



July 23, 2018

VIA EMAIL
Ryan.hill@pc.gc.ca

Ryan Hill
902 Patricia Street, Parks Canada
Jasper , AB T0E 1E0

Attention: **Ryan Hill**
 Technical Services Coordinator
 780-931-6451

Re: **Lead Paint in Buildings Assessment**
 902 Patricia Street Houses
 BSS Project: 902PATL

Barrow Safety Services (BSS) performed a lead paint analysis on the paint inside and outside of the building surveyed at the above-referenced building. BSS understands the information is required to determine if lead paint is present prior to demolition commencing.

SCOPE OF WORK

The scope of work included a general inspection and sampling of paint samples and any suspect material that may or is known to contain lead. The survey was performed on July 16, 2018 by Glen Barrow of Barrow Safety Services.

BUILDING CONSTRUCTION

The 1900's building was painted on the outside. The paint on the interior and exterior of the building was tested for lead. The interior was painted drywall and the exterior was painted wood siding.

SURVEY METHODOLOGY

Suspect lead paint materials were identified by visual inspection and the collection of bulk samples. Select samples were collected of paint material suspected to contain lead and verified through laboratory analysis. Enviro-Works Inc. examined the samples by inductively coupled plasma (ICP) following the ASTM E1645-01 and NIOSH 7300 methodology.

LIMITATIONS

Based on the nature of the building construction, limitations exist which would not have an effect on the thoroughness of the survey. This survey came across no limitations for this testing. Only the areas identified by the client were tested.

REGULATION OF LEAD CONTAINING PAINT

Alberta Occupational Health & Safety (OH&S) regulates provincial workers for handling of lead in the workplace and outlines the requirements to include risk assessment, identification, management, work procedures, worker training, PPE, controls and possible air monitoring if required.

Lead containing materials or paint must be removed or sealed and contained prior to any renovation and demolition activities in accordance with appropriate work procedures set out by OH&S and disposed of in accordance with Alberta Environment. Consulting with Barrow Safety Services would need to be done if lead is found to be present. BSS has supplied a removal procedure and BSS would need to have an onsite advisor to observe removal procedure.

SUMMARY OF RESULTS

A total of three (3) samples of suspect lead paint material was collected and analyzed on the house building. Refer to Appendix I for laboratory results and Appendix I for sample location.

Products that contain lead in excess of 600 parts per million are considered hazardous waste and shall be managed in accordance with the OH&S guideline.

PAT910L

Sample #1 – Upstairs Paint – Positive for lead paint (250.2ppm)

Sample #2 – Basement Paint – Positive for lead paint (<18ppm)

Sample #2 – Exterior Paint – Positive for lead paint (7649ppm)

- Above 600ppm the recommended level.

CONCLUSIONS AND RECOMMENDATIONS

1. All lead paint material that was tested and was found to be positive and above the recommended PPM limit, will be treated as lead and follow the lead removal procedure.
2. Dispose of all Lead containing materials in accordance with Alberta Environment.

3. Manage all lead containing materials within the building through the development and implementation of a Lead Management Program. This can be developed through Barrow Safety Services.
4. Follow the Lead removal procedures that are job specific for this building and this job. Barrow Safety can supply a Lead Removal Procedure and proper disposal of the lead containing material. The BSS onsite lead advisor will be sure the lead procedure is followed and adhered to.
5. Encapsulate and seal lead paint prior to removal. Remove lead containing material as whole as much as possible and dispose of at recognized disposal center for lead waste. The Hinton Landfill does accept lead containing material but needs to be approved first through application (landfill manifest).
6. Upon request a Lead Removal Procedure can be provided and needs to be physically observed by a BSS technician.

If you have any questions regarding this report, please contact the undersigned.

Sincerely,

Authored by:

Barrow Safety Services Inc.

Per:



Glen Barrow
Manager
(780)865-7763

File:



18949 111 Ave. NW
Edmonton, Alberta
T5S 2X4
Ph: 780-457-4652
Fax: 1-844-787-7111

Certificate of Analysis

Client: Barrow Safety Services (Hinton)

Project: 902PATL

Date Sampled: July 16, 2018

Sample Taken by: Glen Barrow

Date Submitted for Laboratory Analysis: July 17, 2018

Sample type: Paint Chip

Date Completed: July 18, 2018

Lab ID: 01037

Lab Test Method: ASTM E1613-12 Lead by FAAS

COC: 59787

Sample ID:	Sample #	Description	Lead (mg/kg)
01037-1	1	Upstairs Paint	250.2
01037-2	2	Basement Paint	<18
01037-3	3	Exterior Paint	7649.0

Enviro-Works Inc. is a Proficient Member of the AIHA-ELPAT Program

This analytical report indicates only the results of the materials submitted and tested at our laboratory. Enviro-Works Inc. is not responsible for any consultation or interpretation of the sample results. Enviro-Works Inc. is also not responsible for the procedure(s) used with respect to the sample collection of the tested material(s) submitted or any course of action taken with respect to the results.

Cherie Laplante, B.Sc.

Lab Manager



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Ryan Hill
902 Patricia Street, Parks Canada
Jasper , AB T0E 1E0

Attention: Ryan Hill
Technical Services Coordinator
780-931-6451

Re: Building Material Assessment – Asbestos Survey
902 Patricia Street Houses
BSS Project: 902PATAS

As requested by Ryan Hill, Barrow Safety Services (BSS) performed an asbestos containing materials (ACM) survey at the above-referenced buildings. BSS understands that the information is required for due diligence purposes.

SCOPE OF WORK

The scope of work included a general inspection of the following items:

- structural materials,
- structural components,
- flooring materials, building materials.

Identification of suspect ACM regulated by Occupational Health and Safety was performed through sample collection of suspect materials. The field work was performed on July 16, 2018 by Glen Barrow of Barrow Safety Services.

BUILDING CONSTRUCTION

The building is a one story wood bungalow building with a basement constructed in 1900's. Interior walls and ceilings are comprised of drywall, drywall compound, concrete flooring (basement), lino flooring, and a stipple ceiling on the main floor. The interior

basement ceiling has ceiling tile and the main floor ceiling has stipple. The outside walls are painted wood. The roof is regular shingles. The insulation in the attic is regular batting insulation and blown in insulation and the walls is regular batting insulation.

SURVEY METHODOLOGY

Suspect ACMs were identified by visual inspection, the collection of bulk samples and verification through laboratory analysis. Select samples were collected of each homogenous building material suspected to contain asbestos. Fibreglass insulation and cellulose was identified visually and was not tested. Enviro-Works Inc. examined the samples by polarized light microscopy (PLM) following the NIOSH 9002 methodology.

Visual extrapolation of suspect asbestos containing materials was conducted. If a floor tile size and pattern was observed multiple locations, it was assumed that the sample result is the same (either positive or negative) for both locations. The results for the drywall compound and the stipple ceilings is assumed that both houses are the same material built at the same time.

LIMITATIONS

Based on the nature of the building construction, limitations exist which had an effect on the thoroughness of the survey. The survey did not include demolition and sampling of roofing, mastics, light fixture heat shields, electrical cloth/wiring, caulking or putties or heating & ventilation system.

REGULATION OF ASBESTOS CONTAINING MATERIALS

Alberta Occupational Health & Safety (OH&S) regulates provincial workers for handling of asbestos in the workplace and outlines the requirements to include risk assessment, identification, management, work procedures, worker training and air monitoring.

An asbestos-containing material is defined by OH&S as any manufactured article or other material which contains 1% or more asbestos by weight at the time of manufacture, or which contains 1% or more asbestos.

Asbestos-containing materials must be removed prior to any renovation and demolition activities in accordance with appropriate work procedures set out by OH&S and disposed of in accordance with Alberta Environment.

RESULTS & RECOMMENDATIONS

A total of ten (10) samples of suspect asbestos-containing building materials were collected and analyzed between both houses. Refer to Appendix I for laboratory results of suspect materials. Six of the samples collected by BSS were reported to be **non-asbestos** and four of the samples collected was reported to **contain asbestos**.

902 Patricia Street House (902PATAS)

- Sample #1 – Upstairs Drywall Compound – No Asbestos Detected
- **Sample #2 – Upstairs Drywall Compound 2 – Asbestos Detected**
 - Chrysotile Asbestos – <1%
- Sample #3 – Upstairs Drywall Compound 3 – No Asbestos Detected
- **Sample #4 – Upstairs Ceiling Stipple – Asbestos Detected**
 - Chrysotile Asbestos – <1%
- Sample #5 – Upstairs Bathroom Lino – No Asbestos Detected
- Sample #6 – Upstairs Kitchen Countertop – No Asbestos Detected
- **Sample #7 – Basement Drywall Compound – Asbestos Detected**
 - Chrysotile Asbestos – <1%
- **Sample #8 – Basement Drywall Compound 2 – Asbestos Detected**
 - Chrysotile Asbestos – <1%
- Sample #9 – Basement Bedroom Ceiling Tile – No Asbestos Detected
- Sample #10 – Exterior Concrete – No Asbestos Detected

*There may be traces of vermiculite under the insulation in attic in sparatic spots.

Asbestos-containing materials must be removed prior to renovation and demolition activities by a qualified contractor in accordance with appropriate work procedures and disposed of in accordance with Alberta Environment. Occupational Health & Safety must be notified in writing before the removal, encapsulation or enclosure of any asbestos containing material. Barrow Safety Services can be contacted for further direction on how to go about asbestos abatement, demololition or renovation.

All asbestos containing materials within the building must be managed through the development and implementation of an Asbestos Management Program. Barrow Safety Services can be contacted for further direction on this Management Program.

If you have any questions regarding this report, please contact the undersigned.

Sincerely,

Authored by:



Barrow Safety Services Inc.

Per

Glen Barrow

Manager

(780)865-7763 Office

File: 902 Patricia Street_asbestos survey report

Certificate of Analysis

Bulk (ACM) Identification:

Visual ID (Area Estimation) NIOSH 9002 : Issue 2

Revision# : 1

Client:

Barrow Safety Services

Client Project Name: 902PATAS

Report Date: July 17, 2018

Samples Collected: July 16, 2018

Date Received: July 17, 2018

Turn Around Requested: Rush 3 hr

Date Analyzed: July 17, 2018

Contact:

Glen Barrow

COC#:

59786

EWI Log #	Sample #	Client Sample Information	Phases/Color/Fibrous/Non-Fibrous/Homogeneity	Asbestos Content Type & %	Other Materials Detected	Analyst
116374-1	1	Upstairs Drywall Compound	100% White chalky mix/ non homogenous/ non fibrous	ND	NFM	CL
116374-2	2	Upstairs Drywall Compound 2	100% White chalky mix/ non homogenous/ non fibrous	Chrysotile <1	NFM	CL
116374-3	3	Upstairs Bathroom Drywall Compound 3	100% White chalky mix/ non homogenous/ non fibrous	ND	NFM	CL
116374-4	4	Upstairs Ceiling Stipple	100% White chalky mix/ non homogenous/ non fibrous	Chrysotile <1	NFM	CL
116374-5	5	Upstairs Bathroom Lino	100% Beige vinyl sheet with beige backing/ non homogenous/ fibrous	ND	Cellulose, NFM	CL
116374-6	6	Upstairs Kitchen Countertop	100% Brown/Beige hard sheet/ homogenous/ non fibrous	ND	NFM	CL
116374-7	7	Basement Drywall Compound	100% White chalky mix/ non homogenous/ non fibrous	Chrysotile <1	NFM	CL
116374-8	8	Basement Drywall Compound 2	100% White chalky mix/ non homogenous/ non fibrous	Chrysotile <1	NFM	CL
116374-9	9	Basement Bedroom Ceiling Tile	100% Brown compressed mat/ homogenous/ fibrous	ND	Cellulose	CL
116374-10	10	Exterior Concrete	100% Grey hard mix/ non homogenous/ non fibrous	ND	NFM	CL

Enviro-Works Inc. is accredited by CALA to ISO/IEC 17025. For scope of Accreditation Visit: www.enviro-works.com

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ND=None detected

NFM=Non fibrous material

VM=Vermiculite & mica

GF=Glass fibre

MW=Mineral wool

P=Perlite

SF=Synthetic fibre

*=Estimated percentage of
asbestos is <0.1%

Reviewed By:



Cherie Laplante, B.Sc.
Lab Manager





Best Management Practice

Name of Best Management Practice	Routine development projects within the Town of Jasper
File Number	J16-033
Scope of Application:	<p>This Best Management Practice (BMP) applies to routine projects within the Town of Jasper that require development and/or building permit, including:</p> <ul style="list-style-type: none">• Construction of new structures;• Demolition, relocation, renovation, addition to and/or modification of existing structures;• Construction, addition or modification of roofs, decks, patios, sheds, retaining walls, fences, driveways, residential parking lots and garages;• Landscaping activities. <p>Application of this BMP to projects within this defined scope of work will be used in whole, or in part, to fulfill the requirements of <i>Parks Canada Directive on Impact Assessment, 2015</i>.</p>
Method of Administration:	<p>This BMP will be administered by Parks Canada's Municipal and Realty Services. The BMP contributes to streamlining the development review and permitting process for routine development activities within the Town of Jasper, and will be applied as follows:</p> <ul style="list-style-type: none">• Projects within the scope of this BMP do not require review by Parks Canada's impact analysis specialists.• Holders of development permits and building permits are responsible for the implementation of the BMP and other permit conditions.• The exceptions noted below will involve the Municipal and Realty Services Office consulting with impact analysis specialists for technical and procedural advice concerning any additional requirements that may be warranted on a case by case basis.
Exceptions:	<p>Additional environmental impact analysis work may need to be completed under the following circumstances:</p> <ul style="list-style-type: none">• Work that affects or involves Federal Heritage Building Review Office (FHBRO) or buildings listed under the Built Heritage Resource Description and Analysis (BHRDA) (impact analysis or alternative processes may apply)¹;• Work that is likely to affect individuals or residence or critical habitat of a listed Species at Risk on Schedule 1 of the <i>Species at Risk Act (SARA)</i>;• Work in the riparian zone of Cabin Creek or Cottonwood Creek (i.e.: within 30m of either creek) or within either creek;

¹ Section 2.4.1 of the *Jasper Community Sustainability Plan* provides direction for maintaining a clear community identity that reflects Jasper's history, landmarks, natural resources and sense of place, and promoting respect and understanding for Jasper's cultural heritage.



	<ul style="list-style-type: none"> • The planned development of previously undeveloped properties, or major changes in land uses (for example, conversion of green space to housing). • Work that involves excavation of contaminated soil (standard industry practices for contamination will be applied); • Other circumstances where the BMP does not address known environmental issues that are associated with the proposed work, or circumstances where the potential environmental impacts of the proposed work are not fully understood.
Approved geographic area of application:	This BMP will be applied within the Town of Jasper in Jasper National Park of Canada.
Rationale:	<p>The impacts of routine development projects in the Town of Jasper on environmental and cultural resources are well understood through decades of local environmental assessment practice, the application of industry standards, and through consideration and analysis at the various scales of the <i>Jasper National Park Management Plan</i> and Strategic Environmental Assessment, the <i>Jasper Community Sustainability Plan</i> and the Class Screening for Routine Projects in National Parks Communities, [completed under the <i>Canadian Environmental Assessment Act (CEAA)</i> prior to CEAA 2012]. Accordingly, potential adverse impacts can be appropriately managed through implementation of this BMP in conjunction with the requirements of the development review process. Additional tools are available as needed under <i>Parks Canada Directive on Impact Assessment, 2015</i>.</p>

Effects Assessment and Mitigation

Components of the environment that may be affected:
<p>Soil/Land Resources</p> <ul style="list-style-type: none"> • Slope instability, due to increased soil exposure and improper excavation and storage • Soil contamination (i.e.: from leaks and accidental spills etc.). <p>Vegetation</p> <ul style="list-style-type: none"> • Damage to and/or removal of native vegetation in immediate or adjacent areas. • Introduction of invasive species or expansions of existing invasive populations. <p>Air Quality</p> <ul style="list-style-type: none"> • Decreased ambient air quality (i.e.: from dust/emissions etc.). • Increased ambient noise levels. <p>Fauna</p> <ul style="list-style-type: none"> • Wildlife habituation/attraction to artificial food sources. • Damage to nests/disturbance to nesting birds. • Disturbance to species which are listed under the <i>Species at Risk Act</i> and other wildlife.



Water Resources

- Impacts to surface and groundwater quality (e.g.: through surface run-off; storm-water drainage to the Athabasca River) that may occur due to erosion of bare ground, sedimentation, transportation of debris and contamination from leaks and accidental spills, etc.).

Cultural Resources

- Adverse effects on the heritage value or character-defining elements of a cultural resource, and specifically structures listed under the *Federal Heritage Building Review Office (FHBRO)* or the *Jasper Built Heritage Resource Description and Analysis (BHRDA)*.
- Impacts to unknown archaeological resources.

Public Safety and Visitor Experience

- Adverse effects on use and enjoyment of public and private property associated with construction activities: noise, air quality from dust or emissions, visual/aesthetic impacts, traffic or circulation disruptions.

Mitigation Measures associated with third party routine building projects within the Town of Jasper listed below:

1- Laydown/Staging Areas

- 1.1 Laydown and staging areas must be on existing hardened areas wherever possible.

2- Equipment Operation

- 2.1 Equipment must be in good operating order, free of leaks (e.g., fuel, oil or grease), and fitted with standard air emission control devices prior to arrival on site.
- 2.2 Minimize idling of engines, contingent on operating instructions and temperature consideration.

3- Spill Response and Soil Contamination

- 3.1 A spill kit capable of handling 110% of the total fuels on-site must be available at worksite and all personnel trained in its use.
- 3.2 In the event of a spill, implement spill response procedures immediately and notify the Parks Canada Environmental Surveillance Officer (or designate) at 780-883-0794. If 100 litres or more of a petroleum product has been released into the environment please call 9-1-1 immediately.
- 3.3 Vehicle refueling must take place at licensed facilities (gas station), on impervious surfaces (roadways or parking lots) or on tarp.
- 3.4 If any soil contamination is found, work must cease immediately at that location. The Parks Canada Environmental Surveillance Officer (or designate) must be notified immediately at 780-883-0794.

4- Vegetation and Soil Management

- 4.1 Equipment from outside the national park must be washed cleaned prior to arrival.
- 4.2 Ensure excavated material does not damage or bury plant material that is to be retained on the site or in adjacent areas.



- 4.3 Optimize degree of compaction to minimize erosion and allow for re-vegetation. Native species with low palatability to wildlife are recommended to avoid attracting wildlife.
- 4.4 Topsoil must be salvaged, stockpiled and used in restoration activities. Stockpiles must be covered to prevent erosion.
- 4.5 Topsoil and seed mixes from outside the national park must be certified weed-free.

5- Wildlife

- 5.1 Wildlife attractants, such as food, must be kept in wildlife-proof containers.

Special Considerations for Bats (Species at Risk):

- 5.1 For building and roof renovations during the breeding season of bats (April 15 to September 1), the presence/absence of bats in the building must be determined and confirmed at least two weeks in advance to work commencing. Results must be documented and provided to Parks Canada. Use of acoustic monitoring equipment is recommended to supplement the initial survey if a building is suspected to be bat habitat. Presence/absence checks must be completed by a qualified individual familiar with bat ecology and bat roosts, and an inspection form is available upon request. If bats are present, Parks Canada will evaluate whether or not the building is used as a maternity roost to determine next steps.
- 5.2 If bat(s) are found during building and roof renovations between October 1st and April 15th, contact Parks Canada. Parks Canada will evaluate whether or not the building is being used for hibernation.
- 5.3 If a bat is found in a building while work is taking place, stop work and allow the bat to exit on its own. Ensure it has access to the outside via open door(s) and/or window(s). If bats won't exit, they return or continue to be found, contact Parks Canada who will need to evaluate whether the bat is passing through or using the location as a maternity roost or hibernation site to determine next steps.
- 5.4 If dead or injured bats are found, leave them as found and notify immediately the Parks Canada Environmental Surveillance Officer (or designate) at 780-883-0794.
- 5.5 A qualified individual should safely collect (i.e., wear gloves) dead bats to be tested for White-Nose Syndrome (WNS) as per Section 1.1.4 of the Parks Canada *Standards for Managing Bats in Protected Heritage Areas*.

Special Considerations for Migratory Birds:

- 5.6 For projects requiring the removal of trees and/or shrubs: The local nesting for breeding migratory birds generally occurs during April 19 - August 24. During this time the destruction of an active nest is prohibited. Plan ahead to complete tree removals and clearing activities outside of that time period.

6- Water Course Protection

- 6.1 No rock, silt, cement, grout, asphalt, petroleum product, lumber, vegetation, domestic waste, pesticide, herbicide or any deleterious substance will be placed or allowed to disperse into any sewer, or other water course.

7- Cultural Resources

- 7.1 If cultural artifacts are discovered, they must be left undisturbed where they were found and work must stop immediately in that location. The Parks Canada Environmental Surveillance Officer (or designate) must be notified immediately at 780-883-0794.



8- Energy efficiency

- 8.1 Exterior lighting should meet the Parks Canada Dark Skies lighting policy (information is available at the Parks Canada Realty/Development Office)


9- Waste Management

- 9.1 The construction site and adjacent areas must be maintained in a tidy condition, free from the accumulation of construction waste products, debris and garbage.
- 9.2 Ensure all waste is stored and handled in compliance with the National Park Garbage Regulations. Burning or burial of waste is not permitted
- 9.3 Contact Parks Canada's Parks Canada Realty/Development Office at 780-852-6220 for up to date information concerning waste that may be accepted at the Jasper Waste Transfer Station. Operating policies and fees are subject to change.
- 9.4 Parks Canada's general requirements are that waste must be source separated and disposed of as follows:
- a. **Sorted materials:** including clean wood, glass, metal, concrete and clean fill may be accepted at the Jasper Waste Transfer Station or a licensed landfill site and recycled where possible.
 - b. **Cardboard (All types):** must be recycled at a licensed recycling facility.
 - c. **Unsorted waste:** including drywall, carpets, treated or painted wood (i.e.: Cedar shingles), asphalt, tar paper, tar and gravel shingles and other mixed construction debris must be disposed of at a licensed landfill site.
 - d. **Hazardous waste:** such as contaminated soil, fuel tanks, lead paint, asbestos, mercury switches and light ballasts must be disposed of at a licensed landfill site.

10- Health & Safety

- 10.1 The construction site must be secure and safe at all times. All site activities must comply with federal and provincial occupational health and safety legislations.
- 10.2 Any trench at worksite left over night will be fenced in to restrict access by people and/or wildlife.

Approval

Salman Rasheed, Acting Jasper Field Unit Superintendent	Date:
Signature: 	MAR 12, 2017