

**Part 1            General**

**1.1            RELATED SECTIONS**

- .1      Section 01 11 01 – Work related general information
- .2      Section 01 14 00 – Restrictions
- .3      Section 01 52 00 – Construction site structures
- .4      Section 01 74 21 – Construction waste management and elimination
- .5      Section 01 74 25 – Solid waste and dry materials
- .6      Section 02 41 16 – Construction demolition

**1.2            DESCRIPTION**

- .1      This section describes the environmental requirements for the Project. The Contractor must respect these requirements at all times during the work described in this specifications document.
- .2      Other sections may also include environmental protection requirements. Appendix A of this document includes a list of mitigation measures that must be taken alongside the measures in the specifications. These specific requirements are therefore in addition to the requirements described in this section. Should two elements contradict each other, the more restrictive element takes precedence.

**1.3            DEFINITIONS**

- .1      Contamination, pollution and damage to the environment: Presence of chemical, physical or biological elements that are harmful to the health and well-being of humans and/or that affect ecological balances that are important to humans; that affect species that are important to humans; or that degrade the aesthetic, cultural or historical characteristics of the environment.
- .2      Sustainable development: General concept that accounts for the interconnectedness of society, the economy and the environment and that aims to create balance between these spheres through a long-term vision of development activities.
- .3      Invasive species: Species that is not native to the environment in which it is found, but is able to reproduce and is capable of harming human health, the economy or the environment. In addition to plants, invasive species include animals, fungi or microorganisms that pose a threat to the area's biodiversity.
- .4      Environmental protection: Prevention and/or control of contamination, pollution and disturbances to the habitat(s) and the environment during construction. "Prevention of

pollution and environmental damage” includes protection of the soil, water, air and biological and cultural resources; it also involves managing appearance, noise, radiant energy, radioactive material and solid, liquid, chemical and gaseous waste, as well as other pollutants.

#### 1.4 REFERENCES

The primary laws, regulations, authorizations and guidelines in effect include but are not limited to:

.1 Government of Canada:

- .1 *Canadian Environmental Protection Act (1999) (CEPA).*
- .2 *Canada Shipping Act, 2001.*
- .3 *Transportation of Dangerous Goods Act, 1992.*
- .4 *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations.*
- .5 *Transportation of Dangerous Goods Regulations.*
- .6 Documentation from the Canadian Council of Ministers of the Environment (CCME).
- .7 *Code of Practice for Environmental Management of Road Salts.*
- .8 *Federal Sustainable Development Strategy and the FCSAP’s Sustainability Strategy and implementation strategy (Punt and Lomas-Jylha, 2012).*
- .9 *Navigation Protection Act (NPA).*
- .10 *Approval under the Navigation Protection Act (NPA).*
- .11 Any other law, regulation or guideline relevant to the Project.

.2 Government of Quebec:

- .1 *Environment Quality Act (EQA).*
- .2 *Regulation respecting the burial of contaminated soils (RBCS).*
- .3 *Regulation respecting the landfilling and incineration of residual materials (RLIRM).*
- .4 *Regulation respecting snow elimination sites.*
- .5 *Regulation respecting hazardous materials (RHM).*
- .6 *Land Protection and Rehabilitation Regulation (LPRR).*
- .7 *Regulation respecting contaminated soil storage and contaminated soil transfer stations (RCSSCSTS).*
- .8 *Transportation of Dangerous Substances Regulations.*
- .9 *Regulation respecting the quality of the atmosphere.*
- .10 *Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains.*
- .11 *Soil Protection and Contaminated Sites Rehabilitation Policy .*
- .12 *Action Guide — Soil Protection and Contaminated Sites Rehabilitation .*

.3 Ministère des Transports du Québec:

- .1 *Ouvrages routiers, Normes, Tome II – Construction routière* [French only].
- .4 Studies and reports available upon request:
  - .1 WSP 2017. *Sécurisation du quai de Mont-Louis en Gaspésie, Évaluation des effets environnementaux*. [French only]. Report produced for Transport Canada. Project no.: 151-09740-02. 8 chapters and appendices.
  - .2 EnviroServices, 2017. *Caractérisation environnementale des sédiments et du remblai du quai, quai commercial de Saint-Maxime-du-Mont-Louis*. [French only] Prepared for Public Services and Procurement Canada and Transport Canada. 42 pages + Appendices
  - .3 Franz Environmental, 2015. *Plan de gestion de la contamination et des déblais (volets 1 à 3 : Synthèse des informations environnementales, évaluation des plans de gestion et élaboration du programme de suivi) quai de Mont-Louis, Gaspésie, Québec*. [French only] Prepared for Public Works and Government Services Canada. 60 pages + Appendices

## 1.5 ENVIRONMENTAL SPECIALIST

- .1 The Contractor must hire, at their own expense, an Expert Environmental Consultant (“Environmental Consultant”) to **develop and implement** an environmental protection program as defined in the following section and apply all of the environmental measures listed in this document.
- .2 The Contractor’s Environmental Consultant must have at least ten (10) years of experience in environmental monitoring on construction sites. They must be able to establish an environmental protection program and follow MDDELCC standards for soil and water sampling.
- .3 The Contractor must provide the chosen Environmental Consultant’s CV to the Departmental Representative. The Departmental Representative may reject the Environmental Consultant if they do not have the required experience.

## 1.6 DOCUMENTS AND SAMPLES TO SUBMIT FOR APPROVAL/INFORMATION

- .1 Submit an Environmental Protection Program to the Departmental Representative for examination and approval.
- .2 The measures described in the Environmental Protection Program must be designed to ensure that activities generate as few residual materials and toxic and undesirable substances as possible, and disrupt the shoreline as little as possible.
- .3 The measures described in the Environmental Protection Program must provide sufficient detail in line with the work to be completed and the environmental problems that may be faced.

- .4 The Environmental Protection Program must allow the Departmental Representative to verify that the measures taken by the Contractor minimize the potential impact on the environment while meeting the requirements of this section and all other sections related to the environment and sustainable development.
- .5 The Departmental Representative's acceptance of the Environmental Protection Program does not mean that the Contractor may establish supplementary measures or modify existing measures if the applicable regulations are not followed or if the authorizations (municipal or provincial authorization, permits, approvals) from the relevant authorities or the requirements of the specifications document are not respected during the work.
- .6 The Environmental Protection Program must include at least the following:
  - .1 Role, responsibility and organization:
    - 1 The names, phone numbers and roles of the people overseeing the enforcement of the Program.
    - .2 A diagram showing where the Contractor's Consultant has the authority to intervene in or stop work if the requirements are not met.
  - .2 A complete overview, per activity, of known and potential environmental risks and problems to be managed during the work.
  - .3 Plans for all zones inside the work area, showing the planned activities for each and indicating restricted-access and off-limits zones (such as the banks outside the temporary platform). These plans must include ways to indicate the boundaries of usable areas, as well as protective measures for elements that are located inside the authorized work area but that must be protected.
  - .4 Plans and drawings indicating the placement and design of access roads (if there are sites outside the work area); temporary work areas if needed; washing and decontamination areas for debris and equipment; material storage; and storage, collection, confinement, treatment and disposal structures for wastewater.
  - .5 Plans and drawings showing the methods to be used for managing runoff, controlling erosion and soil transport and confining materials to the construction site, including their placement.
  - .6 The measures to be taken to:
    - .1 Prevent soil erosion.
    - .2 Protect the quality of surface water.
    - .3 Properly treat wastewater (as applicable: truck supernatants, washing/cleaning water, process water, wastewater, treated water, etc.).
    - .4 Prevent contamination.
    - .5 Prevent air pollution.
    - .6 Manage nuisances.
    - .7 Reduce and manage residual materials.
    - .8 Protect the land.

- .9 Protect flora and fauna.
  - .10 Ensure efficient, environmentally friendly use of resources.
  - .11 Protect commercial and industrial infrastructures.
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- .7 The procedure for detecting and addressing non-compliances, as well as corrective and preventive measures.
  - .8 A list of potentially dangerous substances that will be used on the site (including chemical and petroleum products).
  - .9 A list of final treatment sites for waste materials and contaminated and non-contaminated soil, along with a copy of the permits and authorizations showing that these sites are authorized to receive these materials.
  - .10 A Training and Education Plan that includes:
    - .1 A description of the Environmental Protection Training and Education Plan for affected staff. This should include a review of the risks and steps to be taken for each new activity, an environmental “toolbox talk” at the biweekly site meeting and other meetings as needed as the work progresses.
  - .11 An Emergency Spill Response Plan that includes:
    - .1 A communication scheme.
    - .2 An intervention scheme.
    - .3 The names and contact information for the relevant authorities (Implementation Manager, Intervention Manager, Departmental Representative, spill recovery company, Canadian Coast Guard Environmental Response emergency line, Environment Canada’s Environmental Emergencies program, emergency line for the Ministère du Développement durable, de l’Environnement et de la Lutte contre les changements climatiques [MDDELCC], etc.).
    - .4 Areas of application and content.
    - .5 High-risk activities.
    - .6 Prevention plan.
    - .7 Preparatory measures (equipment, training, simulations).
    - .8 Intervention procedures.
    - .9 Communication procedures (reports to be produced).
    - .10 The Emergency Spill Response Plan must meet the requirements of the environmental impact study, all Project authorizations and standard ISO 14001. It must cover all planned activities under this contract up until the final

delivery of excavated soils to the final waste management sites and include the risks associated with the means of transportation for said soils.

- .12 Spill reports:
  - .1 Send the spill summary report to the Departmental Representative within twenty-four (24) hours of the beginning of the event.
  - .2 Send the full spill report to the Departmental Representative within seventy-two (72) hours of the beginning of the event.

## **1.7 PREVENTING EROSION AND SOIL LEACHING**

- .1 Take the necessary steps, including work monitoring and production of reports, to ensure that the measures comply with federal, provincial and municipal rules and regulations and with the requirements in *Ouvrages routiers, Normes, Tome II – Construction routière* from Quebec's Ministère des Transports.
- .2 Limit soil dispersion from running water in the work area using sediment barriers, detour ditches towards vegetation areas, settling basins or other means.
  - .1 Silt fence: A geotextile attached to posts driven into the soil. It comes pre-assembled and ready for installation. The geotextile must have a uniform texture and appearance, with no defects, weak points or tears that could compromise its ability to work properly.

- .3 Limit infringement onto the water by the temporary work area (temporary work platform). Protect the shorelines as defined in the MDDELCC's *Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains* or the regulations of the relevant municipality or RCM.
- .4 Before installing the temporary work platform, place a geotextile layer covered in an underlay of fine material as indicated in the plan in order to prevent perforation.
- .5 Construction machinery (machinery, trucks, all other equipment) is not allowed on the banks.
- .6 Direct runoff and drainage water around areas that are susceptible to erosion. If this is not possible, place protective structures (berms, detour trenches) around the area.
- .7 Limit the erosion of exposed soil and fill from excavation and filling so that suspended matter does not reach the water. Cover exposed soil or piles of materials as needed.
- .8 Maintain temporary structures that are designed to prevent and control erosion and pollution and that have been installed as part of this contract.

## **1.8 MATERIAL TRANSPORTATION**

- .1 Materials can be transported to the construction site or disposal sites on public roads from Monday to Saturday inclusively, unless otherwise indicated by the relevant authorities. Transport on Sundays or statutory holidays is prohibited.
- .2 Materials may be transported through the municipality between 7 AM and 7 PM during the tourism high season (July and August). If necessary, this time frame can be extended to 10 PM.
- .3 Vehicles must stay within the normal speed limit on 7th and 10th Streets.
- .4 Continually monitor the cleanliness of 7th and 10th Streets and clean them as needed.
- .5 Be careful when transporting oversized vehicles (power shovels on a transportation platform) on 7th and 10th Streets in order to avoid damaging the electrical wires crossing the street.
- .6 The Contractor must ensure that the trucks being used are in good working order. Any trucks or other modes of transportation that are louder than the acceptable sound limits or deemed too loud by the Departmental Representative must cease their activities or be repaired or modified so that they fall within the acceptable sound limits.
- .7 The Contractor must use adequate signage and cooperate with the municipality, the Departmental Representative and all other relevant authorities to minimize the effects of transport activities on people living near the construction site and transport routes.

- .8 The Contractor must ensure that contaminated soil and mud do not leave the construction site. The Contractor must submit planned prevention methods for approval by the Departmental Representative. No matter what method is used (stone layer, washing area, etc.), the Contractor must manage and treat the mud and wastewater (if applicable) from the trucks. The recovered residual soil must be piled on an impermeable surface and covered with an impermeable membrane. If applicable, water used for washing must be collected and stored in an impermeable basin or reservoir. The soil and water must be analyzed to determine their quality, then appropriately disposed of once the results have been obtained. The number of samples collected to determine the residual soil and water quality must comply with the MDDELCC's sampling standards.
- .9 Regularly clean public roads using a mechanical street sweeper.
- .10 Before work begins, the Contractor and the Departmental Representative must take photographs and videos of 7<sup>th</sup> and 10<sup>th</sup> Streets. Once work ends, the Contractor must return the public roads to a state that is at least equal to their initial state as soon as possible. The photographs and video will serve as a reference for cleaning.

## **1.9 PROTECTION OF FLORA, FAUNA AND THE AQUATIC ENVIRONMENT**

- .1 Protection against invasive species:
  - .1 Marine ecosystems are vulnerable to exotic and invasive species, which may be introduced when floating equipment is used. To prevent the introduction of exotic and invasive species during work using floating equipment, the following steps must be taken. The risk of introducing exotic and invasive species can be reduced by using clean floating equipment that has been stored on dry land before work has begun. Thus:
    - .1 For equipment that has been cleaned and stored on dry land just before work has begun, the Contractor must:
      - .1 Provide a written list of the equipment, its storage area and its anticipated launch date(s) to the Departmental Representative. The Departmental Representative must be able to verify that the equipment is in fact clean and has been stored on dry land before the beginning of work.



- .2 For equipment that is already in the water, the Contractor must demonstrate, at their own expense, that the equipment is free from invasive species
  - .1 The Contractor must provide a written inspection report, certifying that the equipment is free from invasive species, just before this equipment is launched. The inspection report must be written by a biologist who is qualified to identify benthic fauna. Sampling must be performed by divers. The report must contain but is not limited to the following: list of equipment inspected (tugboats, scows, etc.), date and location of inspection, summary of sampling and identification protocols, list of samples, table of results and a statement regarding the presence or absence of invasive species. The report must contain photographs and must be signed by the qualified biologist before being submitted to the Departmental Representative alongside the other necessary contractual documents before the equipment is launched.
  - .2 If the inspection report confirms the presence of invasive species, the Contractor must replace the equipment or thoroughly clean it at their own expense. A description of the cleaning must be included with the new (post-cleaning) inspection report alongside all of the previously mentioned information.
  - .3 The Departmental Representative reserves the right to request a second opinion at any time. In the event that invasive species are observed, the Contractor must stop all work and clean the targeted equipment at their own expense, then follow the previously detailed procedure.  
before allowing it to travel towards the work site. Thus:
- .1 Minimizing resuspension

The Contractor must take all necessary steps to prevent sediment resuspension and the diffusion of suspended matter during excavation, stone placing and demolition and handling of the underwater concrete slabs and other underwater structures.
- .2 Work will be performed based on the tides. The Contractor must schedule work so that their machinery is always on dry land. For work in water that is likely to create turbidity and suspended matter, the Contractor must perform work at low tide whenever possible.
- .3 The Contractor must stop work during adverse weather that may affect the management of suspended matter emissions. Doing so will prevent the dispersion and spread of soils, sediments and contaminants in the water.
- .4 Visually monitor suspended matter at all times.

- .5 At all depths within 100 m of the work area, the level of suspended matter can be no more than 25 mg/L above normal.  
(excluding an acute source of suspended matter, significant rainfall or melting).
  - .6 Storing stone or demolition materials in the water or on the banks is prohibited, except within the area that is to be used for a temporary platform.
  - .7 All coarse aggregates (large stones) used during this project must be clean.
  - .8 All granular materials with a fine component coming from outside the construction site must be accompanied by a physicochemical analysis certificate proving that they are not contaminated. The per-volume analysis rate must comply with the MDDELCC's reference guides and notebooks for environmental sampling.
  - .9 When materials are being placed on the sea floor, slow the descent and raising speed of the bucket and avoid flattening surfaces by dragging the bucket along the bottom in order to prevent resuspension and to minimize suspended matter.
  - .10 Place materials directly on the sea floor instead of emptying the bucket as it descends in order to minimize the increase in suspended matter.
  - .11 Keep the construction site clean at all times and recover any debris from the water as work progresses.
- .3 Land flora and fauna:
- .1 Protect plants, trees and other sensitive elements on the construction site and in the neighbouring areas. If work needs to be done near trees, shrubs or other plants, mark and respect the optimal protection zone indicated by development standards.
  - .2 Before creating the temporary work area, check for animals and occupied nests. If any are found, inform the Departmental Representative and await additional instructions before continuing.
  - .3 If structures need to be placed on the banks, they must be placed before mating and brooding season for local birds, which generally occurs from May 1 to August 1.
  - .4 Travelling on the bank outside the temporary work area is prohibited.
  - .5 Work may not surpass the boundaries outlined in the specifications at any time.

- .4 De-icing and snow removal:
  - .1 The Contractor may sand as needed, but must minimize the impact on the aquatic ecosystems near the construction site as much as possible.
  - .2 De-icing salt may not be used in the work area unless explicitly authorized by the Departmental Representative.
    - .3 Snow that has been sanded or salted must be removed completely and transported to a snow disposal site bearing a certificate of authorization in accordance with the *Regulation respecting snow elimination sites*.
- .4 If de-icing salt has not been used, the Contractor may plow the snow without removing it. Areas to be plowed must be approved by the Departmental Representative and they must be returned to their original state once the work been completed.
- .5 Snow may not be dumped in or near bodies of water. If the Contractor intends to create a snow disposal site, they must obtain the approval of the Departmental Representative and the necessary authorizations from the MDDELCC unless arrangements have been made with an authorized site.

**1.10 WASTEWATER MANAGEMENT (SUPERNATANTS FROM EXCAVATED SOIL OR TRUCKS, WASHING/CLEANING, ETC.)**

- .1 The Contractor is responsible for managing the wastewater created during operations: water from excavated soil (supernatants, water from washing the tipper if applicable), from transport, from storage, from the dewatering and treatment of excavated materials and from any other construction activities.
- .2 Take steps or establish the necessary procedures to effectively manage and/or remove wastewater resulting from construction, excavation, dewatering, treatment or any of the Contractor's other activities.
- .3 Take steps or establish the necessary procedures to effectively treat wastewater so that it meets the criteria or quality standards that allow it to be removed.
- .4 At the Departmental Representative's request, the Contractor must be able to prove that their effluent meets the applicable standards or criteria.
- .5 If applicable, the water management systems must be able to handle all water generated during work and during the transport, storage, treatment and dewatering of excavated materials.
- .6 Results must be documented and available to the Departmental Representative at all times.
- .7 The Contractor must perform or oversee all tests and analyses required by the relevant authorities.

- .8 The Contractor must keep a log of results from the chemical analysis of the wastewater and provide it to the Departmental Representative upon request. This log must include the sampling point and the date and time of sampling.

#### **1.11 PREVENTING CONTAMINATION**

- .1 Hazardous materials and oil products:
- .1 Take the necessary precautions to ensure that potentially harmful substances do not become suspended in the air or introduced into the soil, groundwater or surface water.
  - .2 Ensure that the storage and handling of potentially harmful substances complies with all applicable federal, provincial and municipal laws and regulations.
  - .3 Ensure that contaminated or potentially contaminated soil (indicated by discolouration, odours or the presence of debris) is managed properly during construction.
  - .4 Disposal at an authorized site as work progresses is preferable. If temporary storage is absolutely necessary, create an impermeable, water-tight surface and cover the stored materials with an impermeable tarp to protect them against bad weather.
  - .5 Take the necessary precautions to prevent leaks or spills of chemical products.
  - .6 Place the drums or containers for hydrocarbons and other dangerous materials in a vat or between impermeable berms that can hold 110% of the maximum amount that may potentially be stored.
  - .7 Ensure that hazardous materials (fuels and solvents) are safely stored and confined.
  - .8 Do not store petroleum products or other hazardous materials within 30 m of the shore.
  - .9 Do not handle petroleum products or other hazardous materials within 30 m of the shore, except when refuelling equipment (floating or land) with a tank truck.
  - .10 Any handling of fuel, oil, other petroleum products or contaminants, including transfilling activities, must be constantly monitored to prevent accidental spills.
  - .11 The Contractor must keep airtight barrels for storing materials contaminated with hydrocarbons or other potentially hazardous materials near each piece of equipment. The barrels must be clearly identified and comply with applicable regulations.
- .2 Equipment:

- .1 All equipment and machinery must be in excellent working condition and present no leakage. An inspection report certifying their condition must be submitted before the equipment can be used onsite. Any equipment with one or more leaks must be taken out of service immediately. The leak must be contained as quickly as possible and the equipment must be repaired to eliminate the leak as soon as possible. If this condition is not respected, the Departmental Representative may require the Contractor to remove the equipment in question from the site.
- .2 Keep machinery and trucks in perfect working order. The Contractor must check for contaminant leaks every day. If a leak is found, they must repair it immediately.
- .3 Before work begins, identify an area for machinery maintenance, storage and handling of hazardous materials. This area must be located at least 30 m away from a watercourse.
- .4 Vehicle and machinery maintenance, temporary latrine installation and any other storage or activities that could lead to spills of contaminants or potentially dangerous substances must be performed more than 30 m away from a body of water.
- .5 Keep machinery away from the water when it is not in use.
- .6 Mechanical maintenance must be performed on an impermeable surface.
- .3 Contaminated soil:
  - .1 If soil showing signs of contamination (discolouration, odour, presence of debris, etc.) other than those indicated in the specifications is found during excavation, follow the requirements in section 01 74 25 – Solid waste and dry materials.
- .4 Establish the necessary structures and processes (geomembrane/concrete/asphalt; collection, confinement and treatment system, if necessary, for runoff and leachate) to ensure that the storage and handling areas for contaminated materials (debris, sediments, residual hazardous materials, contaminated soil and water, etc.) are impermeable to prevent contaminants from entering the soil, surface water or underlying groundwater.

## **1.12 PREVENTING AIR POLLUTION**

- .1 General:
  - .1 Open burning of waste material is prohibited.
  - .2 Control emissions from equipment and machinery in accordance with the requirements of local authorities.

- .2 Greenhouse gases and other contaminants:
  - .1 Reduce movement onsite and travel offsite to minimize fuel consumption.
  - .2 The Contractor must not allow equipment or truck engines to idle when they are not in use.
  - .3 As much as possible, limit the use of generators that run on fossil fuels.
  - .4 Use machinery, equipment and vehicles that are in good condition to minimize air pollutant emissions.
  - .5 Modify operations to reduce air pollutant emissions as much as possible. Combine activities that use the same equipment, develop an idle reduction plan and use automatic shutoffs for engines during prolonged idling.
  - .6 Minimize the use of equipment that consumes large amounts of fuel and use “cleaner” fuels such as ultra-low sulphur diesel.
  - .7 If necessary, use low-VOC products.
  
- .3 Dust:
  - .1 During transportation, materials containing fine particulates must be covered with firmly secured tarps.
  - .2 If a dust control agent is required, the system may only use water unless otherwise authorized by the Departmental Representative. The dust control agent must conform to standard BNQ-2410-300.
  - .3 Visually monitor dust emissions and take steps to control it as needed. Mitigation measures, such as covering or spraying materials (fill or other), will be required by the Departmental Representative if particles are found to travel more than 5 m from their point of origin.
  - .4 Avoid crushing activities on days where strong winds are blowing towards campsites and residences.
  - .5 Control dust emissions from the crusher by spraying containment equipment with water.
  - .6 Cover piles of dry excavated material and fill.
  - .7 The Departmental Representative may interrupt work at any time if they feel that the Contractor’s dust- and particle-reduction measures are insufficient.
  - .8 When vehicles are moving, the Contractor must ensure that dust is not visible more than 30 cm above the ground.
  - .9 The Contractor is required to respect ambient air quality standards within the limits of the lands used, as indicated in the regulations.

## **1.13 NUISANCE MANAGEMENT**

- .1 The Contractor must ensure that their activities always respect the following sound limits, which correspond to a maximum  $L_{10\%}$  statistical noise level of:
  - .1  $L_{10\%} = 75 \text{ dB(A)}$  during the day (7 AM to 7 PM).
  - .2  $L_{10\%} = L_{Aeq} \text{ (ambient without work)} + 5 \text{ dB(A)}$  in the evening (7:01 PM to 10 PM).
  - .2  $L_{10\%} = L_{Aeq} \text{ (ambient without work)} + 5 \text{ dB(A)}$  at night (10:01 PM to 6:59 AM).
- .2 At the request of the Departmental Representative, the Contractor must be able to prove that their activities fall within the noise limits listed above.
- .3 Ensure that all machinery, vehicles and equipment used respect the sound level standards. Any machinery, vehicle or equipment that is deemed too loud by the Departmental representative must cease its activities or be repaired or modified so that it falls within the acceptable sound limits.
- .4 Prevent the rear panel of dump trucks' hoppers from clanking as they are tilted.
- .5 Where possible, set up stationary equipment such as generators as far away from residential areas as possible.
- .6 Account for dominant winds on the site when choosing the location for stationary equipment.
- .7 Ensure that equipment is in good condition and working normally. Use approved equipment and act on the source of the noise itself (enclosures, mufflers, etc.) if necessary.
- .8 If the site's topography allows for it, use existing declines to hide the noisiest equipment from the line of sight of nearby residences.
- .9 If equipment emits sound in a certain direction, point it away from sensitive areas.
- .10 If necessary, place portable noise barriers around stationary equipment such as generators.
- .11 If noisy equipment needs to be used at night, enclose the equipment or place a noise barrier around it.
- .12 Direct sources of light towards the interior of the site in order to limit light pollution outside the site.
- .13 Use sources of light that limit the amount of light being diffused upwards.
- .14 Limit lighting of the site when no activities are underway (security lighting only).

**1.14 MANAGEMENT AND REDUCTION OF WASTE MATERIALS (HAZARDOUS AND NON-HAZARDOUS)**

- .1 Collect, separate and store waste material every day depending on whether it is recoverable or destined for disposal under the *Regulation respecting the landfilling and incineration of residual materials* (RLIRM) or designated as residual hazardous materials under the *Regulation respecting hazardous materials* (RHM) in effect.

- .2 Implement measures to reduce residual materials and encourage reduction, reuse and recovery of materials based on the 5 R's of recycling.
- .3 Ensure that no construction materials or debris end up in the water. Additionally, dumping scraps in the Gulf, the cove or in storm drains or sewers is prohibited.
- .4 If applicable, separate and store excavated topsoil and clean soil for reuse on the site. Minimize their management offsite.
- .5 All residual materials, debris and scrap that have come into contact with contaminated soil or other contaminants (such as stones polluted by heavy oil product spills) must be cleaned in an impermeable area. If applicable, water used for washing must also be collected and treated according to applicable regulations and the work authorizations issued.
- .6 Residual materials, debris and scrap must be stored in covered airtight containers or on an impermeable surface, covered by an impermeable tarp, until they can be sent for disposal. The aforementioned waste must be stored and disposed of according to the Departmental Representative's indications.
- .7 Provide the Departmental Representative with copies of the transport sheets/manifests and weight tickets for the disposal of residual and recoverable/recycled materials.

#### **1.15 LAND PROTECTION**

- .1 Any use of land outside the work area by the Contractor must be authorized by the municipality, the RCM and the MDDELCC.
- .2 If the Contractor decides to use land(s) located outside of the work area, they must:
  - .1 Prove that they have favoured non-forested areas over forested areas.
  - .2 Ensure that the land being used is at least 20 m away from all wetlands and watercourses.
  - .3 Understand that water from dewatering fill is considered dirty. Before the water can be discharged into the environment, it must comply with the disposal standards for various contaminants. The Contractor must also account for salinity. Saltwater cannot be disposed of in a watercourse, body of freshwater, marsh, etc. It can only be disposed of in the sea, and the MDDELCC's disposal standards must be respected.
  - .4 Ensure that the area is far enough away from residences, schools and other institutional buildings to avoid undue nuisance (noise, smells, dust, etc.) caused by their activities. To this end, the Contractor is responsible for taking the necessary measures to mitigate nuisances caused by their activities.



- .5 Consider the timelines for obtaining the necessary permits (e.g. from the municipality, the RCM or the MDDELCC) to carry out activities in the chosen area. The Contractor is solely responsible for ensuring that the necessary permits are obtained within a timeframe that does not affect the schedule.
- .3 Site protection — site characterization:
  - .1 The Department will have determined the reference state for the area. If the Contractor decides to develop the temporary work area that has been proposed by the Department, they must provide the Departmental Representative with analysis certificates proving that the fill to be used will not contaminate the area.
  - .2 The Contractor must establish an environmental reference state if they use any site other than the proposed work site. This reference state should be determined using videos and photographs showing the state of the various sites as well as any infrastructure, structures, constructions or buildings found there and in the neighbouring areas.
  - .3 The Contractor must create an environmental reference state report for the sites they wish to use other than those proposed by the Department:
    - .1 Complete a Phase I environmental site assessment (Phase I ESA) for each site using the recommendations and requirements in the following documents:
      - .1 Canadian Standards Association standard CSA Z768-01 — Phase I Environmental Site Assessment.
    - .2 Complete a Phase II environmental site characterization (Phase II ESC), including soil characterizations, for each site, using the recommendations and requirements in the following documents:
      - .1 EQA by the Government of Quebec.
      - .2 LPRR by the Government of Quebec.
      - .3 *and Protection and Rehabilitation Regulation* by the MDDELCC.
      - .4 *Guide de caractérisation des terrains* by the MDDELCC.
      - .5 *Guides d'échantillonnage à des fins environnementales* from the Centre d'expertise en analyse environnementale du Québec (CEAEQ).
    - .3 The Phase I ESA and Phase II ESC must be performed by an independent firm that specializes in these types of studies.
    - .4 No activity is permitted on the sites in question before the Departmental Representative reviews the Phase I ESA and Phase II ESC reports and authorizes the Contractor to begin.
  - .4 Work areas must be adequately defined in order to limit movement outside of them.

- .5 Take steps to protect neighbouring properties:
  - .1 Minimize damage to third-party properties.
  - .2 Minimize damage to the area's economic activity.
  - .3 Any damage to neighbouring properties must be repaired at the Contractor's expense.
- .6 Once the Contractor has completed their activities and removed their infrastructure from the site, a Phase II ESC must be performed on each site used, including the Department's site, following the requirements listed in subsection 1.14.3.2.2. These reports must be submitted to the Departmental Representative. The second round of Phase II ESCs must focus on the following areas and others: areas used to store materials, wastewater, fuel and other potentially dangerous materials, and areas where activities likely to cause contamination were performed.
- .7 If the environmental state is found to have declined due to the Contractor's activities (increased contamination levels for a given substance), the Contractor must rehabilitate the site(s) in question, at their own expense and in compliance with the regulations in effect and the agreements made with the property owners.

#### **1.16 RESOURCE USE**

- .1 General:
  - .1 Favour the use of recovered and reconditioned products and materials.
  - .2 Favour the use of products, materials and systems containing post-consumer or post-industrial recycled materials.
- .2 Water use:
  - .1 Minimize water use and avoid allowing water to run unnecessarily.
  - .2 Reuse/recirculate treated and untreated water when possible.
- .3 Dangerous goods, petroleum products and hydraulic oils:
  - .1 Limit the use of ozone-depleting substances (ODS).
  - .2 Use HF biodegradable hydraulic oils for machinery used in and around the water (on the water, on the shore, on the wharf, along the shorelines) except for trucks, which may use conventional hydraulic oils.
  - .3 Use environmentally friendly lubricants for engine maintenance.
- .4 Energy:
  - .1 If needed, use solar-powered signalling equipment.
  - .2 If possible, use fuels that contain a minimum of 5% renewable second-generation biofuels (such as B5 biodiesel or E5 bioethanol).

- .3 Avoid using first-generation biofuels (e.g. ethanol produced directly from corn).
- .5 Granular materials:
  - .1 For construction occurring in the water, use materials that meet the requirements in section 35 31 24 of this contract in order to minimize sediment resuspension, dust emission and the carrying of materials by currents.
- .6 Wood:
  - .1 In order to prevent surface water contamination, avoid using CCA or creosote-treated wood if it may come into direct contact with water.
- .7 Lighting:
  - .1 Use high-efficiency lighting.
  - .2 Use an automatic shut-off (light-sensitive cell) for security lighting (lighting left on when there is no activity on the site).

#### **1.17 PROTECTION OF COMMERCIAL AND INDUSTRIAL INFRASTRUCTURES**

- .1 Check for underground or underwater infrastructures (pipes, cables, etc.) before setting up the construction site.
- .2 Keep emergency phone numbers for various services onsite in order to improve response time in the case of an emergency.
- .3 Carefully control access to the site and establish the necessary infrastructures to prevent unauthorized access to the area. If necessary, hire a security guard.

#### **1.18 EMERGENCY SPILL RESPONSE PLAN**

- .1 The Emergency Spill Response Plan must be available on all sites used by the Contractor.
- .2 All construction site employees must have received basic training on the Emergency Spill Response Plan, and intervention officers must have received the required training for their role.
- .3 Storage tank systems covered by the federal *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* must have their own emergency plan, as described in the Regulations. The emergency plans for the storage tank systems listed in this contract must be provided to the Departmental Representative.

- .4 During work, ensure that an intervention diagram and alarm process (including the names, phone numbers and roles of the various intervention officers) are posted in easily accessible areas that are visible to all employees.
- .5 Communication:
  - .1 In the event of an accidental spill or emission that triggers the Emergency Response Plan, immediately advise the Departmental Representative.
  - .2 In the event of a spill, immediately report the situation to the intervention officers. The situation must also be reported immediately to Environment Canada's Environmental Emergencies line (1-866-283-2333) and Urgence-Environnement du Québec (1-866-694-5454). If the spill occurs in the water, inform the Canadian Coast Guard — Marine Pollution (1-800-363-4735) as well.
- .6 Environmental emergency response equipment:
  - .1 Have emergency response equipment available in case of an accidental contaminant spill. This should include a capture system for floating contaminants that can be deployed quickly, such as floating booms (at least 100 m in length, equipped with a trap at least 30 cm wide). It should also include silt fences and/or hay bales to contain accidental spills of contaminated sediments on land and prevent fine particulates from the erosion of the temporary banks and disturbed areas from travelling towards other aquatic or land areas.
  - .2 The Contractor must also have spill control kits available on the wharf and at two (2) other locations on the shore (total of three (3) kits). Each kit must contain at least the following (or an equivalent approved by the Departmental Representative):
    - .1 One (1) salvage drum with a minimum storage capacity of 285 L (75 US gallons).
    - .2 One hundred (100) 340 g (12 oz. CAN) absorbent pads.
    - .3 Fifteen (15) flotation collars 0.07 m wide and 1.2 m long.
    - .4 Eight (8) flotation collars 0.1 m wide and 3 m long.
    - .5 Nine (9) kg of granular absorbent.
    - .6 One (1) drain cover.
    - .7 One (1) shovel.
    - .8 Strong, leak-proof garbage bags.
    - .9 Patching compound.
  - .3 The Contractor must have absorbent materials available on the construction site/work site at all times so that they can respond quickly to spills involving hazardous materials or petroleum products. They must ensure that the minimum number of kits is available and that all kits are complete. Spare materials must be available.

- .4 If the Departmental Representative deems the emergency spill response or environmental emergency response to be insufficient, they may lead the response. All costs will be borne by the Contractor.

#### **1.19 CLEANING EQUIPMENT, THE CONSTRUCTION SITE AND WORK AREAS**

- .1 Cleaning operations must comply with sections 01 35 13 43 – Special procedures – Contaminated sites and 01 74 11 – Cleaning.

#### **Part 2 Products**

##### **2.1 NOT USED**

- .1 Not used.

#### **Part 3 Execution**

##### **3.1 SELF-MONITORING AND COMPLIANCE**

- .1 The Contractor is responsible for monitoring their activities to ensure that they comply with their legal and contractual requirements.
- .2 The Contractor must complete and submit a weekly environmental monitoring report proving that the various specifications have been verified and comply with the requirements set out in the specifications. Any deviation from the requirements must be documented in the non-compliance report.
- .3 Once work has ended, the Contractor must submit to the Departmental Representative an exhaustive report showing how their activities complied with environmental requirements and the Project's performance requirements. The report must include but is not limited to a description of the project and work process, the actual schedule, the actual volumes for each dredging area, and a description of the final management of the materials (tonnage and equivalent in situ volume). This report must meet the requirements outlined in the MDDELCC's authorization certificate. Any deviations (including non-compliances, complaints, etc.) and the corrective measures taken must be included in the report. The format and a preliminary version of the report must be submitted to the Departmental Representative for approval. The Contractor's report must be verified by their Environment Manager and approved by their Project Manager.

##### **3.2 NON-COMPLIANCE**

- .1 Environmental non-compliances must be corrected as soon as the Contractor has detected them or been informed (verbally or in writing) by the Departmental Representative.

- .2 Any non-compliances that pose a risk to health, safety, the environment or the integrity of the structures, infrastructures or facilities will result in work stoppage by the Departmental Representative until satisfactory corrective measures have been taken.
- .3 The Contractor must receive approval from the Departmental Representative before implementing any proposed corrective measures.
- .4 The Departmental Representative will issue a written notice of non-compliance to the Contractor whenever they notice an incident of non-compliance to a provincial, federal or municipal law, regulation or permit, an authorization, an established criterion or any other element of this document or of the Environmental Protection Program implemented by the Contractor.
- .5 Once the Contractor has received a notice of non-compliance, they must fill out a report describing the non-compliance, the immediate correction and the cause. The report must also suggest corrective measures to the Departmental Representative to prevent the incident from happening again. They must implement these corrective measures following the Departmental Representative's approval.
- .6 No deadline extensions, additional adjustments or additional payments will be made if work is stopped or when immediate corrections are made or corrective measures are taken.

**END OF SECTION**