PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT FORMER CONSTRUCTION CAMP SITES TRANSMISSION LINES 204 AND 231 GRAND FALLS-WINDSOR TO BAY D'ESPOIR NEWFOUNDLAND AND LABRADOR

NEWFOUNDLAND AND LABRADOR HYDRO

PROJECT NO.: TE22104004.2000.
DATE: MAY 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 five (5) former construction camp sites (Camp 75, North West Gander River Camp, Camp 130, Pot Hill Camp and Three Brooks Camp) located along Transmission Line 204 (TL204) which spans from Grand Falls-Windsor to Bay D'Espoir, herein referred to as the "sites". Transmission Line 231 (TL231) also mirrors TL204. 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".

TL204 is a 230 kilovolt (kV) transmission line which consists of wood structures constructed in 1966 and connects the Bay D'Espoir Generating Station and the Stony Brook Terminal Station near Grand Falls-Windsor. TL231 is a 230 kV transmission line which consists of steel structures constructed in 1976 and mirrors TL204. 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 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". 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 75 Site	A2 to D2
3.0	Findings – North West Gander River Camp Site	A3 to D3
4.0	Findings – Camp 130 Site	A4 to D4
5.0	Findings – Pot Hill Camp Site	A5 to D5
6.0	Findings – Three Brooks Camp Site	A6 to D6
7.0	Closure and Limitations	A7 to B7
8.0	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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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 five (5) former construction camp sites (Camp 75, North West Gander River Camp, Camp 130, Pot Hill Camp and Three Brooks Camp) located along Transmission Line 204 (TL204) which spans from Grand Falls-Windsor to Bay D'Espoir, herein referred to as the "sites". Transmission Line 231 (TL231) also mirrors TL204. This assessment was required to provide Hydro with an evaluation of known and potential hazardous building materials in cabins and other related infrastructure at the sites that are slated for demolition, herein referred to as the "site buildings".

1.1 BACKGROUND

TL204 is a 230 kilovolt (kV) transmission line which consists of wood structures constructed in 1966 and connects the Bay D'Espoir Generating Station and the Stony Brook Terminal Station near Grand Falls-Windsor. TL231 is a 230 kV transmission line which consists of steel structures constructed in 1976 and mirrors TL204. 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 five former construction camp sites are situated between the Town of Grand Falls-Windsor and the Community of Bay D'Espoir in Central Newfoundland (refer to Figure 1.1, Appendix A1). The camp sites are currently accessible by either all terrain vehicle (ATV) or a helicopter.

1.2.1 CAMP 75

Camp 75 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 3.4 m^2 (1.7 m x 2.0 m).

Camp 75 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 NORTH WEST GANDER RIVER CAMP

North West Gander River Camp 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 66.5 m^2 (old section: 7.3 m x 7.3 m; new section: 5.5 m x 2.4 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 3.4 m^2 (1.7 m x 2.0 m).

North West Gander River 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 concrete block foundation with a brick exterior and an asphalt shingle peaked roof. The interior ceiling, floor and walls are constructed from plywood and the only ventilation is in the old section. There is an attic space in which a wind turbine and end gable vents provide ventilation.

1.2.3 CAMP 130

Camp 130 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 66.5 m^2 (old section: 7.3 m x 7.3 m; new section: 5.5 m x 2.4 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 3.4 m^2 (1.7 m x 2.0 m).

Camp 130 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 POT HILL CAMP

Pot Hill Camp site is comprised of an accommodations cabin (refer to Photos 13, 14 and 15, 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.

Pot Hill 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 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. The attic space consists of a plywood peaked roof with fibreglass insulation.

1.2.5 THREE BROOKS CAMP

Three Brooks Camp site is comprised of an accommodations cabin and an outhouse (refer to Photos 16 to 19, 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 3.0 m^2 (1.5 m x 2.0 m).

Three Brooks 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 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. 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 75
- Section 3.0: Findings – North West Gander River Camp
- Section 4.0: Findings – Camp 130
- Section 5.0: Findings – Pot Hill Camp
- Section 6.0: Findings – Three Brooks Camp
- Section 7.0: Closure and Limitations
- Section 8.0: 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 included:

- Preparing a site-specific Health and Safety Plan (HASP) and submitting the plan to Hydro.
- 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) and the Environmental Abatement Council of Canada (EACC) 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 quality assurance/quality control (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 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 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 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 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.

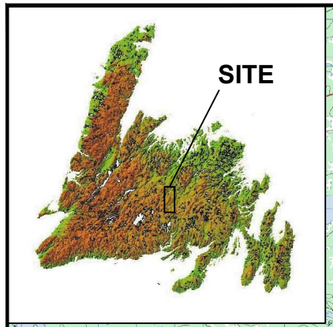
The laboratories utilized have extensive QA/QC programs in place to ensure that reliable results are consistently obtained. Some of the specific laboratory QA/QC measures include:

- 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 A1

Figures



THREE BROOKS CAMP

POT HILL CAMP

CAMP 130

NW GANDER RIVER CAMP

CAMP 75

NOTES:

THIS DRAWING BASED ON 1:50,000 TOPOGRAPHIC MAPS 02 D/04, 02 D/05, 02 D/12 AND 02 D/13.

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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Approved by: L. Wiseman

Scale: NTS

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 204, NL

Title: Site Location Plan

Date: August 2022

Project No. TE22104004

Rev. No. 0

Figure No. 1.1

Appendix B1

Photographic Record

Photo 1: View of Camp 75 Site.

Photo 2: View of Camp 75 Site.

Photo 3: View of accomodations cabin at Camp 75.

Photo 4: View of the outhouse at Camp 75.

Photo 5: View of North West Gander River Camp Site.

Photo 6: View of North West Gander River Camp Site.

Photo 7: View of accomodations cabin at North West Gander River Camp.

Photo 8: View of the outhouse at North West Gander River Camp.

Photo 9: View of Camp 130 Site.

Photo 10: View of Camp 130 Site.

Photo 11: View of accomodations cabin at Camp 130.

Photo 12: View of the outhouse at Camp 130.

Photo 13: View of Pot Hill Camp Site.

Photo 14: View of Pot Hill Camp Site.

Photo 15: View of accomodations cabin at Pot Hill Camp.

Photo 16: View of Three Brooks Camp Site.

Photo 17: View of Three Brooks Camp Site.

Photo 18: View of accomodations cabin at Three Brooks Camp .

Photo 19: View of outhouse at Three Brooks Camp.

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TABLES

APPENDICES

2 CAMP 75 SITE

Camp 75 site is located along TL204 and TL231, 230 kV transmission lines which connect the Bay D'Espoir Generating Station and the Stony Brook Terminal Station near Grand Falls-Windsor (refer to Figure 2.1, Appendix A2). Camp 75 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 m^2 (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 lighting was observed on the interior of the cabin. The accommodations cabin is not currently heated (formerly heated by oil or wood stove).

The outhouse is a one-storey, rectangular structure with a footprint area of approximately 3.4 m^2 (1.7 m x 2.0 m) (refer to Figure 2.2, Appendix A2 and Photo 12, 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 plywood. 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 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	9
Attic (Yes/No)	Yes	10
Type of Structure	Wood Frame	10
Type of Foundation	Cinder Blocks	9
Exterior	Brick	1 to 4
Window/Door Frames	Painted Metal and Wood	6 and 8
Exterior Doors	Painted Metal	4 and 6
Roofing Materials	Asphalt Shingles	11
Interior Walls Finishes	Painted Plywood	5 to 8
Interior Ceiling Finishes	Painted Plywood	6
Floor Finishes	Painted Plywood	6
Interior Doors	NA	-
Interior Lighting	Fluorescent	6
Exterior Lighting	NA	1 to 4

Table 2-1: Site Building Description – Accommodations Cabin

Building Name	Accommodations Cabin	Photo No. (Appendix B2)
Heating	Not Heated (Former Oil or Wood Stove)	6

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	12
Crawl Space (Yes/No)	No	-
Attic (Yes/No)	No	-
Type of Structure	Wood Frame	12
Type of Foundation	Concrete	12
Exterior	Painted Plywood	12
Window/Door Frames	Painted Wood	12
Exterior Doors	NA	-
Roofing Materials	Asphalt Shingles	21
Interior Walls Finishes	Painted Plywood	12
Interior Ceiling Finishes	Painted Plywood	-
Floor Finishes	Painted Plywood	12
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 8, 2022 and the results of laboratory analyses of samples collected from Camp 75. 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, eight (8) building material samples (C75 AS-1 to C75 AS-8), plus one (1) blind field duplicate (C75 AS-DUP1), were collected from the accommodations cabin and one (1) building material sample (C75 AS-9) was collected from the outhouse (refer to Photos 13 to 21, 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.

2.2.1.1 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.

2.2.1.1.1 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.

2.2.1.1.2 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 10 and 13, Appendix B2). Thermal system insulation was not observed at Camp 75.

One (1) sample of foil paper backing on the building insulation (C75 AS-1) 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 paper sample.

2.2.1.2 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.

2.2.1.2.1 CEILING TILE

There were no ceiling tiles observed at Camp 75 during the Pre-Demolition HBMA site visit; therefore, no samples of ceiling tile were collected for analysis.

2.2.1.2.2 DRYWALL JOINT COMPOUND

There was no drywall joint compound observed at Camp 75 during the Pre-Demolition HBMA site visit; therefore, no samples of drywall joint compound were collected for analysis.

2.2.1.2.3 VINYL FLOORING PRODUCTS AND MASTICS

There was no vinyl flooring or products observed at Camp 75 during the Pre-Demolition HBMA site visit; therefore, no samples of vinyl flooring or products were collected for analysis.

2.2.1.2.4 BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

There were no baseboard, carpet or stair tread adhesives/mastics observed at Camp 75 during the Pre-Demolition HBMA site visit; therefore, no samples of these types of adhesives/mastics were collected for analysis.

2.2.1.2.5 ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, one (1) sample of asphalt shingle with tar paper (C75 AS-8) was collected from the roof of the accommodations cabin and one (1) sample of asphalt shingle (C75 AS-9) was

collected from the roof of the outhouse and analyzed for asbestos content (refer to Photos 20 and 21, Appendix B2). 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 Photo 11, Appendix B2).

2.2.1.2.6 CAULKING/SEALANT

There were no caulking/sealants observed at Camp 75 during the Pre-Demolition HBMA site visit; therefore, no samples of caulking/sealants were collected for analysis.

2.2.1.2.7 MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

During the Pre-Demolition HBMA site visit, one (1) sample of brick and mortar (C75 AS-5) was collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photo 17, Appendix B2). 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 (C75 AS-6) was collected from the concrete foundation of the accommodations cabin and one (1) sample of concrete (C75 AS-7) was collected from the concrete pad at the entrance to the accommodations cabin and analyzed for asbestos content (refer to Photos 18 and 19, Appendix B2). Asbestos was not detected in the cinder block/mortar and concrete samples.

2.2.1.2.8 FIRE-RATED DOORS

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

2.2.1.2.9 OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, one (1) sample of particle board with tar paper backing (C75 AS-2) 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), plus one (1) blind field duplicate (C75 AS-DUP1; duplicate of 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, five (5) samples (C75 PS-1 to C75 P-S5), plus one (1) blind field duplicate (C75 PS-DUP1), were collected from painted surfaces of the accommodations cabin and one (1) sample (C75 PS-6) was collected from painted surfaces of the outhouse and analyzed for lead, mercury and PCB content (refer to Photos 22 to 27, 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.

2.2.2.1 LEAD IN PAINT

The concentrations of lead in the five (5) samples (C75 PS-1 to C75 PS-5), plus one (1) blind field duplicate (C75 PS-DUP1; duplicate of C75 PS-5), collected from painted surfaces of the accommodations cabin and one (1) sample (C75 PS-6) collected from the painted surfaces of the outhouse ranged from non-detect (<10 mg/kg) to 1,360 mg/kg (refer to Table C2-2, Appendix C2). Two (2) paint samples (C75 PS-2 and C75 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 (refer to Photos 23 and 25, Appendix B2). The concentrations of lead in the other five (5) samples were below the Federal HPA criterion (90 mg/kg).

2.2.2.2 MERCURY IN PAINT

The concentrations of mercury in the five (5) samples (C75 PS-1 to C75 PS-5), plus one (1) blind field duplicate (C75 PS-DUP1; duplicate of C75 PS-5), collected from painted surfaces of the accommodations cabin and one (1) sample (C75 PS-6) collected from the painted surfaces of the outhouse ranged from non-detect (<0.03 mg/kg) to 1.04 mg/kg, and therefore were below the Federal HPA criterion (10 mg/kg) (refer to Table C2-3, Appendix C2).

2.2.2.3 PCBS IN PAINT

The concentrations of PCBs in the five (5) samples (C75 PS-1 to C75 PS-5), plus one (1) blind field duplicate (C75 PS-DUP1; duplicate of C75 PS-5), collected from painted surfaces of the accommodations cabin and one (1) sample (C75 PS-6) 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 75. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photos 10 and 13, Appendix B2). Since the original date of construction of Camp 75 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 (C75 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 and refer to Photo 28, Appendix B2).

The results of mould analysis determined that tape lift sample C75 M-1 contained *Cladosporium* mould with hyphal fragments (refer to Table C2-5, Appendix C2).

2.2.5 MERCURY-CONTAINING THERMOSTATS

Thermostats were not identified inside the accommodations cabin at Camp 75 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 29 and 30, Appendix B2). The labels on the fluorescent light fixtures indicated that no PCBs were present in the ballasts.

2.2.7 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 2-3.

Table 2-3: Potential Sources of ODSs

Item	Manufacturer	Model (Serial No.)	Location Observed	Photo No. (Appendix B2)	Refrigerant	Potential ODS
Freezer	Danby	D1219W	Kitchen	31	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 31, Appendix B2). This refrigerant (R12) is a hydrochlorofluorocarbon (HCFC) and is regulated under the Federal Halocarbon Regulations.

Fire extinguishers were not observed at Camp 75 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.

2.2.8.1 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.

2.2.8.2 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.

2.2.8.3 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.

2.2.8.4 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 75 during the Pre-Demolition HBMA site visit.

2.2.8.5 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.

2.2.8.6 RADIOACTIVE MATERIALS

A smoke detector was observed in the accommodations cabin during the Pre-Demolition HBMA site visit (refer to Photo 32, 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 75.

2.3.1 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 75 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 five (5) samples (C75 PS-1 to C75 PS-5), plus one (1) blind field duplicate (C75 PS-DUP1; duplicate of C75 PS-5), collected from painted surfaces of the accommodations cabin and one (1) sample (C75 PS-6) collected from the painted surfaces of the outhouse ranged from non-detect (<10 mg/kg) to 1,360 mg/kg.
  - Two (2) paint samples (C75 PS-2 and C75 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 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 five (5) samples (C75 PS-1 to C75 PS-5), plus one (1) blind field duplicate (C75 PS-DUP1; duplicate of C75 PS-5), collected from painted surfaces of the accommodations cabin and one (1) sample (C75 PS-6) collected from the painted surfaces of the outhouse ranged from non-detect (<0.03 mg/kg) to 1.04 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 five (5) samples (C75 PS-1 to C75 PS-5), plus one (1) blind field duplicate (C75 PS-DUP1; duplicate of C75 PS-5), collected from painted surfaces of the accommodations

cabin and one (1) sample (C75 PS-6) 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 (C75 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 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.

2.3.5 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.

2.3.6 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.

2.3.7 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.

2.3.8 SUMMARY OF FINDINGS

Hazardous building materials identified at Camp 75 during this Pre-Demolition HBMA and disposal options, if required, are summarized in Table 2-5. 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 2-4.

Table 2-4: 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)	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)	LBP (grey) on plywood floor in accommodations cabin. LBP (grey) on metal door and window coverings on exterior 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.
Potential UFFI	Federal HPA (R.S.1985, c. H-3)	None Identified.	UFFI is permitted to be bagged and transported to an approved Waste Disposal Site 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.

Table 2-4: Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

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.
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 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.

Client: newfoundland labrador hydro, a nalcor energy company

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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 204, NL

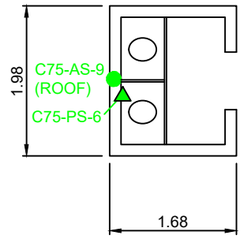
Title: Site Location Plan - Camp 75

Date: August 2022

Project No. TE22104004.2000

Rev. No. 0

Figure No. 2.1



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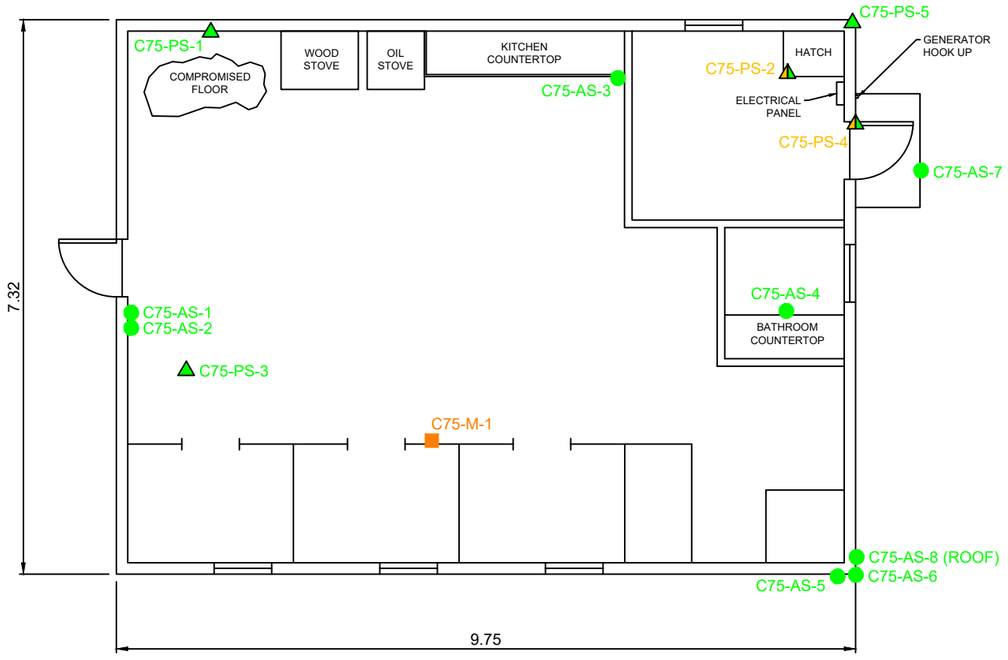

ACCOMMODATIONS CABIN

SCALE
0m 2m 4m

LEGEND:

- ASBESTOS SAMPLE LOCATION - ASBESTOS NOT DETECTED
- 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
- PAINT SAMPLE LOCATION - NO CRITERIA EXCEEDANCES FOR LEAD OR MERCURY OR PCBs WHERE APPLICABLE
- MOULD GROWTH DETECTED - LOW

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
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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 204, NL

Title: Sample Location Plan - Camp 75

Date: August 2022
Project No. TE22104004.2000
Rev. No. 0
Figure No. 2.2

Appendix B2

Photographic Record

Photo 1: View of the accommodations cabin at Camp 75 site.

Photo 2: View of the accommodations cabin at Camp 75 site.

Photo 3: View of the accommodations cabin at Camp 75 site.

Photo 4: View of the accommodations cabin at Camp 75 site.

Photo 5: View of the kitchen area inside the accommodations cabin at Camp 75.

Photo 6: View of the dining area inside the accommodations cabin at Camp 75.

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 75.

Photo 9: View of the crawl space beneath the accommodations cabin at Camp 75.

Photo 10: View of the attic inside the accommodations cabin at Camp 75.

Photo 11: View of the roof on the accommodations cabin at Camp 75.

Photo 12: View of the outhouse at Camp 75 site.

Photo 13: View of bulk material sample C75 AS-1, foil paper, cabin interior.

Photo 14: View of bulk material sample C75 AS-2, particle board, cabin interior.

Photo 15: View of bulk material sample C75 AS-3, countertop mastic, cabin interior.

Photo 16: View of bulk material sample C75 AS-4, countertop mastic, cabin interior.

Photo 17: View of bulk material sample C75 AS-5, brick and mortar, cabin exterior.

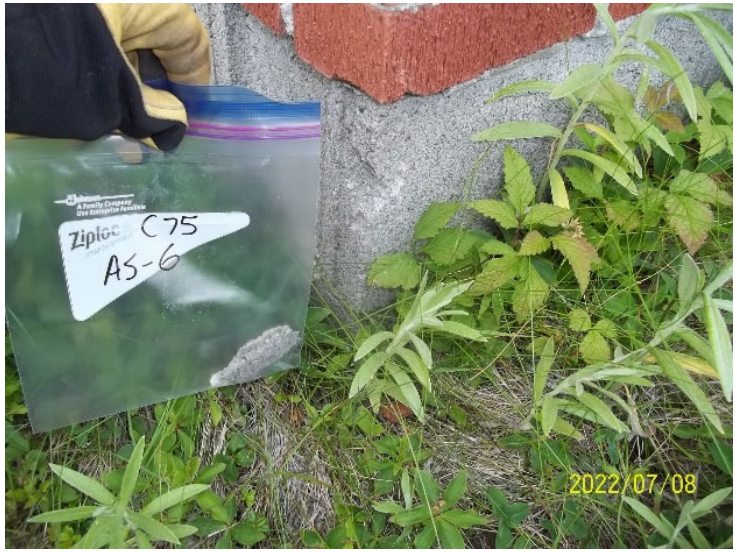


Photo 18: View of bulk material sample C75 AS-6, cinder block, cabin exterior.

Photo 19: View of bulk material sample C75 AS-7, concrete, cabin exterior.

Photo 20: View of bulk material sample C75 AS-8, shingle, cabin exterior.

Photo 21: View of bulk material sample C75 AS-9, shingle, outhouse exterior.

Photo 22: View of paint sample C75 PS-1, wall, cabin interior.

Photo 23: View of paint sample C75 PS-2, floor, cabin interior.

Photo 24: View of paint sample C75 PS-3, ceiling, cabin interior.

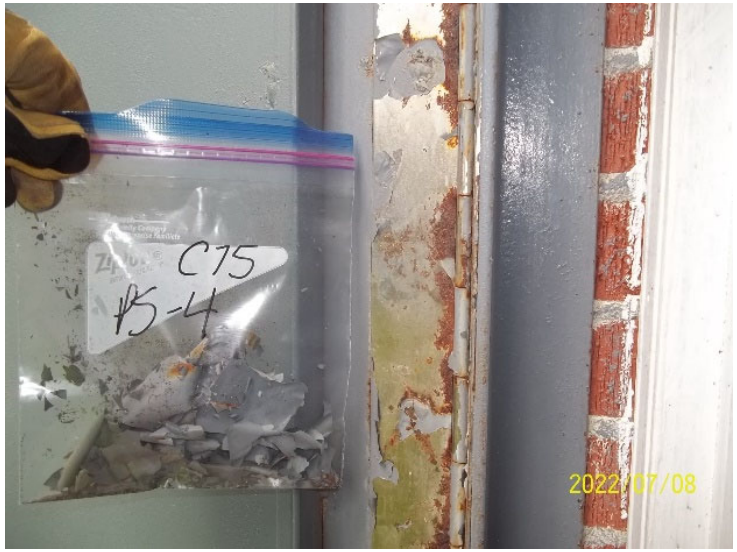


Photo 25: View of paint sample C75 PS-4, door, cabin exterior.

Photo 26: View of paint sample C75 PS-5, roof, cabin exterior.

Photo 27: View of paint sample C75 PS-6, trim, outhouse interior.

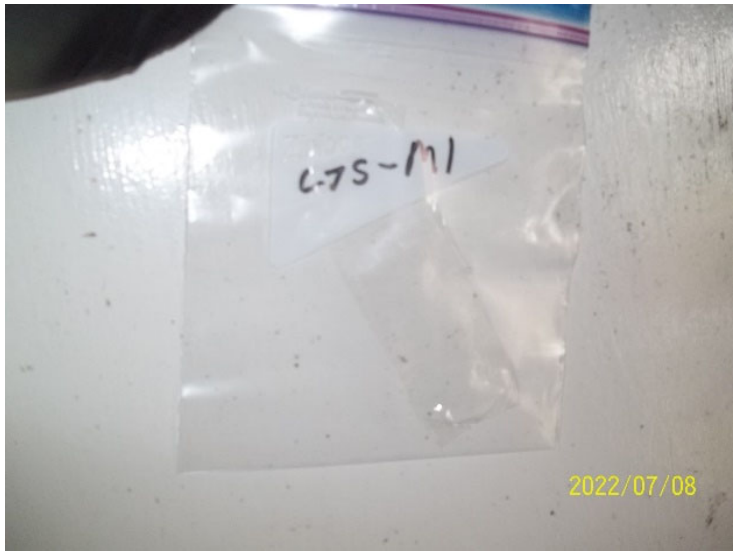


Photo 28: View of mould sample C75-M1, wall, cabin interior.

Photo 29: View of fluorescent light fixtures in cabin.

Photo 30: View of fluorescent light ballast. Note: label indicating no PCBs.

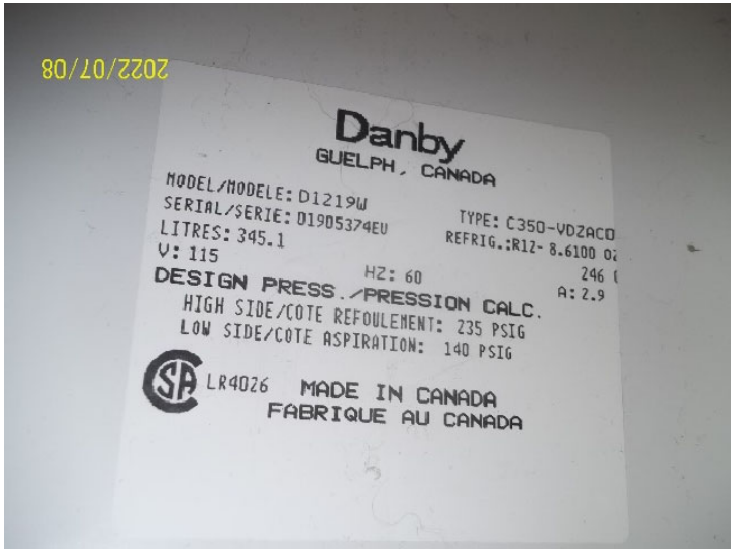


Photo 31: View of label inside freezer indicating refrigerant R12.

Photo 32: 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 75)

Sample ID	Room Description	Photo No.	Sample Location	Sample Description	Layers Analyzed	Analytical Result
C75-AS1	Cabin - Kitchen/Dining Area	13	Wall	Foil paper backing on fibreglass insulation	Foil paper	ND
C75 AS-2-Tar Paper	Cabin - Kitchen/Dining Area	14	Wall	Particle board with tar backing	Tar paper	ND
C75 AS-2-Fibreboard					Fibreboard	ND
C75 AS-3	Cabin - Kitchen/Dining Area	15	Countertop	Countertop mastic	Mastic	ND
C75 AS-4	Cabin - Washroom Area	16	Countertop	Countertop mastic	Mastic	ND
C75 AS-DUP1					Mastic	ND
C75 AS-5-Brick	Cabin - Exterior	17	Wall	Brick and mortar	Brick	ND
C75 AS-5-Mortar					Mortar	ND
C75 AS-6-Mortar 1	Cabin - Exterior	18	Foundation	Cinder block and mortar	Cinder block	ND
C75 AS-6-Mortar 2					Mortar	ND
C75 AS-7	Cabin - Exterior	19	Concrete Pad	Concrete pad	Concrete	ND
C75 AS-8-Shingle	Cabin - Exterior	20	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
C75 AS-8-Tar Paper					Tar paper	ND
C75 AS-9	Outhouse - Exterior	21	Roof	Asphalt shingle	Asphalt shingle	ND

Notes:
C75 AS-DUP1 is a blind field duplicate of C75 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 C2-2: Paint Sample Descriptions and Lead Analytical Results (Camp 75)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
C75 PS-1	Cabin - Kitchen/Dining Area	22	Wall	Plywood	White paint on plywood (sample includes plywood)	10	32
C75 PS-2	Cabin - Kitchen/Dining Area	23	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	**312**
C75 PS-3	Cabin - Kitchen/Dining Area	24	Ceiling	Plywood	White paint on plywood (sample includes plywood)	10	10
C75 PS-4	Cabin - Exterior	25	Door	Metal	Grey paint on metal (sample includes loose paint)	10	**1360**
C75 PS-5	Cabin - Exterior	26	Roof	Wood	White paint on wood (sample includes wood)	10	<10
C75 PS-DUP1						10	<10
C75 PS-6	Outhouse - Interior	27	Trim	Wood Trim	White paint on wood trim (sample includes wood)	10	<10

Notes:

C75 PS-DUP1 is a blind field duplicate of C75 PS-5

<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 75)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
C75 PS-1	Cabin - Kitchen/Dining Area	22	Wall	Plywood	White paint on plywood (sample includes plywood)	0.03	1.04
C75 PS-2	Cabin - Kitchen/Dining Area	23	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	0.24
C75 PS-3	Cabin - Kitchen/Dining Area	24	Ceiling	Plywood	White paint on plywood (sample includes plywood)	0.03	0.22
C75 PS-4	Cabin - Exterior	25	Door	Metal	Grey paint on metal (sample includes loose paint)	0.03	0.13
C75 PS-5	Cabin - Exterior	26	Roof	Wood	White paint on wood (sample includes wood)	0.03	<0.03
C75 PS-DUP1						0.03	<0.03
C75 PS-6	Outhouse - Interior	27	Trim	Wood Trim	White paint on wood trim (sample includes wood)	0.03	<0.03

Notes:

C75 PS-DUP1 is a blind field duplicate of C75 PS-5

<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 75)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
C75 PS-1	Cabin - Kitchen/Dining Area	22	Wall	Plywood	White paint on plywood (sample includes plywood)	0.5	<0.5
C75 PS-2	Cabin - Kitchen/Dining Area	23	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
C75 PS-3	Cabin - Kitchen/Dining Area	24	Ceiling	Plywood	White paint on plywood (sample includes plywood)	0.5	<0.5
C75 PS-4	Cabin - Exterior	25	Door	Metal	Grey paint on metal (sample includes loose paint)	0.5	<0.5
C75 PS-5	Cabin - Exterior	26	Roof	Wood	White paint on wood (sample includes wood)	0.5	<0.5
C75 PS-DUP1						0.5	<0.5
C75 PS-6	Outhouse - Interior	27	Trim	Wood Trim	White paint on wood trim (sample includes wood)	0.5	<0.5

Notes:

C75 PS-DUP1 is a blind field duplicate of C75 PS-5

<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 75)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
C75 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 D2

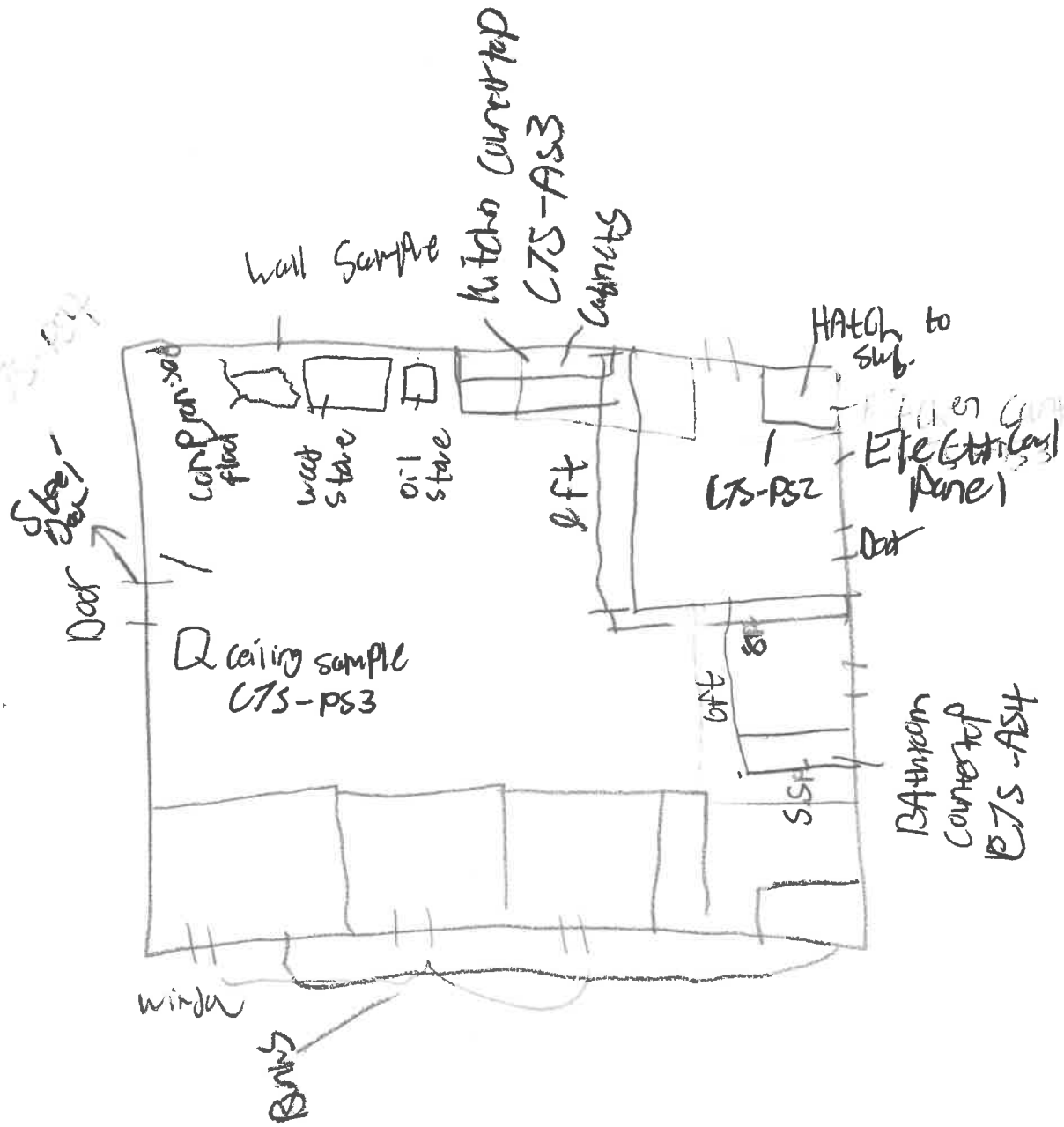
Room-By-Room Inspection Sheets

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Camp 75			Interior	32'x24'x8'

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	glossy grey on Plywood	F to P		
Walls	Semi gloss white on plywood			
Ceiling	glossy white on plywood Dark stains/mold noted on attic side	F to G		
Paint	Floor Semi gloss grey on Plywood Wall Semi gloss white on plywood Ceiling glossy white on Plywood Doors Same as walls Windows Same as walls Other Cupboards: Same as walls			Wall = C75-PS1 Floor = C75-PS2 Ceiling = C75-PS3
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	foil with paper backing on Pink fiberglass on Particle board with tar paper backing	G		foil/Pap = C75-AS1 Particle board/tar = C75-AS2
Piping / Electrical / Mechanical Equipment	Oil furnace Piping noted. Not insulated, Cabin wired for generator - Panel in electrical room	F		
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Phillips Serial #: RQM-2540-TPC Non PCB	Leaking / Other	Total #: 2 # Checked: 2	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	5 in cabin on 1 Battery Smoke detector			
Thermostats	Manufacturer Colour N/A Shape Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)	N/A			
Mould / Water Staining	Materials and area impacted Black mould noted on ceiling/Dividers Rotting along baseboards C75-M1	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers	
Other	Doors (Type and tags): woodstove and oil stove on site, no gasketing oil stove Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit) woodstove: Enterprise foundry, co Danby: m#:D1219W (Freezer.) oil stove: Enterprise Ltd woodsman			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Kitchen: beige/white marbling Red glue C75-AS3 Bathroom: White/grey, beige marble Clear glue: C75-AS4			

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:



Sample list

CTS-AS1
CTS-AS2
CTS-AS3
CTS-PS1
CTS-AS4
CTS-PS2
CTS-PS3
CTS-PS4

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
COMP 75			Obtuse	Same as NW/Gt.

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Plywood floor - Cant Determine paint concrete Pad	P		Pad Same as one on Cabin.
Walls	Semi gloss White on Plywood - outside grey No Sample	P		C75-PS5 = interior
Ceiling	Black asphalt Shingle with tar on Plywood	P		C75 - AS9
Paint	Floor Wall exterior: grey on Plywood, int: white Ceiling Doors Windows Other	P		
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink insulation			
Piping / Electrical / Mechanical Equipment	Electrical wiring			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #: N/A	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	1 ~~fixtures~~ incandescent			
Thermostats	Manufacturer Colour N/A Dial Shape Casing Wall/Floor Mounted		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)	N/A			
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 Structure No longer Sand.			

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)
CTS			Exterior	

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Cinder block foundation grey mortar 6 blocks down Concrete Pad front Door,	G	6 blocks Deep	CTS-AS6 = Cinder block CTS-AS7 = Concrete Pad
Walls	Red Brick w/ grey mortar			CTS-AS5 = RED Brick
Ceiling	Asphalt Shingles with tar and tar paper on wood			Asphalt = CTS-AS8
Paint	Floor Wall Ceiling Doors grey matte on steel Windows Other Eaves: Matte white on Plywood	F to P = P		Steel Door = CTS-PS4
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)				
Piping / Electrical / Mechanical Equipment				
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #: N/A	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	N/A			
Thermostats	Manufacturer Colour Shape N/A Wall/Floor Mounted Dial Casing		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)	N/A			
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) Pre-Fab Chimney,			
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).

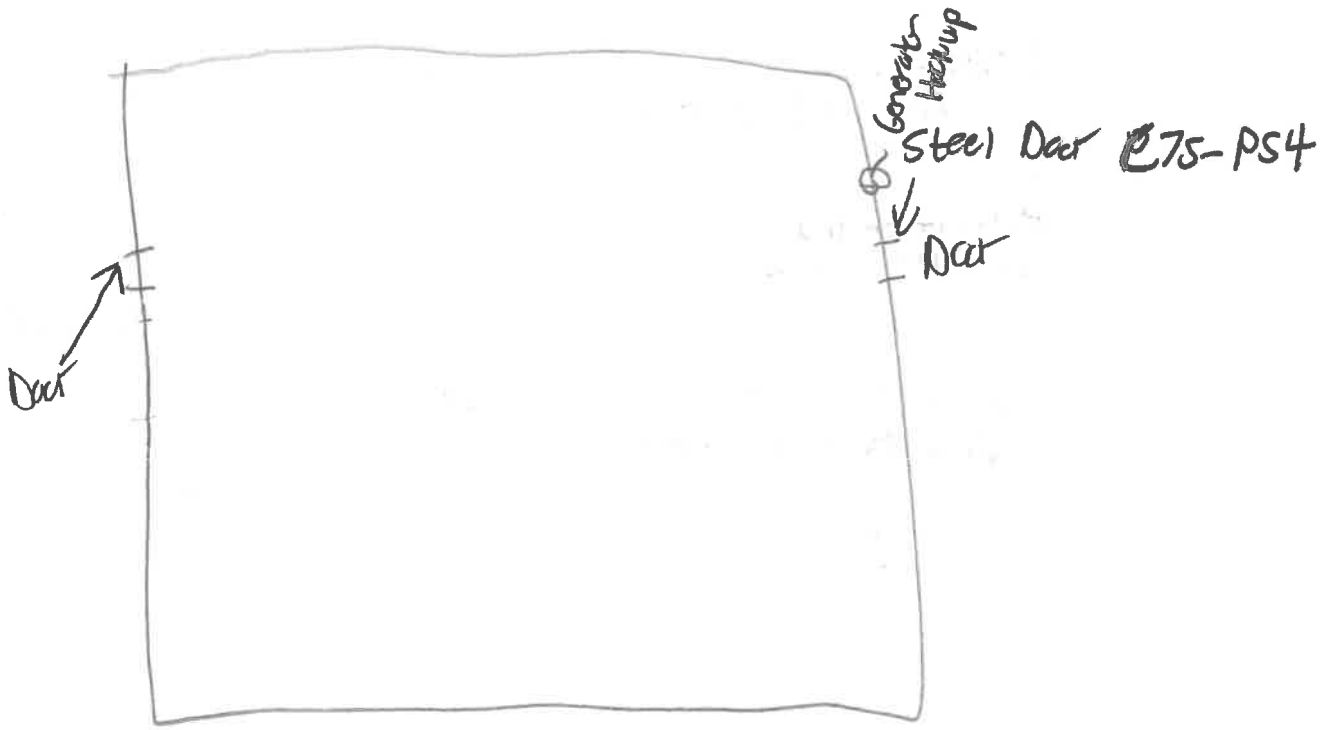
Notes/Comments:

Sample List

C7S-PS4
C7S-AS5
C7S-AS6
C7S-AS7
C7S-AS8

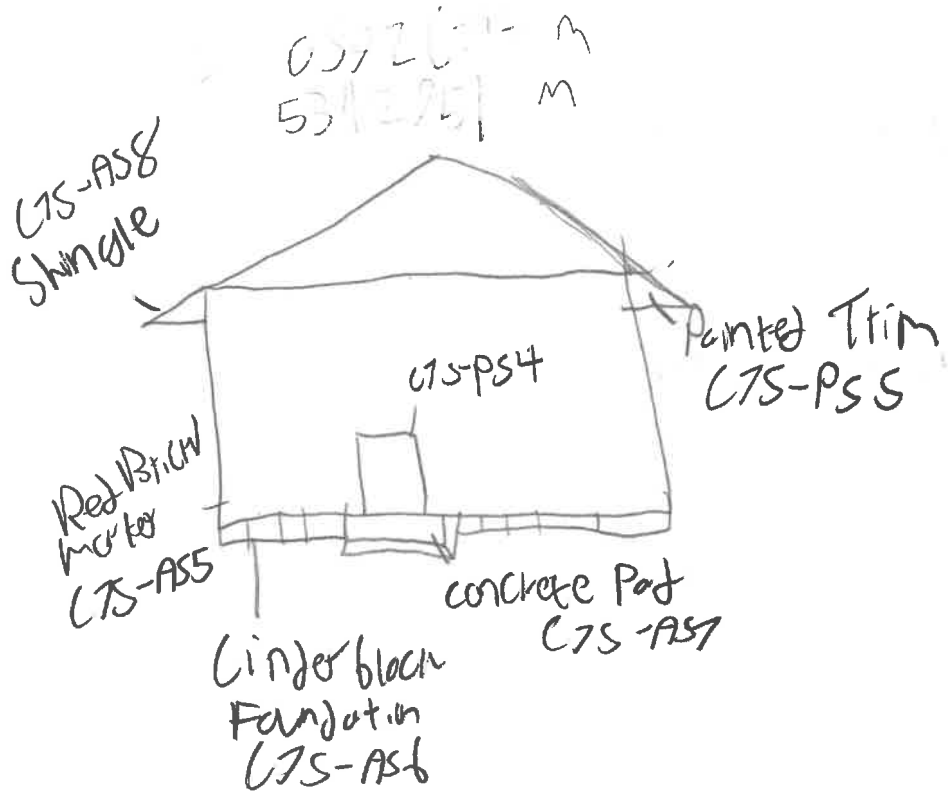
ZIW 0592624m 5342961m

TOP



N ZIW

East side



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TABLES

APPENDICES

3 NORTH WEST GANDER RIVER CAMP SITE

North West Gander Camp site is located along TL204 and TL231, 230 kV transmission lines which connect the Bay D'Espoir Generating Station and the Stony Brook Terminal Station near Grand Falls-Windsor (refer to Figure 3.1, Appendix A3). North West Gander Camp site is comprised of an accommodation cabin and an outhouse.

3.1 BUILDING DESCRIPTIONS

The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 66.5 m^2 (old section: 7.3 m x 7.3 m; new section: 5.5 m x 2.4 m) (refer to Photos 1 to 5, 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.

The outhouse is a one-storey, rectangular structure with a former footprint area of approximately 3.4 m^2 (1.7 m x 2.0 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 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 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 5
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 5
Window/Door Frames	Painted Metal and Wood	1 and 6
Exterior Doors	Painted Metal	1
Roofing Materials	Asphalt Shingles	5 and 14
Interior Walls Finishes	Painted Plywood	6 to 8
Interior Ceiling Finishes	Painted Plywood	6
Floor Finishes	Painted Plywood	7
Interior Doors	NA	-
Interior Lighting	Incandescent and Fluorescent	6

Table 3-1: Site Building Description – Accommodations Cabin

Building Name	Accommodations cabin	Photo No. (Appendix B3)
Exterior Lighting	Incandescent	1
Heating	Not Heated	-

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 Blocks	-
Exterior	Painted Plywood	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	-
Floor Finishes	Painted Plywood	26
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 8, 2022 and the results of laboratory analyses of samples collected from North West Gander River 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 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, nine (9) building material samples (NWGR AS-1 to NWGR AS-9), plus one (1) blind field duplicate (NWGR AS-DUP1), were collected from the accommodations cabin and one (1) building material sample (NWGR AS-10) was collected from the outhouse and analyzed for asbestos content (refer to Photos 12 to 20, 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.

3.2.1.1 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.

3.2.1.1.1 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.

3.2.1.1.2 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 13, Appendix B3). Thermal system insulation was not observed at North West Gander River Camp.

One (1) sample of foil/tar paper backing on the building insulation (NWGR AS-1) was collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 12, Appendix B3). One (1) sample of tar paper (NWGR AS-2) was also collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 13, Appendix B3). Asbestos was not detected in the foil/tar paper samples.

3.2.1.2 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.

3.2.1.2.1 CEILING TILE

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

3.2.1.2.2 DRYWALL JOINT COMPOUND

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

3.2.1.2.3 VINYL FLOORING PRODUCTS AND MASTICS

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

3.2.1.2.4 BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

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

3.2.1.2.5 ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, one (1) sample of asphalt shingle (NWGR AS-3) was collected from the roof of the accommodations cabin and one (1) sample of asphalt shingle (NWGR AS-10) was collected from the roof of the outhouse and analyzed for asbestos content (refer to Photo 14, 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 Photo 5, Appendix B3).

3.2.1.2.6 CAULKING/SEALANT

One (1) sample of caulking (NWGR AS-4), plus one (1) blind field duplicate (NWGR AS-DUP1; duplicate of NWGR AS-4), was collected from an exterior wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 15, Appendix B3). Asbestos was not detected in the caulking sample.

3.2.1.2.7 MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

During the Pre-Demolition HBMA site visit, one (1) sample of brick and mortar (NWGR AS-5) was collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photo 16, Appendix B3). 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 (NWGR AS-6) was collected from the concrete foundation of the accommodations cabin and one (1) sample of cinder block (NWGR AS-9) was collected from the foundation of the outhouse and analyzed for asbestos content (refer to Photos 17 and 20, Appendix B3). Asbestos was not detected in the cinder block and mortar samples.

3.2.1.2.8 FIRE-RATED DOORS

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

3.2.1.2.9 OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, two (2) samples of countertop mastics (NWGR AS-7 and NWGR AS-8) were collected from the accommodations cabin and analyzed for asbestos content (refer to Photos 18 and 19, 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 (NWGR PS-1 to NWGR PS-4), plus one (1) blind field duplicate (NWGR PS-DUP1), were collected from painted surfaces of the accommodations cabin and two (2) samples (NWGR PS-5 and NWGR PS-6) were collected from the painted surfaces of the outhouse and analyzed for lead, mercury and PCB content (refer to Photos 21 to 26, 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.

3.2.2.1 LEAD IN PAINT

The concentrations of lead in the four (4) samples (NWGR PS-1 to NWGR PS-4), plus one (1) blind field duplicate (NWGR PS-DUP1; duplicate of NWGR PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (NWGR PS-5 and NWGR PS-6) collected from the outhouse ranged from 46 mg/kg to 178 mg/kg (refer to Table C3-2, Appendix C3). Three (3) paint samples (NWGR PS-1, NWGR PS-2 and NWGR PS-6) 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 (refer to Photos 21, 22 and 26, Appendix B3). The concentrations of lead in the other four (4) samples were below the Federal HPA criterion (90 mg/kg).

3.2.2.2 MERCURY IN PAINT

The concentrations of mercury in the four (4) samples (NWGR PS-1 to NWGR PS-4), plus one (1) blind field duplicate (NWGR PS-DUP1; duplicate of NWGR PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (NWGR PS-5 and NWGR PS-6) collected from the outhouse ranged from non-detect (<0.03 mg/kg) to 0.44 mg/kg and therefore, were below the Federal HPA criterion (10 mg/kg) (refer to Table C3-3, Appendix C3).

3.2.2.3 PCBS IN PAINT

The concentrations of PCBs in the four (4) samples (NWGR PS-1 to NWGR PS-4), plus one (1) blind field duplicate (NWGR PS-DUP1; duplicate of NWGR PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (NWGR PS-5 and NWGR 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 North West Gander River Camp. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photos 9 and 13, Appendix B3). Since the original date of construction of North West Gander River Camp 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. Two (2) samples (NWGR M-1 and NWGR M-2) of the suspect mould material was collected from the surfaces of the ceiling and a chair for laboratory analysis to confirm the presence/absence of mould (refer to Figure 3.2, Appendix A3 and Photos 27 and 28, Appendix B3).

The results of mould analysis determined that tape lift sample NWGR M-1 contained *Cladosporium* mould with hyphal fragments and tape lift sample NWGR M-2 contained basiodiospores and myxomycetes (refer to Table C3-5, Appendix C3).

3.2.5 MERCURY-CONTAINING THERMOSTATS

Thermostats were not identified inside the accommodations cabin at North West Gander River Camp 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 (refer to Photos 6 and 31, Appendix B3). The labels on the fluorescent light fixtures indicated that no PCBs were present in the ballasts.

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 ODSs

Item	Manufacturer	Model (Serial No.)	Location Observed	Photo No. (Appendix B3)	Refrigerant	Potential ODS
Freezer	Danby	D1219W	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 31, Appendix B3). This refrigerant (R12) is a hydrochlorofluorocarbon (HCFC) and is regulated under the Federal Halocarbon Regulations.

Fire extinguishers were not observed at North West Gander River Camp 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.

3.2.8.1 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.

3.2.8.2MERCURY-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.

3.2.8.3PCB-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.

3.2.8.4TREATED 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 North West Gander River Camp during the Pre-Demolition HBMA site visit.

3.2.8.5SILICA

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.

3.2.8.6 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 North West Gander River Camp.

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 North West Gander River 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 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 ACGIH 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 (NWGR PS-1 to NWGR PS-4), plus one (1) blind field duplicate (NWGR PS-DUP1; duplicate of NWGR PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (NWGR PS-5 and NWGR PS-6) collected from the outhouse ranged from 46 mg/kg to 178 mg/kg.
  - Three (3) paint samples (NWGR PS-1, NWGR PS-2 and NWGR PS-6) 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; and therefore, these paints are considered to be LBPs but are not likely to be leachable for lead.
  - The concentrations of lead in the other four (4) 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 (NWGR PS-1 to NWGR PS-4), plus one (1) blind field duplicate (NWGR PS-DUP1; duplicate of NWGR PS-3), collected from painted surfaces of the accommodations cabin and two (2) samples (NWGR PS-5 and NWGR PS-6) collected from the outhouse ranged from non-detect (<0.03 mg/kg) to 0.44 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 (NWGR PS-1 to NWGR PS-4), plus one (1) blind field duplicate (NWGR PS-DUP1; duplicate of NWGR PS-3), collected from painted surfaces of the

accommodations cabin and two (2) samples (NWGR PS-5 and NWGR 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 (NWGR M-1) was collected from the surfaces of a wall and one (1) suspected mould sample (NWGR M-2) was collected from the surfaces of a chair for laboratory analysis. The samples confirmed the presence of *Cladosporium* mould, basidiospores and myxomycetes.

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 North West Gander River Camp 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

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 (white) on plywood walls of accommodations cabin. LBP (grey) on plywood floor of accommodations cabin. LBP (grey) on plywood floor of outhouse. LBP (grey) on metal door and window coverings on exterior of accommodations cabin (refer to Section 2.0).	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 Waste Disposal Site and disposed in the special waste area of the site.

Table 3-4: Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

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)	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.

Table 3-4: Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

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)	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.
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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Drawn by: T. Rideout

Approved by: L. Wiseman

Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 204, NL

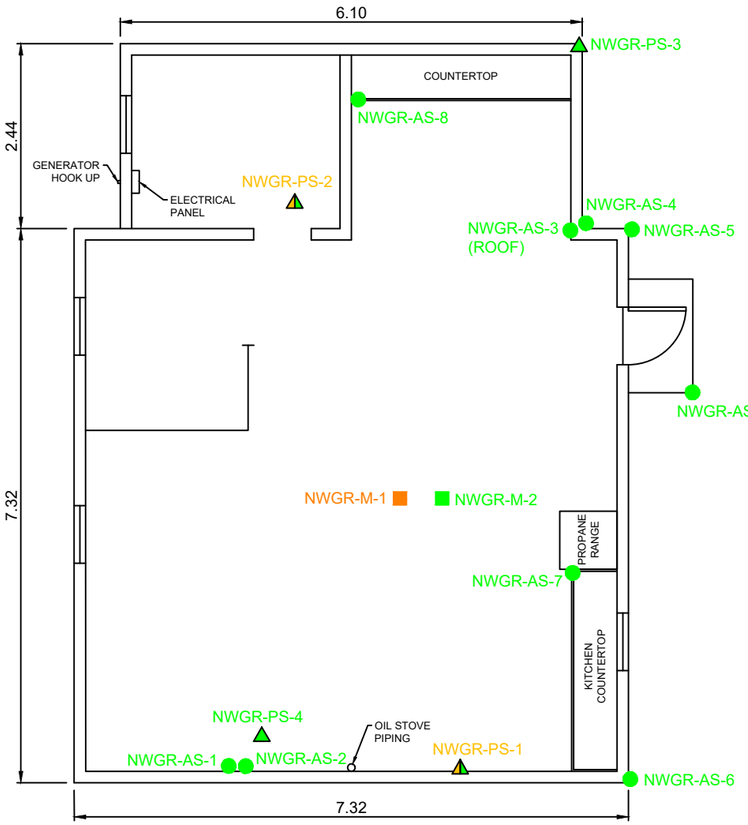
Title: Site Location Plan - Northwest Gander River Camp

Date: August 2022

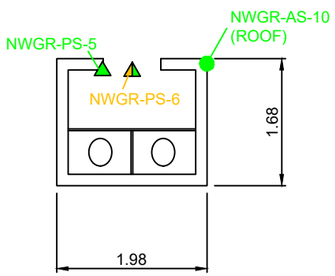
Project No. TE22104004.2000

Rev. No. 0

Figure No. 3.1



ACCOMMODATIONS CABIN



OUTHOUSE

SCALE
0m 2m 4m

LEGEND:

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

NOTES:

1. ALL DIMENSIONS ARE IN METERS.
2. DO NOT SCALE FROM FIGURE.
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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 204, NL

Date: August 2022

Project No. TE22104004.2000

Title: Sample Location Plan - Northwest Gander River Camp

Rev. No. 0

Figure No. 3.2

Appendix B3

Photographic Record

Photo 1: View of the accommodations cabin at North West Gander River Camp.

Photo 2: View of the accommodations cabin at North West Gander River Camp.

Photo 3: View of the accommodations cabin at North West Gander River Camp.

Photo 4: View of the accommodations cabin at North West Gander River Camp.

Photo 5: View of the accommodations cabin at North West Gander River Camp.

Photo 6: View of the kitchen area of the accomodations cabin at North West Gander River Camp.

Photo 7: View of the washroom area of the accomodations cabin at North West Gander River Camp.

Photo 8: View of the sleeping area of the accomodations cabin at North West Gander River Camp.

Photo 9: View of the attic in the accomodations cabin at North West Gander River Camp. Note: rodent feces.

Photo 10: View of the crawl space beneath the accomodations cabin at North West Gander River Camp.

Photo 11: View of the outhouse at North West Gander River Camp.

Photo 12: View of location of bulk material sample NWGR AS-1, foil paper, cabin interior .

Photo 13: View of bulk material sample NWGR AS-2, tar paper, cabin interior.

Photo 14: View of bulk material sample NWGR AS-3, shingle, cabin exterior.

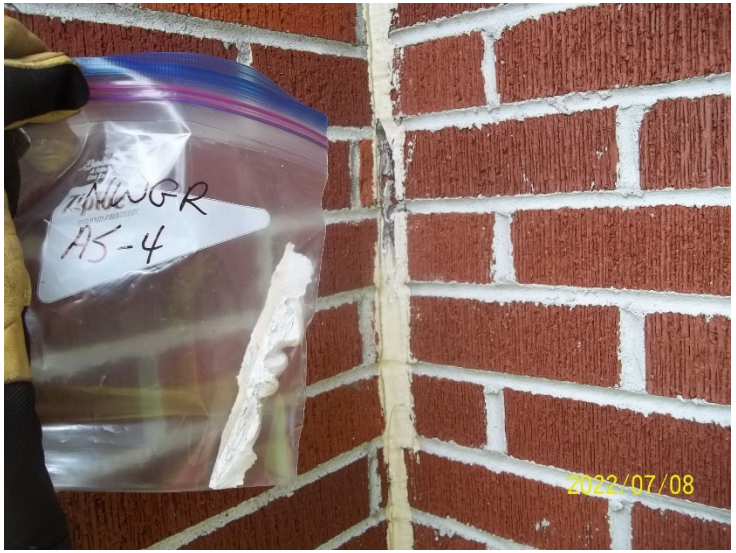


Photo 15: View of bulk material sample NWGR AS-4, caulking, cabin exterior.

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

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

Photo 18: View of bulk material sample NWGR AS-7, countertop mastic, cabin interior.

Photo 19: View of bulk material sample NWGR AS-8, countertop mastic, cabin interior.

Photo 20: View of bulk material sample NWGR AS-9, concrete, cabin exterior.

Photo 21: View of paint sample NWGR PS-1, wall, cabin interior.

Photo 22: View of paint sample NWGR PS-2, floor, cabin interior.

Photo 23: View of paint sample NWGR PS-3, roof, cabin exterior .

Photo 24: View of paint sample NWGR PS-4, ceiling, cabin interior.

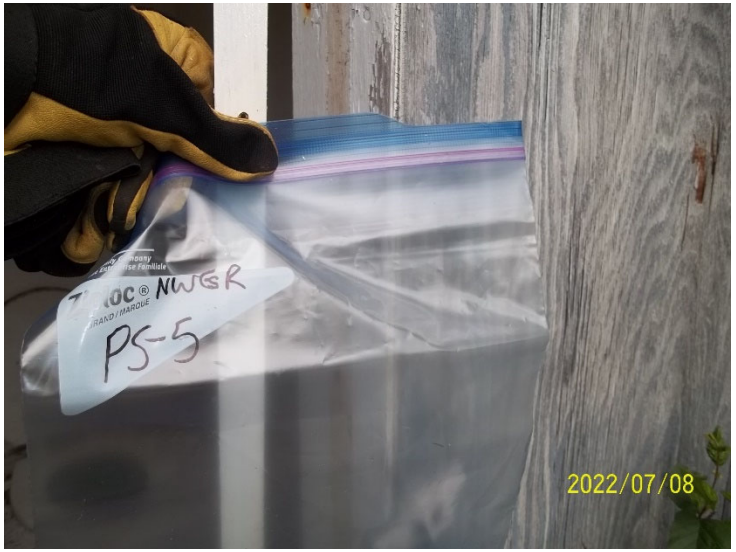


Photo 25: View of paint sample NWGR PS-5, wall, outhouse exterior.

Photo 26: View of paint sample NWGR PS-6, floor, outhouse interior.

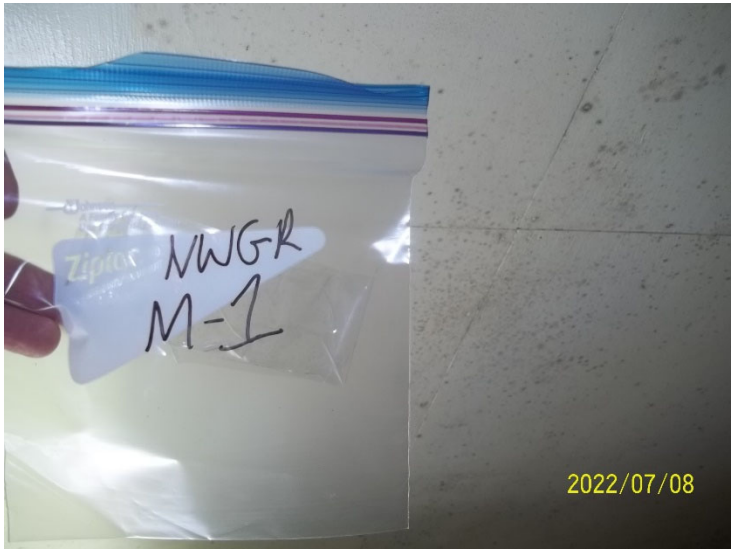


Photo 27: View of mould sample NWGR M-1, ceiling, cabin interior.

Photo 28: View of mould sample NWGR M-2, chair, cabin interior.

Photo 29: View of electrical panel inside cabin.

Photo 30: View of sink undercoating, cabin interior.

Photo 31: View of fluorescent light ballast. Note: label indicating no PCBs.

Photo 32: View of freezer, cabin interior.

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 (North West Gander River Camp

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

Notes:

NWGR AS-DUP1 is a blind field duplicate of NWGR 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 (North West Gander River Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
NWGR PS-1	Cabin - Kitchen/Dining Area	21	Wall	Plywood	White paint on plywood (sample includes plywood)	10	**93**
NWGR PS-2	Cabin - Kitchen/Dining Area	22	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	**178**
NWGR PS-3	Cabin - Exterior	23	Roof	Wood	White paint on wood (sample includes wood)	10	46
NWGR PS-DUP1						10	58
NWGR PS-4	Cabin - Kitchen/Dining Area	24	Ceiling	Plywood	White paint on plywood (sample includes plywood)	10	79
NWGR PS-5	Outhouse - Interior	25	Wall	Wood	White paint on wood (sample includes wood)	10	46
NWGR PS-6	Outhouse - Interior	26	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	**94**

Notes:

NWGR PS-DUP1 is a blind field duplicate of NWGR 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 C3-3: Paint Sample Descriptions and Mercury Analytical Results (North West Gander River Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
NWGR PS-1	Cabin - Kitchen/Dining Area	21	Wall	Plywood	White paint on plywood (sample includes plywood)	0.03	0.13
NWGR PS-2	Cabin - Kitchen/Dining Area	22	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	0.14
NWGR PS-3	Cabin - Exterior	23	Roof	Wood	White paint on wood (sample includes wood)	0.03	<0.03
NWGR PS-DUP1						0.03	<0.03
NWGR PS-4	Cabin - Kitchen/Dining Area	24	Ceiling	Plywood	White paint on plywood (sample includes plywood)	0.03	0.44
NWGR PS-5	Outhouse - Interior	25	Wall	Wood	White paint on wood (sample includes wood)	0.03	<0.03
NWGR PS-6	Outhouse - Interior	26	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	<0.03

Notes:

NWGR PS-DUP1 is a blind field duplicate of NWGR 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 C3-4: Paint Sample Descriptions and PCB Analytical Results (North West Gander River Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
NWGR PS-1	Cabin - Kitchen/Dining Area	21	Wall	Plywood	White paint on plywood (sample includes plywood)	0.5	<0.5
NWGR PS-2	Cabin - Kitchen/Dining Area	22	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
NWGR PS-3	Cabin - Exterior	23	Roof	Wood	White paint on wood (sample includes wood)	0.5	<0.5
NWGR PS-DUP1						0.5	<0.5
NWGR PS-4	Cabin - Kitchen/Dining Area	24	Ceiling	Plywood	White paint on plywood (sample includes plywood)	0.5	<0.5
NWGR PS-5	Outhouse - Interior	25	Wall	Wood	White paint on wood (sample includes wood)	0.5	<0.5
NWGR PS-6	Outhouse - Interior	26	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5

Notes:

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

<X: Non-Detect

RDL: Reportable Detection Limit

CCME: Canadian Council of Ministers of the Environment

CSQG: Canadian Soil Quality Guideline

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

TDG: Transportation of Dangerous Goods

Bold and underlined value exceeds CCME CSQG for an industrial site (33 mg/kg).

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 75)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
NWGR M-1	Tape lift	Cabin - Ceiling	*Cladosporium*	Low
			Hyphal fragment	Low
NWGR M-2	Tape lift	Cabin - Chair	Basiodiospores	Rare
			Myxomycetes	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 Sheets

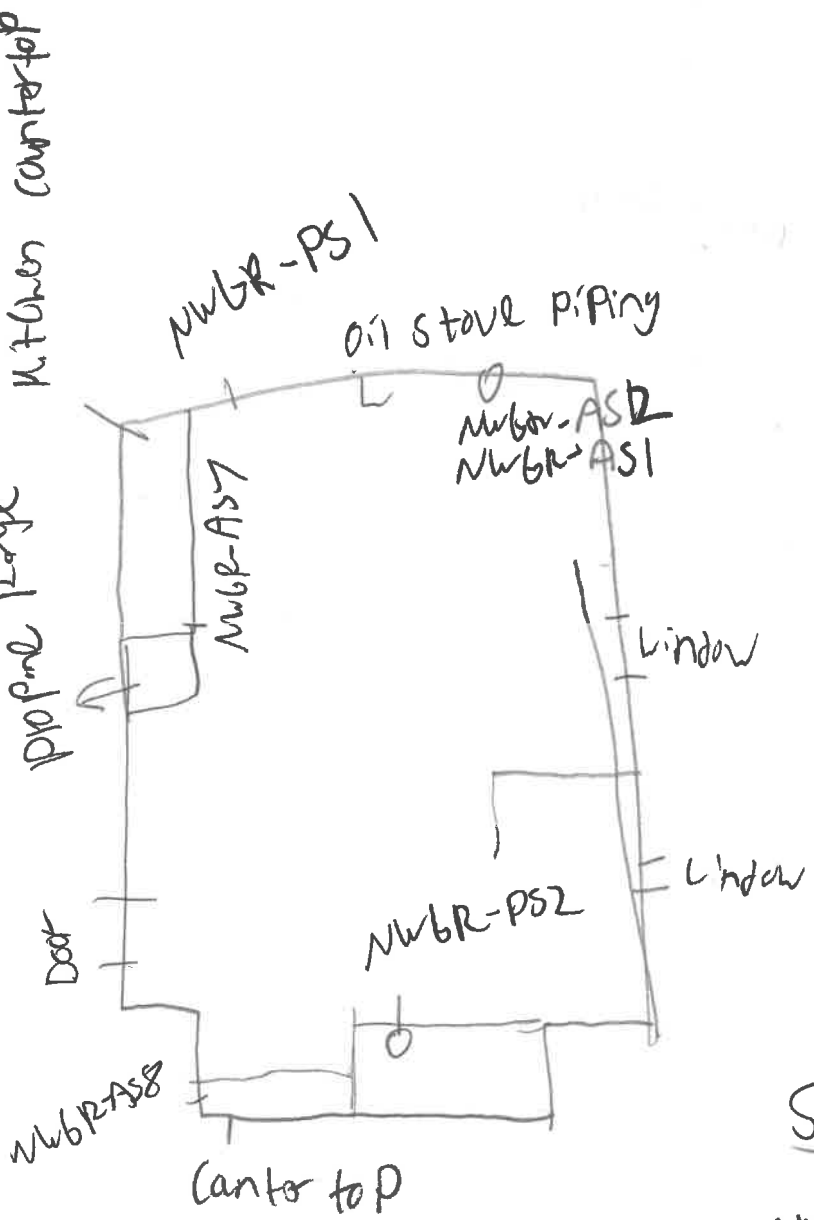
Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
NW, River (Lands)			Interior	Old 24' x 24' 9' 15 pitch New 8 x 20 ' 9' 15 pitch

11:43 Am

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	glossy grey on plywood	F to P		
Walls	glossy white on plywood on glossy white	F		
Ceiling	glossy white on plywood glossy white	F		
Paint	Floor glossy grey on plywood Wall glossy white on glossy white on plywood Ceiling glossy white on plywood Doors on green Windows Other cupboards glossy white on wood	F F		Wall = NWGR-PS1 Floor = NWGR-PS2 Ceiling = NWGR-PS4
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink fiberglass, no tar paper (Attic) foil tarpaper batting, pink insulation (walls)			NWGR-AS1 = Foil NWGR-AS2 = Tar paper
Piping / Electrical / Mechanical Equipment	Propane line run into cabin for stove - oil line runs for oil stove.	G		
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: magnetek universal manufacturing Serial #: 446-LR-TC-P non PCB	Leaking/ Other No	Total #: 2 # Checked: 2	Suspect PCBs: NO
Lighting (Incandescent, HID, etc.)	6 incandescent 1 Battery OPP smoke detector			
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 mold present on walls, ceiling Black on walls/ceiling white chair	ODS Yes Freezer	e.g., refrigerators, coolers, drinking fountains, fire extinguishers NWGR-M1 (ceiling) NWGR-M2 (chair)	
Other	Doors (Type and tags): Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)	→ water damage throughout walls in main. Flooring in extension showing damage		
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Danby freezer model#012194 Lines for oil stove. Stove Removed, 1 Propane range + lines			

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: Kitchen - white/grey marble laminate + Glue : NWGR-AS7
Washroom: grey laminate + Glue = NWGR-AS8



Sample list

Wall = NWGR-PS1
Floor = NWGR-PS2

Mould ceiling = NWGR-M1
Mould Chair = NWGR-M2
Foil = NWGR-AS1
Paper = NWGR-AS2
Kitchen Cantor = NWGR-AS7
Washroom = NWGR-AS8
Ceiling = NWGR-PS4

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
NW Gordon River			Exterior	24'x24'x9'/15' 28'x20'x9'/15'

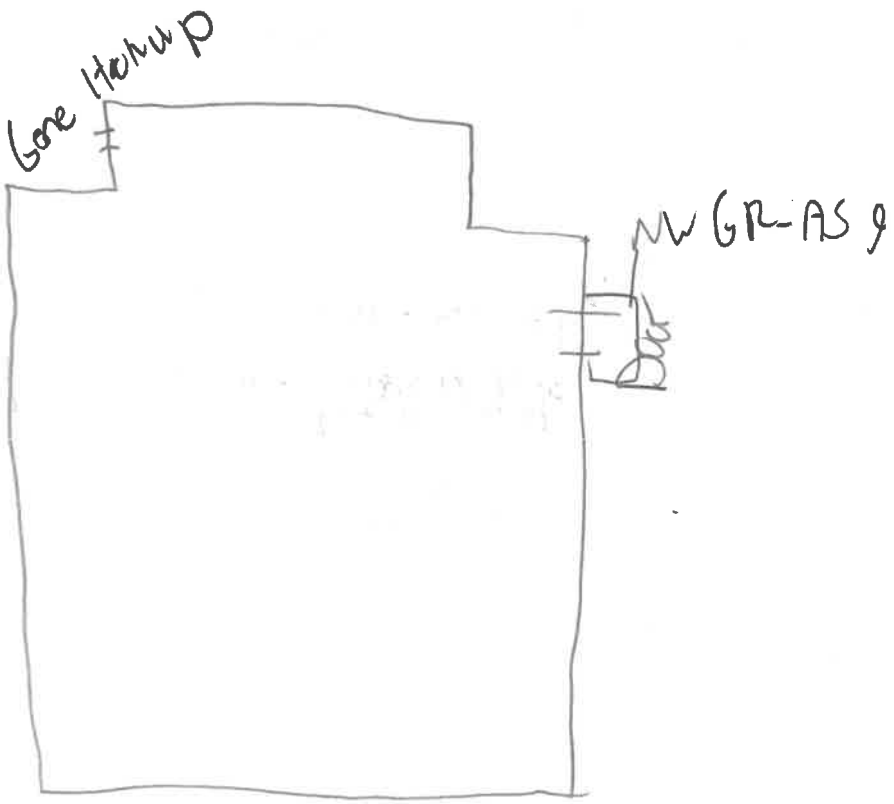
	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	grey cinder block with grey mortar			NWGR-AS6
Walls	Red Brick with grey mortar. White caulking on transition piece	G All		caulking NWGR-AS4 Brick: NWGR-AS5
Ceiling	Black asphalt shingle roof with tar on tar paper on wood	F		NWGR-AS3
Paint Trim - matte grey on wood	Floor Wall Same as floor. Ceiling Doors grey on steel - Interior Windows Other Peeling Ceiling	Door = Poor to Fair		UR=NWGR-AS2=Door Trim=NWGR-PS3
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	yellow fiberglass insulation	F		
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 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): Rodent Droppings noted in attic Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Concrete block Eastern Door. NWGR-AS8			

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).

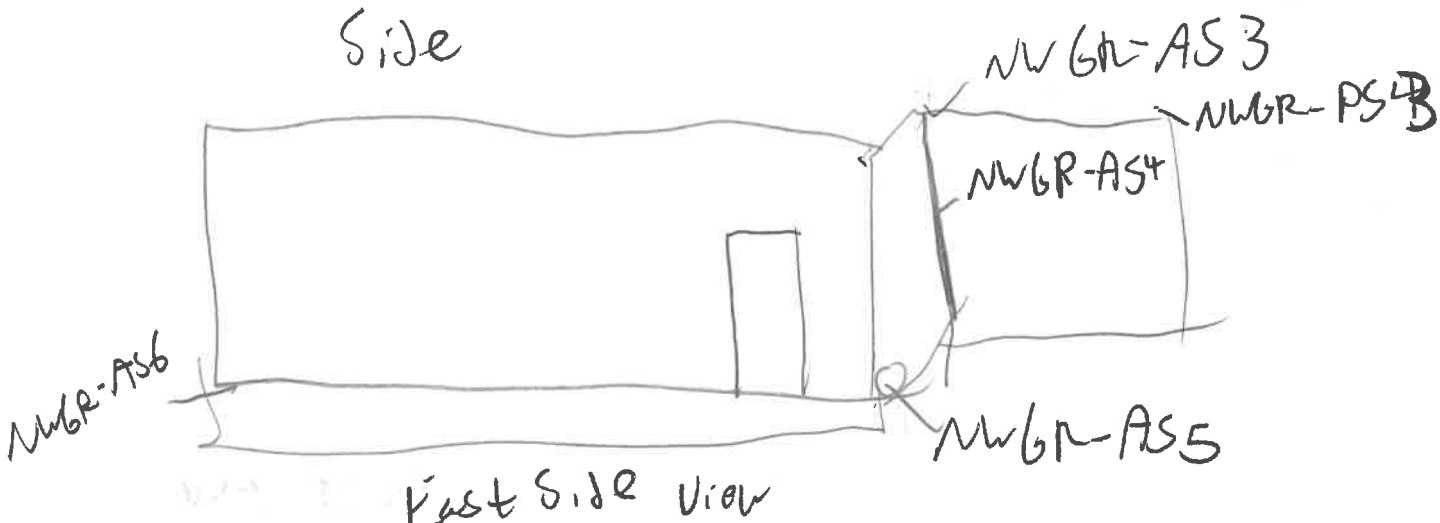
Notes/Comments:

N

Top



Side



East Side View

List

NW6R-AS3
NW6R AS 4
NW GR AS 5
NW GR AS 6
NW GR AS 9
NW GR PS 3

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
NW GR			Outhouse	Same as camp 130

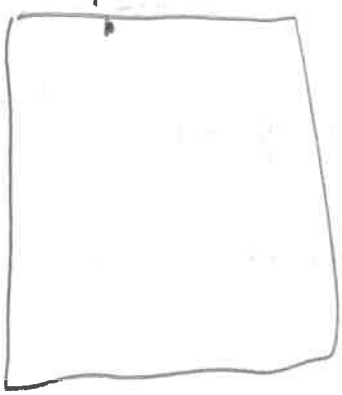
	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	grey on ply wood Cinderblock foundation			Block VR = NW GR - AS
Walls				
Ceiling	White on Plywood (Interior) Asphalt Shingle with tar centering			Asphalt Shingle = NW GR -
Paint	Floor grey on plywood (same as exterior wall) Wall grey on Plywood exterior / White interior Ceiling White on Plywood Doors Windows Other	P		Floor = NW GR - PSb interior wall / ceiling NW G
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink Fiber glass insulation Styrofoam in Duct			
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:

Top

NWBR-AS10



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APPENDICES

4 CAMP 130

Camp 130 site is located along TL204 and TL231, 230 kV transmission lines which connect the Bay D'Espoir Generating Station and the Stony Brook Terminal Station near Grand Falls-Windsor (refer to Figure 4.1, Appendix A4). Camp 130 is comprised of an accommodations cabin and an outhouse.

4.1 BUILDING DESCRIPTION

The accommodations cabin is a one-storey, rectangular structure with a footprint area of approximately 66.5 m^2 (old section: 7.3 m x 7.3 m; new section: 5.5 m x 2.4 m) (refer to Photos 1 to 7, 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 or wood stove).

The outhouse is a one-storey, rectangular structure with a footprint area of approximately 3.4 m^2 (1.7 m x 2.0 m) (refer to Photo 14, Appendix B4). 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 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 7
Crawl Space (Yes/No)	Yes	13
Attic (Yes/No)	Yes	12
Type of Structure	Wood Frame	12 and 13
Type of Foundation	Concrete blocks	13
Exterior	Brick	1 to 7
Window/Door Frames	Painted Metal and Wood	1, 9, 10 and 11
Exterior Doors	Painted Metal	1
Roofing Materials	Asphalt Shingles	7
Interior Walls Finishes	Painted Plywood	8 to 11
Interior Ceiling Finishes	Painted Plywood	8 and 9
Floor Finishes	Painted Plywood	8 and 11
Interior Doors	NA	-
Interior Lighting	Fluorescent and Incandescent	9
Exterior Lighting	Incandescent	1

Table 4-1: Site Building Description – Accommodations Cabin

Building Name	Accommodations cabin	Photo No. (Appendix B4)
Heating	Not Heated (Former Oil or Wood Stove)	8

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	14
Crawl Space (Yes/No)	No	-
Attic (Yes/No)	No	-
Type of Structure	Wood Frame	14
Type of Foundation	Concrete	30
Exterior	Painted Plywood	14
Window/Door Frames	Painted Wood	-
Exterior Doors	Painted Plywood	-
Roofing Materials	Asphalt Shingles	26
Interior Walls Finishes	Painted Plywood	30
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 8, 2022 and the results of laboratory analyses of samples collected from Camp 130. 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, 11 building material samples (C130 AS-1 to C130 AS-11), plus one (1) blind field duplicate (C130 AS-DUP1), were collected from the accommodations cabin and two (2) building material samples (C130 AS-12 and C130 AS-13) were collected from the outhouse and analyzed for asbestos content (refer to Photos 15 to 27, 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.

4.2.1.1 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.

4.2.1.1.1 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.

3.2.1.1.2 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 12, Appendix B4). Thermal system insulation was not observed at Camp 130.

One (1) sample of foil paper backing on the building insulation (C130 AS-1) was collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 15, Appendix B4). One (1) sample of tar paper (C130 AS-3), plus one (1) blind field duplicate (C130 AS-DUP1; duplicate of C130 AS-3), was also collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 17, Appendix B4). Asbestos was not detected in the foil paper or tar paper samples.

4.2.1.1.3 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.

4.2.1.1.4 CEILING TILE

There were no ceiling tiles observed at Camp 130 during the Pre-Demolition HBMA site visit; therefore, no samples of ceiling tile were collected for analysis.

4.2.1.1.5 DRYWALL JOINT COMPOUND

There was no drywall joint compound observed at Camp 130 during the Pre-Demolition HBMA site visit; therefore, no samples of drywall joint compound were collected for analysis.

4.2.1.1.6 VINYL FLOORING PRODUCTS AND MASTICS

There was no vinyl flooring or products observed at Camp 130 during the Pre-Demolition HBMA site visit; therefore, no samples of vinyl flooring or products were collected for analysis.

4.2.1.1.7 BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

There were no baseboard, carpet or stair tread adhesives/mastics observed at Camp 130 during the Pre-Demolition HBMA site visit; therefore, no samples of these types of adhesives/mastics were collected for analysis.

4.2.1.1.8 ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, two (2) samples of shingles (C130 AS-10 and C130 AS-11) were collected from the roof of the accommodations cabin and one (1) sample of shingle (C130 AS-12) was collected from the roof of the outhouse and analyzed for asbestos content (refer to Photos 24 to 26, 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.

4.2.1.1.9 CAULKING/SEALANT

One (1) sample of caulking (C130 AS-9) was collected from an exterior wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 23, Appendix B4). Asbestos was not detected in the caulking sample.

4.2.1.1.10 MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

During the Pre-Demolition HBMA site visit, two (2) samples of brick and mortar (C130 AS-6 and C130 AS-7) were collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photos 20 and 21, Appendix B4). 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 (C130 AS-8) was collected from the concrete foundation of the accommodations cabin and one (1) sample of concrete (C130 AS-13) was collected from the concrete pad at the entrance to the outhouse and analyzed for asbestos content (refer to Photos 22 and 27, Appendix B4). Asbestos was not detected in the concrete and cinder block and mortar samples.

4.2.1.1.11 FIRE-RATED DOORS

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

4.2.1.1.12 OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, one (1) sample of particle board with tar backing (C130 AS-2) was collected from a wall in the accommodations cabin and analyzed for asbestos content (refer to Photo 16, Appendix B4). Asbestos was not detected in the particle board sample.

During the Pre-Demolition HBMA site visit, two (2) samples of countertop mastics (C130 AS-4 and C130 AS-5) were collected from the accommodations cabin and analyzed for asbestos content (refer to Photos 18 and 19, 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 7, 31 and 32, 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, three (3) samples (C130 PS-1 to C130 PS-3), plus one (1) blind field duplicate (C130 PS-DUP1), were collected from painted surfaces of the accommodations cabin and one (1) sample (C130 PS-4) was collected from painted surfaces of the outhouse and analyzed for lead, mercury and PCB content (refer to Photos 28 to 30, 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.

4.2.2.1 LEAD IN PAINT

The concentrations of lead in the three (3) samples (C130 PS-1 to C130 PS-3), plus one (1) blind field duplicate (C130 PS-DUP1; duplicate of C130 PS-1), collected from painted surfaces of the accommodations cabin and one (1) sample (C130 PS-4) collected from the outhouse ranged from 14 mg/kg to 78 mg/kg, and therefore, were below the Federal HPA criterion (90 mg/kg) (refer to Table C4-2, Appendix C4).

4.2.2.2 MERCURY IN PAINT

The concentrations of mercury in the three (3) samples (C130 PS-1 to C130 PS-3), plus one (1) blind field duplicate (C130 PS-DUP1; duplicate of C130 PS-1), collected from painted surfaces of the accommodations cabin and one (1) sample (C130 PS-4) collected from the outhouse ranged from non-detect (<0.03 mg/kg) to 2.87 mg/kg, and therefore, were below the Federal HPA criterion (10 mg/kg) (refer to Table C4-3, Appendix C4).).

4.2.2.3 PCBS IN PAINT

The concentrations of PCBs in the three (3) samples (C130 PS-1 to C130 PS-3), plus one (1) blind field duplicate (C130 PS-DUP1; duplicate of C130 PS-1), collected from painted surfaces of the accommodations cabin and one (1) sample (C130 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 Camp 130. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photo 12, Appendix B4). Since the original date of construction of Camp 130 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 (C130 M-1) of the suspect mould material was collected from the surfaces of the ceiling for laboratory analysis to confirm the presence/absence of mould (refer to Figure 4.2, Appendix A4 and refer to Photo 33, Appendix B4).

The results of mould analysis determined that tape lift sample C130 M-1 contained *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 Camp 130 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 no PCBs were present in the ballasts (refer to Photos 34, Appendix B4).

4.2.7 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 4-3.

Table 4-3: Potential Sources of ODSs

Item	Manufacturer	Model (Serial No.)	Location Observed	Photo No. (Appendix B4)	Refrigerant	Potential ODS
Freezer	Danby	D1219W	Kitchen Area	9	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 31, Appendix B3). This refrigerant (R12) is a hydrochlorofluorocarbon (HCFC) and is regulated under the Federal Halocarbon Regulations.

Fire extinguishers were not observed at Camp 130 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.

4.2.8.1 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.

4.2.8.2MERCURY-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.

4.2.8.3PCB-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.

4.2.8.4TREATED 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 130 during the Pre-Demolition HBMA site visit.

4.2.8.5SILICA

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.

4.2.8.6 RADIOACTIVE MATERIALS

Smoke detectors were not observed at Camp 130 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 Camp 130.

4.3.1 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 130 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 ACGIH 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 three (3) samples (C130 PS-1 to C130 PS-3), plus one (1) blind field duplicate (C130 PS-DUP1; duplicate of C130 PS-1), collected from painted surfaces of the accommodations cabin and one (1) sample (C130 PS-4) collected from the outhouse ranged from 14 mg/kg to 78 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 three (3) samples (C130 PS-1 to C130 PS-3), plus one (1) blind field duplicate (C130 PS-DUP1; duplicate of C130 PS-1), collected from painted surfaces of the accommodations cabin and one (1) sample (C130 PS-4) collected from the outhouse ranged from non-detect (<0.03 mg/kg) to 2.87 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 (C130 PS-1 to C130 PS-3), plus one (1) blind field duplicate (C130 PS-DUP1; duplicate of C130 PS-1), collected from painted surfaces of the accommodations cabin and one (1) sample (C130 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 (C130 M-1) of the suspect mould material was collected from the surfaces of the ceiling 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.

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.

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 Camp 130 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 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 or 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)	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 Waste Disposal Site and disposed in the special waste area of the site.

Table 4-4: Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

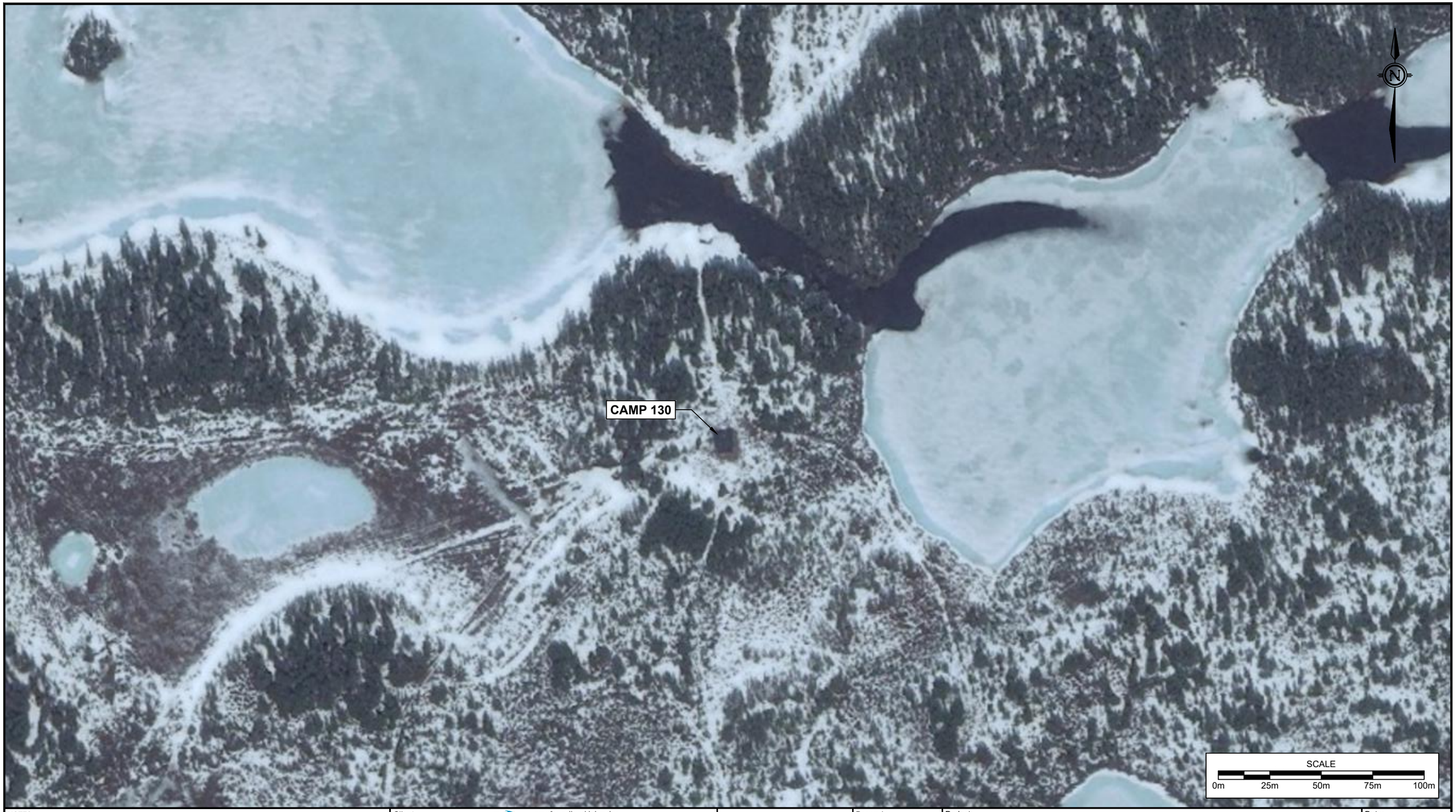
Hazardous Material	Applicable Acts, Regulations or Guidance Documents	Description and Location	Disposal
Mould	Mould Guidelines for the Canadian Construction Industry, Canadian Construction Industry (CCI), 2018; Mould Abatement Guidelines, Environmental Abatement Council of Canada (EACC), 2015	Mould growth 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)	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.

Table 4-4: Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

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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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 204, NL

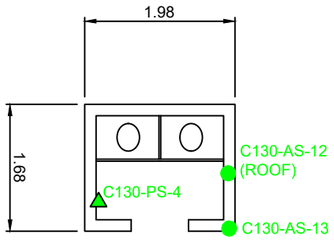
Title: Site Location Plan - Camp 130

Date: September 2022

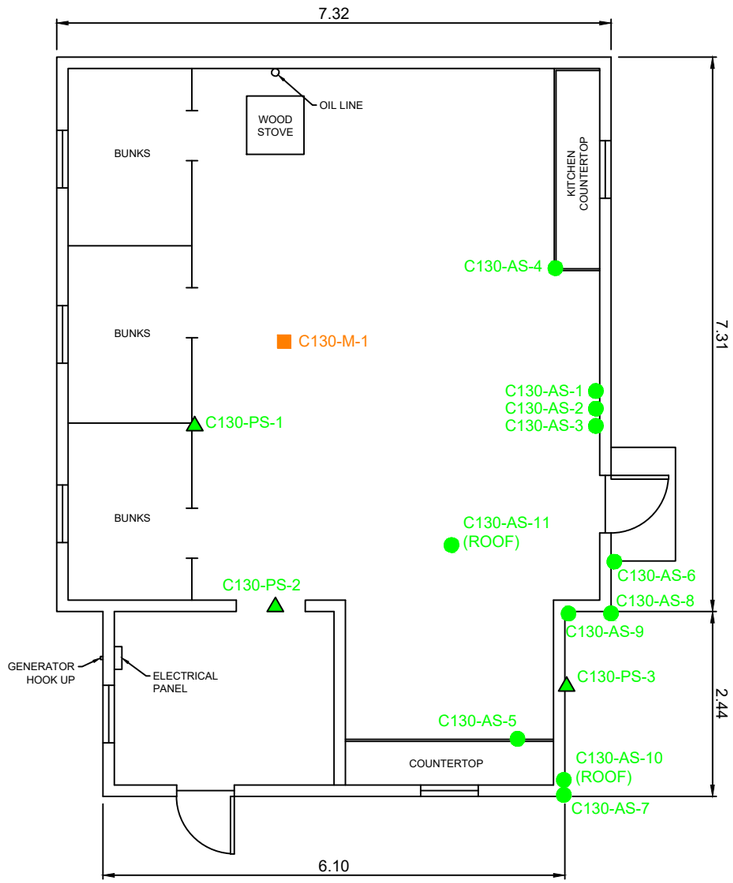
Project No. TE22104004.2000

Rev. No. 0

Figure No. 4.1



OUTHOUSE



ACCOMMODATIONS CABIN

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
- 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

Approved by: L. Wiseman

Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 204, NL

Title: Sample Location Plan - Camp 130

Date: September 2022

Project No. TE22104004.2000

Rev. No. 0

Figure No. 4.2

Appendix B4

Photographic Record

Photo 1: View of the accommodations cabin at Camp 130.

Photo 2: View of the accommodations cabin at Camp 130.

Photo 3: View of the accommodations cabin at Camp 130.

Photo 4: View of the accommodations cabin at Camp 130.

Photo 5: View of the accommodations cabin at Camp 130.

Photo 6: View of the accommodations cabin at Camp 130.

Photo 7: View of the accommodations cabin at Camp 130.

Photo 8: View of the sleeping area/dining area inside the accomodations cabin at Camp 130.

Photo 9: View of the kitchen area of the accomodations cabin at Camp 130.

Photo 10: View of the washroom area of the accomodations cabin at Camp 130.

Photo 11: View of the sleeping area of the accomodations cabin at Camp 130.

Photo 12: View of the attic in the accomodations cabin at Camp 130.

Photo 13: View of the crawl space beneath the accomodations cabin at Camp 130.

Photo 14: View of the outhouse at Camp 130, looking southwest.

Photo 15: View of bulk material sample C130 AS-1, foil/tar paper backing on fibreglass insulation, cabin interior.

Photo 16: View of bulk material sample C130 AS-2, particle board, cabin interior.

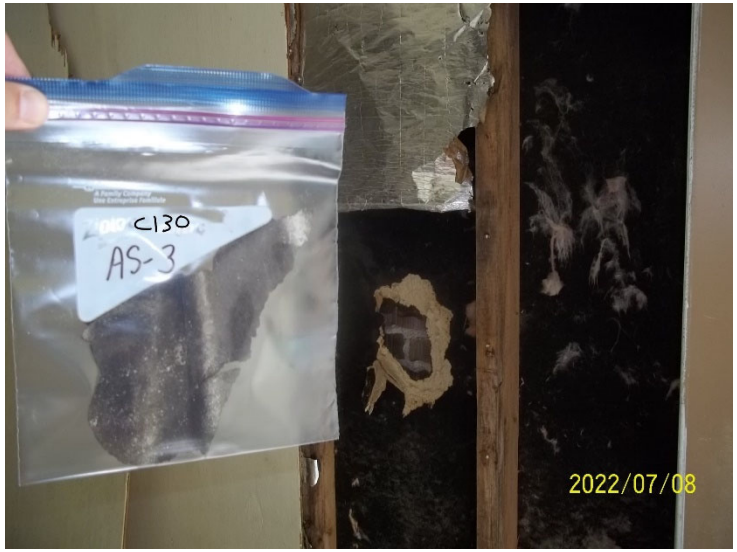


Photo 17: View of bulk material sample C130 AS-3, tar paper, cabin interior.

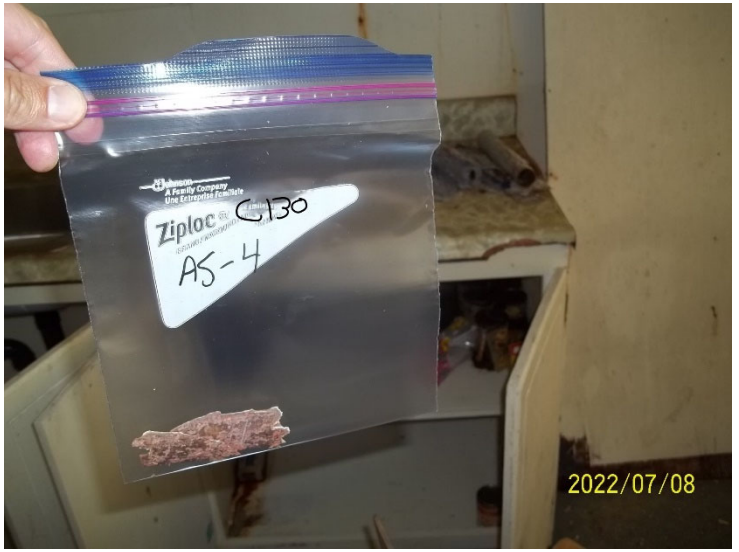


Photo 18: View of bulk material sample C130 AS-4, countertop mastic, cabin interior.

Photo 19: View of bulk material sample C130 AS-5, countertop mastic, cabin interior.

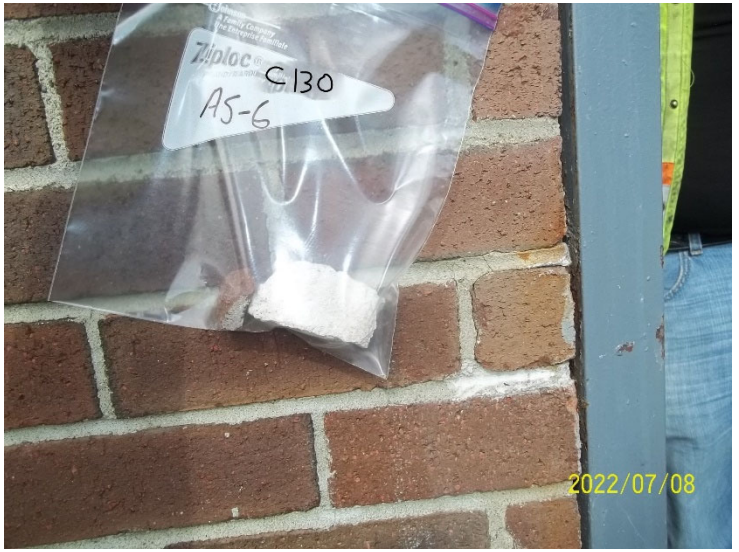


Photo 20: View of bulk material sample C130 AS-6, brick and mortar, cabin exterior.

Photo 21: View of bulk material sample C130 AS-7, brick and mortar, cabin exterior.

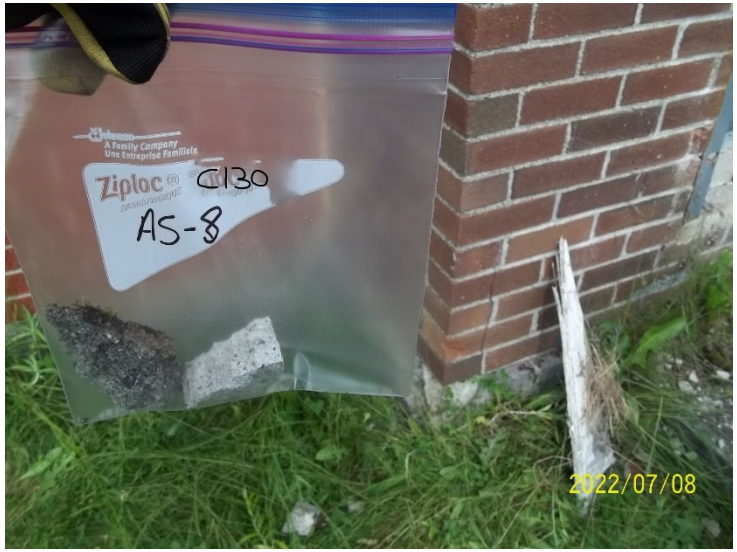


Photo 22: View of bulk material sample C130 AS-8, cinder block and mortar, cabin exterior.

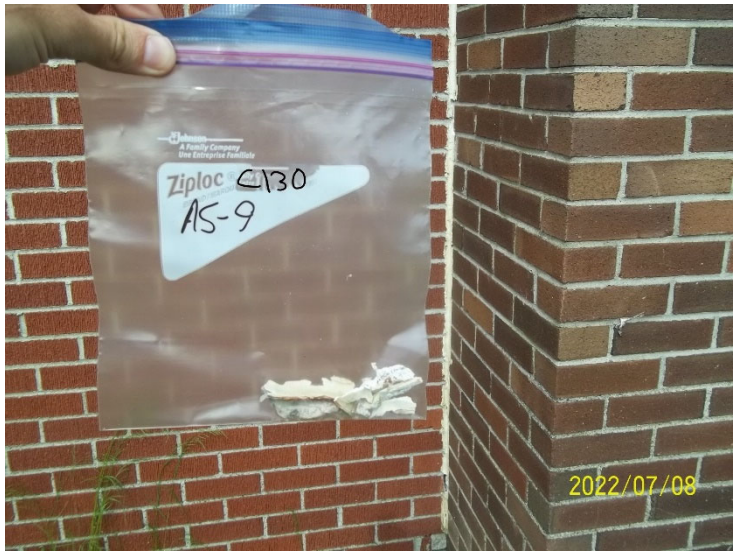


Photo 23: View of bulk material sample C130 AS-9, caulking, cabin exterior.

Photo 24: View of bulk material sample C130 AS-10, shingle, cabin exterior.

Photo 25: View of bulk material sample C130 AS-11, shingle, cabin exterior.

Photo 26: View of bulk material sample C130 AS-12, shingle, outhouse exterior.

Photo 27: View of bulk material sample C130 AS-13, concrete, outhouse exterior.

Photo 28: View of paint sample C130 PS-1, wall, cabin interior.

Photo 29: View of paint sample C130 PS-2, floor, cabin exterior.

Photo 30: View of paint sample 130 PS-4, wall, outhouse interior.

Photo 31: View of electrical panel, cabin interior.

Photo 32: View of sink undercoating, cabin interior.

Photo 33: View of suspected mould on ceiling, cabin interior.

Photo 34: View of fluorescent light ballast. Note: label indicating no PCBs.

Appendix C4

Sample and Analytical Summary Tables

Table C4-1: Bulk Sample Descriptions and Asbestos Analytical Results (Camp 130)

Sample ID	Room Description	Photo No.	Sample Location	Sample Description	Layers Analyzed	Analytical Result
C130 AS-1	Cabin - Kitchen/Dining Area	15	Wall	Foil/tar paper backing on fibreglass insulatior	Foil/tar paper	ND
C130 AS-2-Tar	Cabin - Kitchen/Dining Area	16	Wall	Particle board with tar backing	Tar	ND
C130 AS-2-Fibreboard					Fibreboard	ND
C130 AS-3	Cabin - Kitchen/Dining Area	17	Wall	Tar paper	Tar paper	ND
C130 AS-DUP1					Tar paper	ND
C130 AS-4	Cabin - Kitchen Area	18	Countertop	Countertop mastic	Mastic	ND
C130 AS-5	Cabin - Washroom Area	19	Countertop	Countertop mastic	Mastic	ND
C130 AS-6-Brick	Cabin - Exterior	20	Wall	Brick and mortar	Brick	ND
C130 AS-6-Mortar					Mortar	ND
C130 AS-7-Brick	Cabin - Exterior	21	Wall	Brick and mortar	Brick	ND
C130 AS-7-Mortar					Mortar	ND
C130 AS-8-Cinder Block	Cabin - Exterior	22	Foundation	Cinder block and mortar	Cinder block	ND
C130 AS-8-Mortar					Mortar	ND
C130 AS-9	Cabin - Exterior	23	Wall	Caulking	Caulking	ND
C130 AS-10-Shingle	Cabin - Exterior	24	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
C130 AS-10-Tar Paper					Tar paper	ND
C130 AS-11-Shingle	Cabin - Exterior	25	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
C130 AS-11-Tar Paper					Tar paper	ND
C130 AS-12	Outhouse - Exterior	26	Roof	Asphalt shingle	Asphalt shingle	ND
C130 AS-13	Outhouse - Exterior	27	Foundation	Concrete pad	Concrete	ND

Notes:

C130 AS-DUP1 is a blind field duplicate of C130 AS-3

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 (Camp 130)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
C130 PS-1	Cabin - Kitchen/Dining Area	28	Wall	Plywood	White paint on plywood (sample includes plywood)	10	14
C130 PS-DUP1						10	56
C130 PS-2	Cabin - Kitchen/Dining Area	29	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	78
C130 PS-3	Cabin - Exterior	-	Roof	Plywood	White paint on wood (sample includes wood)	10	34
C130 PS-4	Outhouse - Interior	30	Wall	Plywood	White paint on plywood (sample includes wood)	10	36

Notes:

C130 PS-DUP1 is a blind field duplicate of C130 PS-1

<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 (Camp 130)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
C130 PS-1	Cabin - Kitchen/Dining Area	28	Wall	Plywood	White paint on plywood (sample includes plywood)	0.03	0.34
C130 PS-DUP1						0.03	0.98
C130 PS-2	Cabin - Kitchen/Dining Area	29	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	0.06
C130 PS-3	Cabin - Exterior	-	Roof	Plywood	White paint on wood (sample includes wood)	0.03	2.87
C130 PS-4	Outhouse - Interior	30	Wall	Plywood	White paint on plywood (sample includes wood)	0.03	<0.03

Notes:

C130 PS-DUP1 is a blind field duplicate of C130 PS-1

<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 (Camp 130)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
C130 PS-1	Cabin - Kitchen/Dining Area	28	Wall	Plywood	White paint on plywood (sample includes plywood)	0.5	<0.5
C130 PS-DUP1						0.5	<0.5
C130 PS-2	Cabin - Kitchen/Dining Area	29	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
C130 PS-3	Cabin - Exterior	-	Roof	Plywood	White paint on wood (sample includes wood)	0.5	<0.5
C130 PS-4	Outhouse - Interior	30	Wall	Plywood	White paint on plywood (sample includes wood)	0.5	<0.5

Notes:

C130 PS-DUP1 is a blind field duplicate of C130 PS-1

<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 (Camp 130)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
C130 M-1	Tape lift	Cabin - Ceiling	*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 D4

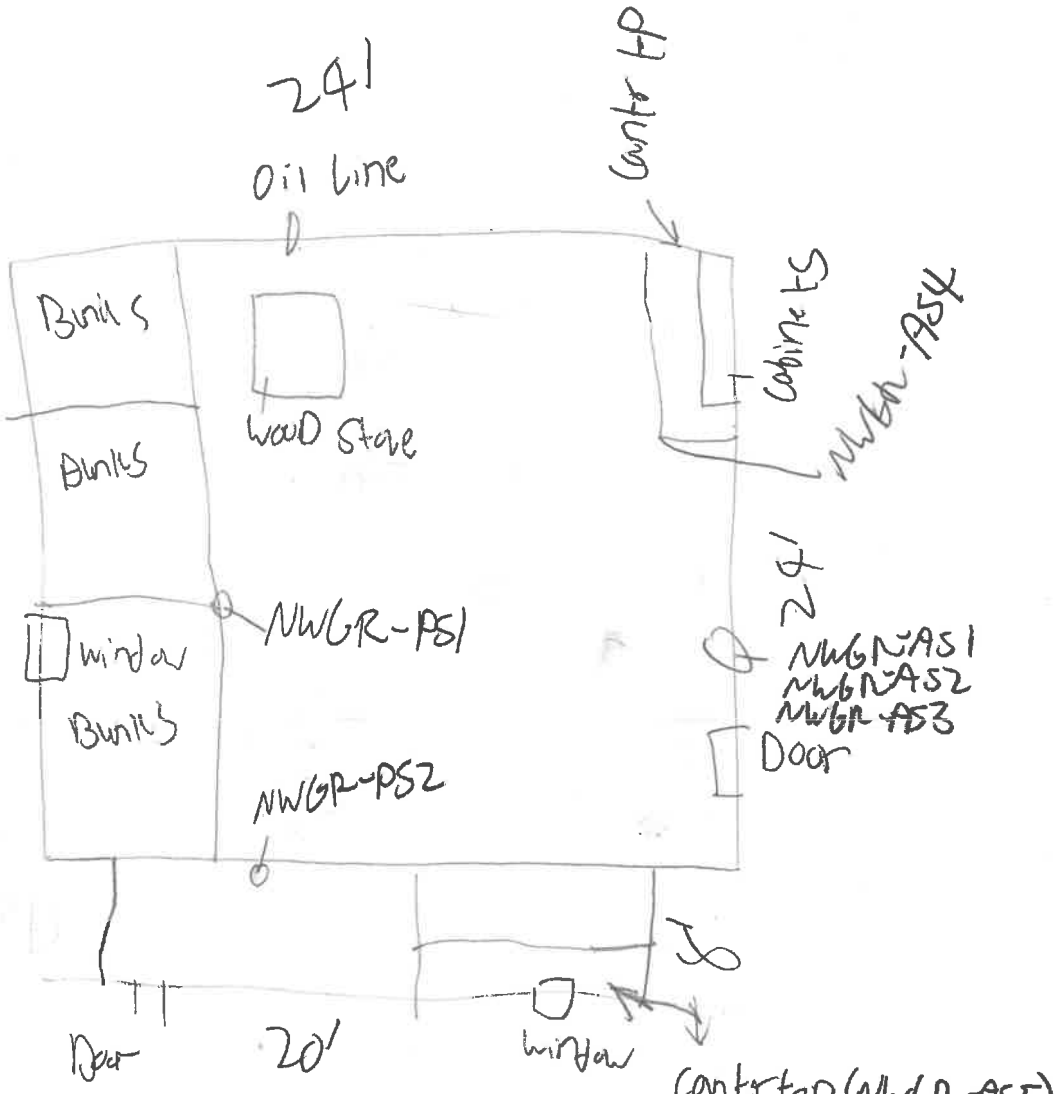
Room-By-Room Inspection Sheets

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Camp 130			Interior	24 x 24 x 8' 8' x 20 x 8'

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Gray plywood floor	F to P		
Walls	White plywood floor	F to P		
Ceiling	White plywood floor	F to P		
Paint	Floor grey on plywood Wall white glossy on wood Ceiling white Doors white on wood same as wall Windows white on wood same as wall Other	Floor = F to P Wall = F	Wall = F	Wall = NWGR-PS1 Floor = NWGR-PS2
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Foil with paper backing, pink fiberglass insulation, black backed particle board, tar paper	F to P	2 inch thick	Foil paper - tar backing = NWGR Particle board tar backing = NWGR Tar paper = NWGR-AS3
Piping / Electrical / Mechanical Equipment	Oil line running out cabin 2 PVC pipe (kitchen, bath)			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Magnetek both same Serial #: 446-LR-TC-P non PCB	Leaking / Other	Total #: 2 # Checked: 2	Suspect PCBs: NO
Lighting (Incandescent, HID, etc.)	6 incandescent 1 battery oped smoke detector			
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 ceilings, cabinets walls, water damage on walls, floor in washroom and electrical room	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers 1 Freezer NWGR-M1	
Other	Doors (Type and tag): wood stove (Enterprise) no gaskets, insulation around ceiling - chimney. Oil stove removed. Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit) 2 1 Freezer (Danby) model # D1219W			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Two counter tops (washroom/kitchen) washroom = Grey laminate/glue, kitchen = green 3 h/brown marble counter top, particle board		washroom = NWGR-AS5 kitchen = NWGR-AS4	

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:



Sample List

NWGR - AS1
NWGR - PS2
NWGR - AS1
NWGR - AS2
NWGR - AS3
NWGR - AS4
NWGR - AS5

9' stat
15' peak

main = 24' x 24' x ↓
addition = 8' x 20' x ↓

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Camp 130			outhouse	5.5' x 6.5 x 6

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Concrete pad Base Plywood flooring			NW6R-AS13 = Concrete
Walls	White Plywood walls interior with grey exterior Paint	exterior = P interior = P		Interior NW6R-PS4
Ceiling	White Plywood Ceiling Black asphalt Shingle with tar			NW6R-AS12 = Shingle + tar
Paint	Floor Wall glossy white on plywood Ceiling Doors grey exterior on plywood Windows Other (Not Sampled Poor. cond.)	P		NW6R-PS4
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink insulation No lagging			
Piping / Electrical / Mechanical Equipment				
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	1 in Cieling 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	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:

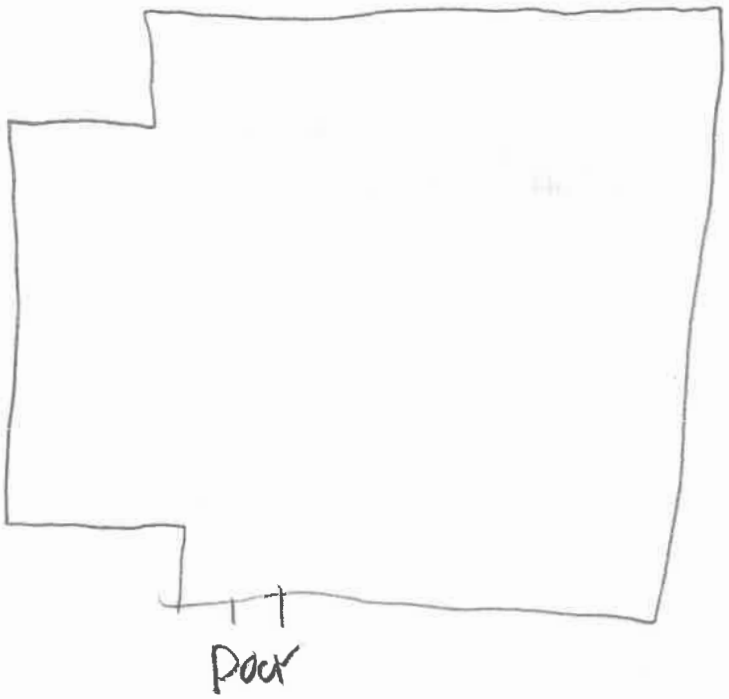
Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Comp 130			Exterior	24x24x9 8x20x9

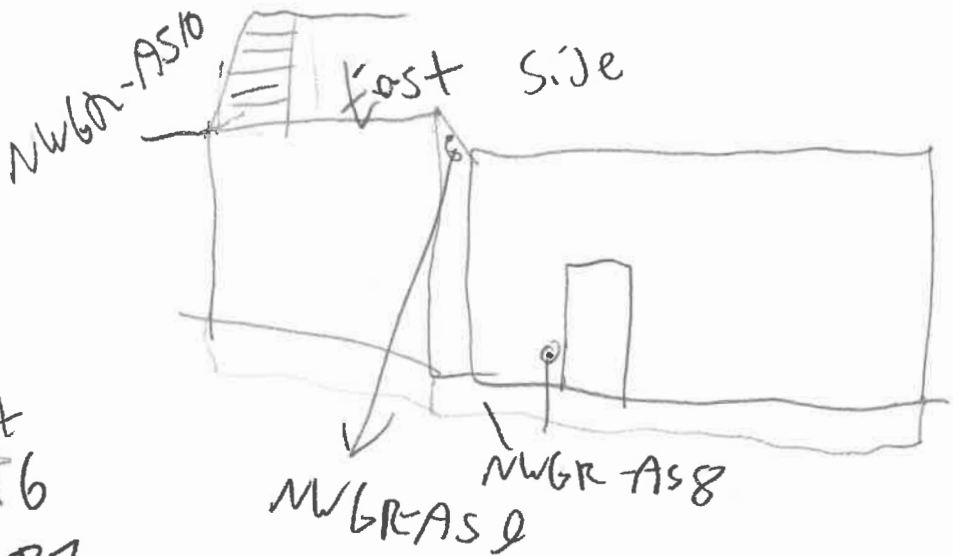
	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Cinder block concrete plus mortar	G		NWGR-AS8
Walls	Red Faded Brick / Mortar ← Newer Red Brick / Mortar ← White caulking Old/New building	F G F top		Old = NWGR-AS6 New = NWGR-AS7 Caulking = NWGR-AS9
Ceiling	New = Black asphalt ~~tar~~ tar paper on wood OLD = Black asphalt shingle with tar	P		NWGR-AS10 = New NWGR-AS11 = OLD
Paint	Floor Wall Ceiling Doors Windows Other On tar paper on wood Eaves: white paint on wood	P		NWGR-PS3 = Trim
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	yellow fiberglass insulation ~~[illegible]~~ in attic (New addition) [illegible]	G	24' x 24 x	
Piping / Electrical / Mechanical Equipment	Old addition = yellow insulation in Attic - No [illegible].	G		
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: N/A Serial #:	Leaking / Other	Total #: # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	1 incandescent light East side 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			

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





Sample List

NWGR #6

NWGR-AS#7

NWGR-AS8

NWGR-AS9

TABLE OF CONTENTS

TABLES

APPENDICES

5 POT HILL CAMP

Pot Hill Camp site is located along TL204 and TL231, 230 kV transmission lines which connect the Bay D'Espoir Generating Station and the Stony Brook Terminal Station near Grand Falls-Windsor (refer to Figure 5.1, Appendix A5). Pot Hill Camp site is comprised of an accommodations cabin.

5.1 BUILDING DESCRIPTION

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 (refer to Figure 5.2, Appendix A5). 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 (formerly heated by oil or wood stove).

A description of accommodations cabin is outlined in Table 5-1. Photographs of the building 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)	Yes	9
Attic (Yes/No)	Yes	8
Type of Structure	Wood Frame	8
Type of Foundation	Concrete Blocks	9
Exterior	Brick	1 to 4
Window/Door Frames	Painted Metal and Wood	1, 5 and 6
Exterior Doors	Painted Metal	1 and 6
Roofing Materials	Asphalt Shingles	2
Interior Walls Finishes	Painted Plywood	5, 6 and 7
Interior Ceiling Finishes	Painted Plywood	5 and 6
Floor Finishes	Painted Plywood	5, 6 and 7
Interior Doors	NA	-
Interior Lighting	Fluorescent and Incandescent	5 and 6
Exterior Lighting	Incandescent	3
Heating	Not Heated (Former Oil or Wood Stove)	-

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 6, 2022 and the results of laboratory analyses of samples collected from Pot Hill 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 are provided in Appendix D5. Photos of the samples collected from the accommodations cabin 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, nine (9) building material samples (PHC AS-1 to PHC AS-9), plus one (1) blind field duplicate (PHC AS-DUP1), were collected from the accommodations cabin and analyzed for asbestos content (refer to Photos 10 to 16, Appendix B5). Bulk sample descriptions and asbestos analytical results are summarized in Table C5-1, Appendix C5. Sample locations and analytical results are graphically illustrated on Figure 5.2, Appendix A5.

5.2.1.1 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.

5.2.1.1.1 SPRAY-APPLIED FIREPROOFING, INSULATION AND TEXTURE FINISHES

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

5.2.1.1.2 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 8 and 16, Appendix B5). Thermal system insulation was not observed at Pot Hill Camp.

One (1) sample of foil paper backing on the building insulation (PHC AS-9) was collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 16, Appendix B5). One (1) sample of tar paper (PHC AS-3), plus one (1) blind field duplicate (PHC AS-DUP1; duplicate of PHC AS-3), was also collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 12, Appendix B5). Asbestos was not detected in the foil paper or tar paper samples.

5.2.1.2 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.

5.2.1.2.1 CEILING TILE

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

5.2.1.2.2 DRYWALL JOINT COMPOUND

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

5.2.1.2.3 VINYL FLOORING PRODUCTS AND MASTICS

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

5.2.1.2.4 BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

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

5.2.1.2.5 ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, one (1) sample of shingle with tar paper (PHC AS-1) was collected from the roof of the accommodations cabin and analyzed for asbestos content (refer to Photo 10, Appendix B5). Asbestos was not detected in PHC AS-1-Shingle; however, asbestos was detected in PHC AS-1-Tar Paper at a concentration of <0.25% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), this material is not considered asbestos-containing materials.

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.

5.2.1.2.6 CAULKING/SEALANT

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

5.2.1.2.7 MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

During the Pre-Demolition HBMA site visit, two (2) samples of brick and mortar (PHC AS-2 and PHC AS-6) were collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photos 11 and 15, 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 (PHC AS-5) was collected from the concrete foundation of the accommodations cabin and analyzed for asbestos content (refer to Photo 14, Appendix B2). Asbestos was not detected in the cinder block sample.

5.2.1.2.8 FIRE-RATED DOORS

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

5.2.1.2.9 OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, one (1) sample of particle board with tar backing (PHC AS-4) was collected from a wall in the accommodations cabin and analyzed for asbestos content (refer to Photo 13, Appendix B5). Asbestos was not detected in the particle board sample.

During the Pre-Demolition HBMA site visit, two (2) samples of countertop mastics (PHC AS-7 and PHC AS-8) were collected from the accommodations cabin and analyzed for asbestos content (refer to Photos 5 and 7, 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 (refer to Photos 2, 21, and 22, Appendix B5).

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 possible concrete leveling compound (existing concrete foundation), 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 and 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, five (5) samples (PHC PS-1 to PHC PS-5), plus one (1) blind field duplicate (PHC PS-DUP1), were collected from painted surfaces of the accommodations cabin and analyzed for lead, mercury and PCB content (refer to Photos 17 to 20, 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 on Figure 5.2, Appendix A5.

5.2.2.1 LEAD IN PAINT

The concentrations of lead in the five (5) samples (PHC PS-1 to PHC PS-5), plus one (1) blind field duplicate (PHC PS-DUP1; duplicate of PHC PS-2), collected from painted surfaces of the accommodations cabin ranged from non detect (<10 mg/kg) to 307 mg/kg (refer to Table C5-2, Appendix C5). One (1) paint sample (PHC PS-4) 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 20, Appendix B5). The concentrations of lead in the other five (5) samples were below the Federal HPA criterion (90 mg/kg).

5.2.2.2 MERCURY IN PAINT

The concentrations of mercury in the five (5) samples (PHC PS-1 to PHC PS-5), plus one (1) blind field duplicate (PHC PS-DUP1; duplicate of PHC PS-2), collected from painted surfaces of the accommodations cabin ranged from

non-detect (<0.03 mg/kg) to 0.77 mg/kg and therefore, were below the Federal HPA criterion (10 mg/kg) (refer to Table C5-3, Appendix C5).

5.2.2.3 PCBS IN PAINT

The concentrations of PCBs in the five (5) samples (PHC PS-1 to PHC PS-5), plus one (1) blind field duplicate (PHC PS-DUP1; duplicate of PHC PS-2), collected from painted surfaces of the accommodations cabin were non-detect (<0.5 mg/kg), and therefore, were below the applicable criterion for PCB solid (50 mg/kg) (refer to Table C5-4, Appendix C5).

5.2.3 UREA FORMALDEHYDE FOAM INSULATION (UFFI)

Visual indicators suggesting the potential presence of UFFI were not observed at Pot Hill Camp. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photos 8 and 16, Appendix B5). Since the original date of construction of Pot Hill 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 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 (PHC M-1) of the suspect mould material was collected from the surface of the kitchen cabinets for laboratory analysis to confirm the presence/absence of mould (refer to Figure 5.2, Appendix A5 and refer to Photo 5, Appendix B5).

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

5.2.5 MERCURY-CONTAINING THERMOSTATS

One (1) mercury-containing thermostat was identified inside the accommodations cabin at Pot Hill Camp during the Pre-Demolition HBMA site visit (refer to Photo 23, Appendix B5).

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 24, Appendix B5). The labels on the fluorescent light fixtures indicated that no PCBs were present in the ballasts.

5.2.7 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 Pot Hill 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.

5.2.8.1 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.

5.2.8.2 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.

5.2.8.3 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.

5.2.8.4 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 Pot Hill Camp during the Pre-Demolition HBMA site visit.

5.2.8.5 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, brick, mortar and asphalt shingles used in the construction of the accommodations cabin.

5.2.8.6 RADIOACTIVE MATERIALS

A smoke detector was observed in the accommodations cabin during the Pre-Demolition HBMA site visit (refer to Photo 26, Appendix B5). 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".

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 Pot Hill Camp.

5.3.1 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 tar paper from the roof of the accommodations cabin which contained <0.25% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), the roofing materials (tar paper) is 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 Pot Hill 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 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 ACGIH 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 five (5) samples (PHC PS-1 to PHC PS-5), plus one (1) blind field duplicate (PHC PS-DUP1; duplicate of PHC PS-2), collected from painted surfaces of the accommodations cabin ranged from non detect (<10 mg/kg) to 307 mg/kg.
  - One (1) paint sample (PHC PS-4) 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 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 five (5) samples (PHC PS-1 to PHC PS-5), plus one (1) blind field duplicate (PHC PS-DUP1; duplicate of PHC PS-2), collected from painted surfaces of the accommodations cabin ranged from non-detect (<0.03 mg/kg) to 0.77 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 five (5) samples (PHC PS-1 to PHC PS-5), plus one (1) blind field duplicate (PHC PS-DUP1; duplicate of PHC PS-2), collected from painted surfaces of the accommodations cabin, 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 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 and PCB-containing paint finishes, due to the potential for dust, mist or fumes to be released and inhaled or ingested by workers. Given the lead-based paints were 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.

5.3.3 MOULD

SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin. One (1) sample (PHC M-1) of the suspect mould material was collected from the surface of the kitchen cabinets 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 MERCURY-CONTAINING MATERIALS/EQUIPMENT

One mercury-containing thermostat and four (4) mercury-containing 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.

5.3.5 SILICA CONTAINING MATERIALS

Silica is expected to be present in the concrete, brick, mortar and asphalt shingles 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.

5.3.6 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.

5.3.7 SUMMARY OF FINDINGS

Hazardous building materials identified at Pot Hill Camp during this Pre-Demolition HBMA and disposal options, if required, are summarized in Table 5-2. Conclusions and recommendations made with respect to the potential and actual presence of hazardous building materials within the accommodations cabin are provided in Section 5.3 and should be reviewed in conjunction with Table 5-2.

Table 5-2: 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 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.
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.

Table 5-2: Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

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)	One (1) mercury-containing thermostat and 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.
Silica-Containing Materials	NL OHS Act (RSNL1990 Chapter O-3) NL OHS Regulations (5/12)	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 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 204, NL

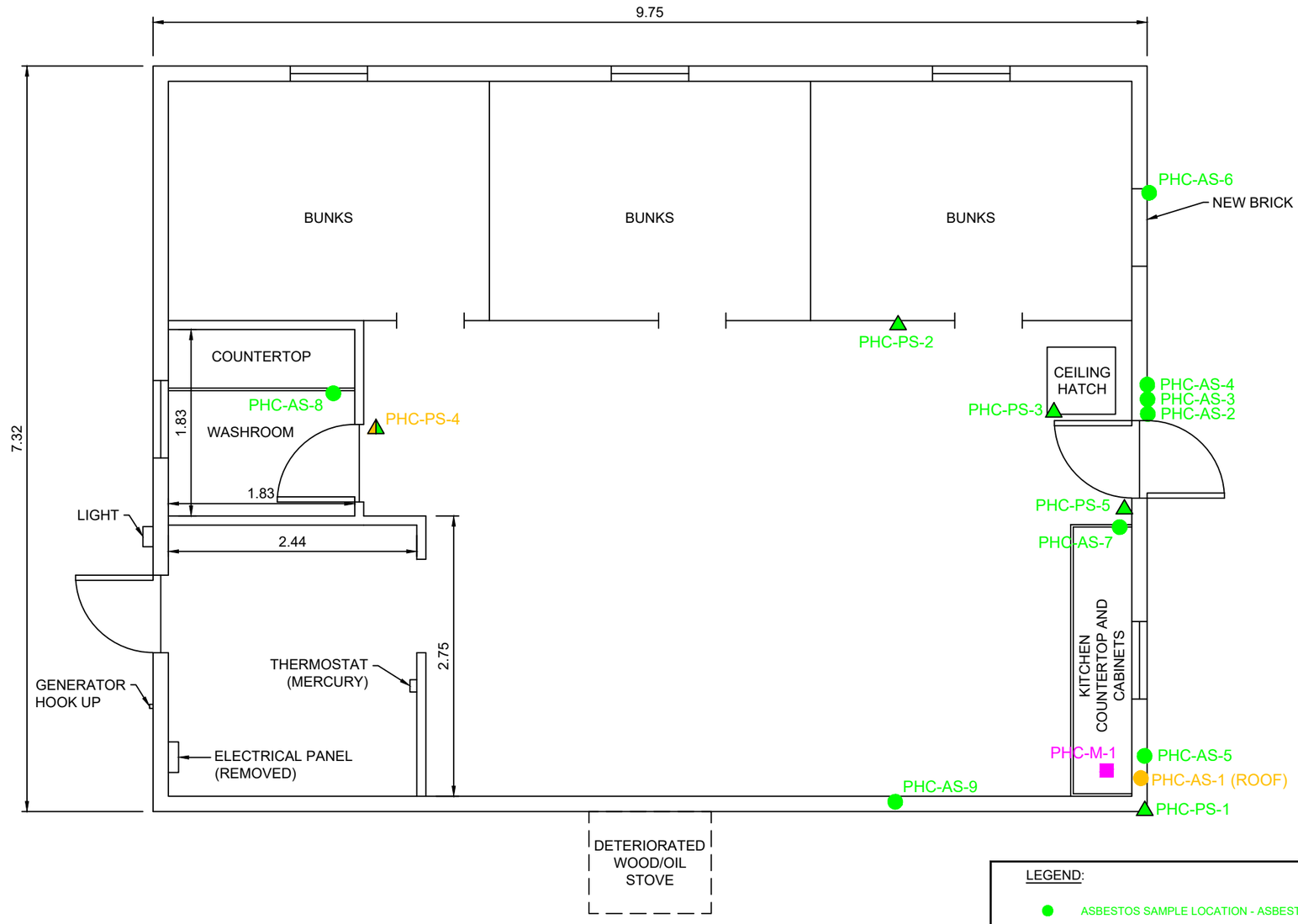
Title: Site Location Plan - Pot Hill Camp

Date: September 2022

Project No. TE22104004.2000

Rev. No. 0

Figure No. 5.1



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.
4. ALL LOCATIONS, DIMENSIONS, AND ORIENTATIONS ARE APPROXIMATE.
5. THIS FIGURE SHOULD NOT BE USED FOR PURPOSES OTHER THAN THOSE OUTLINED ABOVE.
6.

Client: newfoundland labrador hydro, a nalcor energy company

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Drawn by: T. Rideout

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Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 204, NL

Title: Sample Location Plan - Pot Hill Camp

Date: September 2022

Project No. TE22104004.2000

Rev. No. 0

Figure No. 5.2

Appendix B5

Photographic Record

Photo 1: View of the accommodations cabin at Pot Hill Camp.

Photo 2: View of the accomodations cabin at Pot Hill Camp.

Photo 3: View of the accommodations cabin at Pot Hill Camp.

Photo 4: View of the accomodations cabin at Pot Hill Camp.

Photo 5: View of the kitchen area inside the accommodations cabin at Pot Hill Camp.

Photo 6: View of the sleeping area inside the accommodations cabin at Pot Hill Camp.

Photo 7: View of the washroom inside the accommodations cabin at Pot Hill Camp.

Photo 8: View of attic in accommodations cabin at Pot Hill Camp.

Photo 9: View of crawl space beneath accommodations cabin at Pot Hill Camp.

Photo 10: View of bulk material sample PHC AS-1, shingle, cabin exterior.

Photo 11: View of bulk material sample PHC AS-2, brick and mortar, cabin exterior.

Photo 12: View of bulk material sample PHC AS-3, paper barrier, cabin exterior .

Photo 13: View of bulk material sample PHC AS-4, particle board, cabin exterior.

Photo 14: View of bulk material sample PHC AS-5, cinder block, cabin exterior.

Photo 15: View of bulk material sample PHC AS-6, brick and mortar, cabin exterior.

Photo 16: View of bulk material sample PHC AS-9, foil/tar paper, cabin interior.

Photo 17: View of paint sample PHC PS-1, roof, cabin exterior.

Photo 18: View of paint sample PHC PS-2, wall, cabin interior.

Photo 19: View of paint sample PHC PS-3, ceiling, cabin interior.

Photo 20: View of paint sample PHC PS-4, floor, cabin interior.

Photo 21: View of former location of elctrical panel, cabin interior.

Photo 22: View of sink undercoating, cabin interior.

Photo 23: View of mercury-containing thermostat, cabin interior.

Photo 24: View of fluorescent light fixture, cabin interior.

Photo 25: View of mercury-containing light tubes, cabin interior.

Photo 26: View of smoke detector, cabin interior.

Appendix C5

Sample and Analytical Summary Tables

Table C5-1: Bulk Sample Descriptions and Asbestos Analytical Results (Pot Hill Camp)

Sample ID	Room Description	Photo No.	Sample Location	Sample Description	Layers Analyzed	Analytical Result
PHC AS-1-Shingle	Cabin - Exterior	10	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
PHC AS-1-Tar Paper					Tar paper	**<0.25% Chrysotile**
PHC AS-2-Brick	Cabin - Exterior	11	Wall	Brick and mortar	Brick	ND
PHC AS-2-Mortar					Mortar	ND
PHC AS3	Cabin - Exterior	12	Wall	Paper barrier	Paper barrier	ND
PHC AS-DUP1					Paper barrier	ND
PHC AS-4-Tar Paper	Cabin - Exterior	13	Wall	Particle board with tar backing	Tar paper	ND
PHC AS-4-Fibreboard					Fibreboard	ND
PHC AS-5-Cinder Block	Cabin - Exterior	14	Foundation	Cinder block	Cinder block	ND
PHC AS-6-Brick	Cabin - Exterior	15	Wall	Brick and mortar	Brick	ND
PHC AS-6-Mortar					Mortar	ND
PHC AS-7	Cabin - Kitchen Area	-	Countertop	Countertop mastic	Mastic	ND
PHC AS-8	Cabin - Washroom Area	-	Countertop	Countertop mastic	Mastic	ND
PHC AS-9	Cabin - Kitchen/Dining Area	16	Wall	Foil/tar paper	Foil/tar paper	ND

Notes:

PHC AS-DUP1 is a blind field duplicate of PHC AS-3

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 (Pot Hill Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
PHC PS-1	Cabin - Exterior	17	Roof	Wood	White paint on wood (sample includes wood)	10	63
PHC PS-2	Cabin - Kitchen/Dining Area	18	Wall	Wood trim	White paint on wood trim (sample includes wood)	10	48
PHC PS-DUP1						10	57
PHC PS-3	Cabin - Kitchen/Dining Area	19	Ceiling	Wood trim	White paint on wood trim (sample includes wood)	10	31
PHC PS-4	Cabin - Kitchen/Dining Area	20	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	**307**
PHC PS-5	Cabin - Kitchen/Dining Area	-	Wall	Plywood	White paint on plywood (sample includes plywood)	10	<10

Notes:

PHC PS-DUP1 is a blind field duplicate of PHC 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 (Pot Hill Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
PHC PS-1	Cabin - Exterior	17	Roof	Wood	White paint on wood (sample includes wood)	0.03	0.39
PHC PS-2	Cabin - Kitchen/Dining Area	18	Wall	Wood trim	White paint on wood trim (sample includes wood)	0.03	0.77
PHC PS-DUP1						0.03	0.44
PHC PS-3	Cabin - Kitchen/Dining Area	19	Ceiling	Wood trim	White paint on wood trim (sample includes wood)	0.03	<0.03
PHC PS-4	Cabin - Kitchen/Dining Area	20	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	0.22
PHC PS-5	Cabin - Kitchen/Dining Area	-	Wall	Plywood	White paint on plywood (sample includes plywood)	0.03	0.07

Notes:

PHC PS-DUP1 is a blind field duplicate of PHC 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 (Pot Hill Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
PHC PS-1	Cabin - Exterior	17	Roof	Wood	White paint on wood (sample includes wood)	0.5	<0.5
PHC PS-2	Cabin - Kitchen/Dining Area	18	Wall	Wood trim	White paint on wood trim (sample includes wood)	0.5	<0.5
PHC PS-DUP1						0.5	<0.5
PHC PS-3	Cabin - Kitchen/Dining Area	19	Ceiling	Wood trim	White paint on wood trim (sample includes wood)	0.5	<0.5
PHC PS-4	Cabin - Kitchen/Dining Area	20	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
PHC PS-5	Cabin - Kitchen/Dining Area	-	Wall	Plywood	White paint on plywood (sample includes plywood)	0.5	<0.5

Notes:

PHC PS-DUP1 is a blind field duplicate of PHC 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 (Pot Hill Camp)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
PHC 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

Appendix D5

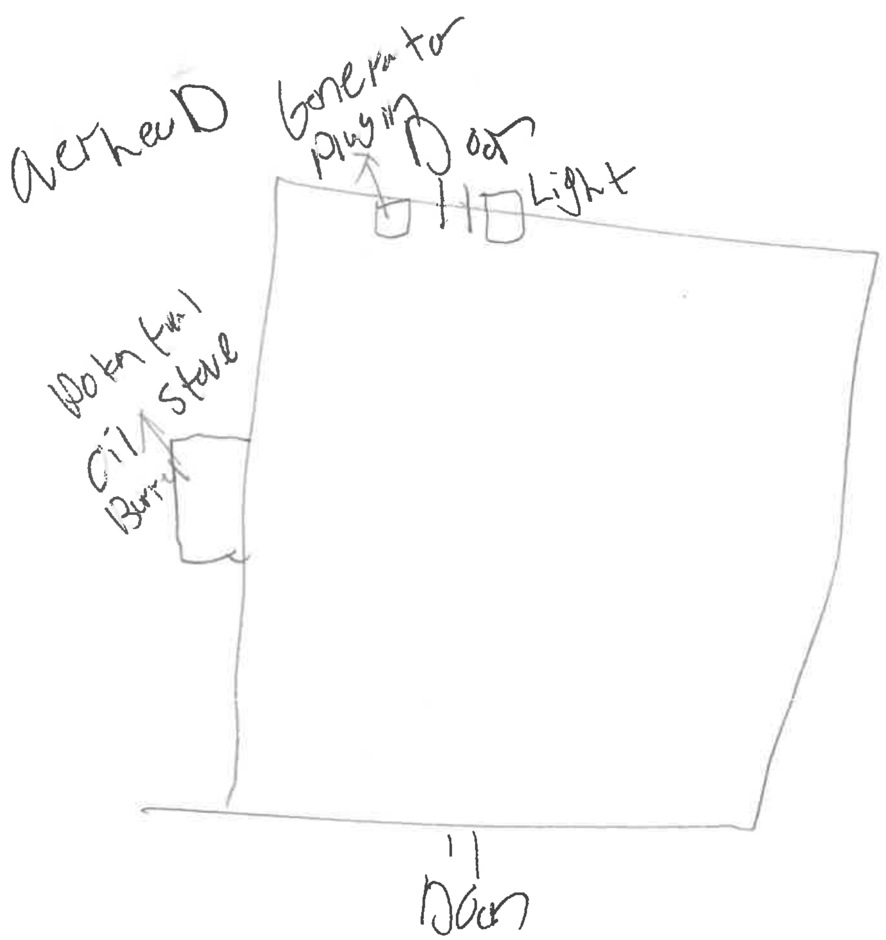
Room-By-Room Inspection Sheets

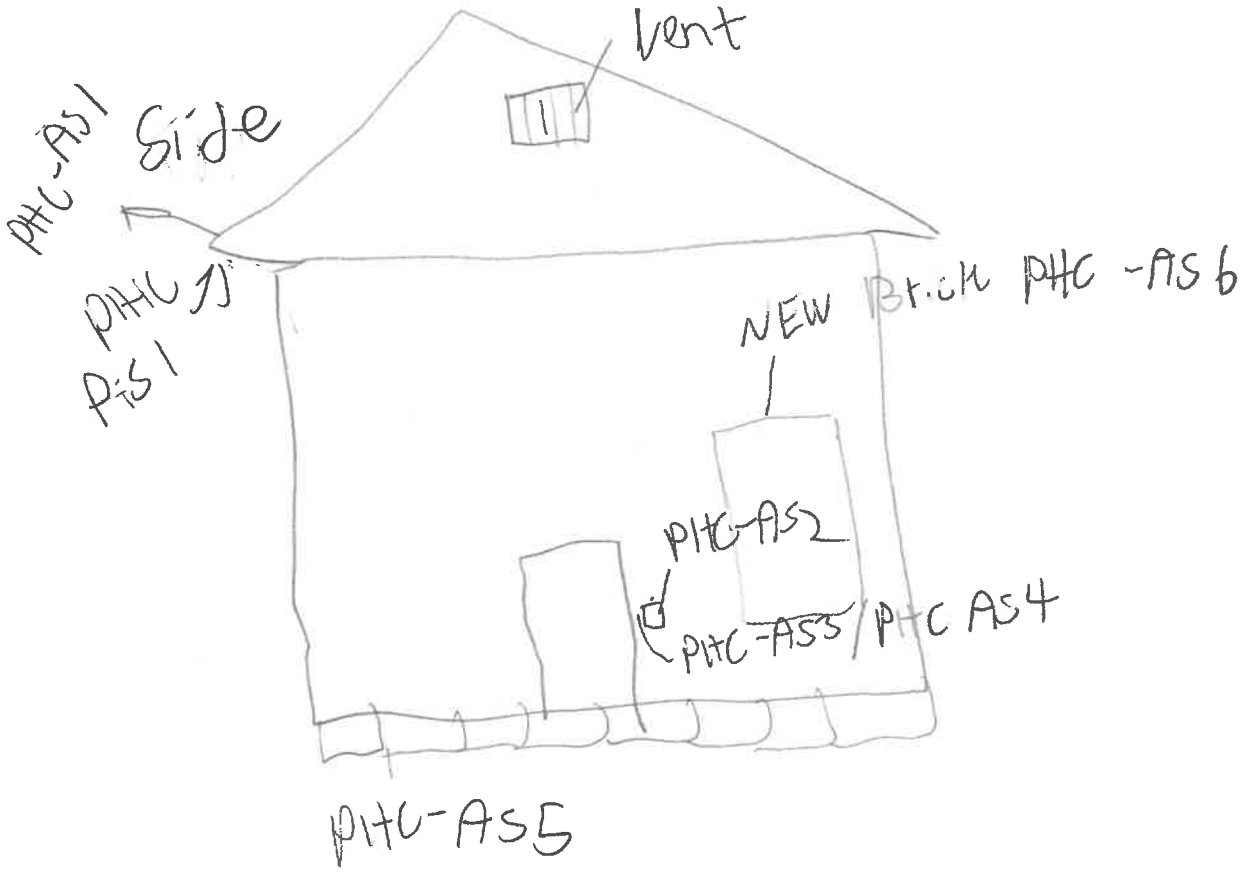
Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Pt hill comp			Exterior	32' x 24' x 18' (4 levels)

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Concrete Block foundation	F	3 layers 1 ft per block	cinder Block = PHC-AS5
Walls	Red Brick with mortar 2. Different time frames. Partible Board with Block Backing	F		OLD Brick = PHC-AS2 NEW Brick = PHC-AS6 Partible Board = PHC-AS4 Block Backing
Ceiling	Shingles, Block for Pop			PHC-AS1
Paint	Floor Wall Ceiling Doors grey on steel. Interior factory grey Windows Other Trim along eaves White on wood			Trim = PHC-PS1
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 In Condescant light Rear Door way	1	1	
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 Exhaust vent on Roof. Stove pipe (Not insulated)			

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:


OverheaD
Generator plug in
Door
Light
Wooden fuel oil stove
Burner
Door

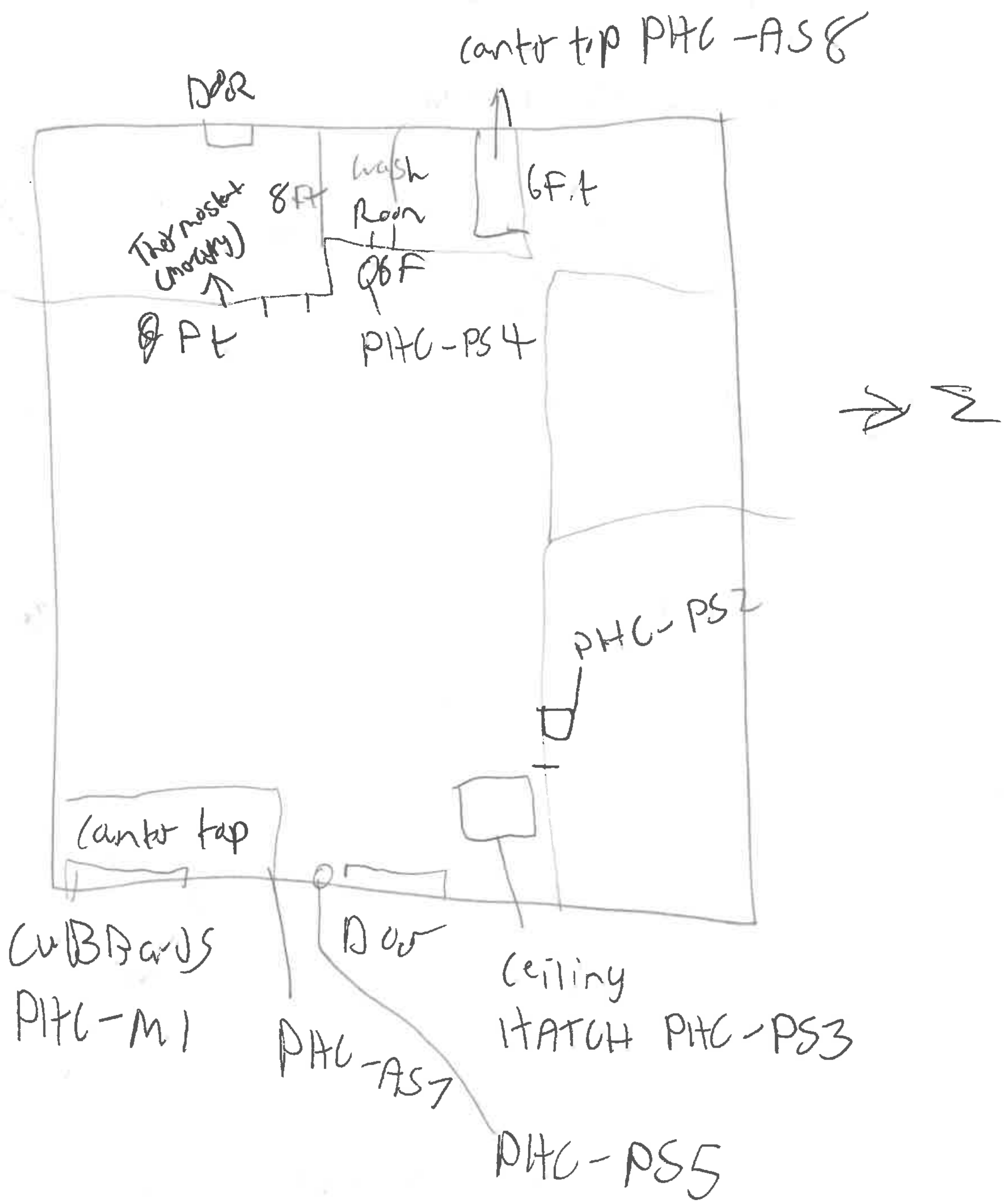

Vent
Side
PHC-AS1
PHC AS1
NEW Brick
PHC-AS6
PHC-AS2
PHC-AS3
PHC AS4
PHC-AS5

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Pot Hill Camp	1	1	Interim	32 x 24 x 8

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	grey on grey plywood	G		
Walls	white on plywood green			
Ceiling	white on plywood			
Paint	Floor grey on grey on wood Wall white on plywood Ceiling Glossy white on plywood Doors Windows same as walls Other Dividers = white on plywood	F	4' x 6' (stalls) 9 panels	Wall Dividers PHC-PS2 Ceiling Hatch PHC-P Flooring = PHC-PS4 Walls = PHC-PS5
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Oil Stove light green yellow fiberglass insulation + tar paper foil backing			PHC = AS9
Piping / Electrical / Mechanical Equipment	ABS piping in washroom wired for generator	G	10 ft piping	
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Philips Serial #: RQM-2S40-TPL Non PCB	Leaking / Other NO	Total #: 2 # Checked:	Suspect PCBs:
Lighting (Incandescent, HID, etc.)				
Thermostats	Manufacturer Empire Comfort Systems Colour beige Shape Rectangle Wall/Floor Mounted wall Dial Switch Casing plastic		Total #: # Checked:	Mercury Switch: Yes
LCMs (saudering, pipes batteries, exit/ emerg lighting,)	1 Battery Smoke Detector			
Mould / Water Staining	Materials and area impacted Black mould noted on cabinets	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers PHC-M1	
Other	Doors (Type and tags): Doors Not fire Rated Windows: No caulking on windows HVAC (e.g., electric baseboard heater, window-mounted A/C unit)			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Counter top (wash room) + Glue (white) PHC-AS8 Counter top (Kitchen) + Glue (fake wood) PHC-AS7			

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:


cantor top PHC-AS8
DOOR
wash Room
8Ft
6Ft
Thermostat (mosquy)
Q6F
8 Ft
PHC-PS4
PHC-PS2
cantor top
CUBBards
PHC-M1
PHC-AS7
Door
ceiling HATCH PHC-PS3
PHC-PS5

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TABLES

APPENDICES

6 THREE BROOKS CAMP

Three Brooks Camp site is located along TL204 and TL231, 230 kV transmission lines which connect the Bay D'Espoir Generating Station and the Stony Brook Terminal Station near Grand Falls-Windsor (refer to Figure 6.1, Appendix A6). Three Brooks Camp is comprised of an accommodations cabin and an outhouse.

6.1 BUILDING DESCRIPTION

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 B6). The floor plan of the cabin consists of a kitchen/dining area, a sleeping area and a washroom area (refer to Figure 6.2, Appendix A6). 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 3.0 m^2 (1.5 m x 2.0 m) (refer to Photos 11 and 12, Appendix B6). 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 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 6-1 and a description of the outhouse is outlined in Table 6-2. Photographs of the buildings are provided in Appendix B6.

Table 6-1: Site Building Description – Accommodations Cabin

Building Name	Accommodations cabin	Photo No. (Appendix B6)
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	Cinder Blocks	10
Exterior	Brick	1 to 4
Window/Door Frames	Painted Metal and Wood	1, 4, 7 and 8
Exterior Doors	Painted Metal	1 and 4
Roofing Materials	Asphalt Shingles	13
Interior Walls Finishes	Painted Plywood	5 to 8
Interior Ceiling Finishes	Painted Plywood	5, 6 and 7
Floor Finishes	Painted Plywood	5 to 8
Interior Doors	NA	5 and 6
Interior Lighting	Fluorescent and Incandescent	5, 6 and 7
Exterior Lighting	Incandescent	4
Heating	Not Heated (Former Oil Stove)	5 and 7

Table 6-2: Site Building Description – Outhouse

Building Name	Outhouse	Photo No. (Appendix B6)
Date of Construction	1985	-
Date of Renovations	Unknown	-
No. of Stories	One	11 and 12
Crawl Space (Yes/No)	No	-
Attic (Yes/No)	No	-
Type of Structure	Wood Frame	11 and 12
Type of Foundation	Concrete	11
Exterior	Painted Plywood	11 and 12
Window/Door Frames	Painted Wood	11
Exterior Doors	Painted Plywood	11
Roofing Materials	Asphalt Shingles	12
Interior Walls Finishes	Painted Plywood	11
Interior Ceiling Finishes	Painted Plywood	-
Floor Finishes	Painted Plywood	11
Interior Doors	NA	-
Interior Lighting	NA	-
Exterior Lighting	NA	-
Heating	NA	-

6.2 FINDINGS

The findings documented in this section are based on observations made by WSP personnel at the time of the site visit on July 6, 2022 and the results of laboratory analyses of samples collected from Three Brooks 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 D6. Photos of the samples collected from the accommodations cabin and outhouse during the site visits are provided in Appendix B6.

6.2.1 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, seven (7) building material samples (TBC AS-1 to TBC AS-7) were collected from the accommodations cabin and three (3) building material samples (TBC AS-8, TBC AS-9 and TBC AS-10), plus one (1) blind field duplicate (TBC AS-DUP1), were collected from the outhouse (refer to Photos 13 to 21, Appendix B6) and analyzed for asbestos content. Bulk sample descriptions and asbestos analytical results are summarized in Table C6-1, Appendix C6. Sample locations and analytical results are graphically illustrated on Figure 6.2, Appendix A6.

6.2.1.1 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.

6.2.1.1.1 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.

6.2.1.1.2 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 and in the walls of the outhouse (refer to Photo 9, Appendix B6). Thermal system insulation was not observed at Three Brooks Camp.

One (1) sample of tar paper (TBC AS-4) was collected from the wall of the accommodations cabin and analyzed for asbestos content (refer to Photo 16, Appendix B6). Asbestos was not detected in the tar paper sample.

6.2.1.2 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.

6.2.1.2.1 CEILING TILE

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

6.2.1.2.2 DRYWALL JOINT COMPOUND

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

6.2.1.2.3 VINYL FLOORING PRODUCTS AND MASTICS

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

6.2.1.2.4 BASEBOARD, CARPET AND STAIR TREAD ADHESIVES/MASTICS

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

6.2.1.2.5 ROOFING PRODUCTS

During the Pre-Demolition HBMA site visit, one (1) sample of asphalt shingle with tar paper (TBC AS-1) was collected from the roof of the accommodations cabin and one (1) sample of asphalt shingle (C75 AS-8), plus one (1) blind field duplicate (TBC AS-DUP1; duplicate of TBC AS-8), was collected from the roof of the outhouse and analyzed for asbestos content (refer to Photos 13 and 20, Appendix B6). Asbestos was detected in TBC AS-DUP1 at a concentration of <0.33% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), this material (i.e., asphalt shingle) 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 1, Appendix B6).

6.2.1.2.6 CAULKING/SEALANT

One (1) sample of caulking (TBC AS-9) was collected from the window of the outhouse and analyzed for asbestos content. Asbestos was not detected in the caulking sample.

6.2.1.2.7 MORTAR, GROUT AND OTHER CEMENTITIOUS MATERIALS

During the Pre-Demolition HBMA site visit, one (1) sample of brick and mortar (TBC AS-2) was collected from the exterior of the accommodations cabin and analyzed for asbestos content (refer to Photo 14, Appendix B6). Asbestos was not detected in the brick and mortar sample.

During the Pre-Demolition HBMA site visit, one (1) sample of cinder block (TBC AS-3) was collected from the concrete foundation of the accommodations cabin and one (1) sample of concrete (TBC AS-10) was collected from the concrete pad of the outhouse and analyzed for asbestos content (refer to Photos 15 and 21, Appendix B6). Asbestos was not detected in the cinder block and concrete samples.

6.2.1.2.8 FIRE-RATED DOORS

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

6.2.1.2.9 OTHER POTENTIAL ACMS

During the Pre-Demolition HBMA site visit, one (1) sample of particle board with tar paper backing (TBC AS-5) was collected from a wall in the accommodations cabin and analyzed for asbestos content (refer to Photo 17, Appendix B6). Asbestos was not detected in the particle board/tar paper sample.

During the Pre-Demolition HBMA site visit, one (1) sample of gasket material (TBC AS-6) was collected from the oil stove in the accommodations cabin and analyzed for asbestos content (refer to Photo 18, Appendix B6). Asbestos was detected in TBC AS-6 at a concentration of 70% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), this material (i.e., oil stove gasket) is considered an asbestos-containing material.

During the Pre-Demolition HBMA site visit, one (1) sample of countertop mastic (TBC AS-7) was collected from the accommodations cabin and analyzed for asbestos content (refer to Photo 19, Appendix B6). Asbestos was not detected in the countertop mastic sample.

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.

6.2.2 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 (TBC PS-1 to TBC P-S6), plus one (1) blind field duplicate (TBC PS-DUP1), were collected from painted surfaces of the accommodations cabin and one (1) sample (TBC PS-7) was collected from painted surfaces of the outhouse and analyzed for lead, mercury and PCB content (refer to Photos 22 to 27, Appendix B6). Paint sample descriptions and lead, mercury and PCBs analytical results are summarized in Tables C6-2 to C6-4, Appendix C6. Sample locations and analytical results are graphically illustrated on Figure 6.2, Appendix A6.

6.2.2.1 LEAD IN PAINT

The concentrations of lead in the six (6) samples (TBC PS-1 to TBC PS-6), plus one (1) blind field duplicate (TBC PS-DUP1; duplicate of TBC PS-3), collected from painted surfaces of the accommodations cabin and one (1) sample (TBC PS-7) collected from the painted surfaces of the outhouse ranged from non-detect (<10 mg/kg) to 561 mg/kg (refer to Table C6-2, Appendix C6). Two (2) paint samples (TBC PS-2 and TBC 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 (refer to Photos 23 and 25, Appendix B6). The concentrations of lead in the other six (6) samples were below the Federal HPA criterion (90 mg/kg).

6.2.2.2 MERCURY IN PAINT

The concentrations of mercury in the six (6) samples (TBC PS-1 to TBC PS-6), plus one (1) blind field duplicate (TBC PS-DUP1; duplicate of TBC PS-3), collected from painted surfaces of the accommodations cabin and one (1) sample (TBC PS-7) collected from the painted surfaces of the outhouse ranged from non-detect (<0.03 mg/kg) to 2.13 mg/kg, and therefore were below the Federal HPA criterion (10 mg/kg) (refer to Table C6-3, Appendix C6).

6.2.2.3 PCBS IN PAINT

The concentrations of PCBs in the six (6) samples (TBC PS-1 to TBC PS-6), plus one (1) blind field duplicate (TBC PS-DUP1; duplicate of TBC PS-3), collected from painted surfaces of the accommodations cabin and one (1) sample (TBC 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 C6-4, Appendix C6).

6.2.3 UREA FORMALDEHYDE FOAM INSULATION (UFFI)

Visual indicators suggesting the potential presence of UFFI were not observed at Three Brooks Camp. The nature of the insulation in the walls and ceilings throughout the accommodations cabin consisted of fiberglass batt insulation (refer to Photo 9, Appendix B6). Since the original date of construction of Three Brooks Camp was 1985, it is not likely that UFFI is present in the cabin.

6.2.4 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 (TBC M-1) of the suspect mould material was collected from the surfaces of the cabinets for laboratory analysis to confirm the presence/absence of mould (refer to Figure 6.2, Appendix A6 and Photo 28, Appendix B6).

The results of mould analysis determined that tape lift sample TBC M-1 contained *Cladosporium* mould (refer to Table C6-5, Appendix C6).

6.2.5 MERCURY-CONTAINING THERMOSTATS

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

6.2.6 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 29, Appendix B6). The labels on the fluorescent light fixtures indicated that no PCBs were present in the ballasts.

6.2.7 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 6-3.

Table 6-3: Potential Sources of ODSs

Item	Manufacturer	Model (Serial No.)	Location Observed	Photo No. (Appendix B3)	Refrigerant	Potential ODS
Freezer	General Freezer	GC12	Kitchen Area	30	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 Three Brooks Camp during the Pre-Demolition HBMA site visit.

6.2.8 OTHER POTENTIALLY HAZARDOUS BUILDING MATERIALS OR SUBSTANCES

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

6.2.8.1 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.

6.2.8.2MERCURY-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 (refer to Photos 6 and 7, Appendix B6).

6.2.8.3 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.

6.2.8.4 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 Three Brooks Camp during the Pre-Demolition HBMA site visit.

6.2.8.5 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.

6.2.8.6 RADIOACTIVE MATERIALS

A smoke detector was observed in the accommodations cabin during the Pre-Demolition HBMA site visit (refer to Photos 5 and 6, Appendix B6). 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".

6.2.8.7BATS AND BAT FECES

At the time of the Pre-Demolition HBMA site visit, there was a large quantity of dead bats observed in the accommodations cabin and an abundance of bat feces present inside the structure (refer to Photos 9 and 31, Appendix B6).

6.3 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 Three Brooks Camp.

6.3.1 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 an oil stove gasket inside the accommodations cabin. Other 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 <0.33% chrysotile asbestos. According to the NL asbestos abatement regulations (Reg. 111/98), the roofing materials (asphalt 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 Three Brooks 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 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 ACGIH TLV. ACMs can be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.

6.3.2 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 (TBC PS-1 to TBC PS-6), plus one (1) blind field duplicate (TBC PS-DUP1; duplicate of TBC PS-3), collected from painted surfaces of the accommodations cabin and one (1) sample (TBC PS-7) collected from the painted surfaces of the outhouse ranged from non-detect (<10 mg/kg) to 561 mg/kg.
  - Two (2) paint samples (TBC PS-2 and TBC 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; and 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); 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 six (6) samples (TBC PS-1 to TBC PS-6), plus one (1) blind field duplicate (TBC PS-DUP1; duplicate of TBC PS-3), collected from painted surfaces of the accommodations cabin and one (1) sample (TBC PS-7) collected from the painted surfaces of the outhouse ranged from

non-detect (<0.03 mg/kg) to 2.13 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 (TBC PS-1 to TBC PS-6), plus one (1) blind field duplicate (TBC PS-DUP1; duplicate of TBC PS-3), collected from painted surfaces of the accommodations cabin and one (1) sample (TBC 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, mercury or lead-containing paint finishes, due to the potential for dust, mist or fumes to be released and inhaled or ingested by workers. Given the lead-based paints were 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.

6.3.3 MOULD

SVG was noted on much of the ceiling and wall surfaces inside the accommodations cabin. One (1) suspected mould sample (TBC M-1) was collected from the surfaces of the cabinets 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.

6.3.4 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.

6.3.5 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.

6.3.6 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.

6.3.7 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.

6.3.8 BATS AND BAT FECES

At the time of the Pre-Demolition HBMA site visit, there was a large quantity of dead bats observed inside the accommodations cabin and an abundance of bat feces present inside the structure.

Employees entering the building and workers involved in removing accumulations of bat feces are at risk of exposure to airborne fungal spores (and other microbial hazards) likely to be released when this material is disturbed. Bat droppings should be presumed to be contaminated with the fungi *Histoplasma capsulatum*, *Cryptococcus neoformans*, and other infectious hazards. Many of these microorganisms are known to cause respiratory infections in workers exposed during construction, maintenance or demolition disturbance, and use of property personal protective equipment is recommended (EACC Mould Abatement Guidelines, Edition 3 (2015)). Materials contaminated with bat feces may be disposed of at a Regional Solid Waste Landfill, provided permission is obtained from the facility.

Prior to demolition or disturbance of materials at the cabin, if any living bats are encountered, it is recommended that the presence of bats within the accommodations cabin be reported to the NL Department of Fisheries and Land Resources' Wildlife Division. Avoid entering the cabin and seek non-destruction methods to deal with the bats.

6.3.9 SUMMARY OF FINDINGS

Hazardous building materials identified at Three Brooks Camp during this Pre-Demolition HBMA and disposal options, if required, are summarized in Table 6-4. 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 6.3 and should be reviewed in conjunction with Table 6-4.

Table 6-4: 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)	Oil stove gasket inside 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 or could not be sampled 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.

Table 6-4: Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

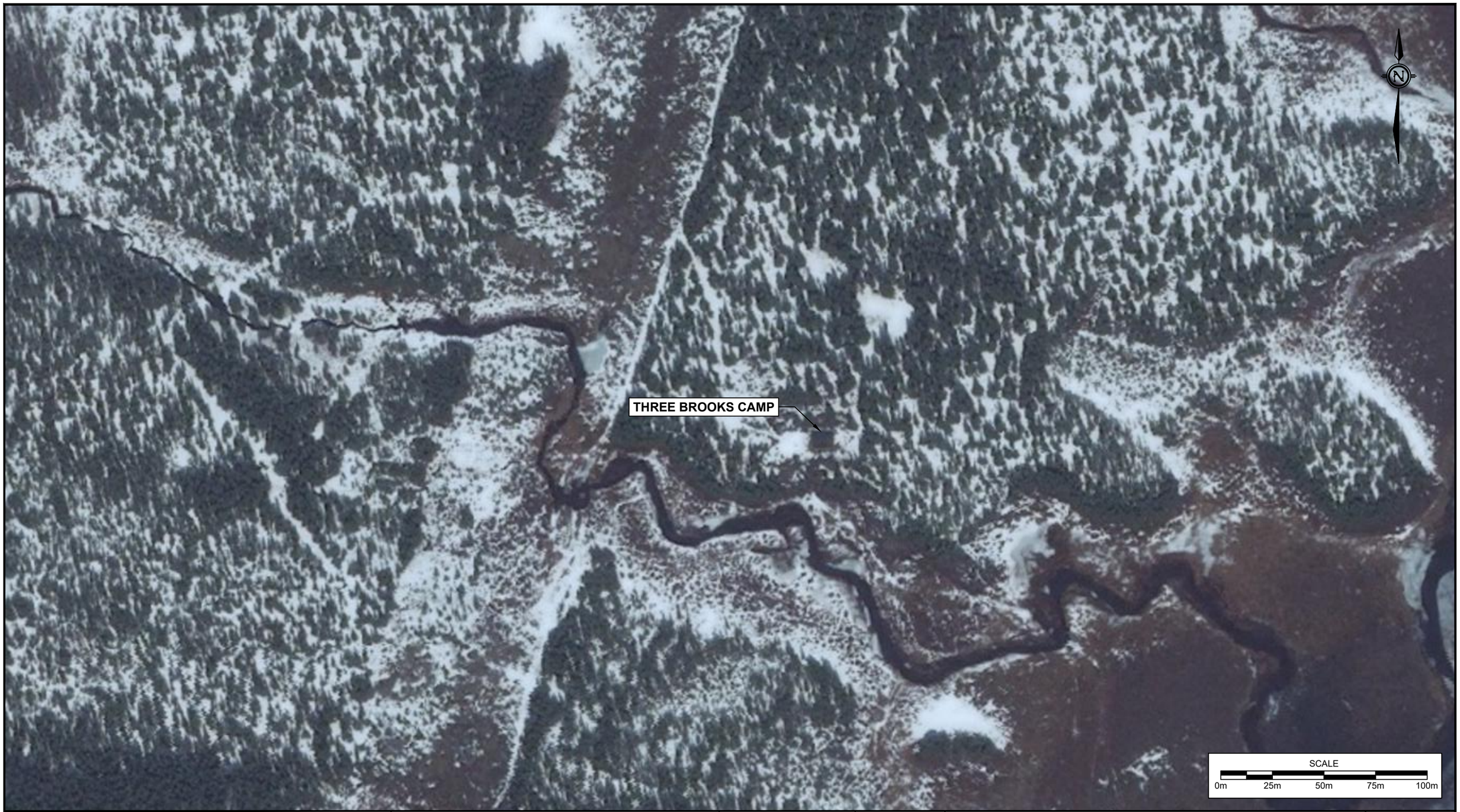
Hazardous Material	Applicable Acts, Regulations or Guidance Documents	Description and Location	Disposal
LBPs	Guidance Document for Leachable Toxic Waste and Disposal (GD-PPD-26.1) Federal HPA (R.S.1985, c. H-3) Federal TDG Act (1992, c. 34) Surface Coating Materials Regulations (SOR/2016-193)	LBP (grey) on exterior wooden cradle near accommodations cabin. 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.
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.

Table 6-4: Summary of Disposal Options for Confirmed and Potential Hazardous Building Materials

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.
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 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.
Bats and Fat Feces	EACC Mould Abatement Guidelines, Edition 3 (2015))	Dead bats and feces are present inside the accommodations cabin.	Materials contaminated with bat feces may be disposed of at a Regional Solid Waste Disposal Facility, provided permission is obtained from the landfill owner/operator. Prior to demolition or disturbance of materials at the cabin, if living bats are encountered, it is recommended that the presence of bats within the accommodations cabin be reported to the NL Department of Fisheries and Land Resources' Wildlife Division. Avoid entering the cabin and seek non-destruction methods to deal with the bats.

Appendix A6

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.
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Approved by: L. Wiseman

Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 204, NL

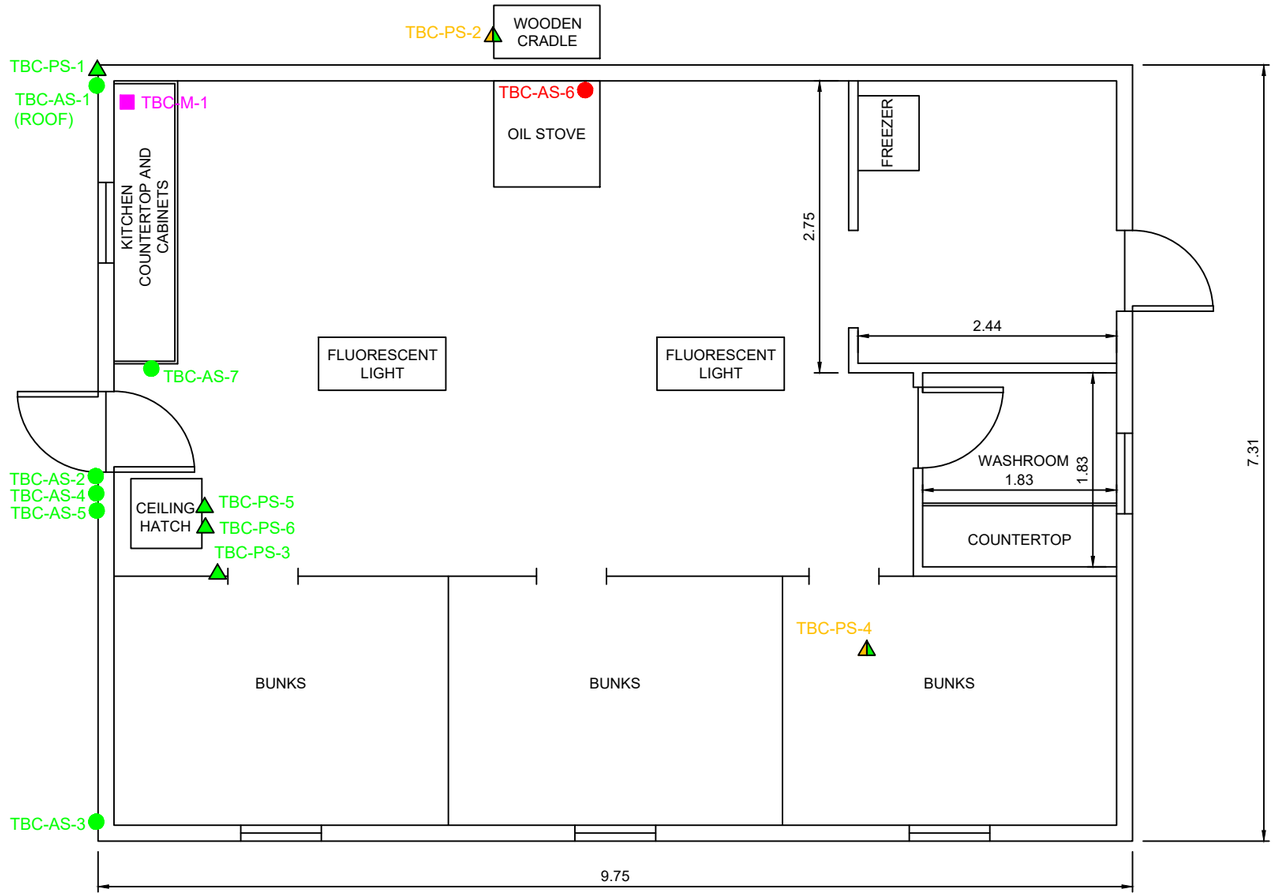
Title: Site Location Plan - Three Brooks Camp

Date: September 2022

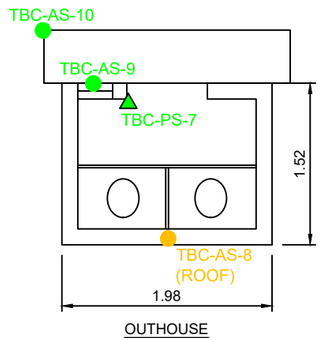
Project No. TE22104004.2000

Rev. No. 0

Figure No. 6.1



ACCOMMODATIONS CABIN



OUTHOUSE

SCALE
0m 0.5m 1.0m 1.5m 2.0m

LEGEND:

- ASBESTOS SAMPLE LOCATION - ASBESTOS NOT DETECTED
- ASBESTOS SAMPLE LOCATION - RESULTS < 1% FOR ASBESTOS
- 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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Scale: As Shown

Project: Pre-Demolition Hazardous Building Materials Assessment, Former Construction Camp Sites, Transmission Line 204, NL

Title: Sample Location Plan - Three Brooks Camp

Date: September 2022

Project No. TE22104004.2000

Rev. No. 0

Figure No. 6.2

Appendix B6

Photographic Record

Photo 1: View of the accommodations cabin at Three Brooks Camp.

Photo 2: View of the accomodations cabin at Three Brooks Camp.

Photo 3: View of the accomodations cabin at Three Brooks Camp.

Photo 4: View of the accomodations cabin at Three Brooks Camp.

Photo 5: View of the dining area of the accomodations cabin at Three Brooks Camp.

Photo 6: View of the sleeping area of the accomodations cabin at Three Brooks Camp.

Photo 7: View of the kitchen area of the accomodations cabin at Three Brooks Camp.

Photo 8: View of the washroom in the accommodations cabin at Three Brooks Camp.

Photo 9: View of the attic in the accommodations cabin at Three Brooks Camp. Note: rodent feces on insulation.

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

Photo 11: View of the outhouse at Three Brooks Camp.

Photo 12: View of the outhouse at Three Brooks Camp.

Photo 13: View of bulk material sample TBC AS-1, shingle, cabin exterior.

Photo 14: View of bulk material sample TBC AS-2, brick and mortar, cabin exterior.

Photo 15: View of bulk material sample TBC AS-3, cinder block, cabin exterior.

Photo 16: View of bulk material sample TBC AS-4, tar paper, cabin exterior.

Photo 17: View of bulk material sample TBC AS-5, particle board, cabin exterior.

Photo 18: View of bulk material sample TBC AS-6, gasket, cabin interior. **70% Crysotile Asbestos**

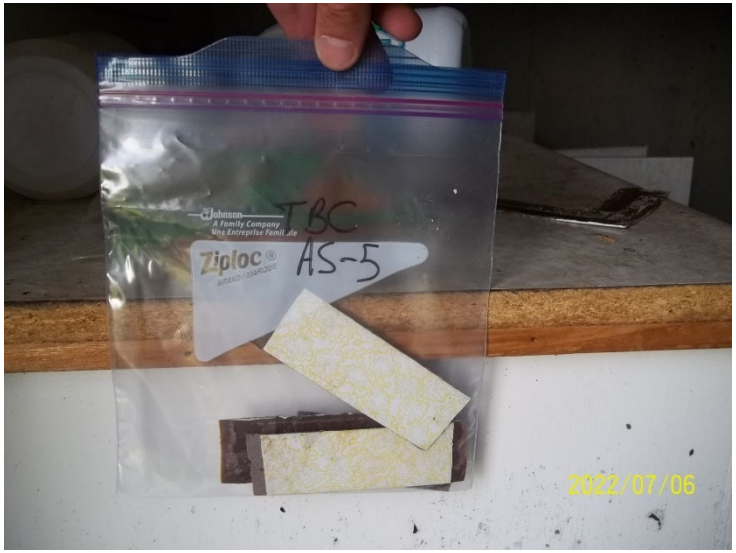


Photo 19: View of bulk material sample TBC AS-7, countertop mastic, cabin interior. Note: sample was mislabeled.

Photo 20: View of bulk material sample TBC AS-8, shingle, outhouse exterior.

Photo 21: View of bulk material sample TBC AS-10, concrete, outhouse exterior. Note: sample was mislabeled.

Photo 22: View of paint sample TBC PS-1, roof, cabin exterior.

Photo 23: View of paint sample TBC PS-2, wood craddle, cabin exterior.

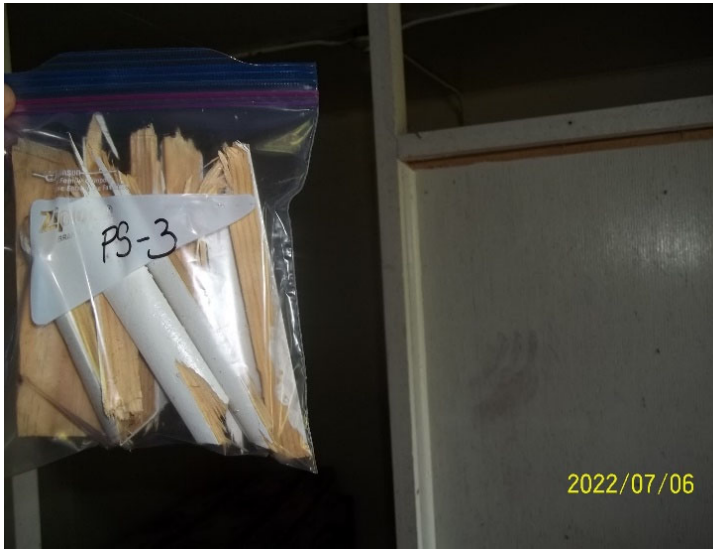


Photo 24: View of paint sampleTBC PS-3, wall, cabin interior.

Photo 25: View of paint sample TBC PS-4, floor, cabin interior.

Photo 26: View of paint sampleTBC PS-5, ceiling, cabin interior.

Photo 27: View of paint sample TBC PS-7, door, outhouse interior.

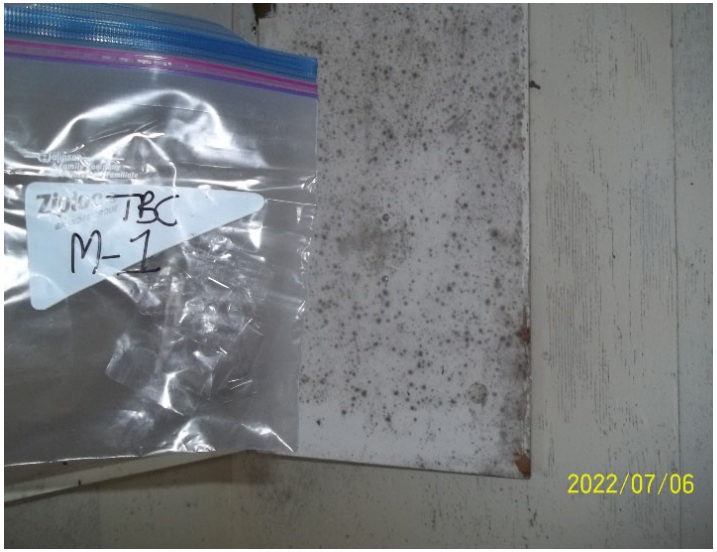


Photo 28: View of mould sample TBC M-1, wall, cabin interior.

Photo 29: View of fluorescent light ballast. Note: label indicating no PCBs.

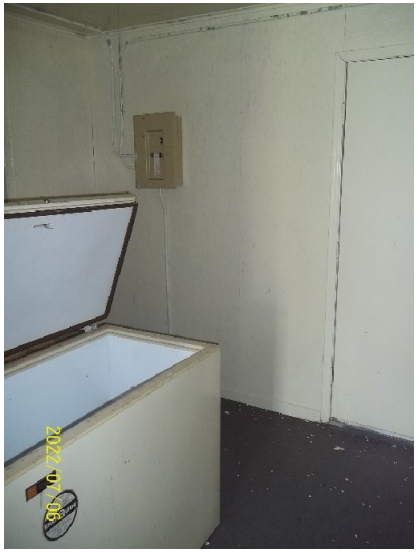


Photo 30: View of freezer and electrical panel, cabin interior.

Photo 31: View of dead bats and feces inside the freezer, cabin interior.

Appendix C6

Sample and Analytical Summary Tables

Table C6-1: Bulk Sample Descriptions and Asbestos Analytical Results (Three Brooks Camp)

Sample ID	Room Description	Photo No.	Sample Location	Sample Description	Layers Analyzed	Analytical Result
TBC AS-1-Shingle	Cabin - Exterior	13	Roof	Asphalt shingle with tar paper	Asphalt shingle	ND
TBC AS-1-Tar Paper					Tar paper	ND
TBC AS-2-Brick	Cabin - Exterior	14	Wall	Brick and mortar	Brick	ND
TBC AS-2-Mortar					Mortar	ND
TBC AS-3	Cabin - Exterior	15	Foundation	Cinder block	Cinder block	ND
TBC AS-4	Cabin - Exterior	16	Wall	Tar paper	Tar paper	ND
TBC AS-5-Tar Paper	Cabin - Exterior	17	Wall	Particle board with tar backing	Tar paper	ND
TBC AS-5-Fibreboard					Fibreboard	ND
TBC AS-6	Cabin - Kitchen Area	18	Oil Stove	Gasket	Gasket	70% Chrysotile
TBC AS-7	Cabin - Kitchen Area	19	Countertop	Countertop mastic	Mastic	ND
TBC AS-8	Outhouse - Exterior	20	Roof	Asphalt shingle	Asphalt shingle	ND
TBC AS-DUP1					Asphalt shingle	**<0.33 Chrysotile**
TBC AS-9	Outhouse - Exterior	-	Window	Caulking	Caulking	ND
TBC AS-10	Outhouse - Exterior	21	Concrete Pad	Concrete	Concrete	ND

Notes:

TBC AS-DUP1 is a blind field duplicate of TBC 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 C6-2: Paint Sample Descriptions and Lead Analytical Results (Three Brooks Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Lead (mg/kg)
TBC PS-1	Cabin - Exterior	22	Roof	Wood	White paint on wood (sample includes wood)	10	41
TBC PS-2	Cabin - Exterior	23	Tank Cradle	Wood	Grey paint on wood (sample includes wood)	10	**561**
TBC PS-3	Cabin - Kitchen/Dining Area	24	Wall	Wood Trim	White paint on wood trim (sample includes wood)	10	13
TBC PS-DUP1						10	30
TBC PS-4	Cabin - Kitchen/Dining Area	25	Floor	Plywood	Grey paint on plywood (sample includes plywood)	10	**194**
TBC PS-5	Cabin - Kitchen/Dining Area	26	Ceiling	Wood Trim	White paint on wood trim (sample includes wood)	10	25
TBC PS-6	Cabin - Kitchen/Dining Area	-	Ceiling	Plywood	Light green paint on plywood (sample includes plywood)	10	<10
TBC PS-7	Outhouse - Interior	27	Door	Wood Trim	Grey paint on wood trim (sample includes wood)	10	30

Notes:

TBC PS-DUP1 is a blind field duplicate of TBC 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 C6-3: Paint Sample Descriptions and Mercury Analytical Results (Three Brooks Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Mercury (mg/kg)
TBC PS-1	Cabin - Exterior	22	Roof	Wood	White paint on wood (sample includes wood)	0.03	0.47
TBC PS-2	Cabin - Exterior	23	Tank Cradle	Wood	Grey paint on wood (sample includes wood)	0.03	1.40
TBC PS-3	Cabin - Kitchen/Dining Area	24	Wall	Wood Trim	White paint on wood trim (sample includes wood)	0.03	0.03
TBC PS-DUP1						0.03	1.29
TBC PS-4	Cabin - Kitchen/Dining Area	25	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.03	1.20
TBC PS-5	Cabin - Kitchen/Dining Area	26	Ceiling	Wood Trim	White paint on wood trim (sample includes wood)	0.03	2.13
TBC PS-6	Cabin - Kitchen/Dining Area	-	Ceiling	Plywood	Light green paint on plywood (sample includes plywood)	0.03	0.08
TBC PS-7	Outhouse - Interior	27	Door	Wood Trim	Grey paint on wood trim (sample includes wood)	0.03	<0.03

Notes:

TBC PS-DUP1 is a blind field duplicate of TBC 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 C6-4: Paint Sample Descriptions and PCB Analytical Results (Three Brooks Camp)

Sample ID	Room Description	Photo No.	Sample Location	Substrate	Sample Description	RDL (mg/kg)	Total PCB (mg/kg)
TBC PS-1	Cabin - Exterior	22	Roof	Wood	White paint on wood (sample includes wood)	0.5	<0.5
TBC PS-2	Cabin - Exterior	23	Tank Cradle	Wood	Grey paint on wood (sample includes wood)	0.5	<0.5
TBC PS-3	Cabin - Kitchen/Dining Area	24	Wall	Wood Trim	White paint on wood trim (sample includes wood)	0.5	<0.5
TBC PS-DUP1						0.5	<0.5
TBC PS-4	Cabin - Kitchen/Dining Area	25	Floor	Plywood	Grey paint on plywood (sample includes plywood)	0.5	<0.5
TBC PS-5	Cabin - Kitchen/Dining Area	26	Ceiling	Wood Trim	White paint on wood trim (sample includes wood)	0.5	<0.5
TBC PS-6	Cabin - Kitchen/Dining Area	-	Ceiling	Plywood	Light green paint on plywood (sample includes plywood)	0.5	<0.5
TBC PS-7	Outhouse - Interior	27	Door	Wood Trim	Grey paint on wood trim (sample includes wood)	0.5	<0.5

Notes:

TBC PS-DUP1 is a blind field duplicate of TBC 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 C6-5: Bulk Sample Descriptions and Mould Analytical Results (Three Brooks Camp)

Sample ID	Detailed Material Description	Sample Location	Fungal Identification	Category
TBC M-1	Tape lift	Cabin - Cabinets	*Cladosporium*	Medium

Notes:

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

Appendix D6

Room-By-Room Inspection Sheets

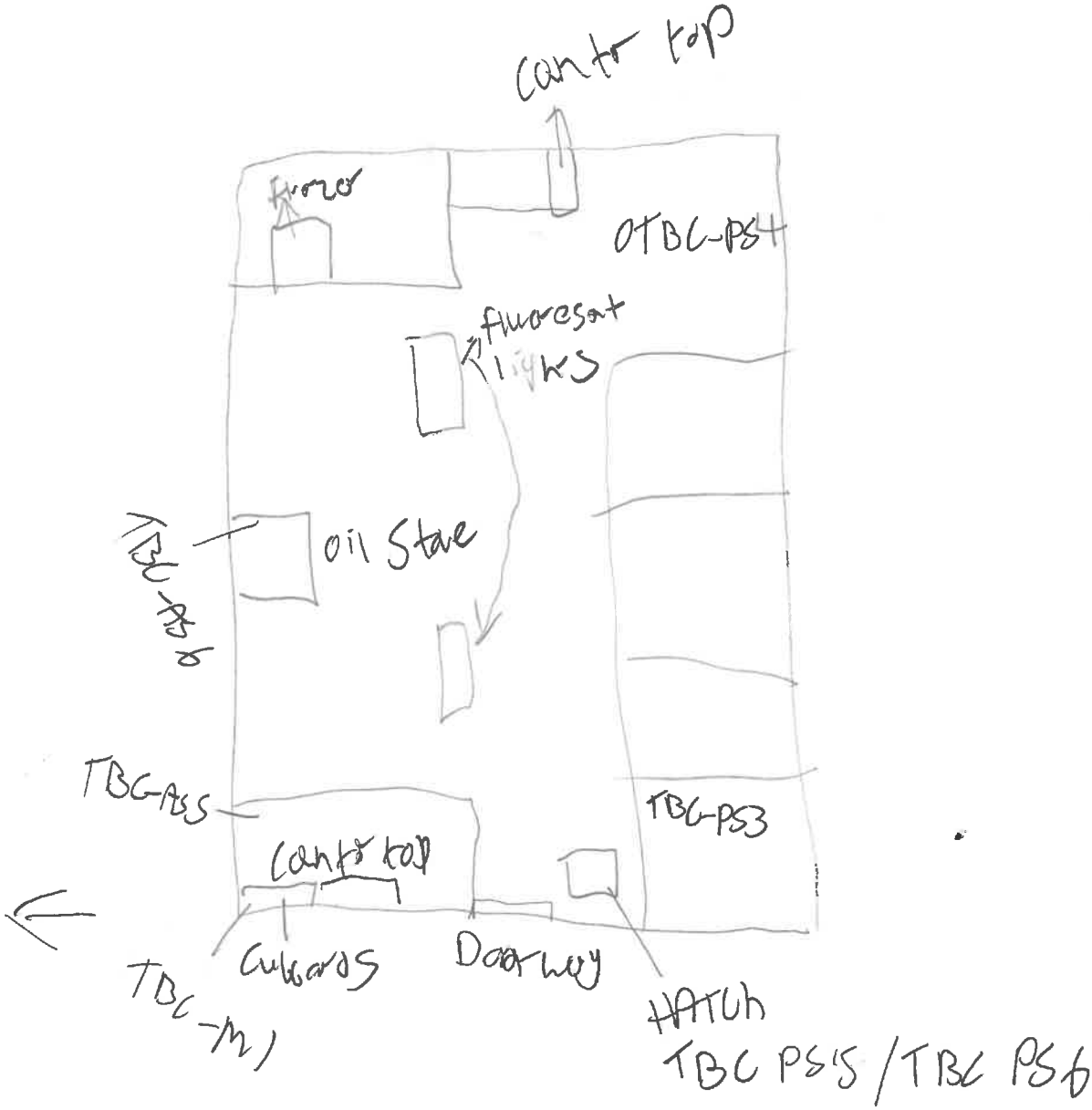
Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Three Brook Camp	2	1	Interior of TBC	24' x 32' 8"

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	grey on plywood	G		
Walls	White on wood	G		
Ceiling	glossy White on plywood grey	F	Stalls	
Paint	Floor grey on plywood Wall White on wood (trim) Ceiling glossy white on plywood light green Doors Windows Other	F	4'6 ↑ & panels	Wall = TBC-PS3 Floor = TBC-PS4 Ceiling = TBC-PS5 Ceiling = TBC-PS6
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	Pink fiberglass in attic			
Piping / Electrical / Mechanical Equipment	Copper piping Fuel lines			
Lighting (Fluorescent) (10% to be checked)	Ballast Manufacturer: Phillips 2 Noted Serial #: RAM-2S40-TPC Non-PCB	Leaking / Other	Total #: 2 # Checked: 2	Suspect PCBs:
Lighting (Incandescent, HID, etc.)	5 incandescent			
Thermostats	Manufacturer N/A Dial Casing N/A Colour Shape Wall/Floor Mounted		Total #: # Checked:	Mercury Switch:
LCMs (saudering, pipes batteries, exit/ emerg lighting,)				
Mould / Water Staining	Materials and area impacted Tape Lift, Cubboards (Kitchen)	ODS	e.g., refrigerators, coolers, drinking fountains, fire extinguishers TBC-M1	
Other	Doors (Type and tags): Battery operated Smoke Detector Windows: HVAC (e.g., electric baseboard heater, window-mounted A/C unit) Counter top (Kitchen) = TBC-AS5 (same as Bathroom → Laminate + Glue			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Freezer, G.E. model #GC12, General Floor Dust Bats, Bat Guano, oil Stove, The enterprise foundry co model #1000			

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:

TBC-AS6 → oil Stove gasket Sample -

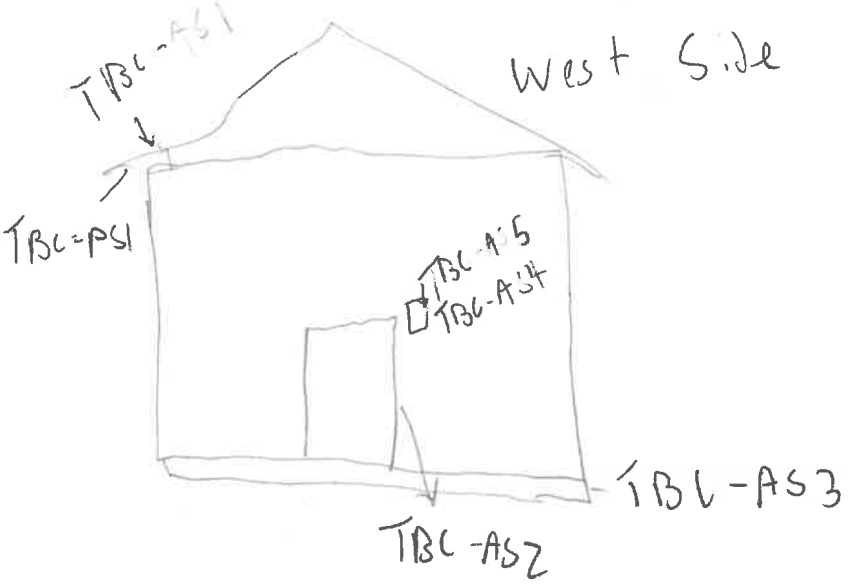

counter top
freezer
OTBC-PS4
fluoresent lights
oil Stove
TBC-PS2
TBC-PS5
TBC-PS3
counter top
Cubards
Doorway
HATCH
TBC-M1
TBC PS1 / TBC PS6

Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
Three Brook Camp.	Exterior		Exterior	24' X 32 X 12

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Cider Block	g		TBC -FS3
Walls	Red Brick / Mortar	g		TBC -AS2
Ceiling	Asphalt shingles	f		TBC -AS1
Paint	Floor Wall Ceiling Doors Factory coated grey metal. Windows Other White trim eave / door, wood	p White Paint on Interior Door same as thin		TBC- PS1
Insulation (Piping/Mechanical/ Wall/Ceiling/Other)	— grey on wood furnace oil stand	p		TBC-PS2
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): NO 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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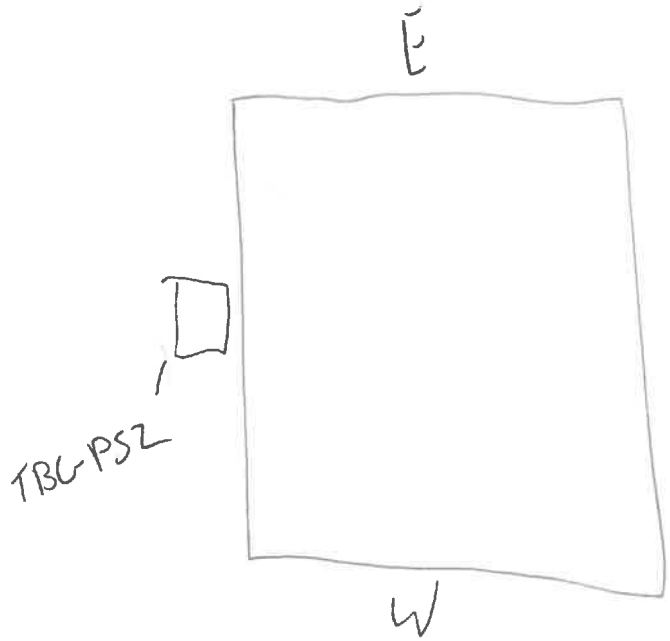
West Side
TBC-PS1
TBC-AS5
TBC-AS4
TBL-AS3
TBC-AS2

Top Down


E
TBC-PS2
W

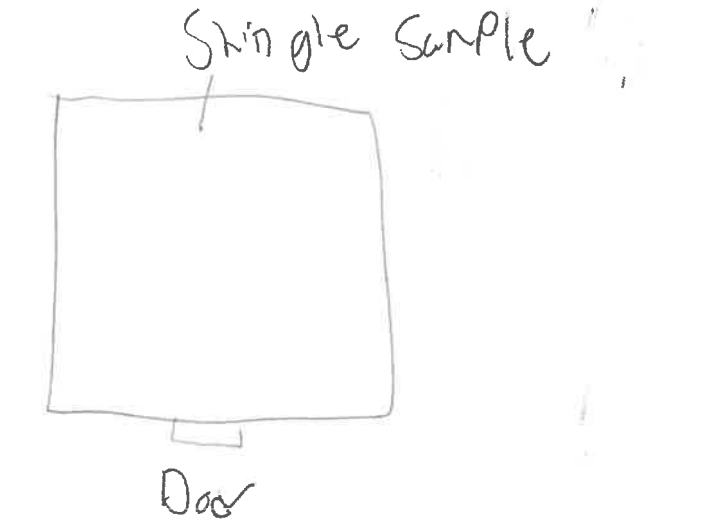
Building	Room #	Floor #	Room Description	Dimensions (L x W x H)
2	B1	1	Out house TBC	5'x6.5'x6'

	Description	Condition (good, fair, poor)	Quantity (SF, LF, total)	Samples Collected (or visual reference)
Floor	Grey on Plywood	G		
Walls	Grey on Ply wood	Fair outside good inside		
Ceiling	Grey on Plywood	Fair outside good inside		
Paint	Floor grey on Ply wood Wall grey on plywood Ceiling grey on Plywood Doors Windows Other	See Above		TBC-AST = Dark Tan
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 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)	Foundation: Cement Block 8ft x 8ft TBC-AST		
	Window Caulking 6 by 18 inches TBC-AS 6			
Other	e.g. UFFI, CO, VOCs, furnace, ASTs, USTs, drums Asphalt Shingles (Tar Paper)			

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



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APPENDICES

7 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 B7.

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.

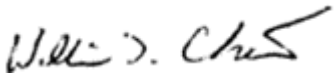
Respectfully Submitted,

WSP E & I Canada Limited

Prepared By:

Lori Wiseman, P.Eng.
Senior Geo-Environmental Engineer

Reviewed By:



Bill Chew, B.Sc., CET
Senior Air Quality Scientist

Appendix A7

Laboratory Certificates of Analysis

Camp 75

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 552212228
Customer ID: 55MEEN26
Customer PO: TE22104004
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/TE22104004

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: C75 AS-1 ***Lab Sample ID:*** **552212228-0001**

Sample Description: Camp 75 Wall/Foil Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/17/2022	Brown/Silver	80.0%	20.0%	None Detected	

Client Sample ID: C75 AS-2-Tar Paper ***Lab Sample ID:*** **552212228-0002**

Sample Description: Camp 75 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	0.0%	100%	None Detected	

Client Sample ID: C75 AS-2-Fibreboard ***Lab Sample ID:*** **552212228-0002A**

Sample Description: Camp 75 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: C75 AS-3 ***Lab Sample ID:*** **552212228-0003**

Sample Description: Camp 75 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: C75 AS-4 ***Lab Sample ID:*** **552212228-0004**

Sample Description: Camp 75 Bathroom/Countertop Mastic

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

Client Sample ID: C75 AS-5-Brick ***Lab Sample ID:*** **552212228-0005**

Sample Description: Camp 75 Exterior/Brick and Mortar

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

Client Sample ID: C75 AS-5-Mortar ***Lab Sample ID:*** **552212228-0005A**

Sample Description: Camp 75 Exterior/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.

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 552212228
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Client Sample ID: C75 AS-6-Mortar 1 ***Lab Sample ID:*** **552212228-0006**
Sample Description: Camp 75 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: C75 AS-6-Mortar 2 ***Lab Sample ID:*** **552212228-0006A**
Sample Description: Camp 75 Foundation/Cider Block and Mortar

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

Client Sample ID: C75 AS-7 ***Lab Sample ID:*** **552212228-0007**
Sample Description: Camp 75 Pad/Concrete

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: C75 AS-8-Shingle ***Lab Sample ID:*** **552212228-0008**
Sample Description: Camp 75 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: C75 AS-8-Tar Paper ***Lab Sample ID:*** **552212228-0008A**
Sample Description: Camp 75 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: C75 AS-9 ***Lab Sample ID:*** **552212228-0009**
Sample Description: Camp 75 Roof/Black Shingle - Tar Felt

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: C75 AS-DUP1 ***Lab Sample ID:*** **552212228-0010**
Sample Description:

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

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 552212228
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Analyst(s):

Elizabeth Mierzynski	PLM (5)
Natalie D'Amico	PLM (2) PLM Grav. Reduction (7)

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: 08/16/202217:54:15

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: TE22104004

AGAT WORK ORDER: 22K928365

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: 22K928365

PROJECT: TE22104004

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:		C75 PS-1	C75 PS-2	C75 PS-3	C75 PS-4	C75 PS-5	C75 PS-6	C75 PS-DUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	**Unit**	**G / S**	**RDL**	**4161981**	**4161983**	**4161984**	**4161985**	**4161986**	**4161987**	**4161988**
Lead in Paint	mg/kg		10	32	312	10	1360	<10	<10	<10
Total Sample Mass	g			0.3733	0.4205	0.4747	0.5278	0.4985	0.4787	0.5089

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: 22K928365

PROJECT: TE22104004

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:		C75 PS-1	C75 PS-2	C75 PS-3	C75 PS-4	C75 PS-5	C75 PS-6	C75 PS-DUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	Unit	G / S	RDL	4161981	4161983	4161984	4161985	4161986	4161987	4161988
Mercury	mg/kg		0.03	1.04	0.24	0.22	0.13	<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

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Certificate of Analysis

AGAT WORK ORDER: 22K928365

PROJECT: TE22104004

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:		C75 PS-1	C75 PS-2	C75 PS-3	C75 PS-4	C75 PS-5	C75 PS-6	C75 PS-DUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	**Unit**	**G / S**	**RDL**	**4161981**	**4161983**	**4161984**	**4161985**	**4161986**	**4161987**	**4161988**
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		97	104	89	104	95	102	96

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: 22K928365

PROJECT: TE22104004

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	4161981	32	40	NA	< 10	111%	80%	120%	98%	80%	120%	105%	70%	130%
Mercury in Paint															
Mercury	4205480		<0.03	<0.03	NA	< 0.03	85%	70%	130%	NA	70%	130%	103%	70%	130%

Certified By: Corey Curl

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Quality Assurance

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AGAT WORK ORDER: 22K928365

PROJECT: TE22104004

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: 22K928365**

PROJECT: TE22104004 **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: 23.3, 23.6.
Hold Time:
AGAT Job Number: 22K928365
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 #: TE22104004
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:
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)
C75 PS-1	Jul 5, 2022	Paint	1 baggie					X														X				X	
C75 PS-2								X														X				X	
C75 PS-3								X														X				X	
C75 PS-4								X														X				X	
C75 PS-5								X														X				X	
C75 PS-6								X														X				X	
C75 PS-DUP1								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	9:20

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1
No:

Document ID: DS-136-1502.004

Date revised: Apr 19, 2021

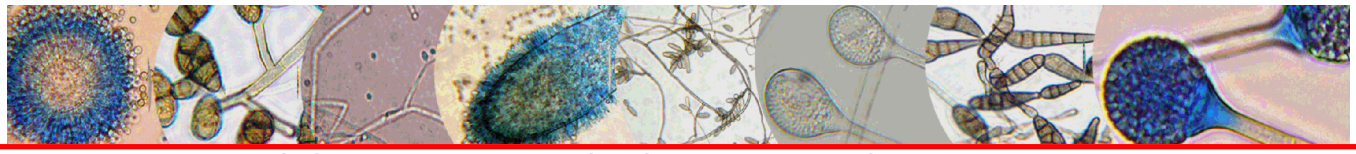
EXPANDED FUNGAL REPORT™

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 TL204 / TE22104004 / 5290.5730-00**
P.O:	**5290.5730-00**
EMSL Canada Orde	**552212229**



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: 552212229
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 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
552212229-0001	C75-M1	Interior	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 19:12:49

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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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Analyzed: 8/15/2022

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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Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 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

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

EMSL Order: 552212229
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

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

North West Gander River Camp

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 552212225
Customer ID: 55MEEN26
Customer PO: TE22104004
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: 8/17/2022

Proj: Pre-Demo HBMA TL22/TE22104004

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

Client Sample ID: NWGR AS-1 ***Lab Sample ID:*** **552212225-0001**

Sample Description: North West Gander River Wall/Foil Wrap - 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: NWGR AS-2-Tar Paper ***Lab Sample ID:*** **552212225-0002**

Sample Description: North West Gander River Wall/Tar Paper - Tar Paper

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

Client Sample ID: NWGR AS-2-Fibreglass ***Lab Sample ID:*** **552212225-0002A**

Sample Description: North West Gander River Wall/Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	White	90.0%	10.0%	None Detected	

Client Sample ID: NWGR AS-3-Shingle ***Lab Sample ID:*** **552212225-0003**

Sample Description: North West Gander River 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: NWGR AS-3-Tar Paper ***Lab Sample ID:*** **552212225-0003A**

Sample Description: North West Gander River 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: NWGR AS-4 ***Lab Sample ID:*** **552212225-0004**

Sample Description: North West Gander River Wall/Caulking

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	

Client Sample ID: NWGR AS-5-Mortar ***Lab Sample ID:*** **552212225-0005**

Sample Description: North West Gander River Exterior/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	

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EMSL Canada Order 552212225
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Client Sample ID: NWGR AS-5-Brick **Lab Sample ID:** **552212225-0005A**
Sample Description: North West Gander River Exterior/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: NWGR AS-6-Light Grey **Lab Sample ID:** **552212225-0006**
Sample Description: North West Gander River 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: NWGR AS-6-Dark Grey **Lab Sample ID:** **552212225-0006A**
Sample Description: North West Gander River 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: NWGR AS-7 **Lab Sample ID:** **552212225-0007**
Sample Description: North West Gander River 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: NWGR AS-8 **Lab Sample ID:** **552212225-0008**
Sample Description: North West Gander River Bathroom/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: NWGR AS-9 **Lab Sample ID:** **552212225-0009**
Sample Description: North West Gander River Outhouse/Cider 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: NWGR AS-10 **Lab Sample ID:** **552212225-0010**
Sample Description: North West Gander River Outhouse/Black Shingle

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: NWGR ASDUP1 **Lab Sample ID:** **552212225-0011**
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 552212225
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Analyst(s):

Kira Ramphal	PLM (1) PLM Grav. Reduction (8)
Natalie D'Amico	PLM (5)
Ruby Lai	PLM Grav. Reduction (1)

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: 08/17/202215:05:26

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
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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: TE22104004

AGAT WORK ORDER: 22K928292

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: 22K928292

PROJECT: TE22104004

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:		NWGR-PS1	NWGR-PS2	NWGR-PS3	NWGR-PS4	NWGR-PS5	NWGR-PS6	NWGR-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	Unit	G / S	RDL	4161242	4161243	4161244	4161245	4161246	4161247	4161248
Lead in Paint	mg/kg		10	93	178	46	79	46	94	58
Total Sample Mass	g			0.4533	0.5001	0.4270	0.5686	0.5940	0.4206	0.5176

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: 22K928292

PROJECT: TE22104004

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:		NWGR-PS1	NWGR-PS2	NWGR-PS3	NWGR-PS4	NWGR-PS5	NWGR-PS6	NWGR-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	Unit	G / S	RDL	4161242	4161243	4161244	4161245	4161246	4161247	4161248
Mercury	mg/kg		0.03	0.13	0.14	<0.03	0.44	<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

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Certificate of Analysis

AGAT WORK ORDER: 22K928292

PROJECT: TE22104004

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:		NWGR-PS1	NWGR-PS2	NWGR-PS3	NWGR-PS4	NWGR-PS5	NWGR-PS6	NWGR-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	Unit	G / S	RDL	4161242	4161243	4161244	4161245	4161246	4161247	4161248
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		88	84	76	81	73	82	79

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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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928292

PROJECT: TE22104004

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: 22K928292

PROJECT: TE22104004

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:

AGAT Laboratories

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Method Summary

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928292

PROJECT: TE22104004

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: 23.6, 23.6, 23.3
Hold Time:
AGAT Job Number: 22K928292
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 #: TE22104004
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
NWGR-PS1	July 8/22	PAINT	BAG	Hold for Possible Leachate
NWGR-PS2				
NWGR-PS3				
NWGR-PS4				
NWGR-PS5				
NWGR-PS6				
NWGR-PSDUP1				

Sample Identification	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)
NWGR-PS1				✓														✓				✓	
NWGR-PS2				✓														✓				✓	
NWGR-PS3				✓														✓				✓	
NWGR-PS4				✓														✓				✓	
NWGR-PS5				✓														✓				✓	
NWGR-PS6				✓														✓				✓	
NWGR-PSDUP1				✓														✓				✓	

168.47
122.12
>200
"
"
140.90
122.84

Samples Relinquished By (Print Name): J. OWNER
Samples Relinquished By (Sign):
Date/Time:
Samples Received By (Print Name): O. Atkins
Samples Received By (Sign):
Aug 1 2022 3:20
Aug 3 9:00

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page 1 of 1
N°:

Document ID: [illegible]
Date created: Apr 19, 2021

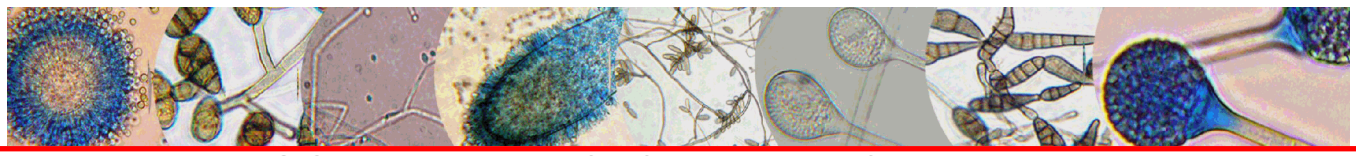
EXPANDED FUNGAL REPORT™

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 TL204 / TE22104004 / 5290.5730-00**
P.O:	**5290.5730-00**
EMSL Canada Orde	**552212222**



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EMSL Order: 552212222
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 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.

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

Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

EMSL Order: 552212222
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

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
552212222-0001	NWGR M-1	Ceiling	Cladosporium	Low
			Hyphal Fragment	Low
552212222-0002	NWGR M-2	Chair	Basidiospores	Rare
			Myxomycetes++	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 19:14:18

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Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

EMSL Order: 552212222
Customer ID: 55MEEN26
Collected:
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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

BASIDIOSPORES	
Natural Habitat	Forest floors. Lawns .Plants (saprobes or pathogens depending on genus)
Suitable Substrates in the Indoor Environment	Depends on genus. Wood products
Water Activity	Unknown.
Mode of Dissemination	Forcible ejection. Wind currents.
Allergic Potential	Type I allergies (hay fever, asthma) . Type III (hypersensitivity pneumonitis)
Potential or Opportunistic Pathogens	Depends on genus.
Industrial Uses	Edible mushrooms are used in the food industry.
Potential Toxins Produced	Amanitins. monomethyl-hydrazine. muscarine. ibotenic acid. psilocybin.
Other Comments	Basidiospores are the result of sexual reproduction and formed on a structure called the basidium. Basidiospores belong to the members of the Phylum Basidiomycota, which includes mushrooms, shelf fungi, rusts, and smuts.

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.

MYXOMYCETES++	
Natural Habitat	Decaying logs, Dead leaves , Dung , Lawns , Mulched flower beds, Lawns
Suitable Substrates in the Indoor Environment	Rotting lumber
Free moisture required for mold growth	Unknown
Mode of Dissemination	Insects, Water, Wind
Allergic Potential	Type I
Potential or Opportunistic Pathogens	Unknown
Industrial Uses	
Other Comments	Includes Myxomycetes, Smut, Rust, and Periconia.

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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:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 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 Order: 552212222
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Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

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

Camp 130

EMSL Canada Inc.

2756 Slough Street Mississauga, ON L4T 1G3
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EMSL Canada Order 552212208
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

Attn: Lori Wiseman
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Saint John's, NL A1B 4A5

Proj: Pre-Demo HBMA TL22/TE22104004

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: C130 AS-1 ***Lab Sample ID:*** **552212208-0001**
Sample Description: Camp 130 Wall/Foil/Tar Paper

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

Client Sample ID: C130 AS-2-Tar ***Lab Sample ID:*** **552212208-0002**
Sample Description: Camp 130 Wall/Particle Board Backing

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

Client Sample ID: C130 AS-2-Fibreboard ***Lab Sample ID:*** **552212208-0002A**
Sample Description: Camp 130 Wall/Particle Board Backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Beige	90.0%	10.0%	None Detected	

Client Sample ID: C130 AS-3 ***Lab Sample ID:*** **552212208-0003**
Sample Description: Camp 130 Wall/Tar Paper

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

Client Sample ID: C130 AS-4 ***Lab Sample ID:*** **552212208-0004**
Sample Description: Camp 130 Kitchen/Countertop Mastic

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

Client Sample ID: C130 AS-5 ***Lab Sample ID:*** **552212208-0005**
Sample Description: Camp 130 Bathroom/Countertop Mastic

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

Client Sample ID: C130 AS-6-Brick ***Lab Sample ID:*** **552212208-0006**
Sample Description: Camp 130 Exterior/Brick and Mortar

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

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

EMSL Canada Order 552212208
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Client Sample ID: C130 AS-6-Mortar **Lab Sample ID:** **552212208-0006A**
Sample Description: Camp 130 Exterior/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: C130 AS-7-Brick **Lab Sample ID:** **552212208-0007**
Sample Description: Camp 130 Exterior/Brick and Mortar

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

Client Sample ID: C130 AS-7-Mortar **Lab Sample ID:** **552212208-0007A**
Sample Description: Camp 130 Exterior/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: C130 AS-8-Cinder Block **Lab Sample ID:** **552212208-0008**
Sample Description: Camp 130 Foundation/Cinder 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: C130 AS-8-Mortar **Lab Sample ID:** **552212208-0008A**
Sample Description: Camp 130 Foundation/Cinder 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: C130 AS-9 **Lab Sample ID:** **552212208-0009**
Sample Description: Camp 130 Exterior/Caulking

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	

Client Sample ID: C130 AS-10-Shingle **Lab Sample ID:** **552212208-0010**
Sample Description: Camp 130 Roof/Black Shingle

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: C130 AS-10-Tar Paper **Lab Sample ID:** **552212208-0010A**
Sample Description: Camp 130 Roof/Black Shingle

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	

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EMSL Canada Order 552212208
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Client Sample ID: C130 AS-11-Shingle **Lab Sample ID:** **552212208-0011**
Sample Description: Camp 130 Roof/Black Shingle

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: C130 AS-11-Tar Paper **Lab Sample ID:** **552212208-0011A**
Sample Description: Camp 130 Roof/Black Shingle

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: C130 AS-12 **Lab Sample ID:** **552212208-0012**
Sample Description: Camp 130 Outhouse/Black Shingle

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: C130 AS-13 **Lab Sample ID:** **552212208-0013**
Sample Description: Camp 130 Outhouse/Concrete

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

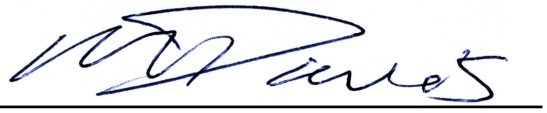
Client Sample ID: C130 AS-DUP1 **Lab Sample ID:** **552212208-0014**
Sample Description: Camp 130 Wall/Tar Paper

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	

Analyst(s):

Caroline Allen PLM (8)
PLM Grav. Reduction (12)

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: 08/16/202216:39:37

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
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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: TE22104004

AGAT WORK ORDER: 22K928383

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: 22K928383

PROJECT: TE22104004

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:		C130 PS-1	C130 PS-2	C130 PS-3	C130 PS-4	C130 PS-DUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	Unit	G / S	RDL	4162120	4162122	4162123	4162124	4162125
Lead in Paint	mg/kg		10	14	78	34	36	56
Total Sample Mass	g			0.4732	0.5232	0.4604	0.4157	0.5087

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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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 22K928383

PROJECT: TE22104004

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:		C130 PS-1	C130 PS-2	C130 PS-3	C130 PS-4	C130 PS-DUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	Unit	G / S	RDL	4162120	4162122	4162123	4162124	4162125
Mercury	mg/kg		0.03	0.34	0.06	2.87	<0.03	0.98

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: 22K928383

PROJECT: TE22104004

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:				C130 PS-1	C130 PS-2	C130 PS-3	C130 PS-4	C130 PS-DUP1
SAMPLE TYPE:				Paint	Paint	Paint	Paint	Paint
DATE SAMPLED:				2022-07-08	2022-07-08	2022-07-08	2022-07-08	2022-07-08
Parameter	Unit	G / S	RDL	4162120	4162122	4162123	4162124	4162125
Total PCBs	mg/kg		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate	Unit	Acceptable Limits						
Decachlorobiphenyl	%	60-140		93	93	95	98	96

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: 22K928383

PROJECT: TE22104004

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		96	85	12.5%	< 10	107%	80%	120%	95%	80%	120%	85%	70%	130%
Mercury in Paint															
Mercury	4205480		<0.03	<0.03	NA	< 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: 22K928383

PROJECT: TE22104004

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: 22K928383

PROJECT: TE22104004

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: 22K928383
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 #: TE22104004
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:
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
C130 PS-1	Jul. 8, 2022	Paint	1 baggie	
C130 PS-2	↓	↓	↓	
C130 PS-3				
C130 PS-4				
C130 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		

Samples Relinquished By (Print Name): Lori Wiseman
Date/Time: Aug. 1, 2022
Samples Relinquished By (Sign):
Date/Time: Aug. 1, 2022
Samples Received By (Print Name): O. Atkins Aug 1 2022
Date/Time: 3:20
Samples Received By (Sign):
Date/Time: 9:00 Aug 3

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1
N°:

Document ID: DRV-138-1502-004
Date revised: Apr 19, 2021

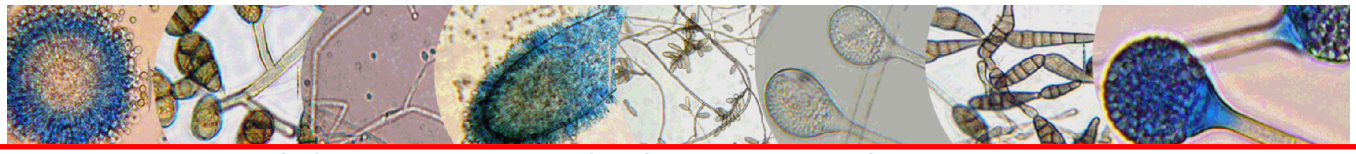
EXPANDED FUNGAL REPORT™

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 TL204 / TE22104004 / 5290.5730-00**
P.O:	**5290.5730-00**
EMSL Canada Orde	**552212232**



EMSL Canada Inc.
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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: 552212232
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 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
552212232-0001	C130 M1	Interior	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 19:09:34

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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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Proj: Pre-Demo HBMA TL204 / TE22104004 / 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

Pot Hill Camp

EMSL Canada Inc.

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

EMSL Canada Order 552212220
Customer ID: 55MEEN26
Customer PO: TE22104004
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/TE22104004

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

Client Sample ID: PHC AS-1-Shingle **Lab Sample ID:** **552212220-0001**
Sample Description: Pot Hill Camp Roof/Black Shingle

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

Client Sample ID: PHC AS-1-Tar Paper **Lab Sample ID:** **552212220-0001A**
Sample Description: Pot Hill Camp Roof/Black Shingle

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	0.59%	99.4%	**<0.25% Chrysotile**	Fibers were found with refractive indices outside of the acceptable range for regulated asbestos. These fibers are possibly altered asbestos fibers and were not included in the final asbestos concentration.

Client Sample ID: PHC AS-2-Brick **Lab Sample ID:** **552212220-0002**
Sample Description: Pot Hill Camp Exterior/Brick and Mortar

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

Client Sample ID: PHC AS-2-Mortar **Lab Sample ID:** **552212220-0002A**
Sample Description: Pot Hill Camp Exterior/Brick and Mortar

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

Client Sample ID: PHC AS-3 **Lab Sample ID:** **552212220-0003**
Sample Description: Pot Hill Camp Wall/Paper Barrier

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

Client Sample ID: PHC AS-4-Tar Paper **Lab Sample ID:** **552212220-0004**
Sample Description: Pot Hill Camp Wall/Particle Board Backing

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

Client Sample ID: PHC AS-4-Fibreboard **Lab Sample ID:** **552212220-0004A**
Sample Description: Pot Hill Camp Wall/Particle Board Backing

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Brown	90.0%	10.0%	None Detected	

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EMSL Canada Order 552212220
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Client Sample ID: PHC AS-5 ***Lab Sample ID:*** **552212220-0005**

Sample Description: Pot Hill Camp Foundation/Cinder 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: PHC AS-6-Brick ***Lab Sample ID:*** **552212220-0006**

Sample Description: Pot Hill Camp 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: PHC AS-6-Mortar ***Lab Sample ID:*** **552212220-0006A**

Sample Description: Pot Hill Camp 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: PHC AS-7 ***Lab Sample ID:*** **552212220-0007**

Sample Description: Pot Hill Camp Kitchen/Countertop Mastic

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

Client Sample ID: PHC AS-8 ***Lab Sample ID:*** **552212220-0008**

Sample Description: Pot Hill Camp Bathroom/Countertop Mastic

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

Client Sample ID: PHC AS-9 ***Lab Sample ID:*** **552212220-0009**

Sample Description: Pot Hill Camp Oil Stove/Foil/Tar Paper

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Asbestos Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	21.4%	78.6%	None Detected	

Client Sample ID: PHC AS DUP-1 ***Lab Sample ID:*** **552212220-0010**

Sample Description:

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

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

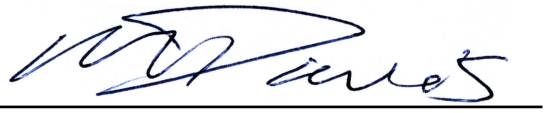
EMSL Canada Order 552212220
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Analyst(s):

Ruby Lai PLM (8)
PLM Grav. Reduction (6)

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: 08/16/202217:26:38

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: TE22104004

AGAT WORK ORDER: 22K928302

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: 22K928302

PROJECT: TE22104004

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:		PHC-PS1	PHC-PS2	PHC-PS3	PHC-PS4	PHC-PS5	PHC-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06
Parameter	Unit	G / S	RDL	4161262	4161263	4161264	4161265	4161266	4161267
Lead in Paint	mg/kg		10	63	48	31	307	<10	57
Total Sample Mass	g			0.3453	0.6533	0.4428	0.4251	0.4605	0.3699

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: 22K928302

PROJECT: TE22104004

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:		PHC-PS1	PHC-PS2	PHC-PS3	PHC-PS4	PHC-PS5	PHC-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06
Parameter	Unit	G / S	RDL	4161262	4161263	4161264	4161265	4161266	4161267
Mercury	mg/kg		0.03	0.39	0.77	<0.03	0.22	0.07	0.44

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: 22K928302

PROJECT: TE22104004

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:		PHC-PS1	PHC-PS2	PHC-PS3	PHC-PS4	PHC-PS5	PHC-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06
Parameter	Unit	G / S	RDL	4161262	4161263	4161264	4161265	4161266	4161267
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		75	73	81	87	93	96

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: 22K928302

PROJECT: TE22104004

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	4161267	4161267	57	58	3.0%	< 10	100%	80%	120%	98%	80%	120%	101%	70%	130%
Mercury in Paint															
Mercury	4161267	4161267	0.51	0.44	14.8%	< 0.03	84%	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: 22K928302

PROJECT: TE22104004

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: 22K928302

PROJECT: TE22104004

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: 22K928302
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 #: TE22104004
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
PHC - PS1	July 6/22	Paint	BAG	HOLD FOR POSSIBLE LEACHATE
PHC - PS2	↓	↓	↓	↓
PHC - PS3				
PHC - PS4				
PHC - PS5				
PHC - PSDUP2				

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:
Samples Received By (Print Name): O. Atkins
Samples Received By (Sign):
Date/Time: Aug 1 2022 3:20
Date/Time: Aug 3 9:10

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1
No:

Document ID: [illegible]

Date revised: Apr 19, 2021

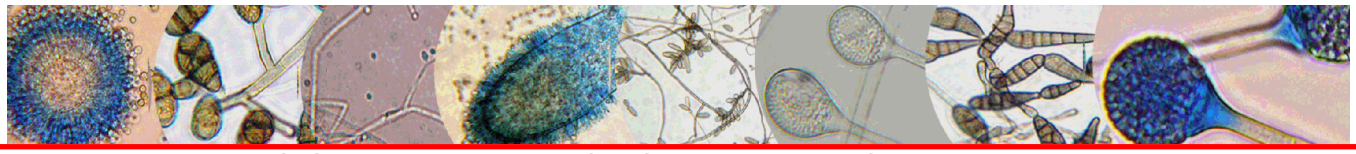
EXPANDED FUNGAL REPORT™

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 TL204 / TE22104004 / 5290.5730-00**
P.O:	**5290.5730-00**
EMSL Canada Orde	**552212211**



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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: 552212211
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 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.

EMSL Canada Inc.

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Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

EMSL Order: 552212211
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

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
552212211-0001	PHC-M1	Cabinets	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 19:13:36

EMSL Canada Inc.
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Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

EMSL Order: 552212211
Customer ID: 55MEEN26
Collected:
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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EMSL Order: 552212211
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Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

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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EMSL Order: 552212211
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

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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Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

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

EMSL Order: 552212211
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 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

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

EMSL Order: 552212211
Customer ID: 55MEEN26
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Received: 8/09/2022
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Proj: Pre-Demo HBMA TL204 / TE22104004 / 5290.5730-00

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

Three Brooks Camp

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 552212239
Customer ID: 55MEEN26
Customer PO: TE22104004
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/TE22104004

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: TBC AS-1-Shingle **Lab Sample ID:** **552212239-0001**
Sample Description: Three Brooks Camp Roof - Black Shingle

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

Client Sample ID: TBC AS-1-Tar Paper **Lab Sample ID:** **552212239-0001A**
Sample Description: Three Brooks Camp Roof - Black Shingle - Tar Paper

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

Client Sample ID: TBC AS-2-Brick **Lab Sample ID:** **552212239-0002**
Sample Description: Three Brooks Camp Exterior - Brick and Mortar

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

Client Sample ID: TBC AS-2-Mortar **Lab Sample ID:** **552212239-0002A**
Sample Description: Three Brooks Camp Exterior - Brick and Mortar

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

Client Sample ID: TBC AS-3 **Lab Sample ID:** **552212239-0003**
Sample Description: Three Brooks Camp Foundation - Cinder Block

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

Client Sample ID: TBC AS-4 **Lab Sample ID:** **552212239-0004**
Sample Description: Three Brooks Camp Wall - Tar Paper - Tar Paper

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

Client Sample ID: TBC AS-5-Tar Paper **Lab Sample ID:** **552212239-0005**
Sample Description: Three Brooks Camp Wall - Particle Board Backing - Tar Paper

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

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EMSL Canada Order 552212239
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Client Sample ID: TBC AS-5-Fibreboard **Lab Sample ID:** **552212239-0005A**
Sample Description: Three Brooks Camp Wall - Particle Board Backing

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

Client Sample ID: TBC AS-6 **Lab Sample ID:** **552212239-0006**
Sample Description: Three Brooks Camp Oil Stove - Gasket - Gasket

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM	8/16/2022	Gray/Beige	0.0%	30.0%	**70% Chrysotile**	

Client Sample ID: TBC AS-7 **Lab Sample ID:** **552212239-0007**
Sample Description: Three Brooks Camp Kitchen - Countertop Mastic

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

Client Sample ID: TBC AS-8 **Lab Sample ID:** **552212239-0008**
Sample Description: Three Brooks Camp Outhouse - Black Shingle

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

Client Sample ID: TBC AS-9 **Lab Sample ID:** **552212239-0009**
Sample Description: Three Brooks Camp Outhouse - Caulking

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

Client Sample ID: TBC AS-10 **Lab Sample ID:** **552212239-0010**
Sample Description: Three Brooks Camp Outhouse - Concrete

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

Client Sample ID: TBC-AS DUP1 **Lab Sample ID:** **552212239-0011**
Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos Fibrous	Non-Fibrous	Asbestos	Comment
PLM Grav. Reduction	8/16/2022	Black	0.0%	100%	**<0.33% Chrysotile**	

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EMSL Canada Order 552212239
Customer ID: 55MEEN26
Customer PO: TE22104004
Project ID:

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

Analyst(s):

Caroline Allen	PLM (4)
Elizabeth Mierzynski	PLM (2) 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: 08/16/202220:46:28

AGAT Laboratories

11 Morris Drive, Unit 122
Dartmouth, Nova Scotia
CANADA B3B 1M2
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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: TE22104004

AGAT WORK ORDER: 22K928355

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: 22K928355

PROJECT: TE22104004

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:		TBC-PS1	TBC-PS2	TBC-PS3	TBC-PS4	TBC-PS5	TBC-PS6	TBC-PS7	TBC-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06
Parameter	Unit	G / S	RDL	4161962	4161964	4161965	4161966	4161967	4161968	4161969	4161970
Lead in Paint	mg/kg		10	41	561	13	194	25	<10	30	30
Total Sample Mass	g			0.3805	0.5024	0.5221	0.4378	0.4468	0.4421	0.4615	0.5177

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: 22K928355

PROJECT: TE22104004

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:		TBC-PS1	TBC-PS2	TBC-PS3	TBC-PS4	TBC-PS5	TBC-PS6	TBC-PS7	TBC-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06
Parameter	Unit	G / S	RDL	4161962	4161964	4161965	4161966	4161967	4161968	4161969	4161970
Mercury	mg/kg		0.03	0.47	1.40	0.03	1.20	2.13	0.08	<0.03	1.29

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: 22K928355

PROJECT: TE22104004

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:		TBC-PS1	TBC-PS2	TBC-PS3	TBC-PS4	TBC-PS5	TBC-PS6	TBC-PS7	TBC-PSDUP1
		SAMPLE TYPE:		Paint	Paint	Paint	Paint	Paint	Paint	Paint	Paint
		DATE SAMPLED:		2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06	2022-07-06
Parameter	Unit	G / S	RDL	4161962	4161964	4161965	4161966	4161967	4161968	4161969	4161970
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		87	76	70	93	76	81	61	66

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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Quality Assurance

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928355

PROJECT: TE22104004

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	4161970	30	25	NA	< 10	106%	80%	120%	100%	80%	120%	99%	70%	130%
Mercury in Paint															
Mercury	4161970	4161970	1.29	1.27	1.6%	< 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: 22K928355

PROJECT: TE22104004

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	0.5	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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Method Summary

CLIENT NAME: WOOD ENVIRONMENT & INFRASTRUCTURE SOLUTIONS CANADA

AGAT WORK ORDER: 22K928355

PROJECT: TE22104004

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: 22K928355
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 #: TE22104004
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)
TBC-PS1	July 6/22	Paint	BAG	Hold for possible Leachate				✓														✓				✓		
TBC-PS2	↓	↓	↓	↓				✓														✓				✓		
TBC-PS3	↓	↓	↓	↓				✓														✓				✓		
TBC-PS4	↓	↓	↓	↓				✓														✓				✓		
TBC-PS5	↓	↓	↓	↓				✓														✓				✓		
TBC-PS6	↓	↓	↓	↓				✓														✓				✓		
TBC-PS7	↓	↓	↓	↓				✓														✓				✓		
TBC-PS DUP1	↓	↓	↓	↓				✓														✓				✓		

Samples Relinquished By (Print Name): S. Mwner
Date/Time:
Samples Relinquished By (Sign): [signature]
Date/Time:
Samples Received By (Print Name): O. Atkins Aug 1 2022
Date/Time: 3:20
Samples Received By (Sign): [signature] Aug 3
Date/Time: 9:00

Pink Copy - Client
Yellow Copy - AGAT
White Copy- AGAT

Page 1 of 1
Nº:

Document ID: [illegible]
Date revised: Apr 19, 2021

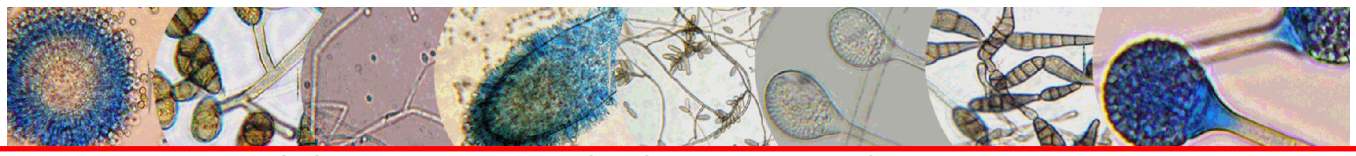
EXPANDED FUNGAL REPORT™

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 TL204 / TE22104004 / 5290.5730-00**
P.O:	**5290.5730-00**
EMSL Canada Orde	**552212204**



EMSL Canada Inc.
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Phone: (289) 997-4602 Fax: (289) 997-4607 Web: http://www.EMSL.com Email:torontolab@emsl.com

Attn: Lori Wiseman
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EMSL Order: 552212204
Customer ID: 55MEEN26
Collected:
Received: 8/09/2022
Analyzed: 8/15/2022

Proj: Pre-Demo HBMA TL204 / TE22104004 / 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
552212204-0001	TBC M-1	Cupboards	Cladosporium	Medium

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 19:07:43

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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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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 B7

Limitations

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 Professional Services 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 are 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 bylaws, orders-in-council, legislative enactments and regulations was not performed.
5. The Site history research included obtaining information from third parties and employees or agents of the owner. No attempt has been made to verify the accuracy of any information provided, unless specifically noted in our report.
6. 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, may be present on-site and may be revealed by different or other testing not provided for in our contract.
7. Because of the limitations referred to above, different environmental conditions from those stated in our report may 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.
11. Provided that the report is still reliable, and less than 12 months old, WSP will issue a third-party reliance letter to parties that the client identifies in writing, upon payment of the then current fee for such letters. All third parties relying on WSP's report, by such reliance agree to be bound by our proposal and WSP's standard reliance letter. WSP's standard reliance letter indicates that in no event shall WSP be liable for

any damages, howsoever arising, relating to third-party reliance on WSP's report. No reliance by any party is permitted without such agreement.

8 REFERENCES

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Government of Newfoundland and Labrador. Storage and Handling of Gasoline and Associated Products Regulations (58/03). http://www.assembly.nl.ca/legislation/sr/regulations/rc030058.htm