

GUIDELINE TITLE: Dismantling and Removal of Petroleum Product and Allied Product Storage Tank Systems

BRANCH/DIVISION: Environmental Programs and Strategies/Environmental Stewardship

Guideline Number:
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INTENT

To manage and direct petroleum and allied product storage tank dismantling and removal processes undertaken by Licensed Petroleum Technicians (LPTs), including but not limited to sampling requirements of soil and groundwater. This document compliments the requirements stated in the *Storage and Handling of Petroleum Products and Allied Products Regulation M.R. 188/2001* and any other associated Guidelines.

GUIDELINE

I. Application and General Requirements

1. Licensed Petroleum Technicians are to apply to their local Regional Environment Office for a *Permit to Remove*.
 - a. No work is to be undertaken until the Licensed Petroleum Technician has received a *Permit to Remove*.
 - b. The Licensed Petroleum Technician, once they have received a *Permit to Remove*, must provide the Environment Officer with at least fifteen (15) working days written notification, prior to commencement of work.
2. Storage tank systems are to be removed in accordance with industry standards, which include, but are not limited to, compliance with workplace safety and health legislation, building codes, municipal permits and any other Provincial or Federal requirements.

II. Preparing the Tank

3. Storage tanks must be purged and/or made inert in accordance with industry standards. Tank removal/destruction may not begin until:
 - a. the combustible gas meter reading is less than 10% LEL at any depth within the tank, or
 - b. the oxygen meter reading of the atmosphere inside the tank is less than 5%.
4. At the time of removal, storage tanks must be examined for any evidence of perforations caused by corrosion or structural failure. Perforations must be photographed and locations documented.

III. Tank Removal and Disposal

5. Tank serial numbers are to be recorded and noted on the Tank Removal Report.
6. Storage tanks must be made to provide ventilation and to render it unfit for further use.
 - a. Steel storage tanks and appurtenances may be sent to a scrap dealer to be processed and recycled.
 - b. Non-steel storage tanks and appurtenances may be crushed on site and disposed of at the local disposal ground.
 - c. Above ground storage tanks which are intended to be reused to store petroleum or allied products must be declared in the Application for *Permit to Remove* and Tank Removal Report. Testing of the tank may be required prior to installation.
 - d. Tanks which are intended to be reused for the storage of any product other than petroleum or allied products must be declared in the Application for *Permit to Remove* and the Tank Removal Report.

IV. Waste Disposal

7. Liquid petroleum product and sludge are regulated hazardous wastes and must be handled in accordance with The Dangerous Goods Handling and Transportation Act.
8. Water from the excavation must be tested to determine suitable disposal options.
 - a. Disposal must be conducted with prior approval from the Environment Officer.
9. Impacted soil must be tested to determine suitable disposal options should disposal of the soil be required.
 - a. A Remediation Plan must be submitted and approved prior to the excavation.
 - b. Disposal must be conducted with prior approval from the Environment Officer.

- c. Soil management, including temporary on-site storage of soil, must receive prior approval from the Environment Officer.

V. Soil and Groundwater Testing

- 10. Soil samples must be taken at the time of tank removal by the Licensed Petroleum Technician, or a qualified individual contracted by the Licensed Petroleum Technician.
- 11. The soil samples collected at a tank removal are analyzed for the purposes of the Tank Removal Report, and do not constitute a Phase II Environmental Site Assessment.
 - a. Current or future Phase II Environmental Site Assessment or Site Remediation activities do not negate the requirement to collect soil samples at the time of tank removal, in accordance with this Guideline.
- 12. Field samples are to be screened in accordance with industry standards.
- 13. The soil and groundwater parameters to be analyzed must be stated in the Application for *Permit to Remove*.
- 14. All samples collected for field screening and laboratory analysis are to be collected in accordance with industry standards.
- 15. All samples identified for lab analysis must be submitted to an accredited lab.
- 16. All potable groundwater wells located on the site must be sampled.
 - a. Additional sampling of off-site vulnerable groundwater wells may be required by the Environment Officer.

VI. Sample Collection – Underground Storage Tank Systems

- 17. Soil samples are to be collected from any areas of prior spillage or leakage.
 - a. The sample with the highest field reading and/or visible staining must be submitted for laboratory analysis.
- 18. Soil samples are to be collected from the excavated tank nest using a representative grid pattern.
 - a. A minimum of two (2) representative samples must be collected from the bottom of the excavation.
 - i. The sample with the highest field reading and/or visible staining must be submitted for laboratory analysis.
 - b. A minimum of three (3) vertical samples must be collected on each excavation wall near the top of the wall, mid wall and near the bottom of the wall; approximately every two (2) metres horizontally along each wall at each specified level (near the top of the wall, mid wall and near the bottom of the wall).
 - i. The sample with the highest field reading and/or visible staining on each wall must be submitted for laboratory analysis.
 - c. A minimum of one (1) representative sample must be collected from beneath or adjacent to the pump island.

- i. The sample with the highest field reading and/or visible staining must be submitted for laboratory analysis.
 - d. The pipe run(s) must be sampled every two (2) metres along the run.
 - i. The sample with the highest field reading and/or visible staining must be submitted for laboratory analysis.
- 19. Additional samples should be taken where layers of porous soil (sand/gravel/silt) are noted in the exposed excavation.
- 20. Excavated backfill material must be sampled.
 - a. The sample with the highest field reading and/or visible staining must be submitted for laboratory analysis in accordance with the appropriate guidelines before being returned to the excavation.

VII. Sample Collection – Aboveground Storage Tank Systems

- 21. Soil samples are to be collected in a grid pattern at two (2) metre intervals horizontally, at a minimum depth of fifteen (15) centimetres, extending just beyond the footprint of any:
 - i. Fuel transfer area(s)
 - ii. Areas of prior spillage or leakage
 - iii. Storage tank footprint(s)
 - a. The sample with the highest field reading and/or visible staining must be submitted from each tank area, fuel transfer area and piping/pump area (if applicable).
- 22. Where underground piping is part of the tank system, underground sampling requirements must be applied.

VIII. Project Completion

- 23. A Work Completion Certificate shall be submitted within ten (10) working days of project completion.
- 24. A Tank Removal Report shall be submitted within ninety (90) calendar days of project completion.

