120B	ICP/OES
Total Sample Mass			
Mercury	INOR-121-6101 & INOR-121-6107	Based on EPA 245.5 & SM 3112B	CV/AA
Trace Organics Analysis			
Total PCBs	ORG-120-5107	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	ORG-120-5106	EAP SW846 3510C/8080/8010	GC/ECD

AGAT Laboratories

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St John's, NL
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P: 709.747.8573 • F: 709.747.2139

Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 23.6, 23.3
Hold Time:
AGAT Job Number: 22K928323
Notes:

Report Information
Company: WOOD
Contact: Lori Wiseman
Address: 36 Pippy Place
St. John's NL PO Box 13216
Phone: 709 689 0479 Fax:
Client Project #: TE22104005.
AGAT Quotation: NL Hydro
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: Lori Wiseman
Email: lori.wiseman@woodplc.com
2. Name:
Email:

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT)
Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Invoice To Same Yes ☐ / No ☐
Company:
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NL DOEC GW
☐ Commercial
☐ Res/Park ☐ NLDOEC Discharge
☐ Agricultural
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No **Salt Water Sample** ☐ Yes ☐ No
Reg. No.:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment
C50-PS1	July 19/22	Paint	Bag	Please hold for Possible Leachate
C50-PS2	↓	↓	↓	↓
C50-PS3				
C50-PS4				
C50-PS5				
C50-PSDUP1				

Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other: Lead	Other:	Hazardous (Y/N)
			✓														✓				✓	
			✓														✓				✓	
			✓														✓				✓	
			✓														✓				✓	
			✓														✓				✓	
			✓														✓				✓	

Samples Relinquished By (Print Name): S. DOWNER
Samples Relinquished By (Sign):
Date/Time: July
Samples Received By (Print Name): O. Atkins
Samples Received By (Sign):
Date/Time: Aug 1 2022 3:20
Date/Time: Aug 3 9:00

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page 1 of 1
N°:

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Date revised: Apr 19, 2021

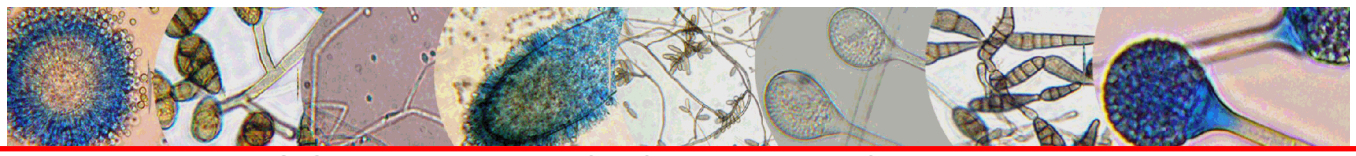
EXPANDED FUNGAL REPORT ™

Prepared Exclusively For

Wood E&IS Canada Ltd

PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5
Phone:7097227023

Report Date:	**8/15/2022**
Project:	**Pre-Demo HBMA TL228 / TE22104005 / 5290.5730-00**
P.O:	**5290.5730-00**
EMSL Canada Orde	**552212231**



EMSL Canada Inc.
2756 Slough Street Mississauga, ON L4T 1G3
Phone: (289) 997-4602 Fax: (289) 997-4607 Web: http://www.EMSL.com Email:torontolab@emsl.com

Attn: Lori Wiseman
Wood E&IS Canada Ltd
PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5

EMSL Order: 552212231
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL228 / TE22104005 / 5290.5730-00

1. Description of Analysis

Analytical Laboratory

EMSL Canada Inc. (EMSL Canada) is a nationwide, full service, analytical testing laboratory network providing Asbestos, Mold, Indoor Air Quality, Microbiological, Environmental, Chemical, Forensic, Materials, Industrial Hygiene and Mechanical Testing services. Ranked as the premier independently owned environmental testing laboratory in the nation, EMSL Canada puts analytical quality as its top priority. This is assured by our high quality personnel, including experienced microbiologists with graduate degrees. Our quality is recognized by many well-respected federal, provincial and private accrediting agencies, such as the American Association for Laboratory Accreditation (A2LA). A2LA is a nonprofit, non-governmental, public service, membership society providing laboratory accreditation based on internationally accepted criteria for competence (ISO/IEC 17025). A2LA accreditation is also recognized internationally through its membership with the International Laboratory Accreditation Cooperation (ILAC).

EMSL Canada is an independent laboratory that performed the analysis of these samples. EMSL Canada did not conduct the sampling or site investigation for this report. The samples referenced herein were analyzed under strict quality control procedures using state-of-the-art microbiological methods. The analytical methods used and the data presented are scientifically and legally defensible

The laboratory data is provided in compliance with A2LA accreditation and the ISO 17025 standard for the particular test(s) requested, including any associated limitations for the methods employed. These data are intended for use by professionals having knowledge of the testing methods necessary to interpret them accurately.

2. Analytical Results

See attached data reports and charts.

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Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number	Client Sample ID	Location	Fungal Identification	Category
552212231-0001	C50-M1	Camp 50	Cladosporium	*Low*

No discernable field blank was submitted with this group of samples.

++ = Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.
- Denotes Not Detected.

Category	Count/area Analyzed
Rare	1 to 10
Low	11 to 100
Medium	101 to 1000
High	> 1000

Sneha Panchal, M.Sc.,RMCCM Laboratory Manager

Initial report from: 08/15/2022 19:10:22

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3. Understanding the Results

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Fungal spores are found everywhere. Whether or not symptoms develop in people exposed to fungi depends on the nature of the fungal material (e.g., allergenic, toxic, or infectious), the exposure level, and the susceptibility of exposed persons. Susceptibility varies with the genetic predisposition (e.g., allergic reactions do not always occur in all individuals), age, pre-existing medical conditions (e.g., diabetes, cancer, or chronic lung conditions), use of immunosuppressive drugs, and concurrent exposures. These reasons make it difficult to identify dose/response relationships that are required to establish “safe” or “unsafe” levels (i.e., permissible exposure limits).

It is generally accepted in the industry that indoor fungal growth is undesirable and inappropriate, necessitating removal or other appropriate remedial actions. The New York City guidelines and EPA guidelines for mold remediation in schools and commercial buildings define the conditions warranting mold remediation. Always remember that water is the key. Preventing water damage or water condensation will prevent mold growth.

This report is not intended to provide medical advice or advice concerning the relative safety of an occupied space. Always consult an occupational or environmental health physician who has experience addressing indoor air contaminants if you have any questions.

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4. Glossary of Fungi

CLADOSPORIUM	
Natural Habitat	Dead plant matter. Straw. Soil. Woody plants
Suitable Substrates in the Indoor Environment	Fiberglass duct liner. Paint. Textiles. Found in high concentration in water-damaged building materials.
Water Activity	Aw 0.84-0.88
Mode of Dissemination	Air
Allergic Potential	Type I (asthma and hay fever).
Potential or Opportunistic Pathogens	Edema. keratitis. onychomycosis. pulmonary infections. Sinusitis.
Industrial Uses	Produces 10 antigens.
Potential Toxins Produced	Cladosporin and Emodin.

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5. References and Informational Links

Books

- Bioaerosols: Assessment and Control. Janet Macher, Ed., American Conference of Governmental Industrial Hygienists, Cincinnati, OH 1999.
- Exposure Guidelines for Residential Indoor Air Quality. Environmental Health Directorate, Health Protection Branch, Health Canada, Ottawa, Ontario, 1989.
- Fungal Contamination in Public Buildings: Health Effects and Investigation Methods. Health Canada, Ottawa, Ontario, 2004.
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  IICRC: S520 Standard and Reference Guide for Professional Mold Remediation. 1st Edition, Institute of Inspection, Cleaning, and Restoration Certification, Vancouver, WA, 2004
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Consumer Links

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<http://www.aiha.org/get-involved/VolunteerGroups/Documents/BiosafetyVG-FactsAbout%20MoldDecember2011.pdf>

The Occupational Safety and Health Administration (OSHA)
http://www.osha.gov/SLTC/molds/index.html

CDC Mold Facts
http://www.cdc.gov/mold/faqs.htm

CDC Stachybotrys - Questions and answers on Stachybotrys chartarum and other molds
http://www.cdc.gov/mold/stachy.htm

IOM, NAS: Clearing the Air: Asthma and Indoor Air Exposures
https://www.epa.gov/indoor-air-quality-iaq/should-you-have-air-ducts-your-home-cleaned

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National Library of Medicine-Mold website
http://www.nlm.nih.gov/medlineplus/molds.html

California Department of Health Services (CADOHS)
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/Mold.aspx

Minnesota Department of Health
http://www.health.state.mn.us/divs/eh/indoorair/mold/index.html

New York City Department of Health and Mental Hygiene
https://www1.nyc.gov/site/doh/health/health-topics/mold.page

H.R.: The United States Toxic Mold Safety and Protection Act

EPA

"Should You Have the Air Ducts in Your Home Cleaned?"
<http://www.epa.gov/iaq/pubs/airduct.html>

General information about molds and actions that can be taken to clean up or prevent a mold problem.
<http://www.epa.gov/asthma/molds.html>

“A Brief Guide to Mold, Moisture, and Your Home” - Includes basic information on mold, cleanup guidelines, and moisture and mold prevention
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“Mold Remediation in Schools and Commercial Buildings” - Information on remediation in schools and commercial property, references for potential mold and moisture remediators.
https://www.epa.gov/mold/mold-remediation-schools-and-commercial-buildings-guide

FEMA

“Homes That Were Flooded May Harbor Mold Problems” - Information and tips for cleaning mold.
http://www.fema.gov/news-release/homes-were-flooded-may-harbor-mold-problems

“Dealing With Mold & Mildew in Your Flood Damaged Home.
http://www.fema.gov/pdf/rebuild/recover/fema_mold_brochure_english.pdf

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6. Important Terms, Conditions, and Limitations

A. Sample Retention

Samples analyzed by EMSL Canada will be retained for 60 days after analysis date Storage beyond this period is available for a fee with written request prior to the initial 30 day period. Samples containing hazardous/toxic substances which require special handling will be returned to the client immediately. EMSL Canadareserves the right to charge a sample disposal fee or return samples to the client.

B. Change Orders and Cancellation

All changes in the scope of work or turnaround time requested by the client after sample acceptance must be made in writing and confirmed in writing by EMSL Canada. If requested changes result in a change in cost the client must accept payment responsibility. In the event work is cancelled by a client, EMSL Canada will complete work in progress and invoice for work completed to the point of cancellation notice. EMSL Canada is not responsible for. holding times that are exceeded due to such changes.

C. Warranty

EMSL Canada warrants to its clients that all services provided hereunder shall be performed in accordance with established and recognized analytical testing procedures and with reasonable care in accordance with applicable federal, state and local laws. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. EMSL Canada disclaims any other warranties, express or implied, including a warranty of fitness for particular purpose and warranty of merchantability.

D. Limits of Liability

In no event shall EMSL Canada be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL Canada and whether EMSL Canada has been informed of the possibility of such damages, arising out of or in connection with EMSL Canada's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. EMSL Canada will not be held responsible for the improper selection of sampling devices even if we supply the device to the user. The user of the sampling device has the sole responsibility to select the proper sampler and sampling conditions to insure that a valid sample is taken for analysis. Any resampling performed will be at the sole discretion of EMSL Canada, the cost of which shall be limited to the reasonable value of the original sample delivery group (SDG) samples. In no event shall

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EMSL Canada be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL Canada by client thereunder.

E. Indemnification

Client shall indemnify EMSL Canada and its officers, directors and employees and hold each of them harmless for any liability, expense or cost, including reasonable attorney's fees, incurred by reason of any third party claim in connection with EMSL Canada services, the test result data or its use by client

APPENDIX

Camp 98

EXPANDED FUNGAL REPORT™

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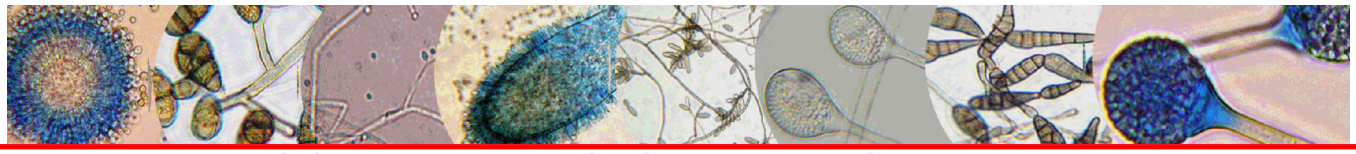
P.O:	**TE22104005**
EMSL Canada Orde	**552212230**



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Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number	Client Sample ID	Location	Fungal Identification	Category
552212230-0001	C98 M-1	Camp 98	Cladosporium	*Low*
			Hyphal Fragment	Rare

No discernable field blank was submitted with this group of samples.

++ = Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.
- Denotes Not Detected.

Category	Count/area Analyzed
Rare	1 to 10
Low	11 to 100
Medium	101 to 1000
High	> 1000

Sneha Panchal, M.Sc.,RMCCM Laboratory Manager

Initial report from: 08/15/2022 19:11:07

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CLADOSPORIUM	
Natural Habitat	Dead plant matter. Straw. Soil. Woody plants
Suitable Substrates in the Indoor Environment	Fiberglass duct liner. Paint. Textiles. Found in high concentration in water-damaged building materials.
Water Activity	Aw 0.84-0.88
Mode of Dissemination	Air
Allergic Potential	Type I (asthma and hay fever).
Potential or Opportunistic Pathogens	Edema. keratitis. onychomycosis. pulmonary infections. Sinusitis.
Industrial Uses	Produces 10 antigens.
Potential Toxins Produced	Cladosporin and Emodin.

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Consumer Links

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The Occupational Safety and Health Administration (OSHA)
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CDC Mold Facts
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CDC Stachybotrys - Questions and answers on Stachybotrys chartarum and other molds
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California Department of Health Services (CADOHS)
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/Mold.aspx

Minnesota Department of Health
http://www.health.state.mn.us/divs/eh/indoorair/mold/index.html

New York City Department of Health and Mental Hygiene
https://www1.nyc.gov/site/doh/health/health-topics/mold.page

H.R.: The United States Toxic Mold Safety and Protection Act

EPA

"Should You Have the Air Ducts in Your Home Cleaned?"
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General information about molds and actions that can be taken to clean up or prevent a mold problem.
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FEMA

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“Dealing With Mold & Mildew in Your Flood Damaged Home.
http://www.fema.gov/pdf/rebuild/recover/fema_mold_brochure_english.pdf

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C. Warranty

EMSL Canada warrants to its clients that all services provided hereunder shall be performed in accordance with established and recognized analytical testing procedures and with reasonable care in accordance with applicable federal, state and local laws. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. EMSL Canada disclaims any other warranties, express or implied, including a warranty of fitness for particular purpose and warranty of merchantability.

D. Limits of Liability

In no event shall EMSL Canada be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL Canada and whether EMSL Canada has been informed of the possibility of such damages, arising out of or in connection with EMSL Canada's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. EMSL Canada will not be held responsible for the improper selection of sampling devices even if we supply the device to the user. The user of the sampling device has the sole responsibility to select the proper sampler and sampling conditions to insure that a valid sample is taken for analysis. Any resampling performed will be at the sole discretion of EMSL Canada, the cost of which shall be limited to the reasonable value of the original sample delivery group (SDG) samples. In no event shall

Attn: Lori Wiseman
Wood E&IS Canada Ltd
PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5

Proj: Pre-Demo HBMA TL228 / TE22104005

EMSL Order: 552212230
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

EMSL Canada be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL Canada by client thereunder.

E. Indemnification

Client shall indemnify EMSL Canada and its officers, directors and employees and hold each of them harmless for any liability, expense or cost, including reasonable attorney's fees, incurred by reason of any third party claim in connection with EMSL Canada services, the test result data or its use by client

EMSL Canada Inc.

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http://www.EMSL.com / torontolab@emsl.com

EMSL Canada Order 552212235
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Attn: Lori Wiseman
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Saint John's, NL A1B 4A5

Phone: (709) 722-7023
Fax: (709) 722-7353
Collected:
Received: 8/09/2022
Analyzed: 8/16/2022

Proj: Pre-Demo HBMA TL22/TE22104005

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: C98 AS-1 ***Lab Sample ID:*** **552212235-0001**
Sample Description: Camp 98 Kitchen - Countertop Mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Tan	0.0%	100%	None Detected	

Client Sample ID: C98 AS-2 ***Lab Sample ID:*** **552212235-0002**
Sample Description: Camp 98 Bathroom - Countertop Mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Red	0.0%	100%	None Detected	

Client Sample ID: C98 AS-3-Tar Paper ***Lab Sample ID:*** **552212235-0003**
Sample Description: Camp 98 Wall - Tar paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C98 AS-3-Fibreglass ***Lab Sample ID:*** **552212235-0003A**
Sample Description: Camp 98 Wall - Tar paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Brown	85.0%	15.0%	None Detected	

Client Sample ID: C98 AS-4-Tar Paper ***Lab Sample ID:*** **552212235-0004**
Sample Description: Camp 98 Wall - Particle board backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C98 AS-4-Fibreboard ***Lab Sample ID:*** **552212235-0004A**
Sample Description: Camp 98 Wall - Particle board backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Brown	85.0%	15.0%	None Detected	

Client Sample ID: C98 AS-5-Brick ***Lab Sample ID:*** **552212235-0005**
Sample Description: Camp 98 Wall - Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Brown/Red	0.0%	100.0%	None Detected	

Client Sample ID: C98 AS-5-Mortar ***Lab Sample ID:*** **552212235-0005A**
Sample Description: Camp 98 Wall - Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Gray	0.0%	100.0%	None Detected	

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EMSL Canada Order 552212235
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: C98 AS-6-Brick **Lab Sample ID:** **552212235-0006**
Sample Description: Camp 98 Wall - Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Brown/Red	0.0%	100.0%	None Detected	

Client Sample ID: C98 AS-7-Mortar 1 **Lab Sample ID:** **552212235-0007**
Sample Description: Camp 98 Foundation - Cinder Block

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Gray	0.0%	100.0%	None Detected	

Client Sample ID: C98 AS-7-Mortar 2 **Lab Sample ID:** **552212235-0007A**
Sample Description: Camp 98 Foundation - Cinder Block

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Gray/Various	0.0%	100.0%	None Detected	

Client Sample ID: C98 AS-8-Shingle **Lab Sample ID:** **552212235-0008**
Sample Description: Camp 98 Roof - Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Gray/Black	0.0%	100%	None Detected	

Client Sample ID: C98 AS-8-Tar Paper **Lab Sample ID:** **552212235-0008A**
Sample Description: Camp 98 Roof - Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C98 AS-9-Shingle **Lab Sample ID:** **552212235-0009**
Sample Description: Camp 98 Roof - Green Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Gray/Green	0.0%	100%	None Detected	

Client Sample ID: C98 AS-9-Tar Paper **Lab Sample ID:** **552212235-0009A**
Sample Description: Camp 98 Roof - Green Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Black	0.0%	100%	None Detected	

Client Sample ID: C98 AS-10 **Lab Sample ID:** **552212235-0010**
Sample Description: Camp 98 Roof - Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Gray/Black	0.0%	100%	None Detected	

Client Sample ID: C98 AS-11 **Lab Sample ID:** **552212235-0011**
Sample Description: Camp 98 Foundation - Concrete Block

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Gray	0.0%	100.0%	None Detected	

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EMSL Canada Order 552212235
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: C98 AS-12 ***Lab Sample ID:*** **552212235-0012**

Sample Description: Camp 98 Wall - Foil Wrap

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Silver/Beige	60.0%	40.0%	None Detected	

Client Sample ID: C98 AS-DUP1-Tar Paper ***Lab Sample ID:*** **552212235-0013**

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	08/16/2022	Black	<0.25%	100%	None Detected	

Client Sample ID: C98 AS-DUP1-Fibreboard ***Lab Sample ID:*** **552212235-0013A**

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	08/16/2022	Brown	85.0%	15.0%	None Detected	

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EMSL Canada Order 552212235
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Attn: Lori Wiseman
Wood E&IS Canada Ltd
PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5

Phone: (709) 722-7023
Fax: (709) 722-7353
Collected:
Received: 8/09/2022
Analyzed: 8/16/2022

Proj: Pre-Demo HBMA TL22/TE22104005

The samples in this report were submitted for asbestos bulk analysis. The reference number for these samples is the Order ID above. Please use this reference number when calling about these samples.

Sample Receipt Date:	08/09/2022	Sample Receipt Time:	10:16 am
Analysis Completed Date:	08/16/2022	Analysis Completed Time:	5:51 pm

Analyst(s):

Signature Not Loaded

Elizabeth Mierzynski PLM (10)
PLM Grav. Reduction (10)

Reviewed and approved by:

Matthew Davis or other approved signatory
or Other Approved Signatory

Samples analyzed by EPA 600/R-93/116 consistent with NLR 111/98. The estimated limit of detection for non-detect samples is <0.1%. 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. Estimation of uncertainty available upon request. This report is a summary of multiple methods of analysis, fully compliant reports are available upon request. A combination of PLM and TEM analysis may be necessary to ensure consistently reliable detection of asbestos. This report must not be used to claim product endorsement by NVLAP of any agency or the U.S. Government.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

AGAT Laboratories

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36 PIPPY PLACE
St. John's, NL A1B4A5
(709) 722-5062

ATTENTION TO: Lori Wiseman

PROJECT: TE22104005

AGAT WORK ORDER: 22K928342

SOIL ANALYSIS REVIEWED BY: Corey Curl, Senior Technician

TRACE ORGANICS REVIEWED BY: Dylan McCarthy, Trace Organics Lab Technician

DATE REPORTED: Aug 19, 2022

PAGES (INCLUDING COVER): 8

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 22K928342

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Lead In Paint (ICP-OES)

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		C98-PS1	C98-PS2	C98-PS3	C98-PS4	C98-PS5	C98-PS6	C98-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19
Parameter	Unit	G / S	RDL	4161483	4161485	4161486	4161487	4161488	4161489	4161490
Lead in Paint	mg/kg		10	62	40	283	<10	20	30	27
Total Sample Mass	g			0.5415	0.4615	0.4403	0.4627	0.616	0.4633	0.4622

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Corey Curl

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Certificate of Analysis

AGAT WORK ORDER: 22K928342

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Mercury in Paint

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		C98-PS1	C98-PS2	C98-PS3	C98-PS4	C98-PS5	C98-PS6	C98-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19
Parameter	Unit	G / S	RDL	4161483	4161485	4161486	4161487	4161488	4161489	4161490
Mercury	mg/kg		0.03	6.81	0.08	1.12	0.49	6.72	0.33	0.07

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Corey Curl

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Certificate of Analysis

AGAT WORK ORDER: 22K928342

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Total Polychlorinated Biphenyls in Paint

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		C98-PS1	C98-PS2	C98-PS3	C98-PS4	C98-PS5	C98-PS6	C98-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19	2022-07-19
Parameter	Unit	G / S	RDL	4161483	4161485	4161486	4161487	4161488	4161489	4161490
Total PCBs	mg/kg		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate	Unit	Acceptable Limits								
Decachlorobiphenyl	%	60-140		111	106	106	94	92	115	94

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928342

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Aug 19, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead In Paint (ICP-OES)															
Lead in Paint	4161981		32	40	NA	< 10	111%	80%	120%	98%	80%	120%	105%	70%	130%
Mercury in Paint															
Mercury	4161489	4161489	0.33	0.33	1.3%	< 0.03	85%	70%	130%	NA	70%	130%	123%	70%	130%

Certified By:

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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928342

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Aug 19, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Polychlorinated Biphenyls in Paint															
Total PCBs	1	BS DUP	0.6	0.7	NA	< 0.5	113%	60%	140%	120%	60%	140%	139%	60%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:

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Method Summary

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928342

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Lead in Paint	MET-121-6103 and MET-121-6113	SM 3120B	ICP/OES
Total Sample Mass			
Mercury	INOR-121-6101 & INOR-121-6107	Based on EPA 245.5 & SM 3112B	CV/AA
Trace Organics Analysis			
Total PCBs	ORG-120-5107	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	ORG-120-5106	EAP SW846 3510C/8080/8010	GC/ECD

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Chain of Custody Record

Laboratory Use Only

Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 23.6, 23.3
Hold Time:
AGAT Job Number: 22K928342
Notes:

Report Information

Company: WOOD
Contact: Lori Wiseman
Address: 36 Pippy Place St. John's NL PO Box 13216
Phone: 709 689 0479 Fax:
Client Project #: TE22104005
AGAT Quotation: NL Hydro
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):

1. Name: Lori Wiseman
   Email: lori.wiseman@woodplc.com
2. Name:
   Email:

Report Format

☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT)

Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Regulatory Requirements (Check):

☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NL DOEC GW
☐ Commercial
☐ Res/Park ☐ NLDOEC Discharge
☐ Agricultural
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No **Salt Water Sample** ☐ Yes ☐ No
Reg. No.:

Invoice To Same Yes ☐ / No ☐

Company:
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other: Lead	Other:	Hazardous (Y/N)
C98-PS1	July 19/22	Paint	Bag	Please hold for possible leachate				✓														✓				✓		
C98-PS2	↓	↓	↓	↓				✓														✓				✓		
C98-PS3								✓														✓				✓		
C98-PS4								✓														✓				✓		
C98-PS5								✓														✓				✓		
C98-PS6								✓														✓				✓		
C98 DUP1								✓														✓				✓		

Samples Relinquished By (Print Name): S.DWNER
Samples Relinquished By (Sign): [signature]
Date/Time:
Samples Received By (Print Name): O.Atkins
Date/Time: Aug 1, 2022 3:20
Samples Received By (Sign): [signature]
Date/Time: Aug 3 9:00

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1
Nº:

Document ID: ... -1507.003

Date revised Apr 19 2021

APPENDIX

Rainy Lake Camp

EMSL Canada Inc.

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EMSL Canada Order 552212214
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Attn: Lori Wiseman
Wood E&IS Canada Ltd
PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5

Proj: Pre-Demo HBMA TL22/TE22104005

Phone: (709) 722-7023
Fax: (709) 722-7353
Collected:
Received: 8/09/2022
Analyzed: 8/16/2022

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: RCL AS-1-Red Mastic ***Lab Sample ID:*** **552212214-0001**
Sample Description: Rainy Lake Camp Kitchen/Countertop Mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Red	0.0%	100%	None Detected	

Client Sample ID: RCL AS-1-Tan Mastic ***Lab Sample ID:*** **552212214-0001A**
Sample Description: Rainy Lake Camp Kitchen/Countertop Mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Tan	0.0%	100%	None Detected	

Client Sample ID: RCL AS-2 ***Lab Sample ID:*** **552212214-0002**
Sample Description: Rainy Lake Camp Bathroom/Countertop Mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Tan	0.0%	100%	None Detected	

Client Sample ID: RCL AS-3 ***Lab Sample ID:*** **552212214-0003**
Sample Description: Rainy Lake Camp Wall/Caulking

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Beige	0.0%	100%	**<0.25% Chrysotile**	

Client Sample ID: RCL AS-4-Brick ***Lab Sample ID:*** **552212214-0004**
Sample Description: Rainy Lake Camp Exterior/Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Brown	0.0%	100.0%	None Detected	

Client Sample ID: RCL AS-4-Mortar ***Lab Sample ID:*** **552212214-0004A**
Sample Description: Rainy Lake Camp Exterior/Brick and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Beige	0.0%	100.0%	None Detected	

Client Sample ID: RCL AS-5-Concrete Block ***Lab Sample ID:*** **552212214-0005**
Sample Description: Rainy Lake Camp Foundation/Concrete block and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Gray	0.0%	100.0%	None Detected	

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EMSL Canada Order 552212214
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: RCL AS-5-Mortar **Lab Sample ID:** **552212214-0005A**
Sample Description: Rainy Lake Camp Foundation/Concrete block and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Beige	0.0%	100.0%	None Detected	

Client Sample ID: RCL AS-6 **Lab Sample ID:** **552212214-0006**
Sample Description: Rainy Lake Camp Roof/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Gray/Black	0.0%	100%	None Detected	

Client Sample ID: RCL AS-7-Tar Paper **Lab Sample ID:** **552212214-0007**
Sample Description: Rainy Lake Camp Wall/Particle board backing - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	1.7%	98.3%	None Detected	

Client Sample ID: RCL AS-7-Fibreboard **Lab Sample ID:** **552212214-0007A**
Sample Description: Rainy Lake Camp Wall/Particle board backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Brown	90.0%	10.0%	None Detected	

Client Sample ID: RCL AS-8 **Lab Sample ID:** **552212214-0008**
Sample Description: Rainy Lake Camp Wall/Foil Wrap

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Brown/Silver	60.0%	40.0%	None Detected	

Client Sample ID: RCL AS-9 **Lab Sample ID:** **552212214-0009**
Sample Description: Rainy Lake Camp Outhouse/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Gray/Black	0.0%	100%	None Detected	

Client Sample ID: RCL AS-10 **Lab Sample ID:** **552212214-0010**
Sample Description: Rainy Lake Camp Exterior/Caulking

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Beige	2.4%	97.6%	**<0.25% Chrysotile**	

Client Sample ID: RCL AS-11 **Lab Sample ID:** **552212214-0011**
Sample Description: Rainy Lake Camp Outhouse/Concrete block and Mortar

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Gray	0.0%	100.0%	None Detected	

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EMSL Canada Order 552212214
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: RCL AS-DUP1 ***Lab Sample ID:*** **552212214-0012**

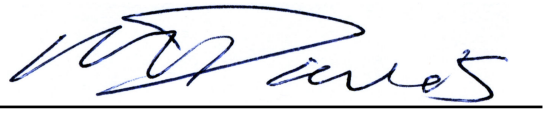
Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Brown/Silver	60.0%	40.0%	None Detected	

Analyst(s):

Caroline Allen PLM (5)
Ruby Lai PLM (3)
PLM Grav. Reduction (8)

Reviewed and approved by:



Matthew Davis or other approved signatory
or Other Approved Signatory

Samples analyzed by EPA 600/R-93/116 consistent with NLR 111/98. The estimated limit of detection for non-detect samples is <0.1%. 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. Estimation of uncertainty available upon request. This report is a summary of multiple methods of analysis, fully compliant reports are available upon request. A combination of PLM and TEM analysis may be necessary to ensure consistently reliable detection of asbestos. This report must not be used to claim product endorsement by NVLAP of any agency or the U.S. Government.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 08/16/202215:43:57

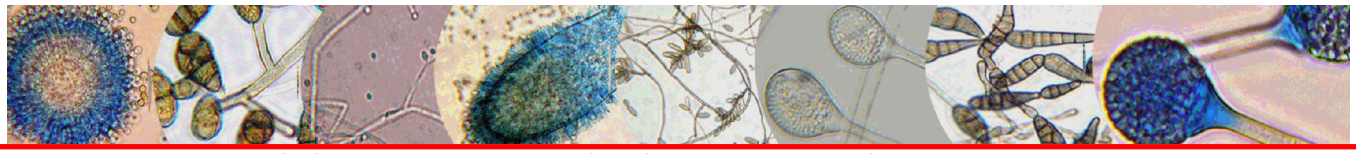
EXPANDED FUNGAL REPORT™

Prepared Exclusively For

Wood E&IS Canada Ltd

PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5
Phone:7097227023

Report Date:	**8/15/2022**
Project:	**Pre-Demo HBMA TL228 / TE22104005 / 5290.5730-00**
P.O:	**5290.5730-00**
EMSL Canada Orde	**552212234**



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EMSL Order: 552212234
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL228 / TE22104005 / 5290.5730-00

1. Description of Analysis

Analytical Laboratory

EMSL Canada Inc. (EMSL Canada) is a nationwide, full service, analytical testing laboratory network providing Asbestos, Mold, Indoor Air Quality, Microbiological, Environmental, Chemical, Forensic, Materials, Industrial Hygiene and Mechanical Testing services. Ranked as the premier independently owned environmental testing laboratory in the nation, EMSL Canada puts analytical quality as its top priority. This is assured by our high quality personnel, including experienced microbiologists with graduate degrees. Our quality is recognized by many well-respected federal, provincial and private accrediting agencies, such as the American Association for Laboratory Accreditation (A2LA). A2LA is a nonprofit, non-governmental, public service, membership society providing laboratory accreditation based on internationally accepted criteria for competence (ISO/IEC 17025). A2LA accreditation is also recognized internationally through its membership with the International Laboratory Accreditation Cooperation (ILAC).

EMSL Canada is an independent laboratory that performed the analysis of these samples. EMSL Canada did not conduct the sampling or site investigation for this report. The samples referenced herein were analyzed under strict quality control procedures using state-of-the-art microbiological methods. The analytical methods used and the data presented are scientifically and legally defensible

The laboratory data is provided in compliance with A2LA accreditation and the ISO 17025 standard for the particular test(s) requested, including any associated limitations for the methods employed. These data are intended for use by professionals having knowledge of the testing methods necessary to interpret them accurately.

2. Analytical Results

See attached data reports and charts.

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Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number	Client Sample ID	Location	Fungal Identification	Category
552212234-0001	RLC M-1	Rainy Lake Camp	Aspergillus/Penicillium	Rare
			Cladosporium	Rare
			Hyphal Fragment	Rare

No discernable field blank was submitted with this group of samples.

++ = Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.
- Denotes Not Detected.

Category	Count/area Analyzed
Rare	1 to 10
Low	11 to 100
Medium	101 to 1000
High	> 1000

Sneha Panchal, M.Sc.,RMCCM Laboratory Manager

Initial report from: 08/15/2022 19:08:45

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EMSL Order: 552212234
Customer ID: 55MEEN26
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Received: 8/09/2022
Analyzed: 8/15/2022

3. Understanding the Results

EMSL Canada Inc. is an independent laboratory, providing unbiased and scientifically valid results. These data represent only a portion of an overall IAQ investigation. Visual information and environmental conditions measured during the site assessment (humidity, moisture readings, etc.) are crucial to any final interpretation of the results. Many factors impact the final results; therefore, result interpretation should only be conducted by qualified individuals. The American Conference of Governmental Industrial Hygienists (ACGIH) has published a good reference book covering sampling and data interpretation. It is entitled, Bioaerosols: Assessment and Control, 1999.

Fungal spores are found everywhere. Whether or not symptoms develop in people exposed to fungi depends on the nature of the fungal material (e.g., allergenic, toxic, or infectious), the exposure level, and the susceptibility of exposed persons. Susceptibility varies with the genetic predisposition (e.g., allergic reactions do not always occur in all individuals), age, pre-existing medical conditions (e.g., diabetes, cancer, or chronic lung conditions), use of immunosuppressive drugs, and concurrent exposures. These reasons make it difficult to identify dose/response relationships that are required to establish “safe” or “unsafe” levels (i.e., permissible exposure limits).

It is generally accepted in the industry that indoor fungal growth is undesirable and inappropriate, necessitating removal or other appropriate remedial actions. The New York City guidelines and EPA guidelines for mold remediation in schools and commercial buildings define the conditions warranting mold remediation. Always remember that water is the key. Preventing water damage or water condensation will prevent mold growth.

This report is not intended to provide medical advice or advice concerning the relative safety of an occupied space. Always consult an occupational or environmental health physician who has experience addressing indoor air contaminants if you have any questions.

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4. Glossary of Fungi

ASPERGILLUS/PENICILLIUM	
Natural Habitat	Plant debris ·Seed ·Cereal crops
Suitable Substrates in the Indoor Environment	Grows on a wide range of substrates indoors ·Prevalent in water damaged buildings ·Foods (blue mold on cereals, fruits, vegetables, dried foods) ·House dust ·Fabrics ·Leather ·Wallpaper ·Wallpaper glue
Water Activity	Aw=0.75-0.94
Mode of Dissemination	Wind ·Insects
Allergic Potential	Type I (hay fever, asthma) ·Type III (hypersensitivity)
Potential or Opportunistic Pathogens	Possible depending on the species.
Industrial Uses	Many depending on the species
Potential Toxins Produced	Possible depending on the species.
Other Comments	Spores of Aspergillus and Penicillium (including others such as Acremonium, Talaromyces, and Paecilomyces) are small and spherical with few distinguishing characteristics. They cannot be differentiated or speciated by non-viable impaction sampling methods. Some species with very small spores may be undercounted in samples with high background debris.

CLADOSPORIUM	
Natural Habitat	Dead plant matter. Straw. Soil. Woody plants
Suitable Substrates in the Indoor Environment	Fiberglass duct liner. Paint. Textiles. Found in high concentration in water-damaged building materials.
Water Activity	Aw 0.84-0.88
Mode of Dissemination	Air
Allergic Potential	Type I (asthma and hay fever).
Potential or Opportunistic Pathogens	Edema. keratitis. onychomycosis. pulmonary infections. Sinusitis.
Industrial Uses	Produces 10 antigens.
Potential Toxins Produced	Cladosporin and Emodin.

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5. References and Informational Links

Books

- Bioaerosols: Assessment and Control. Janet Macher, Ed., American Conference of Governmental Industrial Hygienists, Cincinnati, OH 1999.
- Exposure Guidelines for Residential Indoor Air Quality. Environmental Health Directorate, Health Protection Branch, Health Canada, Ottawa, Ontario, 1989.
- Fungal Contamination in Public Buildings: Health Effects and Investigation Methods. Health Canada, Ottawa, Ontario, 2004.
- IICRC: S500 Standard and Reference Guide for Professional Water Damage Restoration. 3rd Edition, Institute of Inspection, Cleaning, and Restoration Certification, Vancouver, WA, 2006

  IICRC: S520 Standard and Reference Guide for Professional Mold Remediation. 1st Edition, Institute of Inspection, Cleaning, and Restoration Certification, Vancouver, WA, 2004
- Field Guide for the Determination of Biological Contaminants in Environmental Samples. 2nd Edition, American Industrial Hygiene Association, 2005.

Consumer Links

Read the full text of AIHA's "The Facts About Mold" consumer brochure.
<http://www.aiha.org/get-involved/VolunteerGroups/Documents/BiosafetyVG-FactsAbout%20MoldDecember2011.pdf>

The Occupational Safety and Health Administration (OSHA)
http://www.osha.gov/SLTC/molds/index.html

CDC Mold Facts
http://www.cdc.gov/mold/faqs.htm

CDC Stachybotrys - Questions and answers on Stachybotrys chartarum and other molds
http://www.cdc.gov/mold/stachy.htm

IOM, NAS: Clearing the Air: Asthma and Indoor Air Exposures
https://www.epa.gov/indoor-air-quality-iaq/should-you-have-air-ducts-your-home-cleaned

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National Library of Medicine-Mold website
http://www.nlm.nih.gov/medlineplus/molds.html

California Department of Health Services (CADOHS)
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/Mold.aspx

Minnesota Department of Health
http://www.health.state.mn.us/divs/eh/indoorair/mold/index.html

New York City Department of Health and Mental Hygiene
https://www1.nyc.gov/site/doh/health/health-topics/mold.page

H.R.: The United States Toxic Mold Safety and Protection Act

EPA

"Should You Have the Air Ducts in Your Home Cleaned?"
<http://www.epa.gov/iaq/pubs/airduct.html>

General information about molds and actions that can be taken to clean up or prevent a mold problem.
<http://www.epa.gov/asthma/molds.html>

“A Brief Guide to Mold, Moisture, and Your Home” - Includes basic information on mold, cleanup guidelines, and moisture and mold prevention
http://www.epa.gov/mold/moldguide.html

“Mold Remediation in Schools and Commercial Buildings” - Information on remediation in schools and commercial property, references for potential mold and moisture remediators.
https://www.epa.gov/mold/mold-remediation-schools-and-commercial-buildings-guide

FEMA

“Homes That Were Flooded May Harbor Mold Problems” - Information and tips for cleaning mold.
http://www.fema.gov/news-release/homes-were-flooded-may-harbor-mold-problems

“Dealing With Mold & Mildew in Your Flood Damaged Home.
http://www.fema.gov/pdf/rebuild/recover/fema_mold_brochure_english.pdf

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6. Important Terms, Conditions, and Limitations

A. Sample Retention

Samples analyzed by EMSL Canada will be retained for 60 days after analysis date Storage beyond this period is available for a fee with written request prior to the initial 30 day period. Samples containing hazardous/toxic substances which require special handling will be returned to the client immediately. EMSL Canadareserves the right to charge a sample disposal fee or return samples to the client.

B. Change Orders and Cancellation

All changes in the scope of work or turnaround time requested by the client after sample acceptance must be made in writing and confirmed in writing by EMSL Canada. If requested changes result in a change in cost the client must accept payment responsibility. In the event work is cancelled by a client, EMSL Canada will complete work in progress and invoice for work completed to the point of cancellation notice. EMSL Canada is not responsible for. holding times that are exceeded due to such changes.

C. Warranty

EMSL Canada warrants to its clients that all services provided hereunder shall be performed in accordance with established and recognized analytical testing procedures and with reasonable care in accordance with applicable federal, state and local laws. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. EMSL Canada disclaims any other warranties, express or implied, including a warranty of fitness for particular purpose and warranty of merchantability.

D. Limits of Liability

In no event shall EMSL Canada be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL Canada and whether EMSL Canada has been informed of the possibility of such damages, arising out of or in connection with EMSL Canada's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. EMSL Canada will not be held responsible for the improper selection of sampling devices even if we supply the device to the user. The user of the sampling device has the sole responsibility to select the proper sampler and sampling conditions to insure that a valid sample is taken for analysis. Any resampling performed will be at the sole discretion of EMSL Canada, the cost of which shall be limited to the reasonable value of the original sample delivery group (SDG) samples. In no event shall

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EMSL Canada be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL Canada by client thereunder.

E. Indemnification

Client shall indemnify EMSL Canada and its officers, directors and employees and hold each of them harmless for any liability, expense or cost, including reasonable attorney's fees, incurred by reason of any third party claim in connection with EMSL Canada services, the test result data or its use by client

AGAT Laboratories

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FAX (902)468-8924
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CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD
36 PIPPY PLACE
St. John's, NL A1B4A5
(709) 722-5062

ATTENTION TO: Lori Wiseman

PROJECT: TE22104005

AGAT WORK ORDER: 22K928309

SOIL ANALYSIS REVIEWED BY: Corey Curl, Senior Technician

TRACE ORGANICS REVIEWED BY: Dylan McCarthy, Trace Organics Lab Technician

DATE REPORTED: Aug 19, 2022

PAGES (INCLUDING COVER): 8

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 22K928309

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Lead In Paint (ICP-OES)

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		RLC-PS1	RLC-PS2	RLC-PS3	RLC-PS4	RLC-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20
Parameter	Unit	G / S	RDL	4161342	4161344	4161345	4161346	4161347
Lead in Paint	mg/kg		10	30	26	33	45	26
Total Sample Mass	g			0.4827	0.5619	0.5326	0.4671	0.4261

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Corey Curl

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22K928309

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Mercury in Paint

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		RLC-PS1	RLC-PS2	RLC-PS3	RLC-PS4	RLC-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20
Parameter	Unit	G / S	RDL	4161342	4161344	4161345	4161346	4161347
Mercury	mg/kg		0.03	0.06	<0.03	<0.03	<0.03	<0.03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Corey Curl

AGAT Laboratories
11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22K928309

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Total Polychlorinated Biphenyls in Paint

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

SAMPLE DESCRIPTION:				RLC-PS1	RLC-PS2	RLC-PS3	RLC-PS4	RLC-PSDUP1
SAMPLE TYPE:				Paint	Paint	Paint	Paint	Paint
DATE SAMPLED:				2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20
Parameter	Unit	G / S	RDL	4161342	4161344	4161345	4161346	4161347
Total PCBs	mg/kg		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate	Unit	Acceptable Limits						
Decachlorobiphenyl	%	60-140		91	81	93	97	80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

AGAT Laboratories

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CANADA B3B 1M2
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FAX (902)468-8924
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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928309

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Aug 19, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead In Paint (ICP-OES)															
Lead in Paint	4161970		30	25	NA	< 10	106%	80%	120%	100%	80%	120%	99%	70%	130%
Mercury in Paint															
Mercury	4183765		0.13	0.12	NA	< 0.03	94%	70%	130%	NA	70%	130%	121%	70%	130%

Certified By: Corey Curl

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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928309

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Aug 19, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Polychlorinated Biphenyls in Paint															
Total PCBs	1	BS DUP	0.7	0.7	NA	< 0.5	105%	60%	140%	139%	60%	140%	136%	60%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:

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Method Summary

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928309

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Lead in Paint	MET-121-6103 and MET-121-6113	SM 3120B	ICP/OES
Total Sample Mass			
Mercury	INOR-121-6101 & INOR-121-6107	Based on EPA 245.5 & SM 3112B	CV/AA
Trace Organics Analysis			
Total PCBs	ORG-120-5107	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	ORG-120-5106	EAP SW846 3510C/8080/8010	GC/ECD

AGAT Laboratories

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P: 709.747.8573 • F: 709.747.2139

Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 23.6, 23.3
Hold Time:
AGAT Job Number: 22K928309
Notes:

Report Information
Company: WOOD
Contact: Lori Wiseman
Address: 36 Pippy Place
St. John's NL PO BOX 13216
Phone: 709 689 0479 Fax:
Client Project #: TE22104005
AGAT Quotation: NL Hydro
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: Lori Wiseman
Email: lori.wiseman@woodplc.com
2. Name:
Email:

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT)
Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Invoice To Same Yes ☒ / No ☐
Company:
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NL DOEC GW
☐ Commercial
☐ Res/Park ☐ NLDOEC Discharge
☐ Agricultural
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☒ No **Salt Water Sample** ☐ Yes ☒ No
Reg. No.:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment	Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other: Lead	Other:	Hazardous (Y/N)
RLC - PS1	July 20/22	Paint	BAG	Please hold for possible Leachate				✓													✓				✓		
RLC - PS2	↓	↓	↓	↓				✓													✓				✓		
RLC - PS3								✓													✓				✓		
RLC - PS4								✓													✓				✓		
RLC - PSDUP1								✓													✓				✓		

Samples Relinquished By (Print Name): J. DOWNER
Samples Relinquished By (Sign):
Date/Time: July
Date/Time:
Samples Received By (Print Name): O. Atkins
Samples Received By (Sign):
Date/Time: Aug 1 2022 3:20
Date/Time: Aug 3 9:00

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page 1 of 1
N°:

Document ID: [illegible]
Date Revised: Apr 19, 2021

APPENDIX

Glover Island Camp

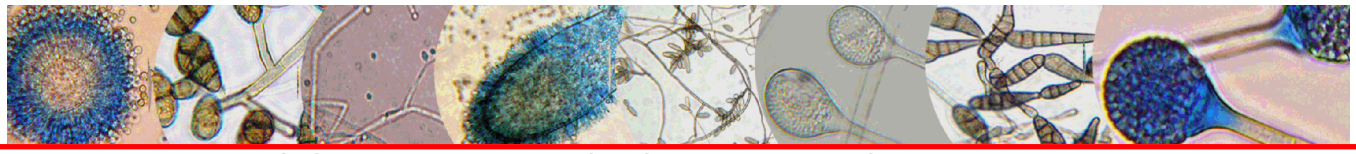
EXPANDED FUNGAL REPORT ™

Prepared Exclusively For

Wood E&IS Canada Ltd

PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5
Phone:7097227023

Report Date:	**8/15/2022**
Project:	**Pre-Demo HBMA TL228 / TE22104005 / 5290.5730-00**
P.O:	**5290.5730-00**
EMSL Canada Orde	**552212209**



EMSL Canada Inc.
2756 Slough Street Mississauga, ON L4T 1G3
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Attn: Lori Wiseman
Wood E&IS Canada Ltd
PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5

EMSL Order: 552212209
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL228 / TE22104005 / 5290.5730-00

1. Description of Analysis

Analytical Laboratory

EMSL Canada Inc. (EMSL Canada) is a nationwide, full service, analytical testing laboratory network providing Asbestos, Mold, Indoor Air Quality, Microbiological, Environmental, Chemical, Forensic, Materials, Industrial Hygiene and Mechanical Testing services. Ranked as the premier independently owned environmental testing laboratory in the nation, EMSL Canada puts analytical quality as its top priority. This is assured by our high quality personnel, including experienced microbiologists with graduate degrees. Our quality is recognized by many well-respected federal, provincial and private accrediting agencies, such as the American Association for Laboratory Accreditation (A2LA). A2LA is a nonprofit, non-governmental, public service, membership society providing laboratory accreditation based on internationally accepted criteria for competence (ISO/IEC 17025). A2LA accreditation is also recognized internationally through its membership with the International Laboratory Accreditation Cooperation (ILAC).

EMSL Canada is an independent laboratory that performed the analysis of these samples. EMSL Canada did not conduct the sampling or site investigation for this report. The samples referenced herein were analyzed under strict quality control procedures using state-of-the-art microbiological methods. The analytical methods used and the data presented are scientifically and legally defensible

The laboratory data is provided in compliance with A2LA accreditation and the ISO 17025 standard for the particular test(s) requested, including any associated limitations for the methods employed. These data are intended for use by professionals having knowledge of the testing methods necessary to interpret them accurately.

2. Analytical Results

See attached data reports and charts.

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Test Report: Microscopic Examination of Fungal Spores, Fungal Structures, Hyphae, and Other Particulates from Tape Samples (EMSL Method MICRO-SOP-200)

Lab Sample Number	Client Sample ID	Location	Fungal Identification	Category
552212209-0001	GIC M-1	Interior	Cladosporium	*Medium*
			Hyphal Fragment	Rare

No discernable field blank was submitted with this group of samples.

++ = Includes other spores with similar morphology; see EMSL's fungal glossary for each specific category.
* = Sample contains fruiting structures and/or hyphae associated with the spores.
- Denotes Not Detected.

Category	Count/area Analyzed
Rare	1 to 10
Low	11 to 100
Medium	101 to 1000
High	> 1000

Sneha Panchal, M.Sc.,RMCCM Laboratory Manager

Initial report from: 08/15/2022 19:11:56

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3. Understanding the Results

EMSL Canada Inc. is an independent laboratory, providing unbiased and scientifically valid results. These data represent only a portion of an overall IAQ investigation. Visual information and environmental conditions measured during the site assessment (humidity, moisture readings, etc.) are crucial to any final interpretation of the results. Many factors impact the final results; therefore, result interpretation should only be conducted by qualified individuals. The American Conference of Governmental Industrial Hygienists (ACGIH) has published a good reference book covering sampling and data interpretation. It is entitled, Bioaerosols: Assessment and Control, 1999.

Fungal spores are found everywhere. Whether or not symptoms develop in people exposed to fungi depends on the nature of the fungal material (e.g., allergenic, toxic, or infectious), the exposure level, and the susceptibility of exposed persons. Susceptibility varies with the genetic predisposition (e.g., allergic reactions do not always occur in all individuals), age, pre-existing medical conditions (e.g., diabetes, cancer, or chronic lung conditions), use of immunosuppressive drugs, and concurrent exposures. These reasons make it difficult to identify dose/response relationships that are required to establish “safe” or “unsafe” levels (i.e., permissible exposure limits).

It is generally accepted in the industry that indoor fungal growth is undesirable and inappropriate, necessitating removal or other appropriate remedial actions. The New York City guidelines and EPA guidelines for mold remediation in schools and commercial buildings define the conditions warranting mold remediation. Always remember that water is the key. Preventing water damage or water condensation will prevent mold growth.

This report is not intended to provide medical advice or advice concerning the relative safety of an occupied space. Always consult an occupational or environmental health physician who has experience addressing indoor air contaminants if you have any questions.

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4. Glossary of Fungi

CLADOSPORIUM	
Natural Habitat	Dead plant matter. Straw. Soil. Woody plants
Suitable Substrates in the Indoor Environment	Fiberglass duct liner. Paint. Textiles. Found in high concentration in water-damaged building materials.
Water Activity	Aw 0.84-0.88
Mode of Dissemination	Air
Allergic Potential	Type I (asthma and hay fever).
Potential or Opportunistic Pathogens	Edema. keratitis. onychomycosis. pulmonary infections. Sinusitis.
Industrial Uses	Produces 10 antigens.
Potential Toxins Produced	Cladosporin and Emodin.

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5. References and Informational Links

Books

- Bioaerosols: Assessment and Control. Janet Macher, Ed., American Conference of Governmental Industrial Hygienists, Cincinnati, OH 1999.
- Exposure Guidelines for Residential Indoor Air Quality. Environmental Health Directorate, Health Protection Branch, Health Canada, Ottawa, Ontario, 1989.
- Fungal Contamination in Public Buildings: Health Effects and Investigation Methods. Health Canada, Ottawa, Ontario, 2004.
- IICRC: S500 Standard and Reference Guide for Professional Water Damage Restoration. 3rd Edition, Institute of Inspection, Cleaning, and Restoration Certification, Vancouver, WA, 2006

  IICRC: S520 Standard and Reference Guide for Professional Mold Remediation. 1st Edition, Institute of Inspection, Cleaning, and Restoration Certification, Vancouver, WA, 2004
- Field Guide for the Determination of Biological Contaminants in Environmental Samples. 2nd Edition, American Industrial Hygiene Association, 2005.

Consumer Links

Read the full text of AIHA's "The Facts About Mold" consumer brochure.
<http://www.aiha.org/get-involved/VolunteerGroups/Documents/BiosafetyVG-FactsAbout%20MoldDecember2011.pdf>

The Occupational Safety and Health Administration (OSHA)
http://www.osha.gov/SLTC/molds/index.html

CDC Mold Facts
http://www.cdc.gov/mold/faqs.htm

CDC Stachybotrys - Questions and answers on Stachybotrys chartarum and other molds
http://www.cdc.gov/mold/stachy.htm

IOM, NAS: Clearing the Air: Asthma and Indoor Air Exposures
https://www.epa.gov/indoor-air-quality-iaq/should-you-have-air-ducts-your-home-cleaned

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National Library of Medicine-Mold website
http://www.nlm.nih.gov/medlineplus/molds.html

California Department of Health Services (CADOHS)
https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHLB/IAQ/Pages/Mold.aspx

Minnesota Department of Health
http://www.health.state.mn.us/divs/eh/indoorair/mold/index.html

New York City Department of Health and Mental Hygiene
https://www1.nyc.gov/site/doh/health/health-topics/mold.page

H.R.: The United States Toxic Mold Safety and Protection Act

EPA

"Should You Have the Air Ducts in Your Home Cleaned?"
<http://www.epa.gov/iaq/pubs/airduct.html>

General information about molds and actions that can be taken to clean up or prevent a mold problem.
<http://www.epa.gov/asthma/molds.html>

“A Brief Guide to Mold, Moisture, and Your Home” - Includes basic information on mold, cleanup guidelines, and moisture and mold prevention
http://www.epa.gov/mold/moldguide.html

“Mold Remediation in Schools and Commercial Buildings” - Information on remediation in schools and commercial property, references for potential mold and moisture remediators.
https://www.epa.gov/mold/mold-remediation-schools-and-commercial-buildings-guide

FEMA

“Homes That Were Flooded May Harbor Mold Problems” - Information and tips for cleaning mold.
http://www.fema.gov/news-release/homes-were-flooded-may-harbor-mold-problems

“Dealing With Mold & Mildew in Your Flood Damaged Home.
http://www.fema.gov/pdf/rebuild/recover/fema_mold_brochure_english.pdf

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Customer ID: 55MEEN26
Collected:
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Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL228 / TE22104005 / 5290.5730-00

6. Important Terms, Conditions, and Limitations

A. Sample Retention

Samples analyzed by EMSL Canada will be retained for 60 days after analysis date Storage beyond this period is available for a fee with written request prior to the initial 30 day period. Samples containing hazardous/toxic substances which require special handling will be returned to the client immediately. EMSL Canadareserves the right to charge a sample disposal fee or return samples to the client.

B. Change Orders and Cancellation

All changes in the scope of work or turnaround time requested by the client after sample acceptance must be made in writing and confirmed in writing by EMSL Canada. If requested changes result in a change in cost the client must accept payment responsibility. In the event work is cancelled by a client, EMSL Canada will complete work in progress and invoice for work completed to the point of cancellation notice. EMSL Canada is not responsible for. holding times that are exceeded due to such changes.

C. Warranty

EMSL Canada warrants to its clients that all services provided hereunder shall be performed in accordance with established and recognized analytical testing procedures and with reasonable care in accordance with applicable federal, state and local laws. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied. EMSL Canada disclaims any other warranties, express or implied, including a warranty of fitness for particular purpose and warranty of merchantability.

D. Limits of Liability

In no event shall EMSL Canada be liable for indirect, special, consequential, or incidental damages, including, but not limited to, damages for loss of profit or goodwill regardless of the negligence (either sole or concurrent) of EMSL Canada and whether EMSL Canada has been informed of the possibility of such damages, arising out of or in connection with EMSL Canada's services thereunder or the delivery, use, reliance upon or interpretation of test results by client or any third party. We accept no legal responsibility for the purposes for which the client uses the test results. EMSL Canada will not be held responsible for the improper selection of sampling devices even if we supply the device to the user. The user of the sampling device has the sole responsibility to select the proper sampler and sampling conditions to insure that a valid sample is taken for analysis. Any resampling performed will be at the sole discretion of EMSL Canada, the cost of which shall be limited to the reasonable value of the original sample delivery group (SDG) samples. In no event shall

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EMSL Canada be liable to a client or any third party, whether based upon theories of tort, contract or any other legal or equitable theory, in excess of the amount paid to EMSL Canada by client thereunder.

E. Indemnification

Client shall indemnify EMSL Canada and its officers, directors and employees and hold each of them harmless for any liability, expense or cost, including reasonable attorney's fees, incurred by reason of any third party claim in connection with EMSL Canada services, the test result data or its use by client

EMSL Canada Inc.

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http://www.EMSL.com / torontolab@emsl.com

EMSL Canada Order 552212238
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Attn: Lori Wiseman
Wood E&IS Canada Ltd
PO Box 13216
36 Pippy Place
Saint John's, NL A1B 4A5

Proj: Pre-Demo HBMA TL22/TE22104005

Phone: (709) 722-7023
Fax: (709) 722-7353
Collected:
Received: 8/09/2022
Analyzed: 8/17/2022

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: GIC AS-1-Tar Paper **Lab Sample ID:** **552212238-0001**
Sample Description: Glover Island Camp Wall/Particle board backing - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Black	0.0%	100%	None Detected	

Client Sample ID: GIC AS-1-Caulk **Lab Sample ID:** **552212238-0001A**
Sample Description: Glover Island Camp Wall/Particle board backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Beige	0.0%	100%	None Detected	

Client Sample ID: GIC AS-1-Fibreboard **Lab Sample ID:** **552212238-0001B**
Sample Description: Glover Island Camp Wall/Particle board backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	8/17/2022	Brown/Gray/White	90.0%	10.0%	None Detected	

Client Sample ID: GIC AS-2 **Lab Sample ID:** **552212238-0002**
Sample Description: Glover Island Camp Wall/Particle board backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	8/17/2022	Brown	90.0%	10.0%	None Detected	

Client Sample ID: GIC AS-3-Shingle **Lab Sample ID:** **552212238-0003**
Sample Description: Glover Island Camp Roof/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Gray/Black	0.0%	100%	None Detected	

Client Sample ID: GIC AS-3-Flashing **Lab Sample ID:** **552212238-0003A**
Sample Description: Glover Island Camp Roof/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	8/17/2022	Gray/Black	0.0%	60.0%	**40% Chrysotile**	

Client Sample ID: GIC AS-4-Shingle **Lab Sample ID:** **552212238-0004**
Sample Description: Glover Island Camp Roof/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Black	0.0%	98.2%	**1.8% Chrysotile**	

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EMSL Canada Order 552212238
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: GIC AS-4-Tar Felt ***Lab Sample ID:*** **552212238-0004A**

Sample Description: Glover Island Camp Roof/Black Shingle - Tar Felt

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Black	0.0%	100%	**<0.25% Chrysotile**	

Client Sample ID: GIC AS-4-Tar Paper ***Lab Sample ID:*** **552212238-0004B**

Sample Description: Glover Island Camp Roof/Black Shingle - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Black	0.0%	100%	**<0.25% Chrysotile**	

Client Sample ID: GIC AS-5 ***Lab Sample ID:*** **552212238-0005**

Sample Description: Glover Island Camp Kitchen/Countertop Mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Tan	0.0%	100%	None Detected	

Client Sample ID: GIC AS-6 ***Lab Sample ID:*** **552212238-0006**

Sample Description: Glover Island Camp Bathroom/Countertop Mastic

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Red	0.0%	100%	None Detected	

Client Sample ID: GIC AS-7-Tar Paper ***Lab Sample ID:*** **552212238-0007**

Sample Description: Glover Island Camp Wall/Tar paper - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Brown/Black	3.6%	96.4%	None Detected	

Client Sample ID: GIC AS-7-Fibreglass ***Lab Sample ID:*** **552212238-0007A**

Sample Description: Glover Island Camp Wall/Tar paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/17/2022	Pink	90.0%	10.0%	None Detected	

Client Sample ID: GIC AS-8 ***Lab Sample ID:*** **552212238-0008**

Sample Description: Glover Island Camp Bathroom/Putty

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Gray	0.0%	90.3%	**9.7% Chrysotile**	

Client Sample ID: GIC AS-9 ***Lab Sample ID:*** **552212238-0009**

Sample Description: Glover Island Camp Window/Caulking

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Brown/Gray	0.0%	100%	None Detected	

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Phone/Fax: (289) 997-4602 / (289) 997-4607
http://www.EMSL.com / torontolab@emsl.com

EMSL Canada Order 552212238
Customer ID: 55MEEN26
Customer PO: TE22104005
Project ID:

Summary Test Report for Asbestos Analysis via EPA 600/R-93/116

Client Sample ID: GIC AS-10 ***Lab Sample ID:*** **552212238-0010**

Sample Description: Glover Island Camp Exterior/Caulking

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	White	0.0%	100%	None Detected	

Client Sample ID: GIC AS-11 ***Lab Sample ID:*** **552212238-0011**

Sample Description: Glover Island Camp Siding/Caulking

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Beige	0.0%	100%	None Detected	

Client Sample ID: GIC AS-12-Shingle ***Lab Sample ID:*** **552212238-0012**

Sample Description: Glover Island Camp Outhouse/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Black	0.0%	100%	None Detected	

Client Sample ID: GIC AS-12-Tar Paper ***Lab Sample ID:*** **552212238-0012A**

Sample Description: Glover Island Camp Outhouse/Black Shingle - Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/17/2022	Black	0.0%	100%	None Detected	

Client Sample ID: GIC ASDUP1 ***Lab Sample ID:*** **552212238-0013**

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/17/2022	Brown/Gray/White	90.0%	10.0%	None Detected	

Analyst(s):

Ruby Lai PLM (5)
PLM Grav. Reduction (15)

Reviewed and approved by:

Matthew Davis or other approved signatory
or Other Approved Signatory

Samples analyzed by EPA 600/R-93/116 consistent with NLR 111/98. The estimated limit of detection for non-detect samples is <0.1%. 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. Estimation of uncertainty available upon request. This report is a summary of multiple methods of analysis, fully compliant reports are available upon request. A combination of PLM and TEM analysis may be necessary to ensure consistently reliable detection of asbestos. This report must not be used to claim product endorsement by NVLAP of any agency or the U.S. Government.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0

Initial report from: 08/17/202217:18:18

AGAT Laboratories

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CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD
36 PIPPY PLACE
St. John's, NL A1B4A5
(709) 722-5062

ATTENTION TO: Lori Wiseman

PROJECT: TE22104005

AGAT WORK ORDER: 22K928385

SOIL ANALYSIS REVIEWED BY: Corey Curl, Senior Technician

TRACE ORGANICS REVIEWED BY: Dylan McCarthy, Trace Organics Lab Technician

DATE REPORTED: Aug 19, 2022

PAGES (INCLUDING COVER): 8

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (709)747-8573

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
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- The test results reported herewith relate only to the samples as received by the laboratory.
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- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 22K928385

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Lead In Paint (ICP-OES)

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		GIC PS-1	GIC PS-2	GIC PS-3	GIC PS-4	GIC PS-5	GIC PS-6	GIC PS-7	GIC PS-DUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-18	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20
Parameter	Unit	G / S	RDL	4162201	4162202	4162203	4162204	4162205	4162206	4162207	4162208
Lead in Paint	mg/kg		10	<10	82	33	176	<10	70	28	96
Total Sample Mass	g			0.2398	0.5708	0.5095	0.5483	0.5895	0.4805	0.5198	0.4303

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Corey Curl

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Certificate of Analysis

AGAT WORK ORDER: 22K928385

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Mercury in Paint

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		GIC PS-1	GIC PS-2	GIC PS-3	GIC PS-4	GIC PS-5	GIC PS-6	GIC PS-7	GIC PS-DUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-18	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20
Parameter	Unit	G / S	RDL	4162201	4162202	4162203	4162204	4162205	4162206	4162207	4162208
Mercury	mg/kg		0.03	<0.03	0.26	0.46	1.34	0.03	1.82	0.11	0.30

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By: Corey Curl

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Certificate of Analysis

AGAT WORK ORDER: 22K928385

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Total Polychlorinated Biphenyls in Paint

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-08-19

		SAMPLE DESCRIPTION:		GIC PS-1	GIC PS-2	GIC PS-3	GIC PS-4	GIC PS-5	GIC PS-6	GIC PS-7	GIC PS-DUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-18	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20	2022-07-20
Parameter	Unit	G / S	RDL	4162201	4162202	4162203	4162204	4162205	4162206	4162207	4162208
Total PCBs	mg/kg		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate	Unit	Acceptable Limits									
Decachlorobiphenyl	%	60-140		106	98	89	119	108	110	104	84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928385

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Aug 19, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Lead In Paint (ICP-OES)															
Lead in Paint	4162208	4162208	96	85	12.5%	< 10	107%	80%	120%	95%	80%	120%	85%	70%	130%
Mercury in Paint															
Mercury	4162206	4162206	1.75	1.82	3.9%	< 0.03	85%	70%	130%	NA	70%	130%	103%	70%	130%

Certified By: Corey Curl

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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928385

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Aug 19, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Polychlorinated Biphenyls in Paint															
Total PCBs	1	BS DUP	0.5	0.6	NA	< 0.5	108%	60%	140%	102%	60%	140%	122%	60%	140%

Comments: If Matrix spike value is NA, the spiked analyte concentration was lower than that of the matrix contribution.
If RPD value is NA, the results of the duplicates are less than 5x the RDL and the RPD will not be calculated.

Certified By:

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Method Summary

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928385

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Lead in Paint	MET-121-6103 and MET-121-6113	SM 3120B	ICP/OES
Total Sample Mass			
Mercury	INOR-121-6101 & INOR-121-6107	Based on EPA 245.5 & SM 3112B	CV/AA
Trace Organics Analysis			
Total PCBs	ORG-120-5107	EPA SW-846 8082	GC/ECD
Decachlorobiphenyl	ORG-120-5106	EAP SW846 3510C/8080/8010	GC/ECD

AGAT Laboratories

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Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 23.3, 23.6
Hold Time:
AGAT Job Number: 22K928385
Notes:

Report Information
Company: Wood Environment & Infrastructure Solutions
Contact: Lori Wiseman
Address: 36 Pippy Place
St. John's, NL A1B 4A5
Phone: 709 689 0479 Fax:
Client Project #: TE22104005
AGAT Quotation:
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: Lori Wiseman
Email: lori.wiseman@woodplc.com
2. Name:
Email:

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT)
Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Invoice To Same Yes ☒ / No ☐
Company: Same
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NL DOEC GW
☐ Commercial
☐ Res/Park ☐ NLDOEC Discharge
☐ Agricultural
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No **Salt Water Sample** ☐ Yes ☐ No
Reg. No.:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment
GIC PS-1	Jul. 18, 2022	Paint	1 baggie	
GIC PS-2	Jul. 20, 2022			
GIC PS-3				
GIC PS-4				
GIC PS-5				
GIC PS-6				
GIC PS-7				
GIC PS-DUP1				

Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other: Lead	Other:	Hazardous (Y/N)
			X														X				X	
			X														X				X	
			X														X				X	
			X														X				X	
			X														X				X	
			X														X				X	
			X														X				X	
			X														X				X	

Samples Relinquished By (Print Name):	Date/Time	Samples Received By (Print Name):	Date/Time
Lori Wiseman	Aug. 1, 2022	O. Atkins	Aug 1 2022 3:20
Samples Relinquished By (Sign):	Date/Time	Samples Received By (Sign):	Date/Time
	Aug. 1, 2022		Aug 3 9:00

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page 1 of 1
N°:

Document ID: DM-138-1502.004
Date revised: Apr 19, 2021

AGAT Laboratories

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(709) 722-5062
ATTENTION TO: Lori Wiseman
PROJECT: TE22104005
AGAT WORK ORDER: 22K928933
MISCELLANEOUS ANALYSIS REVIEWED BY: Jason Coughtrey, Inorganics Supervisor
SOIL ANALYSIS REVIEWED BY: Jason Coughtrey, Inorganics Supervisor
TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor
DATE REPORTED: Sep 07, 2022
PAGES (INCLUDING COVER): 9
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (902) 468-8718

*Notes

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Certificate of Analysis

AGAT WORK ORDER: 22K928933

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Crushing - Dal

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-09-07

SAMPLE DESCRIPTION:				GIC PT-1	GIC PT-2	GIC PT-3
SAMPLE TYPE:				Wood	Wood	Wood
DATE SAMPLED:						
Parameter	Unit	G / S	RDL	4165726	4165727	4165728
Subcontracted Data				Y	Y	Y

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

AGAT Laboratories
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FAX (902)468-8924
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Certificate of Analysis

AGAT WORK ORDER: 22K928933

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

TCLP Metals - As,Cr

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-09-07

		SAMPLE DESCRIPTION:		GIC PT-1	GIC PT-2	GIC PT-3
		SAMPLE TYPE:		Wood	Wood	Wood
		DATE SAMPLED:				
Parameter	Unit	G / S	RDL	4165726	4165727	4165728
Arsenic Leachate	mg/L		0.02	12.4	0.06	0.41
Chromium Leachate	mg/L		0.02	9.03	0.05	0.12

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Halifax (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 22K928933

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Chlorophenols by GC-ECD (TCLP)

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-09-07

		SAMPLE DESCRIPTION:		GIC PT-1	GIC PT-2	GIC PT-3
		SAMPLE TYPE:		Wood	Wood	Wood
		DATE SAMPLED:				
Parameter	Unit	G / S	RDL	4165726	4165727	4165728
2,3,4,6-Tetrachlorophenol	µg/L		1.0	<1.0	<1.0	<1.0
2,4,6-Trichlorophenol	µg/L		0.4	<0.4	<0.4	<0.4
2,4-D	µg/L		0.3	<0.3	<0.3	<0.3
Pentachlorophenol	µg/L		1.0	<1.0	<1.0	<1.0
Phenoxy Extr	NA			Y	Y	Y
Surrogate	Unit	Acceptable Limits				
DCAA	%	50-140		98	80	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

4165726-4165728 There was limited water available to perform the analysis. The reporting detection limit has been corrected.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 22K928933

PROJECT: TE22104005

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA LTD

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

TCLP Creosol & B[a]P

DATE RECEIVED: 2022-08-01

DATE REPORTED: 2022-09-07

		SAMPLE DESCRIPTION:		GIC PT-1	GIC PT-2	GIC PT-3
		SAMPLE TYPE:		Wood	Wood	Wood
		DATE SAMPLED:				
Parameter	Unit	G / S	RDL	4165726	4165727	4165728
Cresols Leachate	mg/L		0.012	<0.012	<0.012	<0.012
o-Cresol Leachate	mg/L		0.004	<0.004	<0.004	<0.004
Meta & Para-Cresol Leachate	mg/L		0.008	<0.008	<0.008	<0.008
Benzo(a)pyrene Leachate	mg/L		0.001	<0.001	<0.001	<0.001
Surrogate	Unit	Acceptable Limits				
Chrysene-d12	%	50-140		85	79	85
2-Fluorophenol	%	50-140		79	85	74
Phenol-d6	%	50-140		85	84	79
2,4,6-Tribromophenol	%	50-140		84	78	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928933

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

RPT Date: Sep 07, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
TCLP Metals - As,Cr															
Arsenic Leachate	4213947		<0.02	<0.02	NA	< 0.02	102%	80%	120%	99%	80%	120%	101%	70%	130%
Chromium Leachate	4213947		<0.02	<0.02	NA	< 0.02	99%	80%	120%	101%	80%	120%	109%	70%	130%

Certified By:

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
TEL (902)468-8718
FAX (902)468-8924
http://www.agatlabs.com

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Trace Organics Analysis

RPT Date: Sep 07, 2022			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Chlorophenols by GC-ECD (TCLP)															
2,3,4,6-Tetrachlorophenol		TW	< 0.5	< 0.5	NA	< 0.5	92%	50%	140%	82%	50%	140%	76%	50%	140%
2,4,6-Trichlorophenol		TW	< 0.2	< 0.2	NA	< 0.2	90%	50%	140%	76%	50%	140%	82%	50%	140%
2,4-D		TW	< 0.3	< 0.3	NA	< 0.3	99%	50%	140%	96%	50%	140%	84%	50%	140%
Pentachlorophenol		TW	< 0.5	< 0.5	NA	< 0.5	103%	50%	140%	92%	50%	140%	86%	50%	140%
TCLP Creosol & B[a]P															
o-Cresol Leachate	4248088		< 0.004	< 0.004	NA	< 0.004	74%	50%	140%	96%	50%	140%	98%	50%	140%
Meta & Para-Cresol Leachate	4248088		< 0.008	< 0.008	NA	< 0.008	78%	50%	140%	105%	50%	140%	85%	50%	140%
Benzo(a)pyrene Leachate	4248088		< 0.001	< 0.001	NA	< 0.001	85%	50%	140%	78%	50%	140%	79%	50%	140%

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Method Summary

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928933

PROJECT: TE22104005

ATTENTION TO: Lori Wiseman

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Miscellaneous Analysis			
Subcontracted Data			
Soil Analysis			
Arsenic Leachate	MET-121-6108, MET-121-6105	EPA SW-846 6020A/SM1325 In-house leachate	ICP-MS
Chromium Leachate	MET-121-6108, MET-121-6105	EPA SW-846 6020A/SM1325 In-house leachate	ICP-MS
Trace Organics Analysis			
2,3,4,6-Tetrachlorophenol	ORG-91-5114	EPA SW-846 8151A	GC/ECD
2,4,6-Trichlorophenol	ORG-91-5110	EPA SW-846 8151A	GC/ECD
2,4-D	ORG-91-5110	EPA SW-846 8151A	GC/ECD
Pentachlorophenol	ORG-91-5110	EPA SW-846 8151A	GC/ECD
DCAA	ORG-91-5110	EPA SW-846 8151	GC/ECD
Phenoxy Extr			N/A
Cresols Leachate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
o-Cresol Leachate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Meta & Para-Cresol Leachate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(a)pyrene Leachate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Chrysene-d12	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2-Fluorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Phenol-d6	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4,6-Tribromophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS

AGAT Laboratories

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Chain of Custody Record

Laboratory Use Only
Arrival Condition: ☐ Good ☐ Poor (see notes)
Arrival Temperature: 23.3, 23.6
Hold Time:
AGAT Job Number: 22K928933
Notes:

Report Information
Company: Wood Environment & Infrastructure Solutions
Contact: Lori Wiseman
Address: 36 Pippy Place
St. John's, NL A1B 4A5
Phone: 709 689 0479 Fax:
Client Project #: TE22104005
AGAT Quotation: NL Hydro
Please Note: If quotation number is not provided client will be billed full price for analysis.

Report Information (Please print):
1. Name: Lori Wiseman
Email: lori.wiseman@woodplc.com
2. Name:
Email:

Report Format
☐ Single Sample per page
☐ Multiple Samples per page
☐ Excel Format Included
☐ Export

Turnaround Time Required (TAT)
Regular TAT ☒ 5 to 7 working days
Rush TAT ☐ Same day ☐ 1 day ☐ 2 days ☐ 3 days
Date Required:

Regulatory Requirements (Check):
☐ List Guidelines on Report ☐ Do not list Guidelines on Report
☐ PIRI
☐ Tier 1 ☐ Res ☐ Pot ☐ Coarse
☐ Tier 2 ☐ Com ☐ N/Pot ☐ Fine
☐ Gas ☐ Fuel ☐ Lube
☐ CCME ☐ CDWQ
☐ Industrial ☐ NL DOEC GW
☐ Commercial
☐ Res/Park ☐ NLDOEC Discharge
☐ Agricultural
☐ FWAL
☐ Sediment ☐ Other

Drinking Water Sample: ☐ Yes ☐ No **Salt Water Sample** ☐ Yes ☐ No
Reg. No.:

Invoice To Same Yes ☐ / No ☐
Company: Same as above
Contact:
Address:
Phone: Fax:
PO/Credit Card#:

Sample Identification	Date/Time Sampled	Sample Matrix	# Containers	Comments – Site/Sample Info. Sample Containment
GIC PT-1		Wood	1 Baggie	191.36
GIC PT-2		↓	↓	>200
GIC PT-3		↓	↓	176.57

Field Filtered/Preserved	Standard Water Analysis	Metals: ☐ Total ☐ Diss ☐ Available	Mercury	☐ BOD ☐ CBOD	pH	☐ TSS ☐ TDS ☐ VSS	TKN	Total Phosphorus	Phenols	Tier 1: TPH/BTEX (PIRI) ☐ low level	Tier 2: TPH/BTEX Fractionation	CCME-CWS TPH/BTEX	VOC	THM	HAA	PAH	PCB	TC + EC ☐ P/A ☐ MPN ☐ MF	☐ HPC ☐ Pseudomonas	Fecal Coliform ☐ MPN ☐ MF	Other: Creosote TCLP	Other: Inorganic TCLP	Chlorophenolic TCLP
																					X	X	X
																					X	X	X
																					X	X	X

Samples Relinquished By (Print Name):	Date/Time	Samples Received By (Print Name):	Date/Time
Lori Wiseman	Jul. 29, 2022	O. Atkins	Aug 1 2022 3:20
Samples Relinquished By (Sign):	Date/Time	Samples Received By (Sign):	Date/Time
Lori	Jul. 29, 2022		

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1
No:

Document ID: DBV-139-1502.004

Date revised: Apr 19, 2021

APPENDIX

B6. REPORT LIMITATIONS

APPENDIX

LIMITATIONS

1. The work performed in the preparation of this report and the conclusions presented are subject to the following:

   (a) The Standard Terms and Conditions which form a part of our Contract;

   (b) The Scope of Services;

   (c) Time and Budgetary limitations as described in our Contract; and,

   (d) The Limitations stated herein.

2. No other warranties or representations, either expressed or implied, are made as to the professional services provided under the terms of our Contract, or the conclusions presented.

3. The conclusions presented in this report were based, in part, on visual observations of the site and attendant structures. Our conclusions cannot and are not extended to include those portions of the site or structures which were not reasonably available, in WSP's opinion, for direct observation.

4. The environmental conditions at the site were assessed, within the limitations set out above, having due regard for applicable environmental regulations as of the date of the inspection. A review of compliance by past owners or occupants of the site with any applicable local, provincial or federal by-laws, orders-in-council, legislative enactments and regulations was not performed.

5. Where testing was performed it was carried out in accordance with the terms of our contract providing for testing. Other substances, or different quantities of substances testing for, might be present on site and be revealed by different or other testing not provided for in our contract.

6. The findings within this report do not reflect potential ACMs in areas not accessed, such as remote space areas, roof areas, wall cavities and ceilings spaces. During future renovations or demolition activities and subsequent removal of interior wall and ceiling materials, the actual quantities of asbestos containing materials can be verified. Also, at this time, analysis of suspect ACM materials may be required if the appearance differs from that of materials previously confirmed to contain asbestos in adjacent rooms.

7. Because of the limitations referred to above, different environmental conditions from those stated in our report might exist. Should such different conditions be encountered, WSP must be notified in order that it may determine if modifications to the conclusions in the report are necessary.

8. The utilization of WSP's services during the implementation of any remedial measures will allow WSP to observe compliance with the conclusions and recommendations contained in the report. WSP's involvement will also allow for changes to be made as necessary to suit field conditions as they are encountered.

9. This report is for the sole use of the party to whom it is addressed unless expressly stated otherwise in the report or contract. Any use which any third party makes of the report, in whole or the part, or any reliance thereon or decisions made based on any information or conclusions in the report, is the sole responsibility of such third party. WSP accepts no responsibility whatsoever for damages or loss of any nature or kind suffered by any such third party as a result of actions taken or not taken or decisions made in reliance on the report or anything set out therein.

10. This report is not to be given over to any third party for any purpose whatsoever without the written permission of WSP.

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