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INSPECTION AND MAINTENANCE REQUIREMENTS of STORAGE TANK SYSTEMS for Petroleum Products and Allied Petroleum Products

for Aboveground Storage Tanks Systems 5000 Litres or Larger and Underground Storage Tank Systems

Requirement

For storage tank systems with aboveground tanks 5000L or greater, and/or underground tanks, Manitoba Environment, Climate and Parks requires that all storage tank systems be inspected and maintained in accordance with Part 5 of Manitoba Regulation MR 188/2001 *Storage and Handling of Petroleum Products and Allied Products Regulation* (the Regulation).

Inspection and performance testing must be conducted and documented annually, by an *authorized individual*.

Definition

Authorized individual: means a person licensed, under section 54 of the Regulation, to construct, alter, or test a storage tank system. This person is known as a licensed petroleum technician (LPT) and will have a licence issued by Manitoba Environment, Climate and Parks which identifies the categories of work on storage tank systems he/she is authorized to conduct.

Background

Manitoba Regulation MR 188/2001 *Storage of Handling of Petroleum Products and Allied Products Regulation* (the Regulation) pursuant to *The Dangerous Goods Handling and Transportation Act*, requires inspections and maintenance of storage tank systems in accordance with Part 8 of the *CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003* (the Code of Practice).

Sections 8.4.1(2) and 8.4.1(3) of the Code of Practice outline the requirements for daily and weekly visual inspections that must be conducted by an owner or operator of a storage tank system.

Section 8.4.1(4) of the Code of Practice specifies the annual inspection and performance testing requirements for storage tank system components. Inspection and performance testing must be conducted by an *authorized individual* in accordance with manufacturer's instructions and documented. **This applies to any component, listed in Table 1, which is part of the storage tank system.**

The LPT must provide the tank owner or operator a record of the inspection and performance test, including at a minimum:

- the name of the *authorized individual* who conducted the test and their license number
- the date of the test
- the component inspected or performance tested
- the inspection or performance test
- results of the performance test

Minimum Inspection and Performance Testing Requirements

A summary of what may be part of the inspection and performance testing is presented in the Table 1. Inspections and performance tests are not limited to the requirements listed, but must, at a minimum, meet these requirements. All inspections and performance tests must be conducted in accordance to manufactures' instructions.

Due to the variation of the inspection or performance testing requirements of components, the *authorized individual* must ensure that the correct manuals and instructions are consulted. When in doubt of inspection/ maintenance requirements, consult with the manufacturer.

Table 1

Tank Component	Inspection or Performance Test Required

automatic tank gauges* and monitoring systems	• review alarm history
	  ○ verify in-tank tests being conducted & passed
	  ○ verify parameters are correctly set
	• visually inspect cables, connections, caps, seals, etc. for condition and proper placement
	• manually dip tank to verify probe reading

high-technology sensors	• invert sensor to verify sump sensor alarms • check for position and orientation within sumps • may be tested by exposing sensor to water where recommended by manufacturer

electronic or mechanical leak detection equipment	• test in accordance with manufacturer's* instructions. For example**:**
	  ○ ***Incon*** requires the qualified person to print and review "line compliance report"
	  ▪ verify each line is being tested/ passing each month
	  ○ ***Veeder Root*** requires "periodic operability testing"

corrosion protection equipment	• yearly test required • the LPT must be authorized to test corrosion protection equipment in Manitoba
pressurized piping emergency valves	• manually trip shear valves to verify product flow stops • open interstitial space of double walled closed piping systems to atmosphere to test alarm
emergency shut-down devices	• push emergency shut-down buttons and verify that all power shut off
containment sumps including dispenser, turbine and transition containment devices	• annual visual inspection verifying containment sump is void of liquid and debris
overfill protection devices	• tested in accordance with manufacturer's instructions**. ○ **where manufacturers do not provide instructions for a model the inspection will verify the presence of the device.

*Automatic tank gauge (ATG) as defined in Part 6, Table 2 of the Code of Practice; *Automatic tank gauge with monthly precision leak detection test.*

Useful Links

Manitoba Environment, Climate and Parks - Petroleum Storage Program:
http://www.gov.mb.ca/sd/envprograms/psp/index.html

Manitoba Environment, Climate and Parks - Emergency Response Program:
https://www.gov.mb.ca/sd/environment_and_biodiversity/petroleum_storage/emergency_response.html

Canadian Council of the Ministers of the Environment:
http://www.ccme.ca/publications/

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