

PART 1 - GENERAL

- 1.1 RELATED SECTIONS
- .1 Section 01 11 00 - General Requirements of Work.
 - .2 Section 01 35 30 - Health and Safety Requirements.
 - .3 Section 01 52 00 - Construction Facilities.
- 1.2 REFERENCES
- .1 Transportation and Dangerous Goods Act.
 - .2 Canadian Council of Ministers of the Environment (CCME), Contaminated Sites, Soils & Groundwater.
- 1.3 DESCRIPTION OF WORK
- .1 This section outlines the requirements for environmental protection associated with the work.
- 1.4 ENVIRONMENTAL PROTECTION PLAN
- .1 The contractor is required to develop and submit an Environmental Protection Plan (EPP) that demonstrates the contractor's commitment to avoidance of adverse environmental impacts through implementation of best practices in pollution prevention and the promotion of sound environmental practices for the project. The plan shall also include/address all recommendations and mitigations from the Canadian Environmental Assessment Act (CEAA) screening document.
- 1.5 NOISE CONTROL
- .1 Establish and maintain site procedures such that noise levels from the work site are minimized.
 - .2 Control noise levels in accordance with local by-laws.
 - .3 Use vehicles and equipment equipped with efficient muffling devices.
 - .4 Provide and use devices that will minimize noise levels at the work site.
- 1.6 DUST CONTROL
- .1 Prevent dust nuisances resulting from operations at the work site.
 - .2 Use water, brine or calcium chloride to control dust.

1.6 DUST CONTROL
(Cont'd)

- .3 Minimize use of calcium and brine, particularly in close proximity to water courses or agricultural lands.
- .4 Transport dusty materials in covered haulage vehicles.
- .5 Public roadways shall be kept clean and free of soil material.

1.7 WATER CONTROLS

- .1 Protect open excavations against flooding and damage due to surface run-off.
- .2 Any water and free phase liquid petroleum product ("free product") observed on water or encountered in the excavations shall be collected by means of skimming equipment, containment booms, vacuum trucks, oil water separators or sorbent materials suitable for oil based products.
- .3 The surrounding environment shall be protected at all times from the release of free product and sedimentation from the work area.
- .4 Intercept and divert concentrated run-off from unstablized areas under sheet flow conditions.
- .5 Dispose of water so as not to be injurious to public health or safety, to property or to any part of work completed or under construction.
- .6 It is emphasized that control of water and prevention of siltation is the responsibility of the Contractor. All work is to be carried out in accordance with the NLDEC.
- .7 If water is to be released into a public sewer or sewer leading to a public sewer, sewage or effluent pipelines, the water quality criteria specified within the Newfoundland and Labrador Environmental Control Water and Sewage Regulations, 2003 shall be met and analytical data shall be submitted to the Departmental Representative prior to release.
- .8 The control of run-off water containing suspended materials or other harmful substances must be in accordance with applicable provincial and/or federal criteria.

1.8 EROSION AND
SEDIMENT CONTROL

- .1 Install erosion and sediment control measures prior to any land disturbance including site preparation, site clearing, grubbing, scarification and general construction activities.
- .2 Provide and maintain temporary measures which may include, but are not limited to, silt fences, straw bale check dams, ditches, berms, sedimentation basins, dikes, erosion control structures and any other construction required to prevent erosion and migration of silt, mud, sediment, and other debris off site or to other areas of site where damage might result, or that might otherwise be required by Laws and Regulations.
 - .1 Silt Fence: an assembled ready to install unit consisting of geotextile attached to driveable posts. Geotextile shall be uniform in texture and appearance, having no defects, flaws, or tears that would affect its physical properties; and contain sufficient ultraviolet ray inhibitor and stabilizers to provide minimum 2-year service life from outdoor exposure.
 - .2 Check erosion and sediment control measures weekly and after each rainfall; during prolonged rainfall, check daily. Make all necessary repairs if any damage is discovered.
 - .3 Unless indicated or directed by Departmental Representative, remove temporary erosion and sediment control devices upon completion of Work. Spread accumulated sediments to form a suitable surface for seeding or dispose of, and shape area to permit natural drainage to satisfaction of Departmental Representative. Materials, once removed, become property of the Contractor.

1.9 ROADWAYS

- .1 Maintenance and Use:
 - .1 Prevent contamination of access roads. Immediately scrape up debris or materials on access roads which is suspected to be contaminated as determined by Departmental Representative; transport and dispose of in appropriate off-site disposal facility. Clean access roads at least once per shift.
 - .2 Departmental Representative may collect soil samples for chemical analyses from traveling surfaces of constructed and existing access routes prior to, during and upon completion of Work. Excavate and dispose of clean soil contaminated by Contractor's activities at no additional cost.

1.10 POLLUTION
CONTROL

- .1 Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious toxic substances and pollutants produced by construction operations.
- .2 Refueling and maintenance activities should be undertaken on level terrain, at least 30 m from any surface water, on a prepared impermeable surface with a collection system to ensure oil, gasoline and hydraulic fluids do not enter surface waters. Waste oil should be disposed of in an approved manner.
- .3 Drums of petroleum products or chemicals should be tightly sealed and stored to prevent corrosion and rust. Drums shall be stored on an impermeable barrier in a dry, watertight building or shed with an impermeable floor.
- .4 Be prepared to intercept, clean up, and dispose of spills or releases that may occur whether on land or water. Maintain materials and equipment required for cleanup of spills or releases readily accessible on site.
- .5 Promptly report spills and releases potentially causing damage to environment to:
 - .1 Authority having jurisdiction or interest in spill or release including conservation authority, water supply authorities, drainage authority, road authority, and fire department.
 - .2 Environmental Emergencies 24-hour Report Line (1-709-772-2083 / 1-800-563-9089.)
 - .3 Owner of pollutant, if known.
 - .4 Person having control over pollutant, if known.
 - .5 Departmental Representative.
- .6 Contact manufacturer of pollutant if known and ascertain hazards involved, precautions required, and measures used in cleanup or mitigating action.
- .7 Take immediate action using available resources to contain and mitigate effects on environment and persons from spill or release.
- .8 Provide spill response materials including, containers, open-ended barrels, absorbent, shovels, and personal protective equipment. Response equipment should be stored in an accessible location on-site. Make spill response materials available at all times in which hazardous materials or wastes are being handled or transported. Spill response materials should be compatible with types of material being handled. Personnel working on the project should be knowledgeable about response procedures. Develop a contingency plan specific to the proposed undertaking

<u>1.10 POLLUTION CONTROL (Cont'd)</u>	.8	(Cont'd) to enable a quick and effective response to a spill event.
<u>1.11 ASSURANCE</u>	.1	Perform work in accordance with the following regulatory requirements: .1 Laws, guidelines and policies of government authorities pertaining to: environment; noise; waste water; air quality, health and safety; and transportation. .2 WHMIS. .3 Canadian Environmental Assessment Act. .4 Canadian Environmental Protection Act (New Substance Notification Regulations). .5 Transportation of Dangerous Goods Act. .6 NL Environmental Control Water and Sewage Regulations.
<u>1.12 MEASUREMENT FOR PAYMENT</u>	.1	No separate Measurement for Payment shall be made for items in this section. Include all costs for Environmental Protection in the Lump Sum portion of the work on the Bid and Acceptance Form.
<u>PART 2 - PRODUCTS</u>		
<u>2.1 NOT USED</u>	.1	NOT USED
<u>PART 3 - EXECUTION</u>		
<u>3.1 COORDINATION OF WORK</u>	.1	The Contractor must coordinate the work with the requirements of the Departmental Representative. The Departmental Representative will indicate in the field the limits of excavation, this may vary from that indicated on the drawings.
<u>3.2 EXCAVATION, DISPOSAL, AND RELOCATION OF SOILS</u>	.1	All stockpiled clean soils will be re-used as backfill in the excavation unless directed otherwise by the Departmental Representative.
	.2	Minimize exposed soil areas by limiting the area exposed at any one time, and by limiting the amount of time that any area is exposed.

3.2 EXCAVATION,
DISPOSAL, AND
RELOCATION OF SOILS
(Cont'd)

- .3 Contractor must ensure that truck box is water tight and no leakage occurs prior to or during transportation of material. Any vehicles failing to meet these requirements will be rejected.

3.3 REMOVAL
AND DISPOSAL

- .1 Remove surplus materials and temporary facilities from site.
- .2 Do not burn or bury rubbish and waste materials on site.
- .3 Do not dispose of volatile or hazardous wastes such as mineral spirits, oil, or paint thinner on site or in storm or sanitary drains.
- .4 Do not discharge wastes into streams or waterways. Dispose of waste/excess materials at appropriate off-site facilities identified by Contractor and approved by Departmental Representative.
- .5 Minimize generation of hazardous waste to maximum extent practicable. Take necessary precautions to avoid mixing clean and contaminated wastes.

3.4 EQUIPMENT

- .1 Do not clean equipment in streams or lakes.
- .2 Clean construction equipment prior to driving on roadways or removal from site.
- .3 Do not clean equipment in locations where debris can gain access to watercourses.