
Part 1 General

1.1 RELATED REQUIREMENTS

- .1 The list of work sections in this division is indicative and non-exhaustive. It does not exclude the works described in the other specification sections, shown in the drawings or necessary for the execution of the works in keeping with overall intent of the plans.
- .2 Section 01 35 13.43 – Special project procedures – Contaminated soil.
- .3 Section 01 35 43 – Environmental procedures.

1.2 REFERENCES

- .1 Canadian Council of Ministers of the Environment (CCME).
 - .1 CCME PN 1326-2003, Environmental Code of Practice for Underground Storage Tank Systems Containing Petroleum Products and Allied Petroleum Products.
 - .2 CCME PN 1299-2006, Canadian Environmental Quality Guidelines.
 - .1 Chapter 7-2006, Canadian Soil Quality Guidelines for the Protection of Environmental and Human Health.
- .2 Canadian Federal Legislation.
 - .1 Canadian Environmental Protection Act (CEPA), 1999, c. 33.
 - .1 Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations SOR/2008-197.
 - .2 Canadian Environmental Assessment Act (CEAA), 1995, c. 37.
 - .3 Canada Labour Code (R.S. 1985, c. L-2).
 - .1 Part II (September 2000) - Occupational Health and Safety.
 - .4 Transportation of Dangerous Goods Act (TDGA), 1992, c. 34.
- .3 Underwriters' Laboratories of Canada (ULC).
 - .1 ULC-S603-2000, Standard for Steel Underground Tanks for Flammable and Combustible Liquids.
 - .2 ULC-S615-1998, Standard for Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide written storage tank description in accordance with Section 01 33 00 - Submittal Procedures.
- .3 Provide the following information on storage tank :
 - .1 Former contents.
 - .2 Location.
 - .3 Reason for removal.

- .4 Provide Departmental Representative with copy of vapour removal test results.
- .5 Forward affidavit of destruction of underground storage tanks to authority having jurisdiction.

1.4 QUALITY ASSURANCE

- .1 Contractor must be licensed/certified by Province/Territorial authorities having jurisdiction for removal of underground storage tanks.
 - .1 License/certificate, title and number must accompany tender document.
 - .2 Regulatory Requirements : ensure Work is performed in compliance with applicable Provincial/Territorial regulations.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Waste Management and Disposal.
 - .1 Separate waste materials for disposal in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Divert metal materials from landfill to metal recycling facility approved by Departmental Representative.
- .3 Segregate and deliver non-salvageable or non-recyclable materials, including waste liquids and sludges to Provincially licensed waste facility.

Part 2 Products

- .1 Equipments to remove.
- .2 Petroleum storage tank and allied piping :
 - .1 Tank capacity : $\pm 10\,000$ liters.
 - .2 Material type : steel.

Part 3 Execution

3.1 PREPARATION SAFETY AND SECURITY

- .1 Conform to or exceed Federal 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 PIPING AND TANK 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 and Provincial regulations using waste disposal carrier licensed by Provincial Environmental Agency having jurisdiction.

3.3 EXCAVATION TRENCHING AND BACKFILL

- .1 Do work in accordance with Section 31 23 10 - Excavation, Trenching and Backfilling.
- .2 Provide protective material around excavation.
- .3 Provide constant supervision during excavation and backfilling.
- .4 Excavation :
 - .1 Excavate until top of tank and connections and openings are exposed.
 - .2 Disconnect piping :
 - .1 Remove fill tube.
 - .2 Disconnect fill gauge, product and vent lines.
 - .3 Cap or plug open ends of lines that are not to be used further.
 - .4 Remove piping from ground.
 - .3 Temporarily plug tank openings.
 - .4 Continue excavation until tank is completely exposed.
 - .5 Temporarily stockpile on site soil in vicinity of tank, until waste classification can be established prior to final disposal.
- .5 Prevent movement, settlement or damage of adjacent structures. Provide bracing or shoring as required.

3.4 TANK REMOVAL

- .1 Remove tank in accordance with CCME Code of Practice PN 1326 and/or applicable provincial standards and regulations, and place in secure location.
- .2 Block tank to prevent movement.

- .3 Replace excavation with a material compacted at 90 % of M.P. Combler l'excavation avec un matériel de remblai compacté à 90 % du P.M. for which the degree of contamination is lower than the criterion CCME and whose generic criteria of contamination is lower than the adjacent soil.

3.5 VAPOUR REMOVAL

- .1 Purging :
 - .1 Purge vapours to less than 10 % of lower explosive limit (LEL).
 - .2 Verify with combustible gas metre.
- .2 Inverting :
 - .1 Displace oxygen to levels below necessary to sustain combustion.
 - .2 Verify with combustible gas metre.
- .3 Water Method :
 - .1 Fill tank with water to expel vapours.
 - .2 Remove and dispose of contaminated water in accordance with regulations after tank is removed from site.
 - .3 Verify with combustible gas metre.
- .4 Air Method :
 - .1 Ventilate tank with air using small gas exhauster operated with compressed air, of appropriate type.
 - .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.

3.6 TANK CAPPING

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

3.7 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 vent hole of appropriate dimension is located at uppermost point on tank.

3.8 WORKMANSHIP AND DISPOSAL

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

3.9 WORK SUPERVISION

- .1 Approved auditor in petroleum equipment.
 - .1 Work must be performed in the presence of a person acknowledged by the Régie du Bâtiment du Québec (RBQ) to oversee the removal of petroleum product storage tank.
- .2 Report.
 - .1 When work has been completed, the person that oversaw the removal operations and acknowledged by the RBQ must write a report and hand it to the Departmental Representative. The report should attest that the removal of the storage tank has been made in accordance with the laws and regulations. The report should also specify the disposal location of the tank, the date of disposal, the tank's volume and any other relevant informations.

END OF SECTION