

## **Appendix A**

---

### Lead Abatement Procedures and Inspection Report

# Lead Abatement Procedures and Inspection Report

## 845 Sargent Ave

---

Prepared for:  
City of Winnipeg  
4th Floor, 185 King Street  
Winnipeg, MB



**MWI Consultants Inc.**

Phone: (204) 781-6131

Email: [info@mwiconsultants.ca](mailto:info@mwiconsultants.ca)

Website: [mwiconsultants.ca](http://mwiconsultants.ca)

## **Inspection Report with Lead Abatement Procedures**

**LOCATION:** 845 Sargent Ave  
Winnipeg, Manitoba

**INSPECTION DATE:** December 19, 2017

### **1.0 PURPOSE AND SUMMARY**

An inspection of the building located at 845 Sargent Avenue was completed by MWI Consultants, at the request of the City of Winnipeg, to review renovations plans within the basement area and to review sampling results completed for lead content of paints present within the area.

Based on sampling completed, there are no lead-based paints (LBPs) present in the basement area.

This report contains site-specific review of lab results obtained and recommendations regarding paint removal.

### **2.0 BACKGROUND AND OBSERVATIONS**

- 2.1. The subject property is a City of Winnipeg Fire Hall.
- 2.2. Sampling for lead content of paint in the basement area was completed by the City of Winnipeg, ahead of planned renovations in the area. Renovations may include removing portions of the concrete between main floor and the basement.
- 2.3. Based on sampling completed, there are no lead-based paints (LBPs) present in the basement area.
- 2.4. Given the low level of lead detected in one sample, there are no precautions required beyond worker awareness and good housekeeping practices.

### **3.0 HAZARDS OF LEAD EXPOSURES**

Lead is toxic. Lead is a suspected human carcinogen, mutagen and teratogen and has been shown to cause cancer in laboratory animals. Lead is a designated substance. Lead interferes with many body processes and is poisonous to most organs and tissues, including the bones, intestines, kidneys, nervous system, and reproductive organs. Lead can accumulate in the body making long-term or repetitive/constant exposures over time much more dangerous. All contractors or workers should be aware of the potential hazards.

Potential sources of exposure to lead from buildings and building materials include lead-based paints (LBPs) that was used during building construction or renovation in 1970s or earlier, as well as lead-based water pipes and lead-solder joints/fittings for copper lines.

Paints made prior to 1950 may contain significant amounts of lead, with some lead-based paints containing 30% to 50% lead by weight. Additional sources can include wall insulation around x-rays or other equipment, as an additive in brass and other alloys, from batteries, cable and wire casing, cast iron pipes, gaskets and connections,

Acute lead poisoning (high exposure over a short period of time) can cause headaches, fatigue, anemia, constipation, abdominal pain and damage to the nervous system. Chronic lead poisoning (exposure over a longer period of time) can cause fatigue, joint pain, and weakness.

Lead poisoning can damage the fetus in pregnant female workers, and impair fertility in male workers.

Workers are exposed to lead when they inhale lead-containing dust or ingest lead residue from their hands (e.g., when eating, chewing gum, or smoking). Lead can migrate across the project (i.e. to lunchrooms) if workers are not meticulous with good hygiene procedures.

According to Part 36, section 36.5(1) (b) of the Manitoba Workplace Safety and Health Regulation 217/2006, the occupational exposure limit of a designated material must be as close to zero as is reasonably practicable, but shall not exceed the Threshold Limit Value (TLV) established by the American Conference of Governmental Industrial Hygienists (ACGIH). In Manitoba, the Workplace Safety and Health Regulations have adopted the current ACGIH TLVs as the allowable OEL for those chemical and biological substances where a TLV exists.

The current TLV for lead (elemental and inorganic compounds, as lead) is 0.05 mg/m<sup>3</sup>. For workers with chronic exposure to lead-containing dust or lead-based materials, biological testing to determine lead-blood content would be warranted. For lead, the Biological Exposure Index (BEI) is 30 µg/100 mL and lower levels are specified for women of child-bearing potential. This would be intended for industrial workers with higher-level chronic exposures.

The removal and clean-up of the lead-based paint shall be performed according to procedures that address requirements in the Manitoba Workplace Safety & Health Division *Guideline for Working with Lead*<sup>1</sup> and/or as modified in these procedures. Any lead removal or abatement activities must be performed by qualified contractors with training in the applicable activities, as well as familiarity with the applicable legislation issued by the Manitoba Department of Labour Workplace Safety & Health Division.

Under the federal *Surface Coating Materials Regulations* (SOR/2016-193), coatings on consumer products cannot contain more than 90 mg/kg lead (or 0.009% w/w). This applies to some materials including children's toys or products used by children; products containing more than this level require specific labelling. These regulations do not address existing painted surfaces or workplace requirements for handling lead-based paints. In the absence of clear Canadian-based legislation and guidelines, guidelines and definitions available in the US Code of Federal Regulations (CFR) are used in this assessment as an

---

<sup>1</sup> A *Guideline for Working with Lead*. Manitoba Workplace Safety & Health Division. August 2002.

evaluation guideline. The US Department of Housing and Urban Development has legislation providing definitions for lead-based paints, as it relates to lead-based paint poisoning prevention in certain residential structures.

According to definitions provided in 24 CFR Part 35.110, lead-based paint (LBP) is defined as any paint or coating with lead content equal to or greater than 1 mg/cm<sup>2</sup> or 5000 ppm or 5,000 mg/kg or 0.5% w/w . Canada's Hazardous Products Act (1976) cites the same 0.5 % w/w limit for indoor lead-based paints.

Work to remove painted surfaces where the painted or coated surface contains less than 0.5% w/w is not expected to generate airborne lead concentrations in excess of the TLV established for lead, provided hand tools only are used to removed paint.

#### **4.0 LABORATORY TEST RESULTS**

Sampling of paint in the area was completed by the City of Winnipeg, and the results obtained are included as Appendix 2 to this report.

There were seven samples of paint taken from throughout the basement area of the building. Samples were analyzed with a reportable limit of 0.010% w/w and a single sample was positive for lead content, with a result of 0.012% w/w lead (Pb). This sample was reportedly taken of paint on the wall in the drying room in the south-west portion of the basement.

Based on sampling completed by the City of Winnipeg, there are no lead-based paints (LBPs) in the basement area. Lead-based paints may be present in other areas of the building.

#### **5.0 SAFE WORK PROCEDURES - LEAD PAINT REMOVAL**

##### **5.1. Review or Lead Content and Risk**

- 5.1.1. There are no lead-based paints (paint containing 0.5% w/w lead or greater) in the work area.
- 5.1.2. There was a single sample where lead was detectable at low levels.
- 5.1.3. Beyond worker awareness and standard good housekeeping practices, there are no additional precautions required regarding containment.
- 5.1.4. As with all work practices, employers must ensure that the workers are knowledgeable of the hazards associated with lead and properly trained in the removal of materials where there is a potential for lead exposure.

## 5.2. Housekeeping Procedures

- 5.2.1. While working with lead, it can get on your clothes, your hands and your hair leading to potential ingestion by bringing hands to your mouth.
- 5.2.2. Dry sweeping and the use of compressed air are prohibited for removing dust and debris containing lead. Work areas and equipment covered by dust will be cleaned at the end of every shift using a HEPA-filtered vacuum and wet cleanup will also be used to remove dust.
- 5.2.3. Waste material from HEPA vacuums will be placed directly into a container for proper disposal with a licensed hazardous waste facility.
- 5.2.4. A water sprayer should be used to minimize dust generation.
- 5.2.5. Upon completion of lead removal, the pail (or container) will be removed to a licensed disposal facility.
- 5.2.6. Supervisors are responsible for ensuring that work areas are free from dust at the end of each shift.
- 5.2.7. Daily inspect all dust control equipment and tools to make sure they are in good working order.
- 5.2.8. Use and maintain all tools and equipment as specified by the manufacturer.



Bradley Walker, B. Sc., WRT, AMRT  
MWI Consultants, Inc.

## Appendix 1– Photographs

### Photo 1

Reported location of the paint sample that was found to contain 0.012% w/w lead (EMC Lab L67178-1).

This is the wall in the drying room located in the SW corner of the basement.

Based on sample result of <0.5% w/w, lead-based paints (LBPs) are not present in the area.



### Photo 2

The ceiling in the drying room.

A sample of paint applied to ceiling (EMC Lab L67178-2) was found to contain <0.010 %w/w lead (Pb).



**Appendix 3- Paint Sampling Results (Lead / Pb)**



9830 South 51<sup>st</sup> Street, Suite B-109 / PHOENIX, ARIZONA 85044 / 480-940-5294 or 800-362-3373 / FAX 480-893-1726  
emclab@emclabs.com

**LEAD (Pb) IN PAINT CHIP SAMPLES**  
EMC SOP METHOD #L01/1 EPA SW-846 METHOD 7420

<b>EMC LAB #:</b> L67178		<b>DATE RECEIVED:</b> 11/22/17			
<b>CLIENT:</b>		<b>REPORT DATE:</b> 11/28/17			
		<b>DATE OF ANALYSIS:</b> 11/28/17			
<b>CLIENT ADDRESS:</b>		<b>P.O. NO.:</b>			
<b>PROJECT NAME:</b> 845 Sargent FS-05		<b>PROJECT NO.:</b>			
EMC # L67178-	SAMPLE DATE /17	CLIENT SAMPLE #	DESCRIPTION	REPORTING LIMIT (%Pb by weight)	%Pb BY WEIGHT
1	11/17	3	Drying Room SW Corner / Lead Paint	0.010	0.012
2	11/17	4	Drying Room SW Ceiling / Lead Paint	0.010	BRL
3	11/17	5	Gym Ceiling West / Lead Paint	0.010	BRL
4	11/17	6	Gym NW Wall / Lead Paint	0.010	BRL
5	11/17	7	Basement Washroom Ceiling / Lead Paint	0.010	BRL
6	11/17	8	Basement North West / Lead Paint	0.010	BRL
7	11/17	9	SE Basement / Lead Paint	0.010	BRL

^ = Dilution Factor Changed \* = Excessive Substrate May Bias Sample Results BRL = Below Reportable Limits # = Very Small Amount Of Sample Submitted, May Affect Result

This report applies to the standards or procedures identified and to the samples tested only. The test results are not necessarily indicative or representative of the qualities of the lot from which the sample was taken or of apparently identical or similar products, nor do they represent an ongoing quality assurance program unless so noted. Unless otherwise noted, all quality control analyses for the samples noted above were within acceptable limits.

Where it is noted that a sample with excessive substrate was submitted for laboratory analysis, such analysis may be biased. The lead content of such sample may, in actuality, be greater than reported. EMC makes no warranty, express or implied, as to the accuracy of the analysis of samples noted to have been submitted with excessive substrate. Resampling is recommended in such situations to verify original laboratory results.

These reports are for the exclusive use of the addressed client and are rendered upon the condition that they will not be reproduced wholly or in part for advertising or other purposes over our signature or in connection with our name without special written permission. Samples not destroyed in testing are retained a maximum of sixty (60) days.

**ANALYST:**

Jason Thompson

**QA COORDINATOR:**

Kurt Kettler

Rev. 11/30/08