

**Part 1            General**

**1.1               RELATED REQUIREMENTS**

- .1      Division 01 – General requirements
- .2      Section 01 41 00 – Regulatory requirements
- .3      Section 01 74 21 – Construction-demolition waste management and disposal

**1.2               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 humans; or degrade environment aesthetically, culturally and/or historically.
  - .2      Environmental protection: prevention/control of pollution and, habitat and environmental disturbance during construction. The prevention of pollution and damage to environment covers the protection of the soil, water, air, biological and cultural resources; it also includes visual aesthetics, noise, solid, chemical, gas and liquid wastes, radiation energy, radioactive substances and other pollutants.
- .2      Reference Standards:
  - .1      Fisheries Act
  - .2      Canadian Environmental Protection Act, 1999 (1999)
  - .3      Navigation Protection Act LPN, L.R.C (1985), ch. N-22
  - .4      Politic of Soil Protection and Rehabilitation of Contaminated Sites (MSDEFCC ) and Environmental analyses sampling guide relating to it.

**1.3               ACTION AND INFORMATIONAL SUBMITTALS**

- .1      Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2      Product Data:
  - .1      Submit one (1) soft copy of required descriptive records, following the terms of WHMIS, in accordance with Section 01 35 29.06 - Health and Safety.
- .3      Before commencing construction activities or delivery of materials to site, submit Environmental Protection Plan to Departmental Representative.
- .4      Environmental Protection Plan must include comprehensive overview of known or potential environmental issues to be addressed during construction.
- .5      Address topics at level of detail commensurate with environmental issue and required construction tasks.
- .6      Include in Environmental Protection Plan:

- .1 Names of persons responsible for ensuring adherence to Environmental Protection Plan.
- .2 Names and qualifications of persons responsible for manifesting hazardous waste to be removed from site.
- .3 Names and qualifications of persons responsible for training site personnel.
- .4 Descriptions of environmental protection personnel training program.
- .5 Drawings indicating locations of proposed temporary excavations or embankments for haul roads, stream crossings, material storage areas, structures, sanitary facilities, and stockpiles of excess or spoil materials including methods to control runoff and to contain materials on site.
- .6 Traffic Control Plans including measures to reduce erosion of temporary roadbeds by construction traffic, especially during wet weather.
  - .1 Plans to include measures to minimize amount of material transported onto paved public roads by vehicles or runoff.
- .7 Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use.
  - .1 Plan to include measures for marking limits of use areas and methods for protection of features to be preserved within authorized work areas.
- .8 Spill Control Plan to include procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.
- .9 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
- .10 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, are contained on project site.
- .11 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.
- .12 Waste Water Management Plan identifying methods and procedures for management 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.

#### **1.4 FIRES**

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

#### **1.5 DRAINAGE**

- .1 Develop and submit erosion and Sediment Control Plan (ESC) identifying type and location of erosion and sediment controls provided. Plan to include monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.
- .2 Storm Water Pollution Prevention Plan (SWPPP) to be substituted for erosion and sediment control plan.

- .3 Provide temporary drainage and pumping required to keep excavations and site free from water.
- .4 Ensure pumped water into waterways, sewer or drainage systems is free of suspended materials.
- .5 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

## **1.6 WASTE MANAGEMENT AND DISPOSAL OF EXCAVATED SEDIMENTS**

- .1 Wastes on sea bed
  - .1 Remove diverse elements (cables of steel, fender, tires and other similar materials) which may be met in the top layer of the sea bed.
  - .2 Sort materials for reuse/recycling or elimination
  - .3 Remove the unfined wastes of materials and store temporarily these materials on a tight surface or on a tight tarpaulin or directly in tight containers or tight tipper trucks.
  - .4 All waste material for removal become Contractor's property and remove waste materials from sea bed cleaning at daily regularly scheduled times.
  - .5 Waste materials not reused, salvaged, or recycled must be arranged in one or several authorized sites by the Minister of Sustainable Development, Environment and the Fight against Climate Change (MSDEFCC)
- .2 Excavated sediments
  - .1 Dredge sediments in front of the quay according to the specifications.
  - .2 Install a silt barrier to avoid the distribution of contaminants and fragments during the excavation of sediments.
  - .3 Manage excavated sediments in according to the results of analyses obtained during the sedimentary characterization, according to existing standards (Refer to Politic of Soil Protection and Rehabilitation of Contaminated Sites (MSDEFCC) and to *The Règlement sur le stockage et les centres de transfert de sols contaminés (RSCTSC)*).
  - .4 All excavated sediments must be managed as soil.
  - .5 The harnessing and the management of waters of drying out is the Contractor's responsibility. The latter is responsible for its method. This method will be subjected to the Ministry for approval and this one has to be in compliance with the current laws and regulations.
  - .6 Manage waters of drying out in accordance with the current laws and regulations. (Criteria of the quality of the water of surface, MSDEFCC).

## **1.7 WORK ADJACENT TO WATERWAYS**

- .1 Construction equipment to be operated on land only.
- .2 Use waterway beds for borrow material only after written receipt of approval from Departmental Representative.
- .3 Waterways to be kept free of excavated fill, waste material and debris.

- .4 Carry out vehicle maintenance and refuelling at a minimum distance of 30 meters from shore.
- .5 In case some of the equipment must be within 30 meters of water body, the Contractor shall submit a protection plan for the operations to the Departmental Representative.
- .6 Store fuel, or other hazardous substance, more than 30 meters away from water body. If temporary oil facilities are used, then storage facilities must be planned in accordance with applicable rules and regulations. Storage systems must be on impervious surfaces. A response kit in case of oil spills must be available on the site.

## **1.8 TRANSPORTATION OF MATERIALS**

- .1 Transportation of materials on public roads to the site shall be done from Monday to Saturday unless the competent authorities decide otherwise. Transportation shall not be allowed on Sundays and public holidays.
- .2 The Contractor shall ensure the proper functioning of the trucks used. Any truck or other means of transportation that the Departmental Representative considers too noisy shall not be used to transport materials unless it is repaired or improved upon to make it acceptable.
- .3 The Contractor shall use proper signs and cooperate with the municipality, the Departmental Representative and other competent authorities, so as to minimize the impact of transportation on the lives of residents around where the trucks pass and the project site.
- .4 Use tarpaulin to cover the materials during transportation.
- .5 Use watertight bins to transport wet materials such as dredged material.
- .6 Regularly clean, or at the request of the Departmental Representative, public roads using a sweeper.

## **1.9 PRESERVING AQUATIC LIFE AT THE PROJECT SITE**

- .1 It is forbidden to dispose waste from demolition in water.
- .2 As the works progress, the Contractor shall thoroughly clean all water bodies around to recover any debris from the work.
- .3 The Contractor shall minimize all work close to water bodies, be it along beaches or river banks. At no time should heavy machinery be taken into water bodies located outside the project site.
- .4 It is advisable to use equipment that minimizes mud suspension. Reducing the speed of the bucket as it drops and lifts during excavation will minimize the dispersion of the material in the water and it is important to educate the operators of dredging equipment on the issue.
- .5 Dredging should be done only in favourable weather conditions.
- .6 Machinery and equipment used on and under water must use biodegradable vegetable oil.
- .7 Prevent dispersal of the dredged material, algae, mud, dust and water contained in the mud from the harbour and other water bodies.

- .8 The Contractor shall limit the work area in which the equipment and machinery will be kept at all times.
- .9 All granular materials used in this project must be clean and free from contamination.

#### **1.10 POLLUTION CONTROL**

- .1 Maintain temporary erosion and pollution control features installed under this Contract.
- .2 Control emissions from equipment and plant in accordance with local authorities' emission requirements.
- .3 Prevent sandblasting and other extraneous materials from contaminating air and waterways beyond application area.
  - .1 Provide temporary enclosures where indicated or directed by Departmental Representative.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.
- .5 Machinery used will be in good working condition, free of any contaminant and any adjustments will be made before it is brought on site. Ensure that there are no leakages of fuel, oil or grease. The Contractor must send a mechanical inspection certificate to the Departmental Representative on the condition of equipment just before their delivery to the site.
- .6 Avoid cleaning machines close to water.
- .7 Do not leave the engines of machines and trucks running unnecessarily.
- .8 An up-to-date environmental response kit must be in every machine, including even those for subcontractors.
- .9 In the case of an accidental spill of oil, fuel or other environmental incident, report the matter immediately to the Departmental Representative and the following authorities:
  - .1 Environment Canada, Environmental Emergencies Centre. Tél.: 866-283-2333.
  - .2 Ministry for Sustainable Development, Environment and the Fight against Climate Change (MDDELCC). Tél.: 1-866-694-5454.
  - .3 Canadian Coast Guard, Maritime Pollution. Tél.: 800-363-4735.
  - .4 Site Supervisor.
- .10 The Contractor shall make every effort to clog the source of the spills within the recommended security limits. Oil booms and/or oil absorbing mats will be used to contain spills. The mats or oil booms will be stored in a specific container at the shore and will be towed to absorb or contain spills. The mats and booms will be loaded inside sealed containers for treatment and/or appropriate disposal.
- .11 Soil contaminated by accidental spills should be stockpiled on waterproof tarpaulins and must be covered with waterproof tarpaulins, as well. Environmental quality checks should be done for such materials before they are taken away from the site, in accordance with the rules and regulations, and MDDELCC guidelines. They will then be taken to an authorized site.

- .12 Water contaminated by accidental spills will be kept and checked or immediately handed over to a specialized company, in accordance with the rules and regulations, and MDDELCC guidelines.
- .13 All relevant staff on the site will be fully trained on procedures for emergency response to spills, methods and use of equipment, as well as relevant materials.

#### **1.11 CONSTRUCTION OF TREATED TIMBER CRIBWORK**

- .1 Construction of treated timber cribwork have to be realized at a sufficient distance of a watercourse or other sensitive environment to avoid any contamination by the storing, the fragments or the sawdust.
- .2 Works have to be done in accordance with Best Management Practices for the use of treated wood in aquatic and wetland environments (WWP Institute, 2011).
- .3 Timbers shall be covered with tarpaulin during transport and until implementation.
- .4 Fragments and sawdust will have to be got back and arranged according to the current regulations for this kind of material. If these materials are temporarily stored on site, they will have to find themselves between tarpaulin or in a tight container.

#### **1.12 NONCOMPLIANCE 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 Take action only 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 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.

- .2 Bury rubbish and waste materials on site where directed after receipt of written approval from Departmental Representative.
- .3 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.
- .4 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .5 Waste Management: separate waste materials for reuse/recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
  - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

**END OF SECTION**