



**City of Thompson – Wastewater  
Treatment Plant  
Decommissioning Plan**

Decommissioning Plan

April 1, 2022

Prepared for:

Manitoba Water Services Board  
Unit 1A – 2010 Currie Blvd.  
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- and -

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Project No. 111220500



**CITY OF THOMPSON – WASTEWATER TREATMENT PLANT DECOMMISSIONING PLAN**

<b>Revision</b>	<b>Description</b>	<b>Author</b>		<b>Quality Check</b>		<b>Independent Review</b>	
1	Final	RDK		SKB		JC	



## CITY OF THOMPSON – WASTEWATER TREATMENT PLANT DECOMMISSIONING PLAN

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# CITY OF THOMPSON – WASTEWATER TREATMENT PLANT DECOMMISSIONING PLAN

Introduction  
April 1, 2022

## 1.0 INTRODUCTION

### 1.1 BACKGROUND

The City of Thompson (City) recently constructed a new Wastewater Treatment Plant (WWTP) to treat 100% of the City's wastewater. Since commissioning of the new WWTP, the City's old WWTP is no longer required. Under the new WWTP's licence No. 3118R Articles 48 & 49, the City is to submit a decommissioning plan for the old WWTP and effluent outfall to the Director of Manitoba Environment, Climate and Parks (MECP) – Industrial and Wastewater Section for approval.

### 1.2 PURPOSE

The purpose of this document is to:

- Summarize the decommissioning plan for the old WWTP and outfall



## **2.0 DESCRIPTION OF EXISTING WASTEWATER TREATMENT SYSTEMS**

The old WWTP and treated effluent outfall was commissioned in 1958.

The key infrastructure at the WWTP includes:

- Raw wastewater forcemains w/ flowmeters and valves
- Primary Clarifiers (below ground concrete tanks)
- Primary Clarifier sludge rakes (not in service)
- Sludge storage tanks / digesters (below ground concrete tanks)
- Vacuum filter sludge thickener & dewatered sludge conveyor belt
- Polymer chemical feed system
- Hot water boiler
- Sludge heat exchanger vessel
- Solids handling submersible pumps and dry pit stands
- Piping, valves and instrumentation
- Motor starters
- HVAC system including air handling unit, supply fans, exhaust fans, ducting
- Below ground infrastructure (site piping, valves)
- Treated effluent discharge pipe and outfall manhole
- MB Hydro power supply (overhead supply lines)

Key infrastructure at the Treated Effluent Outfall includes:

- Below ground piping
- Discharge manhole (located on the shore of the Burntwood River)
- Intermediate manhole



## **CITY OF THOMPSON – WASTEWATER TREATMENT PLANT DECOMMISSIONING PLAN**

### Description of Existing Wastewater Treatment Systems

April 1, 2022

The majority of the equipment at the old WWTP are old and not worth salvaging. The City should identify any items that they will be removing to retain or items they would like the Contractor to remove and turn over. This information will be included in the tender documents.



# CITY OF THOMPSON – WASTEWATER TREATMENT PLANT DECOMMISSIONING PLAN

Hazardous Material Assessment  
April 1, 2022

## 3.0 HAZARDOUS MATERIAL ASSESSMENT

Stantec completed a Hazardous Material Assessment on June 29, 2021. The complete Hazardous Material Assessment Report is found in Appendix A. A summary of the observations are provided below for information and removal in the future should there be a need to repurpose the existing building. Refer to the report for the detailed recommendations.

- Asbestos-containing material (ACM) were detected in the following materials noted below.
  - Vinyl floor tiles located in the WWTP Office and Hallway
  - Vinyl floor tiles located in the WWTP Laboratory
  - Sweat wrap located in the WWTP Boiler Room.
- Lead at concentrations greater than 600 ppm was detected in laboratory analysis of the following paints noted below.
  - Blue coloured paint on the front entrance walls of the WWTP
  - Red coloured paint on the metal railing to the Pump Room of the WWTP
  - Orange coloured paint on the pump, tank and associated piping in the Boiler Room of the WWTP
  - White coloured paint on the piping in the Pump Room of the WWTP
  - Rust coloured paint on the exterior metal trim of the WWTP
  - Black coloured paint on the exterior panels of the WWTP
  - Beige coloured paint on the exterior panels of the WWTP
- Lead may also be present in the following materials:
  - Lead-acid batteries used in emergency lighting
  - Older electrical wiring materials and sheathing
  - Solder used on domestic water lines
  - Solder used in bell fittings for cast iron pipes and in electrical equipment
  - Vent and pipe flashing
- Polychlorinated biphenyls (PCBs) may be present in older vintage light fluorescent lighting fixtures. PCB containing items identified for removal shall be handled, transported, stored and disposed of in accordance with Provincial and Federal regulations.
- Mould and moisture staining was observed in the following areas:





## CITY OF THOMPSON – WASTEWATER TREATMENT PLANT DECOMMISSIONING PLAN

### Hazardous Material Assessment

April 1, 2022

- Moisture staining was observed in the pressed cardboard ceiling tiles found in the Washroom of the WWTP
- Moisture staining was observed in the HVAC duct wrap found in the Sludge Dewatering Room of the WWTP
- Moisture damage was observed in the pressed cardboard ceiling tiles found along the south wall of the WWTP Office
- Mercury vapour is present in the light tubes of the approximately 24 fluorescent light fixtures observed and 2 thermostats with mercury-containing switches. Complete removal of mercury containing items is required before demolition and they are to be handled, transported, stored and disposed of in accordance with Provincial and Federal regulations.
- Ozone-depleting substances (ODS) related to cooling, refrigeration or fire suppression equipment was not observed.



## **4.0 WASTEWATER TREATMENT PLANT DECOMMISSIONING**

Decommissioning of the old wastewater treatment plant will consist of the following activities which are described in greater detail in the sections below:

- Inventory waste material and chemicals requiring special disposal
- Removal of equipment to be salvaged
- Disposal of untreated wastewater and sludge

### **4.1 INVENTORIES**

Inventories of hazardous material and chemicals present at the time of decommissioning will be documented and disposed of at the City of Thompson Waste Disposal Grounds.

### **4.2 REMOVAL OF EQUIPMENT TO BE SALVAGED**

As noted in Section 2, the majority of the equipment is old and unlikely to be salvaged. The City will provide a list of equipment that either they would like to remove before demolition or equipment that is to be removed by the contractor and turned over to the City. This information will be incorporated in the decommissioning specifications.

### **4.3 UNTREATED WASTEWATER REMOVAL AND DISPOSAL**

The remaining liquids (untreated wastewater) will be discharged to the new WWTP via the truck dump receiving station. The liquids can be removed by a registered sewage hauler or pumped to the truck dump receiving station via temporary overland piping.

### **4.4 SLUDGE REMOVAL AND DISPOSAL**

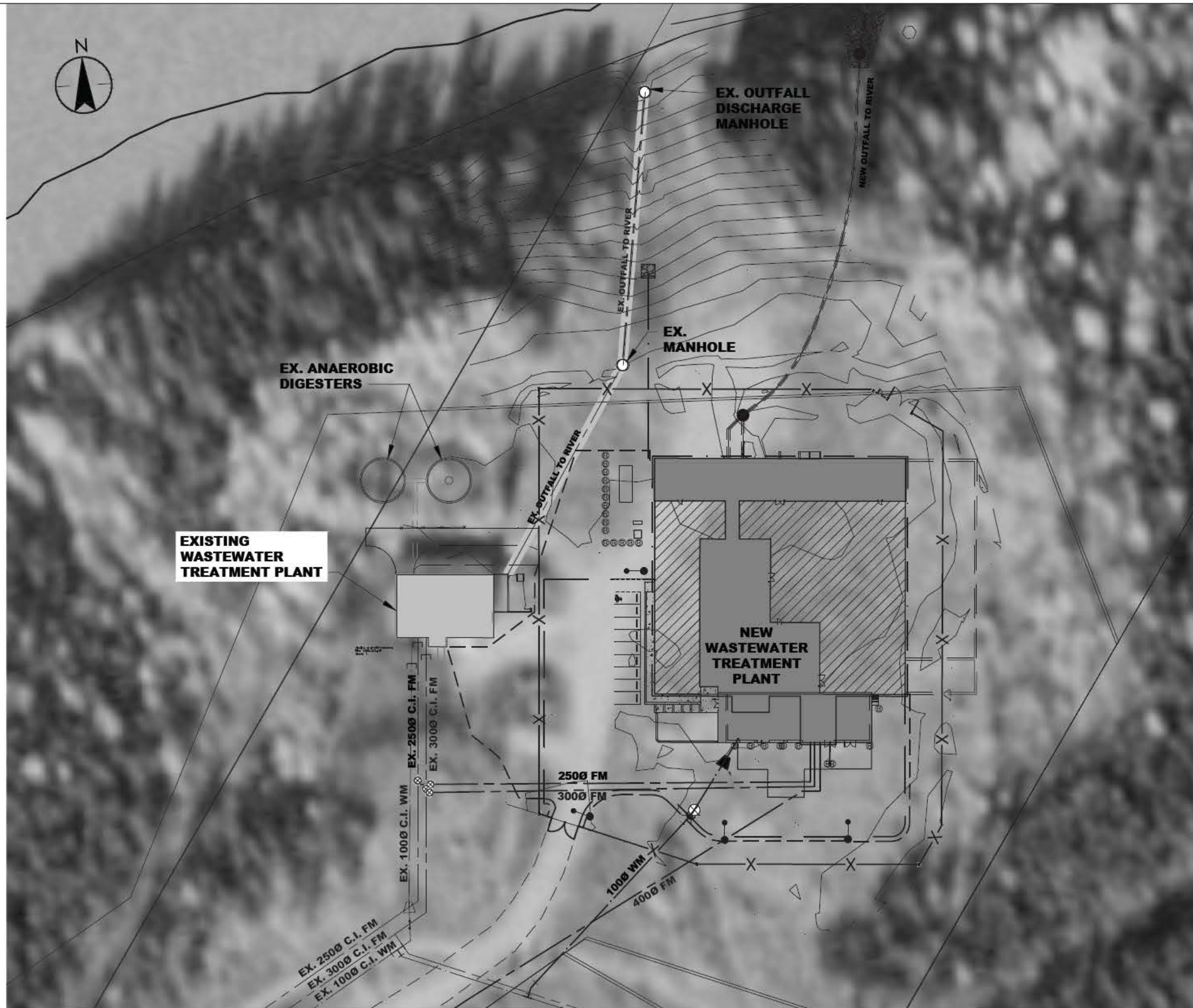
Sludge accumulation found in the existing clarifiers and digesters is estimated to be 950m<sup>3</sup> total. All sludge will be removed and temporarily stored in the City of Thompson's Lagoon before being dewatered/dried at a later date as part of the decommissioning of the old lagoon. The lagoon has been off-line since June 2019 and has an estimated 7,000m<sup>3</sup> of spare capacity and therefore has capacity accommodate the sludge from the old WWTP. Sludge to be hauled in liquid-tight containers to prevent loss of sludge to the environment.

The old WWTP is not accessible to the public. Access hatches to the existing clarifier tanks and digesters will be closed and locked where possible following removal of sludge. No further cleaning or disinfection will be undertaken within these tanks.



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Legend

Notes



Client/Project

CITY OF THOMPSON  
 WASTEWATER TREATMENT PLANT  
 DEMOLITION

Figure No.

4.1

Title

OLD WASTEWATER TREATMENT PLANT  
 AND OUTFALL SITE PLAN

## 5.0 TREATED EFFLUENT OUTFALL DEMOLITION

Demolition of the treated effluent outfall will consist of the following activities which are described in greater detail in the sections below:

- Removal of outfall manholes
- Cap and abandon underground piping
- Site rehabilitation

### 5.1 DECOMMISSIONING EXISTING UNDERGROUND INFRASTRUCTURE

The treated effluent outfall includes:

- **400 mm dia. Treated effluent discharge pipe.** This pipe will be capped at each end and abandoned in place.
- **Intermediate Manhole.** The intermediate manhole will be abandoned by removing and disposing of the upper sections at the City of Thompson Waste Disposal Grounds. The lower barrel will be filled with stabilization concrete to prevent future collapse and will be buried with common fill.
- **Outfall Discharge Manhole.** The outfall discharge manhole will be removed and disposed of at the City of Thompson Waste Disposal Grounds.

Underground site piping to be capped will be done so in accordance with the Manitoba Water Services Board Standard Construction Specification.

### 5.2 SITE REHABILITATION

Site rehabilitation activities include debris clean up, grading, topsoil placement and seeding.



# **APPENDIX A**

## **Hazardous Material Assessment**





**Pre-Demolition Hazardous  
Building Materials Assessment**

City of Thompson Wastewater Treatment  
Plant and Associated Buildings, Thompson,  
Manitoba

FINAL REPORT

September 15, 2021

Prepared for:

Manitoba Water Services Board  
Unit #1A – 2010 Currie Blvd.  
Brandon, MB R7B 4E7

Prepared by:

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## **Executive Summary**

Stantec Consulting Ltd. (Stantec) was commissioned by Manitoba Water Services Board (the Client) to conduct a hazardous building materials assessment of the wastewater treatment plant (WWTP) building located in Thompson, Manitoba (subject building), which was reportedly originally constructed in the late 1950s. While in the area of the WWTP, a chlorination building and lagoon aeration building were also observed and assessed.

The purpose of the assessment was to check for potential hazardous building materials that may require special management practices in accordance with applicable provincial regulations, prior to future demolition activities.

The work was carried out in accordance with the requirements of Manitoba's Workplace Safety and Health Regulation (MB Reg. 217/2006).

The hazardous building materials considered during this assessment included the following:

- Asbestos-containing materials (ACMs).
- Lead including lead-containing paints (LCPs).
- Polychlorinated biphenyls (PCBs).
- Mould-impacted materials.
- Equipment with elemental mercury.
- Equipment with ozone-depleting substances (ODSs).

Based on Stantec's visual assessment and the laboratory analyses performed on the samples collected, hazardous building materials were identified to be present.

A summary of our findings is presented in Table 1, below. Recommendations pertaining to the handling, removal, transportation and disposal of identified hazardous building materials are provided in the body of this report.

**Table ES 1 Summary of Findings**

<b>Building Materials</b>	<b>Comments</b>
Asbestos	<p>The following ACMs were identified through this assessment.</p> <ul style="list-style-type: none"> <li>• 9" x 9" vinyl floor tiles; beige with grey streaks in the WWTP.</li> <li>• 9" x 9" vinyl floor tiles; grey with white streaks in the WWTP.</li> <li>• Cement board walls and ceiling in the chlorination building.</li> </ul> <p>Presumed asbestos-containing materials (PACMs) were observed to be present in the form of:</p> <ul style="list-style-type: none"> <li>• Roofing materials on the chlorination building and lagoon aeration building.</li> <li>• Cement board walls and ceiling in the lagoon aeration building (visually similar to those inside the chlorination building, which are an ACM).</li> </ul> <p>These materials were not sampled as there was no access. As these materials are known to have been manufactured with asbestos, they should be presumed to be asbestos containing unless proven otherwise by laboratory analysis.</p>



**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

**Table ES 1 Summary of Findings**

<b>Building Materials</b>	<b>Comments</b>
Lead	<p>Greater than 600 ppm lead was detected through laboratory analysis of chip samples of the following paints:</p> <ul style="list-style-type: none"> <li>• Blue coloured paint on plywood walls in entrance to WWTP.</li> <li>• Red coloured paint on metal railing to pump floor of WWTP.</li> <li>• Orange coloured paint on metal pump and tank in boiler room of WWTP.</li> <li>• Rust coloured paint on metal trim on exterior of WWTP.</li> <li>• Black coloured paint on exterior panels of WWTP.</li> <li>• Beige coloured paint on exterior panels of WWTP.</li> <li>• Brown coloured paint on exterior wooden door of chlorination building.</li> </ul> <p>Lead may also be present in the following materials, which are present in various locations throughout the WWTP:</p> <ul style="list-style-type: none"> <li>• Lead-acid batteries used in emergency lighting.</li> <li>• Older electrical wiring materials and sheathing.</li> <li>• Solder used on domestic water lines.</li> <li>• Solder used in bell fittings for cast iron pipes and in electrical equipment.</li> <li>• Vent and pipe flashings.</li> </ul>
Polychlorinated biphenyls (PCBs)	<p>PCBs may be present in the fluorescent light ballasts of the approximately 24 light fixtures observed in the WWTP. As the ballasts were energized, they could not be inspected at the time of the assessment for health and safety reasons.</p>
Mould	<p>Moisture-impacted materials were observed as follows:</p> <ul style="list-style-type: none"> <li>• Moisture-stained pressed cardboard ceiling tiles in the WWTP washroom.</li> <li>• Moisture-stained duct wrap in the WWTP sludge dewatering room.</li> <li>• Moisture-damaged pressed cardboard ceiling tiles and peeling paint in the WWTP office.</li> </ul>
Mercury	<p>Mercury vapour is present in the light tubes within the approximately 24 fluorescent light fixtures observed in the WWTP.</p> <p>Mercury is present in the switches in two thermostats observed in the WWTP.</p>
Ozone-depleting substance (ODS)	<p>Building related cooling, refrigeration or fire suppression equipment suspected to be ODS-containing was not observed.</p>

The statements made in this Executive Summary text are subject to the same limitations included in this report and are to be read in conjunction with the remainder of this report.



## Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
ACM	asbestos-containing material
AIHA	American Industrial Hygiene Association
AMP	Asbestos Management Plan
ELLAP	Environmental Lead Laboratory Approval Program
EMSL	EMSL Canada Inc.
HVAC	heating, ventilation and air conditioning
LCP	lead-containing paint
NVLAP	National Voluntary Laboratory Accreditation Program
ODS	ozone-depleting substance
OEL	occupational exposure limit
PACM	presumed asbestos-containing material
PCB	polychlorinated biphenyl
USEPA	United States Environmental Protection Agency



# PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT

Introduction  
September 15, 2021

## 1.0 INTRODUCTION

Stantec Consulting Ltd. (Stantec) was commissioned by Manitoba Water Services Board (the Client) to conduct a hazardous building materials assessment of the wastewater treatment plant (WWTP) building located in Thompson, Manitoba. While assessing the WWTP, a chlorination building and lagoon aeration building were also observed and included in our assessment.

The purpose of the assessment was to check for potential hazardous building materials that may require special management practices in accordance with applicable provincial regulations, prior to future demolition activities.

The work was carried out in accordance with the requirements of Manitoba's Workplace Safety and Health Regulation (MB Reg. 217/2006).

The hazardous building materials considered during this assessment included the following:

- Asbestos-containing materials (ACMs).
- Lead including lead-containing paints (LCPs).
- Polychlorinated biphenyls (PCBs).
- Mould-impacted materials.
- Equipment with elemental mercury.
- Equipment with ozone-depleting substances (ODSs).

The site work was conducted by Summer Hull on June 29, 2021.

## 1.1 UNDERSTANDING OF THE PROJECT

Stantec understands that current information pertaining to the identity, location and approximate extent of hazardous building materials (if any) within the wastewater treatment plant and associated chlorination building and lagoon aeration building (subject buildings) is not on file. As such, the Client commissioned this assessment as a measure of diligence in maintaining compliance with MB Reg. 217/2006 pertaining to the identification of hazardous materials prior to planned demolition activities.



# PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT

Scope

September 15, 2021

## 2.0 SCOPE

The planned scope of work for this assessment involved the following:

- Review of existing information, including site drawings, and discussions with site personnel, where available.
- Visual assessment of readily accessible areas for the presence of suspected hazardous building materials.
- Collection of representative bulk samples from building materials suspected to contain asbestos fibres.
- Collection of paint chip samples for the determination of the lead content in paint finishes.
- Submission of samples collected for laboratory analysis.
- Evaluation and interpretation of field findings and sample analytical results to develop conclusions and recommendations pertaining to hazardous building materials identified.

## 2.1 LIMITATIONS

In preparation of this report, Stantec used professional judgment based on experience. The work was conducted in accordance with generally accepted professional standards. Stantec relied on information gathered during the site investigation and laboratory analytical reports.

This report reflects the observations made within accessible and accessed areas of the subject buildings, and the results of analyses performed on the specific material sampled during the assessment. Analytical results reflect the sampled materials at the specific sample locations.

This report has been prepared for the exclusive use of the Client for the purpose of assessing general conditions in the subject buildings. Any use that a third party makes of this report, or reliance on, or decisions to be made on it, are the responsibility of such third parties. Stantec accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

### 2.1.1 Physical and Sampling Limitations

Sampling was conducted pertaining to suspected ACMs and suspected LCPs only. The assessment for the presence of other hazardous building materials was visual in nature and was conducted pertaining to readily visible surfaces within accessible spaces only. Concealed spaces were inspected via existing access panels, where present. Interior and exterior finishes, solid ceilings, walls, flooring and structural elements were not removed to access concealed areas.

Due to limitations on the agreed to scope of work for this project as well as physical limitations in accessing concealed areas and limitations associated with working in occupied/operational spaces, there are specific limitations to the information that can be provided regarding each hazardous building material considered in this assessment, as outlined below.

- Building materials that may be present and that may contain asbestos but were not accessible for sampling include, but are not limited to the following:
  - Sub-grade materials (e.g., asbestos cement drainage pipe).
  - Woven tape inside duct connection joints.
  - Mechanical (e.g., piping and ducting) insulation within wall cavities, crawlspaces tunnels or other concealed spaces.



## PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT

Scope

September 15, 2021

- Insulation materials inside fire-rated doors.
- Heating, ventilation and air conditioning (HVAC) units' mechanical inner linings and/or insulation on the interior side of ducts.
- Heat protection materials inside mechanical installations and light fixtures.
- Samples of paint applications suspected to contain lead were collected from surfaces of major paint applications where visually different paint colours and/or types were identified. Although the surfaces where samples were collected may be covered with more than one coat of paint, the paint samples are described by the surface (visible) colour only. Attempts were made to represent all layers of paint in the samples collected. As analytical results are referenced to the surface paint colour only, the lead content of all painted surfaces similar to that represented by the surface paint colour were presumed to be the same, regardless of differing sub surface paints, if any.
- Due to height restrictions and the risk of electrical shock in handling operational light fixtures, the ballasts present in the fixtures observed were not inspected for PCB labels or other PCB identifiers. Conclusions and recommendations regarding the presence of PCBs are based on limited observations and are presented to provide guidance regarding the likelihood that PCB-containing equipment is or is not present. The exact extent and/or number of fluorescent lamp ballasts containing PCBs, if any, will not be commented on.
  - Although they may also be present in other items in limited amounts (e.g., plastics, molded rubber parts, applied dried paints, coatings or sealants, caulking, adhesives, paper, sound-deadening materials, insulation, or felt and fabric products such as gaskets), PCBs are not expected to be present in those materials in concentrations that would necessitate the requirement for PCB-specific handling procedures, separate removal and/or disposal considerations for renovation or demolition. As such, these items were not considered in our assessment.
- Visual assessment for the presence of suspected visible mould and/or suitable conditions for mould growth (e.g., moist and/or water-stained building materials) was conducted. The conclusions made in this report provide description(s) of the potential source(s) of moisture that may have led to suitable conditions for mould growth, only in those cases where potential source(s) of moisture were identified. The visual assessment did not include an intrusive assessment. The conclusions provided herein will not necessarily identify all sources of moisture leading to suitable conditions for mould growth within the impacted area(s).
  - This assessment does not constitute a building envelope/building systems assessment, which would include an intrusive investigation to assess the internal condition, potential moisture sources, and expected remaining service life of the various components and systems comprising the envelope of a building.
- The potential presence of mercury or mercury-containing equipment in inaccessible areas or as internal parts of HVAC mechanisms or other equipment was not assessed.
  - Although limited amounts of mercury may be present in paints and adhesives, mercury is not expected to be present in those materials in concentrations that would necessitate the requirement for mercury-specific handling procedures, separate removal and/or disposal considerations for renovation or demolition. As such, these items were not considered in our assessment.
- Investigation was limited to a visual review in accessed areas of readily accessible building-related cooling and refrigeration equipment which could contain ODSs. Testing was not conducted. Equipment or materials that were not assessed but that may contain ODSs included, but were not limited to, portable equipment (including domestic-type refrigerators and water coolers, tenant-related refrigeration equipment), flexible plastic foam or rigid insulation foam, solvents, aerosol spray propellants and fire extinguishing equipment.
- In general, the assessment for the presence of hazardous building materials was visual in nature and was conducted pertaining to readily visible surfaces within accessible accessed spaces only. Additional hazardous building materials are potentially present in inaccessible areas not assessed including, but not limited to: ceiling spaces, wall cavities, and buried materials.



## PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT

Scope

September 15, 2021

### 2.1.2 Areas Not Accessed

The following areas were not accessed, for the reasons indicated:

- Rooftops (safe access not available).
- Interior of lagoon aeration building (locked).

As such, limited comments, if any, will be provided regarding the presence, quantity or condition of hazardous building materials within the above-noted areas.



## PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT

Facility Description  
September 15, 2021

### 3.0 FACILITY DESCRIPTION

The Wastewater Treatment Plant is located in Thompson, MB, and consists of a one-storey plus basement level (pump floor) WWTP building originally constructed in the late 1950s, as well as a chlorination building and lagoon aeration building which appear to be of pre-1990 construction vintage. The original construction time period for the subject buildings is consistent with those dates when hazardous building materials were commonly used in construction.

The typical structural components, mechanical components and building finishes associated with the subject buildings consist of the following:

- Foundation – concrete.
- Exterior – brick; metal cladding; stucco on chlorination building and lagoon aeration building.
- Mechanical – fibreglass and uninsulated pipes.
- Heating, ventilation and air conditioning (HVAC) – WWTP is heated via boiler and hydronic heat and cooled via make up air handling unit. The chlorination building and lagoon aeration building are provided with electric heat; cooling systems are not associated with these buildings.
- Interior walls – plywood and block walls; cement board in chlorination building and lagoon aeration building.
- Interior ceilings – plywood, pressed cardboard ceiling tiles; metal; concrete; cement board in chlorination building and lagoon aeration building.
- Interior flooring – vinyl floor tiles and concrete; concrete in chlorination building and lagoon aeration building.
- Roof – not accessed; asphalt shingles observed on all buildings. Shingles also noted on the ground around the WWTP.





### 4.0 HAZARDOUS BUILDING MATERIALS ASSESSMENT

Background, methodology, findings and recommendations are provided on a material-by-material basis in the following sub-sections, for each of the hazardous building materials considered in this assessment.

Floor plans showing the locations of samples collected during this assessment are provided in Appendix A.

#### 4.1 ASBESTOS

Asbestos is a naturally occurring form of fibrous silicate that is durable and flexible; has high thermal and tensile strength; is resistant to heat, chemical corrosion and friction; does not conduct electricity; and insulates well against condensation, heat and noise. Due to these properties, asbestos was used in over 3,000 commercial products, and it is estimated that approximately 70% of the asbestos that was used in North America was used in building materials.

In buildings, and among many other potential asbestos-containing materials, asbestos is typically found in plaster, mechanical insulation, gaskets, thermal insulation on pipes, refractory material, roofing felts, floor tiles, ceiling tiles and parging, heat resistant panels, incandescent light fixture reflector plates, and any other material requiring a high degree of durability or thermal resistance.

Asbestos-containing materials are grouped into two classifications, friable and non-friable materials. Friable ACMs are those that can easily be crumbled or broken apart by mere hand pressure. When these materials break apart asbestos fibres are then released into the atmosphere. Non-friable ACMs or “manufactured products” are materials that by the nature of their manufacturing/construction do not readily allow the release of asbestos fibres. These materials should not be cut or shaped with power tools, since this procedure may allow for the release of the asbestos fibres. Some materials or “manufactured products”, such as plaster, drywall and ceiling tiles that are considered to be non-friable in an undisturbed state can become friable when damaged or disturbed.

The common use of asbestos in various building materials started to decline as a result of changes in industry practices and/or legislation beginning in the mid-1970s. For example, the spray application of asbestos-containing fireproofing was prohibited in 1986. Although many types of ACMs were no longer in use by the 1990s, some ACMs, primarily non-friable materials such as asbestos cement products (e.g., pipes, shingles, wall panels) and sealants (e.g., roofing products, firestopping products, penetration sealants, pipe thread sealants) saw continued use. A material known as vermiculite, which was found to be asbestos contaminated as a result of the co-occurrence of asbestos forms in the vermiculite mineral deposits, was used into the mid-1990s for insulation within attics, floor spaces or within masonry block wall systems. Asbestos was still used in selected building materials through the end of 2018 in Canada, when an official ban on the import, manufacture, sale, trade or use of asbestos-containing products was implemented.

##### 4.1.1 Methodology

The presence of asbestos in the workplace in Manitoba is governed by the MB Reg. 217/2006. The SAFE Work Manitoba document *Guide for Asbestos Management* (MB Asbestos Guide) was developed based on those requirements, provides significant additional information and regulatory guidance, and is used by Manitoba



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Government Workplace Safety and Health Officers as a guide when reviewing abatement work practices and employer codes of practice.

With respect to the definition of ACM, the MB Asbestos Guide indicates that the employer must comply with the asbestos requirements when there is:

- 0.1%, or greater, asbestos in a friable material.
- 1%, or greater, asbestos in a non-friable material.
- Vermiculite insulation that contains asbestos.

Based on these criteria, a visual assessment of accessible areas was undertaken to check for the presence of suspected ACMs. Locations to collect discrete bulk samples of suspected ACMs were identified and samples of representative materials were then collected at these locations.

Multiple samples were collected from each “homogenous application” of observed suspected ACMs (materials suspected to contain asbestos that are uniform in material type, colour, texture application and estimated installation date) and submitted to EMSL Canada Inc. (EMSL) in Mississauga, Ontario for analysis of asbestos content using polarized light microscopy (PLM) with dispersion staining, in accordance with the United States Environmental Protection Agency (USEPA) 600/R-93/116 method. EMSL’s analytical laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

The number of samples to be collected for each homogenous application of a suspected ACM was based on accepted occupational hygiene standards and protocols, on the recommendations provided in the MB Asbestos Guide, and on the assessor’s experience and understanding of the consistency of that building material’s application.

### 4.1.1.1 Potential Asbestos-Containing Vermiculite Insulation

As part of the assessment, Stantec assessed the subject buildings for areas where vermiculite insulation, a potential ACM, would likely be present. This included making note of and assessing floor cavities and masonry block or brick walls, which are typical areas where vermiculite is found. Where masonry or brick walls were present, cavities were visually reviewed through existing cracks, damaged areas, holes, etc. Additional destructive assessment (drilling) was also conducted to assess the cavity for the presence of vermiculite.

### 4.1.1.2 Sample Results Interpretation

When asbestos is detected in concentrations greater than 1% percent in one of the samples within a set that was collected to represent a “homogenous application” of a particular non-friable material (or detected in concentrations greater than 0.1% in applications of friable materials or in any concentration, for applications of vermiculite), the entire sample set, and the entire application of that material is then considered to be an ACM.

In addition to the above, a “positive stop” option was requested during the laboratory analysis of the building material samples submitted for asbestos analysis. The “positive stop” option is utilized by the laboratory when asbestos is detected at a concentration greater than that which would define the material as ACM. At this point, further analysis of subsequent samples within the set is deemed to be unnecessary (as the entire set will be considered an ACM, per above), and the remainder of the samples within the set are not analyzed.



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### 4.1.1.3 Asbestos Sampling Quality Assurance/Quality Control

Sampling activities pertaining to asbestos were conducted in accordance with Stantec's safe work practices, which take into account current provincial regulations pertaining to such work (i.e., sampling procedures, required number of samples and laboratory analytical procedures).

Representative bulk samples were collected of accessible suspect ACMs in sufficient quantities for laboratory analysis. Suspect ACM samples were sealed in polyethylene zip-lock bags labeled with the sample number, suspect material description, and sample location. As part of sampling procedures, sampling tools were cleaned between sample collection events to avoid the potential for cross-contamination of samples.

All sample bags were compiled in order and placed into a single container accompanied with a chain of custody form outlining the project information, date, building location, number of samples, and sample description. Samples were submitted to the analytical laboratory in a sealed container via courier.

### 4.1.1.4 Assessment of Material Condition

A visual assessment of the condition and accessibility was also completed for each occurrence of suspect ACM. The criteria used in evaluating the condition, accessibility and exposure risk of ACMs were generally based on the June 5, 2017 Public Services and Procurement Canada "Asbestos Management Standard", and industry standards of practice.

## 4.1.2 Findings

A summary list of the bulk samples collected by Stantec, including a description of the material, sampling location and laboratory test results is provided in Appendix B. Copies of the Laboratory Certificates of Analysis for bulk samples analyzed are provided in Appendix C.

Based on our observations of building construction (estimated vintage of interior finishes and uniformity of building material use) and on our interpretations of the analytical results of suspected ACMs collected through this assessment, the materials presented in the table in Appendix D were identified as ACMs. The following information is included for each identified ACM:

- type of material that contains asbestos
- location/approximate extent of the ACM within the building
- asbestos type and percentage identified
- friability
- condition
- representative photographs, where available

### 4.1.2.1 Presumed Asbestos-Containing Materials

The following building materials were observed to be present at the subject buildings but not sampled, and are listed as presumed asbestos-containing materials (PACMs):



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- Roofing materials - not sampled at the chlorination building and lagoon aeration building. Samples at the WWTP were collected from loose shingles present on the ground.
- Cement board walls and ceiling at the lagoon aeration building (no access; observed through screens, visually similar to confirmed ACM in other locations).

These materials were observed to be in good condition. As these materials are known to have been manufactured with asbestos, they should be presumed to be asbestos containing unless proven otherwise by laboratory analysis.

### 4.1.2.2 Non-Asbestos-Containing Materials

The bulk samples collected during this assessment for which no asbestos was detected through laboratory analysis can be seen in the table in Appendix B.

#### Non-ACMs with Trace Asbestos Detections

Samples of the following materials collected within subject building were found to contain trace amounts of asbestos:

- Window caulking (interior windows throughout the WWTP) – non-friable material (0.52% and 0.86% chrysotile detected in two samples, no asbestos detected in the third sample).
- Mastic associated with vinyl floor tile (12" x 12" beige) – non-friable material (0.64% chrysotile detected in one sample, no asbestos detected in the other two samples).
- Mastic associated with vinyl floor tile (9"x9" beige with grey streaks) – non-friable material (two types of mastic – brown [two samples <0.29% chrysotile detected] and black [0.32%, 0.72% and 0.93% chrysotile detected]).
- Mastic associated with vinyl floor tile (9"x9" grey with white streaks) – non-friable material (<0.25% chrysotile in all 3 samples).
- Sweat wrap in the WWTP – non-friable material (<0.25% chrysotile in one sample; no asbestos detected in the other two samples).
- Texture coat on the chlorination building exterior walls – friable material (<0.1% chrysotile in the texture coat layer in all three samples; no asbestos detected in the base layer).
- Texture coat on the lagoon aeration building exterior walls – friable material (<0.1% chrysotile in the texture coat layer in two of three samples; no asbestos detected in the texture coat layer of the third sample or in the base layer of any sample).

The numbers of samples collected for each of the above-noted materials would be adequate to appropriately characterize their asbestos contents based on their extents and published standards for sampling of homogenous applications of suspected ACMs (e.g., the Asbestos Guide). Given these analytical results and the definition of ACM in Manitoba, these materials are not considered ACMs.

#### Materials Not Suspected to Contain Asbestos

Various materials within the subject buildings were observed and/or presumed to be present, which are not suspected to contain asbestos. Typical materials of this nature that were observed and are not considered suspected ACMs, include but are not limited to the following:

- Materials comprised of glass, such as:



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- Windowpanes.
- Fibreglass batt insulation in wall, floor or ceiling cavities, or used in other applications (potentially excluding attached paper backing).
- Blown-in/loose-fill fiberglass insulation in attic or other spaces.
- Lights and lighting components.
- Materials comprised of metal, such as:
  - Flashings on siding or roofs.
  - Electrical wiring (excluding wrap) and conduit.
  - Plumbing components.
  - Components of doors, windows and associated trim.
  - Roofing.
- Materials comprised of wood, such as:
  - Components of doors, windows and associated trim.
  - Roofing.
- Other materials generally not suspected to contain asbestos:
  - Gypsum board/"drywall" (excluding suspected ACM finishing compounds).
  - Poured concrete items such as foundations, floors, pads or structural beams (excluding suspected ACM finishing compounds).
  - Gravel ballast on roofing.
  - Masonry units such as bricks or blocks (excluding mortar or potential loose-fill insulation).
  - Silicone-based clear caulking or sealants.

### 4.1.2.3 Potential for Vermiculite Insulation

Destructive testing was conducted by Stantec at the time of this assessment to assess wall cavities (and other potential locations of vermiculite) as indicated on the drawings in Appendix A. No vermiculite insulation was observed within the subject buildings through observations or destructive testing.

### 4.1.3 Recommendations

Based on the visual assessment and results of laboratory analyses, Stantec recommends the following with regards to meeting the requirements of MB Reg. 217/2006 as they pertain to managing asbestos during demolition projects:

- Identified ACMs (including damaged materials and/or debris) must be removed prior to building demolition, in accordance with the requirements of MB Reg. 217/2006 and the Asbestos Guide.
- Prior to demolition or other activities that would disturb them, undertake testing of PACMs that may be impacted to determine their asbestos content. Assessment and testing should be conducted by a competent person, and materials confirmed as ACMs should be handled by appropriately trained personnel (e.g., asbestos abatement contractor personnel), in accordance with the requirements of MB Reg. 217/2006 and the Asbestos Guide.
- Should a material suspected to contain asbestos fibres become uncovered during demolition activities, all work in the areas that may disturb the material should be stopped. Assessment and testing should be conducted by a competent person to determine asbestos content. Confirmed ACMs should be handled in accordance with the requirements of MB Reg. 217/2006 and the Asbestos Guide.
- If found in other locations, materials deemed visually similar to the ACMs identified in this report should be considered asbestos-containing and handled as such, until assessment and testing conducted by a competent person confirms otherwise
- Asbestos-containing cement pipe may be present below ground—caution should be used at any time when excavation is required.



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- Ensure all asbestos containing waste is handled, stored, and disposed of in accordance with the requirements of the Manitoba Departments of Conservation and Water Stewardship, and Labour (Workplace Safety and Health), and the Federal Transportation of Dangerous Goods Regulation.

### 4.2 LEAD

Lead may be used in its pure metallic form or combined chemically with other elements to form lead compounds. Metallic lead is used to make products such as electric storage batteries, ammunition, lead solder, radiation shields, pipes, and sheaths for electric cables. Metallic lead is sometimes combined with other metals such as copper, tin and antimony as lead alloys for use in the manufacture of a variety of metal products.

Organic lead compounds contain a lead atom covalently bonded to carbon. Common examples of organic lead compounds include lead “soaps” such as lead oleates, high pressure lubricants, and anti-knock agents in gasoline.

Inorganic lead compounds (or lead salts) result when lead is combined with an element other than carbon. Examples are lead oxide, lead chromate, lead carbonate and lead nitrate. Inorganic lead compounds may occur as solids or in solutions, and are used in insecticides, pigments, paints, frits, glasses, plastics, and rubber compounds.

Lead is commonly found in buildings in items such as the solder used on copper domestic pipes; the caulking on bell fittings of cast iron drainage pipes; electrical equipment/wiring; batteries (e.g., emergency exit signage batteries); lead sheeting (e.g., x-ray rooms); vent and pipe flashings; and paints and ceramic tile glazes.

#### 4.2.1 Methodology

A visual assessment of accessible areas was undertaken to check for the presence of materials that may contain lead. These materials included paint applications, wiring and plumbing, batteries, etc.

##### 4.2.1.1 Lead in Paint

With respect to potential lead exposures associated with disturbance to surfaces coated with lead-containing products, various occupational health and safety administrations have indicated the following:

- The improper removal of lead paint containing 600 mg/kg lead results in airborne lead concentrations that exceed half of the exposure limit for lead, when the occupational exposure limit is 0.05 milligrams per cubic metre ( $\text{mg}/\text{m}^3$ ), as it is in Manitoba.
  - This potential for exposure exceeding half of the occupational exposure limit would be the trigger for implementation of an exposure control plan.
- Lead concentrations as low as 90 mg/kg may present a risk to pregnant women and children.
  - Any risk assessment should include for the presence of high-risk individuals within the workplace.

When reviewing the above, “High risk” individuals are not expected to be present in the workplace or work areas associated with this building during building material alteration activities (i.e., renovation/demolition) that would create significant disturbance to paint. As such, Stantec will reference a value of >600 ppm in defining paints as “lead-containing” for the purpose of this report, such that appropriate risk assessments can be completed for ongoing operations and maintenance or renovation or demolition planning. However, information regarding the lead content of all paints tested is provided herein, for reference and risk assessment should the consideration of high-risk individuals be necessary, based on the requirements of a particular situation.



## PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT

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Based on the above, samples of potential LCPs were collected from major paint applications, in sufficient quantity to conduct analysis for total lead content. The sampling of paint applications involved the collection of paint chip samples of paint layers to the substrate, where possible. A minimum volume of 5 cc or ½ teaspoon of paint chips was typically collected. Wherever necessary and possible, paint was separated from any backing material such as paper, concrete or wood and placed in a sealed, clearly labelled plastic bag.

Samples collected were submitted to EMSL for analysis of total lead content using EPA Method SW 846 3050B\*/7000B. EMSL's analytical laboratory is also accredited by the AIHA Environmental Lead Laboratory Approval Program (ELLAP).

### 4.2.1.2 Assessment of Paint Condition

The criteria for condition evaluation pertaining to LCPs described herein are generally based on the United States Housing and Urban Development (HUD) 2012 *Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing*.

### 4.2.2 Findings

Lead is expected to be present in the following, which are present in various locations within the subject buildings:

- Lead-acid batteries used in emergency lighting.
- Older electrical wiring materials and sheathing.
- Solder used on domestic water lines.
- Solder used in bell fittings for cast iron pipes and in electrical equipment.
- Vent and pipe flashings.

#### 4.2.2.1 Lead in Paint

A summary list of the samples collected including a description of the samples, sampling locations and laboratory analytical results is provided in Appendix E. Copies of the Laboratory Certificates of Analysis for paint chip samples analyzed are included in Appendix F.

Based on our observations and interpretations of suspected LCP sample analytical results, the paints presented in the table in Appendix G were identified as LCPs.

The following information is included for each identified LCP:

- Paint colour.
- Substrate to which paint is applied.
- Location/approximate extent of the LCP within the building.
- Lead content of paint.
- Condition.
- Representative photographs, where available.

### 4.2.3 Recommendations

LCPs in poor condition should be addressed and visible LCP paint chip debris should be removed for appropriate disposal. This should be completed as part of the planned demolition project.



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When paints or other lead-containing equipment/materials within the buildings are to be disturbed and/or removed, including instances when LCP debris is cleaned up, ensure compliance with the following:

- The exposure protection requirements of MB Reg. 217/2006.
- The disposal requirements of the current version of the Manitoba Hazardous Waste Regulation MR 55/2003.
- The Transportation requirements of Manitoba's *The Dangerous Goods Handling and Transportation Act* and the
- Federal Transportation of Dangerous Goods Regulations.

Corrective action or remedial work on paint applications containing any concentration of lead should be undertaken in a manner so as to avoid generating fine particulate matter or dust (i.e., avoid sanding). Airborne lead dust or fumes should not exceed MB Reg. 217/2006 eight-hour occupational exposure limit (OEL) of 0.05 mg/m<sup>3</sup> during the removal of paints and products containing any concentration of lead.

Ultimately, the employer is responsible to review the work tasks required and the ways in which materials (including those coated with paints that may contain lead in varying concentrations) will be impacted, as well as the individuals that will be present in the immediate vicinity of the work (i.e., potential for high-risk individuals) in order to determine the appropriate personal protective equipment (PPE—including respirators and protective clothing), containment and/or decontamination measures and work procedures that should be followed to protect workers from lead exposure.

### 4.3 POLYCHLORINATED BIPHENYLS

PCBs are man-made toxic chemicals whose physical and chemical properties produce the following attributes: fire resistance, low electrical conductivity, high resistance to thermal breakdown, high chemical stability and resistance to oxidants and other chemical.

PCBs were used widely as coolants and lubricants in transformers, capacitors, and other electrical equipment. In fluorescent fixtures, PCBs were usually found within the small capacitors inside the ballast that controls the lamp. The Federal Chlorobiphenyls Regulation, SOR/91-152, prohibited the use of PCBs in electrical equipment manufactured after July 1, 1980. Stocks of items such as ballasts containing PCBs may have been used into the early or mid-1980s.

#### 4.3.1 Methodology

A visual review for the presence of PCBs in electrical equipment was completed. Equipment that is generally suspected of containing PCBs includes lamp ballasts, transformers, hydraulic systems, compressors, switchgear and capacitors.

No sampling of dielectric fluids was undertaken as part of this assessment.

#### 4.3.2 Findings

PCBs may be present in the fluorescent light ballasts of the approximately 24 light fixtures observed in the WWTP. As the ballasts were energized, they could not be inspected at the time of the assessment for health and safety reasons.





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### 4.3.3 Recommendations

When decommissioned, verify the PCB content of fluorescent lamp ballasts as per the Environment Canada publication *Identification of Lamp Ballasts Containing PCBs*, 1991.

Should a material suspected to contain PCBs become uncovered during demolition activities (i.e., dielectric fluids, hydraulic fluids), all work in the areas that may disturb the material should be stopped. Samples of the suspect material should be submitted for laboratory analysis to determine if PCBs are present.

PCB-containing items identified for removal and disposal should be handled, transported, stored and disposed of in accordance with the following:

- Manitoba's Hazardous Waste Regulation MR 195/2015.
- Transportation requirements of Manitoba's *The Dangerous Goods Handling and Transportation Act* and the Federal Transportation of Dangerous Goods Regulations.
- Federal PCB Regulations (SOR/2008-273).

## 4.4 MOULD

Mould can be found everywhere in the outside environment—on plants, in soil and on dead and decaying matter (i.e., dead leaves). Mould requires two main conditions to grow—a source of food (a substrate typically comprised of cellulose) and water. Sources of food for mould are plentiful in outdoor and indoor environments; however, it is the presence of water in an indoor environment that will determine mould growth. The source of water can be a result of a water pipe leak or even excess condensation. Thus, the key to controlling mould indoors is to control the presence of water.

The removal of building materials impacted by mould growth may require workers with specific training and experience using work procedures that have been developed to protect workers and work areas from exposure to elevated concentrations of airborne mould.

### 4.4.1 Methodology

The presence of suspect visible mould was assessed through visual observations. Material observed with dark-coloured staining and/or a textured and discoloured appearance is described as “suspected mould”. Mould identified visually is defined as “suspected mould” unless it is confirmed as mould by laboratory analysis.

The scope of work and procedures utilized for the visual assessment were based on the recommendations for such provided in the documents listed below:

- Standard Construction Document CCA 82 *Mould Guidelines for the Canadian Construction Industry*, Canadian Construction Association, 2004 (referred to as CCA 82).
- *Guidelines on Assessment and Remediation of Fungi in Indoor Environment*, New York City Department of Health and Mental Hygiene, November 2008 (referred to as the NYC Guidelines).
- *Fungal Contamination in Public Buildings: Health Effects and Investigation Methods*, Federal-Provincial Committee on Environmental and Occupational Health, 2004 (referred to as the Health Canada Guide).
- *Indoor Air Quality in Office Buildings: A Technical Guide*, Report of the Federal-Provincial Advisory Committee on Environmental and Occupational Health, 1995 (referred to as the IAQ Guide).



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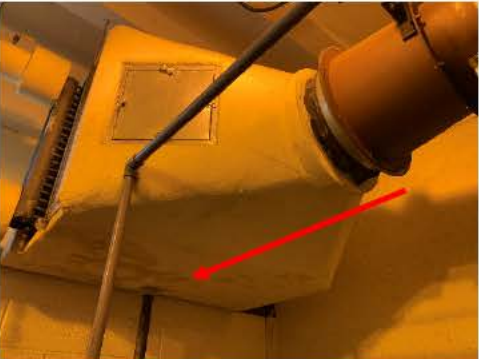
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- *Bioaerosols: Assessment and Control*, American Conference of Governmental Industrial Hygienists (ACGIH), 1999 (referred to as the ACGIH Report).
- *Field Guide for the Determination of Biological Contaminants in Environmental Samples*, AIHA, Second Edition 2005.

**4.4.2 Findings**

The observations pertaining to mould and/or moisture that were made during this assessment are summarized in Table 4-2, below.

**Table 4-1 Mould/Moisture Observations Summary – June 29, 2021  
City of Thompson Wastewater Treatment Plant, Thompson, MB**


Building Area	Observation	Suspected Source of Moisture	Photo
WWTP washroom	Moisture-stained pressed cardboard ceiling tiles	Roof leaks	
WWTP sludge dewatering room	Moisture-stained duct wrap	Roof leaks; condensation	



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**Table 4-1 Mould/Moisture Observations Summary – June 29, 2021  
City of Thompson Wastewater Treatment Plant, Thompson, MB**

Building Area	Observation	Suspected Source of Moisture	Photo
WWTP office; south wall	Moisture-damaged pressed cardboard ceiling tiles and peeling paint	Roof leaks	

### 4.4.3 Recommendations

When demolition work within the subject buildings proceeds, it is expected that mould and/or moisture impacted building materials will be removed and disposed of during that process. Due to the actual or potential presence of mould on building materials in the building, and if those impacted materials are to be removed by hand, demolition workers should be notified of the potential presence of mould and be provided with respiratory protection and/or other personal protective equipment as deemed necessary for the work that they will be conducting.

If significant mould contamination is identified in concealed locations, an experienced mould abatement contractor may be required to assist with removal in accordance with applicable guidelines and standards for such work.

## 4.5 MERCURY

Mercury is commonly found in buildings as mercury vapour lighting, thermostats/thermometers with mercury-containing glass ampoules, electrical switches and can also be found in minor amounts in fluorescent lamp tubes and vapour bulbs and may be present in stable forms in adhesives. If mercury is exposed to the air, odourless vapours are formed.

### 4.5.1 Methodology

An assessment for equipment that is likely to contain mercury (such as thermostats, thermometers and fluorescent light tubes) was completed visually. Information on the type of equipment (i.e., gauges, switches, batteries, thermometers, etc.), model and serial numbers and quantities was recorded, where such information was available.



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### 4.5.2 Findings

Mercury vapour is present in the light tubes within the approximately 24 fluorescent light fixtures observed. Two thermostats with mercury-containing switches were observed in the WWTP in the locations indicated on the floor plan drawings in Appendix A.

### 4.5.3 Recommendations

Complete removal of mercury-containing equipment is required prior to demolition activities that may disturb the equipment. When mercury-containing items (e.g., fluorescent light bulbs/tubes and thermostats) are removed, ensure all mercury waste is handled, stored transported and disposed of in accordance with the requirements the following:

- The disposal requirements of the current version of Manitoba's Hazardous Waste Regulation MR 195/2015.
- The transportation requirements of Manitoba's *The Dangerous Goods Transportation and Handling Act* and the Federal Transportation of Dangerous Goods Regulations.

Precautions should be taken if workers may potentially be exposed to mercury or mercury vapours to ensure that workers exposure levels do not exceed the occupational exposure limit of 0.025 mg/m<sup>3</sup> as per MB Reg. 217/2006. This can be achieved by providing respiratory and skin protection applicable to the hazard and task to be completed.

## 4.6 OZONE-DEPLETING SUBSTANCES

Ozone-depleting substances (ODSs) are chemical agents known as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) used in various refrigeration equipment including air-conditioning, heat pump, refrigeration or freezer units. They have also been used in solvents, as aerosol additives in the production of foam insulation and in fire extinguishing equipment.

### 4.6.1 Methodology

An assessment for equipment or systems likely to contain ODSs (such as refrigeration/cooling equipment or fire suppression systems) was completed visually. Information on the type of equipment, manufacturer and type and quantity of refrigerants was recorded, where available.

### 4.6.2 Findings

Buildings related cooling, refrigeration or fire suppression equipment suspected to be ODS-containing was not observed.

### 4.6.3 Recommendations

As no suspect ODS-containing equipment was observed within the subject buildings during the assessment, no recommendations have been provided.



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### 5.0 CLOSURE

This report has been prepared for the sole benefit of the Client. Any use which a third party makes of this report, or any reliance on decisions based on it, is the responsibility of such third parties. Stantec Consulting Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The information and conclusions contained in this report are based upon work undertaken by trained professionals and technical staff in accordance with generally accepted engineering, scientific and occupational health and safety practices current at the time the work was performed. Conclusions presented in this report should not be construed as legal advice.

The conclusions presented in this report represent the best technical judgment of Stantec Consulting Ltd. based on the data obtained from the work. The conclusions are based on the site conditions encountered by Stantec Consulting Ltd. at the time the work was performed at the specific assessment and/or sampling locations and can only be extrapolated to an undefined limited area around these locations. The extent of the limited area depends on building construction and conditions, building usage and other factors. Due to the nature of the investigation and the limited data available, Stantec Consulting Ltd. cannot warrant against undiscovered environmental or health and safety liabilities.

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.

We trust that the above is satisfactory for your purposes at this time. Should you have any questions or concerns, or require additional information, please do not hesitate to contact the Stantec Project Manager at your convenience.

Regards,

**Stantec Consulting Ltd.**



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## PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT

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This report was approved for transmittal by:



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# **APPENDIX A FLOOR PLANS**

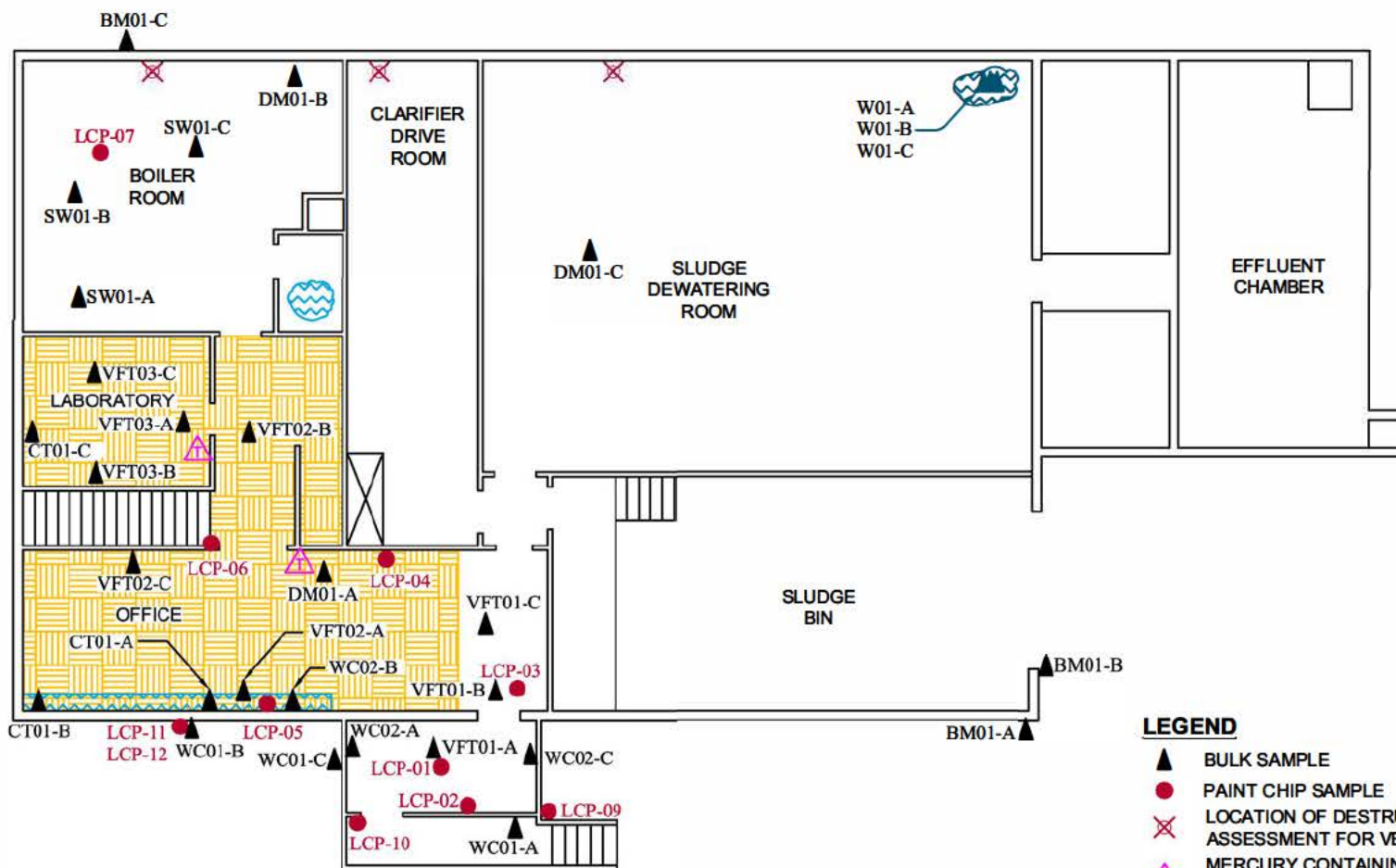
**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix A Floor Plans  
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**Appendix A FLOOR PLANS**







**LEGEND**

- ▲ BULK SAMPLE
- PAINT CHIP SAMPLE
- ✕ LOCATION OF DESTRUCTIVE ASSESSMENT FOR VERMICULITE
- △ MERCURY CONTAINING THERMOSTAT
- ▨ MOISTURE DAMAGED BUILDING MATERIALS
- ▨ ASBESTOS CONTAINING VINYL FLOOR TILES

**OPERATING FLOOR**

**NOTES:** 1. RM01-A, RM01-B, RM01-C, WERE COLLECTED ON THE GROUND.  
 2. THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

**FLOOR PLANS SHOWING BULK SAMPLE LOCATIONS**

EXISTING WASTEWATER TREATMENT PLANT, THOMPSON, MANITOBA

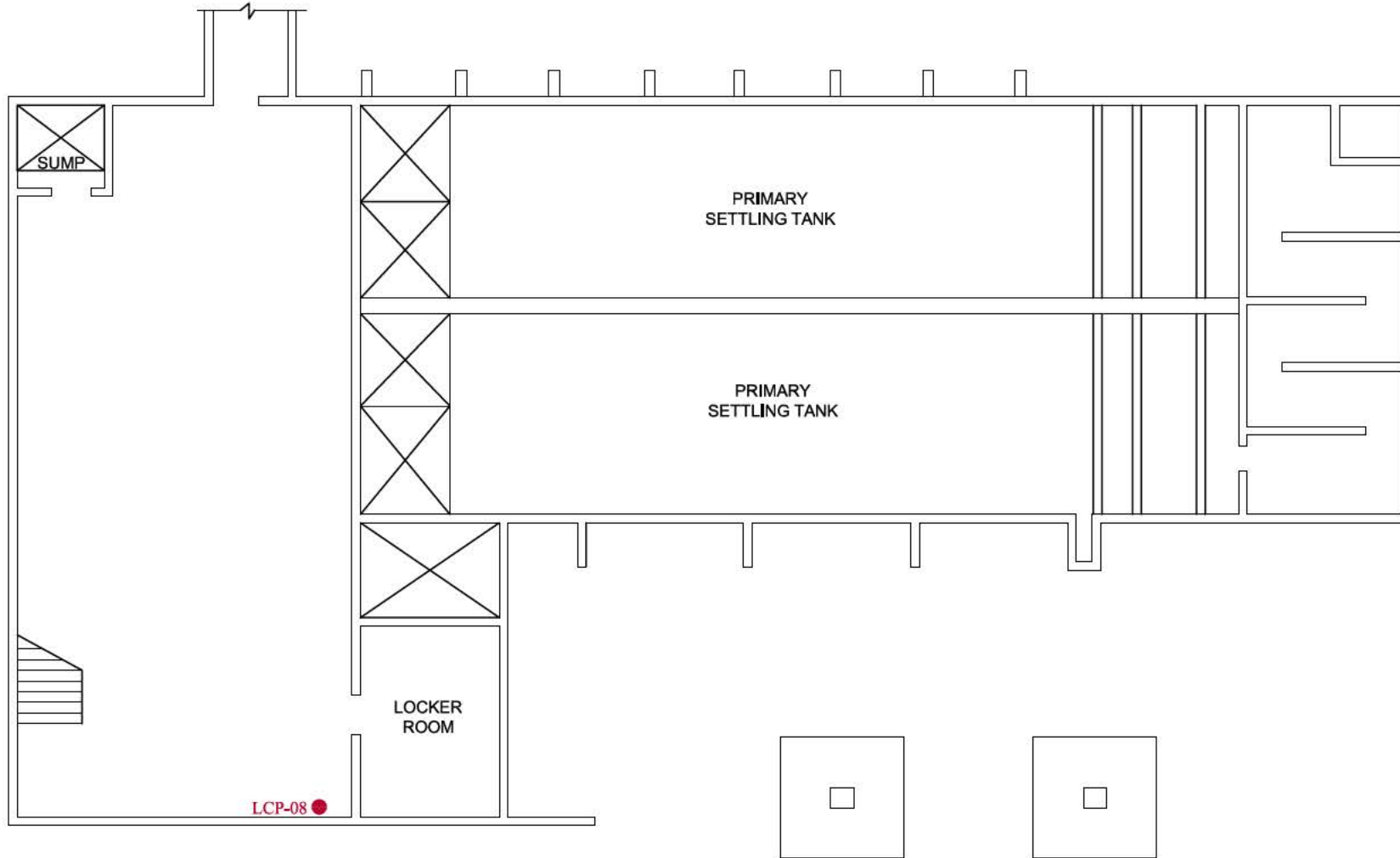
Client: MANITOBA WATER SERVICES BOARD

Project No.:	111220500
Scale:	N.T.S.
Date:	21/07/29
Dwn. By:	CD SL2021070058 CS/DM
App'd By:	SH

Dwg. No.:

1





**PUMP FLOOR**

**LEGEND**

● PAINT CHIP SAMPLE

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

**FLOOR PLANS SHOWING BULK SAMPLE LOCATIONS**

EXISTING WASTEWATER TREATMENT PLANT, THOMPSON, MANITOBA

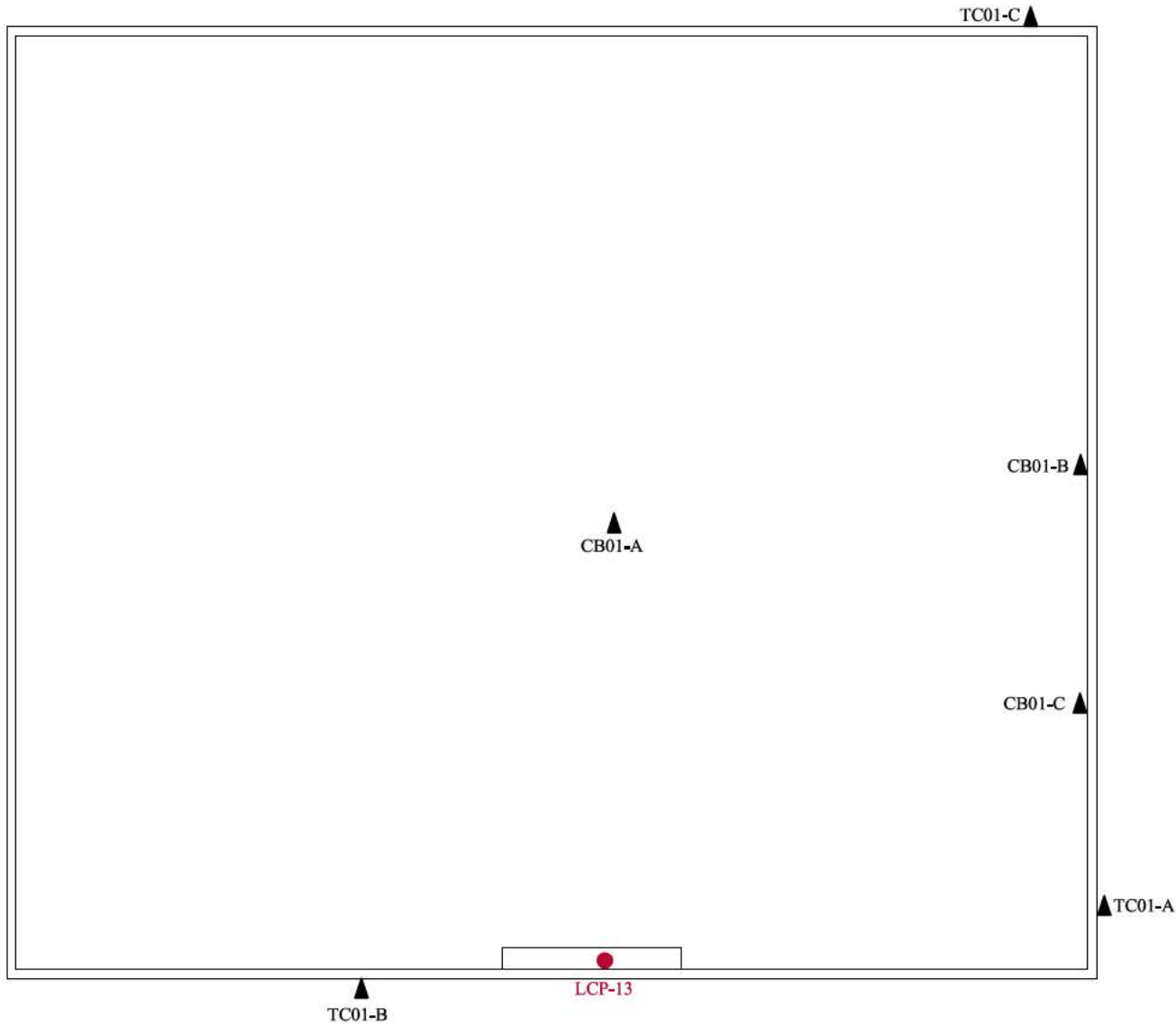
**Client:** MANITOBA WATER SERVICES BOARD

<b>Project No.:</b> 111220500
<b>Scale:</b> N.T.S.
<b>Date:</b> 21/07/29
<b>Dwn. By:</b> CD <small>SL2021070059</small> CS/DM
<b>App'd By:</b> SH

**Dwg. No.:**

**2**





### CHLORINATION BUILDING

**LEGEND**

- ▲ BULK SAMPLE
- PAINT CHIP SAMPLE

**NOTES:** 1. CEMENT BOARD ON INTERIOR WALLS AND CEILING IS ASBESTOS-CONTAINING.  
 2. THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

## FLOOR PLANS SHOWING BULK SAMPLE LOCATIONS

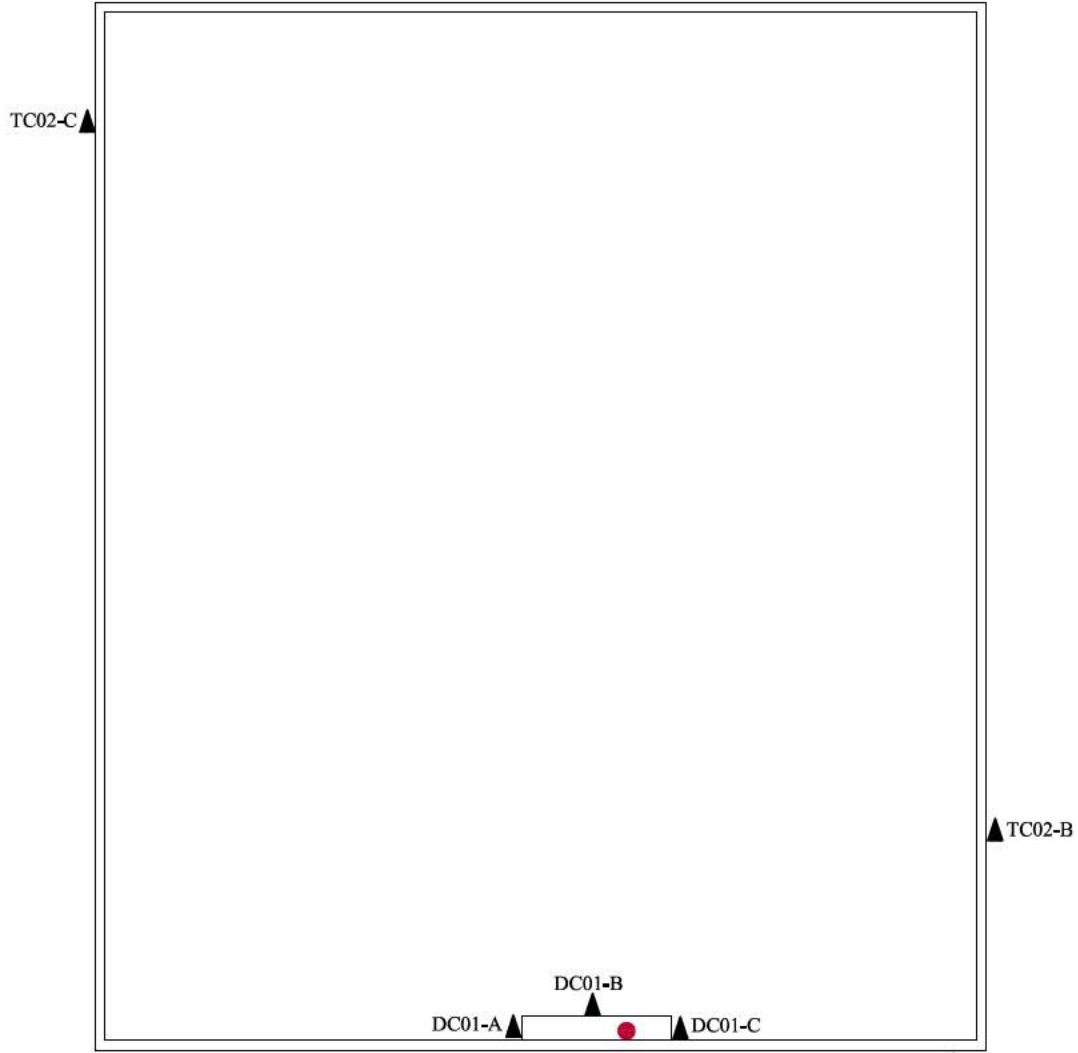
EXISTING WASTEWATER TREATMENT PLANT, THOMPSON, MANITOBA

**Client:** MANITOBA WATER SERVICES BOARD

<b>Project No.:</b> 111220500
<b>Scale:</b> N.T.S.
<b>Date:</b> 21/09/14
<b>Dwn. By:</b> CD <small>SL2021090019</small> PT/GS
<b>App'd By:</b> SH

**Dwg. No.:**  
  
**3**





**LAGOON AERATION  
BUILDING**

**LEGEND**  
 ▲ BULK SAMPLE  
 ● PAINT CHIP SAMPLE

**NOTES:** 1. CEMENT BOARD ON INTERIOR WALLS AND CEILING IS A SUSPECTED ASBESTOS-CONTAINING MATERIAL.  
 2. THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC CONSULTING LTD. REPORT AND MUST NOT BE USED FOR OTHER PURPOSES.

**FLOOR PLANS SHOWING BULK SAMPLE LOCATIONS**  
 EXISTING WASTEWATER TREATMENT PLANT, THOMPSON, MANITOBA

**Client:** MANITOBA WATER SERVICES BOARD

<b>Project No.:</b> 111220500
<b>Scale:</b> N.T.S.
<b>Date:</b> 21/09/14
<b>Dwn. By:</b> CD <small>SL2021090020</small> PT/CS
<b>App'd By:</b> SH

**Dwg. No.:**  
  
**4**



**APPENDIX B**  
**SUMMARY OF RESULTS: ANALYSIS OF**  
**BULK SAMPLES FOR ASBESTOS**

## Appendix B SUMMARY OF RESULTS: ANALYSIS OF BULK SAMPLES FOR ASBESTOS

**Table B-1 Suspected ACM Bulk Sample and Analytical Results Summary  
City of Thompson Wastewater Treatment Plant and Associated  
Buildings, Thompson, Manitoba**

Material/Homogenous Application Description	Sample Number	Sample Location	Result (% Asbestos)
Window caulking; located on exterior windows of the WWTP	WC01-A	WWTP; entrance; south; exterior window	None Detected
	WC01-B	WWTP; south wall; exterior window	None Detected
	WC01-C	WWTP; entrance; west; exterior window	None Detected
Window caulking; located on interior windows throughout the WWTP	WC02-A	WWTP; entrance; west; interior window	0.52% Chrysotile
	WC02-B	WWTP; south wall; interior window	0.86% Chrysotile
	WC02-C	WWTP; entrance; east; interior window	None Detected
Ceiling tiles; 12" x 12" dot pattern; located in WWTP office space and laboratory	CT01-A	WWTP; office	None Detected
	CT01-B	WWTP; office	None Detected
	CT01-C	WWTP; laboratory	None Detected
Vinyl floor tile; 12" x 12" beige and associated mastic; located in WWTP office space	VFT01-A-Floor Tile	WWTP; entrance	None Detected
	VFT01-A-Mastic	WWTP; entrance	None Detected
	VFT01-B-Floor Tile	WWTP; entrance	None Detected
	VFT01-B-Mastic	WWTP; entrance	0.64% Chrysotile
	VFT01-C-Floor Tile	WWTP; office	None Detected
	VFT01-C-Mastic	WWTP; office	0.91% Chrysotile
Vinyl floor tile; 9" x 9" beige with grey streaks and associated mastic; located in WWTP office space and hallway	<b>VFT02-A-Floor Tile</b>	<b>WWTP; office</b>	<b>0.29% Chrysotile</b>
	VFT02-A-Brown Mastic	WWTP; office	<0.29% Chrysotile
	VFT02-A-Black Mastic	WWTP; office	0.32% Chrysotile
	<b>VFT02-B-Floor Tile</b>	<b>WWTP; hallway</b>	<b>0.46% Chrysotile</b>
	VFT02-B-Brown Mastic	WWTP; hallway	<0.29% Chrysotile
	VFT02-B-Black Mastic	WWTP; hallway	0.72% Chrysotile
	<b>VFT02-C-Floor Tile</b>	<b>WWTP; office</b>	<b>1.5% Chrysotile</b>
	VFT02-C-Mastic	WWTP; office	0.93% Chrysotile

**Table B-1 Suspected ACM Bulk Sample and Analytical Results Summary  
City of Thompson Wastewater Treatment Plant and Associated  
Buildings, Thompson, Manitoba**

<b>Material/Homogenous Application Description</b>	<b>Sample Number</b>	<b>Sample Location</b>	<b>Result (% Asbestos)</b>
Vinyl floor tile; 9" x 9" grey with white streaks and associated mastic; located in WWTP laboratory	VFT03-A-Floor Tile	WWTP; laboratory	1.8% Chrysotile
	VFT03-A-Mastic	WWTP; laboratory	<0.25% Chrysotile
	VFT03-B-Floor Tile	WWTP; laboratory	Positive Stop (not analyzed)
	VFT03-B-Mastic	WWTP; laboratory	<0.25% Chrysotile
	VFT03-C-Floor Tile	WWTP; laboratory	Positive Stop (not analyzed)
	VFT03-C-Mastic	WWTP; laboratory	<0.25% Chrysotile
Roofing material; WWTP; collected from loose material located on the ground around the WWTP	RM01-A	WWTP; adjacent ground	None Detected
	RM01-B	WWTP; adjacent ground	None Detected
	RM01-C	WWTP; adjacent ground	None Detected
Wrap; WWTP; duct work in sludge dewatering room	W01-A	WWTP; sludge dewatering room	None Detected
	W01-B	WWTP; sludge dewatering room	None Detected
	W01-C	WWTP; sludge dewatering room	None Detected
Duct mastic; WWTP; duct work throughout	DM01-A	WWTP; office	None Detected
	DM01-B	WWTP; boiler room	None Detected
	DM01-C	WWTP; sludge dewatering room	None Detected
Sweat wrap; WWTP; boiler room	SW01-A	WWTP; boiler room	<0.25% Chrysotile
	SW01-B	WWTP; boiler room	None Detected
	SW01-C	WWTP; boiler room	None Detected
Brick mortar; WWTP; throughout exterior walls	BM01-A	WWTP; south exterior wall	None Detected
	BM01-B	WWTP; east exterior wall	None Detected
	BM01-C	WWTP; north exterior wall	None Detected
Cement board; chlorination building; interior walls and ceiling	CB01-A	Chlorination building; ceiling	13% Chrysotile
	CB01-B	Chlorination building; interior wall	Positive Stop (not analyzed)
	CB01-C	Chlorination building; interior wall	Positive Stop (not analyzed)

**Table B-1 Suspected ACM Bulk Sample and Analytical Results Summary  
City of Thompson Wastewater Treatment Plant and Associated  
Buildings, Thompson, Manitoba**

<b>Material/Homogenous Application Description</b>	<b>Sample Number</b>	<b>Sample Location</b>	<b>Result (% Asbestos)</b>
Texture coat; Chlorination Building; exterior walls	TC01-A-Texture	Chlorination building; exterior wall	<0.1% Chrysotile
	TC01-A-Base Coat	Chlorination building; exterior wall	None Detected
	TC01-B-Texture	Chlorination building; exterior wall	<0.1% Chrysotile
	TC01-B-Base Coat	Chlorination building; exterior wall	None Detected
	TC01-C-Texture	Chlorination building; exterior wall	<0.1% Chrysotile
	TC01-C-Base Coat	Chlorination building; exterior wall	None Detected
Texture coat; lagoon aeration building; exterior walls	TC02-A-Texture	Lagoon aeration building; exterior wall	<0.1% Chrysotile
	TC02-A-Base Coat	Lagoon aeration building; exterior wall	None Detected
	TC02-B-Texture	Lagoon aeration building; exterior wall	<0.1% Chrysotile
	TC02-B-Base Coat	Lagoon aeration building; exterior wall	None Detected
	TC02-C	Lagoon aeration building; exterior wall	None Detected
Door caulking; lagoon aeration building; exterior door	DC01-A	Lagoon aeration building; exterior door	None Detected
	DC01-B	Lagoon aeration building; exterior door	None Detected
	DC01-C	Lagoon aeration building; exterior door	None Detected
<p>NOTES:</p> <ol style="list-style-type: none"> <li>1. Bold, highlighted text indicates confirmed ACM</li> <li>2. Discrepancies between sampled material or location descriptions between this table and the laboratory certificate – this table is to be considered correct.</li> </ol>			



**APPENDIX C**  
**LABORATORY ANALYTICAL REPORT -**  
**ASBESTOS: POLARIZED LIGHT**  
**MICROSCOPY**

**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix C Laboratory Analytical Report - Asbestos: Polarized Light Microscopy  
September 15, 2021

**Appendix C LABORATORY ANALYTICAL REPORT - ASBESTOS:  
POLARIZED LIGHT MICROSCOPY**





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EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

**Attn:** Summer Hull  
Stantec Consulting Ltd.  
905 Waverley Street  
Winnipeg, MB R3T 5P4  
**Proj:** 111220500  
**Phone:** (204) 488-5730  
**Fax:** (204) 453-9012  
**Collected:**  
**Received:** 7/06/2021  
**Analyzed:** 9/10/2021

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

**Client Sample ID:** WC01-A **Lab Sample ID:** 552110952 0001

**Sample Description:** WWTP; exterior window/Window caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Gray/White	0.0%	100%	None Detected	

**Client Sample ID:** WC01-B **Lab Sample ID:** 552110952-0002

**Sample Description:** WWTP; exterior window/Window caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Gray/White	0.0%	100%	None Detected	

**Client Sample ID:** WC01 C **Lab Sample ID:** 552110952-0003

**Sample Description:** WWTP; exterior window/Window caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Gray/White	0.0%	100%	None Detected	

**Client Sample ID:** WC02-A **Lab Sample ID:** 552110952-0004

**Sample Description:** WWTP; interior window/Window caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Gray/White	0.0%	99.5%	0.52% Chrysotile	

**Client Sample ID:** WC02-B **Lab Sample ID:** 552110952-0005

**Sample Description:** WWTP; interior window/Window caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	9/10/2021	Gray/White	0.0%	99.1%	0.86% Chrysotile	

**Client Sample ID:** WC02-C **Lab Sample ID:** 552110952 0006

**Sample Description:** WWTP; interior window/Window caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	9/10/2021	Gray/White	0.0%	100%	None Detected	

**Client Sample ID:** CT01-A **Lab Sample ID:** 552110952-0007

**Sample Description:** WWTP; office/Ceiling tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	Brown	90.0%	10.0%	None Detected	



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EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

**Client Sample ID:** CT01-B **Lab Sample ID:** 552110952-0008  
**Sample Description:** WWTP; office/Ceiling tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	Brown	90.0%	10.0%	None Detected	

**Client Sample ID:** CT01-C **Lab Sample ID:** 552110952-0009  
**Sample Description:** WWTP; office/Ceiling tile

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	Brown	90.0%	10.0%	None Detected	

**Client Sample ID:** VFT01-A-Floor Tile **Lab Sample ID:** 552110952-0010  
**Sample Description:** WWTP; front entrance/Vinyl floor tile; 12x12 beige

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Beige	0.0%	100%	None Detected	

**Client Sample ID:** VFT01-A-Mastic **Lab Sample ID:** 552110952-0010A  
**Sample Description:** WWTP; front entrance/Vinyl floor tile; 12x12 beige

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Brown	0.0%	100%	None Detected	

**Client Sample ID:** VFT01-B-Floor Tile **Lab Sample ID:** 552110952-0011  
**Sample Description:** WWTP; front entrance/Vinyl floor tile; 12x12 beige

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Beige	0.0%	100%	None Detected	

**Client Sample ID:** VFT01-B-Mastic **Lab Sample ID:** 552110952-0011A  
**Sample Description:** WWTP; front entrance/Vinyl floor tile; 12x12 beige

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Black	0.0%	99.4%	0.64% Chrysotile	

**Client Sample ID:** VFT01-C-Floor Tile **Lab Sample ID:** 552110952-0012  
**Sample Description:** WWTP; office/Vinyl floor tile; 12x12 beige

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Beige	0.0%	100%	None Detected	

**Client Sample ID:** VFT01-C-Mastic **Lab Sample ID:** 552110952-0012A  
**Sample Description:** WWTP; office/Vinyl floor tile; 12x12 beige

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	9/10/2021	Black	0.0%	99.1%	0.91% Chrysotile	



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EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

**Client Sample ID:** VFT02-A-Floor Tile **Lab Sample ID:** 552110952-0013  
**Sample Description:** WWTP; office/Vinyl floor tile; 9x9 beige w/ grey streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Beige	0.0%	99.7%	0.29% Chrysotile	TEM Recommended

**Client Sample ID:** VFT02-A-Brown Mastic **Lab Sample ID:** 552110952-0013A  
**Sample Description:** WWTP; office/Vinyl floor tile; 9x9 beige w/ grey streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Brown	0.0%	100%	<0.29% Chrysotile	

**Client Sample ID:** VFT02-A-Black Mastic **Lab Sample ID:** 552110952-0013B  
**Sample Description:** WWTP; office/Vinyl floor tile; 9x9 beige w/ grey streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Black	0.0%	99.7%	0.32% Chrysotile	

**Client Sample ID:** VFT02-B-Floor Tile **Lab Sample ID:** 552110952-0014  
**Sample Description:** WWTP; hall/Vinyl floor tile; 9x9 beige w/ grey streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Beige	0.0%	99.5%	0.46% Chrysotile	TEM Recommended

**Client Sample ID:** VFT02-B-Brown Mastic **Lab Sample ID:** 552110952-0014A  
**Sample Description:** WWTP; hall/Vinyl floor tile; 9x9 beige w/ grey streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Brown	0.0%	100%	<0.29% Chrysotile	

**Client Sample ID:** VFT02-B-Black Mastic **Lab Sample ID:** 552110952-0014B  
**Sample Description:** WWTP; hall/Vinyl floor tile; 9x9 beige w/ grey streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Black	0.0%	99.3%	0.72% Chrysotile	

**Client Sample ID:** VFT02-C-Floor Tile **Lab Sample ID:** 552110952-0015  
**Sample Description:** WWTP; office/Vinyl floor tile; 9x9 beige w/ grey streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Beige	0.0%	98.5%	1.5% Chrysotile	

**Client Sample ID:** VFT02-C-Mastic **Lab Sample ID:** 552110952-0015A  
**Sample Description:** WWTP; office/Vinyl floor tile; 9x9 beige w/ grey streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	9/10/2021	Black	0.0%	99.1%	0.93% Chrysotile	



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EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

**Client Sample ID:** VFT03-A-Floor Tile **Lab Sample ID:** 552110952-0016  
**Sample Description:** WWTP; lab/Vinyl floor tile; 9x9 grey w/ white streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Gray	0.0%	98.2%	1.8% Chrysotile	

**Client Sample ID:** VFT03-A-Mastic **Lab Sample ID:** 552110952-0016A  
**Sample Description:** WWTP; lab/Vinyl floor tile; 9x9 grey w/ white streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Black	0.0%	100%	<0.25% Chrysotile	

**Client Sample ID:** VFT03-B-Floor Tile **Lab Sample ID:** 552110952-0017  
**Sample Description:** WWTP; lab/Vinyl floor tile; 9x9 grey w/ white streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021				Positive Stop (Not Analyzed)	

**Client Sample ID:** VFT03-B-Mastic **Lab Sample ID:** 552110952-0017A  
**Sample Description:** WWTP; lab/Vinyl floor tile; 9x9 grey w/ white streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Black	0.0%	100%	<0.25% Chrysotile	

**Client Sample ID:** VFT03-C-Floor Tile **Lab Sample ID:** 552110952-0018  
**Sample Description:** WWTP; lab/Vinyl floor tile; 9x9 grey w/ white streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021				Positive Stop (Not Analyzed)	

**Client Sample ID:** VFT03-C-Mastic **Lab Sample ID:** 552110952-0018A  
**Sample Description:** WWTP; lab/Vinyl floor tile; 9x9 grey w/ white streaks

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Black	0.0%	100%	<0.25% Chrysotile	

**Client Sample ID:** RM-01A **Lab Sample ID:** 552110952-0019  
**Sample Description:** WWTP/Roofing material

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Various/Black	0.0%	100%	None Detected	

**Client Sample ID:** RM-01B **Lab Sample ID:** 552110952-0020  
**Sample Description:** WWTP/Roofing material

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Various/Black	0.0%	100%	None Detected	



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EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

**Client Sample ID:** RM-01C **Lab Sample ID:** 552110952-0021  
**Sample Description:** WWTP/Roofing material

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Various/Black	0.0%	100%	None Detected	

**Client Sample ID:** W01-A **Lab Sample ID:** 552110952-0022  
**Sample Description:** WWTP; sludge dewatering room/Wrap

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Tan/Yellow	0.0%	100%	None Detected	

**Client Sample ID:** W01-B **Lab Sample ID:** 552110952-0023  
**Sample Description:** WWTP; sludge dewatering room/Wrap

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Tan/Yellow	0.0%	100%	None Detected	

**Client Sample ID:** W01-C **Lab Sample ID:** 552110952-0024  
**Sample Description:** WWTP; sludge dewatering room/Wrap

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Tan	0.0%	100%	None Detected	

**Client Sample ID:** DM01-A **Lab Sample ID:** 552110952-0025  
**Sample Description:** WWTP; office/Duct mastic - Duct Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Gray	0.0%	100%	None Detected	

**Client Sample ID:** DM01-B **Lab Sample ID:** 552110952-0026  
**Sample Description:** WWTP; boiler room/Duct mastic - Duct Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Gray	0.0%	100%	None Detected	

**Client Sample ID:** DM01-C **Lab Sample ID:** 552110952-0027  
**Sample Description:** WWTP; sludge dewatering room/Duct mastic - Duct Mastic

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Gray	0.0%	100%	None Detected	

**Client Sample ID:** SW01-A **Lab Sample ID:** 552110952-0028  
**Sample Description:** WWTP; boiler room/Sweat wrap

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Tan	0.0%	100%	<0.25% Chrysotile	



# EMSL Canada Inc.

2756 Slough Street Mississauga, ON L4T 1G3  
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EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

**Client Sample ID:** SW01-B **Lab Sample ID:** 552110952-0029  
**Sample Description:** WWTP; boiler room/Sweat wrap

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Tan	0.0%	100%	None Detected	

**Client Sample ID:** SW01-C **Lab Sample ID:** 552110952-0030  
**Sample Description:** WWTP; boiler room/Sweat wrap

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Tan	0.0%	100%	None Detected	

**Client Sample ID:** BM01-A **Lab Sample ID:** 552110952-0031  
**Sample Description:** WWTP; south exterior/Brick mortar

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** BM01-B **Lab Sample ID:** 552110952-0032  
**Sample Description:** WWTP; east exterior/Brick mortar

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** BM01-C **Lab Sample ID:** 552110952-0033  
**Sample Description:** WWTP; north exterior/Brick mortar

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** CB01-A **Lab Sample ID:** 552110952-0034  
**Sample Description:** Chlorination building; ceiling/Cement board

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	Gray	0.0%	87.0%	13% Chrysotile	

**Client Sample ID:** CB01-B **Lab Sample ID:** 552110952-0035  
**Sample Description:** Chlorination building; wall/Cement board

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021				Positive Stop (Not Analyzed)	

**Client Sample ID:** CB01-C **Lab Sample ID:** 552110952-0036  
**Sample Description:** Chlorination building; wall/Cement board

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021				Positive Stop (Not Analyzed)	





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<http://www.EMSL.com> / [torontolab@emsl.com](mailto:torontolab@emsl.com)

EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

**Client Sample ID:** TC01-A-Texture **Lab Sample ID:** 552110952-0037  
**Sample Description:** Chlorination building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	White	0.0%	100.0%	<1% Chrysotile	
1000 PLM Pt Ct	7/13/2021	Gray/White	0.0%	100.0%	<0.1% Chrysotile	

**Client Sample ID:** TC01-A-Base Coat **Lab Sample ID:** 552110952-0037A  
**Sample Description:** Chlorination building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** TC01-B-Texture **Lab Sample ID:** 552110952-0038  
**Sample Description:** Chlorination building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	White	0.0%	100.0%	<1% Chrysotile	
1000 PLM Pt Ct	7/13/2021	Gray/White	0.0%	100.0%	<0.1% Chrysotile	

**Client Sample ID:** TC01-B-Base Coat **Lab Sample ID:** 552110952-0038A  
**Sample Description:** Chlorination building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** TC01-C-Texture **Lab Sample ID:** 552110952-0039  
**Sample Description:** Chlorination building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	White	0.0%	100.0%	<1% Chrysotile	
1000 PLM Pt Ct	7/13/2021	White	0.0%	100.0%	<0.1% Chrysotile	

**Client Sample ID:** TC01-C-Base Coat **Lab Sample ID:** 552110952-0039A  
**Sample Description:** Chlorination building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** TC02-A-Texture **Lab Sample ID:** 552110952-0040  
**Sample Description:** Lagoon aeration building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	White	0.0%	100.0%	<1% Chrysotile	
1000 PLM Pt Ct	7/13/2021	White	0.0%	100.0%	<0.1% Chrysotile	



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EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

**Client Sample ID:** TC02-A-Base Coat **Lab Sample ID:** 552110952-0040A

**Sample Description:** Lagoon aeration building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** TC02-B-Texture **Lab Sample ID:** 552110952-0041

**Sample Description:** Lagoon aeration building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/12/2021	White	0.0%	100.0%	<1% Chrysotile	
1000 PLM Pt Ct	7/13/2021	White	0.0%	100.0%	<0.1% Chrysotile	

**Client Sample ID:** TC02-B-Base Coat **Lab Sample ID:** 552110952-0041A

**Sample Description:** Lagoon aeration building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** TC02-C **Lab Sample ID:** 552110952-0042

**Sample Description:** Lagoon aeration building; exterior/Texture coat

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM	7/13/2021	Gray	0.0%	100.0%	None Detected	

**Client Sample ID:** DC01-A **Lab Sample ID:** 552110952-0043

**Sample Description:** Lagoon aeration building; exterior door/Door caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Brown	0.0%	100%	None Detected	

**Client Sample ID:** DC01-B **Lab Sample ID:** 552110952-0044

**Sample Description:** Lagoon aeration building; exterior door/Door caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Brown	0.0%	100%	None Detected	

**Client Sample ID:** DC01-C **Lab Sample ID:** 552110952-0045

**Sample Description:** Lagoon aeration building; exterior door/Door caulking

TEST	Analyzed Date	Color	Non-Asbestos		Asbestos	Comment
			Fibrous	Non-Fibrous		
PLM Grav. Reduction	7/13/2021	Brown	0.0%	100%	None Detected	



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EMSL Canada Order 552110952  
Customer ID: 55JACQ30FF  
Customer PO: 111220500  
Project ID:

## Test Report: Asbestos Analysis of Bulk Materials for Manitoba Regulation 217/2006 via EPA600/R-93/116 Method

### Analyst(s):

Anne Balayboa	PLM Grav. Reduction (9)
Dmitriy Suzdalev	PLM (9)
Natalie D'Amico	PLM (9)
	1000 PLM Pt Ct (5)
Stephanie Achaia	PLM Grav. Reduction (4)
Tiffany Pilon	PLM Grav. Reduction (26)

### Reviewed and approved by:



Matthew Davis or other approved signatory  
or Other Approved Signatory

None Detected = <0.1%. EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Estimation of uncertainty available upon request. This report is a summary of multiple methods of analysis, fully compliant reports are available upon request. A combination of PLM and TEM analysis may be necessary to ensure consistently reliable detection of asbestos. This report must not be used to claim product endorsement by NVLAP of any agency or the U.S. Government.

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

Initial report from: 07/13/2021 11:12:29



**APPENDIX D**  
**SUMMARY OF IDENTIFIED ASBESTOS-**  
**CONTAINING MATERIALS**

**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix D SUMMARY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS  
September 15, 2021

**Appendix D SUMMARY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS**

**Table D-1 Summary of Identified Asbestos-Containing Materials  
City of Thompson Wastewater Treatment Plant and Associated Buildings,  
Thompson, Manitoba**

Identified ACM Description and Condition Information							
<p><b>Vinyl floor tile; 9" x 9" beige with grey streaks; located in WWTP office space and hallway</b></p> <table border="1"> <tr> <td>% Type</td> <td>1.5% Chrysotile</td> </tr> <tr> <td>Friability</td> <td>Non-friable</td> </tr> <tr> <td>Condition</td> <td>Good with localized areas of cracked or broken tiles</td> </tr> </table>	% Type	1.5% Chrysotile	Friability	Non-friable	Condition	Good with localized areas of cracked or broken tiles	
% Type	1.5% Chrysotile						
Friability	Non-friable						
Condition	Good with localized areas of cracked or broken tiles						
<p><b>Vinyl floor tile; 9" x 9" grey with white streaks; located in WWTP laboratory</b></p> <table border="1"> <tr> <td>% Type</td> <td>1.8% Chrysotile</td> </tr> <tr> <td>Friability</td> <td>Non-friable</td> </tr> <tr> <td>Condition</td> <td>Good with localized areas of cracked or broken tiles</td> </tr> </table>	% Type	1.8% Chrysotile	Friability	Non-friable	Condition	Good with localized areas of cracked or broken tiles	
% Type	1.8% Chrysotile						
Friability	Non-friable						
Condition	Good with localized areas of cracked or broken tiles						



**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix D SUMMARY OF IDENTIFIED ASBESTOS-CONTAINING MATERIALS  
September 15, 2021

<b>Cement board; chlorination building; interior walls and ceiling</b>	
% Type	13% Chrysotile
Friability	Non-friable
Condition	Good



# **APPENDIX E SUMMARY OF RESULTS: ANALYSIS OF PAINT CHIP SAMPLES FOR LEAD**



**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix E Summary of Results: Analysis of Paint Chip Samples for Lead  
September 15, 2021

## Appendix E SUMMARY OF RESULTS: ANALYSIS OF PAINT CHIP SAMPLES FOR LEAD

**Table E-1 Suspected Lead-Containing Paint Samples and Analytical Results Summary, City of Thompson Wastewater Treatment Plant and Associated Buildings, Thompson, Manitoba**

Sample Number	Paint Colour/Application	Sample Location	Result (ppm)
LCP-01	WWTP; white on entrance ceiling	WWTP; entrance ceiling	<80
<b>LCP-02</b>	<b>WWTP; blue on entrance walls</b>	<b>WWTP; entrance wall</b>	<b>1,000</b>
LCP-03	WWTP; white on interior metal doors	WWTP; door to office	<140
LCP-04	WWTP; bright blue on office walls	WWTP; office wall	<260
LCP-05	WWTP; white on office walls	WWTP; office wall	<94
<b>LCP-06</b>	<b>WWTP; red on metal railing to pump floor</b>	<b>WWTP; stair railing to pump floor</b>	<b>1,400</b>
<b>LCP-07</b>	<b>WWTP; orange on metal pump, tank and associated piping in boiler room</b>	<b>WWTP; boiler room; pump</b>	<b>57,000</b>
<b>LCP-08</b>	<b>WWTP; white on metal piping on pump room floor</b>	<b>WWTP; pump room floor; metal piping</b>	<b>1,000</b>
<b>LCP-09</b>	<b>WWTP; rust on exterior metal trim</b>	<b>WWTP; exterior; trim</b>	<b>5,500</b>
LCP-10	WWTP; white on exterior metal doors	WWTP; exterior door	<210
<b>LCP-11</b>	<b>WWTP; black on exterior panels</b>	<b>WWTP; exterior</b>	<b>2,900</b>
<b>LCP-12</b>	<b>WWTP; beige on exterior panels</b>	<b>WWTP; exterior</b>	<b>3,000</b>
<b>LCP-13</b>	<b>Chlorination building; brown on exterior wooden door</b>	<b>Chlorination building; exterior door</b>	<b>9,100</b>
LCP-14	Lagoon aeration building; brown on exterior metal door	Lagoon aeration building; exterior door	<180

**NOTE:**

1. Bold, highlighted text indicates confirmed LCP
2. Discrepancies between sampled material or location descriptions between this table and the laboratory certificate – this table is to be considered correct.





**APPENDIX F**  
**LABORATORY ANALYTICAL REPORT -**  
**LEAD: PAINT CHIP ANALYSIS**

**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix F Laboratory Analytical Report - Lead: Paint Chip Analysis  
September 15, 2021

**Appendix F    LABORATORY ANALYTICAL REPORT - LEAD:  
PAINT CHIP ANALYSIS**





# EMSL Analytical, Inc.

6340 CastlePlace Dr., Indianapolis, IN 46250

Phone/Fax: (317) 803-2997 / (317) 803-3047

<http://www.EMSL.com>

[indianapolislab@emsl.com](mailto:indianapolislab@emsl.com)

EMSL Order: 162114916

CustomerID: JACQ30FF

CustomerPO:

ProjectID:

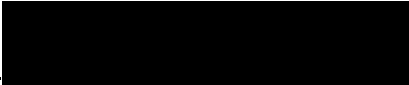
Attn: **Summer Hull**  
**Stantec Consulting Ltd.**  
**905 Waverley Street**  
**Winnipeg, MB R3T 5P4**

Phone: (204) 488-5730  
Fax: (204) 453-9012  
Received: 7/12/2021 09:40 AM  
Collected:

Project: 111220500

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

Client SampleDescription	Collected	Analyzed	Weight	RDL	Lead Concentration
LCP-01 162114916-0001	Site: WWTP:Front Entrance-Ceiling	7/12/2021	0.2597 g	80 ppm	<80 ppm
LCP-02 162114916-0002	Site: WWTP:Front Entrance-Wall	7/12/2021	0.2141 g	93 ppm	1000 ppm
LCP-03 162114916-0003	Site: WWTP:Door to Office	7/12/2021	0.1391 g	140 ppm	<140 ppm
LCP-04 162114916-0004	Site: WWTP:Office Wall	7/12/2021	0.0778 g	260 ppm	<260 ppm
LCP-05 162114916-0005	Site: WWTP:Office Wall	7/12/2021	0.213 g	94 ppm	<94 ppm
LCP-06 162114916-0006	Site: WWTP:Metal Railing to Pump Floor	7/12/2021	0.0671 g	300 ppm	1400 ppm
LCP-07 162114916-0007	Site: WWTP:Boiler Room-Metal Pump	7/12/2021	0.1867 g	2700 ppm	57000 ppm
LCP-08 162114916-0008	Site: WWTP:Pump Floor-Metal Piping	7/12/2021	0.2535 g	80 ppm	1000 ppm
LCP-09 162114916-0009	Site: WWTP:Exterior Metal Trim	7/12/2021	0.2107 g	950 ppm	5500 ppm
LCP-10 162114916-0010	Site: WWTP:Exterior Door	7/12/2021	0.0934 g	210 ppm	<210 ppm
LCP-11 162114916-0011	Site: WWTP:Exterior Panels	7/12/2021	0.0567 g	350 ppm	2900 ppm

  
Allison Ford, Chemistry Lab Manager  
or other approved signatory

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Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, N AIHA-LAP, LLC-ELLAP 157245, OH E10040

Initial report from 07/13/2021 10:10:38



# EMSL Analytical, Inc.

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EMSL Order: 162114916

CustomerID: JACQ30FF

CustomerPO:

ProjectID:

Attn: **Summer Hull**  
**Stantec Consulting Ltd.**  
**905 Waverley Street**  
**Winnipeg, MB R3T 5P4**

Phone: (204) 488-5730  
Fax: (204) 453-9012  
Received: 7/12/2021 09:40 AM  
Collected:

Project: 111220500

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

<i>Client SampleDescription</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Weight</i>	<i>RDL</i>	<i>Lead Concentration</i>
LCP-12 162114916-0012		7/12/2021	0.0225 g	890 ppm	3000 ppm
	Site: WWTP:Exterior Panels				
LCP-13 162114916-0013		7/12/2021	0.2507 g	800 ppm	9100 ppm
	Site: Chlorination Building:Exterior Wood Door				
LCP-14 162114916-0014		7/12/2021	0.1102 g	180 ppm	<180 ppm
	Site: Lagoon Aeration Building:Exterior Metal Door				



Allison Ford, Chemistry Lab Manager  
or other approved signatory

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Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008% wt based on the minimum sample weight per our SOP. "<" (less than) result signifies the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Indianapolis, N AIHA-LAP, LLC-ELLAP 157245, OH E10040

Initial report from 07/13/2021 10:10:38

**APPENDIX G**  
**SUMMARY OF IDENTIFIED LCPS**

**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix G Summary of Identified LCPs  
September 15, 2021




**Appendix G SUMMARY OF IDENTIFIED LCPS**



**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix G Summary of Identified LCPs  
September 15, 2021




**Table G-1 Summary of Identified LCPs  
City of Thompson Wastewater Treatment Plant and Associated Buildings,  
Thompson, Manitoba**

LCP Description		Photo
Paint colour	Blue	
Substrate	Plywood	
Location/approx. extent	WWTP; entrance walls	
Lead content	1,000 ppm	
Condition	Good	
Paint colour	Red	
Substrate	Metal	
Location/approx. extent	WWTP; railing to pump floor	
Lead content	1,400 ppm	
Condition	Good	
Paint colour	Orange	
Substrate	Metal	
Location/approx. extent	WWTP; pump, tank and associated piping in boiler room	
Lead content	57,000 ppm	
Condition	Poor	



**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix G Summary of Identified LCPs  
September 15, 2021



Paint colour	White	
Substrate	Metal	
Location/approx. extent	WWTP; piping on pump room floor	
Lead content	1,000	
Condition	Poor	
Paint colour	Rust	
Substrate	Metal	
Location/approx. extent	WWTP; exterior trim	
Lead content	5,500 ppm	
Condition	Good	
Paint colour	Black	
Substrate	Metal	
Location/approx. extent	WWTP; exterior panels	
Lead content	2,900 ppm	
Condition	Good	





**PRE-DEMOLITION HAZARDOUS BUILDING MATERIALS ASSESSMENT**

Appendix G Summary of Identified LCPs  
September 15, 2021

Paint colour	Beige	
Substrate	Metal	
Location/approx. extent	WWTP; exterior panels	
Lead content	3,000 ppm	
Condition	Good	
Paint colour	Brown	
Substrate	Wood	
Location/approx. extent	Chlorination building; exterior door	
Lead content	9,100 ppm	
Condition	Good	

