

1 GENERAL

1.01 RELATED REQUIREMENTS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 02 41 16 - Selective Site Demolition.
- .2 Section 31 23 10 - Excavation, Trenching and Backfilling.

1.02 GENERAL

- .1 All environmental mitigation measures are the Contractor's responsibility under this contract. All measures to mitigate hazardous material from entering watercourses and offsite areas; as well as all acts, regulations and mitigation measures listed under this section are the Contractor's responsibility to follow for the duration of this contract.
 - .1 Construction work will be monitored daily and establish mitigation measures as required. Adjust and upgrade items as required to meet the Municipal, Provincial and Federal Acts as required.

1.03 SUBMITTAL REQUIREMENTS

- .1 Develop written Environmental Protection Plan (EPP) based on the project specific; prior to beginning site Work and continue to implement, maintain, and enforce Plan that will be used until demobilization from Site.
- .2 Develop written Site Specific Erosion Control Measures based on the project specific Plan under this contract.
- .3 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
 - .1 Departmental Representative may request an updated document at any time during the construction period under this contract if measures on site do not meet acts and regulations specified under this contract.
- .4 Develop written temporary road access plan including; location, type of material that will be used for construction and how the areas will be restored to its original state or better.
- .5 Design, provision, and installation of an impermeable barrier wall along the western boundary of the remediation excavation to prevent seepage of LPH from the upgradient DND and Provincial properties (refer to Figure 2, Appendix B). The barrier wall will need to be installed during backfilling of the remediation excavation. Assume that the barrier wall will be 30 m in length. The Contractor

will not be required to remove the barrier wall.

1.04 REGULATORY REQUIREMENTS

- .1 Do Work in accordance with regulatory requirements specified in related sections and references in the Contract Documents.

1.05 PROJECT/SITE CONDITIONS

- .1 Work at site will involve contact with:
 - .1 Possibility of high winds.
 - .2 Uneven work areas.
 - .3 Adverse weather conditions.
 - .4 Access restrictions.
 - .5 Continuous vehicular traffic on adjacent roads.

1.06 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

1.07 REFERENCES

- .1 Canada Shipping Act, Transport Canada, (CSA) 2001, amended 2017-12-12 or latest edition.
- .2 Canadian Coast Guard Regulations, Fisheries and Oceans Canada.
- .3 Canadian Environmental Assessment Act, 2012, amended 2017-06-22.
- .4 Canadian Environmental Protection Act, 1999, amended 2018-04-04.
- .5 Fisheries Act, 1985, Fisheries and Oceans Canada, amended 2016-04-05.
- .6 Guidelines for the Use of Explosives in or Near Canadian Fisheries Waters, 1998.
- .7 Migratory Birds Convention Act, 1994, Environment Canada, amended 2017-12-12.
- .8 Navigation Protection Act, 1985. Transport Canada, amended 2017-06-22.
- .9 Newfoundland and Labrador - Environmental Impact Assessment Regulation, Clean Environmental Act.
- .10 Species at Risk Act, 2002, amended 2018-05-30.

- .11 The Federal Policy on Wetland Conservation, 1991, Environment Canada.
- .12 Transportation of Dangerous Goods Act, 1992, Transport Canada, amended 2017-01-01.
- .13 Newfoundland *Heritage Conservation Act*.
- .14 Newfoundland Watercourse and Wetland Alteration Technical Guidelines.
- .15 Equipment and heavy machinery:
 - .1 On-road vehicles to: CEPA-SOR/2003-2, On-Road Vehicle and Engine Emission Regulations and CEPA-SOR/2006-268, Regulations Amending the On-Road Vehicle and Engine Emission Regulations.
 - .2 Off-road vehicles to: EPA CFR 86.098-10 and EPA CFR 86.098-11.
- .16 Work activities must comply with all / any conditions of the Navigation Protection Act (NPA) permit issued by Transport Canada.
- .17 Environmental Protection Act, Water Disposal Permit (if required), NLDAE and Service NL.
- .18 Water Resources Permit to Alter a Body of Water (if required), NLDAE and Service NL.

1.08 DEFINITIONS

- .1 Archaeological Resources: all tangible evidence of human activity that is of historical, cultural or scientific interest. Examples include features, structures, archaeological objects (artifacts) or remains at or from an archaeological site, or an object recorded as an isolated archaeological find. An "artifact" is any object manufactured, used, moved or otherwise modified by human beings, including all waste materials and by-products of these processes.
- .2 Buffer zone: a vegetated land that protects watercourses from adjacent land uses. It refers to the land adjacent to watercourses, such as streams, rivers, lakes, ponds, oceans, and wetlands, including the floodplain and the transitional lands between the watercourse and the drier upland areas.
- .3 Deleterious substance:
 - (a) any substance that, if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water,
 - Or
 - (b) any water that contains a substance in such quantity or concentration, or that has been so treated, processed or changed, by heat or other means, from a natural state that it would, if added to any other water, degrade

or alter or form part of a process of degradation or alteration of the quality of that water so that it is rendered or is likely to be rendered deleterious to fish or fish habitat or to the use by man of fish that frequent that water.

- .4 Fish habitat: spawning grounds and any other areas; including nursery, rearing, food supply and migration areas, on which fish depend directly or indirectly in order to carry out their life processes.
- .5 Measureable LPH: is defined as the thickness of LPH that can be measured in a monitoring well using an electronic oil/water interface probe (typically equal to or greater than 1 mm LPH thickness).
- .6 Hazardous material: product, substance, or organism that is used for its original purpose; and that is either dangerous goods or a material that may cause adverse impact to the environment or adversely affect health of persons, animals, or plant life when released into the environment.
- .7 Invasive or alien species: refers to a species or subspecies introduced outside its normal distribution whose establishment and spread threaten ecosystems, habitats or species with economic or environmental harm.
- .8 Navigable water: a canal and any other body of water created or altered as a result of the construction of any work.
- .9 Surface watercourse: refers to the bed and shore of a river, stream, lake, creek, pond, marsh, estuary or salt-water body that contains water for at least part of each year.
- .10 Wetlands: land where the water table is at, near or above the surface or which is saturated for a long enough period to promote such features as wet-altered soils and water tolerant vegetation. Wetlands include organic wetlands or "peatlands", and mineral wetlands or mineral soil areas that are influenced by excess water but produce little or no peat.

1.09 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Environmental Protection Plan within 7 days after date of Acceptance of Bid and prior to commencement of Work.
 - .1 Mitigation measures to prevent sedimentation.
 - .2 Mitigation measures to prevent LPH and LPH impacted soils from causing additional soil and water contamination.
 - .3 Location and type of materials used for temporary access roads and measures to restore the access to its original state or better; the Departmental Representative's will be the sole judge of what it deemed acceptable as a final product.
- .3 Submit digital copy of Contractor's Environmental Protection Plan to the

Departmental Representative 7 days before commencement of Work, for review.

- .4 Submit copies of reports or directions issued by Municipal, Federal or Provincial health and safety inspectors.
- .5 Develop and submit to the Departmental Representative an Environmental Protection Plan with Spill Response Plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance. Include Provincial Environmental Emergency Contact information, and Departmental Representative's contact information. Emergency Response Number is 1-800-563-9089.
- .6 Before commencing construction activities or delivery of materials to site, the Contractor must submit an Environmental Protection Plan (EPP) for review and approval by the Departmental Representative. The EPP must include a comprehensive overview of known or potential environmental issues to be addressed during construction of the project.

1.10 TRANSPORTATION

- .1 Transport hazardous materials and hazardous waste in compliance with the Transportation of Dangerous Goods Act.
- .2 Maintain trucks clean and free of mud, dirt, and other foreign matter. Contractor to avoid transport of soil material during wet, windy and rainy weather.
- .3 Secure contents against free board spillage when excavating, loading and hauling material. Do not overload trucks when hauling material and avoid potential release of contents, and of any foreign matter onto highways, roads and access routes used for the Work. Trucks must have water tight containment when transporting LPH soils from Site to Disposal Facility. Immediately clean any ground spills and soils to extent as directed by authority having jurisdiction.

1.11 TEMPORARY LAND-BASED ROADS

- .1 Prior to the start of construction, Contractor is responsible to submit for review;
 - .1 A plan indicating location of temporary road and type of proposed material to be used.
 - .2 Contractor will describe how the temporary roads will be removed.
 - .3 Disposal location of temporary fill material upon completion of the project.

- .4 How the location where the temporary road was constructed will be restored to its original state or better.
- .2 Construction material and debris is not to become waterborne.
- .3 Maintain a minimum distance from all areas occupied by concentration of seabirds and water birds. Travel at steady speeds when close to seabird and water bird colonies, moving parallel to the shore, rather than approaching the colony directly. Avoid any sharp or loud noises, do not blow horns or whistles, and maintain constant engine noise levels. Do not pursue seabirds or water birds swimming on the water surface and avoid concentration of these birds on the water.
- .4 The Contractor must use public right-of-way when possible and must provide traffic control personnel, as per Section 01 51 00 - Temporary Utilities, Section 01 52 00 - Construction Facilities and Section 01 56 00 - Temporary Barriers and Enclosures.

1.12 TEMPORARY ACCESS ROADS AND BARRIER WALL

- .1 It will be the Contractor's responsibility to gain access to the work area. The construction and removal of temporary access roads will be as per the Contractor's submittal and removal/disposal of the access road materials at a location environmentally acceptable to receive the type of proposed material, or at a pre-determined location specified under this contract.
- .2 All material used for construction of temporary access roads and barrier wall must be clean and free from excessive fines, organics, debris and non-toxic (i.e., free of fuel, oil, grease and/or any other contaminants), non-ore bearing and from a provincially approved non-water source.
- .3 Contractor to remove temporary roadway materials following completion of the Work and return Site to original condition.
- .4 Contractor is responsible to develop and install an impervious barrier wall along the western boundary of the remediation excavation during backfilling to prevent seepage of LPH from impacted upgradient properties. Contractor to provide design details and type of materials that will be used for construction.
- .5 Contractor will not be responsible for the removal of the temporary barrier wall following completion of the remediation work onsite. Barrier wall to remain intact onsite.

1.13 OPERATION OF MACHINERY

- .1 Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.
- .2 Whenever possible, operate machinery on land above the high water mark, on ice, or from a floating barge in a manner that minimizes disturbance to the banks and bed of the water body.
- .3 Wash, refuel and service machinery and store fuel and other materials for machinery in such a way as to prevent any deleterious substances from entering the water. Refuelling should occur a minimum distance of 100 metres from water.
- .4 Biodegradable fluids should be considered for use in place of petroleum products whenever possible, as a standard for best practices.
- .5 All in-water activities should be conducted during low wind, wave and suitable weather conditions.
- .6 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.
- .7 Do not perform cleaning and wash down within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area. Abide by requirements and recommendations from Fisheries and Oceans Canada - Fisheries Protection Program in cleaning and wash down of equipment.
- .8 No staging of vehicles or equipment/materials will take place on any beach, dune, wetland or environmentally sensitive areas.

1.14 CONTAINMENT AND SPILL MANAGEMENT

- .1 Comply with Federal (CEPA *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*) and Provincial regulations, codes, standards and guidelines for the storage of fuel and allied petroleum products on site.
- .2 In the event of a petroleum spill, immediately notify the Departmental Representative and the Canadian Coast Guard (CCG) at 1-800-565-1633 (24 hour report line). Perform clean-up in accordance with all regulations and procedures stipulated by authority having jurisdiction.
- .3 Do not dump petroleum products or any other deleterious substances on ground or in the water.
- .4 Be diligent and take all necessary precautions to avoid spills and contamination of the soil and water (both surface and subsurface) when handling petroleum products on site and during fuelling and servicing of

vehicles and equipment.

- .5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) over pack spill kit for containment and clean-up of spills. Emergency Response Number is 1-800-563-9089.
- .6 Maintain vehicles and equipment in good working order to prevent leaks onsite.
- .7 Materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, or other chemicals are not to enter a watercourse.
- .8 Develop and submit to the Departmental Representative an Emergency Response Plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance. Include Provincial Environmental Emergency Contact information, and Departmental Representative's contact information. Emergency Response Number is 1-800-563-9089.
- .9 If an oiled seabird is encountered, methodology for the handling and release of marine and migratory birds outlined in Environment and Climate Change Canada (ECCC) - Canada Wildlife Service (CWS)'s Oiled Birds Protocol will be implemented. A permit application must be obtained from ECCC-CWS prior to implementation of this protocol.

1.15 HAZARDOUS MATERIAL HANDLING

- .1 Store and handle hazardous materials in accordance with applicable federal and provincial regulations, codes, standards and guidelines. Store in location that will prevent spillage into the environment.
- .2 Label containers to WHMIS requirements and keep MSDS data sheets on site for all hazardous materials.
- .3 Maintain inventory of hazardous materials and hazardous waste stored on site. List items by product name, quantity and date when stored.
- .4 Store and handle flammable and combustible materials in accordance with National Fire Code.
- .5 Workers in contact with hazardous materials must be provided with, and use regulated personal protective equipment and must have the necessary training to know how to handle the different hazardous materials for Health and Safety and according to Environmental Regulations.

1.16 DISPOSAL OF WASTE

LPH SOIL REMEDIATION
FORMER LANDFILL
AND ASPHALT PLANT
OTTER CREEK
HAPPY VALLEY-GOOSE BAY
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- .1 Do not bury rubbish, construction and demolition debris (i.e., concrete, creosote timbers, steel, impacted soil materials etc.) and waste materials on site.
- .2 Dispose and recycle construction and demolition debris and waste materials in accordance with Provincial Waste Management Regulations and the project waste management requirements specified in Section 02 41 16 - Selective Site Demolition.
- .3 Do not dispose of hazardous waste, volatile materials (such as mineral spirits, paints, thinners etc.) and petroleum products into waterways, storm or sanitary sewers or in waste landfill sites.
- .4 Dispose of hazardous waste in accordance with applicable federal and provincial, regulations, codes, standards and guidelines.
- .5 Dispose of construction related debris, including demolished cribwork materials and cut timber at an approved landfill that is licensed to dispose of creosote timber or in a manner approved by the Province.
- .6 Perform dumping of residual material and truck cleaning operations only at a location environmentally acceptable to regulations and good practices as approved by the Provincial Department of the Environment and other authorities having jurisdiction.
- .7 Chipped vegetation may be used as mulch but must not be spread into a waterbody or wetland.
- .8 All salvageable stockpiles of creosote timbers must be situated a minimum of 500 meters from any dwelling or water well and a minimum of 100 meters from any watercourse/wetland or environmentally sensitive area. Any stockpile must be contained, off the ground and must be contained on federal land, unless approved by Departmental Representative.
- .9 Debris entering the marine environment should be immediately retrieved when it is safe to do so.
- .10 Concrete waste:
 - .1 Do not discharge residual or rejected concrete on site.
 - .2 Immediately clean any accidental release of concrete on site prior to solidification.
- .11 The Contractor must provide the waste manifest of the deconstruction material to the Departmental Representative with the progress claim.

1.17 WATER QUALITY

- .1 Conduct work in or near a watercourse in such a manner to limit turbidity and reduce sediment suspension in the water to an absolute minimum at all times:
 - .1 Maintain appropriate production speed and momentum of the excavation equipment. Make adjustments as required and as approved by Departmental Representative.
 - .2 Strategically position excavation equipment and haul vehicles to avoid over the water swings of finer material whenever possible.
- .2 Contractor is required to:
 - .1 Employ suitable operational and engineering controls (e.g., silt curtain), as approved by the Departmental Representative, around the work area, or as specified by the Departmental Representative.
- .3 Do not wash down equipment within a 30 meter buffer zone of a wetland, watercourse or other identified environmentally sensitive area.
- .4 Where required, install effective sediment control measures before starting work to prevent the entry or re-suspension of sediment in the water body. Inspect sediment control measures regularly to ensure they are functioning properly, and make all necessary repairs if any damage occurs. Upon completion of use, remove these control measures in a way that prevents the escape of settled sediment.
- .5 Discharge of any water on the Site must meet the CCME Water Quality Guidelines for Freshwater Aquatic Life and Atlantic PIRI Surface Water ESLs.

1.18 AIR QUALITY

- .1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.
- .2 Dust suppression by the application of water must be employed, when required. Apply dust control measures to roads, parking lots and work areas.
- .3 Spray surfaces with water or other environmentally approved product. Use purposely suited equipment or machinery and apply in sufficient quantity and frequency to provide effective result and continued dust control during the entire course of the Work.
- .4 To reduce emissions of air contaminants and Greenhouse Gas, implement an idling policy which includes:
 - .1 Diesel construction equipment will be turned off when not in active use.
 - .2 Vehicles idling more than 5 minutes will be turned off. Morning vehicle warm-ups will be restricted to 3-5 minutes.

A staging zone will be established for trucks that are waiting to load/unload to minimize public exposure to emissions.

Idling restrictions will not apply when:

- .1 The engine is required to power auxiliary equipment (e.g., hoist, lift, computers, safety lights, etc.);
- .2 Extreme weather conditions (-10 degrees Celsius or below / +30 degrees Celsius or above) or any other circumstance where heating or air conditioning is required for worker's health and safety;
- .3 The original equipment manufacturer specifically recommends a longer idling period for normal and efficient operation of the motor vehicle in which case such recommended period shall not be exceeded;
- .4 Vehicle/equipment maintenance and diagnostic purposes.

1.19 BIRD AND BIRD HABITAT

- .1 Become knowledgeable with and abide by the Migratory Birds Convention Act (MBCA) in regards to the protection of migratory birds, their eggs, nests and their young encountered on site and in the vicinity.
- .2 Minimize disturbance to all birds on site and adjacent areas during the entire course of the Work.
- .3 Ensure that no litter (including food wastes) is left in coastal areas.
- .4 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.
- .5 Do not use beaches, dunes, coastal wetlands and other natural previously undisturbed areas of the site to conduct work unless specifically approved by the Departmental Representative.
- .6 To avoid the risk of nest destruction, the proponent shall avoid vegetation clearing during the most critical period of the migratory bird breeding season, which is April 15th through August 15th.

In the event that vegetation clearing is to take place inside the April 15th to August 15th window, a qualified biologist must inspect the area prior to potential disturbance or loss of habitat activities to ensure there will be no adverse impacts to birds and wildlife.

- .7 Should nests or chicks of migratory birds or raptors be encountered during work, immediately stop work in that area and notify Departmental Representative for directives to be followed.

- .1 Do not disturb nest site and neighbouring vegetation until nesting is completed.
- .2 Minimize work immediately adjacent to such areas until nesting is completed.
- .3 The proponent shall ensure that if a nest or chick of a migratory bird is detected within the project area, work in the area shall be halted and NL Department of Fisheries and Land Resources -Wildlife Division (709-637-2353) and Canadian Wildlife Services should be consulted at 709-772-2154.
- .4 Should a migratory bird or raptor nest be encountered during work, activity in the vicinity of the nest should be halted. The nest location should be protected until chicks have naturally fledged from the area, with a buffer zone appropriate to the species as determined in consultation with the appropriate regulators (ECCC-CWS for species protected under the MBCA; provincial department of natural resources for raptors). As a general guideline, for small landbirds, an appropriate buffer for clearing activities may be 10 - 50 m, or even more depending on the level of activity and on the species. The buffer shall stay in place until August 15th or the time when chicks have naturally fledged from the area. A nest shall not be marked, or the tree/shrub in which it is situated, using flagging tape or other similar material; this increases the visibility of the nest and the risk of predation.
- .5 Protect these areas by following recommendations of Canadian Wildlife Service.

1.20 FISH PROTECTION

- .1 Ensure that all in-water activities, or associated in-water structures, do not interfere with fish passage, constrict the channel width, or reduce flows.
- .2 Screen any water intakes or outlet pipes to prevent entrainment or impingement of fish. Entrainment occurs when a fish is drawn into a water intake and cannot escape. Impingement occurs when an entrapped fish is held in contact with the intake screen and is unable to free itself.
- .3 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to Departmental Representative for review.
- .4 Do not perform cleaning and washdown within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area. Abide by requirements and recommendations from Fisheries and Oceans Canada - Fisheries Protection Program in cleaning and wash down of equipment.
- .5 The introduction of deleterious substances into the watercourse is not permitted.
- .6 Conduct in-stream work during periods of low flow, or at low tide, to further reduce the risk to fish and their habitat or to allow work in water to be isolated from flows.

1.21 INVASIVE SPECIES

- .1 To minimize the possibility of fish habitat contamination and the spread of aquatic invasive species, all construction equipment which will be immersed into the water of a watercourse, or has the possibility of coming into contact with such water during the course of the work, must be cleaned and washed to ensure that they are free of marine growth and alien species prior to mobilization to the site.
 - .1 Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and all other miscellaneous tools and equipment previously used in a marine environment.
- .2 Cleaning and washing of equipment shall be performed immediately upon their arrival at the site and before use in or over the body of water.
- .3 Conduct cleaning and washing operations as follows:

- .1 Scrape and remove heavy accumulation of mud and dispose appropriately.
 - .2 Wash all surfaces of equipment by use of a pressurized fresh water supply.
 - .3 Immediately follow with application of a heavy sprayed coating of undiluted vinegar or other environmentally approved cleaning agent to thoroughly remove all plant matter, animals and sediments.
 - .4 Check and remove all plant, animal and sediment matter from all bilges and filters.
 - .5 Drain standing water from equipment and let fully dry before use.
 - .6 Upon removal from the water, drain standing water from equipment and let fully dry before removal off the site.
- .4 Record of Assurance Logbook:
- .1 Maintain an on-going log of past and present usage and washdowns of all equipment to illustrate mitigation measures undertaken against fish habitat contamination by alien species.
 - .2 Write data in a hard cover bound logbook to include the following:
 - .1 Date and location where equipment was previously used in a watercourse or wetland;
 - .1 Type of work performed.
 - .2 Dates of wash down for each piece of equipment;
 - .3 Cleaning method and cleaning agent(s) used.Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to Departmental Representative for review.
 - .3 The Departmental Representative has the right to request a video inspection of the equipment, including hulls, to ensure that they are free of marine growth and alien species prior to mobilization to the site.

1.22 ARCHEOLOGIST

- .1 All construction personnel are responsible for reporting any cultural materials, which may be archaeological resources, unearthed during construction to the Construction Supervisor. If the find is believed to be an archaeological resource, the Construction Supervisor will immediately stop work in the vicinity of the find and notify the Departmental Representative.
- .2 If an archaeological and / or historically significant item (an archaeological resource) is discovered during the work activities, work in the area will be stopped immediately and the Departmental Representative will be contacted as well as the Provincial Archaeological Services unit.
 - .1 Newfoundland and Labrador Archaeological Office can be reached at (709) 729-2462.
- .3 Work can only resume in the vicinity of the archaeological find when authorized by the Departmental Representative, after approval has been granted by the provincial authority.
- .4 In the event of the discovery of possible human remains or possible evidence of human burials, the work will immediately cease. If the discovery is potential, but not positively human remains, contact the Departmental Representative as well as the Provincial Archaeological Services unit. If the materials discovered are undoubtedly human remains, the nearest law enforcement agency will be contacted immediately by the Departmental Representative and/or the Construction Supervisor. Until determined otherwise, the possible human remains should be treated as evidence in a criminal investigation. If the possible human remains are found in the bucket of heavy equipment, the bucket should not be emptied as physical evidence may be destroyed by that action. The area should immediately be designated as "Out of Bounds" to all personnel and the public. Depending on the weather and other conditions, the potential human remains should be provided with non-intrusive protection, such as covering with a cloth or canvas tarp (non-plastic preferred).

1.23 SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLAN

- .1 Contractor is responsible to develop plan and include in the Environmental Protection Plan that minimizes risk of sediment of the water body during all phases of the Work. Plan is to be submitted as per Section 01 33

00, for review by the Departmental Representative. Erosion and sediment control measures should be maintained until all disturbed ground has been permanently stabilized, suspended sediment has resettled to the bed of the water body or settling basin and runoff water is clear. The plan should, where applicable, include:

- .1 Where required, effective sediment control measures (e.g. silt fencing, check dams) must be an initial step in the construction sequence to prevent the entry or re-suspension of sediment in the water body. Notes on inspection, repairs, and removals are outlined below.
- .2 Inspect sediment control measures regularly to ensure they are functioning properly, and make all necessary repairs if any damage occurs. Upon completion of use, remove these control measures in a way that prevents the escape of settled sediment.
- .3 Measures for managing water flowing onto the site, as well as water being pumped / diverted from the site such that sediment is filtered out prior to the water entering a water body. For example, pumping / diversion of water to a vegetated area, construction of a settling basin or other filtration system. The water will be pumped to a sediment pond or into a filter bag to ensure that the concentration of sediment is below regulated discharged criteria before it reaches a water body.
- .4 Site isolation measures (e.g., silt boom or silt curtain) for containing suspended sediment. This should include measures for material stockpiles (e.g. tarps).
- .5 Measures for containing and stabilizing waste material (e.g., dredged material, construction waste and materials, commercial logging waste, uprooted or cut aquatic plants, accumulated debris) above the high water mark of nearby water bodies to prevent re-entry.
- .6 Description of approach for managing potential impacts to the local environment including silt curtains, sediment fence, hay bales, treatment, etc.
- .7 Methodology for monitoring weather, specifically rainfall and storms and altering work plan for inclement weather.
- .8 Contractor to avoid excavation work during periods of wet, windy and rainy weather.

1.24 WETLANDS REINSTATEMENT

- .1 The wetland area on site consists of standing water and bog/marsh at the southwest corner of the area to be remediated that measures approximately 100 square metres. The areas of standing water to be reinstated by Contractor during the backfilling of the remediation excavation. In

addition, organic material (i.e. peat, moss, etc.) must be added to the top 0.3 m of the soil horizon at this area to promote re-establishment of native vegetation. Organic material may be sourced onsite during excavation of top 0 to 0.5 m of soil, as long as there are no visual or olfactory evidence of petroleum hydrocarbon impacts. Otherwise organic materials to be sourced off site.

1.25 SOCIOECONOMIC RESTRICTIONS

- .1 Abide by municipal and provincial regulations for any restrictions on work performed during the night time and on flood lighting of the site. Obtain applicable permits.
- .2 Place flood lights in opposite direction of adjacent residential and business areas.
- .3 Work equipment and machinery must be equipped with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.
- .4 The use of solid-burning or slow pulsing warning lights at night must be avoided. The use of strobe lights at night, at the minimum intensity and minimum number of flashes per minute (longest duration between flashes) allowable by Transport Canada, is recommended. Lights should completely turn off between flashes.
- .5 LED lights must be used instead of other types of lights where possible. LED light fixtures are less prone to light trespass (i.e., are better at directing light where it needs to be, and do not bleed light into the surrounding area).
- .6 Sounds such as whistle blasts and horns will be limited or replaced, to the extent possible, with radio communication.

1.26 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Departmental Representative.

END OF SECTION