

Cape Spear Lightstation
Remediation/Risk Management
Cape Spear, NL

2016-08-20

PART 1 - GENERAL

1.1 REFERENCES

- .1 Guideline for Lead on Construction Projects from Occupational Health and Safety Branch, Ontario Ministry of Labour, April 2011.
- .2 Health Canada
 - .1 Workplace Hazardous Materials Information System (WHMIS), Material Safety Data Sheets (MSDS).
- .3 Human Resources and Social Development Canada (HRSDC)
 - .1 Canada Labour Code Occupational Health and Safety Regulations.
- .4 Transport Canada (TC)
 - .1 Transportation of Dangerous Goods Act, 1992 (TDGA).
- .5 Management of Disposal of Construction, Abatement and Demolition Waste Containing Lead-Based Paint, 2010, NL Department of Environment and Conservation.
- .6 Leachable Toxic Waste, Testing and Disposal, NL Department of Environment, November 2003.

1.2 SCOPE

- .1 For this work scope, lead based paint is noted to be present on the existing structures. For the purposes of transportation and disposal, note the following: (i) all paint chips/flakes including the grey concrete paint, paint on the fog horn and concrete base and any white paint flaking from the siding/ramp/patio is to be considered leachable and is to be disposed of as hazardous waste; (ii) the siding/ramp/patio substrate (and any paint which remains adhered to the

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substrate) is to be considered non-leachable and can be disposed of in the regular waste stream; (iii) the siding on the shed (designated for demolition) is to be considered leachable and is to be disposed of as hazardous waste (this includes the substrate itself). Refer to the laboratory results appended to the specifications.

- .2 Comply with requirements of this Section when performing following Work:

- .1 Removal of lead based paint from concrete, wood and steel surfaces.

- .2 Disposal of lead based paint and abrasive blasting material in accordance with the NL Department of Environment Regulations, as defined in the reference document noted under Part 1.1.5 of this specification section.

1.3 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide proof satisfactory to Departmental Representative that suitable arrangements have been made to dispose of lead based paint waste in accordance with requirements of authority having jurisdiction. Note that it is the Contractor's responsibility to determine an approved waste site for all demolition debris contained leachable and non-leachable lead based paint.
- .3 Provide proof of Contractor's General and Environmental Liability Insurance governing abatement of lead.
- .4 Quality Control:

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- .1 Provide proof satisfactory to Departmental Representative that employees had instruction on hazards of lead exposure, respirator use, dress, entry and exit from Work Area, and aspects of work procedures and protective measures.
- .2 Provide proof that supervisory personnel have attended lead abatement course, of not less than one day duration, approved by Departmental Representative. Minimum of one supervisor for every ten workers.
- .5 Contractor to submit Shop Drawings on containment system. Containment system to be established in all areas where the Contractor's work activities have the potential to generate lead dust
- .6 All shop drawings for scaffolding, temporary supports and structures to be utilized in the work shall be submitted under seal of professional engineer licensed to practice in Newfoundland & Labrador.

1.4 QUALITY ASSURANCE

- .1 Regulatory Requirements: comply with federal, provincial/Territorial and local requirements pertaining to lead, in case of conflict among those requirements or with these specifications the more stringent requirement applies. Comply with regulations in effect at time work is performed.

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PART 2 - PRODUCTS

- 2.1 MATERIALS
- .1 Polyethylene 0.15 mm unless otherwise specified; in sheet size to minimize joints.
 - .2 FR polyethylene: 0.15 mm woven fibre reinforced fabric bonded both sides with polyethylene.
 - .3 Tape: fibreglass - reinforced duct tape suitable for sealing polyethylene under dry conditions and wet conditions using amended water.
 - .4 Slow - drying sealer: non-staining, clear, water - dispersible type that remains tacky on surface for at least 8 hours and designed for trapping residual lead paint residue.
 - .5 Lead waste containers: metal fibre type acceptable to dump operator with tightly fitting covers and 0.15 mm sealable polyethylene liners.
 - .1 Label containers with pre-printed cautionary warning "Lead" clearly visible when ready for removal to disposal site.

PART 3 - EXECUTION

- 3.1 SUPERVISION
- .1 Approved Supervisor must remain within Work Area during disturbance, removal, or handling of lead based paints.
- 3.2 RESPIRATORS
- .1 Use respirators in accordance with protocols outlined in the Guideline for Lead on Construction Projects from Occupational Health and Safety Branch, Ontario Ministry of Labour, April 2011, or as otherwise required by NL Provincial OHS (with the more stringent criteria applying).

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3.3 GENERAL

- .1 Washing facilities to be established on site before removal of lead paint surfaces. Washing facilities to consists of a wash basin, water, soap and towels.
- .2 No eating, drinking, chewing gum or smoking in work area.
- .3 Drop sheets to be used below all lead operations which produce or may produce dust, chips or debris containing lead.
- .4 Dust and waste to be cleaned up and removed by vacuuming with a HEPA filter equipped vacuum.
- .5 Clean-up after ach operation to be done to prevent lead contamination and exposure to lead.

3.4 MEASURES

- .1 Removal of paint using pressure washing or abrasive blasting:
 - .1 Post signs to warn of lead hazard.
 - .2 Wear respirators during all paint removal activities, involving pressure washing or abrasive blasting.
 - .3 Wear protective clothing to prevent skin contamination, including but not limited to coveralls, gloves, hats and footwear or disposable coverlets; safety glasses, face shields or goggles. All protective clothing to be removed at the end of each shift and be decontaminated.
 - .4 Construct full tight enclosure (with tarps that are generally impermeable and fully sealed joints and entryways).
 - .5 Seal off openings, polyethylene sheeting sealed with tape. Cover floor surfaces or working platform in work area from wall to wall with FR polyethylene drop sheets. Build airlocks at entrances and

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exits from work areas to ensure work areas are always closed off by one curtained doorway when workers enter or exit. At point of access to work areas install warning signs.

- .6 Maintain emergency and fire exits from work areas, or establish alternative exits satisfactory to Authority having jurisdiction
- .7 Where water application is required provide temporary water supply by use of appropriately sized hoses for application of water as required.
- .8 Provide electrical power and shut off for operation of powered tools and equipment. Provide 24 volt safety lighting and ground fault interrupter circuits on power source for electrical tools, in accordance with applicable CSA Standard. Ensure safe installation of electrical lines and equipment.
- .9 Worker Decontamination Enclosure System includes Equipment and Access Room and Clean Room, as follows:
 - .1 Equipment and Access Room: construct between exit and work areas, with two curtained doorways, one to the rest of the site, and one to work area. Install waste receptor and storage facilities for workers' shoes and protective clothing to be re-worn in work areas. Build large enough to accommodate specified facilities, equipment needed, and at least one worker allowing sufficient space to change comfortably.
 - .2 Clean Room: construct with curtained doorway to outside of enclosures. Provide lockers or hangers and hooks for workers' street clothes and personal belongings. Provide storage for clean protective clothing and respiratory equipment. Install mirror to permit workers to fit respiratory

equipment properly.

- .10 Construction of Decontamination Enclosures:
 - .1 Construct framing for enclosures or otherwise provide portable enclosures as approved by the Departmental Representative. Line enclosure with polyethylene sheeting and seal with tape, apply two layers of FR polyethylene on floor.
 - .2 Construct curtain doorways between enclosures so when people move through or waste containers and equipment are moved through doorway, one of two closure comprising doorway always remains closed.
 - .3 Shower room in decontamination facility to be provided with the following:
 - .1 Hot and cold water or water of constant temperature not less than 40 degrees Celsius or more than 50 degrees Celsius.
 - .2 Individual controls inside to regulate water flow and temperature.
 - .4 Prior to each shift in which a decontamination facility is being used, a competent person should inspect the facility to ensure that there are no defects that would allow lead-containing dust to escape. Defects should be repaired before the facility is used. The decontamination facility should be maintained in a clean and sanitary condition.