1.1 RELATED WORK

.1 Waste Management and Disposal: Section 01 74 21.

1.2 REFERENCES

.1 WHMIS: Workplace Hazardous Materials Information System, Health Canada.

.2 Transportation of Dangerous Goods Act. Transport Canada, amended 2011-11-09.

.3 Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters, Department of Fisheries and Oceans Canada, 1998.

.4 MBCA: Migratory Birds Convention Act, Environment Canada, 1994.

.5 Canadian Coast Guard Regulations, Department of Fisheries and Oceans Canada.

.6 Canadian Shipping Act, Transport Canada, 2001.

.7 AWPA: American Wood Preserver Association

1.3 DEFINITIONS

.1 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.

.2 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.

.3 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.

1.4 TRANSPORTATION

.1 Transport hazardous materials and hazardous waste in compliance with Federal Transportation of Dangerous Goods Act.

.2 Do not overload trucks when hauling material. Secure contents against spillage.

.3 Maintain trucks clean and free of mud, dirt and other foreign matter.

.4 Avoid potential release of contents and of any foreign matter onto highways, roads and access routes used for the Work. Take extra care when hauling materials. Immediately clean any spillage and soils.

.5 Before commencement of work, advise the Departmental Representative of the existing roads and temporary routes proposed to be used to access work areas and to haul material to and from the site.

.6 Machinery is not allowed in water. Refer to 1.6 for equipment requirements that may come in contact with water.

1.5 HAZARDOUS MATERIAL HANDLING

.1 Handle and store hazardous materials on site in accordance with WHMIS procedures and requirements.

.2 Store all hazardous liquids in location and manner to prevent their spillage into the environment.

.3 Maintain written inventory of all hazardous materials kept on site. List product name, quantity and storage date.

.4 Keep MSDS data sheets on site for all items.

1.6 PETROLEUM, OIL AND LUBRICANTS

.1 Comply with Federal and Provincial laws, regulations, codes and guidelines for the storage of fuel and petroleum products on site.

.2 Do not place fuel storage tanks and store fuel or other petroleum products within a 30 metre buffer zone of watercourses and wetlands. Do not fuel or lubricate equipment within this 30 metre buffer zone. Obtain approval from Departmental Representative of acceptable location on site for fuel storage and equipment service.

.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 contaminate the soil and water (both surface and subsurface) when handling petroleum products on site and during fueling and servicing of vehicles and equipment.

.5 Maintain on site appropriate emergency spill response equipment consisting of at least one 250-litre (55 gallon) overpack spill kit for containment and cleanup of spills.

.6 Maintain vehicles and equipment in good working order to prevent leaks on site.

.7 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.

.8 If using a floating barge, the following mitigation measures should be adhered to:
.1 Vessels should be compliant with all Canada Shipping Act, 2001, requirements for inspection, which includes certification of the vessel and adequate training and appropriate certification of competency for the operator.
.2 Ensure that all vessels will have procedures in place to ensure safeguards against marine pollution: awareness training of all employees, means of retention of waste oil on board and discharge to shore based reception facilities, capacity of responding to and clean-up of accidental spill caused by vessels involved in any particular part of the project.
.3 Onsite crews must have emergency spill clean-up equipment, adequate for the activity involved, on-site. Spill equipment will include, as a minimum, at least one 250 L (i.e. 55 gallon) overpak spill kit containing items to prevent a spill from spreading; absorbent booms, pillows, and mats; rubber gloves; and plastic disposal bags. All spills or leaks must be promptly contained, cleaned up, and reported to the 24-Hour Environment Emergencies Report System (1-800-565-1633)

1.7 DISPOSAL OF WASTES

.1 Do not bury rubbish, demolition debris and waste materials on site.

.2 Dispose and recycle demolition debris and

waste materials in accordance with project waste management requirements specified in section 01 74 21.

.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 laws, regulations, codes and guidelines.

.5 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.
.3 Do not wash and clean concrete vehicles on site.
.4 Perform dumping of residual material and truck cleaning operations only at the concrete plant. Follow environmental regulations and good practices as approved by the Provincial Department of the Environment and other authorities having jurisdiction.

1.8 EXCAVATED MATERIAL

.1 All stockpiled soil must be dyked to prevent erosion and release of sediment laden water.

.2 If any material is excavated during the proposed project activities then the Departmental Representative must be consulted to identify an appropriate stockpile location for the excavated material to ensure the material, or any part of the material, does not re-enter any waterbody.

.3 Excavated material shall be tested if it

is to leave DFO-SCH property. If testing of material is required the cost will be the responsibility of the Crown.

.4 Excavated wet/dry material that is not re-used is to be stockpiled at the locations onsite noted A and B.

1.9 WATER QUALITY

.1 During construction activities, a floating silt curtain must be installed around the work site to prevent any suspended solids and/or debris from entering into the adjacent water body. The floating silt curtain must be installed before the commencement of any work activity.
1. The silt curtains will be measured for payment as per Section 01 10 10.
2. The silt curtain must be marked at 20m intervals with 0.4m yellow buoys.
3. The silt curtain is not to be in the path of any vessels.
4. Provide temporary buoys to mark the silt curtain location.

.2 Water contamination by preservative treated wood:
.1 Preservative treated lumber and timber, whether plant or site treated, shall be cured for a minimum of 30 days from date of the treatment application before their installation in areas which will be in contact with the water.
.2 Do not cut treated wood lumber over the surface of a watercourse or wetland.
.3 Do not use liquid applied preservative products over the surface of a watercourse or wetland.
.4 Wood treated with Chromate Copper Arsenate (CCA) or Ammoniac Copper Zinc Arsenate (ACZA) must be CSA or AWPA approved.
.5 Do not use timber and lumber treated with creosote, petroleum and

pentachlorophenol for any part of the Work.

.4 Visually monitor the water turbidity of the surrounding areas adjacent to the work and up to 200 metres.
.1 Should excessive change occur in the turbidity beyond the 200 metres which differs from existing conditions of the surrounding water bodies, such as a distinct colour difference; stop the work and notify the Departmental Representative to obtain appropriate mitigation measures to be followed.

.5 Any construction debris entering the marine environment will be immediately retrieved when it is safe to do so.

.6 The construction material used must be clean and non-toxic (free of fuel, oil, grease, and/or any contaminants).

1.10 SOCIOECONOMIC RESTRICTIONS

.1 Must 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 Equip equipment and machinery with purposely designed mufflers to reduce noise on site to lowest possible level. Maintain mufflers in good operating condition at all times.

.4 Adequate signage and safety measures must be supplied during transportation of materials and equipment to the harbour.

1.11 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 Do not approach concentrations of seabirds, waterfowl and shorebirds when anchoring equipment, accessing wharves or ferrying supplies.

.4 During night time work, position flood lights in opposite direction of nearby bird nesting habitat.

.5 Do not use beaches, dunes and other natural previously undisturbed areas of the site to conduct work unless specifically approved by the Departmental Representative.

.6 Should nests of migratory birds in wetlands be encountered during work, immediately notify Departmental Representative for directives to be followed.
.1 Do not disturb nest site and neighboring vegetation until nesting is completed.
.2 Minimize work immediately adjacent to such areas until nesting is completed.
.3 Protect these areas by following recommendations of Canadian Wildlife Service.

.7 Ensure that food scraps and garbage are not left at the work site.

.8 Project vehicles will keep to designated project transportation routes and stay within DFO-SCH property boundaries.

.9 No staging of vehicles or equipment/ material storage will take place on any beaches, wetlands or dunes, unless otherwise advised, via permit, by Departmental Representative. The project footprint will not encroach/impact these abovementioned areas.

1.12 FISH AND FISH HABITAT

.1 Be aware of the risk for contamination of the fish habitat at the site as a result of alien species being introduced in the water.

.2 To minimize the possibility of fish habitat contamination, 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.
.1 Equipment shall include boats, barges, cranes, excavators, haul trucks, pumps, pipe lines and other all miscellaneous tools and equipment previously used in a marine environment.

.3 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.

.4 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 Checks and remove all plant, animal and sediment matter from the 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.

.5 Do not perform cleaning and wash down within a 30 metre buffer zone of a wetland, watercourse or other identified environmentally sensitive area.

.6 Record of Assurance Logbook:
.1 Maintain an on-going log of past and present usage and wash down of all equipment to illustrate mitigation measures undertaken against fish habitat contamination by alien species.
.2 Write data in a hard cover bound logbook,
.3 Include the following:
.1 Date and location where equipment was previously used in a watercourse or wetland;
.2 Type of work performed.
.3 Dates of wash down for each piece of equipment;
.4 Cleaning method and cleaning agent(s) used.

.7 Keep Record of Assurance Logbook updated from project to project. Upon request, submit logbook to Departmental Representative for review.

.8 Abide by requirements and recommendations of the Federal Department of Environment and the Department of Fisheries and Oceans - Habitat Protection and Sustainable Development Branch in cleaning and wash down of equipment.

1.13 AIR QUALITY

.1 Keep airborne dust and dirt resulting from the work on site to an absolute minimum.

.2 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 Do not use oil or any other petroleum products for dust control.

1.14 FIRES

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

END OF SECTION