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| **Section Cover Page** |
|  **Section 02 83 19** **Removal and Disposal of Bulk Lead Materials and****2018-01-22 Lead-Based Paints** |

Use this Section to specify removal of and disposal of lead-based paints.

Edit this Section only in consultation with Infrastructure specialists in lead removal and disposal procedures. Contact the Alberta Infrastructure - Building Environmental Unit (780-422-7472, 780-422-7600 or 780-422-7440) for inquiries related to this specification.

This Technical Specification Section contains:

.1 This Cover Page

.2 Specification Section Text:

**1. General**

1.1 Section Includes

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1.4 Regulatory Requirements

**2. Products**

 Not Used

**3. Execution**

3.1 Identification

3.2 Removal Procedure for Lead Based Paints

3.3 Transportation and Permanent Disposal

1. General

1.1 SECTION INCLUDES

.1 This Section includes requirements for:

.1 identification,

.2 removal,

.3 preparation for disposal,

.4 transportation,

.5 permanent disposal of bulk lead materials and lead-based paints.

1.2 REmoval contractor qualifications

.1 Use contractors experienced in hazardous materials abatement for removal, packaging and transportation arrangements for disposal of the building materials with lead based paints.

1.3 disposal contractor qualifications

.1 Handling and transportation of lead containing materials to be performed by a hazardous waste company registered as a carrier with Alberta Environment and Parks. A listing of qualified companies may be obtained from the Alberta Environment and Parks website.

.2 Carrier of hazardous wastes shall have successfully completed a Transportation of Dangerous Goods course acceptable to the authority having jurisdiction within the past three years.

1.4 REGULATORY REQUIREMENTS

.1 Comply with the following:

.1 Canadian Environmental Protection Act (Canada)

.2 Environmental Contaminants Act (Canada)

.3 Environmental Protection and Enhancement Act (Alberta)

.4 Transportation of Dangerous Goods Act, 1992 (Canada)

.5 Dangerous Goods Transportation and Handling Act (Alberta) and Regulations

.6 Other legislation and regulations which apply to the performance of the work of this section.

2. Products (Not Used)

3. Execution

3.1 IDENTIFICATION

.1 Locate and classify all lead based paints.

.2 Lead based paints are to be removed in accordance with all applicable regulations.

.3 Locate all emergency light fixtures with lead acid batteries designated for disposal.

.4 Locate all roof flashings and penetrations with lead sheeting designated for disposal.

.5 Locate all sealed cast iron water drain lines designated for disposal.

3.2 Removal procedure for lead Based Paints

.1 For painted surfaces in non-dispersible form (i.e. surfaces have no flaking paints):

.1 Workers performing demolition, shall wear required personal protection equipment (PPE) including non-powered half-mask respirator equipped with P100 filters, disposable coveralls made of material that resists penetration by lead dust, eye protection and impervious gloves.

.2 Carry out demolition work in accordance with Canadian Standards Association (CSA) S350-M1980 Code of Practice for Safety in Demolition of Structures, unless otherwise specified.

.3 Sprinkle debris with water to prevent dust. Do not cause flooding, contaminated runoff or icing. Do not allow waste material, rubbish, and windblown debris to reach and contaminate adjacent properties.

.4 Segregate lead painted components from the demolition debris.

.5 Transport lead paint waste to landfill in a manner preventing lead paint dust from becoming airborne.

.6 Each load shall be accompanied by a properly completed manifest satisfactory to the authority having jurisdiction.

.7 Dispose of lead paint waste at a Class II landfill. No Toxicity Characteristic Leaching Procedure (TCLP) is required for painted surfaces in good condition. Pre-schedule the waste disposal with the landfill to ensure materials are handled appropriately.

.8 Contractor shall not allow lead containing components to be recycled or ground up.

.2 For painted surfaces in dispersible form (i.e. flaking):

.1 Workers performing removal of lead paint in a dispersible form, prior to a demolition, shall wear required personal protection equipment (PPE) including non-powered half-mask respirator equipped with P100 filters, disposable coveralls made of material that resists penetration by lead dust, eye protection and impervious gloves.

.2 Before the work begins a HEPA filtered vacuum, and a pail of soap and warm water with disposable wiping rags (to use as a wash-up station), 150 micrometre polyethylene drop sheet, and good quality duct tape are required.

.3 Surfaces must be scraped using non-powered hand tools, to remove all flaking areas leaving only firmly adhered paint surfaces.

.4 When possible, remove flaking paint in one piece and place them on the polyethylene drop sheet.

.5 Fully seal the first drop sheet containing lead contaminated materials with duct tape. Wrap entire sealed pieces in a second layer of 150 micrometre polyethylene and seal all edges with duct tape.

.6 Spray the scraped surface areas with an industry recognized adhesive product to trap invisible fine dusts that may contain lead and could become airborne during demolition.

.7 Deliver a representative sample of the scraped paint flakes to a recognized laboratory for a Toxicity Characteristic Leaching Procedure (TCLP) test. Provide copy of test results to the [Province’s own forces] [Environmental Consultant].

.8 Repeat for in two operations, a HEPA vacuum or a wet clean, using Trisodium Phosphate (TSP) and warm water solution to all dust surfaces resulting from flaking lead paint removal.

.9 Remove disposable coveralls and gloves when leaving work area. Disposable coveralls and gloves shall be placed into polyethylene sheeting, wrapped and sealed air tight with duct tape, and disposed of as lead waste.

.10 Prior to removal of respirator, workers wash head, face and exterior of respirator thoroughly in wash up station, prior to removing the respirator.

.11 Dispose of all lead painted materials and other waste resulting from this work according to the results of the Toxicity Characteristic Leaching Procedure (TCLP). If the laboratory result is higher than 5.0 mg/L, the flaking lead paint waste shall be disposed of at a Class I landfill (Ryley or Drayton Valley are Class 1 landfills). If laboratory result is 5.0 mg/L or lower the lead waste shall be disposed of at Class II landfill.

.12 Transport lead paint waste to landfill in a manner preventing lead paint dust from becoming airborne.

.13 Each load shall be accompanied by a properly completed manifest satisfactory to the authority having jurisdiction. Pre-schedule the waste disposal with the landfill to ensure materials are handled appropriately.

.14 The contractor is not allowed to recycle or grind-up lead containing components.

.15 After removing all the flaking paints, the remaining good condition lead containing surfaces can be demolished as described in 3.2.1 above.

.16 A final visual inspection by [Province’s own forces] [Environmental Consultant] is required at the end of the flaking lead paint removal to ensure the area is clean of building debris. The [Province’s own forces] [Environmental Consultant] may collect surface lead samples and perform lead air tests to ensure the area is free of lead-containing dust.

.3 For painted surfaces in good condition and the substrate will be reused as part of a renovation project or maintenance activities:

.1 The paint stripping work shall include removal by a qualified lead paint removal contractor, together with air monitoring and inspection by [Province’s own forces] [Environmental Consultant].

.2 The procedures could involve: work area containment, negative air pressure, and electric heat gun or chemical stripping removal of the paint containing lead (no abrasive methods permitted).

3.3 Removal procedure for bulk lead materials

.1 Handle, store, transport and dispose/recycle bulk lead materials in accordance with Alberta and Federal legislation and regulations.

.2 Handle, store, transport, and dispose of bulk lead materials in accordance with Alberta and Federal legislation and regulations.

3.3 TRANSPORTATION AND PERMANENT DISPOSAL

.1 Transport waste in accordance with provincial and federal legislation and regulations.

.2 Ensure all materials are properly packaged and labeled prior to transportation.

.3 Transport hazardous waste materials in properly placarded vehicles equipped with a rain and windproof box.

.4 Each load shall be accompanied by a properly completed Transportation of Dangerous Goods Regulation (TDGR) Waste Manifest. Provide the [Province’s own forces] [Environmental Consultant] with a copy of each waste manifest.

 END OF SECTION