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<b>Title - Sujet</b> Pump Station Upgrade - PEI Parks	
<b>Solicitation No. - N° de l'invitation</b> ED001-160896/A	<b>Amendment No. - N° modif.</b> 004
<b>Client Reference No. - N° de référence du client</b> R.075015.001	<b>Date</b> 2015-09-14
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWC-010-3680	
<b>File No. - N° de dossier</b> PWC-5-38056 (010)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2015-09-17</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Atlantic Daylight Saving Time ADT
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**ADDENDUM No.4**

September 14, 2015

Project Number: R.075015.001

**The following changes in the bid documents are effective immediately. This addendum will form part of the contract documents**

**SPECIFICATIONS**

1. Index of Specifications, add the following item to page 2,  
Appendix A Hazardous Building Materials Surveys
2. Section 01 35 24 - Special Procedures on Fire Safety Requirements
  - .1 Item 1.3 - References, delete items 1.3.1 and 1.3.2 in their entirety and replace with the following:
    - .1 Fire Protection Standards issued by:
      - .1 National Building Code of Canada
      - .2 National Fire Code of Canada
      - .3 Occupational Safety Act for the Province of PEI and the Occupational Health and Safety Act Regulations made pursuant to the Act.
  - .2 Item 1.6 - Fire Safety and Hot Work Requirements
    - .1 Item 1.6.1.1, revise National Fire Code 2005 to National Fire Code 2010.
    - .2 Item 1.6.12, delete in its entirety and renumber remaining items.
    - .3 Item 1.6.3, delete in its entirety and renumber remaining items.
3. Section 01 35 25 - Special Procedures on Lockout Requirements
  - .1 Item 1.3 - References, add the following item 1.3.5:
  - .2 Item 1.3.2, delete (R2001) and replace with (R2015).
  - .3 Item 1.3.3, delete (R2000) and replace with (R2015).
- .4 Add the following new item 1.3.5:
  - .5 CSDA Z7460-13 Control of Hazardous Energy Lockout.

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5. Section 01 35 29 - Health and Safety Requirements

- .1 Item 1.11 - Project/Site Conditions. Add the following items to the end of item 1.11.1

- .4 Pedestrian/general traffic
- .5 Confined spaces
- .6 Asbestos and lead paint
- .7 Contamination of potable water source
- .8 Unplanned release of waste water

- .2 Item 1.11 - Project/Site Conditions, add the following item 1.11.5:

- .5 Notify Departmental Representative if hazardous substances are discovered or suspected for further direction.

6. Section 02 82 12 - Asbestos Abatement

- .1 Item 1.8 - Existing Conditions, delete .1 in its entirety and replace with the following:

- .1 Results of tests of asbestos-containing materials to be handled, removed, or otherwise disturbed and disposed of during this Project are available for inspection and are bound into this specification in Appendix A. These are for general information only and are not necessarily representative of asbestos-containing materials covered within scope of this Project.

- .2 Item 1.10 - Owner's Instructions, delete item 1.10.5 in its entirety.

7. Section 07 11 00 - Exterior Waterproofing

- .1 Item 2.1.1, add acceptable material W.R. Meados MEL-ROL.

8. Add the following documents to Appendix A:

- .1 Hazardous Building Materials Survey, Brackley Beach Sewage Pumping Station, PEI
- .2 Hazardous Building Materials Survey, Cavendish Campground Sewage Pumping Station, PEI

# Hazardous Building Materials Survey

## Brackley Beach Sewage Pumping Station, PEI



152618.00 • Final Report • September 2015

Prepared for:  
**Public Works and  
Government Services  
Canada**

Prepared by:  
  
**CBCL LIMITED**  
Consulting Engineers

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# EXECUTIVE SUMMARY

CBCL Limited (CBCL) was commissioned by Public Works and Government Services Canada (PWGSC) to complete a Quantitative Hazardous Building Materials Survey of a sewage pump station in Brackley, Prince Edward Island (PEI). This work is being completed in conjunction with some upcoming design and renovations proposed for the fall of 2015. The building is located along the west end of the parking area of the Parks Canada, Brackley Beach, PEI.

Survey findings are summarized below.

**Table E.1: Summary of Hazardous Building Materials Survey findings**

Hazardous Material	Findings
Asbestos	Laboratory results by PLM analysis indicate that asbestos is present in one (1) sample analyzed in concentrations greater than 1%. Identified ACMs include a section of wall board (transite board).
Metal Containing Paint (lead, mercury)	Concentrations of metals in paint samples submitted for laboratory analysis were below the referenced guidelines.
Mercury-Containing Materials (excluding paint)	Building materials were visually assessed for the presence of mercury. <ul style="list-style-type: none"> <li>Fluorescent light bulbs which contain mercury vapour were observed in the building.</li> </ul>
Other Lead Containing Material	The building was visually assessed for other lead containing materials. <ul style="list-style-type: none"> <li>Metal pipes were observed throughout the building and associated with the pumping infrastructure could contain lead and lead solder.</li> </ul>
PCB-Containing Materials	Potential sources of PCBs that may exist within the building include electrical equipment such as fluorescent light ballasts. <ul style="list-style-type: none"> <li>Readings taken during the site visit with a ballast discriminator indicate that most of the ballasts in the subject building are magnetic therefore do not contain PCBs; and,</li> <li>A pad mounted transformer is located adjacent to the subject building, this transformer may contain PCBs.</li> </ul>
Mould	Areas within the subject building were visually assessed for signs of apparent fungal (mould) growth. <ul style="list-style-type: none"> <li>No readily visible areas of apparent mould growth were noted.</li> </ul>
Halocarbons	No equipment containing halocarbons, were noted in the building at the time of the Survey.
Radioactive Materials	Smoke/heat detectors, which have the potential of containing a small amount of radioactive material, were not observed in the building.
UFFI	No suspected UFFI or indications of UFFI application were observed in the assessment areas.
Silica	The building has a concrete floor slab and a concrete frost wall. If these materials are cut or broken up during demolition activities, silica dust could be generated.

# INTRODUCTION

CBCL was commissioned by Public Works and Government Services Canada (PWGSC) to complete a Quantitative Hazardous Building Materials Survey of a sewage pump station in Brackley, PEI. This work is being completed in conjunction with some upcoming design and renovations proposed for the fall of 2015. The building is located along the west end of the parking area of the Parks Canada, Brackley Beach, PEI. The following report presents the findings of the Survey completed for the Site building.

**Table 1.1: Building – Background Information**

<i>Building</i>	<i>Location</i>	<i>Year of Construction</i>	<i>Footprint (m<sup>2</sup>)</i>	<i>Floors</i>	<i>Activity</i>	<i>Previous Reports</i>
Sewage Pump Station	Brackley Beach, PEI	1978	13.5	1	Pump house	Alltech asbestos report 1995

The purpose of the Hazmat Survey was to identify and quantify hazardous building materials present (is any) in the building and to provide information regarding appropriate methodologies for handling and disposing of these materials prior to renovation and/or demolition activities.

## 1.1 Building Descriptions

The subject building consists of a 1 storey wood framed construction, unfinished building with a slab on grade serving as a sewage pump house. The exterior finishes of the building consist of unfinished cedar shingles, with painted white trim and matching sloped cedar shingles on the roof. The interior surfaces are unfinished and consisted of open wall cavity with 2" x 4" wood studs and plywood surfaces. The floor finishes consist of a concrete slab.

## 1.2 Scope of Work

As per our proposal, the scope of work for the Survey included the following:

- Review of documentation (i.e., previous Hazmat reports), if available;
- Interviews with personnel familiar with the building and site visit to obtain additional relevant information on any renovations to the building and on the present status and extent of hazardous materials within the building;

- Hazardous Materials (Hazmat) Survey of the subject building, including assessment, sample collection, analyses and quantification of potentially hazardous building materials. The objective of the study is to, as closely as possible, accurately quantify and provide locations of hazardous building materials;
- Submission of samples to accredited laboratories; and,
- Preparation and submission of a report presenting the findings, site-specific professional advice and recommendations for the identified hazardous materials, if encountered.

## METHODOLOGY

### 2.1 Reference Documentation and Legislative Review

A reference list of the applicable guidelines, regulations and other documentation that were used to evaluate the results and make recommendations with regard to this assessment can be found in Chapter 5 of this report. Federal and Provincial acts, regulations and guidelines for the handling, storage, or disposal of hazardous building materials, including the Federal Canada Labour Code, Part II, Canada Occupational Health and Safety Regulation, Part X – Hazardous Substances and the provincial Occupational Health and Safety Act, were reviewed for applicability to determine the requirements for hazardous materials found at the site.

### 2.2 Previous Investigations

A previous report was provided to CBCL to review, ALL-TECH Environmental Services Ltd. completed an asbestos sampling program in 1995.

### 2.3 Site Visit

The Survey was completed on September 2, 2015 by Scott Cail, CET of CBCL.

The subject building was observed for the types of building materials present and their potential for containing hazardous materials. The Survey was not intrusive in nature, as the sampling program consisted of collecting representative samples of suspected hazardous materials in readily visible locations. In each sample location, the type of material, its general condition and location were noted and photographs were taken.

### 2.4 Hazardous Building Materials

The following hazardous building materials were assessed during the survey.

#### 2.4.1 Asbestos-Containing Materials

##### 2.4.1.1 BULK ASBESTOS

Representative samples of building materials that could potentially contain asbestos were collected from the subject building. Samples were collected by hand or using appropriate tools, and were then placed in sealed plastic bags for transport to the laboratory. Each sampling location was sprayed with water prior to disturbing the material to reduce the release of dust into the air, if required.

Sample locations were covered with appropriate building materials to eliminate the exposure pathway to a disturbed area of potential asbestos (if required), labelled and photographed.

#### **2.4.1.2 VERMICULITE**

The building was visually assessed for the presence of apparent vermiculite. Areas of potential vermiculite were identified and noted, if present.

#### **2.4.2 Paint**

Representative paint samples were collected from the building. Paint samples were collected by removing a representative area of paint, including older paint layers when present, and substrate where possible, and placing them in a sealed plastic bag for transport to the laboratory. Sample locations were covered or patched to eliminate the exposure pathway to an area of potential concern (if required), labelled and photographed.

#### **2.4.3 Lead**

Suspected lead piping or metal pipes with leaded joints or solder were noted in the building if present. Emergency lights with lead-acid batteries were noted, if present.

#### **2.4.4 Mercury**

Thermostats, switches and fluorescent bulbs, which could potentially contain mercury, were noted, if present, in the subject building. Sampling or specific testing for mercury was not performed.

#### **2.4.5 Polychlorinated Biphenyls (PCBs)**

Potential PCB containing materials such as fluorescent light ballasts were noted if present in the subject building.

#### **2.4.6 Mould**

Evidence of mould or serious water damage was noted during the Survey, if present. Sampling or specific testing for mould was not included in the scope of work.

#### **2.4.7 Halocarbons**

A visual assessment was conducted for refrigerators, coolers, HVAC units and any other items that could contain halocarbons within the subject building.

#### **2.4.8 Other Hazardous Materials**

##### **2.4.8.1 UREA-FORMALDEHYDE FOAM INSULATION (UFFI)**

A visual inspection was conducted for the presence of UFFI insulation in the building. Sampling or specific testing for UFFI was not included in this scope of work.

##### **2.4.8.2 RADIOACTIVE MATERIALS**

Potential radioactive materials (e.g., smoke detectors) were noted in the building, if present. Radon was not sampled as part of this Survey.

#### 2.4.8.3 SILICA

Areas containing cement products that would be subject to cutting or disturbance during any future demolition activities were noted.

## LABORATORY ANALYSIS

### 3.1 Asbestos Samples

Bulk samples collected for asbestos analyses were sent to EMSL Canada Inc. in Mississauga, ON, Canada. EMSL Canada Inc. is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) for the analysis of bulk samples of asbestos. TEM analysis was conducted for non-friable, organically bound samples, as well as PLM EPA 600/R-93/116. Results of the analytical testing are presented in Chapter 4.

### 3.2 Paint Samples

Paint samples were sent to AGAT Laboratories in Dartmouth, Nova Scotia and were submitted for analysis of available and leachable lead, available and leachable mercury. AGAT is accredited by the Standards Council of Canada (SCC) and the Canadian Association for Laboratory Accreditation (CALA). Results of the analytical testing are presented in Chapter 4.

## FINDINGS & RECOMMENDATIONS

The findings of the Quantitative Hazardous Materials (Hazmat) Survey conducted at Brackley, PEI are presented below.

Sample locations are shown on Figure 1 in Appendix A. A summary of the asbestos and paint samples, the results of the analytical testing, including estimated quantity and condition of the confirmed hazardous materials and the recommendations are presented in Tables 1 (Asbestos) and 2 (Metal-Containing Paints and Coatings), Appendix B. Laboratory certificates are presented in Appendix C.

Site photographs are presented in Appendix D.

### 4.1 Asbestos

The Hazmat Survey included a review of suspected friable and non-friable ACMs. ACMs are defined as materials containing asbestos fibres or asbestos dust in a concentration greater than 1% asbestos by weight. The term friable is applied to a material that can be readily reduced to dust or powder by hand pressure. The term potentially friable is applied to a material that is generally non-friable in place but which has the potential to generate dust upon removal or if significantly damaged or disturbed. ACMs that are friable have a much greater potential to release airborne asbestos fibers when disturbed.

#### 4.1.1 Regulatory Requirements

Provincial regulations regarding ACMs distinguish between friable and non-friable materials when assigning appropriate work practices. Where friable materials are identified containing asbestos in any concentration and there is the possibility of the release of asbestos fibres posing an occupational health and safety or environmental exposure, the material must be treated as an ACM for demolition purposes. Non-friable materials with concentrations of asbestos that are less than 1% are not considered to be an ACM. Following removal, materials containing asbestos must be disposed of at an approved facility with prior approval from the facility operator. All disposal must comply, in accordance with the Prince Edward Island Regulatory & Appeals Commission, Environmental Protection Act, Waste Resource Management Regulations (September 2014).

#### **4.1.2 Findings**

A total of four (4) samples (AS-01-BRA to AS-04-BRA) of suspected asbestos containing materials were collected and submitted for laboratory analysis. Sampled materials included wall board, insulator wrap, gasket material and tar paper roofing material.

Laboratory results by PLM and TEM analysis indicate that asbestos is present in one (1) sample analyzed in concentrations greater than 1%. Identified ACMs include a section of wall board (transite). As such, this wall board should be managed as an asbestos containing material during demolition activities. CBCL's asbestos survey findings are summarized in Table1, Appendix A.

The following approximate quantities of asbestos containing materials were identified by the HAZMAT Survey:

- Two panels of wall board approximately 1.6 m<sup>2</sup> (transite) was identified. CBCL would recommend that the two sections of transite board be removed prior to demolition and be managed as asbestos containing.

#### **4.1.3 Recommendations**

In accordance with the Federal Canada Labour Code, Part II, Canada Occupational Health and Safety Regulation, Part X – Hazardous Substances and the provincial Occupational Health and Safety Act, appropriate precautions must be implemented to manage any ACMs during repair, as well as during renovation or demolition activities to reduce the potential for the release of airborne asbestos fibres. The specific level of precautions (Type 1, Type 2, or Type 3) to be implemented depends on the type of ACM (friable/non-friable), the quantity of material and the repair/removal method.

Contractors must implement appropriate health and safety precautions that meet all applicable legislation when working with materials that contain asbestos (at any concentration). These precautions will include donning appropriate personal protective equipment (PPE) and the use of appropriate health and safety measures suitable to mitigate exposure to asbestos. Following removal, materials containing asbestos must be appropriately packaged, transported and disposed of at an approved facility with prior approval from the facility operator.

## **4.2 Metal Containing Paint and Coatings (MCP/C)**

Metals were used as a primary ingredient in many interior and exterior paints and surface coatings from the early 1900s to the late 1970s. Health Canada has indicated that MCP/Cs require special precautions for sensitive individuals, particularly if the paint is in poor condition and is peeling.

#### **4.2.1 Regulatory Requirements**

Hazardous substances are also covered under the *Hazardous Products Act* and the *Transportation of Dangerous Goods Act*. Worker exposure to hazardous materials is covered under the Workers Compensation Board (WCB) which regulates the Occupational Health and Safety Act in Prince Edward Island.

#### 4.2.1.1 LEAD

##### **Lead**

Lead containing materials in Prince Edward Island are governed by the following provincial codes and guidelines: Prince Edward Island Regulatory & Appeals Commission, Environmental Protection Act, and Waste Resource Management Regulations (September 2014). The regulation states lumber or wood covered in a protective coating containing concentrations of lead that does not pass a lead leachate test, must not be disposed of at a C&D facility.

It should be noted that definitions of lead based surface coatings vary in Canada. In 2010, the *Surface Coatings Materials Regulation* (SOR/2005-109) made under the Canadian Hazardous Products Act imposed restrictions on paints that have a concentration above 90 mg/kg of lead by weight with several exceptions noted (e.g., anti-corrosive or anti-weathering coatings, touch up coatings for metal surfaces, traffic signs, etc.). This does not specifically address surface coatings on existing surfaces.

The U.S. Housing and Urban Development defines a lead-based paint as a paint or surface coating that contain lead equal to or exceeding 1.0 mg per square cm or 0.5 percent by weight or 5,000 ppm by weight.

It is possible that any concentration of lead in a surface coating can be hazardous depending on the methods used to remove it. As such it is important that appropriate precautions and PPE be utilized that are appropriate for the method of disturbance (e.g., scraping versus grinding). The American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) for worker exposure to lead (expressed as a time-weighted average), is 0.05 mg/m<sup>3</sup>. This is considered to be the concentration of a substance to which most workers can be exposed without adverse effects.

For disposal purposes in Prince Edward Island, materials with well adhered paint (i.e., not flaking or peeling) with total (available) lead concentrations below 1000 mg/kg can be disposed of at a Regional Sanitary Landfill. Paint with a lead concentrations above 1000 mg/kg and exceeding lead leachate concentration >5 mg/L must be disposed of as hazardous waste. There are currently no Hazardous waste facilities in Prince Edward Island. Paint that is well adhered to a metal substrate can be sent for metal recycling. It is recommended that prior to disposal of metal containing paint, approval from facility operators be obtained.

#### 4.2.1.2 MERCURY

In 2010, the *Surface Coatings Materials Regulation* (SOR/2005-109) made under the *Canadian Hazardous Products Act* imposed restrictions on paints that have a concentration above 10 mg/kg of mercury by weight.

It is possible that any concentration of mercury in a surface coating can be hazardous depending on the methods used to remove it. As such it is important that appropriate precautions and PPE be utilized that are appropriate for the method of disturbance (e.g., scraping versus grinding). The American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) for worker exposure to mercury is 0.025 mg/m<sup>3</sup>.

For disposal purposes, paints have been initially screened by comparison of available mercury concentrations to the CCME Soil Quality Guidelines for industrial land use (50 mg/kg).

Those that exceed this criterion have been submitted for leachate analysis. PEI *has adopted the leachate extraction test regulated by Environment Canada – Exports and Imports of Hazardous Waste and Hazardous Recyclable Material Regulations (EIHWHRM)*. If leachate results indicate the concentration of mercury leachate is above the allowable 0.1 mg/L, the paint must be disposed of at an approved hazardous waste facility (none currently present in PEI). Paint in with a leachable mercury concentration below 0.1 mg/L may be disposed of at a Regional Sanitary landfill with prior approval from the facility operator.

Metal containing paint that is well adhered to a metal substrate can be sent for metal recycling together with its substrate.

#### **4.2.2 Findings**

Two (2) paint samples (P-01-BRA and P-02-BRA) were collected from the subject building. Sample P-01-BRA consisted of white paint from exterior wood trim. Sample P-02 consisted of a grey paint with a white underlain on the pump infrastructure. Paint samples were collected and submitted for laboratory analysis of acid extractable (available) lead and mercury. Concentrations of metals were below the referenced guidelines for both samples.

#### **4.2.3 Recommendations**

When removing metal containing paint, a hazard evaluation must be conducted to determine if the removal method could expose the workers to paint with elevated metals or dust. Workers must implement health and safety precautions that result from the hazard evaluation and that meet all appropriate legislation. Depending on the removal method, these precautions may include donning appropriate personal protective equipment (PPE) and use of appropriate health and safety measures suitable to mitigate exposure to metals. Materials painted with these paints can be disposed of at a C&D Landfill following removal.

### **4.3 Other Lead**

Metal pipes were observed throughout the building and associated with the pumping infrastructure could contain lead and lead solder. This lead solder should be sent for metal recycling, together with the pipe, rather than disposal at the time of removal.

### **4.4 Other Mercury**

Potential sources of mercury (other than paint) that may exist within the building include light bulbs and thermostats.

Fluorescent light bulbs, which contain mercury vapour, were observed in the building. No other mercury containing equipment was noted during the site visit.

Removal and disposal of equipment containing mercury must be completed in accordance with applicable provincial and federal guidelines. At the time of removal, bulbs containing mercury must be removed and disposed of intact (unbroken) at an approved recycling facility.

#### **4.5 PCBs**

Potential sources of PCBs that may exist within the building include fluorescent light ballasts.

Ballasts in light fixtures were screened at the time of the site visit with the use of a ballast discriminator. This device is used to remotely distinguish between magnetic ballasts, which may contain PCB's, and electronic ballasts, which do not. Readings taken indicate that the ballasts in the building were electronic and not magnetic and therefore would not contain PCBs.

It should be noted a pad mounted transformer was observed adjoining the subject building, if during demolition activities the transformer is to be removed or relocated, information on the transformer and its contents should be obtained from the utility provider.

Any PCB-containing materials must be removed in accordance with the provincial PCB Management Regulations and the federal PCB Regulations. Prince Edward Island landfills do not accept PCB-containing materials. PCB-containing materials must be disposed of at an approved hazardous waste disposal facility.

#### **4.6 Mould**

Areas within the subject building were visually assessed for signs of apparent fungal (mould) growth. No readily visible areas of apparent mould growth were noted.

Mould affected materials identified during any future renovations or demolition activities must be removed by a qualified contractor in accordance with practices described in the Canadian Construction Association's Guidelines for Mould Remediation. Areas of water leaks/ingress should be repaired to prevent the potential for future mould growth.

#### **4.7 Halocarbons**

No equipment containing halocarbons, were noted in the building at the time of the Survey.

Equipment suspected of containing halocarbons must have the halocarbons recovered by a qualified contractor prior to disposal.

#### **4.8 Radioactive Materials**

##### **4.8.1 Radon**

No sampling for radon gas was conducted as part of this Survey.

##### **4.8.2 Other Sources of Radiation**

No equipment containing potential sources of radioactive materials, were observed in the building.

The Canadian Nuclear Association states that there "is no need for any special care in the disposal of used smoke detectors. They can be safely included with other household waste for disposal."

#### **4.9 Urea-Formaldehyde Foam Insulation (UFFI)**

No suspected UFFI or indicators of UFFI applications were observed in the building.

#### **4.10 Silica**

The building has a concrete floor slab as well as concrete frost walls. If these materials are cut or broken up during the demolition activities, silica dust could be generated.

Workers must implement appropriate health and safety precautions that meet all applicable legislation. These precautions may include donning appropriate personal protective equipment (PPE) and use of appropriate health and safety measures suitable to mitigate silica dust exposure. The Ontario Guideline- *Silica on Construction Projects* may be referenced for appropriate procedures to implement during removal of concrete.

## CONCLUSIONS AND RECOMMENDATIONS

CBCL Limited was commissioned by Public Works and Government Services Canada (PWGSC) to complete a Quantitative Hazardous Building Materials Survey of a sewage pump station in Brackley, PEI. This work is being completed in conjunction with some upcoming design and renovations proposed for the fall of 2015. The building is located along the west end of the parking area of the Parks Canada, Brackley Beach, PEI.

Survey findings are summarized below along with CBCL's recommendations.

**Table 6.1: Summary of Hazardous Building Materials Survey Findings with Conclusions and Recommendations.**

Hazardous Material	Conclusions and Recommendations
Asbestos	<p>Laboratory results by PLM analysis indicate that asbestos is present in one (1) sample analyzed in concentrations greater than 1%. Identified ACMs include a section of wall board (transite).</p> <p>Contractors must implement appropriate health and safety precautions that meet all applicable legislation when working with materials that contain asbestos (at any concentration). These precautions will include donning appropriate personal protective equipment (PPE) and the use of appropriate health and safety measures suitable to mitigate exposure to asbestos. Following removal, materials containing asbestos must be appropriately packaged, transported and disposed of at an approved facility with prior approval from the facility operator.</p>
Metal Containing Paint (lead and mercury)	<p>Concentrations of metals in paint samples submitted for laboratory analysis (P-01-BRA and P-02-BRA) were below the referenced guidelines.</p>
Mercury-Containing Materials (excluding paint)	<p>Building materials were visually assessed for the presence of mercury.</p> <ul style="list-style-type: none"> <li>Fluorescent light bulbs which contain mercury vapour were observed in the building.</li> </ul> <p>Disposal of equipment containing mercury must be completed in accordance with applicable provincial and federal guidelines. At the time of removal, bulbs containing mercury must be removed and disposed of intact (unbroken) at an approved recycling facility.</p>
Other Lead containing Materials	<p>The building was visually assessed for other lead containing materials.</p> <ul style="list-style-type: none"> <li>Metal pipes were observed throughout the building and associated</li> </ul>

Hazardous Material	Conclusions and Recommendations
	<p>with the pumping infrastructure could contain lead and lead solder. This lead solder should be sent for metal recycling, together with the pipe, rather than disposal at the time of removal.</p>
PCB-Containing Materials	<p>Potential sources of PCBs that may exist within the building include electrical equipment such as fluorescent light ballasts.</p> <ul style="list-style-type: none"> <li>• Readings taken during the site visit with a ballast discriminator indicate that all of the ballasts in the subject building are magnetic and therefore do not contain PCBs;</li> <li>• A pad mounted transformer is located adjacent to the subject building, this transformer may contain PCB.</li> </ul> <p>Any PCB-containing materials must be removed in accordance with the provincial PCB Management Regulations and the federal PCB Regulations. Prince Edward Island landfills do not accept PCB-containing materials. PCB-containing materials must be disposed of at an approved hazardous waste disposal facility.</p>
Mould	<p>Areas within the subject building were visually assessed for signs of apparent fungal (mould) growth.</p> <ul style="list-style-type: none"> <li>• No readily visible areas of apparent mould growth were noted.</li> </ul> <p>Mould affected materials identified during any future renovations or demolition activities must be removed by a qualified contractor in accordance with practices described in the Canadian Construction Association's Guidelines for Mould Remediation.</p>
Halocarbons	<p>No equipment containing halocarbons, were noted in the building at the time of the Survey.</p>
Radioactive Materials	<p>Smoke/heat detectors, which have the potential of containing a small amount of radioactive material, were observed in the building.</p>
UFFI	<p>No suspected UFFI or indications of UFFI application were observed in the assessment areas.</p>
Silica	<p>The building has concrete floor slab and a concrete frost wall. If these materials are cut or broken up during demolition activities, silica dust could be generated.</p> <p>Workers must implement health and safety precautions that meet all appropriate legislation. These precautions may include donning appropriate personal protective equipment (PPE) and use of appropriate health and safety measures suitable to mitigate silica dust exposure.</p>

## LIMITATIONS

The results presented in this report are indicative of the observations recorded and samples collected at the time and place noted in this report. Every effort was made to collect samples which were representative of potential hazardous building materials. Intrusive sampling was completed during the Survey in select locations, and while there is no evidence to suggest otherwise, it is possible that hidden hazardous materials may not have been sampled during the Survey. It is possible that asbestos fibres are not evenly distributed in a material and therefore the results of this Survey are thought to be indicative of other similar materials but may not be entirely identical. The opinions contained in this report are based upon accepted professional principals but should not be interpreted as legal advice or as a guarantee or warranty regarding potential liability associated with conditions at this site.

This report has been prepared for the sole benefit of Public Works and Government Services Canada (PWGSC) and cannot be used or relied upon by any other entity without the express written permission of PWGSC and CBCL Limited. The information contained in this report is not intended to serve as legal or medical advice.

If any conditions become apparent that differ significantly from our understanding of conditions as presented in this report, we request that we be notified immediately to reassess the conclusions provided herein.

The primary author of this report was Scott Cail, CET and it was reviewed by Jean-Charles Cormier, PTech

Respectfully submitted,

CBCL Limited



Reviewed by:  
Jean-Charles Cormier, PTech  
Senior Project Manager  
Telephone: (506) 858-2400  
E-Mail: jccormier@cbcl.ca



Scott Cail, CET  
Senior Environmental Technologist  
Telephone: (506) 858-2400  
E-Mail: scail@cbcl.ca

*Prince Edward Island Regulatory & Appeals Commission, Environmental Protection Act, Waste Resource Management Regulations (September 2014).*

*Canada Labour Code, R.S.C., 1985, C.L-2, <http://laws-lois.justice.gc.ca/eng/acts/L-2/FullText.html>*

*Canada Occupational Health and Safety Regulations, Part X, Hazardous Substances, SOR/2002-208, S.43(F), Canada Labour Code, <http://laws-lois.justice.gc.ca/eng/regulations/SOR-86-304/page-44.html>*

*Canadian Council of Ministers of the Environment. 2001. Canada Wide Standards on Fluorescent Lamps Containing Mercury. [http://www.ccme.ca/assets/pdf/merc\\_lamp\\_standard\\_e.pdf](http://www.ccme.ca/assets/pdf/merc_lamp_standard_e.pdf)*

*Canadian Environmental Protection Act. 1999. c. 33 <http://laws.justice.gc.ca/en/C-15.31/index.html>*

*Canadian Hazardous Products Act. R.S. 1985. c H-3 <http://laws.justice.gc.ca/en/H-3/index.html>*

*Canadian Interprovincial Movement of Hazardous Waste Regulations. 2002. <http://laws.justice.gc.ca/en/C-15.31/SOR-2002-301/text.html>*

*Canadian Transportation of Dangerous Goods Act. 1992. c. 34 [http://www.tc.gc.ca/acts-regulations/GENERAL/T/tdg/regulations/tdg001/part\\_1.htm](http://www.tc.gc.ca/acts-regulations/GENERAL/T/tdg/regulations/tdg001/part_1.htm)*

*Environment Act. 1998. c. 18, s. 557; 2001. c. 6, s. 103 <http://www.gov.ns.ca/legislature/legc/statutes/envromnt.htm>*

*Environment Canada. 1991. Environmental Protection Series. Identification of Lamp Ballasts Containing PCBs. Report EPS 2/CC/2 (revised) [http://www.ec.gc.ca/pcb/pdf/PCB23\\_e.pdf](http://www.ec.gc.ca/pcb/pdf/PCB23_e.pdf)*

*Environment Canada. 2002. Federal Programs Division Federal Facilities Mercury Info-guide. <http://www.on.ec.gc.ca/pollution/fpd/merc/merc-1000-e.html>*

*Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations. 2005. (SOR/2005-149) <http://laws.justice.gc.ca/eng/SOR-2005-149/index.html>*

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Identification of Lamp Ballasts Containing PCBs" (EPS2/CC/2. August 1991). <http://www.ec.gc.ca/publications/F1D91988-3B5E-4956-A705-78D054685FFE/IdentificationofLampBallastsContainingPCBsPart1.pdf>

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Ontario Ministry of Labour. April 2011. *Lead on Construction Projects.* <http://www.labour.gov.on.ca/english/hs/pubs/lead/>

*PCB Regulations.* 2008. (C-15.31 -- SOR/2008-273). <http://laws.justice.gc.ca/eng/SOR-2008-273/index.html>

*Surface Coating Materials Regulations (latest version).* 2010. SOR/2010-224. <http://www.canlii.org/en/ca/laws/regu/sor-2005-109/latest/sor-2005-109.html>

## APPENDIX A

# Figures



TRANSFORMER

D

P-02-BRA

AS- 11-BR.



P-01-BRA



AS-03

AS-0 -BRA

AS-04-8 J

## LEGEND

- AS-XX SAMPLE LOCATION
- ... AS-XX SAMPLE LOCATION > 1% ASBESTOS
- PS-XX PAINT SAMPLE LOCATION

## NOTES:

1. BUILDING SIZES AND LOCATIONS ARE APPROXIMATE ONLY.

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QUANTITATIVE HAZARDOUS BUILDING MATERIAL SURVEY  
BRACKLEY BEACH, PEI

Figure

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Consulting Enginaars  
ISO 9001CERTIFIED

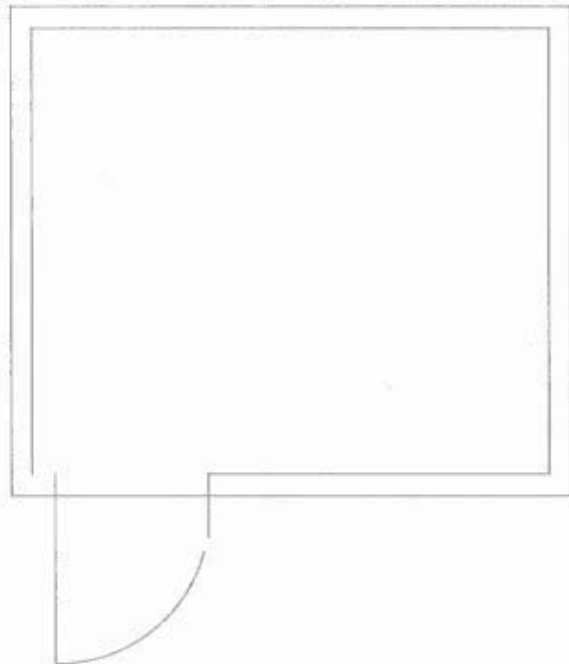
SIIE LOCA110N

1

CAD OPERATOR:

DATE: September

LAYOUT NAME: FIG



# Hazardous Materials Summary Tables

**CBCL Limited Project No. 152618.00**

**TABLE 1: ASBESTOS CONTAINING MATERIALS**

**Building:** Sewage Pump Station

**Location:** Brackley Beach, PEI

Sample #	Location	Description, Condition	Friable/Non-Friable	Asbestos Present, Total % Asbestos		Estimated Quantities
				Guideline - 1% <sup>1</sup>		
				15% Chrysotile		
AS-01-BRA	Sewage pump station - interior east wall	Wall Board	Non-Friable			Estimated 1.6 sq meters
AS-02-BRA	Sewage pump station - interior east wall	Canvas wrap	Non-friable		NAD	N/A
AS-03-BRA	Sewage pump station - pump central portion	Gasket material	Non-friable		NAD	N/A
AS-04-BRA	Sewage pump station - exterior south west corner	Tar paper roofing	Non-Friable		NAD	N/A

**Legend:**

<sup>1</sup> Prince Edward Island Regulatory & Appeals Commission, Environmental Protection Act, Waste Resource Management Regulations (September 2014). Asbestos containing material to be one which contains one per cent or more by volume of asbestos.

**Bold and Shaded result is above the referenced guideline.**

NAD – no asbestos detected

N/A – not applicable due to NAD result

CBCL Limited Project No. 152618.00

TABLE 2: METAL CONTAINING PAINTS/COATINGS

Building: Sewage Pump Station

Location: Brackley Beach, PEI

Sample #	Location, Description, Condition	Metals	Lead	Mercury	Estimated Quantity
		Units	mg/kg	mg/kg	m <sup>2</sup>
				10 <sup>1</sup>	
		Guideline	1000 <sup>1,2</sup>	50 <sup>2</sup>	-
P-01-BRA	White paint on exterior trim		130	1.84	-
P-02- BRA	Grey Paint on pump infrastructure		266	0.19	-

Notes:

<sup>1</sup> Surface Coating Materials Regulation(referenced health and safety)

<sup>2</sup> CCME Interim Soil quality Criterion (1991)

**Bold indicates the concentration exceeds the referenced health and safety guideline**

**Bold and Underlined indicates the concentration exceeds the C&D landfill disposal guideline**

**Shaded indicates the concentration exceed the Regional Sanitary Landfill disposal guideline; paint is leachate hazardous**

**Note:** C&D landfills in Prince Edward Island do not accept metal containing paint flakes for disposal. These must be sent to a regional sanitary landfill, with operator approval.

N/A – Not analyzed

N/Q – Not Quantified

APPENDIX C

# Laboratory Certificates

**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 551509513  
Customer 10: 55CBCM34  
Customer PO: 152618.00  
Project 10:

Attn: JC Cormier  
CBCL Ltd.  
68 Highfield Street  
Moncton, NB E1C 5N3

Phone: (506) 858-2400  
Fax: (506) 858-2405  
Collected:  
Received: 9/04/2015  
Analyzed: 9/10/2015

Proj: 152618.00

**Test Report: Asbestos Analysis of Bulk Materials for New Brunswick Regulation 92-106 via  
EPA600/R-93/116 Method**

Client Sample ID						Lab Sample ID	551509513-4001
Sample Description							
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment	
			Fibrous	Non-Fibrous			
Client Sample ID	2						Lab Sample ID 551509513-4002
Sample Description							
TEST	Analyzed		Non-Asbestos		Asbestos	Comment	
PLM			Fibrous	Non-Fibrous			
Client Sample ID	3						Lab Sample ID 551509513-4003
Sample Description	AS-01-BRAI WALL BOARDS						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment	
PLM	9/10/2015	Gray	Fibrous	Non-Fibrous			
Client Sample ID	4						Lab Sample ID 551509513-4004
Sample Description	AS-04-BRA/TAR PAPER ROOF						
TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment	
PLM	9/10/2015	Black	Fibrous	Non-Fibrous			
			75%	25%	None Detected		

Analyst(s):

Natale D'Amico PLM (4)

Reviewed and approved by:



Matthew Davis  
or Other Approved Signatory

None Detected = <1%. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 200877-0  
(Initial report from: 09/10/2015 09:47:51)

Test Report: EPAMultiTests-7 32.2.0 Printed: 9/10/2015 09:47AM

# 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](mailto:torontolab@emsl.com)

EMSL Canada Order 551509511

Customer PO: 152618.00  
 Customer 10: 55CBM34

Project ID:

Attn: JC Cormier  
 CBCL Ltd.  
 68 Highfield Street  
 Moncton, NB E1C 5N3

Phone: (506) 858-2400  
 Fax: (506) 858-2405  
 Collected:  
 Received: 9/04/2015  
 Analyzed: 9/10/2015

Proj: 152618.00

## Test Report: Asbestos Analysis of Bulk Materials for New Brunswick Regulation 92-106 via EPA600/R-93/116 Method

Client Sample ID:

Lab Sample ID: 551509511-0001

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav. Reduction						

Client Sample ID: 2

Lab Sample ID: 551509511-0002

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav.Reduction						

Client Sample ID: 3

Lab Sample ID: 551509511-0003

Sample Description: AS-05-CAV/CAULKING

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav. Reduction						

Client Sample ID: 4

Lab Sample ID: 551509511-0004

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav. Reduction						

Client Sample ID: 5

Lab Sample ID: 551509511-0005

Sample Description: AS-02-BRA/WRAP

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav.Reduction	9/10/2015	Clear	0.0%	100%	None Detected	

Client Sample ID: 6

Lab Sample ID: 551509511-0006

Sample Description: AS-03-BRA/GASKETTE MATERIAL

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav.Reduction	9/10/2015	Red	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](mailto:torontolab@emsl.com)

EMSL Canada Order	551509511
Customer ID:	55CBCM34
Customer PO:	152618.00
Project ID:	

### Test Report: Asbestos Analysis of Bulk Materials for New Brunswick Regulation 92-106 via EPA600/R-93/116 Method

---

#### Analyst(s):

Jon Delos Santos TEM Grav. Reduction (6)

#### Reviewed and approved by:



Matthew Davis  
or Other Approved Signatory

None Detected = <1% EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government.

Samples analyzed by EMSL Canada Inc. Mississauga, ON NVLAP Lab Code 201877-0

Test Report from 09/10/2015 21:51:29

Test Report EPAMukTest& 7 32 2 0 Printed 9/10/2015 09:51 PM



@GJIT

Laboratories

### Chain of Custody Record

#### Report Information

Company: GFLI  
Contact: ---C  
Address: CO

VOY "r-l" NB

Phone: (-) 400 8<8-24  
AGAT Quotation: CBCL  
Client Project#: ID 200000

#### Report Information (Please print).

1. Name: fC Co' (r)r' vif  
Email: C-o-r' (r) (r) QX> < l.co

2. Email: PK z X-GG\oc\co

#### Regulatory Requirements (Check):

☐ Don't list Guidelines on Report

Regulatory Requirements (Check):  
☐ Don't list Guidelines on Report

Regulatory Requirements (Check):  
☐ Don't list Guidelines on Report

Regulatory Requirements (Check):  
☐ Don't list Guidelines on Report

Company: WIT  
Contact: WIT  
Address: WIT

Phone: FAV  
PO/Credit Card#

Sample Identification

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Containers

Comments - Site/Sample Info  
Sample Container Info

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**@@@1J Laboratories**

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

CLIENT NAME: CBCL LTO  
68 HIGHFIELD ST. SUITE 100  
MONCTON, NB E1C5N3  
(506) 858-2400

ATTENTION TO: JC Cormier

PROJECT: 152618.00

AGAT WORK ORDER: 15X015414

SOIL ANALYSIS REVIEWED BY: Laura Baker, Inorganics Data Reporter

DATE REPORTED: Sep 08, 2015

PAGES (INCLUDING COVER): 7

VERSION: 1

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



All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

**AGAT** Laboratories (V1)

Member of Association of Professional Engineers and Geoscientists of Alberta (APEGA)  
Western Environmental Laboratory Association (WELA)  
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from [www.cala.ca](http://www.cala.ca) and/or [www.scc.ca](http://www.scc.ca). The tests in this report may not necessarily be included in the scope of accreditation.

Results relate only to the items tested and to all the items tested  
All reportable information as specified by ISO 17025:2005 is available from AGAT Laboratories upon request

Page 1 of 7



**GJ@GJJ** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 15X015414

PROJECT: 152618.00

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: CBCL LTO

SAMPLING SITE:

ATTENTION TO: JC Connor

SAMPLED BY:

Lead In Paint				DATE RECEIVED: 2015-09-04	DATE REPORTED: 2015-09-08
DESCRIPTION:		P-01-BRA		Paint	
SAMPLE TYPE:		P-02-BRA		Paint	
DATE SAMPLED:		9/2/2015		9/2/2015	
GIS		6933296		6933298	
RDL		266		130	
Unit		mg/kg		g	
Parameter		0.6394		0.6268	
Lead		15		130	
Total Sample Mass		g		0.6394	

Comments: RDL - Reported Detection Limit; GIS - Guideline / Standard

/ pak--

**Certified By:**



**@@@ Laboratories**

## Certificate of Analysis

AGAT WORK ORDER: 15X015414  
PROJECT: 152618.00

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

CLIENT NAME: CBCL LTO

SAMPLING SITE:

ATTENTION TO: JC Cormier  
SAMPLED BY:

Mercury Analysis in Paint						
DATE RECEIVED: 2015-09-04		DATE REPORTED: 2015.09.08				
Parameter	Unit	SAMPLE DESCRIPTION:				
		SAMPLE TYPE	Paint	P-02-BRA	P-01-BRA	
		DATE SAMPLED:	9/2/2015	Paint	912/2015	Paint
		GIS	6933295	91212015	6933298	
		RDL	0.05	6933296	0.19	1.84
Mercury	mg/kg					

Comments: RDL - Reported Detection Limit; GIS - Guideline / Standard

**Certified By:**

/ 17



**@@@1J** Laboratories

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

## Quality Assurance

CLIENT NAME: CBCL LTO

PROJECT: 152618.00

SAMPLING SITE:

AGAT WORK ORDER: 15X015414

ATTENTION TO: JC Cormier

SAMPLED BY:

Soil Analysis															
RPT Date: Sep 08, 2015			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															
Lead	9042015	6933298	130	132	1.5%	<15	107%	70%	130%	108%	70%	130%	95%	70%	130%
Mercury Analysis in Paint															
Mercury		6933298	1.17	1.15	1.7%	<0.05	95%	70%	130%		70%	130%	97%	70%	130%

**Certified By:**

*Laura Bala*

**AGAT** QUALITY ASSURANCE REPORT (V1)

Page 4 of 7

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Results relate only to the items tested and to all the items tested.



**J@JLJ** Laboratories

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

## Method Summary

CLIENT NAME: CBCL TO

AGATWORK ORDER: 15X015414

PROJECT: 152618.00

ATTENTION TO: JC Cormier

SAMPLING SITE:

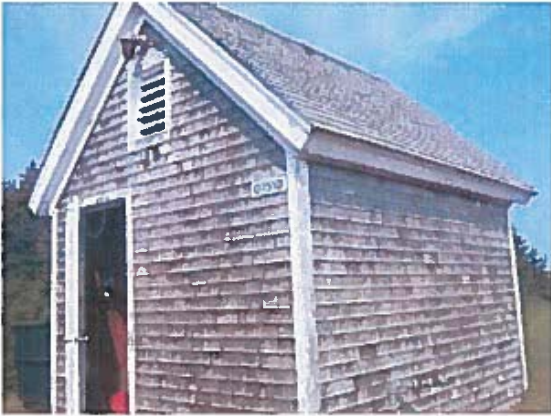
SAMPLED BY:

PARAMETER	AGATS.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
lead	MET-121-6105 & MET-121-6103	EPA SW 846 6020A/30508, SM3125, ICP/MS AOAC974.02	
Total Sample Mass			
Mercury	INOR-121-6101 & INOR-121-6107	Based on EPA 245.5 & SM 31128	CV/AA

## APPENDIX D

# Photographs

**Photo Log - Hazardous Building Material Survey – Brackley Beach, PEI**



**Photo 1: Subject building.**



**Photo 2: Photo of sample AS-01-BRA, two sections of wall board (containing 15% chrysotile).**



**Photo 3: Photo of sample AS-02-BRA, canvas covering over some former electrical components.**



**Photo 4: Photo of sample AS-03-BRA, gasket material on a pipe flange.**



**Photo 5: Photo of sample AS-04-BRA, tar paper roof, under shingles.**



**Photo 6: Photo of paint sample P-01-BRA, white exterior paint.**

**Photo Log - Hazardous Building Material Survey – Brackley Beach, PEI**



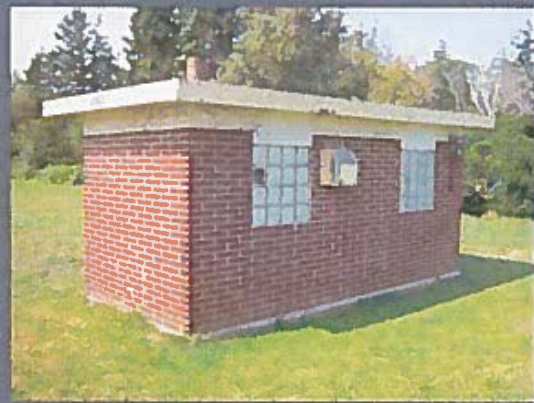
**Photo 7– Photo of paint sample P-02-BRA, grey pump paint.**



**Photo 8 – Photo of typical lighting.**

# **Hazardous Building Materials Survey**

## Cavendish Campground Sewage Pumping Station, PEI



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Prepared for:  
**Public Works and  
Government Services  
Canada**

Prepared by:  
**CBCL**  
**CBCL LIMITED**  
Consulting Engineers

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# EXECUTIVE SUMMARY

CBCL Limited (CBCL) was commissioned by Public Works and Government Services Canada (PWGSC) to complete a Quantitative Hazardous Building Materials Survey of a sewage pump station in Cavendish, Prince Edward Island. This work is being completed in conjunction with some upcoming design and renovations proposed for the fall of 2015. The building is located in the central portion of the Parks Canada campground, Cavendish, PEI.

Survey findings are summarized below.

**Table E.1: Summary of Hazardous Building Materials Survey findings**

Hazardous Material	Findings
Asbestos	Laboratory results by PLM analysis indicate that asbestos is present in one (1) sample analyzed in concentrations greater than 1%. The identified ACM was a gasket material collected from the pumping infrastructure.
Metal Containing Paint (lead, mercury)	Paint sample (PS-01-CAV) has been determined to be lead leachate hazardous and in found to be in poor condition.
Mercury-Containing Materials (excluding paint)	Building materials were visually assessed for the presence of mercury. <ul style="list-style-type: none"> <li>No Fluorescent light bulbs or thermostats which contain mercury vapour were observed in the building.</li> </ul>
Other Lead Containing Material	The building was visually assessed for other lead containing materials. <ul style="list-style-type: none"> <li>Metal pipes were observed throughout the building and associated with the pumping infrastructure could contain lead and lead solder.</li> </ul>
PCB-Containing Materials	Potential sources of PCBs that may exist within the building include electrical equipment such as fluorescent light ballasts. <ul style="list-style-type: none"> <li>The site building was assessed presence of electrical equipment that could contain PCBs. Electrical equipment in the building appeared to be newer and there was no indication of the presence of PCBs. No fluorescent light fixtures were observed.</li> </ul>
Mould	Areas within the subject building were visually assessed for signs of apparent fungal (mould) growth. <ul style="list-style-type: none"> <li>No readily visible areas of apparent mould growth were noted.</li> </ul>
Halocarbons	No equipment containing halocarbons, were noted in the building at the time of the Survey.
Radioactive Materials	Smoke/heat detectors, which have the potential of containing a small amount of radioactive material, were not observed in the building.
UFFI	No suspected UFFI or indications of UFFI application were observed in the assessment areas.
Silica	The building has a concrete floor slab and a concrete frost wall and brick veneer exterior finish. If these materials are cut or broken up during demolition activities, silica dust could be generated.

CBCL was commissioned by Public Works and Government Services Canada (PWGSC) to complete a Quantitative Hazardous Building Materials Survey of a sewage pump station in Cavendish, Prince Edward Island (PEI). This work is being completed in conjunction with some upcoming design and renovations proposed for the fall of 2015. The building is located in the central portion of the Parks Canada campground, Cavendish, PEI. The following report presents the findings of the Survey completed for the Site building.

**Table 1.1: Building – Background Information**

<i><b>Building</b></i>	<i><b>Location</b></i>	<i><b>Year of Construction</b></i>	<i><b>Footprint (m<sup>2</sup>)</b></i>	<i><b>Floors</b></i>	<i><b>Activity</b></i>	<i><b>Previous Reports</b></i>
Sewage Pump Station	Cavendish, Beach, PEI	1985	10.3	1	Pump house	Alltech asbestos report 1995

The purpose of the Hazmat Survey was to identify and quantify hazardous building materials present (if any) in the building and to provide information regarding appropriate methodologies for handling and disposing of these materials prior to renovation and/or demolition activities.

### **1.1 Building Descriptions**

The subject building consists of a one storey wood brick building, serving as a sewage pump house. The exterior finishes of the building consist of brick finish, flat roof with painted copper trim. The interior surfaces consist of wall board. The floor finishes consist of a concrete slab.

### **1.2 Scope of Work**

As per our proposal, the scope of work for the Survey included the following:

- Review of documentation (i.e., previous Hazmat reports), if available;
- Interviews with personnel familiar with the building and site visit to obtain additional relevant information on any renovations to the building and on the present status and extent of hazardous materials within the building;

- Hazardous Materials (Hazmat) Survey of the subject building, including assessment, sample collection, analyses and quantification of potentially hazardous building materials. The objective of the study is to, as closely as possible, accurately quantify and provide locations of hazardous building materials;
- Submission of samples to accredited laboratories; and,
- Preparation and submission of a report presenting the findings, site-specific professional advice and recommendations for the identified hazardous materials, if encountered.

## METHODOLOGY

### 2.1 Reference Documentation and Legislative Review

A reference list of the applicable guidelines, regulations and other documentation that were used to evaluate the results and make recommendations with regard to this assessment can be found in Chapter 5 of this report. Federal and Provincial acts, regulations and guidelines for the handling, storage, or disposal of hazardous building materials, including the Federal Canada Labour Code, Part II, Canada Occupational Health and Safety Regulation, Part X – Hazardous Substances and the provincial Occupational Health and Safety Act, were reviewed for applicability to determine the requirements for hazardous materials found at the site.

### 2.2 Previous Investigations

A previous report was provided to CBCL to review, ALL-TECH Environmental Services Ltd. completed an asbestos sampling program in 1995.

### 2.3 Site Visit

The Survey was completed on September 2, 2015 by Scott Cail, CET of CBCL.

The subject building was observed for the types of building materials present and their potential for containing hazardous materials. The Survey was not intrusive in nature, as the sampling program consisted of collecting representative samples of suspected hazardous materials in readily visible locations. In each sample location, the type of material, its general condition and location were noted and photographs were taken.

### 2.4 Hazardous Building Materials

The following hazardous building materials were assessed during the survey.

#### 2.4.1 Asbestos-Containing Materials

##### 2.4.1.1 BULK ASBESTOS

Representative samples of building materials that could potentially contain asbestos were collected from the subject building. Samples were collected by hand or using appropriate tools, and were then placed in sealed plastic bags for transport to the laboratory. Each sampling location was sprayed with water prior to disturbing the material to reduce the release of dust into the air, if required.

Sample locations were covered with appropriate building materials to eliminate the exposure pathway to a disturbed area of potential asbestos (if required), labelled and photographed.

#### **2.4.1.2 VERMICULITE**

The building was visually assessed for the presence of apparent vermiculite. Areas of potential vermiculite were identified and noted, if present.

#### **2.4.2 Paint**

Representative paint samples were collected from the building. Paint samples were collected by removing a representative area of paint, including older paint layers when present, and substrate where possible, and placing them in a sealed plastic bag for transport to the laboratory. Sample locations were covered or patched to eliminate the exposure pathway to an area of potential concern (if required), labelled and photographed.

#### **2.4.3 Lead**

Suspected lead piping or metal pipes with leaded joints or solder were noted in the building if present. Emergency lights with lead-acid batteries were noted, if present.

#### **2.4.4 Mercury**

Thermostats, switches and fluorescent bulbs, which could potentially contain mercury, were noted, if present, in the subject building. Sampling or specific testing for mercury was not performed.

#### **2.4.5 Polychlorinated Biphenyls (PCBs)**

Potential PCB containing materials such as fluorescent light ballasts were noted if present in the subject building.

#### **2.4.6 Mould**

Evidence of mould or serious water damage was noted during the Survey, if present. Sampling or specific testing for mould was not included in the scope of work.

#### **2.4.7 Halocarbons**

A visual assessment was conducted for refrigerators, coolers, HVAC units and any other items that could contain halocarbons within the subject building.

#### **2.4.8 Other Hazardous Materials**

##### **2.4.8.1 UREA-FORMALDEHYDE FOAM INSULATION (UFFI)**

A visual inspection was conducted for the presence of UFFI insulation in the building. Sampling or specific testing for UFFI was not included in this scope of work.

##### **2.4.8.2 RADIOACTIVE MATERIALS**

Potential radioactive materials (e.g., smoke detectors) were noted in the building, if present. Radon was not sampled as part of this Survey.

#### 2.4.8.3 SILICA

Areas containing cement products that would be subject to cutting or disturbance during any future demolition activities were noted.

## LABORATORY ANALYSIS

### 3.1 Asbestos Samples

Bulk samples collected for asbestos analyses were sent to EMSL Canada Inc. in Mississauga, ON, Canada. EMSL Canada Inc. is certified under the National Voluntary Laboratory Accreditation Program (NVLAP) for Polarized Light Microscopy (PLM) and Transmission Electron Microscopy (TEM) for the analysis of bulk samples of asbestos. TEM analysis was conducted for non-friable, organically bound samples, as well as PLM EPA 600/R-93/116. Results of the analytical testing are presented in Chapter 4.

### 3.2 Paint Samples

Paint samples were sent to AGAT Laboratories in Dartmouth, Nova Scotia and were submitted for analysis of available and leachable lead, available and leachable mercury. AGAT is accredited by the Standards Council of Canada (SCC) and the Canadian Association for Laboratory Accreditation (CALA). Results of the analytical testing are presented in Chapter 4.

## FINDINGS & RECOMMENDATIONS

The findings of the Quantitative Hazardous Materials (Hazmat) Survey conducted at Cavendish, PEI are presented below.

Sample locations are shown on Figure 1 in Appendix A. A summary of the asbestos and paint samples, the results of the analytical testing, including estimated quantity and condition of the confirmed hazardous materials and the recommendations are presented in Tables 1 (Asbestos) and 2 (Metal-Containing Paints and Coatings), Appendix B. Laboratory certificates are presented in Appendix C.

Site photographs are presented in Appendix D.

### 4.1 Asbestos

The Hazmat Survey included a review of suspected friable and non-friable ACMs. ACMs are defined as materials containing asbestos fibres or asbestos dust in a concentration greater than 1% asbestos by weight. The term friable is applied to a material that can be readily reduced to dust or powder by hand pressure. The term potentially friable is applied to a material that is generally non-friable in place but which has the potential to generate dust upon removal or if significantly damaged or disturbed. ACMs that are friable have a much greater potential to release airborne asbestos fibers when disturbed.

#### 4.1.1 Regulatory Requirements

Provincial regulations regarding ACMs distinguish between friable and non-friable materials when assigning appropriate work practices. Where friable materials are identified containing asbestos in any concentration and there is the possibility of the release of asbestos fibres posing an occupational health and safety or environmental exposure, the material must be treated as an ACM for demolition purposes. Non-friable materials with concentrations of asbestos that are less than 1% are not considered to be an ACM. Following removal, materials containing asbestos must be disposed of at an approved facility with prior approval from the facility operator. All disposal must comply, in accordance with the Prince Edward Island Regulatory & Appeals Commission, Environmental Protection Act, Waste Resource Management Regulations (September 2014).

#### **4.1.2 Findings**

A total of six (6) samples (AS-01-CAV to AS-06-CAV) of suspected asbestos containing materials were collected and submitted for laboratory analysis. Sampled materials included roofing material, mortar, wall board, caulking and gasket material.

Laboratory results by PLM and TEM analysis indicate that asbestos is present in one (1) samples analyzed in concentrations greater than 1%. ACMs were identified in the gasket material collected from the pumping infrastructure on-site. As such, the gasket materials should be managed as an asbestos containing material during demolition activities. CBCL's asbestos survey findings are summarized in Table1, Appendix A.

The following approximate quantities of asbestos containing materials were identified by the HAZMAT Survey:

- All gasket materials associated with the pumping infrastructure should be considered asbestos containing, based on the above noted sample results. It is estimated there may be upwards of 25 gaskets in total.

#### **4.1.3 Recommendations**

In accordance with the Federal Canada Labour Code, Part II, Canada Occupational Health and Safety Regulation, Part X – Hazardous Substances and the provincial Occupational Health and Safety Act, appropriate precautions must be implemented to manage any ACMs during repair, as well as during renovation or demolition activities to reduce the potential for the release of airborne asbestos fibres. The specific level of precautions (Type 1, Type 2, or Type 3) to be implemented depends on the type of ACM (friable/non-friable), the quantity of material and the repair/removal method.

Contractors must implement appropriate health and safety precautions that meet all applicable legislation when working with materials that contain asbestos (at any concentration). These precautions will include donning appropriate personal protective equipment (PPE) and the use of appropriate health and safety measures suitable to mitigate exposure to asbestos. Following removal, materials containing asbestos must be appropriately packaged, transported and disposed of at an approved facility with prior approval from the facility operator.

## **4.2 Metal Containing Paint and Coatings (MCP/C)**

Metals were used as a primary ingredient in many interior and exterior paints and surface coatings from the early 1900s to the late 1970s. Health Canada has indicated that MCP/Cs require special precautions for sensitive individuals, particularly if the paint is in poor condition and is peeling.

#### **4.2.1 Regulatory Requirements**

Hazardous substances are also covered under the *Hazardous Products Act* and the *Transportation of Dangerous Goods Act*. Worker exposure to hazardous materials is covered under the Workers Compensation Board (WCB) which regulates the Occupational Health and Safety Act in Prince Edward Island.

#### 4.2.1.1 LEAD

##### **Lead**

Lead containing materials in Prince Edward Island are governed by the following provincial codes and guidelines: Prince Edward Island Regulatory & Appeals Commission, Environmental Protection Act, and Waste Resource Management Regulations (September 2014). The regulation states lumber or wood covered in a protective coating containing concentrations of lead that does not pass a lead leachate test, must not be disposed of at a C&D facility.

It should be noted that definitions of lead based surface coatings vary in Canada. In 2010, the *Surface Coatings Materials Regulation* (SOR/2005-109) made under the Canadian Hazardous Products Act imposed restrictions on paints that have a concentration above 90 mg/kg of lead by weight with several exceptions noted (e.g., anti-corrosive or anti-weathering coatings, touch up coatings for metal surfaces, traffic signs, etc.). This does not specifically address surface coatings on existing surfaces.

The U.S. Housing and Urban Development defines a lead-based paint as a paint or surface coating that contain lead equal to or exceeding 1.0 mg per square cm or 0.5 percent by weight or 5,000 ppm by weight.

It is possible that any concentration of lead in a surface coating can be hazardous depending on the methods used to remove it. As such it is important that appropriate precautions and PPE be utilized that are appropriate for the method of disturbance (e.g., scraping versus grinding). The American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) for worker exposure to lead (expressed as a time-weighted average), is 0.05 mg/m<sup>3</sup>. This is considered to be the concentration of a substance to which most workers can be exposed without adverse effects.

For disposal purposes in Prince Edward Island, materials with well adhered paint (i.e., not flaking or peeling) with total (available) lead concentrations below 1000 mg/kg can be disposed of at a Regional Sanitary Landfill. Paint with a lead concentrations above 1000 mg/kg and exceeding lead leachate concentration >5 mg/L must be disposed of as hazardous waste. There are currently no Hazardous waste facilities in Prince Edward Island. Paint that is well adhered to a metal substrate can be sent for metal recycling. It is recommended that prior to disposal of metal containing paint, approval from facility operators be obtained.

#### 4.2.1.2 MERCURY

In 2010, the *Surface Coatings Materials Regulation* (SOR/2005-109) made under the *Canadian Hazardous Products Act* imposed restrictions on paints that have a concentration above 10 mg/kg of mercury by weight.

It is possible that any concentration of mercury in a surface coating can be hazardous depending on the methods used to remove it. As such it is important that appropriate precautions and PPE be utilized that are appropriate for the method of disturbance (e.g., scraping versus grinding). The American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) for worker exposure to mercury is 0.025 mg/m<sup>3</sup>.

For disposal purposes, paints have been initially screened by comparison of available mercury concentrations to the CCME Soil Quality Guidelines for industrial land use (50 mg/kg).

Those that exceed this criterion have been submitted for leachate analysis. PEI has adopted the leachate extraction test regulated by Environment Canada – Exports and Imports of Hazardous Waste and Hazardous Recyclable Material Regulations (EIHWHRM). If leachate results indicate the concentration of mercury leachate is above the allowable 0.1 mg/L, the paint must be disposed of at an approved hazardous waste facility (none currently present in PEI). Paint in with a leachable mercury concentration below 0.1 mg/L may be disposed of at a Regional Sanitary landfill with prior approval from the facility operator.

Metal containing paint that is well adhered to a metal substrate can be sent for metal recycling together with its substrate.

#### **4.2.2 Findings**

One (1) paint samples (PS-01-CAV) was collected from the subject building. Sample P-01-CAV consisted of white paint from exterior concrete surfaces. The paint sample was collected and submitted for laboratory analysis of acid extractable (available) lead and mercury. Concentrations of lead and mercury exceeding the referenced guidelines were reported. Subsequently a lead and mercury leachate were conducted, lead leachate concentrations were reported at 7.3 mg/L exceeding the 5.0 mg/L referenced guideline. Additionally, the mercury leachate were reported as 0.0006 mg/L which was below the referenced 0.1 mg/L guideline.

#### **4.2.3 Recommendations**

Paint sample (PS-01-CAV) has been determined to be lead leachate hazardous and in poor condition. Therefore, CBCL recommends that all white paint (exterior surfaces) be managed appropriately as lead leachate hazardous materials and disposed of at a licensed hazardous waste disposal facility. The metal containing paints that are in poor condition (flaking) provide a viable exposure pathway to the public. It is recommended that a qualified contractor remove all loose and flaking metal containing paints using appropriate precautions, such as those outlined in the Ontario *Lead on Construction Projects* guideline, Type I precautions.

When removing metal containing paint, a hazard evaluation must be conducted to determine if the removal method could expose the workers to paint with elevated metals or dust. Workers must implement health and safety precautions that result from the hazard evaluation and that meet all appropriate legislation. Depending on the removal method, these precautions may include donning appropriate personal protective equipment (PPE) and use of appropriate health and safety measures suitable to mitigate exposure to metals.

It should be noted that there are not hazardous waste facilities located in Prince Edward Island, therefore the white paint located on the exterior concrete (PS-01-CAV) will need to be collected and sent to a licenced hazardous waste disposal facility.

### **4.3 Other Lead**

Metal pipes were observed throughout the building and associated with the pumping infrastructure could contain lead and lead solder. This lead solder should be sent for metal recycling, together with the pipe, rather than disposal at the time of removal.

### **4.4 Other Mercury**

Potential sources of mercury (other than paint) that may exist within the building may include light bulbs and thermostats.

No other mercury containing equipment was noted during the site visit.

### **4.5 PCBs**

PCBs are regulated by Environment Canada under the PCB Regulations, which is part of the *Environmental Protection Act*.

The site building was assessed presence of electrical equipment that could contain PCBs. Equipment in the electrical room appeared to be newer and there was no indication of the presence of PCBs. No signs of fluorescent light fixtures were observed.

Any PCB-containing materials must be removed in accordance with the provincial PCB Management Regulations and the federal PCB Regulations. Prince Edward Island landfills do not accept PCB-containing materials. PCB-containing materials must be disposed of at an approved hazardous waste disposal facility.

### **4.6 Mould**

Areas within the subject building were visually assessed for signs of apparent fungal (mould) growth. No readily visible areas of apparent mould growth were noted.

Mould affected materials identified during any future renovations or demolition activities must be removed by a qualified contractor in accordance with practices described in the Canadian Construction Association's Guidelines for Mould Remediation. Areas of water leaks/ingress should be repaired to prevent the potential for future mould growth.

### **4.7 Halocarbons**

No equipment containing halocarbons, were noted in the building at the time of the Survey.

### **4.8 Radioactive Materials**

#### **4.8.1 Radon**

No sampling for radon gas was conducted as part of this Survey.

#### **4.8.2 Other Sources of Radiation**

No equipment containing potential sources of radioactive materials, were observed in the building.

The Canadian Nuclear Association states that there "is no need for any special care in the disposal of used smoke detectors. They can be safely included with other household waste for disposal."

#### **4.9 Urea-Formaldehyde Foam Insulation (UFFI)**

No suspected UFFI or indicators of UFFI applications were observed in the building.

#### **4.10 Silica**

The building has concrete floor slab, concrete frost wall and exterior brick veneer. If these materials are cut or broken up during the demolition activities, silica dust could be generated.

Workers must implement appropriate health and safety precautions that meet all applicable legislation. These precautions may include donning appropriate personal protective equipment (PPE) and use of appropriate health and safety measures suitable to mitigate silica dust exposure. The Ontario Guideline- *Silica on Construction Projects* may be referenced for appropriate procedures to implement during removal of concrete.

## CONCLUSIONS AND RECOMMENDATIONS

CBCL Limited (CBCL) was commissioned by Public Works and Government Services Canada (PWGSC) to complete a Quantitative Hazardous Building Materials Survey of a sewage pump station in Cavendish, PEI. This work is being completed in conjunction with some upcoming design and renovations proposed for the fall of 2015. The building is located in the central portion of the Parks Canada campground, Cavendish, PEI. The following report presents the findings of the Survey completed for the site building.

Survey findings are summarized below along with CBCL's recommendations.

**Table 6.1: Summary of Hazardous Building Materials Survey Findings with Conclusions and Recommendations.**

Hazardous Material	Conclusions and Recommendations
Asbestos	Laboratory results by PLM analysis indicate that asbestos is present in one (1) sample analyzed in concentrations greater than 1%. The identified ACM was a gasket material collected from the pumping infrastructure. Contractors must implement appropriate health and safety precautions that meet all applicable legislation when working with materials that contain asbestos (at any concentration). These precautions will include donning appropriate personal protective equipment (PPE) and the use of appropriate health and safety measures suitable to mitigate exposure to asbestos. Following removal, materials containing asbestos must be appropriately packaged, transported and disposed of at an approved facility with prior approval from the facility operator.
Metal Containing Paint (lead and mercury)	Paint sample (PS-01-CAV) has been determined to be lead leachate hazardous and in poor condition. Therefore, CBCL recommends that all white paint (exterior surfaces) be managed appropriately as lead leachate hazardous materials and disposed of at a licensed hazardous waste disposal facility. When removing metal containing paint, a hazard evaluation must be conducted to determine if the removal method could expose the workers to paint with elevated metals or dust. Workers must implement health and safety precautions that result from the hazard evaluation and that meet all appropriate legislation. Depending on the removal method, these precautions may include donning appropriate personal protective

Hazardous Material	Conclusions and Recommendations
	<p>equipment (PPE) and use of appropriate health and safety measures suitable to mitigate exposure to these hazardous materials.</p> <p>Non-leachate hazardous paint flakes may be disposed of at a regional sanitary landfill with operator approval.</p>
Mercury-Containing Materials (excluding paint)	<p>Potential sources of mercury (other than paint) that may exist within the building may include light bulbs and thermostats.</p> <ul style="list-style-type: none"> <li>No other mercury containing equipment was noted during the site visit.</li> </ul>
Other Lead containing Materials	<ul style="list-style-type: none"> <li>The building was visually assessed for other lead containing materials. Metal pipes were observed throughout the building and associated with the pumping infrastructure could contain lead and lead solder. This lead solder should be sent for metal recycling, together with the pipe, rather than disposal at the time of removal.</li> </ul>
PCB-Containing Materials	<p>Potential sources of PCBs that may exist within the building include electrical equipment such as fluorescent light ballasts.</p> <ul style="list-style-type: none"> <li>The site building was assessed presence of electrical equipment that could contain PCBs. Electrical equipment in the building appeared to be newer and there was no indication of the presence of PCBs. No fluorescent light fixtures were observed.</li> </ul>
Mould	<p>Areas within the subject building were visually assessed for signs of apparent fungal (mould) growth.</p> <ul style="list-style-type: none"> <li>No readily visible areas of apparent mould growth were noted.</li> </ul> <p>Mould affected materials identified during any future renovations or demolition activities must be removed by a qualified contractor in accordance with practices described in the Canadian Construction Association's Guidelines for Mould Remediation.</p>
Halocarbons	<p>No equipment containing halocarbons, were noted in the building at the time of the Survey.</p>
Radioactive Materials	<p>Smoke/heat detectors, which have the potential of containing a small amount of radioactive material, were observed in the building.</p>
UFFI	<p>No suspected UFFI or indications of UFFI application were observed in the assessment areas.</p>
Silica	<p>The building has a concrete floor slab and a concrete frost wall and brick veneer exterior finish. If these materials are cut or broken up during demolition activities, silica dust could be generated.</p> <p>Workers must implement health and safety precautions that meet all appropriate legislation. These precautions may include donning appropriate personal protective equipment (PPE) and use of appropriate health and safety measures suitable to mitigate silica dust exposure.</p>

## LIMITATIONS

The results presented in this report are indicative of the observations recorded and samples collected at the time and place noted in this report. Every effort was made to collect samples which were representative of potential hazardous building materials. Intrusive sampling was completed during the Survey in select locations, and while there is no evidence to suggest otherwise, it is possible that hidden hazardous materials may not have been sampled during the Survey. It is possible that asbestos fibres are not evenly distributed in a material and therefore the results of this Survey are thought to be indicative of other similar materials but may not be entirely identical. The opinions contained in this report are based upon accepted professional principals but should not be interpreted as legal advice or as a guarantee or warranty regarding potential liability associated with conditions at this site.

This report has been prepared for the sole benefit of Public Works and Government Services Canada (PWGSC) and cannot be used or relied upon by any other entity without the express written permission of PWGSC and CBCL Limited. The information contained in this report is not intended to serve as legal or medical advice.

If any conditions become apparent that differ significantly from our understanding of conditions as presented in this report, we request that we be notified immediately to reassess the conclusions provided herein.

The primary author of this report was Scott Cail, CET and it was reviewed by Jean-Charles Cormier, PTech.

Respectfully submitted,

CBCL Limited



Reviewed by:  
Jean-Charles Cormier, PTech  
Senior Project Manager  
Telephone: (506) 858-2400  
E-Mail: jccormier@cbcl.ca



Scott Cail  
Senior Environmental Technologist  
Telephone: (506) 858-2400  
E-Mail: scail@cbcl.ca

*Prince Edward Island Regulatory & Appeals Commission, Environmental Protection Act, Waste Resource Management Regulations (September 2014).*

*Canada Labour Code, R.S.C., 1985, C.L-2, <http://laws-lois.justice.gc.ca/eng/acts/L-2/FullText.html>*

*Canada Occupational Health and Safety Regulations, Part X, Hazardous Substances, SOR/2002-208, S.43(F), Canada Labour Code, <http://laws-lois.justice.gc.ca/eng/regulations/SOR-86-304/page-44.html>*

*Canadian Council of Ministers of the Environment. 2001. Canada Wide Standards on Fluorescent Lamps Containing Mercury. [http://www.ccme.ca/assets/pdf/merc\\_lamp\\_standard\\_e.pdf](http://www.ccme.ca/assets/pdf/merc_lamp_standard_e.pdf)*

*Canadian Environmental Protection Act. 1999. c. 33 <http://laws.justice.gc.ca/en/C-15.31/index.html>*

*Canadian Hazardous Products Act. R.S. 1985. c H-3 <http://laws.justice.gc.ca/en/H-3/index.html>*

*Canadian Interprovincial Movement of Hazardous Waste Regulations. 2002. <http://laws.justice.gc.ca/en/C-15.31/SOR-2002-301/text.html>*

*Canadian Transportation of Dangerous Goods Act. 1992. c. 34 [http://www.tc.gc.ca/acts-regulations/GENERAL/T/tdg/regulations/tdg001/part\\_1.htm](http://www.tc.gc.ca/acts-regulations/GENERAL/T/tdg/regulations/tdg001/part_1.htm)*

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- Identification of Lamp Ballasts Containing PCBs” (EPS2/CC/2. August 1991). <http://www.ec.gc.ca/publications/F1D91988-3B5E-4956-A705-78D054685FFE/IdentificationofLampBallastsContainingPCBsPart1.pdf>

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Ontario Ministry of Labour. April 2011. *Lead on Construction Projects*. <http://www.labour.gov.on.ca/english/hs/pubs/lead/>

*PCB Regulations*.2008. (C-15.31 -- SOR/2008-273). <http://laws.justice.gc.ca/eng/SOR-2008-273/index.html>

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## APPENDIX A

# Figures



AS-02-CAV

A

S-06-CAV

A

AS-01-C'

••

V-05-CAV

A

P-01-CAV

#### LEGEND

- A SAMPLE LOCATION
- A5-XX
- A SAMPLE LOCATION > 1% ASBESTOS
- PAINT SAMPLE LOCATION
- PS-XX
- PAINT SAMPLE LOCATION
- PS-XX
- LEACHATE CONCENTRATION ABOVE
- GUIDELINES: LEACHATE HAZARDOUS

#### NOTES:

1. BUILDING SIZES AND LOCATIONS ARE APPROXIMATE ONLY.

h u , a t t e --- S c - a l e --- U t e s l g n e l d -- r , w n --- ; n e c ; K t e d -- A I P P r o v e l d -- c . o n l t r r a c t --

Sa E P • T • 1 1 / ' 1 w 5 . - . 1 w : 5 0 . \_ ± ----- • Y w \_ u ----- J C ---- 1 5 2 6 1 w 8 . 0 0 . \_

QUANTITATIVE HAZARDOUS BUILDING MATERIAL SURVEY  
CAVENDISH, PEI

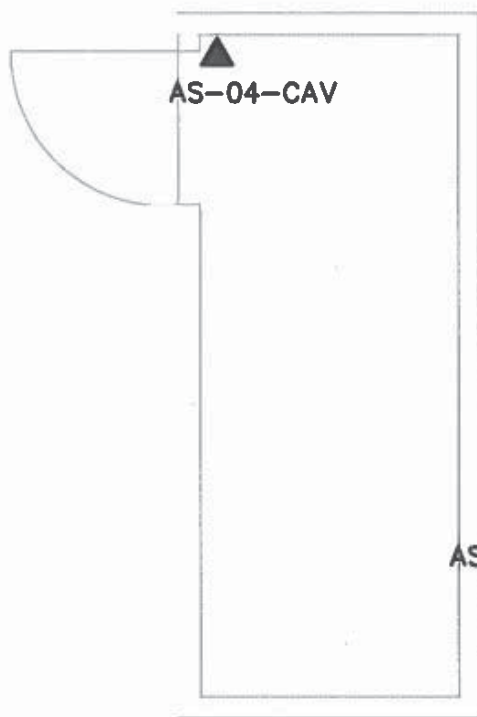
Figure

CBCL LIMITED  
Consulting Engineers  
ISO 9001 CERTIFIED

SIIE LOCA110N

1

AS-XX



APPENDIX B

# Hazardous Materials Summary Tables

**CBCL Limited Project No. 152618.00**

**TABLE 1: ASBESTOS CONTAINING MATERIALS**

**Building:** Sewage Pump Station

**Location:** Cavendish, PEI

Sample #	Location	Description, Condition	Friable/Non-Friable	Asbestos Present, Total % Asbestos		Estimated Quantities
				Guideline - 1% <sup>1</sup>		
AS-01-CAV	Sewage pump house -exterior west side	Core Roofing Layer	Non-Friable	NAD		
AS-02-CAV	Sewage pump house -exterior north west side	Brick Mortar	Non-Friable	NAD		
AS-03-CAV	Sewage pump house -exterior east side	Mortar around window	Non-Friable	NAD		
AS-04-CAV	Sewage pump house -interior north end (near door)	Wall Board	Non-Friable	NAD		
AS-05-CAV	Sewage pump house -exterior east side (around heat shield)	Caulking	Non-Friable	NAD		
AS-06-CAV	Sewage pump house -interior central portion	Gasket Material	Non-Friable	9.0% Chrysotile		Estimated 25

**Legend:**

<sup>1</sup> Prince Edward Island Regulatory & Appeals Commission, Environmental Protection Act, Waste Resource Management Regulations (September 2014). Asbestos containing material to be one which contains one per cent or more by volume of asbestos.

**Bold and Shaded result is above the referenced guideline.**

NAD – no asbestos detected

N/A – not applicable due to NAD result

CBC Limited Project No. 152618.00

TABLE 2: METAL CONTAINING PAINTS/COATINGS

Building: Sewage Pump Station

Location: Cavendish, PEI

Sample #	Location, Description, Condition	Metals	Lead	Leachable Lead	Mercury	Leachable Mercury	Estimated Quantity
		Units	mg/kg	mg\L	mg/kg	mg\L	m <sup>2</sup>
		Guideline	1000 <sup>1</sup> 50 <sup>2</sup>	5	10 <sup>1</sup> 50 <sup>2</sup>	0.1	-
PS-01-CAV	White paint on exterior trim		3640	7.3	25.3	0.0006	9

Notes:

<sup>1</sup> Surface Coating Materials Regulation(referenced health and safety)

<sup>2</sup> CCME Interim Soil quality Criterion (1991)

**Bold** indicates the concentration exceeds the referenced health and safety guideline

**Bold and Underlined** indicates the concentration exceeds the C&D landfill disposal guideline

Shaded indicates the concentration exceed the Regional Sanitary Landfill disposal guideline; paint is leachate hazardous

Note: C&D landfills in Prince Edward Island do not accept metal containing paint flakes for disposal. These must be sent to a regional sanitary landfill, with operator approval.

N/A – Not analyzed

N/Q – Not Quantified

## APPENDIX C

# Laboratory Certificates

**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 551509513  
Customer ID: 55CBM34  
Customer PO: 152618 00  
Project ID:

Attn: JC Cormier  
CBCL Ltd.  
68 Highfield Street  
Moncton, NB E1C 5N3

Phone: (506) 858-2400  
Fax: (506) 858-2405  
Collected:  
Received: 9/04/2015  
Analyzed: 9/10/2015

Proj: 152618.00

**Test Report: Asbestos Analysis of Bulk Materials for New Brunswick Regulation 92-106 via  
EPA600/R-93/116 Method**

Client Sample ID: Lab Sample ID: 551509513 001

Sample Description: AS-02-CAV/BRICK MORTAR

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	9/10/2015	Gray	0%	100%	None Detected	

Client Sample ID: 2 Lab Sample ID: 551509513 002

Sample Description: AS-03-CAV/GLASS MORTAR

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	9/10/2015	Gray	0%	100%	None Detected	

Client Sample ID: 3 Lab Sample ID: 551509513 003

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		

Client Sample ID: 4 Lab Sample ID: 551509513 004

Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		

**Analyst(s):**

Natalie D'Amico PLM (4)

Reviewed and approved by:



Matthew Davis  
or Other Approved Signatory

None Detected = <1%. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government.

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

(Initial report from 09/10/2015 09:47:51)

EMSL ANALYTICAL INC.  
10-A ADOVCT

# Asbestos Bulk Building Material Chain of Custody EMSL Order Number (Lab Use Only):

55\SJ9S\3

EMSL ANALYTICAL INC.  
200 ROUTE 130 NORTH  
CINNAMINSON, NJ 08077  
PHONE: (800) 220-3675  
FAX: (856) 786-5974

Company: CBCL		EMSL-Bill to: <input checked="" type="checkbox"/> Same <input type="checkbox"/> Different If Bill to is Different not Instructions In Comments	
Street: 62 Highfield St, Suite 100		Third Party Billing requires written authorization from third party	
City: Noncton	State/Province: NJ	Zip/Postal Code: EIC 5N3	Country: Canada
Report To (Name): JC Cormier / Scott Cail		Telephone #: 506 858-2400	
Email Address: Jccormier@cbcl.ca / scail@cbcl.ca		Fax #: 506 858-2405	Purchase Order:
Project Name/Number: 152618.00		Please Provide Results: <input type="checkbox"/> Fax <input type="checkbox"/> Email	
U.S. State Samples Taken:		CT Samples: <input type="checkbox"/> Commercial/Taxable <input type="checkbox"/> Residential/Tax Exempt	
Turnaround Time (TAT) Options* - Please Check			
<input type="checkbox"/> 3 Hour <input type="checkbox"/> 6 Hour <input type="checkbox"/> 24 Hour <input type="checkbox"/> 48 Hour <input type="checkbox"/> 72 Hour <input type="checkbox"/> 96 Hour <input checked="" type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week			
*For TEM Air 3 hr through 6 hr, please call ahead to schedule. *There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with EMSL's Terms and Conditions located in the Analytical Price Guide.			
PLM - Bulk (reporting limit)		TEM - Bulk	
<input checked="" type="checkbox"/> PLM EPA 600/R-93/116 (<1%) <input type="checkbox"/> PLM EPA NOB (<1%) Point Count <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) Point Count w/Gravimetric <input type="checkbox"/> 400 (<0.25%) <input type="checkbox"/> 1000 (<0.1%) <input type="checkbox"/> NIOSH 9002 (<1%) <input type="checkbox"/> NY ELAP Method 198.1 (friable In NY) <input type="checkbox"/> NY ELAP Method 198.6 NOB (non-friable-NY) <input type="checkbox"/> OSHA 10-191 Modified <input type="checkbox"/> Standard Addition Method		<input type="checkbox"/> TEM EPA NOB-EPA 600/R-93/116 Section 2.5.5.1 <input type="checkbox"/> NY ELAP Method 198.4 (TEM) <input type="checkbox"/> Chatfield Protocol (semi-quantitative) <input type="checkbox"/> TEM %by Mass-EPA 600/R-93/116 Section 2.5.5.2 <input type="checkbox"/> TEM Qualitative via Filtration Prep Technique <input type="checkbox"/> TEM Qualitative via Mount Technique <input type="checkbox"/> Other	
<input type="checkbox"/> Check For Positive Stop - Clearly Identify Homogenous Group		Date Sampled:	
Samplers Name:		Samplers Signature:	
Sample #	HA #	Sample Location	Material Description
		AS-02-CAV	Brick mortar
		AS-03-CAV	Glass mortar
		AS-01-BRA	Wall boards
		AS-04-BRA	Tar paper roof
Client Sample # (s):		Total # of Samples: 4	
Relinquished (Client): Scott Cail		Date: Sept 3, 2015	Time: 10:00 AM
Received (Lab):			
Comments/Special Instructions:			

# 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 551509511  
Customer ID: 55CBM34  
Customer PO: 152618.00  
Project ID:

Attn: JC Cormier  
CBCL Ltd.  
68 Highfield Street  
Moncton, NB E1C 5N3

Phone: (506) 858-2400  
Fax: (506) 858-2405  
Collected:  
Received: 9/04/2015  
Analyzed: 9/10/2015

Proj: 152618.00

## Test Report: Asbestos Analysis of Bulk Materials for New Brunswick Regulation 92-106 via EPASOO/R-93/116 Method

Client Sample ID: L11b Sample ID: 551509511.0001  
S11mple Description: AS 01-CAV/CORE ROOF

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav. Reduction	9/10/2015	Black/Yellow	00%	100%	None Detected	

Client Sample ID: 2 Lab Sample ID: 551509511.0002  
Sample Description: AS 04 CAWNALL BOARD

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav. Reduction	9/10/2015	Beige	0.0%	100%	None Detected	

Client S11mple ID: 3 Lab Sample ID: 551509511.0003  
Sample Description: AS 05 CAV/CAULKING

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav. Reduction	9/10/2015	Gray/Red	0.0%	100%	None Detected	

Client Sample ID: 4 Lab Sample ID: 551509511-0004  
Sample Description: AS-06-CAV/GASKET/MATERIAL

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
TEM Grav. Reduction	9/10/2015	Gray/Red/Narious	0.0%	91.0%	9.0 Chrysotile	

Client Sample ID: 5 Lab Sample ID: 551509511-0005  
Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		

Client Sample ID: 6 Lab Sample ID: 551509511-0006  
Sample Description:

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		

## 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](mailto:torontolab@emsl.com)

EMSL Canada Order	551509511
Customer ID:	55CBM34
Customer PO:	152618.00
Project ID:	

### Test Report: Asbestos Analysis of Bulk Materials for New Brunswick Regulation 92-106 via EPA600/R-93/116 Method

---

Analyst(s):

Jon DeLos Santos TEM Grav Reduction (6)

Reviewed and approved by:



Matthew Davis  
or Other Approved Signatory

None Detected= <1%. EMSL maintains liability limited to cost of analysis. 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. Interpretation and use of test results are the responsibility of the client. Samples received in good condition unless otherwise noted. This report must not be used to claim product endorsement by NVLAP of any agency of the U.S. Government

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

(Initial report from: 09/10/2015 21:29)

Test Report EPAMultiTests-7.32 2.0 Printed: 9/10/2015 09:51PM



Sample Identification  
Date/Tmw Specified  
Sample Man  
Comments - Site/Sample Info  
Summ Contained

es-oi:Q\K  
h  
JQ:tfB(j-41

13 0::tfq/L

Yellow Copy - AGAT  
White Copy-AGAT : 939423



**@@@1J Laboratories**

11 Morris Drive, Unit 122  
Dartmouth, Nova Scotia  
C/W/DA 838 1M2  
TEL (902) 468-8718  
FAX (902) 468-8924  
h /www.agatlabs.com

CLIENT NAME: CBCL LTO  
68 HIGHFIELD ST. SUITE 100  
MONCTON, NB E1C5N3  
(506) 858-2400

ATTENTION TO: JC Cormier

PROJECT: 152618.00

AGAT WORK ORDER: 15X015414

SOIL ANALYSIS REVIEWED BY: Jason Coughtrey, Inorganics Supervisor

DATE REPORTED: Sep 11, 2015

PAGES (INCLUDING COVER): 9

VERSION: 2

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

**\*NOTES**

VERSION 2: "Version 2" supersedes work order 15X015414, Version 1.0; Issued Sep 18, 2015 - additional analysis reported

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

**AGAT** Laboratories (V2)

Member of Association of Professional Engineers and Geoscientists of Alberta (APEGA)  
Western EnviroAgricultural Laboratory Association (WEALA)  
Environmental Services Association of Alberta (ESAA)

AGAT laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from [www.cala.ca](http://www.cala.ca) and/or [www.scc.ca](http://www.scc.ca). The tests in this report may not necessarily be included in the scope of accreditation.

Results relate only to the items tested and to all the items tested.  
All reportable information as specified by ISO 17025:2005 is available from AGAT Laboratories upon request.

Page 1 of 9



(f)@GJJ  
Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 15X015414

PROJECT: 152618.00

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: CBCL LTO

SAMPLING SITE:

ATTENTION TO: JC Cormier

SAMPLED BY:

CGSB Leachable Mercury

DATE RECEIVED: 2015-09-04

DATE REPORTED: 2015-09-11

SAMPLE DESCRIPTION: PS-01 CAV

SAMPLE TYPE: Paint

DATE SAMPLED: 9/2/2015

G/S RDL 6933295

Parameter Unit

ug/l

0.6

NA

8.78

NA

5.30

%

0

g

5.04

Mercury

Initial pH

Final pH

% Moisture

Total Sample Mass

Comments: RDL - Reported Detection Limit;

GIS - Guideline / Standard

Certified By:

(f)@GJJ CERTIFICATE OF ANALYSIS (V2)

Results relate only to the items tested and to all the items tested



**@a@11 Laboratories**

## Certificate of Analysis

AGAT WORK ORDER: 15X015414

PROJECT: 152618.00

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: CBCL LTO

SAMPLING SITE:

ATTENTION TO: JC Cormier

SAMPLED BY:

DATE RECEIVED: 2015-09-04		CGSB Leachable Metals • Lead		DATE REPORTED: 2015-09-11
SAMPLE DESCRIPTION: PS-01-GAV				
SAMPLE TYPE: Paint				
DATE SAMPLED: 9/2/2015				
G/S RDL		6933295		
Parameter	Unit			
Lead	ug/L	7300		
Initial pH	NA	8.78		
Final pH	NA	5.30		
% Moisture	%	<1		
Total Sample Mass	g	5.04		
Comments:	RDL • Reported Detection Limit: GIS - Guideline / Standard			

**Certified By:**

**Q.6<'r:**



**@GQLF** Laboratories

## Certificate of Analysis

AGAT WORK ORDER: 15X015414

PROJECT: 152618.00

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

CLIENT NAME: CBCL LTD

SAMPLING SITE:

ATTENTION TO: JC Cormier

SAMPLED BY:

Lead In Paint			
DATE RECEIVED: 2015. (09. (14	SAMPLE DESCRIPTION: PS-G1.CAV		DATE REPORTED: 2015. (09-11
Parameter	Unit	G/S	RDL
Lead Total Sample Mass	mg/kg	15	0.6039

Comments: RDL • Reported Detection Limit: G / S • Guideline / Standard

**Certified By:**

1/4 e6&1 c4t-t:-



**@@@LF Laboratories**

## Certificate of Analysis

AGAT WORK ORDER:15X015414

PROJECT:152618.00

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

CLIENT NAME:CBCL LTD

SAMPLING SITE:

ATTENTION TO:JC Connier

SAMPLED BY:

Mercury Analysis in Paint					DATE RECEIVED	2015-09-04	DATE REPORTED	2015-09-11
SAMPLE DESCRIPTION		PS-01-CAV						
SAMPLE TYPE		Paint						
DATE SAMPLED		9/21/2015						
G/S		6933295						
ROL		6933296						
Unit		mg/kg						
Parameter		25.3						
Mercury		6933298						

Comments: RDL - Reported Detection Limit; GIS • Guideline / Standard

**Certified By:**

O & CV-UL



@@@1J

Laboratories

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

## Quality Assurance

CLIENT NAME: CBCL LTO

PROJECT: 152618.00

SAMPLING SITE:

AGAT WORK ORDER: 15X015414

ATTENTION TO: JC Cormier

SAMPLED BY:

Soil Analysis																
RPT Date: Sep 11, 2015				DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	sample Id	Oup#1	Dup#2	RPO	Measured Value		Acceptable Umit.		Recovery	Acceptable Limits		Recovery	Acceptable Umit a		
								Lower	Upper		Lower	Upper		Lower	Upper	
Lead In Paint																
Lead	9042015	6933298	130	132	1.5%	< 15	107%	70%	130%	108%	70%	130%	95%	70%	130%	
Mercury Analysis in Paint																
Mercury		6933298	1.17	1.15	1.7%	< 0.05	95%	70%	130%		70%	130%	97%	70%	130%	
CGSB Leachable Mercury																
Mercury		6933295	06	06	0.0%	< 0.5	94%	70%	130%		70%	130%	95%	70%	130%	
CGSB Leachable Metals - Lead																
Lead	9102015		143	147	2.8%	< 5	87%	80%	120%	88%	80%	120%	91%	70%	130%	

Certified By:

*[Signature]*

fi~~fi~~ QUALITY ASSURANCE REPORT (V2)

Page 6 of 9

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from [www.cala.ca](http://www.cala.ca) and/or [www.scc.ca](http://www.scc.ca). The tests in this report may not necessarily be included in the scope of accreditation.

Results relate only to the items tested and to all the items tested



**@@@LJ Laboratories**

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

## Method Summary

CLIENT NAME: CBCL LTO  
PROJECT: 152618.00

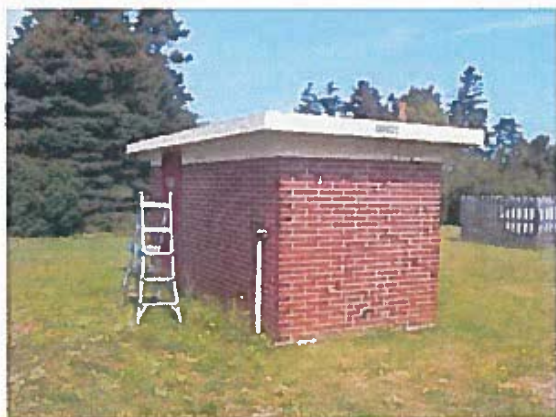
AGATWORK ORDER: 15X015414  
ATTENTION TO: JC Cormier

PARAMETER	AGATS.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Mercury	MET-121-6110 & MET-121-6107	EPA 245.1/In-house Leachate	CVAAS
Initial pH	MET-121-6110		pH Meter
Final pH	MET-121-6110		pH Meter
% Moisture			GRAVIMETRIC
Total Sample Mass			
Lead	MET-121-6110, MET-121-6105	Based on CGSB 164-GP-1MP & In-House Method, SM3125	ICP/MS
Lead	MET-121-6105 & MET-121-6103	EPA SW 846 6020A/30508, SM3125, AOAC 974.02	ICP/MS
Mercury	INOR-121-6101 & INOR-121-6107	Based on EPA 245.5 & SM 31126	CV/AA

APPENDIX D

# Photographs

**Photo Log - Hazardous Building Material Survey – Cavendish, PEI**



**Photo 1: Subject building.**



**Photo 2: Photo of sample AS-01-CAV, roofing material.**



**Photo 3: Photo of sample AS-02-CAV, brick mortar.**



**Photo 4: Photo of sample AS-03-CAV, mortar around window casing.**



**Photo 5: Photo of sample AS-04-CAV, wall board interior surfaces.**



**Photo 6: Photo of sample AS-05-CAV, caulking around heat shield.**

**Photo Log - Hazardous Building Material Survey – Cavendish, PEI**



**Photo 7– Photo of paint sample AS-06-CAV, gasket material (containing 9.0% chrysotile).**



**Photo 8 – Photo of paint sample P-01-CAV, white exterior trim paint (lead 3640 mg/kg, mercury 25.3 mg/kg). PS-01-CAV was determined to be lead leachate hazardous.**