CONTENTS OF THE CONTRACT DOCUMENTS

SPECIFICATIONS- DIVISION 1 TO 2

DIVISION 1 GENERAL REQUIREMENTS

Section 01 01 50	General Instructions	8
Section 01 11 00	Summary of Work	2
Section 01 14 00	Work Restrictions	2
Section 01 14 10	Security Requirements	2
Section 01 31 19	Project Meetings	2
Section 01 33 00	Submittal Procedures	2
Section 01 35 33	Health and Safety Requirements	10
Section 01 35 35	Fire Safety Requirements	3
Section 01 35 43	Environmental Procedures	3
Section 01 41 00	Regulatory Requirements	2
Section 01 51 00	Temporary Utilities	2
Section 01 56 00	Temporary Barriers and Enclosures	2
Section 01 74 11	Cleaning	2
Section 01 77 00	Closeout Procedures	2

DIVISION 2 SITEWORK

Section 02 81 01	Hazardous Materials	5
Section 02 82 00.01	Asbestos Abatement Minimum Precautions	7
Section 02 83 10	Lead Abatement Minimum Precautions	8
Section 02 83 11	Lead Abatement Intermediate Precautions	11
Section 02 83 12	Lead Abatement Maximum Precautions	11

APPENDICIES

Appendix A **Reports**

1 Stantec Consulting Ltd. Report for Project No. 123220964 entitled “Metal Based Paint Remedial Action Plan - Parks Canada Buildings and Structures at Georgina Point (Active Pass) Lightstation, East Point (Saturna Island) Lightstation; Portlock Point Lightstation and Russell Island” dated March 5, 2018, prepared for Parks Canada Agency.

END OF SECTION

Part 1 Summary of Work

1.1 WORK COVERED BY CONTRACT DOCUMENTS

.1 Work of this Contract consists of execution of the Remedial Action Plan as detailed in the following document, which is attached in Appendix A:

.1 Stantec Consulting Ltd. Report for Project No. 123220964 entitled "Metal Based Paint Remedial Action Plan - Parks Canada Buildings and Structures at Georgina Point (Active Pass) Lightstation, East Point (Saturna Island) Lightstation; Portlock Point Lightstation and Russell Island" dated March 5, 2018, prepared for Parks Canada Agency, further referred to herein as "the RAP".

.2 In general, Work of this Contract consists of execution of hazardous building materials abatement (primarily removal of lead-containing paints from various substrates or removal of substrates themselves, which are coated with lead-containing paints) within Parks Canada Buildings and Structures at the following sites located in Gulf Islands National Park Reserve (GINPR), BC:

.1 Georgina Point (Active Pass) Lightstation
  .1 Accessible using BC Ferries

.2 East Point (Saturna Island) Lightstation
  .1 Accessible using BC Ferries

.3 Portlock Point Lighstation
  .1 Accessible using private boat or other means – not on BC Ferries route

.4 Russell Island
  .1 Accessible using private boat or other means – not on BC Ferries route

.3 In general, reinstatement (to match existing) of paint and/or building finishes that are removed will be included in the Work of this Contract. Details are provided in the RAP.

.1 In the event that removal of additional materials is deemed necessary by the Contractor to facilitate the Work, reinstatement of such materials is to be included in the Contract and associated pricing.
  .1 For example, in some instances associated with window frames, asbestos-containing caulking is present and it is expected that this material can be left in place for the repainting process. Should the Contractor deem it more appropriate to remove the asbestos-containing caulking material (using appropriate procedures for asbestos abatement), then the Contractor will be responsible for reinstating new caulking to match the appearance and function of the caulking that was removed.

1.2 OCCUPANCY

.1 Each building or structure that requires work will be unoccupied during execution of the Work. However:

.1 Remaining buildings and/or structures at each site are to remain occupied and operational for periodic users.

.2 Contractor is to only work in one building or structure at a particular site at the one time.

.3 Contractor is to submit their proposed schedule for the Work at each site separately. Schedule will provide a detailed breakdown of expected work days in each structure.

.1 Schedule is subject to the approval of the Departmental Representative.

.2 Co-operate with Departmental Representative in scheduling operations to minimize conflict and to facilitate Parks Canada usage of premises, where applicable.

1.3 CONTRACTOR'S USE OF PREMISES

.1 Contractor will have access to each site as follows:

.1 Georgina Point (Active Pass) Lightstation

.1 To be completed after September 3, 2018.

.2 East Point (Saturna Island) Lightstation

.1 Work that may kill, harm, harass barn swallows, or that may damage or destroy the residence (nest) of barn swallows must NOT be undertaken between May 1 and September 30, inclusive.

.3 Portlock Point Lighstation

.1 Can be completed as soon as practical.

.4 Russell Island

.1 To be completed after September 3, 2018.

.2 Reasonable space will be provided for Contractor's use (bin storage, parking), to be confirmed with Departmental Representative.

.1 Limited space will be available at East Point and Georgina Point. Available space will be reviewed during bidder's meeting

1.4 DOCUMENTS REQUIRED

.1 Maintain at job site, one copy each document as follows, where applicable:

.1 Contract Drawings.
.2 Specifications.
.3 Addenda.
.4 Change Orders.
.5 Other Modifications to Contract.
.6 Field Test Reports.
.7 Copy of Approved Work Schedule.
.8 Health and Safety Plan and Other Safety Related Documents.
.9 Environmental Protection Plan, relevant environmental permits and other environment related documents.
.10 Other documents as specified.

Part 2 Work Restrictions

.1 Execute work with least possible interference or disturbance to normal use of premises.

.2 Where security is reduced by work, provide temporary means to maintain security.

.3 Contractor to supply their own sanitary facilities.

.4 Power and water are limited at each site, with water often being dependent on weather conditions. Contractor is advised to provide their own power and water. In general:

- .1 Georgina Point (Active Pass) Lightstation,
  - .1 Limited power and water available
- .2 East Point (Saturna Island) Lightstation
  - .1 Water is not available
- .3 Portlock Point Lighstation
  - .1 No power or water available
- .4 Russell Island
  - .1 Limited power and no water available

.5 Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

.6 Security Requirements: refer to Section 01 14 10 - Security Requirements.

.7 Hours of work:

- .1 The Work is to be performed during regular work days (Monday to Friday) between the hours of 07:00 to 17:00.
  - .1 Noise generating work is not to be initiated until after 08:00 at East Point and Georgina Point.

.8 Access into Facility:

- .1 No access will be permitted into unauthorized buildings unless approved by the Departmental Representative.

Part 3 Construction Work Schedule

.1 Commence work immediately upon official notification of acceptance of offer and complete the work as indicated in the Contract.

.2 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Substantial Certificate and Final Certificate as defined times of completion are of essence of this contract.

.3 Submittals:

- .1 Refer to Section 01 33 00 Submittal Procedures.

.4 Project Scheduling Reporting:

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

.5 Project Meetings:

.1 Discuss Project Schedule at meetings to be called by the Departmental Representative, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

.2 Before submitting first progress claim submit breakdown of Contract price in detail as directed by Departmental Representative and aggregating contract price. After approval by Departmental Representative cost breakdown will be used as basis for progress payments.

Part 4 Health and Safety

.1 Specified in Section 01 35 33 - Health and Safety Requirements.

Part 5 Environmental Procedures

.1 Specified in Section 01 35 43 – Environmental Procedures.

.2 Fires and burning of rubbish on site not permitted.

.3 Do not dispose of waste or volatile materials such as oil, paint thinner or mineral spirits into waterways, storm or sanitary systems.

.4 Under no circumstances dispose of rubbish or waste materials on property or in Parks Canada waste bins.

Part 6 Regulatory Requirements

6.1 REFERENCES AND CODES

.1 Perform Work in accordance with National Building Code of Canada including all amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.

.2 Meet or exceed requirements of:

.1 Contract documents.

.2 Specified standards, codes and referenced documents.

Part 7 Quality Control

7.1 INSPECTION

.1 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.

.2 Departmental Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such

work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction.

7.2 REJECTED WORK

.1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.

.2 Make good other Contractor's work damaged by such removals or replacements promptly.

Part 8 Temporary Utilities

8.1 TEMPORARY VENTILATION

.1 Ventilating:

.1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during abatement.

.2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.

.3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.

.4 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.

.2 Maintain strict supervision of operation of temporary ventilating equipment to:

.1 Conform with applicable codes and standards.

.2 Enforce safe practices.

.3 Prevent abuse of services.

.4 Prevent damage to finishes.

8.2 TEMPORARY POWER AND LIGHT

.1 Provide own electrical lines from source, as necessary to complete the work.

8.3 TEMPORARY COMMUNICATION FACILITIES

.1 Conform to Section 01 14 10 Security Requirements.

8.4 FIRE PROTECTION

.1 Provide and maintain temporary fire protection equipment during performance of Work required by governing codes, regulations and bylaws.

Part 9 Construction Facilities

9.1 LIFTING EQUIPMENT

.1 Where required, provide, operate and maintain lifting equipment and manpower required for moving of heavy products in accordance with applicable standards and regulations.

9.2 SITE STORAGE/LOADING

.1 Confine work and operations of employees to areas specified in Contract Documents. Do not unreasonably encumber premises with products.

9.3 CONSTRUCTION PARKING

.1 Parking will be available where needed at each site with vehicle access, as directed by the Departmental Representative.

9.4 CONTRACTOR'S SITE OFFICE

.1 Provide office to accommodate Contractor's operations, if required.

.2 Provide a clearly marked and fully stocked first-aid case in a readily available location in accordance with WorkSafeBC requirements.

9.5 EQUIPMENT AND TOOLS STORAGE

.1 Provide and maintain, in a clean and orderly condition, lockable secure lock box for storage of tools and materials.

9.6 SANITARY FACILITIES

.1 Contractor to supply their own sanitary facilities.

9.7 CONSTRUCTION SIGNS

.1 If signage is requested or required, format, location and quantity of site signs and notices to be approved by Departmental Representative.

.2 Signs and notices for safety or instruction to be in both official languages, or commonly understood graphic symbols.

.3 Maintain signboards, signs and notices for duration of project.

.4 Remove signs from site at completion of project or as directed by Departmental Representative.

Part 10 Temporary Barriers and Enclosures

10.1 ENCLOSURE OF WORK AREA

.1 Provide temporary dust barriers around work areas where dust or harmful vapours are being generated. Exhaust dust and vapours to exterior.

Part 11 Cleaning

11.1 PROJECT CLEANLINESS

.1 Maintain Work in tidy condition, free from accumulation of waste products and debris.

.2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative and/or in accordance with applicable transportation and disposal regulations and guidelines.

.3 Provide on-site containers for collection of waste materials and debris.

.4 Provide and use clearly marked separate bins for recycling.

.5 If generated, store volatile waste in covered metal containers, and remove from premises at end of each working day.

.6 Provide adequate ventilation during use of volatile or noxious substances.

.7 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

.8 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

11.2 FINAL CLEANING

.1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.

.2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.

.3 Remove waste products from site.

Part 12 Closeout Procedures

12.1 INSPECTION AND DECLARATION

.1 Contractor's Inspection: Conduct an inspection of Work with all subcontractors, identify deficiencies and defects, and repair as required to conform to Contract Documents.

.2 Notify Departmental Representative in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.

.3 Request Departmental Representative’s Inspection.

12.2 INSPECTION

.1 Departmental Representative and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.

12.3 COMPLETION

.1 Submit written certificate that the following have been performed:

.1 Work has been completed and inspected for compliance with Contract Documents.

.2 Defects have been corrected and deficiencies have been completed.

.3 Work is complete and ready for Final Inspection.

12.4 FINAL INSPECTION

.1 When items noted above are completed, request final inspection of Work by Departmental Representative. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection, at no additional cost to the Contract.

END OF SECTION

Part 1 General

1.1 WORK COVERED BY CONTRACT DOCUMENTS

.1 Work of this Contract consists of execution of the Remedial Action Plan as detailed in the following document, which is attached in Appendix A:

.1 Stantec Consulting Ltd. Report for Project No. 123220964 entitled “Metal Based Paint Remedial Action Plan - Parks Canada Buildings and Structures at Georgina Point (Active Pass) Lightstation, East Point (Saturna Island) Lightstation; Portlock Point Lightstation and Russell Island” dated March 5, 2018, prepared for Parks Canada Agency, further referred to herein as “the RAP”.

1.2 CONTRACT METHOD

.1 Conduct Work under stipulated price (lump sum) contract.

.2 Relations and responsibilities between Contractor and subcontractors are as defined in Conditions of Contract. Assigned Subcontractors must, in addition:

.1 Furnish to Contractor, bonds covering faithful performance of subcontracted work and payment of obligations thereunder when Contractor is required to furnish such bonds to Owner.

.2 Purchase and maintain liability insurance to protect from claims for not less than limits of liability which Contractor is required to provide to Owner.

1.3 WORK BY OTHERS

.1 Other contractors are not expected to be present.

1.4 EXISTING SERVICES

.1 Notify Departmental Representative and utility companies of intended interruption of services and obtain required permission.

.2 Carry out work at times as directed by governing authorities with minimum disturbance to vehicular traffic.

.3 Provide alternative routes for vehicular traffic, as required.

.4 Temporary services to maintain critical building and tenant systems are not required.

.5 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.

.6 Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

.7 Although power may be available at the site the Contractor must plan to provide power to be self-sufficient.

.8 Contractor must plan to supply potable water to be self-sufficient.

.9 Contractor to supply their own sanitary facilities.

1.5 DOCUMENTS REQUIRED

.1 Maintain at job site, one copy each document as follows:

.1 Contract Drawings.
.2 Specifications.
.3 Addenda.
.4 Change Orders.
.5 Other Modifications to Contract.
.6 Field Test Reports.
.7 Copy of Approved Work Schedule.
.8 Health and Safety Plan and Other Safety Related Documents.
.9 Environmental Protection Plan, relevant environmental permits and other environment related documents.
.10 Other documents as specified.

Part 2 Products

2.1 NOT USED

.1 Not used.

Part 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

Part 1 General

1.1 ACCESS AND EGRESS

.1 Design, construct and maintain temporary "access to" and "egress from" work areas, including stairs, runways, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

1.2 USE OF SITE AND FACILITIES

.1 Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Departmental Representative to facilitate work as stated.

.2 Maintain existing services to building as require to facilitate the Work, and provide for personnel and vehicle access.

.3 Where security is reduced by work provide temporary means to maintain security.

.4 Contractor to supply their own sanitary facility. Keep facilities clean.

.5 Closures: protect work temporarily until permanent enclosures are completed.

1.3 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

.1 Execute work with least possible interference or disturbance to site operations, public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

1.4 EXISTING SERVICES

.1 Notify Departmental Representative and utility companies of intended interruption of services and obtain required permission.

.2 Provide for pedestrian and vehicular traffic, if and where necessary.

.3 Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

1.5 SPECIAL REQUIREMENTS

.1 Carry out noise generating Work in accordance with applicable Municipal bylaws.

.2 Ensure Contractor's personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.

.3 Keep within limits of work and avenues of ingress and egress.

.4 Deliver materials during Contract hours as indicated in Section 01 01 50 General Instructions

1.6 SECURITY

.1 Where security has been reduced by Work of Contract, provide temporary means to maintain security.

.2 Security clearances:

.1 Personal security is required for all contractor employees.

.2 A security briefing form is to be completed for each employee.

1.7 BUILDING SMOKING ENVIRONMENT

.1 Comply with smoking restrictions. Smoking is not permitted.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 Purpose

.1 To ensure that the abatement project and the facility operations may proceed without undue disruption or hindrance and that the security of the facility is maintained at all times.

Part 2 Definitions

.1 “Unauthorized smoking and related Items” means all smoking items including, but not limited to, cigarettes, cigars, tobacco, chewing tobacco, cigarette making machines, matches and lighters.

.2 "Commercial Vehicle" means any motor vehicle used for the shipment of material, equipment and tools required for the abatement project.

.3 "Departmental Representative" means Parks Canada Agency representative, or Representative of the facility as applicable.

.4 "Abatement employees" means persons working for the general contractor, the sub-contractors, equipment operators, material suppliers, testing and inspection companies and regulatory agencies.

.5 "Abatement limits" means the area, as indicated in the contract documents, that the contractor will be allowed to work". Limits to be confirmed at abatement start-up meeting.

Part 3 Preliminary Proceedings

.1 At abatement start-up meeting:

.1 Discuss the nature and extent of all activities involved in the Project.

.2 Establish mutually acceptable security procedures in accordance with this instruction and the facility's particular requirements..

.2 The contractors’ responsibilities:

.1 Ensure that all abatement employees are aware of the security requirements.

.2 Ensure that a copy of the security requirements is always prominently on display at the job site.

.3 Co-operate with facility personnel in ensuring that security requirements are observed by all abatement employees.

Part 4 Contractor Employees

.1 Any person employed on the abatement site will be subject to immediate removal from property if they:

.1 Appear to be under the influence of alcohol, drugs or narcotics.

.2 Behave in an unusual or disorderly manner.

Part 5 Parking

.1 Parking will be available where needed or possible at each site.

Part 6 Work Hours

.1 In accordance with applicable Municipal bylaws and regulations.

Part 7 Tools and Equipment

.1 Store all tools and equipment in approved secure locations.

.2 Lock all tool boxes when not in use. Keys to remain in the possession of the employees of the contractor.

Part 8 Contraband

.1 Weapons, ammunition, explosives, alcoholic beverages, drugs and narcotics are prohibited on the work site.

END OF SECTION

Part 1 General

1.1 ADMINISTRATIVE

.1 Project meetings will be scheduled and administered throughout the progress of the work at the call of Departmental Representative.

.2 Meeting minutes will be recorded by the Contractor and distributed by Departmental Representative, if required.

.3 Representative of Contractor, Subcontractor and/or suppliers attending meetings will be qualified and authorized to act on behalf of the party each represents.

1.2 PRECONSTRUCTION MEETING

.1 Departmental Representative will schedule a pre-commencement meeting.

.2 Departmental Representatives and Contractor will be in attendance.

.3 Agenda to include:

- .1 Appointment of official representative of participants in the Work.
- .2 Schedule of Work: in accordance with schedule stipulated in Contract Documents.
- .3 Schedule of submission. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .4 Delivery schedule of specified equipment.
- .5 Site security.
- .6 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
- .7 Monthly progress claims, administrative procedures, photographs, hold backs.
- .8 Insurances, transcript of policies.

1.3 PROGRESS MEETINGS

.1 Progress meetings will be held. Departmental Representative will schedule the meetings and arrange for a meeting location or call-in number.

.2 Contractor involved in Work and Departmental Representative(s) are to be in attendance.

.3 Departmental Representative will chair the meeting, and distribute meeting minutes. Contractor will record the meeting minutes and provide within 5 business days.

.4 Agenda typically to include the following:

- .1 Review, approval of minutes of previous meeting.
- .2 Review of Work progress since previous meeting.
- .3 Field observations, problems, conflicts.
- .4 Problems which impede construction schedule.
- .5 Corrective measures and procedures to regain projected schedule.

.6 Revision to construction schedule.

.7 Progress schedule, during succeeding work period.

.8 Review submittal schedules: expedite as required.

.9 Maintenance of quality standards.

.10 Review proposed changes for effect on construction schedule and on completion date.

.11 Other business.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 ADMINISTRATIVE

.1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.

.2 Do not proceed with Work affected by submittal until review is complete.

.3 Present shop drawings and product data in SI Metric units.

.1 Where items or information is not produced in SI Metric units converted values are acceptable.

.4 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.

.5 Notify Departmental Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

.6 Verify field measurements and affected adjacent Work.

.7 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.

.8 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.

.9 Keep one reviewed copy of each submission on site.

1.2 SHOP DRAWINGS AND PRODUCT DATA

.1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work, where required or requested by Departmental Representative.

.2 Allow 5 days for Departmental Representative's review of each submission.

.3 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.

.4 After Departmental Representative's review, distribute copies.

.5 Submit electronic copies of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.

.6 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings,

through same procedure indicated above, must be performed before installation of Work may proceed.

1.3 PHOTOGRAPHIC DOCUMENTATION

.1 Submit electronic copies of colour digital photography in ".jpg" format, standard resolution as directed by Departmental Representative.

.2 Project identification: name and number of project and date of exposure indicated.

.3 Viewpoints and their location as determined by Departmental Representative.

.4 Frequency of photographic documentation:

.1 Upon completion of Work, and as directed by Departmental Representative.

1.4 CERTIFICATES AND TRANSCRIPTS

.1 Immediately after award of Contract, submit Workers' Compensation Board (WorkSafeBC) status or clearance letter.

.2 Submit transcription of insurance immediately after award of Contract.

Products

1.5 NOT USED

.1 Not Used.

Part 2 Execution

2.1 NOT USED

.1 Not Used.

END OF SECTION

1.1 REFERENCES

.1 Government of Canada.

- .1 Canada Labour Code - Part II.
- .2 Canada Occupational Health and Safety Regulations.

.2 National Building Code of Canada (NBC)

- .1 Part 8, Safety Measures at Construction and Demolition Sites.

.3 The Canadian Electric Code (as amended)

.4 Canadian Standards Association (CSA) as amended

- .1 CSA Z797-2009 Code of Practice for Access Scaffold
- .2 CSA S269.1-1975 (R2003) Falsework for Construction Purposes
- .3 CSA S350-M1980 (R2003) Code of Practice for Safety in Demolition of Structures
- .4 CSA Z1006-10 Management of Work in Confined Spaces.
- .5 CSA Z462- Workplace Electrical Safety Standard

.5 National Fire Code of Canada 2010 (as amended)

- .1 Part 5 – Hazardous Processes and Operations and Division B as applicable and required.

.6 Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149).

.7 Department of Justice Canada (Jus)

- .1 *Transportation of Dangerous Goods Act*, 1992 (TDG Act) [1992], (c. 34).
- .2 Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286)

.8 Health Canada / Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS).

.9 National Research Council Canada Institute for Research in Construction (NRC-IRC).

.10 WorkSafeBC

- .1 Workers Compensation Act
- .2 Occupational Health and Safety Regulation (BC Reg. 296/97, including amendments to date of work)
- .3 “Lead-Containing Paints and Coatings; Preventing Exposure in the Construction Industry”, 2011
- .4 “Safe Work Practices for Handling Lead”, 2017
- .5 “Safe Work Practices for Handling Asbestos”, 2017

.11 The current version of the British Columbia Hazardous Waste Regulation (BC Reg. 63/88).

1.2 RELATED SECTIONS

.1 Section 01 33 00 - Submittal Procedures

.2 Section 01 35 35 – Fire Safety Requirements.

.3 Section 01 35 43 – Environmental Procedures.

.4 Section 01 74 11 - Cleaning.

.5 Section 02 81 01 – Hazardous Materials.

.6 Section 02 82 00.01 – Asbestos Abatement Minimum Precautions.

.7 Section 02 83 10 – Lead Abatement Minimum Precautions

.8 Section 02 83 11 – Lead Abatement Intermediate Precautions

.9 Section 02 83 12 – Lead Abatement Maximum Precautions

1.3 WORKERS' COMPENSATION BOARD COVERAGE

.1 Comply fully with the British Columbia *Workers' Compensation Act*, regulations and orders made pursuant thereto, and any amendments up to the completion of the work.

.2 Maintain Workers' Compensation Board of BC coverage during the term of the Contract, until and including the date that the Certificate of Final Completion is issued.

1.4 COMPLIANCE WITH REGULATIONS

.1 Parks Canada may terminate the Contract without liability to Parks Canada where the Contractor, in the opinion of Parks Canada, refuses to comply with a requirement of the *Workers' Compensation Act* or the Occupational Health and Safety Regulations.

.2 It is the Contractor's responsibility to ensure that all workers are qualified, competent and certified to perform the work as required by the *Workers' Compensation Act* or the Occupational Health and Safety Regulations.

1.5 SUBMITTALS

.1 Submit to Departmental Representative submittals listed for review in accordance with Section 01 33 00.

.2 Work effected by submittal shall not proceed until review is complete.

.3 Submit the following:

.1 Site Specific Health and Safety Plan.

.2 Copies of reports or directions issued by Federal and Provincial health and safety inspectors.

.3 Copies of incident and accident reports.

.4 Complete set of current Material Safety Data Sheets (MSDS), and all other documentation required by Workplace Hazardous Materials Information System (WHMIS) requirements.

.5 Emergency Procedures.

.4 The Departmental Representative will review the Contractor's Site Specific Health and Safety Plan and emergency procedures, and provide comments to the Contractor within 5 days after receipt of the plan. Revise the plan as appropriate and resubmit to Departmental Representative.

.5 Medical surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of work, and submit additional certifications for any new site personnel to Departmental Representative.

.6 Submission of the Site Specific Health and Safety Plan, and any revised version, to the Departmental Representative is for information and reference purposes only. It shall not:

.1 Be construed to imply approval by the Departmental Representative.

.2 Be interpreted as a warranty of being complete, accurate and legislatively compliant.

.3 Relieve the Contractor of his legal obligations for the provision of health and safety on the project.

1.6 RESPONSIBILITY

.1 Assume responsibility as the Prime Contractor for work under this contract.

.2 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.

.3 Comply with and enforce compliance by employees with safety requirements of Contract documents, applicable Federal, Provincial, Territorial and local statutes, regulations, and ordinances, and with Site Specific Health and Safety Plan.

1.7 HEALTH AND SAFETY COORDINATOR

.1 The Health and Safety Coordinator will:

.1 Be responsible for completing all health and safety training and ensuring that personnel that do not successfully complete the required training are not permitted to enter the site to perform work.

.2 Be responsible for implementing, revising, daily enforcing, and monitoring the Site Specific Health and Safety Plan.

.3 Be on site during execution of work.

1.8 GENERAL CONDITIONS

.1 Provide safety barricades and lights around work site as required to provide a safe working environment for workers and protection for pedestrian and vehicular traffic.

.2 Ensure that non-authorized persons are not allowed to circulate in designated construction areas of the work site.

.1 Provide appropriate means by use of barricades, fences, warning signs, traffic control personnel, and temporary lighting as required.

.2 Secure site at night time as deemed necessary to protect site against entry.

1.9 PROJECT/SITE CONDITIONS

.1 Work at site will involve contact with:

.1 Federal employees and general public.

1.10 UTILITY CLEARANCES

.1 The Contractor is solely responsible for all utility detection and clearances prior to starting the work, where ground disturbance is required.

.2 The Contractor will not rely solely upon the Reference Drawings or other information provided for utility locations.

1.11 REGULATORY REQUIREMENTS

.1 Comply with specified codes, acts, bylaws, standards and regulations to ensure safe operations at site.

.2 In event of conflict between any provision of the above authorities, the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, the Departmental Representative will advise on the course of action to be followed.

1.12 WORK PERMITS

.1 Obtain specialty permit[s] related to project before start of work.

1.13 FILING OF NOTICE

.1 The General Contractor is to complete and submit a Notice of Project as required by Provincial authorities.

.2 Provide copies of all notices to the Departmental Representative.

1.14 HEALTH AND SAFETY PLAN

.1 Conduct a site-specific hazard assessment based on review of Contract documents, required work, and project site. Identify any known and potential health risks and safety hazards.

.2 Prepare and comply with a site-specific project Health and Safety Plan based on hazard assessment, including, but not limited to, the following:

.1 Primary requirements:

.1 Contractor's safety policy.

.2 Identification of applicable compliance obligations.

.3 Definition of responsibilities for project safety/organization chart for project.

.4 General safety rules for project.

.5 Job-specific safe work procedures.

.6 Inspection policy and procedures.

.7 Incident reporting and investigation policy and procedures.

.8 Occupational Health and Safety Committee/Representative procedures.

.9 Occupational Health and Safety meetings.

.10 Occupational Health and Safety communications and record keeping procedures.

.2 Summary of health risks and safety hazards resulting from analysis of hazard assessment, with respect to site tasks and operations which must be performed as part of the work.

.3 List hazardous materials to be brought on site as required by work.

.4 Indicate Engineering and administrative control measures to be implemented at the site for managing identified risks and hazards.

.5 Identify personal protective equipment (PPE) to be used by workers.

.6 Identify personnel and alternates responsible for site safety and health.

.7 Identify personnel training requirements and training plan, including site orientation for new workers.

.3 Develop the plan in collaboration with all subcontractors. Ensure that work/activities of subcontractors are included in the hazard assessment and are reflected in the plan.

.4 Revise and update Health and Safety Plan as required, and re-submit to the Departmental Representative.

.5 Departmental Representative's review: the review of Site Specific Health and Safety Plan shall not relieve the Contractor of responsibility for errors or omissions in final Site Specific Health and Safety Plan or of responsibility for meeting all requirements of construction and Contract documents.

1.15 EMERGENCY PROCEDURES

.1 List standard operating procedures and measures to be taken in emergency situations. Include an evacuation plan and emergency contacts (i.e. names/telephone numbers) of:

.1 Designated personnel from own company.

.2 Regulatory agencies applicable to work and as per legislated regulations.

.3 Local emergency resources.

.4 Departmental Representative [site staff].

.2 Include the following provisions in the emergency procedures:

.1 Notify workers and the first-aid attendant, of the nature and location of the emergency.

.2 Evacuate all workers safely.

.3 Check and confirm the safe evacuation of all workers.

.4 Notify the fire department or other emergency responders.

.5 Notify adjacent workplaces or residences which may be affected if the risk extends beyond the workplace.

.6 Notify Departmental Representative [site staff].

.3 Provide written rescue/evacuation procedures as required for, but not limited to:

.1 Work at high angles.

.2 Work in confined spaces or where there is a risk of entrapment.

.3 Work with hazardous substances.

.4 Underground work.

.5 Work on, over, under and adjacent to water.

.6 Workplaces where there are persons who require physical assistance to be moved.

.4 Design and mark emergency exit routes to provide quick and unimpeded exit.

1.16 HAZARDOUS PRODUCTS

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage and disposal of hazardous materials, and regarding labelling and provision of Material Safety Data Sheets (MSDS) acceptable to the Departmental Representative and in accordance with the Canada Labour Code.

.2 Where use of hazardous and toxic products cannot be avoided:

.1 Advise Departmental Representative beforehand of the product(s) intended for use. Submit applicable MSDS and WHMIS documents as per Section 01 33 00.

.2 In conjunction with Departmental Representative, schedule to carry out work during "off hours" when tenants have left the building.

.3 Provide adequate means of ventilation in accordance with Manufacturers recommendations and WorkSafeBC regulations.

.4 The contractor shall ensure that the product is applied as per manufacturers recommendations.

.5 The contractor shall ensure that only pre-approved products are brought onto the work site in an adequate quantity to complete the work.

1.17 ASBESTOS HAZARD

.1 Carry out any activities involving asbestos in accordance with applicable Provincial and Federal Regulations, Acts, and Guidelines.

.2 Removal and handling of asbestos will be in accordance with applicable Provincial and Federal Regulations, Acts, and Guidelines.

.3 Acceptable guidelines for managing work with Asbestos in a Federal environment have been referenced in the following specifications.

.1 Section 02 82 00.01 – Asbestos Abatement Minimum Precautions.

1.18 PCB REMOVALS

.1 Not anticipated to be required as part of the Work

1.19 REMOVAL OF LEAD-CONTAINING PAINTS

.1 Carry out any activities involving lead-containing paints in accordance with applicable Provincial and Federal Regulations, Acts, and Guidelines.

.2 Removal and handling of lead-containing paints will be in accordance with applicable Provincial and Federal Regulations, Acts, and Guidelines.

.3 Acceptable guidelines for managing work with lead-containing paints in a Federal environment have been referenced in the following specifications.

.1 Section 02 83 10 – Lead Abatement Minimum Precautions.

.2 Section 02 83 11 – Lead Abatement Intermediate Precautions.

.3 Section 02 83 12 – Lead Abatement Maximum Precautions.

1.20 ELECTRICAL SAFETY REQUIREMENTS

.1 Comply with authorities and ensure that, when installing new facilities or modifying existing facilities, all electrical personnel are completely familiar with existing and new electrical circuits and equipment and their operation.

.1 Before undertaking any work, coordinate required energizing and de-energizing of new and existing circuits with Departmental Representative.

.2 Maintain electrical safety procedures and take necessary precautions to ensure safety of all personnel working under this Contract, as well as safety of other personnel on site.

1.21 ELECTRICAL LOCKOUT

.1 Develop, implement and enforce use of established procedures to provide electrical lockout and to ensure the health and safety of workers for every event where work must be done on any electrical circuit or facility.

.2 Prepare the lockout procedures in writing, listing step-by-step processes to be followed by workers, including how to prepare and issue the request/authorization form. Have procedures available for review upon request by the Departmental Representative.

.3 Keep the documents and lockout tags at the site and list in a log book for the full duration of the Contract. Upon request, make such data available for viewing by Departmental Representative or by any authorized safety representative.

1.22 OVERLOADING

.1 Ensure no part of work is subjected to a load which will endanger its safety or will cause permanent deformation.

1.23 FALSEWORK

.1 Design and construct falsework in accordance with CSA S269.1- 1975 (R2003).

1.24 SCAFFOLDING

.1 Design, construct and maintain scaffolding in a rigid, secure and safe manner, in accordance with CSA Z797-2009 and BC Occupational Health and Safety Regulations.

1.25 CONFINED SPACES

.1 Carry out work in confined spaces in compliance with Provincial Regulations, Acts, and Guidelines.

1.26 POWDER-ACTUATED DEVICES

.1 Not required.

1.27 FIRE SAFETY AND HOT WORK

.1 Refer to Section 01 35 35 – Fire Safety Requirements.

.2 Obtain Departmental Representative's authorization before any welding, cutting or any other hot work operations can be carried out on site.

.3 Hot work includes cutting/melting with use of torch, flame heating roofing kettles, or other open flame devices and grinding with equipment which produces sparks.

1.28 FIRE SAFETY REQUIREMENTS

.1 Refer to Section 01 35 35 – Fire Safety Requirements.

.2 Store oily/paint-soaked rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.

.3 Handle, store, use and dispose of flammable and combustible materials in accordance with the National Fire Code of Canada.

.4 Portable gas and diesel fuel tanks are not permitted on most federal work sites. Approval from the Departmental Representative is required prior to any gas or diesel tank being brought onto the work site.

1.29 FIRE PROTECTION AND ALARM SYSTEM

.1 Refer to Section 01 35 35 – Fire Safety Requirements.

.2 Fire protection and alarm systems shall not be:

.1 Obstructed.
.2 Shut off.
.3 Left inactive at the end of a working day or shift.

.3 Do not use fire hydrants, standpipes and hose systems for purposes other than firefighting.

.4 Be responsible/liable for costs incurred from the fire department, the building owner and the tenants, resulting from false alarms.

1.30 UNFORESEEN HAZARDS

.1 Should any unforeseen or peculiar safety-related factor, hazard or condition become evident during performance of the work, immediately stop work and advise the Departmental Representative verbally and in writing.

1.31 POSTED DOCUMENTS

.1 Post legible versions of the following documents on site:

.1 Site Specific Health and Safety Plan.

.2 Sequence of work.

.3 Emergency procedures.

.4 Site drawing showing project layout, locations of the first-aid station, evacuation route and marshalling station, and the emergency transportation provisions.

.5 Notice of Project.

.6 Floor plans or site plans.

.7 Notice as to where a copy of the *Workers' Compensation Act* and Regulations are available on the work site for review by employees and workers.

.8 Workplace Hazardous Materials Information System (WHMIS) documents.

.9 Material Safety Data Sheets (MSDS).

.10 List of names of Joint Health and Safety Committee members, or Health and Safety Representative, as applicable.

.2 Post all Material Safety Data Sheets (MSDS) on site, in a common area, visible to all workers and in locations accessible to tenants when work of this Contract includes construction activities adjacent to occupied areas.

.3 Postings should be protected from the weather, and visible from the street or the exterior of the principal construction site shelter provided for workers and equipment, or as approved by the Departmental Representative.

1.32 MEETINGS

.1 Attend health and safety pre-construction meeting and all subsequent meetings called by the Department Representative.

1.33 CORRECTION OF NON-COMPLIANCE

.1 Immediately address health and safety non-compliance issues identified by the Departmental Representative.

.2 Provide Departmental Representative with written report of action taken to correct non-compliance with health and safety issues identified.

.3 The Departmental Representative may issue a "stop work order" if non-compliance of health and safety regulations is not corrected immediately or within posted time. The General Contractor/subcontractors will be responsible for any costs arising from such a "stop work order".

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 FIRE DEPARTMENT BRIEFING

.1 Departmental Representative will co-ordinate arrangements for contractor for briefing on Fire Safety, including site specific “Do’s and Don’ts” in accordance with applicable Municipal standards, before work is commenced.

1.2 REPORTING FIRES

.1 Know location of nearest fire alarm box and telephone, including emergency phone number:

.1 911 for Georgina Point and East Point

.2 Jasper Dispatch 1-877-852-3100 for Portlock Point and Russell Island.

.2 Immediately report fire incidents to the local Fire Department.

.3 Person calling in the fire alarm box will remain at entrance to direct Fire Department to scene of fire.

.4 When reporting fire by telephone, give location of fire, address or number of building and be prepared to verify location.

1.3 INTERIOR AND EXTERIOR FIRE PROTECTION AND ALARM SYSTEMS

.1 Fire hydrants, standpipes and hose systems will not be used for other than fire-fighting purposes unless authorized by Departmental Representative.

1.4 FIRE EXTINGUISHERS

.1 Supply fire extinguishers necessary to protect work in progress and contractor's physical plant on site.

1.5 BLOCKAGE OF ROADWAYS

.1 Advise Departmental Representative of work that would impede fire apparatus response. This includes erecting of barricades and digging of trenches.

1.6 SMOKING PRECAUTIONS

.1 No smoking is permitted on-site.

1.7 RUBBISH AND WASTE MATERIALS

.1 Keep rubbish and waste materials at minimum quantities.

.2 Burning of rubbish is prohibited.

.3 Remove rubbish from work site at end of work day or shift or as directed.

.4 Storage:

.1 Store waste in approved receptacles to ensure maximum cleanliness and safety.

.2 Store waste in appropriate containers and/or using appropriate means to protect from wind such that distribution of waste by wind does not occur.

.3 Deposit greasy or oily rags and materials subject to spontaneous combustion in approved receptacles and remove specified.

1.8 FLAMMABLE AND COMBUSTIBLE LIQUIDS

.1 Handling, storage and use of flammable and combustible liquids governed by current National Fire Code of Canada.

.2 Keep flammable and combustible liquids such as gasoline, kerosene and naphtha for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing Underwriters' Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes requires permission of Departmental Representative.

.3 Transfer of flammable and combustible liquids is prohibited within buildings.

.4 Transfer of flammable and combustible liquids will not be carried out in vicinity of open flames or any type of heat-producing devices.

.5 Do not use flammable liquids having flash point below 38 degrees C such as naphtha or gasoline as solvents or cleaning agents.

.6 Store flammable and combustible waste liquids, for disposal, in approved containers located in safe ventilated area. Keep quantities minimum and Agassiz Fire Department is to be notified when disposal is required.

1.9 HAZARDOUS SUBSTANCES

.1 If the Work involves the use of toxic or hazardous materials, chemicals and/or explosives, or otherwise creating hazard to life, safety or health, Work shall be conducted in accordance with National Fire Code of Canada.

.2 When Work is carried out in dangerous or hazardous areas involving use of heat, provide fire watchers equipped with sufficient fire extinguishers. Determination of dangerous or hazardous areas along with level of protection necessary for Fire Watch is at discretion of Departmental Representative. Contractors are responsible for providing fire watch service for work on scale established and in conjunction with Departmental Representative (or alternate) at pre-work conference.

.3 Provide ventilation where flammable liquids, such as lacquers or urethanes are used, eliminate sources of ignition.

1.10 QUESTIONS AND/OR CLARIFICATION

.1 Direct questions or clarification on Fire Safety in addition to above requirements to Departmental Representative.

1.11 FIRE INSPECTION

.1 Co-ordinate site inspections through Departmental Representative.

.2 Allow Departmental Representative unrestricted access to work site.

.3 Co-operate with Departmental Representative during routine fire safety inspection of work site.

.4 Immediately remedy unsafe fire situations observed by Departmental Representative (or alternate).

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 Definitions:

.1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.

.2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Prior to commencing construction activities or delivery of materials to site, provide Environmental Protection Plan for review and approval by Departmental Representative.

.3 Ensure Environmental Protection Plan includes comprehensive overview of known or potential environmental issues to be addressed during construction.

.4 Address topics at level of detail commensurate with environmental issue and required abatement task[s].

.5 Include in Environmental Protection Plan:

.1 Name[s] of person[s] responsible for ensuring adherence to Environmental Protection Plan.

.2 Name[s] and qualifications of person[s] responsible for manifesting hazardous waste to be removed from site.

.3 Name[s] and qualifications of person[s] responsible for training site personnel.

.4 Descriptions of environmental protection personnel training program.

.5 Traffic Control Plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather. Ensure plans include measures to minimize amount of mud transported onto paved public roads by vehicles or runoff.

.6 Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use. Ensure plan includes measures for marking limits of use areas and methods for protection of features to be preserved within authorized work areas.

.7 Spill Control Plan including procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.

.8 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.

.9 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, are contained on project site.

.10 Contaminant Prevention Plan identifying potentially hazardous substances to be used on job site; intended actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.

.11 Waste Water Management Plan identifying methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete curing water, clean-up water, dewatering of ground water, disinfection water, hydrostatic test water, and water used in flushing of lines.

1.3 FIRES

.1 Fires and burning of rubbish on site not permitted.

1.4 DRAINAGE

.1 Ensure pumped water into waterways, sewer or drainage systems is free of suspended materials.

.2 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

1.5 POLLUTION CONTROL

.1 Maintain temporary erosion and pollution control features installed at the Site.

.2 Control emissions from equipment and plant to local authorities' emission requirements.

.3 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area.

.1 Provide temporary enclosures where required.

.4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1.6 NOTIFICATION

.1 Departmental Representative will notify Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.

.2 Contractor: after receipt of such notice, inform Departmental Representative of proposed corrective action and take such action for approval by Departmental Representative.

.1 Do not take action until after receipt of written approval by Departmental Representative.

.3 Departmental Representative will issue stop order of work until satisfactory corrective action has been taken.

.4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 CLEANING

.1 Clean in accordance with Section 01 74 11 - Cleaning.

.2 Waste Management: dispose of waste in accordance with Section 02 81 01 – Hazardous Materials.

.3 Rubbish and waste materials are not to be buried on site

.4 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.

END OF SECTION

Part 1 General

1.1 REFERENCES AND CODES

.1 Perform Work in accordance with codes of Federal, Provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.

.2 Meet or exceed requirements of:

.1 Contract documents.

.2 Specified standards, codes and referenced documents.

.3 Comply with all approvals and permits that apply to the Work.

.4 Contractor shall ensure compliance on its part and on the part of all its Subcontractors with the British Columbia Occupational Health and Safety Regulation thereunder.

.5 All other British Columbia Laws and Regulations shall apply as appropriate and the Contractor shall comply with the requirements thereof as though they had been specifically named in these specifications.

.6 Codes, Standards and Regulations are specified in other sections of the specifications and the Work shall be done in accordance with those Codes, Standards and Regulations where applicable.

1.2 HAZARDOUS MATERIAL DISCOVERY

.1 Asbestos: Notify Departmental Representative if additional, previously un-identified suspected ACM is identified and require disturbance and/or removal during the Work. Leave undisturbed (as much as possible) until Departmental Representative provides instructions.

.2 Lead: Removal of lead-containing paint is one of the prime purposes of this Contract. Notify Departmental Representative if additional, previously un-identified suspected lead-containing materials or lead-containing paints are identified and require disturbance and/or removal during the Work. Leave undisturbed (as much as possible) until Departmental Representative provides instructions.

.3 Other Hazardous Materials: Notify Departmental Representative if additional, previously un-identified hazardous materials are identified and require disturbance and/or removal during the Work. Leave undisturbed (as much as possible) until Departmental Representative provides instructions.

1.3 BUILDING SMOKING ENVIRONMENT

.1 Comply with smoking restrictions and Municipal by-laws and the provisions of the Contract Documents.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 INSTALLATION AND REMOVAL

.1 Provide temporary utilities controls in order to execute work expeditiously.

.2 Remove from site all such work after use.

1.2 DEWATERING

.1 Provide temporary drainage and pumping facilities to keep excavations and site free from standing water.

1.3 WATER SUPPLY

.1 Contractor will provide continuous supply of potable water for own use.

.2 If required, arrange for connection with appropriate utility company and pay costs for installation, maintenance and removal.

1.4 TEMPORARY HEATING AND VENTILATION

.1 If required, provide temporary heating, as required during construction period, including attendance, maintenance and fuel.

.2 Construction heaters used inside building must be vented to outside or be non-flameless type. Solid fuel salamanders are not permitted.

.3 Provide temporary heat and ventilation in enclosed areas as required to:

- .1 Facilitate progress of Work.
- .2 Protect Work and products against dampness and cold.
- .3 Prevent moisture condensation on surfaces.
- .4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
- .5 Provide adequate ventilation to meet health regulations for safe working environment.

.4 Ventilating:

- .1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during work.
- .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
- .3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
- .4 Ventilate storage spaces containing hazardous or volatile materials.
- .5 Ventilate temporary sanitary facilities.
- .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.

1.5 TEMPORARY POWER AND LIGHT

.1 Provide and maintain temporary lighting throughout project, where required and in accordance with applicable Health and Safety standards.

1.6 TEMPORARY COMMUNICATION FACILITIES

.1 Provide and pay for temporary telephone and data hook up (and associated lines) necessary for own use, if required.

1.7 FIRE PROTECTION

.1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.

.2 Burning rubbish and construction waste materials is not permitted on site.

Part 2 Products

2.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 INSTALLATION AND REMOVAL

.1 Provide temporary controls in order to execute Work expeditiously.

.2 Remove from site all such work after use.

1.2 GUARD RAILS AND BARRICADES

.1 Provide secure, rigid guard rails and barricades around deep excavations, open shafts, open stair wells, open edges of floors and roofs as necessary

.2 Provide as required by governing authorities.

1.3 DUST TIGHT SCREENS

.1 Provide dust tight screens or partitions to localize dust generating activities, and for protection of workers and public, as required.

.2 Maintain and relocate protection until such work is complete.

1.4 ACCESS TO SITE

.1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.

1.5 FIRE ROUTES

.1 Maintain access to property including overhead clearances for use by emergency response vehicles.

1.6 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

.1 Protect surrounding private and public property from damage during performance of Work.

.2 Be responsible for damage incurred.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 PROJECT CLEANLINESS

.1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Departmental Representative or other Contractors.

.2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.

.3 Clear snow and ice from access to buildings, if necessary.

.4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.5 Provide on-site containers for collection of waste materials and debris.

.6 Provide and use marked separate bins for recycling.

.7 Dispose of waste materials and debris off site.

.8 Store volatile waste in covered metal containers, and remove from premises at end of each working day.

.9 In general, store materials and/or waste in appropriate containers and/or using appropriate means to protect from wind such that distribution of materials and/or waste by wind does not occur.

.10 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

.11 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

1.2 FINAL CLEANING

.1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.

.2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.

.3 Prior to final review remove surplus products, tools, construction machinery and equipment.

.4 Remove all waste products and debris.

.5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.

.6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.7 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.

.8 Clean and sweep areaways and sunken wells.

.9 Sweep and wash clean paved areas.

1.3 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials in accordance with Section 02 81 01 – Hazardous Materials

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 ADMINISTRATIVE REQUIREMENTS

.1 Acceptance of Work Procedures:

.1 Contractor's Inspection: Contractor to conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.

.1 Notify Departmental Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.

.2 Request Departmental Representative inspection.

.2 Departmental Representative Inspection:

.1 Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.

.2 Contractor to correct Work as directed.

.3 Completion Tasks: submit written certificates that tasks have been performed as follows:

.1 Work: completed and inspected for compliance with Contract Documents.

.2 Defects: corrected and deficiencies completed.

.3 Work: complete and ready for final inspection.

.4 Final Inspection:

.1 When completion tasks are done, request final inspection of Work by Departmental Representative.

.2 When Work incomplete according to Departmental Representative, complete outstanding items and request re-inspection, at no additional cost to the Contract.

.5 Final Payment:

.1 When Departmental Representative considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.

1.2 FINAL CLEANING

.1 Clean in accordance with Section 01 74 11 - Cleaning.

.1 Remove surplus materials, excess materials, rubbish, tools and equipment.

.2 Waste Management: dispose of waste materials in accordance with Section 02 81 01 – Hazardous Materials

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 01 33 00 - Submittal Procedures

.2 Section 01 35 33 - Health and Safety Requirements

.3 Section 01 35 43 - Environmental Procedures

.4 Section 01 74 11 - Cleaning

1.2 REFERENCES

.1 Report (collectively referred to herein as the "Assessment Report")

.1 Stantec Consulting Ltd. Report for Project No. 123220964 entitled "Metal Based Paint Remedial Action Plan - Parks Canada Buildings and Structures at Georgina Point (Active Pass) Lightstation, East Point (Saturna Island) Lightstation; Portlock Point Lightstation and Russell Island" dated January 19, 2018, prepared for Parks Canada Agency.

.2 Definitions:

.1 Dangerous Goods: product, substance, or organism specifically listed or meets hazard criteria established in Transportation of Dangerous Goods Regulations.

.2 Hazardous Material: product, substance, or organism used for its original purpose; and is either dangerous goods or material that will cause adverse impact to environment or adversely affect health of persons, animals, or plant life when released into the environment.

.3 Hazardous Waste: hazardous material no longer used for its original purpose and that is intended for recycling, treatment or disposal.

.4 Hazardous Building Material: component of a building or structure that will cause adverse impact to environment or adversely affect health of persons, animals, or plant life when altered, disturbed or removed during maintenance, renovation or demolition.

.3 Reference Standards:

.1 Canadian Environmental Protection Act,1999 (CEPA 1999)

.1 Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149).

.2 Government of Canada.

.1 Canada Labour Code - Part II.

.2 Canada Occupational Health and Safety Regulations.

.3 Department of Justice Canada (Jus)

.1 Transportation of Dangerous Goods Act, 1992 (TDG Act) [1992], (c. 34).

.2 Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286).

.4 Health Canada / Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.5 National Research Council Canada Institute for Research in Construction (NRC-IRC).

.1 National Fire Code of Canada-(2010).

.6 WorkSafeBC

.1 British Columbia's Occupational Health and Safety Regulation (BC Reg. 296/97, including amendments to date of work)

.2 "Lead-Containing Paints and Coatings; Preventing Exposure in the Construction Industry", 2011

.3 "Safe Work Practices for Handling Lead"

.7 The current version of the British Columbia Hazardous Waste Regulation (BC Reg. 63/88)

.8 The Federal Transportation of Dangerous Goods Regulation

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Submit manufacturer's instructions, printed product literature and data sheets for hazardous materials and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Submit two copies of WHMIS MSDS in accordance with Sections 01 35 33 – Health and Safety Requirements and 01 35 43 – Environmental Procedures to Departmental Representative for each hazardous material required prior to bringing hazardous material on site.

.3 Submit environmental management plan to Departmental Representative that identifies hazardous materials, usage, location, personal protective equipment requirements, and disposal arrangements.

.4 Low-Emitting Materials: submit listing of adhesives and sealants used in building, comply with VOC and chemical component limits or restrictions requirements.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Transport hazardous materials and wastes in accordance with Transportation of Dangerous Goods Act, Transportation of Dangerous Goods Regulations, and applicable provincial regulations.

.4 Storage and Handling Requirements:

.1 Co-ordinate storage of hazardous materials with Departmental Representative and abide by internal requirements for labelling and storage of materials and wastes.

.2 Store and handle hazardous materials and wastes in accordance with applicable Federal and Provincial laws, regulations, codes, and guidelines.

.3 Store and handle flammable and combustible materials in accordance with National Fire Code of Canada requirements.

.4 Keep no more than 45 litres of flammable and combustible liquids such as gasoline, kerosene and naphtha for ready use.

.1 Store flammable and combustible liquids in approved safety cans bearing the Underwriters' Laboratory of Canada or Factory Mutual seal of approval.

.2 Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes requires the written approval of the Departmental Representative.

.5 Transfer of flammable and combustible liquids is prohibited within buildings.

.6 Transfer flammable and combustible liquids away from open flames or heat-producing devices.

.7 Solvents or cleaning agents must be non-flammable or have flash point above 38 degrees C.

.8 Store flammable and combustible waste liquids for disposal in approved containers located in safe, ventilated area. Keep quantities to minimum.

.9 Observe smoking regulations, smoking is prohibited in areas where hazardous materials are stored, used, or handled.

.10 Storage requirements for quantities of hazardous materials and wastes in excess of 5 kg for solids, and 5 litres for liquids:

.1 Store hazardous materials and wastes in closed and sealed containers.

.2 Label containers of hazardous materials and wastes in accordance with WHMIS.

.3 Store hazardous materials and wastes in containers compatible with that material or waste.

.4 Segregate incompatible materials and wastes.

.5 Ensure that different hazardous materials or hazardous wastes are stored in separate containers.

.6 Store hazardous materials and wastes in secure storage area with controlled access.

.7 Maintain clear egress from storage area.

.8 Store hazardous materials and wastes in location that will prevent them from spilling into environment.

.9 Have appropriate emergency spill response equipment available near storage area, including personal protective equipment.

.10 Maintain inventory of hazardous materials and wastes, including product name, quantity, and date when storage began.

.11 When hazardous waste is generated on site:

.1 Co-ordinate transportation and disposal with Departmental Representative and site staff.

.2 Comply with applicable Federal, Provincial and Municipal laws and regulations for generators of hazardous waste.

.3 Use licensed carrier authorized by Provincial authorities to accept subject material.

.4 Before shipping material obtain written notice from intended hazardous waste treatment or disposal facility it will accept material and it is licensed to accept this material.

.5 Label containers with legible, visible safety marks as prescribed by Federal and Provincial regulations.

.6 Only trained personnel handle, offer for transport, or transport dangerous goods.

.7 Provide photocopy of shipping documents and waste manifests to Departmental Representative.

.8 Track receipt of completed manifest from consignee after shipping dangerous goods. Provide photocopy of completed manifest to Departmental Representative.

.9 Report discharge, emission, or escape of hazardous materials immediately to Departmental Representative and appropriate Provincial authority. Take reasonable measures to control release.

.12 Ensure personnel have been trained in accordance with Workplace Hazardous Materials Information System (WHMIS) requirements.

.13 Report spills or accidents immediately to Departmental Representative. Submit a written spill report to Departmental Representative within 24 hours of incident.

Part 2 Products

2.1 MATERIALS

.1 Description:

.1 Bring on site only quantities hazardous material required to perform Work.

.2 Maintain MSDS in proximity to where materials are being used. Communicate this location to personnel who may have contact with hazardous materials.

Part 3 Execution

3.1 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning. Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

.3 Waste Management: dispose of waste materials in accordance with the regulations and guidelines as outlined in this Section.

.1 Dispose of hazardous waste materials in accordance with applicable Federal and Provincial acts, regulations, and guidelines.

.2 Recycle hazardous wastes for which there is approved, cost effective recycling process available.

.3 Send hazardous wastes to authorized hazardous waste disposal or treatment facilities.

.4 Burning, diluting, or mixing hazardous wastes for purpose of disposal is prohibited.

.5 Disposal of hazardous materials in waterways, storm or sanitary sewers, or in Municipal solid waste landfills is prohibited.

.6 Dispose of hazardous wastes in timely fashion in accordance with applicable Federal and Provincial regulations.

.7 Minimize generation of hazardous waste to maximum extent practicable. Take necessary precautions to avoid mixing clean and contaminated wastes.

.8 Identify and evaluate recycling and reclamation options as alternatives to land disposal, such as:

.1 Hazardous wastes recycled in manner constituting disposal.

.2 Hazardous waste burned for energy recovery.

.3 Lead-acid battery recycling.

.4 Hazardous wastes with economically recoverable precious metals.

END OF SECTION

Part 1 General

1.1 SUMMARY

.1 Refer to the following report, attached in the Appendix of the Project Specifications, for information pertaining to lead-containing paints (LCPs) that have been identified and remediation as part of the Work:

.1 Stantec Consulting Ltd. Report for Project No. 123220964 entitled "Metal Based Paint Remedial Action Plan - Parks Canada Buildings and Structures at Georgina Point (Active Pass) Lightstation, East Point (Saturna Island) Lightstation; Portlock Point Lightstation and Russell Island" dated January 19, 2018, prepared for Parks Canada Agency (further referred to herein as "the RAP").

.2 Actions that will disturb lead-containing materials (including paints and materials coated with LCPs) are to be conducted in such a manner to keep airborne exposure to lead dust to less than the Canada Labour Code and British Columbia's Occupational Health and Safety Regulation 8-hour Occupational Exposure Limit (OEL) for lead of 0.05 milligram per cubic metre (mg/m^3).

.3 The work tasks required and the ways in which lead-containing materials (including LCPs) will be impacted will determine the appropriate respirators, measures and procedures that should be followed to protect workers from lead exposure. This is to be determined by the Contractor through their own Risk Assessment.

.4 Contractor is responsible for reviewing plans, specifications and reports such that they understand the locations and amounts of LCPs that will be impacted by the Work of this contract, and such that appropriate plans and budgets can be included in their overall bids to address those items, as necessary.

.5 Unless otherwise determined through risk assessment conducted by the Contractor's qualified person, comply with requirements of this Section when performing work that will tasks considered under Moderate Risk and Moderate-High Risk as outlined in the WorkSafeBC 2017 publication "Safe Work Practices for Handling Lead", and including, but not limited to the following:

.1 Removing LCPs with a chemical gel or paste by hand.
.2 Removing LCPs with a heat-gun.
.3 Scraping or sanding LCPs using non-powered hand tools (large projects).
.4 Manually demolishing walls or building components with LCPs when using a sledgehammer or similar tool.
.5 Removing LCPs using power tools without an effective dust collection system equipped with a HEPA filter.
.6 Removing LCPs using a high-pressure waterjet.

1.2 SECTION INCLUDES

.1 Requirements, applicable procedures and personal protective equipment to be utilized during activities that will disturb LCPs as outlined herein.

1.3 REFERENCES

.1 Canadian Environmental Protection Act,1999 (CEPA 1999)

.1 Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149).

.2 Department of Justice Canada

.1 Transportation of Dangerous Goods Act, 1992 (TDG Act) [1992], (c. 34).

.2 Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286).

.3 Health Canada / Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.4 National Research Council Canada Institute for Research in Construction (NRC-IRC)

.1 National Fire Code of Canada (2015).

.2 WorkSafe BC

.1 British Columbia's Occupational Health and Safety Regulation (BC Reg. 296/97, including amendments to date of work)

.2 "Safe Work Practices for Handling Asbestos" (2017)

.3 "Lead-Containing Paints and Coatings; Preventing Exposure in the Construction Industry" (2011)

.4 "Safe Work Practices for Handling Lead" (2017)

.5 Government of Canada

.1 The Canada Labour Code, Part II, Canada Occupational Health and Safety Regulations.

.6 British Columbia Ministry of Environment

.1 British Columbia Hazardous Waste Regulation (BC Reg. 63/88), including amendments up to the date of the work.

1.4 DEFINITIONS

.1 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with filter system capable of collecting and retaining fibres greater than 0.3 microns in any direction at 99.97% efficiency.

.2 Authorized Visitors: Parks Canada Representative and representatives of regulatory agencies.

.3 Occupied Area: areas of building or work site that is outside Work Area.

.4 Polyethylene: polyethylene sheeting or rip-proof polyethylene sheeting with tape along edges, around penetrating objects over cuts and tears, and elsewhere as required to provide protection and isolation. For protection of underlying surfaces from damage and to prevent lead dust entering in clean area.

.5 Sprayer: garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Must be appropriate capacity for scope of work.

.6 Airlock: ingress or egress system, without permitting air movement between contaminated area and uncontaminated area. Consisting of two curtained doorways at least 2 m apart.

.7 Curtained doorway: arrangement of closures to allow ingress and egress from one room to another. Typically constructed as follows:

.1 Place two overlapping polyethylene sheets over existing or temporarily framed doorway, securing each along top of doorway, securing vertical edge of one sheet along one vertical side of doorway, and secure other sheet along opposite vertical side of doorway.

.2 Reinforce free edges of polyethylene with duct tape and add weight to bottom edge to ensure proper closing.

.3 Overlap each polyethylene sheet at openings 1.5 m on each side.

.8 Action level: British Columbia's Occupational Health and Safety Regulation 8-hour Occupational Exposure Limit (OEL) for lead is 0.05 mg/m^3, Action level is to be set at 50% of the OEL, or 0.025 mg/m^3 for lead. If workers are expected to be exposed to lead in excess of the action level, appropriate controls (work procedures, personal protective equipment) are to be implemented in accordance with applicable Provincial and Federal Occupational Health and Safety Regulations.

.9 Competent person: Department Representative and Contractor personnel capable of identifying existing lead hazards in workplace taking corrective measures to eliminate them.

.10 Lead in Dust: wipe sampling on vertical and/or horizontal surfaces, dust and debris is considered to be lead contaminated if it contains more than 40 micrograms of lead in dust per square foot.

1.5 SUBMITTALS

.1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit proof of Contractor's General and Environmental Liability Insurance.

.3 Where lead waste will be disposed of via landfill, submit proof satisfactory to Department Representative that suitable arrangements have been made to dispose of lead containing waste in accordance with requirements of authority having jurisdiction.

.4 Submit Provincial and/or local requirements for Notice of Project Form.

.5 Where lead waste will be transported from site, submit to Department Representative necessary permits for transportation and disposal of lead waste and proof that lead waste has been received and properly disposed.

.6 Where work will require specific disturbance to lead and LCPs, submit proof satisfactory to Department Representative that employees have respirator fitting and testing. Workers must be fit tested for a respirator that is personally issued.

1.6 QUALITY ASSURANCE

.1 Regulatory Requirements: comply with Federal, Provincial and local requirements pertaining to lead, provided that in case of conflict among these requirements or with these

specifications, more stringent requirement applies. Comply with regulations in effect at time Work is performed.

.2 Health and Safety:

.1 Perform construction occupational health and safety in accordance with Section 01 35 23 - Health and Safety Requirements.

.2 Safety Requirements: worker protection.

.1 Protective equipment and clothing to be worn by workers and visitors in Work Area Includes

.1 Air purifying half or full face-piece respirator with N-100, R-100 or P-100 particulate filter (or powered, air purifying respirator [PAPR] with similar cartridge; combination cartridges [e.g. HEPA and organic vapour] may be required for chemical removal methods), personally issued to worker and marked as to efficiency and purpose, suitable for protection against airborne lead and acceptable to Provincial Authority having jurisdiction. The respirator to be fitted so that there is an effective seal between the respirator and the worker's face, unless the respirator is equipped with a hood or helmet. The respirator to be cleaned, disinfected and inspected after use on each shift, or more often if necessary, when issued for the exclusive use of one worker, or after each use when used by more than one worker. The respirator to have damaged or deteriorated parts replaced prior to being used by a worker; and, when not in use, to be stored in a convenient, clean and sanitary location. The employer to establish written procedures regarding the selection, use and care of respirators, and a copy of the procedures to be provided to and reviewed with each worker who is required to wear a respirator. A worker not to be assigned to an operation requiring the use of a respirator unless he or she is physically able to perform the operation while using the respirator.

.1 The type of respirator chosen will depend on the amount of material removed and the duration of the work.

.2 Disposable type protective clothing that does not readily retain or permit skin contamination, consisting of full body covering including head covering with snug fitting cuffs at wrists, ankles, and neck.

.2 Requirements for workers:

.1 Remove street clothes in clean change room and put on respirator with new filters or reusable filters, clean coveralls and head covers before entering Equipment and Access Rooms or Work Area. Store street clothes, uncontaminated footwear, towels, and similar uncontaminated articles in clean change room.

.2 Remove gross contamination from clothing before leaving work area. Place contaminated work suits in receptacles for disposal with other lead - contaminated materials. Leave reusable items except respirator in Equipment and Access Room. When not in use in Work Area, store work footwear in Equipment and Access Room. Upon completion of lead abatement, dispose of footwear

as contaminated waste or clean thoroughly inside and out using soap and water before removing from Work Area or from Equipment and Access Room.

.3 Enter unloading room from outside dressed in clean coveralls to remove waste containers and equipment from Holding Room of Container and Equipment Decontamination Enclosure system. Workers not to use this system as means to leave or enter work area.

.4

.3 Eating, drinking, chewing, and smoking are not permitted in Lead Work Area.

.4 Ensure workers are fully protected with respirators and protective clothing during preparation of system of enclosures prior to commencing actual lead abatement.

.5 Ensure workers wash hands and face when leaving Work Area. Facilities for washing are to be supplied by the Contractor

.6 Provide and post in Clean Change Room and in Equipment and Access Room the procedures described in this Section, in both official languages.

.7 Ensure no person required to enter Work Area has facial hair that affects seal between respirator and face

.8 Visitor Protection:

.1 Provide protective clothing and approved respirators to Authorized Visitors to Work Areas.

.2 Instruct Authorized Visitors to Work Areas.

.3 Instruct Authorized Visitors in use of protective clothing, respirators and procedures.

.4 Instruct Authorized Visitors in proper procedures to be followed in entering into and exiting from Work Area.

1.7 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials in accordance with Section 02 81 01 – Hazardous Materials.

.2 Place materials defined as hazardous or toxic in designated containers.

.3 Handle and dispose of hazardous materials in accordance with the CEPA, TDGA, Regional and Municipal regulations.

.4 Disposal of lead waste generated by removal activities must comply with Federal, Provincial and Municipal regulations.

.5 Provide manifests describing and listing waste created. Transport containers by approved means to licensed landfill for burial.

1.8 EXISTING CONDITIONS

.1 Reports and information pertaining to identified LCPs within each building that are to be handled, removed, or otherwise disturbed and disposed of during this Project are bound into this specification in Appendix A.

.2 Notify Department Representative of suspected LCP discovered during Work, which requires alteration, disturbance, removal and/or disposal, and which is not apparent from drawings, specifications, or report pertaining to Work. Do not disturb such material pending instructions from Department Representative.

1.9 SCHEDULING

.1 Hours of Work: perform work during normal working hours as indicated in Contract Documents.

.2 Contractor is to notify Department Representative of schedule for activities planned under this Section, if any, at least 10 business days prior to initiation.

Part 2 Products

2.1 MATERIALS

.1 Drop Sheets:

.1 Polyethylene: 0.15 mm thick.

.2 FR polyethylene: 0.15 mm thick woven fibre reinforced fabric bonded both sides with polyethylene.

.2 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

.3 Lead or waste containers: metal or fibre type acceptable to dump operator with tightly fitting covers and 0.15 mm thickness sealable polyethylene liners.

.1 Label containers with pre-printed bilingual cautionary Warning Lead clearly visible when ready for removal to disposal site

.4 Tape: fibreglass - reinforced duct tape suitable for sealing polyethylene under both dry conditions and wet conditions using amended water.

Part 3 Execution

3.1 GENERAL

.1 Work is generally to be conducted in accordance with the procedures stipulated in the WorkSafeBC 2017 publication “Safe Work Practices for Handling Lead”. Where there are discrepancies between that document and this specification, the more stringent will apply.

3.2 SUPERVISION

.1 Approved Supervisor must remain within Lead Work Area during disturbance, removal, or other handling of lead based paints.

3.3 PREPARATION

.1 Remove and wrap items to be salvaged or reused, and transport and store in area specified by Department Representative

.2 Work Area:

.1 Shut off and isolate HVAC system to prevent dust dispersal into other building areas. Conduct smoke tests to ensure duct work is airtight.

.2 Pre-clean fixed casework, and equipment within work areas, using HEPA vacuum and cover with polyethylene sheeting sealed with tape.

.3 Clean work areas using HEPA vacuum. If not practicable, use wet cleaning method. Do not use methods that raise dust, such as dry sweeping, or vacuuming using other than HEPA vacuum.

.4 Seal off openings, corridors, doorways, windows, skylights, ducts, grilles, and diffusers, with polyethylene sheeting sealed with tape.

.5 Cover floor surfaces in work area from wall to wall with FR polyethylene drop sheets to protect existing floor during removal.

.6 Build airlocks at entrances and exits from work areas to ensure work areas are always closed off by one curtained doorway when workers enter or exit.

.7 At point of access to work areas install warning signs in both official languages in upper case "Helvetica Medium" letters reading as follows where number in parentheses indicates font size to be used:

.1 CAUTION LEAD HAZARD AREA (25 mm).

.2 NO UNAUTHORIZED ENTRY (19 mm).

.3 WEAR ASSIGNED PROTECTIVE EQUIPMENT AND RESPIRATOR (19 mm).

.4 BREATHING LEAD CONTAMINATED DUST CAUSES SERIOUS BODILY HARM (7 mm).

.8 Maintain emergency and fire exits from work areas, or establish alternative exits satisfactory to Authority having jurisdiction.

.9 Where water application is required for wetting lead containing materials, provide temporary water supply by use of appropriately sized hoses for application of water as required.

.10 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.

.3 Worker Decontamination Enclosure System:

.1 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 suite, 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.

.4 Construction of Decontamination Enclosures:

.1 Construct framing for enclosures or use existing rooms. 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 closures comprising doorway always remains closed.

.5 Separation of work Areas from Occupied Areas

.1 Barriers between Work Area and occupied area to be constructed as follows:

.1 Construct floor to ceiling lumber stud framing, cover with polyethylene sheeting and seal with duct tape. Apply plywood over polyethylene sheeting. Seal plywood joints and between adjacent materials with surface film forming sealer, to create airtight barrier.

.2 Cover plywood with polyethylene sheeting and sealed with duct tape.

.6 Maintenance of Enclosures:

.1 Maintain enclosures in clean condition.

.2 Ensure barriers and polyethylene linings are effectively sealed and taped. Repair damaged barriers and remedy defects immediately.

.3 Visually inspect enclosures at beginning of each work day.

.4 Use smoke test method to test effectiveness of barriers as directed by Department Representative.

3.4 LCP ABATEMENT

.1 Remove LCP from surfaces in small sections and pack waste as it is being removed in sealable 0.15 mm plastic bags and place in labelled containers for transport.

.2 Seal filled containers. Clean external surfaces thoroughly by wet sponging. Remove from immediate working area to Staging Area. Clean external surfaces thoroughly again by wet sponging before moving containers to decontamination Washroom. Wash containers thoroughly in decontamination Washroom, and store in Holding Room pending removal to Unloading Room and outside. Ensure containers are removed from Holding Room by workers who have entered from uncontaminated areas dressed in clean coveralls.

.3 After completion of stripping work, wire brush and wet sponge surface from which lead based paint has been removed to remove visible material. During this work keep surfaces wet.

.4 After wire brushing and wet sponging to remove visible lead based paint, and after encapsulating lead containing material impossible to remove, wet clean work area including equipment and access room, and equipment used in process. After inspection by Department Representative, apply continuous coat of slow drying sealer to surfaces. Do

not disturb work for 8 hours with no entry, activity, ventilation or disturbance during this period.

.5 After enclosing lead painted surfaces, wet clean work area and equipment and access room. During settling period no entry, activity, or ventilation will be permitted.

3.5 INSPECTION

.1 Perform inspection to confirm compliance with specification and governing authority requirements. Deviations from these requirements not approved in writing by Departmental Representative will result in work stoppage, at no cost to Owner.

.2 Departmental Representative will inspect work for:

- .1 Adherence to specific procedures and materials.
- .2 Final cleanliness and completion.
- .3 No additional costs will be allowed by Contractor for additional labour or materials required to provide specified performance level.
- .4 When lead dust leakage from Work Area occurs Departmental Representative may order Work shutdown.
  - .1 No additional costs will be allowed by Contractor for additional labour or materials required to provide specified performance level.

3.6 AIR MONITORING

.1 Air monitoring may be conducted, at the discretion of the Departmental Representative.

.2 Where air monitoring is undertaken, it will be conducted by the Departmental Representative, and in accordance with the requirements and procedures as outlined in the WorkSafe BC 2017 document “Safe Work Practices for Handling Lead”.

- .1 Air samples will be collected and analyzed in accordance with NIOSH method 7082 or 7300.
- .2 Air sample results will be provided to the Contractor within 5 days of air sample collection.
- .3 Analysis will be conducted by qualified laboratories that take part in a documented QA/QC program for such analysis.

.3 Contractor will be notified to stop Work when airborne lead concentrations in excess of 0.025 mg/m3 are measured, when PPE and protection factors are considered, and to correct procedures.

- .1 Additional monitoring will be conducted, where possible, to verify procedural corrections were effective.

.4 If air monitoring shows that areas outside Lead Work Area are contaminated as determined by the Departmental Representative, Contractor will be notified to maintain and clean these areas in same manner as that applicable to Lead Work Area, at no additional cost to the Contract

3.7 LEAD SURFACE SAMPLING – WORK AREAS

.1 Final lead surface sampling may be conducted, at the discretion of the Departmental Representative.

.2 Where final lead surface sampling is undertaken, it will be conducted by the Departmental Representative as follows:

.1 After Work Area has passed a visual inspection for cleanliness approved by Departmental Representative and acceptable coat of lock-down agent has been applied to surfaces within enclosure, and appropriate setting period of 8 hours has passed. Departmental Representative will perform lead wipe sampling in Work Area.

.1 Final lead wipe sampling results from horizontal and vertical surfaces where lead based paints have been removed must show lead levels of less than 40 micrograms of lead in dust per square foot. Samples must be collected and analyzed in accordance with EPA 747-R-95-007.

.2 If wipe sampling results show levels of lead in excess of 40 micrograms per square foot, re-clean work area at contractor's expense and apply another acceptable coat of lock-down agent to surfaces.

.3 Repeat as necessary until fibre levels are less than 40 micrograms per square foot.

3.8 FINAL CLEANUP

.1 Following specified cleaning procedures, and when lead wipe sampling is below acceptable concentrations proceed with final clean up.

.2 Remove polyethylene sheet by rolling it away from walls to centre of work area. Vacuum visible lead containing particles observed during cleanup, immediately, using HEPA vacuum equipment.

.3 Place polyethylene seals, tape, cleaning material, clothing, and other contaminated waste in plastic bags and sealed labelled waste containers for transport.

.4 Clean-up Work Areas, Equipment and Access Room, and other contaminated enclosures.

.5 Clean-up sealed waste containers and equipment used in Work and remove from work areas, via Container and Equipment Decontamination Enclosure System, at appropriate time in cleaning sequence.

.6 Conduct final check to ensure no dust or debris remains on surfaces as result of dismantling operations.

3.9 RE-ESTABLISHMENT OF OBJECTS AND SYSTEMS

.1 Repair or replace objects damaged in course of work to their original state or better, as directed by Department Representative

3.10 REINSTATEMENT

.1 Where LCPs have been removed from surfaces, and where indicated in the RAP, surfaces are to be re-painted to match existing colours, using products and methods in accordance with applicable standards, guidelines and regulations for such work.

.1 Not all surfaces will require re-painting. Refer to the RAP for details.

.2 Where substrates coated with LCPs have been removed from buildings or structures, Contractor is to replace such substrates in kind (supplied and installed), finished and painted to match existing, and including sub-layers or materials, as required (e.g. building paper, sealants, etc.).

3.11 WASTE DISPOSAL

.1 The RAP provides information regarding the tested (in limited situations) and assumed (in most instances) leachable lead concentrations of the various wastes that are expected to be generated during Work of this project.

.1 The Contractor is to plan and budget for the tested and assumed leachable lead concentrations as indicated in the RAP.

.2 Should the Contractor wish to conduct testing to verify actual leachable lead content of wastes once they are generated, the Contractor is responsible to retain and pay for the services associated with sampling and analysis.

.1 If testing changes the categorization of a particular waste stream from “hazardous” (i.e. leachable for lead in excess of standards) to “non-hazardous”, testing records and supporting documentation must be provided to the Departmental Representative, and the waste cannot be shipped for end disposal until approved by the Departmental Representative.

.2 Copies of all waste transportation and disposal documents are to be provided to the Departmental Representative.

END OF SECTION

Part 1 General

1.1 SUMMARY

.1 Refer to the following report, attached in the Appendix of the Project Specifications, for information pertaining to lead-containing paints (LCPs) that have been identified and remediation as part of the Work:

.1 Stantec Consulting Ltd. Report for Project No. 123220964 entitled "Metal Based Paint Remedial Action Plan - Parks Canada Buildings and Structures at Georgina Point (Active Pass) Lightstation, East Point (Saturna Island) Lightstation; Portlock Point Lightstation and Russell Island" dated January 19, 2018, prepared for Parks Canada Agency (further referred to herein as "the RAP").

.2 Actions that will disturb lead-containing materials (including paints and materials coated with LCPs) are to be conducted in such a manner to keep airborne exposure to lead dust to less than the Canada Labour Code and British Columbia's Occupational Health and Safety Regulation 8-hour Occupational Exposure Limit (OEL) for lead of 0.05 milligram per cubic metre (mg/m^3).

.3 The work tasks required and the ways in which lead-containing materials (including LCPs) will be impacted will determine the appropriate respirators, measures and procedures that should be followed to protect workers from lead exposure. This is to be determined by the Contractor through their own Risk Assessment.

.4 Contractor is responsible for reviewing plans, specifications and reports such that they understand the locations and amounts of LCPs that will be impacted by the Work of this contract, and such that appropriate plans and budgets can be included in their overall bids to address those items, as necessary.

.5 Unless otherwise determined through risk assessment conducted by the Contractor's qualified person, comply with requirements of this Section when performing work that will tasks considered under High Risk as outlined in the WorkSafeBC 2017 publication "Safe Work Practices for Handling Lead", and including, but not limited to the following:

.1 Abrasive blasting of LCPs from substrates (including wet, slurry and dry abrasive blasting).

.2 Dry ice blasting of LCPs from substrates.

1.2 SECTION INCLUDES

.1 Requirements, applicable procedures and personal protective equipment to be utilized during activities that will disturb LCPs as outlined herein.

1.3 REFERENCES

.1 Canadian Environmental Protection Act,1999 (CEPA 1999)

.1 Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations (SOR/2005-149).

.2 Department of Justice Canada

.1 Transportation of Dangerous Goods Act, 1992 (TDG Act) [1992], (c. 34).

.2 Transportation of Dangerous Goods Regulations (T-19.01-SOR/2001-286).

.3 Health Canada / Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.4 National Research Council Canada Institute for Research in Construction (NRC-IRC)

.1 National Fire Code of Canada (2015).

.2 WorkSafe BC

.1 British Columbia's Occupational Health and Safety Regulation (BC Reg. 296/97, including amendments to date of work)

.2 "Safe Work Practices for Handling Asbestos" (2017)

.3 "Lead-Containing Paints and Coatings; Preventing Exposure in the Construction Industry" (2011)

.4 "Safe Work Practices for Handling Lead" (2017)

.5 Government of Canada

.1 The Canada Labour Code, Part II, Canada Occupational Health and Safety Regulations

.6 British Columbia Ministry of Environment

.1 British Columbia Hazardous Waste Regulation (BC Reg. 63/88), including amendments up to the date of the work.

1.4 DEFINITIONS

.1 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with filter system capable of collecting and retaining fibres greater than 0.3 microns in any direction at 99.97% efficiency.

.2 Authorized Visitors: Departmental Representative and representatives of regulatory agencies.

.3 Occupied Area: areas of building or work site that is outside Work Area.

.4 Dioctyl Phthalate (DOP) Test: testing method used to evaluate particle penetration and air flow resistance properties of filtration materials - HEPA filter leak test. Sprayer: garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Must be appropriate capacity for scope of work.

.5 Sprayer: garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Appropriate capacity for scope of work.

.6 Airlock: ingress or egress system, without permitting air movement between contaminated area and uncontaminated area. Consisting of two curtained doorways at least 2 m apart.

.7 Curtained doorway: arrangement of closures to allow ingress and egress from one room to another. Typically constructed as follows:

.1 Place two overlapping polyethylene sheets over existing or temporarily framed doorway, securing each along top of doorway, securing vertical edge of one sheet

along one vertical side of doorway, and secure other sheet along opposite vertical side of doorway.

.2 Reinforce free edges of polyethylene with duct tape and add weight to bottom edge to ensure proper closing.

.3 Overlap each polyethylene sheet at openings 1.5 m on each side.

.8 Action level: British Columbia's Occupational Health and Safety Regulation 8-hour Occupational Exposure Limit (OEL) for lead is 0.05 mg/m^3. Action level is to be set at 50% of the OEL, or 0.025 mg/m^3 for lead. If workers are expected to be exposed to lead in excess of the action level, appropriate controls (work procedures, personal protective equipment) are to be implemented in accordance with applicable Provincial and Federal Occupational Health and Safety Regulations.

.9 Competent person: Departmental Representative and Contractor personnel capable of identifying existing lead hazards in workplace and taking corrective measures to eliminate them.

.10 Negative Air Pressure Machine: extracts air directly from work area and filters extracted air through a HEPA filter, discharge air to exterior of building.

.1 Maintain pressure differential of 5 to 7 Pa relative to adjacent areas outside of work areas. Machine to be equipped with alarm to warn of system breakdown, and equipped with instrument to continuously monitor and automatically record pressure differences.

1.5 SUBMITTALS

.1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit proof of Contractor's General and Environmental Liability Insurance.

.3 Where lead waste will be disposed of via landfill, submit proof satisfactory to Department Representative that suitable arrangements have been made to dispose of lead containing waste in accordance with requirements of authority having jurisdiction.

.4 Provide: Provincial requirements for Notice of Project Form.

.5 Quality Control:

.1 Where lead waste will be transported from site, submit to Department Representative necessary permits for transportation and disposal of lead waste and proof that lead waste has been received and properly disposed.

.2 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.

.3 Provide proof that supervisory personnel have attended lead abatement course, of not less than two days duration, approved by Departmental Representative. Minimum of one supervisor for every ten workers.

.6 Product Data:

.1 Provide documentation including test results, fire and flammability data, and Material Safety Data Sheets (MSDS) for chemicals or materials including:

.1 Encapsulants.

.2 Amended water.

.3 Slow drying sealer.

.7 Where work will require specific disturbance to lead, LCPs submit proof satisfactory to Department Representative that employees have respirator fitting and testing. Workers must be fit tested for a respirator that is personally issued.

1.6 QUALITY ASSURANCE

.1 Regulatory Requirements: comply with Federal, Provincial and local requirements pertaining to lead, provided that in case of conflict among these requirements or with these specifications, more stringent requirement applies. Comply with regulations in effect at time Work is performed.

.2 Health and Safety:

.1 Perform construction occupational health and safety in accordance with Section 01 35 23 - Health and Safety Requirements.

.2 Safety Requirements: worker protection.

.1 Abrasive blasting of lead paint: NIOSH approved and equipped with filter cartridges with assigned protection factor of 1000, acceptable to Authority having jurisdiction. Suitable for type of lead and level of lead dust exposure in Lead Work Area. Respirator to be equivalent Type CE abrasive blast supplied air respirator operated in a pressure demand or positive pressure mode with a tight-fitting full-face-piece. Compressed air used to supply supplied air respirators to meet breathing air purity requirements of CAN/CSA-Z180.1. Where an oil-lubricated compressor is used to supply breathing air, a continuous carbon monoxide monitor/alarm to be provided.

.2 Disposable protective clothing that does not readily retain or permit skin contamination, consisting of full body covering including head covering with snug fitting cuffs at wrists, ankles, and neck.

.2 Requirements for workers:

.1 Remove street clothes in clean change room and put on respirator with new filters or reusable filters, clean coveralls and head covers before entering Equipment and Access Rooms or Work Area. Store street clothes, uncontaminated footwear, towels, and similar uncontaminated articles in clean change room.

.2 Remove gross contamination from clothing before leaving work area. Place contaminated work suits in receptacles for disposal with other lead contaminated materials. Leave reusable items except respirator in Equipment and Access Room. When not in use in work area, store work footwear in Equipment and Access Room. Upon completion of lead abatement, dispose of footwear as contaminated waste or clean thoroughly inside and out using soap and water before removing from work area or from Equipment and Access Room.

.3 Enter unloading room from outside dressed in clean coveralls to remove waste containers and equipment from Holding Room of Container and Equipment Decontamination Enclosure system. Workers not use this system as means to leave or enter Work Area.

.3 Eating, drinking, chewing, and smoking are not permitted in Work Area.

.4 Ensure workers are fully protected with respirators and protective clothing during preparation of system of enclosures prior to commencing actual lead abatement.

.5 Ensure workers wash hands and face when leaving Lead Work Area. Facilities for washing are to be provided by the Contractor.

.6 Provide and post in Clean Change Room and in Equipment and Access Room the procedures described in this Section, in both official languages.

.7 Ensure no person required to enter Work Area has facial hair that affects seal between respirator and face.

.8 Visitor Protection:

.1 Provide protective clothing and approved respirators to Authorized Visitors to work areas.

.2 Instruct Authorized Visitors in use of protective clothing, respirators and procedures.

.3 Instruct Authorized Visitors in proper procedures to be followed in entering into and exiting from Work Area.

1.7 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials in accordance with Section 02 81 01 – Hazardous Materials.

.2 Handle and dispose of hazardous materials in accordance with CEPA, TDGA, Regional and Municipal regulations.

.3 Disposal of lead waste generated by removal activities must comply with Federal, Provincial and Municipal regulations. Dispose of lead waste in sealed double thickness 0.15 mm (6 mil) bags or leak proof drums. Label containers with appropriate warning labels.

.4 Provide manifests describing and listing waste created. Transport containers by approved means to licensed landfill for burial.

1.8 EXISTING CONDITIONS

.1 Reports and information pertaining to identified LCPs within each building that are to be handled, removed, or otherwise disturbed and disposed of during this Project are bound into this specification in Appendix A.

.2 Notify Department Representative of suspected LCP discovered during Work, which requires alteration, disturbance, removal and/or disposal, and which is not apparent from drawings, specifications, or report pertaining to Work. Do not disturb such material pending instructions from Department Representative.

1.9 SCHEDULING

.1 Hours of Work: perform work during normal working hours as indicated in Contract Documents.

.2 Contractor is to notify Department Representative of schedule for activities planned under this Section, if any, at least 10 business days prior to initiation.

Part 2 Products

2.1 MATERIALS

.1 Drop Sheets:

.1 Polyethylene: 0.15 mm thick.

.2 FR polyethylene: 0.15 mm thick woven fibre reinforced fabric bonded both sides with polyethylene.

.2 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

.3 Lead waste containers: metal or fibre type acceptable to dump operator with tightly fitting covers and 0.15 mm (6 mil) thickness sealable polyethylene liners.

.1 Label containers with pre-printed bilingual cautionary Warning Lead clearly visible when ready for removal to disposal site

.4 Tape: fibreglass - reinforced duct tape suitable for sealing polyethylene under both dry conditions and wet conditions using amended water.

Part 3 Execution

3.1 GENERAL

.1 Work is generally to be conducted in accordance with the procedures stipulated in the WorkSafeBC 2017 publication “Safe Work Practices for Handling Lead”. Where there are discrepancies between that document and this specification, the more stringent will apply.

3.2 SUPERVISION

.1 Approved Supervisor must remain within Lead Work Area during disturbance, removal, or other handling of lead based paints.

3.3 PREPARATION

.1 Remove and wrap items to be salvaged or reused, and transport and store in area specified by Department Representative

.2 Work Area:

.1 Shut off and isolate HVAC system to prevent dust dispersal into other building areas. Conduct smoke tests to ensure duct work is airtight.

.2 Pre-clean fixed casework, and equipment within work areas, using HEPA vacuum and cover with polyethylene sheeting sealed with tape.

.3 Clean work areas using HEPA vacuum. If not practicable, use wet cleaning method. Do not use methods that raise dust, such as dry sweeping, or vacuuming using other than HEPA vacuum.

.4 Install negative pressure machine system and operate continuously from installation of polyethylene sheeting until completion of final cleanup. Provide automatic continuous monitoring and recording instrument of pressure difference.

.5 Seal off openings, corridors, doorways, windows, skylights, ducts, grilles, and diffusers, with polyethylene sheeting sealed with tape.

.6 Cover floor surfaces in work area from wall to wall with FR polyethylene drop sheets to protect existing floor during removal.

.7 Build airlocks at entrances and exits from work areas to ensure work areas are always closed off by one curtained doorway when workers enter or exit.

.8 At point of access to work areas install warning signs in both official languages in upper case "Helvetica Medium" letters reading as follows where number in parentheses indicates font size to be used:

.1 CAUTION LEAD HAZARD AREA (25 mm).

.2 NO UNAUTHORIZED ENTRY (19 mm).

.3 WEAR ASSIGNED PROTECTIVE EQUIPMENT AND RESPIRATOR (19 mm).

.4 BREATHING LEAD CONTAMINATED DUST CAUSES SERIOUS BODILY HARM (7 mm).

.9 Maintain emergency and fire exits from work areas, or establish alternative exits satisfactory to Authority having jurisdiction.

.10 Where water application is required for wetting lead containing materials, provide temporary water supply by use of appropriately sized hoses for application of water as required.

.11 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.

.3 Worker Decontamination Enclosure System:

.1 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 suite, 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.

.4 Construction of Decontamination Enclosures:

.1 Construct framing for enclosures or use existing rooms. 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.

.5 Separation of Work Areas from Occupied Areas:

.1 Barriers between Work Area and occupied areas (where applicable) to be constructed as follows;

.1 Construct floor to ceiling lumber stud framing, cover with polyethylene sheeting and seal with duct tape. Apply plywood over polyethylene sheeting. Seal plywood joints and between adjacent materials with surface film forming sealer, to create airtight barrier.

.2 Cover plywood with polyethylene sheeting and sealed with duct tape.

.6 Maintenance of Enclosures:

.1 Maintain enclosures in tidy condition.

.2 Ensure barriers and polyethylene linings are effectively sealed and taped. Repair damaged barriers and remedy defects immediately.

.3 Visually inspect enclosures at beginning of each working day.

.4 Use smoke test method to test effectiveness of barriers as directed by Departmental Representative.

3.4 LCP ABATEMENT

.1 Remove LCP from surfaces in small sections and pack waste as it is being removed in sealable 0.15 mm plastic bags and place in labelled containers for transport.

.2 Wet method to be used to reduce dust generation. Examples of wet methods include wetting surfaces, wet scraping, and wet shovelling. Wet method not be used if it creates a hazard or cause damage to equipment or to project.

.3 Seal filled containers. Clean external surfaces thoroughly by wet sponging. Remove immediate from working area to staging area. Clean external surfaces thoroughly again by wet sponging before moving containers to decontamination Washroom. Wash containers thoroughly in decontamination Washroom, and store in Holding Room pending removal to Unloading Room and outside. Ensure containers are removed from Holding Room by workers who have entered from uncontaminated areas dressed in clean coveralls.

.4 After completion of stripping work, wire brush and wet sponge surface to remove visible material. During this work keep surfaces wet. After wire brushing and wet sponging, wet clean and HEPA vacuum entire work area including Equipment and Access Room. Compressed air or dry sweeping not be used to clean up lead-containing dust or waste. After inspection and approval by Departmental Representative, apply continuous coat of slow drying sealer to surfaces. Do not disturb work area for 8 hours, no entry, activity, or ventilation other than operation negative air machine during this period.

.5 After enclosing lead painted surfaces, wet clean work area and equipment and access room. During settling period no entry, activity, or ventilation will be permitted.

3.5 INSPECTION

.1 Perform inspection to confirm compliance with specification and governing authority requirements. Deviations from these requirements not approved in writing by Departmental Representative will result in work stoppage, at no cost to Owner.

.2 Departmental Representative will inspect work for:

.1 Adherence to specific procedures and materials.

.2 Final cleanliness and completion.

.3 No additional costs will be allowed by Contractor for additional labour or materials required to provide specified performance level.

.4 When lead dust leakage from Work Area occurs, Departmental Representative may order Work shutdown.

.1 No additional costs will be allowed by Contractor for additional labour or materials required to provide specified performance level.

3.6 AIR MONITORING

.1 Air monitoring may be conducted, at the discretion of the Departmental Representative.

.2 Where air monitoring is undertaken, it will be conducted by the Departmental Representative, and in accordance with the requirements and procedures as outlined in the WorkSafe BC 2017 document “Safe Work Practices for Handling Lead”.

.1 Air samples will be collected and analyzed in accordance with NIOSH method 7082 or 7300.

.2 Air sample results will be provided to the Contractor within 5 days of air sample collection.

.3 Analysis will be conducted by qualified laboratories that take part in a documented QA/QC program for such analysis.

.3 Contractor will be notified to stop Work when airborne lead concentrations in excess of 0.025 mg/m3 are measured, when PPE and protection factors are considered, and to correct procedures.

.1 Additional monitoring will be conducted, where possible, to verify procedural corrections were effective.

.4 If air monitoring shows that areas outside Lead Work Area are contaminated as determined by the Departmental Representative, Contractor will be notified to maintain

and clean these areas in same manner as that applicable to Lead Work Area, at no additional cost to the Contract

3.7 LEAD SURFACE SAMPLING – WORK AREAS

.1 Final lead surface sampling may be conducted, at the discretion of the Departmental Representative.

.2 Where final lead surface sampling is undertaken, it will be conducted by the Departmental Representative as follows:

.1 After Work Area has passed a visual inspection for cleanliness approved by Departmental Representative and acceptable coat of lock-down agent has been applied to surfaces within enclosure, and appropriate setting period of 8 hours has passed. Departmental Representative will perform lead wipe sampling in Work Area.

.1 Final lead wipe sampling results from horizontal and vertical surfaces where lead based paints have been removed must show lead levels of less than 40 micrograms of lead in dust per square foot. Samples must be collected and analyzed in accordance with EPA 747-R-95-007.

.2 If wipe sampling results show levels of lead in excess of 40 micrograms per square foot, re-clean work area at contractor's expense and apply another acceptable coat of lock-down agent to surfaces.

.3 Repeat as necessary until fibre levels are less than 40 micrograms per square foot.

3.8 FINAL CLEANUP

.1 Following specified cleaning procedures, and when lead wipe sampling is below acceptable concentrations proceed with final clean up.

.2 Remove polyethylene sheet by rolling it away from walls to centre of work area. Vacuum visible lead containing particles observed during cleanup, immediately, using HEPA vacuum equipment.

.3 Place polyethylene seals, tape, cleaning material, clothing, and other contaminated waste in plastic bags and sealed labelled waste containers for transport.

.4 Clean-up Work Areas, Equipment and Access Room, and other contaminated enclosures.

.5 Remove sealed waste containers and equipment used in Work and remove from work areas at appropriate time in cleaning sequence.

.6 Conduct final check to ensure no dust or debris remains on surfaces as result of dismantling operations.

3.9 RE-ESTABLISHMENT OF OBJECTS AND SYSTEMS

.1 Repair or replace objects damaged in course of work to their original state or better, as directed by Department Representative.

3.10 REINSTATEMENT

.1 Where LCPs have been removed from surfaces, and where indicated in the RAP, surfaces are to be re-painted to match existing colours, using products and methods in accordance with applicable standards, guidelines and regulations for such work.

.1 Not all surfaces will require re-painting. Refer to the RAP for details.

.2 Where substrates coated with LCPs have been removed from buildings or structures, Contractor is to replace such substrates in kind (supplied and installed), finished and painted to match existing, and including sub-layers or materials, as required (e.g. building paper, sealants, etc.).

3.11 WASTE DISPOSAL

.1 The RAP provides information regarding the tested (in limited situations) and assumed (in most instances) leachable lead concentrations of the various wastes that are expected to be generated during Work of this project.

.1 The Contractor is to plan and budget for the tested and assumed leachable lead concentrations as indicated in the RAP.

.2 Should the Contractor wish to conduct testing to verify actual leachable lead content of wastes once they are generated, the Contractor is responsible to retain and pay for the services associated with sampling and analysis.

.1 If testing changes the categorization of a particular waste stream from “hazardous” (i.e. leachable for lead in excess of standards) to “non-hazardous”, testing records and supporting documentation must be provided to the Departmental Representative, and the waste cannot be shipped for end disposal until approved by the Departmental Representative.

.2 Copies of all waste transportation and disposal documents are to be provided to the Departmental Representative.

END OF SECTION

Part 1 General

1.1 SUMMARY

.1 Asbestos-containing materials (ACMs) are present at various structures, but are not expected to be impacted by the Work. Identified ACMs in areas of the Work include the following:

- .1 Georgina Point Beacon
  - .1 ACM window caulking.
    - .1 Scope for paint removal includes removal of lead-containing paint from interior (metal walls and ceiling) and exterior (metal siding and railings) surfaces. It is anticipated that these tasks can be completed without disturbing the ACM window caulking.
- .2 Portlock Point Light House
  - .1 ACM building tar and ACM window caulking
    - .1 Scope for paint removal includes removal of lead-containing paint from interior (metal walls and ceiling) and exterior (wood trim, metal walls and roof) surfaces. It is anticipated that these tasks can be completed without disturbing the ACM window building tar or window caulking.

.2 If the Contractor deems it necessary to remove identified ACMs to otherwise facilitate their Work, the Contractor is responsible for including the costs for such removals in their bid.

.3 Unless otherwise determined through risk assessment conducted by the Contractor's qualified person, comply with requirements of this Section when performing work associated with the removal of the non-friable ACMs as noted herein.

1.2 SECTION INCLUDES

.1 Requirements, applicable procedures and personal protective equipment to be utilized during asbestos abatement activities as outlined herein.

1.3 REFERENCES

.1 Department of Justice Canada (Jus)

- .1 *Canadian Environmental Protection Act*, 1999 (CEPA).

.2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

- .1 Material Safety Data Sheets (MSDS).

.3 Transport Canada (TC)

- .1 *Transportation of Dangerous Goods Act*, 1992 (TDGA).

.4 Underwriters' Laboratories of Canada (ULC)

.5 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-1.205-[94], Sealer for Application of Asbestos Fibre Releasing Materials.

.6 Government of Canada.

.1 Canada Labour Code - Part II.

.2 Canada Occupational Health and Safety Regulations.

.7 WorkSafeBC

.1 British Columbia's Occupational Health and Safety Regulation (BC Reg. 296/97, including amendments to date of work)

.2 "Safe Work Practices for Handling Asbestos", 2017.

.8 The current version of the British Columbia Hazardous Waste Regulation (BC Reg. 63/88).

1.4 DEFINITIONS

.1 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with filter system capable of collecting and retaining fibres greater than 0.3 microns in any direction at 99.97% efficiency.

.2 Amended Water: water with non-ionic surfactant wetting agent added to reduce water tension to allow thorough wetting of fibres.

.3 Asbestos Containing Materials (ACMs): materials that contain 0.5 per cent or more asbestos by dry weight (or vermiculite insulation materials with any asbestos) and are identified under Existing Conditions including fallen materials and settled dust.

.4 Asbestos Work Area: area where work takes place which will, or may, disturb ACMs.

.5 Authorized Visitors: Consultant or Departmental Representative and representatives of regulatory agencies.

.6 Competent worker: in relation to specific work, means a worker who:

.1 Is qualified because of knowledge, training and experience to perform the work.

.2 Is familiar with the provincial and federal laws and with the provisions of the regulations that apply to the work.

.3 Has knowledge of all potential or actual danger to health or safety in the work.

.7 Friable material: means material that:

.1 When dry, can be crumbled, pulverized or powdered by hand pressure, or

.2 is crumbled, pulverized or powdered.

.8 Non-Friable Material: material that when dry cannot be crumbled, pulverized or powdered by hand pressure.

.9 Occupied Area: any area of the building or work site that is outside Asbestos Work Area.

.10 Polyethylene: polyethylene sheeting or rip-proof polyethylene sheeting with tape along edges, around penetrating objects, over cuts and tears, and elsewhere as required to provide protection and isolation.

.11 Sprayer: garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Must have appropriate capacity for work.

1.5 SUBMITTALS

.1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit proof satisfactory to Departmental Representative that suitable arrangements have been made to dispose of asbestos-containing waste in accordance with requirements of authority having jurisdiction.

.3 Submit Provincial and/or local requirements for Notice of Project Form.

.4 Submit proof of Contractor's Asbestos Liability Insurance.

.5 Submit to Departmental Representative necessary permits for transportation and disposal of asbestos-containing waste and proof that asbestos-containing waste has been received and properly disposed.

.6 Submit proof that all asbestos workers and/or supervisor have received appropriate training from a competent person in the hazards of asbestos exposure, good personal hygiene and work practices while working in Asbestos Work Areas, and the use, cleaning and disposal of respirators and protective clothing. Instruction and training related to respirators includes, at minimum:

- .1 Fitting of equipment.
- .2 Inspection and maintenance of equipment.
- .3 Disinfecting of equipment.
- .4 Limitations of equipment.

.7 Submit proof satisfactory to Departmental Representative that employees have respirator fitting and testing. Workers must be fit tested respirator that is personally issued.

1.6 QUALITY ASSURANCE

.1 Regulatory Requirements: comply with Federal, Provincial and local requirements pertaining to asbestos, provided that in case of conflict among these requirements or with these specifications, more stringent requirement applies. Comply with regulations in effect at time Work is performed.

.2 Health and Safety:

- .1 Perform construction occupational health and safety in accordance with Section 01 35 33 - Health and Safety Requirements.
- .2 Safety Requirements: worker protection.
  - .1 Protective equipment and clothing to be worn by workers while in Asbestos Work Area include:
    - .1 Air purifying half-mask respirator with N-100, R-100 or P-100 particulate filter, personally issued to worker and marked as to efficiency and purpose, suitable for protection against asbestos and acceptable to Provincial Authority having jurisdiction. The respirator to be fitted so that there is an effective seal between the

respirator and the worker's face, unless the respirator is equipped with a hood or helmet. The respirator to be cleaned, disinfected and inspected after use on each shift, or more often if necessary, when issued for the exclusive use of one worker, or after each use when used by more than one worker. The respirator to have damaged or deteriorated parts replaced prior to being used by a worker; and, when not in use, to be stored in a convenient, clean and sanitary location. The employer to establish written procedures regarding the selection, use and care of respirators, and a copy of the procedures to be provided to and reviewed with each worker who is required to wear a respirator. A worker not to be assigned to an operation requiring the use of a respirator unless he or she is physically able to perform the operation while using the respirator.

.2 Disposable-type protective clothing that does not readily retain or permit penetration of asbestos fibres. Protective clothing to be provided by the employer and worn by every worker who enters the work area, and the protective clothing shall consist of a head covering and full body covering that fits snugly at the ankles, wrists and neck, in order to prevent asbestos fibres from reaching the garments and skin under the protective clothing to include suitable footwear, and to be repaired or replaced if torn.

.2 Eating, drinking, chewing, and smoking are not permitted in Asbestos Work Area.

.3 Before leaving Asbestos Work Area, the worker can decontaminate his or her protective clothing by using a vacuum equipped with a HEPA filter, or by damp wiping, before removing the protective clothing, or, if the protective clothing will not be reused, place it in a container for dust and waste. The container to be dust tight, suitable for asbestos waste, impervious to asbestos, identified as asbestos waste, cleaned with a damp cloth or a vacuum equipped with a HEPA filter immediately before removal from the work area, and removed from the work area frequently and at regular intervals.

.4 Facilities for washing hands and face shall be provided within or close to the Asbestos Work Area.

.5 Ensure workers wash hands and face when leaving Asbestos Work Area. Facilities for washing are to be supplied by the Contractor.

.6 Ensure that no person required to enter an Asbestos Work Area has facial hair that affects seal between respirator and face.

1.7 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials in accordance with Section 02 81 01 – Hazardous Materials.

.2 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.3 Collect and separate for disposal packaging material in appropriate on-site bins for recycling.

.4 Place materials defined as hazardous or toxic in designated containers.

.5 Handle and dispose of hazardous materials in accordance with the CEPA, TDGA, Regional and Municipal regulations.

.6 Fold up metal banding, flatten and place in designated area for recycling.

.7 Disposal of asbestos waste generated by removal activities must comply with Federal, Provincial and Municipal regulations. Dispose of asbestos waste in sealed double thickness 6 mil bags or leak proof drums. Label containers with appropriate warning labels.

.8 Provide manifests describing and listing waste created. Transport containers by approved means to licensed landfill for burial.

1.8 EXISTING CONDITIONS

.1 Reports and information pertaining to ACMS to be handled, removed, or otherwise disturbed and disposed of during this Project are bound into this specification in Appendix A.

.2 Notify Departmental Representative of suspected ACM discovered during Work and not apparent from drawings, specifications, or report pertaining to Work. Do not disturb such material pending instructions from Departmental Representative.

1.9 SCHEDULING

.1 Hours of Work: perform work during normal working hours as indicated in Contract Documents.

Part 2 Products

2.1 MATERIALS

.1 Drop Sheets:

.1 Polyethylene: 0.15 mm thick.

.2 FR polyethylene: 0.15 mm thick woven fibre reinforced fabric bonded both sides with polyethylene.

.2 Wetting Agent: 50% polyoxyethylene ester and 50% polyoxyethylene ether mixed with water in a concentration to provide thorough wetting of asbestos-containing material.

.3 Waste Containers: contain waste in two separate containers.

.1 Inner container: 0.15 mm thick sealable polyethylene waste bag.

.2 Outer container: sealable metal or fibre type where there are sharp objects included in waste material; otherwise outer container may be sealable metal or fibre type or second 0.15 mm thick sealable polyethylene bag.

.3 Labelling requirements: affix pre-printed cautionary asbestos warning in both official languages that is visible when ready for removal to disposal site.

.4 Slow - drying sealer: non-staining, clear, water - dispersible type that remains tacky on surface for at least 8 hours and designed for purpose of trapping residual asbestos fibres.

.5 Tape: fibreglass - reinforced duct tape suitable for sealing polyethylene under both dry conditions and wet conditions using amended water.

Part 3 Execution

3.1 PROCEDURES

.1 Do construction occupational health and safety in accordance Section 01 35 33 - Health and Safety Requirements.

.2 Work is generally to be conducted in accordance with the procedures stipulated in the WorkSafeBC 2017 publication “Safe Work Practices for Handling Asbestos”. Where there are discrepancies between that document and this specification, the more stringent will apply.

.3 Before beginning Work, isolate Asbestos Work Area using, minimum, preprinted cautionary asbestos warning signs in both official languages that are visible at access routes to Asbestos Work Area.

.1 Remove visible dust from surfaces in the work area where dust is likely to be disturbed during course of work.

.2 Use HEPA vacuum or damp cloths where damp cleaning does not create a hazard and is otherwise appropriate.

.3 Do not use compressed air to clean up or remove dust from any surface.

.4 Prevent spread of dust from Asbestos Work Area using measures appropriate to work to be done.

.1 Use FR polyethylene drop sheets over flooring such as carpeting that absorbs dust and over flooring in Asbestos Work Area where dust and contamination cannot otherwise be safely contained. Drop sheets are not to be reused.

.5 Wet materials containing asbestos to be cut, ground, abraded, scraped, drilled, or otherwise disturbed unless wetting creates hazard or causes damage.

.1 Use garden reservoir type low - velocity fine - mist sprayer.

.2 Perform Work to reduce dust creation to lowest levels practicable.

.3 Work will be subject to visual inspection and air monitoring.

.4 Contamination of surrounding areas indicated by visual inspection or air monitoring will require complete enclosure and clean-up of affected areas.

.6 Frequently and at regular intervals during Work and immediately on completion of work:

.1 Dust and waste to be cleaned up and removed using a vacuum equipped with a HEPA filter, or by damp mopping or wet sweeping, and placed in a waste container, and

.2 Drop sheets to be wetted and placed in a waste container as soon as practicable.

.7 Cleanup:

.1 Place dust and asbestos containing waste in sealed dust-tight waste bags. Treat drop sheets and disposable protective clothing as asbestos waste; wet and fold these items to contain dust, and then place in plastic bags.

.2 Clean exterior of each waste-filled bag using damp cloths or HEPA vacuum and place in second clean waste bag immediately prior to removal from Asbestos Work Area.

.3 Seal waste bags and remove from site. Dispose of in accordance with requirements of Provincial and Federal Authority having jurisdiction. Supervise dumping and ensure that dump operator is fully aware of hazardous nature of material to be dumped and that the appropriate guidelines and regulations for asbestos disposal are followed.

.4 Perform final thorough clean-up of Work areas and adjacent areas affected by Work using HEPA vacuum.

3.2 AIR MONITORING

.1 From beginning of Work until completion of cleaning operations, and where necessary, Departmental Representative will take air samples inside and outside of Asbestos Work Areas in accordance with the recommendations set forth in BC Reg. 296/97 and the current version of the WorkSafeBC Manual entitled “Safe Work Practices for Handling Asbestos”.

.1 Air samples will be collected and analyzed in accordance with NIOSH method 7400.

.2 Air sample results will be provided to the Contractor within 24-hours of sample collection.

.3 Analysis will be conducted by qualified persons or laboratories that take part in a documented QA/QC program for such analysis.

.2 Contractor will be notified to stop Work when airborne fibre measurements exceed 0.05 fiber/cubic centimetre (f/cc), when PPE and protection factors are considered, and to correct procedures.

.1 Additional monitoring will be conducted, where possible, to verify procedural corrections were effective.

.3 If air monitoring shows that areas outside Asbestos Work Area are contaminated as determined by the Departmental Representative, Contractor will be notified to maintain and clean these areas in same manner as that applicable to Asbestos Work Area, at no additional cost to the Contract.

END OF SECTION