

Lead Paint Survey

Crystal Pool

Victoria, BC

Prepared by



North West
Environmental Group Ltd.

3 – 835 Devonshire Rd
Victoria, British Columbia

NWEG Project: 12711

Prepared for:
**On Behalf of the
City of Victoria**

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1 EXECUTIVE SUMMARY

A lead paint risk assessment at the Crystal Pool was conducted on September 29th, 2010. Suspect hazardous materials were identified logged and, where necessary, sampled to determine the presence of hazardous materials.

The Crystal Pool is a recreational facility owned and operated by the City of Victoria.

The building was occupied and in use during the investigation and, therefore, invasive investigative techniques were not used. Even with the most invasive survey techniques, however, it should be noted that the possibility remains for other concealed materials to be found during the demolition process.

WorkSafeBC Regulations require that lead based paint be handled to prevent worker exposure to airborne lead dust. Any removal of lead based paint must be undertaken by a qualified contractor employing WorkSafeBC approved procedures. If materials are encountered during deconstruction that differ from, or are in addition to those reported in the sample collection report, then work must stop until the material content can be determined.

The purpose of this hazard assessment was to identify the locations of lead based paint prior to building renovation. This report includes a list of building materials that are confirmed or suspected of containing lead based paint.

The survey identified lead based paint in locations throughout the Crystal Pool. Paint waste must be collected for testing prior to disposal. Precautions need to be taken by workers to prevent the spread of lead containing dust and to minimize exposure to workers.

Where hazardous materials were found they can be presumed to be found in similar materials throughout the building.

2 INTRODUCTION

North West Environmental was retained by the City of Victoria to conduct a lead paint assessment at the Crystal Pool, Victoria, BC.

The Crystal Pool is a recreational facility owned and operated by the City of Victoria.

All accessible areas of this building were inspected for the presence of lead based paint. Where appropriate, representative samples of materials were collected and sent for confirmatory testing.

WorkSafeBC Regulations require that all lead based paint be handled in a manner that prevents worker exposure to airborne lead dust. Removal of lead paint must be undertaken by a qualified contractor employing WorkSafeBC approved procedures. If materials are encountered during deconstruction that differ from, or are in addition to those described in this report, then work must stop until the material content can be determined.

Environmental regulations also dictate the disposal criteria for lead containing paint waste.

3 REGULATORY CRITERIA

3.1 Lead

Most houses and buildings built before 1950 have had lead-based paint applied to the interior or exterior surfaces. In most cases, lead paint of this era contained up to 40% lead by weight. Paints made between 1950 and 1978 usually contained smaller amounts of lead.

Lead is a designated substance and as such is regulated under the BC Occupational Health and Safety Regulation. Airborne exposure criteria, respirator requirements and mandatory worker testing requirements are also outlined under this regulation. As with all other designated substances, all personnel working around or with such materials must be made aware of their presence and be supplied with training in the potential health effects and means of avoiding exposures. As leachable lead is a hazardous waste, disposal sites should be contacted in advance to ensure their willingness to accept the waste.

4 FINDINGS

4.1 Lead

4.1.1 Lead Paint

Sample #	Location	Lead (%)
12711-1	Entrance to Men's Change Room	<0.010
12711-2	Concrete near Bleachers	0.11
12711-3	Upper Level – Door Frame	<0.010
12711-4	Bleacher Backs	1.1
12711-5	Lower Level Stairs – Light Brown	0.012
12711-6	Lower Level Stairs – Dark Brown	<0.033
12711-8	Exterior Door	0.39

5 CONCLUSIONS AND RECOMMENDATIONS

Options for dealing with the lead paint are to strip the paint and dispose of only the paint, or to dispose of the paint and substrate (i.e. metal, wood and concrete). In either case, the material may have to be disposed as a Hazardous Waste at a licensed landfill. Soils analysis for lead content around the exterior of the building should also be included and any contaminated soils should be removed and disposed of appropriately.

Although no leachate-criteria testing was conducted, experience has shown that lead paints often exceed the leachate quality criteria of the BC Hazardous Waste Regulation. Lead paints if concentrated in the form of chips should be considered hazardous waste and be transported by a licensed carrier and disposed of at a licensed facility. Materials coated with paint containing lead should not be chipped and buried as this destructive disposal method not only has the potential to release significant amounts of hazardous dust, but also increases the potential for hazardous levels of metals to leach from the material substrate.

Workers should use caution to avoid activities such as sanding or heat stripping of paints containing lead, arsenic or mercury since such activities can create airborne dusts and fumes in concentrations that may pose an inhalation hazard. An effective exposure control plan may include the use of decontamination facilities, respiratory protection, waste handling procedures, and contamination control procedures.

Based on the above stated conclusions, the following recommendations are provided.

1. Provide copies of this report to site personnel as required, including contractors.
2. Suspect materials encountered during demolition activities should be left undisturbed until testing determines the presence or absence of lead.
3. Workers should use caution to avoid activities such as sanding or heat stripping of paints containing lead, arsenic or mercury since such activities can create airborne dusts and fumes in concentrations that may pose an inhalation hazard.

6 CLOSURE

This survey and assessment report has been prepared exclusively for the client and is intended to provide a delineation of the presence and condition of asbestos-containing materials and other hazardous materials as outlined in the report as observed on the date this survey was conducted. The conclusions and recommendations contained in this assessment report are based upon professional opinions with regard to the subject matter. These opinions are in accordance with accepted hygiene assessment standards and practices applicable to these locations and are subject to the following inherent limitations:

The data and findings presented in this report are valid as of the date of the investigation. The passage of time, manifestation of latent conditions or occurrence of future events may warrant further exploration at the properties, analysis of the data, and re-evaluation of the findings, observations, and conclusions expressed in this report.

The data reported and the findings, observations and conclusions expressed in this report are limited by the Scope of Work. The Scope of Work was defined by the request of the client, the time and budgetary constraints imposed by the client, and availability of access to the properties. A stage 1 Preliminary Site Investigation was not part of our scope of work.

Because of the limitations stated above, the findings, observations and conclusions expressed by North West in this report are not, and should not be, considered an opinion concerning compliance of any past or present owner or operator of the site with any federal, provincial or local laws or regulations.

No warranty or guarantee, whether expressed or implied, is made with respect to the data or the reported findings, observations, and conclusions, which are based solely upon site conditions in existence at the time of investigation.

This report may not be used, relied upon, copied, published, or quoted by any party without the written consent of North West Environmental Group, Ltd. Other parties reading this report must independently verify the completeness and accuracy of this report and its contents.



Robert Christie, B.Sc., MBA, CIH

Principal

APPENDIX 1 Sample Report



EMSL Analytical, Inc.
3 Cooper St., Westmont, NJ 08108
Phone: (856) 858-4800 Fax: (856) 858-9551 Email: westmontleadlab@emsl.com

Attn: **Janet Peto**
North West Environmental
#3-835 Devonshire Road
Victoria, BC V9A4T4

Customer ID: PAEC50
Customer PO:
Received: 10/01/10 12:30 PM
EMSL Order: 201013859

Fax: (250) 384-9865 Phone: (250) 384-9695
Project: 12711, City of Victoria, Public Works

EMSL Proj:

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

<i>Client Sample Description</i>	<i>Lab ID</i>	<i>Collected</i>	<i>Analyzed</i>	<i>Lead Concentration</i>
12711-02 Site: Entrance to Men's Change Rm Desc: Paint Chips	0001	10/4/2010	10/4/2010	<0.010 % wt
12711-03 Site: Bleachers Desc: Concrete Paint Chips	0002	10/4/2010	10/4/2010	0.11 % wt
12711-04 Site: Upper Level-Door Frame Desc: Paint Chips	0003	10/4/2010	10/4/2010	<0.010 % wt
12711-05 Site: Bleacher Backs Desc: Paint Chips	0004	10/4/2010	10/4/2010	1.1 % wt
12711-06 Site: Lower Level Stairs Desc: Light Brown Paint Chips	0005	10/4/2010	10/4/2010	0.012 % wt
12711-07 Site: Lower Level Stairs Desc: Brown Paint Chips	0006	10/4/2010	10/4/2010	<0.033 % wt
12711-08 Site: Exterior Door Desc: Paint Chips	0007	10/4/2010	10/4/2010	0.39 % wt

Initial report from

Shannon Kauffman, Lead Lab Supervisor
or other approved signatory

Reporting limit is 0.01 % wt. The QC data associated with these sample results included in this report meet the method quality control requirements, unless specifically indicated otherwise. Unless noted, results in this report are not blank corrected. 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.

* slight modifications to methods applied Samples received in good condition unless otherwise noted. Quality Control Data associated with this sample set is within acceptable limits, unless otherwise noted

Samples analyzed by EMSL Analytical, Inc. 3 Cooper St., Westmont NJ NJ-NELAP: 04653, AIHA-LAP, LLC. ELLAP Accreditation 100194

APPENDIX 2 Photographs



Photo 1:

Sample Number: 12711-02
Location: Entrance to Men's
Change Room
Material: Paint Chips
L.C.: <0.10 % wt



Photo 2:

Sample Number: 12711-03
Location: Bleachers
Material: Concrete Paint Chips
L.C.: 0.11 % wt



Photo 3:

Sample Number: 12711-04
Location: Upper level-Door
Frame
Material: Paint Chips
L.C.: <0.010 % wt



Photo 4:

Sample Number: 12711-05

Location: Bleacher Backs

Material: Paint Chips

L.C.: 1.1 % wt

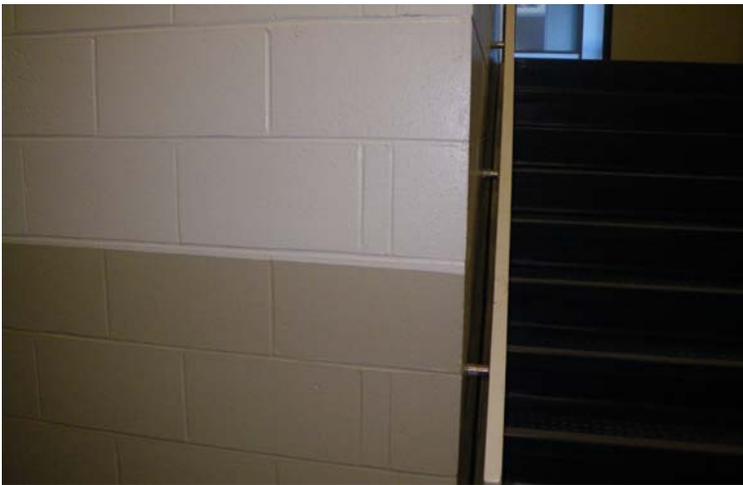


Photo 5:

Sample Number: 12711-06

Location: Lower Level Stairs

Material: Light Brown Paint
Chips

L.C.: 0.012 % wt

Sample Number: 12711-07

Location: Lower Level Stairs

Material: Brown Paint Chips

L.C.: <0.033 % wt



Photo 6:

Sample Number: 12711-08

Location: Exterior Door

Material: Paint Chips

L.C.: 0.39 % wt

