1 General

1.1 SECTION INCLUDES

.1 Methods and procedures for deconstruction of structures and parts of structures, elements as shown on drawings.

1.2 RELATED SECTIONS

.1 Section 01 33 00 - Submittal Procedures.
.2 Section 01 74 22 - Construction/Demolition Waste Management And Disposal.
.3 Section 01 35 43 - Environmental Procedures.
.4 Section 01 35 29 - Health and Safety Requirements.

1.3 REFERENCES

.1 Canadian Standards Association (CSA International).
  .1 CSA S350-(R1998), Code of Practice for Safety in Demolition of Structures.
.2 Federal Legislation.
  .1 Canadian Environmental Assessment Act (CEAA), 1992, c. 37.
  .2 Canadian Environmental Protection Act (CEPA), 1999, c. 33.

1.4 DEFINITIONS

.1 Alternate Disposal: reuse and recycling of materials by designated facility, user or receiving organization which has valid Certificate of Approval to operate. Alternative to landfill disposal.
.2 Deconstruction: systematic dismantling of structure in a manner that achieves safe removal/disposal of hazardous materials and maximum salvage/recycling of materials.
  .1 Ultimate objective is to recover potentially valuable resources while diverting from landfill what has traditionally been significant portion of waste system.
.3 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, including but not limited to: corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or other material that can endanger human health, well being or environment if handled improperly.
.4 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
.5 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form.
  .1 Recycling does not include burning, incinerating, or thermally destroying waste.
.6 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
  .1 Salvaging reusable materials from remodeling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
  .2 Returning reusable items including pallets or unused products to vendors.
.7 Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
.8 Source Separation: acts of keeping different types of waste materials separate, beginning from first time they became waste.
.9 Waste Management Coordinator (WMC): contractor representative responsible for supervising waste management activities as well as coordinating related, required submittal and reporting requirements.

1.5 SUBMITTALS

.1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
.2 Prior to beginning of Work on site submit detailed Waste Reduction Workplan in accordance with Section 01 74 22 - Construction/Demolition Waste Management and Disposal and indicate:
  .1 Descriptions of and anticipated quantities in percentages of materials to be salvaged reused, recycled and landfilled.
  .2 Schedule of selective demolition.
  .3 Number and location of dumpsters.
  .4 Anticipated frequency of tippage.
  .5 Name and address of haulers.

1.6 QUALITY ASSURANCE

.1 Ensure Work is performed in compliance with CEPA.

1.7 ENVIRONMENTAL REQUIREMENTS

.1 Do Work in accordance with Section 01 35 43 - Environmental Procedures.

1.8 SITE CONDITIONS

.1 Existing Conditions.
  .1 Should materials resembling spray or trowel applied asbestos or other designated substance listed as hazardous be encountered in course of deconstruction, stop work, take preventative measures, and notify Departmental Representative immediately. Do not proceed until written instructions have been received.
.2 Protection.
  .1 Take precautions to protect environment.

2 Products

2.1 EQUIPMENT

.1 Leave equipment and machinery running only while in use.
.2 Where possible use water efficient wetting equipment/trucks/attachments when minimizing dust.

3 Execution

3.1 SITE VERIFICATION OF CONDITIONS

.1 Determine if Environmental Assessment (EA) is required under requirements of CEAA.
  .1 If necessary, employ licensed consultant to perform EA.
  .2 Communicate findings and conclusions in writing to Departmental Representative prior to start of Work.

3.2 PREPARATION

.1 Do Work in accordance with Section 01 35 29 - Health and Safety Requirements.

3.3 DISASSEMBLY

.1 Employ workmanship procedures which minimize damage to materials and equipment.
.2 Ensure workers and subcontractors are briefed to carry out work in accordance with appropriate deconstruction techniques.
.3 Deconstruct in accordance with CSA S350 and.
.4 Workers must utilize adequate fall protection.

.5 Systematically remove finishes.
.6 Source separate for recycling materials that cannot be salvaged for reuse.
.7 Remove materials that cannot be salvaged for reuse or recycling and dispose of in accordance with applicable codes at licensed facilities.

3.4 PROCESSING

.1 Supply separate, marked disposal bins for categories of waste material.

3.5 REMOVAL FROM SITE

.1 Transport material designated for disposal by approved haulers in accordance with applicable regulations.

3.6 CLEANING AND RESTORATION

.1 Keep site clean and organized throughout deconstruction.
.2 Upon completion, remove debris and leave work site clean.
.3 Upon completion of project, reinstate areas affected by Work to condition which existed prior to beginning of Work.

End of Section

1 General

1.1 SUMMARY

.1 Comply with requirements of this Section when performing the following Type-1 operations as defined in Public Works and Government Services Canada (PWGSC) Deputy Minister Directive (DIR:057) *Respecting Asbestos Management in Federal Owned or Leased Buildings or Facilities containing Asbestos*:

- .1 Removing vinyl floor tiles. Cut floor tiles mentioned above using heavy duty scrapers. Do not use electric powered scrapers. If required, shape, grind, drill, scrape or abrade materials mentioned above using hand powered tools, or using power tools equipped with a HEPA filter.

.2 Asbestos was identified in non-friable building material, vinyl floor tiles (3% Chrysotile Asbestos) present on floors in Room A-229. The vinyl floor tiles are 0.3 m by 0.3 m square and are light green with grey streaks in appearance.

- .1 Recommend use of Type 1 (Minimum Precautions) for the abatement of vinyl floor tiles using hand tools and polyethylene sheeting.

1.2 RELATED SECTIONS

.1 01 10 10 - General Instructions.
.2 01 35 29 - Health and Safety Requirements.
.3 01 35 43 - Environmental Procedures.

1.3 REFERENCES

.1 Prince Edward Island Occupational Health and Safety Act.

- .1 PEI Reg. Part 49 - Asbestos Regulations

.2 PWGSC Deputy Minister Directive (DIR:057) Respecting Asbestos Management in Federal Owned or Leased Buildings or Facilities containing Asbestos.

- .1 Appendix 5 - Classification of Asbestos-Related Work
- .2 Appendix 6 - Work Procedures

.3 Stantec Consulting Limited.

- .1 FINAL REPORT - Asbestos Management Plan (AMP), AAFC Crops and Livestock Research Centre, Charlottetown, PEI, Jan. 21, 2011.
- .2 FINAL REPORT - Asbestos-Containing Materials Assessment, AAFC Crops and Livestock Research Centre, Charlottetown, PEI, Jan. 21, 2011.

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 identified under existing conditions including fallen materials and settled dust with an asbestos concentration of 1.0 % or greater.
.4 Asbestos Work Area: area where work takes place which will, or may, disturb ACMs.
.5 Authorized Visitors: Departmental Representative, Departmental Representative or designated representative, and representatives of regulatory agencies.
.6 Non-Friable Material: material that when dry cannot be crumbled, pulverized or powdered by hand pressure.
.7 Occupied Area: any area of the building or work site that is outside Asbestos Work Area.
.8 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.

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

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

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

.4 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.

.5 Submit signed PWGSC Contractor Notification and Acknowledgement (AMP-Appendix 2) form to PWGSC Project Manager.

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 Safety Requirements: worker and visitor protection.

.1 Protective equipment and clothing to be worn by workers while in Asbestos Work Area include:

.1 Non-powered reusable or replaceable filter-type respirator equipped with HEPA filter cartridges, personally issued to worker and marked as to efficiency and purpose, suitable for protection against asbestos and acceptable to Prince Edward Island Occupational Health and Safety Act Standards (part 49.15).

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

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

.3 Before leaving Asbestos Work Area, dispose of protective clothing as contaminated waste as specified.

.4 Ensure workers wash hands and face when leaving Asbestos Work Area.

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

.2 Visitor Protection:

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

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

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

1.7 WASTE MANAGEMENT AND DISPOSAL

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

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

.5 Disposal of asbestos waste generated by removal activities must comply with Provincial Regulations (OHSA Part 49) and Federal Transportation of Dangerous Goods Regulations. Dispose of asbestos waste in sealed double thickness 6 ml bags or leak proof drums. Label containers with appropriate warning labels.

.6 Provide manifests describing and listing waste created. Transport containers by approved means to landfill with a Certificate of Approval for burial.

1.8 EXISTING CONDITIONS

.1 Concentrations of Chrysotile asbestos (3 %) have been identified in 0.3 m x 0.3 m vinyl floor tile - light green with grey streaks colour.

.2 Notify Departmental Representative of friable material 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 OWNER'S INSTRUCTIONS

.1 Before beginning Work, provide Departmental Representative satisfactory proof that every worker has had instruction and training in hazards of asbestos exposure, in personal hygiene and work practices, and in use, cleaning, and disposal of respirators and protective clothing.

.2 Instruction and training related to respirators includes following minimum requirements:

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

.3 Instruction and training must be provided by a competent, qualified person.

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 preprinted cautionary asbestos warning in both official languages that is visible when ready for removal to disposal site.
- .4 Tape: tape suitable for sealing polyethylene to surfaces under both dry and wet conditions using amended water.

3 Execution

3.1 PROCEDURES

.1 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.

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

course of work.

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

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

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

.3 Use Fibre Reinforced (FR) polyethylene drop sheets over cabinets, furnishings, etc. including flooring such as carpeting that absorbs dust and over flooring in Asbestos Work Area where dust and contamination cannot otherwise be safely contained. Place FR polyethylene over entrance door to room (i.e. doorway air flap).

.4 Ensure proper equipment is on site to perform the removal of non-friable asbestos containing 0.3 m x 0.3 m vinyl floor tiles.

.5 Wet materials containing asbestos to be removed 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.

.6 Remove non-friable asbestos containing 0.3 m x 0.3 m vinyl floor tiles using hand powered tools (i.e. heavy duty scrapers, screw drivers, etc.). Use hot air gun to loosen tiles if necessary.

.7 As each tile is removed, place into asbestos waste receptor. Do not break into smaller pieces.

.8 Work will be subject to visual inspection.

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

.9 Clean-Up :

.1 Frequently during Work and immediately after completion of Work, clean up dust and asbestos-containing waste using HEPA vacuum or by damp mopping.

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

.3 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. Repair any punctures to asbestos waste bags as soon as they are detected. Thoroughly clean tools and equipment before reusing.

.4 Seal waste bags and remove from site. Dispose of in accordance with requirements of Provincial/Territorial and Federal Authority having jurisdiction. Supervise dumping and ensure that waste hauler is fully aware of hazardous nature of material to be dumped and that any and all applicable guidelines and/or regulations for asbestos disposal are followed. Perform final thorough clean-up of Work areas and adjacent areas affected by Work using HEPA vacuum.

End of Section