

## **1 General**

### **1.1 RELATED SECTIONS**

- .1 Section 02 41 19.13 - Selective Building Demolition.

### **1.2 REFERENCES**

- .1 Canadian Federal Legislation
  - .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
    - .1 Canadian Environmental Protection Act (CEPA), 1999, - Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, SOR/2008-197
  - .2 Canadian Council of the Ministers of Environment - Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003 (CCME)
  - .3 National Fire code of Canada, 2015

### **1.3 SUBMITTALS**

- .1 Submit written tank description in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide written description of tank, its former contents, location and reason for removal.
- .3 Provide Departmental Representative with copy of vapour removal test results.
- .4 Forward affidavit of destruction of aboveground storage tanks to the Departmental Representative, and Closeout Documentation, as found in Appendix B.
- .5 Information required by PWGSC to notify the Minister of Environment through FIRSTS (Federal Identification Registry of Storage Tank Systems), of tank removal including a drawing of the system.

### **1.4 QUALITY ASSURANCE**

- .1 Contractor must be licensed/certified by Province authorities having jurisdiction for removal of aboveground storage tanks.
  - .1 License/certificate, title and number must accompany tender document.
  - .2 Regulatory Requirements: Ensure Work is performed in compliance with CEPA, CERA (Canadian Energy Regulators Act) and applicable Provincial Regulations.
  - .3 SOR 197/2008 including tagging the fill pipe as "out of service" as applicable.

### **1.5 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse in accordance with Waste Management Plan.
- .2 Divert metal materials from landfill to metal recycling facility.
- .3 Segregate and deliver non-salvageable or non-recyclable materials, including waste liquids and sludges to Provincially licensed waste facility.
- .4 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Departmental Representative initiating a clean-up and related costs being deducted from progress claims.

## **2 Products**

### **2.1 NOT USED**

- .1 Not Used.

## **3 Execution**

### **3.1 PREPARATION SAFETY AND SECURITY**

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- .1 Conform to or exceed Federal (including SOR 197/2008) and Provincial codes, local municipal by-laws, by-laws, and codes and regulations of utility authorities having jurisdiction.
- .2 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Protection.
  - .1 Meet safety requirements of Occupational Safety and Health, Canada Labour Code Part II and Regulations for Construction Projects.
  - .2 Disconnect or remove source of ignition from vicinity of tank.
  - .3 Provide temporary protection for safe movement of personnel and vehicle traffic.
  - .4 Cut, braze or weld metal only in monitored areas established to be free of ignitable vapour concentrations.
  - .5 Ground and bond metal equipment, including tanks and transfer pipes, before operating equipment or transferring flammable materials.
  - .6 Use non-sparking tools and intrinsically safe electrical equipment.
  - .7 Smoking is not permitted.

### 3.2 DRAINING

- .1 Drain and flush piping into tank.
- .2 Pump out liquid from tank.
  - .1 Use explosion proof, air driven or hand pump.
- .3 Remove sludge from tank bottom.
  - .1 Dispose of product and sludge in accordance with local, Provincial regulations using waste disposal carrier licensed by Provincial Environmental Agency having jurisdiction.
  - .2 Purge all vapours and VOC gases per section 3.4 prior to any removal activity.
  - .3 Monitor and Maintain appropriate vapour levels in the tanks until the delivery of the tanks to the decommission site.
  - .4 Contractor to provide contamination testing of site by an independent Third party.
  - .5 Backfilling must not occur until contamination has been received from soil testing.

### 3.3 TANK REMOVAL

- .1 Remove tank in accordance with CEPA SOR197-2008 and CCME Code of Practice PN1055 and place in secure location.
- .2 Block tank to prevent movement.
- .3 Advise Departmental Representative immediately if there is evidence of leakage or contamination in tank removal, stop Work until further notice.

### 3.4 VAPOUR REMOVAL

- .1 Purging:
  - .1 Purge vapors to less than 10% of lower explosive limit (LEL).
  - .2 Verify with combustible gas meter.
  - .3 provide the Departmental Representative with the test results.
- .2 Dry Ice Method:
  - .1 Add 1.85 gm of solid carbon dioxide (dry ice) for each 100 liter capacity.
  - .2 Crush and distribute ice evenly over greatest area to secure rapid evaporation. Avoid skin contact.
  - .3 Verify dry ice has vaporized.
- .3 Air Method:
  - .1 Ventilate tank with air using small gas exhauster operated with compressed air.

- .2 Air to enter opening at one end and to exit opening at other end to quickly remove vapour.
- .3 Test interior of tank to determine when tank is free of vapour.
- .4 Provide Departmental Representative with the test results of purging per SOR197-2008, Section 44.

### **3.5 CAPPING**

- .1 Plug holes after tank has been freed of vapors and before tank is moved from site.
  - .1 Leave vents open.
- .2 Plug corrosion leak holes using screwed (boiler) plugs.
- .3 Leave 3 mm vent hole in one plug to prevent tank from being subjected to excessive pressure differential caused by extreme temperature change.

### **3.6 SECURING AND REMOVAL FROM SITE**

- .1 Check vapour levels prior to transport.
  - .1 Remove vapour if required.
- .2 Dispose of tank in accordance with local, Provincial and Federal regulations.
- .3 Truck removal.
  - .1 Secure tank on truck for transport to disposal site.
  - .2 Cut suitable openings in tank sides to render tank unusable.
  - .3 Ensure 3 mm vent hole located at uppermost point on tank.
  - .4 Label tank stating "Not for Reuse" and "To be Disposed".

### **3.7 WORKMANSHIP AND DISPOSAL**

- .1 Tanks destined for disposal.
  - .1 Dismantle, cut sufficient openings or otherwise render unusable.

### **3.8 CONTAMINATED SOIL**

- .1 Contaminated soil extents have been previously mapped to determine the general extents of the contaminant plume, and are presented in the hydrocarbon contaminants report found in Appendix E, provided for general reference. The Contractor must fully remove all contaminated soil presented in with the extent modified as required per testing under as noted below during implementation.
- .2 A third party is to be commissioned by the Contractor for soil testing, to confirm the extents of the hydrocarbon contamination at the site. This will determine the scope of removal for soils.
- .3 Removals and subsequent remediation to be completed in accordance with the associated standards including current CCME environmental guidelines, and the Canada-wide Standard for Petroleum Hydrocarbons.
- .4 The Contractor is to remove the contaminated soils from the site, and deliver to the nearest disposal facility (located in Happy Valley Goose Bay). The extent of the soil removal is expected to be 80m<sup>3</sup> as described in Appendix E, however all soils found to be contaminated at the time of the site works are to be removed. The Contractor is to report the actual disposal volume to the Departmental Representative.
- .5 Any soil volume differences from this amount are to be credited or billed via approved Change Order. The Contractor will be required to provide all supporting invoices and documentation to support expense claims in the Change Order, including disposal fees, hauling costs and markups for the material disposal difference between the tendered value and the actual value.

### **3.9 SITE REMEDIATION**

- .1 Finished grades shall be restored to previous profile, and to match surrounding area. Contractor to use suitable backfill material as defined in Section 31 23 33.01 Excavation,

- Trenching, and Backfilling.
- .2 Provide seed and sod to match surrounding area.

**END OF SECTION**