

## **PART 1 - GENERAL**

### **1.1 SUMMARY**

- .1 As part of the part of the construction of the CCG Southside Base Phase 1 the excavated soil shall be treated as contaminated soil. Contractors will excavate, and transport the soil in accordance with applicable federal and provincial acts, legislation, and regulations including Canadian Environmental Protection Act, Canadian Transportation of Dangerous Goods Act and Newfoundland Dangerous Goods Transportation Act.
- .2 It is the intent that work performed as per this section will result in the disposal to a landfill or treatment facility licensed to receive polycyclic aromatic hydrocarbons (PAH), petroleum hydrocarbons (TPH), and metals impacted soil excavated at the Site. Prior to removal of the impacted soil refer to Civil Drawings and the Remediation Action Plan provided in Appendix C to confirm disposal requirements.
- .3 Removal activities must comply with requirements of this Section when excavating and transporting contaminated soil to an offsite treatment facility.
- .4 The Contractor will be responsible for all costs related to the removal and disposal of all surplus materials generated by project activities.
- .5 Groundwater and surface water management shall be included in soil removal costs.
- .6 Spill response: the Contractor shall have a plan in place and maintain sufficient equipment and materials on-site to respond to any release of contaminated soil or groundwater which occurs during excavation or transportation.
- .7 The disposal facility must be licensed by the governing municipal, provincial, and/or federal authorities to accept (PAH and TPH) contaminated soils.

### **1.2 REFERENCES**

- .1 Canadian Environmental Protection Act (1999).
  - .2 CCME (Canadian Council of Ministers of the Environment) Contaminated Sites, Contaminated Soil and Groundwater, and Remediation of Contaminated Sites.
  - .3 Transport Canada, Transportation of Dangerous Goods Act (1992).
  - .4 Newfoundland Dangerous Goods Transportation Act (1989).
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- .5 Applicable federal and provincial environmental and health and safety laws and regulations.

### **1.3 DEFINITIONS**

- .1 PAHs - Polycyclic Aromatic Hydrocarbons.
- .2 TPHs - Petroleum Hydrocarbons.

### **1.4 REGULATORY REQUIREMENTS**

- .1 Comply with the following:
  - .1 Canadian Environmental Protection Act.
  - .2 Transport Canada, Transportation of Dangerous Goods Act and Regulations.
  - .3 Newfoundland Dangerous Goods and Transportation Act and Regulations.
    - .1 Emergency Spill Regulations pursuant to the Newfoundland and Labrador Environmental Protection Act.
- .2 Other legislation which applies to the performance of the work in this section:
  - .1 Perform work in accordance with:
    - .1 Acts, Regulations, Laws, guidelines codes of practice, directives and policies of government authorities pertaining to: environment; noise; water supply; waste water; air quality; health and safety; transportation; waste management.
    - .2 WHMIS.
    - .3 Canadian Environmental Assessment Act.
    - .4 Canadian Environmental Protection Act (New Substance Notification Regulations).
    - .5 Transportation of Dangerous Goods Act.
    - .6 National Building Code of Canada.
    - .7 National Fire Code of Canada.

### **1.5 QUALITY ASSURANCE**

- .1 Qualifications:
    - .1 Provide detailed descriptions of firm and sub-contractors, indicating experience in soil removal and disposal. Provide descriptions of similar projects completed in the past five (5) years.
    - .2 Identify members of project team including project manager. Define experience, education and training, qualifications, tasks and responsibilities of each team member.
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- .2 Pre-proposal meeting:
  - .1 Attend site meetings and verify site conditions before submitting proposal.

## **1.6 PROJECT/SITE CONDITIONS**

- .1 Existing Conditions:
  - .1 Some soils at the Site are contaminated with PAHs, TPHs, and/or metals. Refer to the Human Health and Ecological Assessment and Remediation Action Plan provided in Appendix B and C respectively.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- .1 Contaminated soil.

### **2.2 EQUIPMENT**

- .1 Leave equipment and machinery running only while in use, except where extreme temperatures prohibit shutting down.
- .2 Dump Trucks:
  - .1 Cleaned meticulously between loads of contaminated soil and clean fill.
  - .2 Cleaned meticulously at end of work day.
  - .3 Cover dump truck box with tarpaulins during transportation of contaminated soil.
  - .4 Use watertight truck bodies for transporting contaminated soil.
- .3 Peripheral Water Drainage System (surface and groundwater).
- .4 Environmental Emergency Response Equipment.
- .5 Safety Equipment.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- .1 Verification of Site conditions.
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### **3.2 PREPARATION**

- .1 Protection:
  - .1 Keep excavation sites water free throughout work and manage recovered water according to contamination level and provincial/municipal regulations.
  - .2 Protect excavation from rainwater.
  - .3 Provide temporary structures to divert flow of surface waters from excavation.
  - .4 Provide safety measures to ensure worker and public safety.

### **3.3 APPLICATION**

- .1 The Contractor will ensure appropriate Personal Protective Equipment (PPE) and hygiene measures will be applied at the work site to prevent dermal contact, ingestion, and respiratory contact inhalation with the PAH, TPH and metals contaminated soils.
  - .2 Groundwater and surface water management.
    - .1 Pump groundwater and surface water that has entered excavation into a storage tank for Contractor to dispose. Should the Contractor wish to discharge dewatering into the municipal storm sewer they must first test the water to confirm it meets municipal sewer use by-law (S-101) and CCME marine aquatic life acceptance criteria. Testing results are subject to review by Departmental Representative.
  - .3 Soil excavation and management.
    - .1 Avoid temporary stockpiling of soils as much as possible;
    - .2 Store soil generated from excavation activities in accordance with applicable provincial standards, requirements and regulations.
    - .3 store on an appropriate containment surface such as asphalt or impermeable geomembrane and cover daily.
    - .4 Ensure stockpiles are located at least 30 m from a watercourse or storm drain;
    - .5 Do not dilute contaminated soil with less contaminated soil.
  - .4 Contaminated soil removal:
    - .1 Load Contaminated soil into water-tight trucks.
    - .2 Protect non-contaminated material from adjacent contaminated soil.
  - .5 The Contractor will transport excavated soil and collected groundwater off-site to a soil treatment facility in accordance with Transport Canada's Transportation of Dangerous Goods Act.
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### **3.4 SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Within seven (7) days of the project award and prior to the starting onsite activities, the Contractor is to provide the following items to the Departmental Representative:
  - .1 The name, location, and contact information for the proposed Soil Disposal Facility that will receive the soils generated by project activities.
  - .2 Written correspondence from the proposed Soil Disposal Facility stating that the facility is licensed by the governing municipal, provincial, and federal authorities to accept metals, PAH and TPH contaminated soils, and that the facility will accept the quantity of soils expected to be generated by this project.
  - .3 Copies of the soil disposal manifests must be provided to the Departmental Representative within 48 hours of the soil leaving the project work site.

### **3.5 METHOD OF REMEDIATION**

- .1 Off-site disposal at a licensed soil disposal facility.

### **3.6 RESTORATION**

- .1 Clean permanent access roads of contamination resulting from project activity at request of Departmental Representative.

### **3.7 EQUIPMENT DECONTAMINATION**

- .1 Decontaminate equipment used in soil removal process and remove from site upon completion of soil removal activities.