

Lower Fort Garry
Southwest Bastion
Industrial Hygienist Requirements
Statement of Work

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Southwest Bastion Occupational Hygienist Requirements
STATEMENT OF WORK

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1. Introduction

The Manitoba Field Unit (MFU), within the Parks Canada Agency (PCA), operates the Southwest Bastion at Lower Fort Garry National Historic Site (LFG). The interior of the building has lead containing paint on the historic limestone walls that requires removal and abatement. A Request for Quote has gone out for the abatement project which is separate from this Request for an Industrial Hygienist. An Industrial Hygienist contractor is required to conduct lead testing for the duration of this abatement project and includes conducting air quality and surface testing to advise the Departmental Representative if lead migration has occurred outside the Work Area during the removal and abatement and ensure safe process and procedures are being followed.

2. Background

The Southwest Bastion is a cultural resource and is the only bastion at Lower Fort Garry with a Federal Heritage Building Review Organization designation.

During the 1960's extensive restoration was conducted on this building and at that time lead containing paint was applied to the walls. It has since been found that this paint is trapping moisture in the masonry and causing deterioration to the building. As a result, Parks Canada has put a tender out to remove the paint from the interior walls so that masonry repairs can proceed. Some areas are currently friable and can be easily removed by use of non abrasive brushes and vacuums with HEPA filtration, other areas of the walls will require removal by non-carcinogenic soda blasting. **The intent for this Industrial Hygienist contract is to conduct air quality and surface testing before, during and after abatement work. This is to advise the Departmental Representative if migration has occurred outside the Work Area during the removal and abatement and ensure safe process and procedures are being followed.**

Due to the porous nature of the historic limestone, it is possible that lead may still remain in the limestone wall surfaces once all the paint is removed. The Industrial hygienist contractor is not expected to provide guidance and recommendations on how to proceed if that occurs as part of this contract. Those costs would be in addition to this contract.

The walls are original from the 1840's and are made of limestone. Preservation of these original stones is important to the overall preservation of the building.

Testing was conducted in 2021 on the paint on the interior historic stone walls and the paint was found to contain lead (Pb). Please see ALL *Appendices* for:

- Lead testing Certificate of Analysis ALS
- Photographs,
- Diagrams,

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- Maps of the project
- Statement of work required for the lead paint abatement contractor. (separate from this request for quote)

The Lead Paint Abatement contractor in charge of abatement is required to ensure ALL paint is abated and/or remediated according to all current federal and provincial codes to ensure the health and safety of visitors and staff. **The Industrial Hygienist hired through this contract will be expected to test air quality and surfaces before, during and after that abatement to advise the Departmental Representative if lead migration has occurred outside the Work Area during the removal and abatement and ensure safe process and procedures are being followed.**

The Industrial Hygienist Contractor hired through this contract is expected to work within the schedule of the Lead Abatement Contractor (separate contract) and provide services before they start, during abatement and upon conclusion, final report for Industrial Hygienist work to be completed by January 13, 2024.

Departmental Representatives for the project are:

Project Manager:
Heather Beerling
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204-904-7153

And

Project Manager:
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204-891-7467

3. General Requirements

Parks Canada requires the Industrial Hygienist contractor to **conduct air quality and surface testing before, during and after abatement work to advise the Departmental Representative if migration has occurred outside the Work Area during the removal and abatement and ensure safe process and procedures are being followed.**

During this contract there will be two contractors working on the site at the same time periodically. **The Lead Paint Removal contractor is the prime contractor and as a result the Industrial Hygienist will follow ALL health and safety requirements as laid out by the Lead Paint Removal Contractor, this could include, but is not limited to wearing personal protective equipment, attending safety training by the Lead Paint Removal Contractor, following the site safety program, plan and procedures.**

The following work is required by the Industrial Hygienist contractor:

Prior to abatement -Industrial Hygienist contract commencement

- Meet onsite to discuss the project.
- Review proposed methods and materials and requirements. **This will include a review of the Statement of Work and Appendices for the Abatement Contractor to provide any recommendations or flag areas of concern to the Departmental Representative.**
- Review methods and procedures
- Verify project requirements,
- Verify substrate conditions.
- Advise of existing conditions that may require notification to the Project Authority before proceeding.
- Review of Abatement and Remediation Action Plan, abatement procedures, equipment and tools, submitted by Lead Paint contractor to ensure adherence to provincial and federal standards. Provide comments and recommendations to Parks Canada.
- Review of any hoarding or containment units/ systems the abatement contractor has installed to prevent the escape of lead dust to other areas of the building or to the exterior of the building. Provide comments and recommendations to the Departmental Representative for Parks Canada.
- Submission of all materials and methods that will be used for lead testing for review by the Departmental Representative.
- Submission of Safety Data Sheets for any products being used.
- Methods and products will be reviewed by the Departmental Representative to ensure safety for use on historic limestone.
- Industrial hygienist contractor will NOT proceed until the Departmental Representative has approved methods and materials.
- Conduct 3 indoor lead air quality tests– 1 in each area of the building (attic, main floor east, main floor west) to establish a lead level baseline prior to abatement activities.
- Conduct 1 outdoor lead air quality test to establish a lead level baseline prior to abatement activities.
- Conduct 7 surface tests – 3 on each side of building -main floor east and main floor west walls, 1 in vestibule to establish a **lead** level baseline prior to abatement activities.
- Conduct 7 surface tests – 3 on each side of building -main floor east and main floor west walls, 1 in vestibule to establish if **Asbestos** exists in the paint or mortar. **If the Asbestos test comes back as positive, then this statement of work will include monitoring of Asbestos and Lead levels throughout the project.**
- Prior to abatement starting, once the Abatement contractor has installed containment and abatement equipment, conduct a pre inspection of containment equipment and

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containment activities to ensure abatement contractor has followed all applicable health and safety requirements and that pollutants will not escape the areas being abated.

- Results of all testing to be provided to the Departmental Representative after each test.
- Attend paint removal and abatement contract start up meeting with hired abatement contractor in case of any questions.
- Attend health and safety training meeting run by the abatement contractor.

Twice During Abatement contract (items below x 2):

- Conduct 1 outdoor lead air quality test to determine if lead is escaping shrouding or containment activities are not sufficient.
- Inspection of containment equipment and containment activities to ensure abatement contractor has followed all applicable health and safety requirements and that pollutants will not escape the areas being abated; this includes confirming seal on the attic door remains intact so that the attic does not become contaminated during abatement.
- Results of all testing to be provided to the Departmental Representative after each test.
- Provide any comments or concerns to Departmental Representative

End of Abatement Contract

- Conduct 3 indoor lead air quality tests – 1 in each area of the building (attic, main floor east, main floor west) to determine if lead levels are the same or lower than prior to abatement. **Attic test to be conducted once main floor test results are received and it is confirmed that levels are acceptable.**
- Conduct 1 outdoor lead air quality test to determine if lead levels are the same or lower than prior to abatement commencement.
- Conduct 7 surface tests – 3 on each side of building -main floor east and main floor west walls, 1 in vestibule to determine if lead levels are the same or lower than prior to abatement commencement. Inform Parks Canada if existing lead levels exceed provincial or federal regulations.
- Results of all testing to be provided to the Departmental Representative after each test.
- Creation and submission of a final report at the end of the project containing all tests conducted, diagrams noting where locations of all tests, safety data sheets, testing methods and equipment used, results of testing, comments, copies of certification of laboratories who did the testing that they adhere to all necessary requirements such as appropriate certification from the Canadian Association for Laboratory Accreditation (CALA) or the equivalent.

It is expected that the Industrial hygienist will be available throughout the duration of the paint removal project to answer questions as necessary via email, phone or onsite if necessary.

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The Industrial hygienist will provide reference to where samples have been taken this could include photographs, georeferencing or diagrams with measurements of all sample locations for the duration of the contract (e.g., GPS, maps, or land survey).

Due to the historic nature of the buildings onsite it is expected that methods and materials used throughout this contract will be the least intrusive and not cause further damage to the historic building. Please consult the ***Standards and Guidelines for the Conservation of Historic Places in Canada*** for more information. [HistoricPlaces.ca - The Standards & Guidelines for the Conservation of Historic Places in Canada](http://HistoricPlaces.ca)

4. Sampling and Analytical Program

Parks Canada requires an Industrial hygienist to conduct air quality and surface sampling before, during and after a lead paint abatement project.

Surface and Air Quality Sampling to be conducted to determine if lead has been removed and abated appropriately and not migrating outside of the Work Area. Analytical testing is required to determine the concentrations of contaminants of concern in various media.

The laboratories used for this purpose must have the appropriate certification from the Canadian Association for Laboratory Accreditation (CALA) or the equivalent.

Laboratory data to be summarized in tables which include the applicable environmental quality criteria and/or standards being used for comparison and highlight guideline/standard exceedances in the appropriate category.

5. Quality Assurance and Quality Control

The Industrial Hygienist shall be a company specializing in this type of work described in this contract and be able to effectively conduct the testing required.

The Contractors shall identify and adhere to acceptable quality assurance and quality control (QA/QC) procedures throughout the project. QA/QC measures must be explicitly identified in the

Consultant's work plan and project report. This includes but is not limited to:

Certification and Training	
•	Required certifications for analytical laboratory
•	Required certifications and specialized training required by

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	field staff (e.g., health safety, equipment operation, sampling methods)
Sampling Methods	
•	Sampling methodology and equipment
•	Equipment decontamination procedures
Field Equipment	
•	Instrument type and model specification
•	Calibration requirements and documentation
•	Instrument inspection and maintenance requirements
•	Operator training required
•	Calibration and inspection
Sample Handling, Custody and Analysis	
•	Analytical protocol
•	Sample containers
•	Field preservation
•	Holding times
•	Sample storage requirements (e.g., packing, type, temperature)
•	Chain-of-custody (consistent labeling and nomenclature on chain-of-custody documents and sample containers)
•	Data quality targets (e.g., detection limits, precision, accuracy)
•	Field quality control samples (e.g., duplicates, trip blanks, field blanks)
•	Laboratory quality control samples (e.g., duplicates, method blanks, surrogate and matrix spikes, standard or certified reference materials)
•	Frequency of quality control samples tested
•	Other performance assessment measures (e.g., audits, inter-laboratory testing)
•	Sample storage and testing turnaround time

Reports should undergo a thorough senior review before they are submitted to the Parks Canada Departmental Representative

Deficient reports will be returned to the Industrial hygienist for further editing without any cost to Parks Canada Agency.

6. Reference Standards

- i. Department of Justice Canada Canadian Environmental Protection Act, 1999 (CEPA).
- ii. Health Canada Workplace Hazardous Materials Information System (WHMIS), Safety Data Sheets (SDS).
- iii. Human Resources and Social Development Canada (HRSDC)
- iv. Canada Labour Code Part II, - SOR 86-304 - Industrial Health and Safety Regulations.
- v. Transport Canada (TC)Transportation of Dangerous Goods Act, 1992 (TDGA).
- vi. U.S. Environmental Protection Agency (EPA)
- vii. EPA 747-R-95-007-[1995] , Sampling House Dust for Lead.
- viii. U.S. Department of Health and Human Services/Centers for Disease Control and Prevention/National Institute for Industrial Safety and Health (NIOSH)
- ix. NIOSH Manual of Analytical Methods (NMAM), 5th Edition.
- x. 1.5.8. U.S. Department of Labour - Industrial Safety and Health Administration (OSHA) - Toxic and Hazardous Substances
- xi. Lead in Construction Regulation - 29 CFR 1926.62-[1993].
- xii. Underwriters' Laboratories of Canada (ULC)
- xiii. Standards and Guidelines for the Conservation of Historic Places.HistoricPlaces.ca - [The Standards & Guidelines for the Conservation of Historic Places in Canada](http://HistoricPlaces.ca)

7. Action and Informational Submittals

Provide submittals in a timely manner.

Action Submittals:

Informational Submittals, submit the following before work commences:

- Information on process and procedures used for air quality and surface lead testing.
- Safety Data Sheets for any products to be used.

Information Requests and Site Instructions

- Should there be a need for information requests or site instructions before or after the work commences, provide these by email with all the relevant information to ensure the Departmental Representative can respond in a timely manner.

8. Health and Safety

During this contract there will be two contractors working on the site at the same time periodically. **The Lead Paint Removal contractor is the prime contractor and as a result the Industrial Hygienist will follow ALL health and safety requirements as laid out by the Lead Paint Removal Contractor, this could include, but is not limited to wearing personal protective equipment, attending safety training by the Lead Paint Removal Contractor, following the site safety program, plan and procedures.**

The Industrial hygienist will ensure that all of the Industrial Hygienist workers wear appropriate safety equipment in accordance with Canadian Labour Code and that all their workers are covered by the Workers Compensation Board of Manitoba.

The Industrial hygienist will provide names of the people who will need to access the site to Parks Canada and the Lead Paint Removal contractor and will ensure that these authorized people will have the knowledge and training on health and safety pertinent to their reason for being at the site.

At all times the Industrial Hygienist will comply with Occupational Health and Safety requirements for the Province of Manitoba and the Government of Canada. In case of conflict or discrepancy between above specified requirements, the more stringent shall apply.

The Industrial hygienist will maintain Workers Compensation Coverage in good standing for the duration of the Contract.

The Industrial hygienist will maintain employee records and evidence of training received. Make data available to the Departmental Representative upon request.

The Industrial hygienist will ensure the following minimum safety rules are obeyed by persons granted access to Work Site:

- Wear appropriate Personal Protective Equipment (PPE) pertinent to the Work or assigned task; **minimum** being hard hat, safety footwear, safety glasses, hearing protection and high visibility workwear. Any respiratory protective equipment and/or other equipment (ie. tyvek clothing etc) and requirements as instructed by the Lead Paint Removal Contractor.
- Immediately report unsafe condition at the site, near-miss accident, injury and damage to the Departmental Representative,
- Obey warning signs and safety tags

- Comply with requirements of Workplace Hazardous Materials Information System (WHMIS).
- Provide copies of Safety Data Sheets for any products used onsite. Submit a copy to the Departmental Representative. Provide a copy for the Lead Paint Removal contractor.

9. General Historic Treatment

The building is a historic building and therefore methods and procedures used should be those that are the least obtrusive and will not cause damage to the building. Please consult the Standards and Guidelines for the Conservation of Historic Places in Canada. HistoricPlaces.ca - [The Standards & Guidelines for the Conservation of Historic Places in Canada](#)

Ensure that Departmental Representatives are notified prior to testing.

Cease Work, notify the Project Authority, and await instructions if materials or conditions encountered at the site are not as indicated by the Contract Documents or if structure is in danger of movement or collapse.

10. Clean Up

Daily pick up and removal of debris associated with lead testing for this Industrial hygienist contract shall be the responsibility of the Industrial hygienist contractor. Ensure that no safety hazards remain as a result of work the Industrial Hygienist is conducting before leaving the project site.

Any testing debris or waste material due to lead testing is to be disposed of at an approved landfill site that is authorized to accept debris.

Any damage to the site or grounds as a result of this lead testing or the Industrial Hygienist contractors, will be repaired by the Industrial Hygienist contractor at their expense. The site has been thoroughly photo documented by the Departmental Representative to provide information on the conditions prior to contract commencement.

11. Security and Copyright

Information, data, photos, drawings, etc. gathered as part of this project must not be shared and made available only to the Departmental Representative.

The use of any data, reports, photographs or site plans submitted by PCA to the Contractor

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(hard copy or digital) for reference purposes are considered to be the property of PCA and will not be used, shared, or sold to any group for any other project other than that defined herein.

Reports created by the Lead Abatement Contractor as part of this project will be reviewed by the Industrial Hygienist Contractor.

Test results and reports from the Industrial Hygienist Contractor will be shared with the Lead Abatement Contractor.

Refer any queries regarding this project from the public, news media or others to the Departmental Representative. All materials produced, including intellectual material, is the property of the Crown.

12. Meetings

Upon Contract Award, the Contractor shall contact the Project Authority within 5 business days to discuss the work required and clarify client expectations and needs.

The Contractor shall meet with the Project Authority on an “as and when required” basis as determined by the Contractor or Project Authority or their designate.

Arrangements for these “as and when required” meetings will be made via email or telephone conversation between the Contractor and Project Authority or their designate.

The contractor will be required to attend a meeting with the prime contractor for lead paint removal to discuss health and safety requirements onsite. This could include any training sessions run by the prime contractor.

13. Invoicing

The Contractor is required to submit, to the Project Authority, on or after completion of the work, for each payment a signed invoice showing the following:

- Contract number,
- Contractor’s name, address, and GST number
- Period covered by the invoice.
- Proof of Workers Compensation Board of Manitoba coverage

14. Pricing

Contractor shall provide a single price for all work required that has been listed in this statement of work.

15. Appendices