



## TANK TIP 12

# STORAGE TANK REGULATIONS CHECKLISTS

The **Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations** classify storage tank systems according to when they were installed:

- if your system was already in place before June 12, 2008, it is an **existing** system
- if your system was installed after that date, it is a **new** system

Some aspects of the Regulations apply to all systems, and some apply specifically to new or existing systems. If you are planning to install a new system, it is important that you read the Regulations before purchasing and installing equipment.

**Checklist 1** summarizes the requirements for **all systems**

**Checklist 2** summarizes the requirements for **new systems**, divided into five sections according to the type of system

**Checklist 3** summarizes the requirements for **existing systems**, divided into six sections according to the type of system

Note: In some places, the Regulations refer to the **Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, PN 1326** established by the Canadian Council of Ministers of the Environment (CCME Code). The Regulations incorporate by reference certain parts of the CCME Code, and these parts become enforceable. The Regulations also reference the Canadian Environmental Protection Act, 1999 (CEPA).

### CHECKLIST 1: REQUIREMENTS FOR ALL SYSTEMS (EXISTING AND NEW)

✓	REQUIREMENTS	REGULATIONS	MORE INFORMATION
	Identify tank systems	Section 28 + Schedule 2	Tank Tip 3 Identifying Your System
	<i>Use the Federal Identification Registry for Storage Tank Systems (FIRSTS) at <a href="https://www.ec.gc.ca/rfiss-firsts/secureprotege/LoginEntree.aspx">https://www.ec.gc.ca/rfiss-firsts/secureprotege/LoginEntree.aspx</a> or the identification form</i>		
	<i>Display the identification number on or near the system</i>		
	<i>Update FIRSTS within 60 days if any of the information required for the identification changes</i>		



✓	REQUIREMENTS	REGULATIONS	MORE INFORMATION
	Product delivery personnel fill tanks only if they see an identification number on or near the system	Section 29	Tank Tip 10 If You Deliver Products
	Product delivery personnel notifies the operator if a release in liquid form to the environment occurs, or if they see any sign of a leak or any release		
	Prepare and keep up-to-date an emergency plan for each storage tank system	Sections 30–32	Tank Tip 6 Preparing Your Emergency Plan
	Design product transfer areas to prevent releases in liquid form from reaching the environment	Section 15	Tank Tip 7 Containment at Product Transfer Areas
	Perform leak tests immediately if a tank system is suspected to be leaking and does not have continuous leak monitoring	Section 26	Tank Tip 5 Handling Leaks
	Immediately withdraw from service leaking systems or components until leaks are repaired	Subsection 3(1)	
	Releases to the environment are prohibited	Section 2.1	Tank Tip 8 Reporting a Release
	<i>Notify your provincial authority responsible for environmental emergency notifications of any release to the environment</i>	CEPA Paragraph 212(1)(a)	
	<i>For releases over 100 litres, also send a written report to Environment and Climate Change Canada</i>	Section 41	
	Keep regular records including:	Section 46	Tank Tip 11 Record Keeping For Your Storage Tank System
	<i>Inspections</i>	Section 27	
	<i>Installation</i>	Subsection 33(2) + Section 34	
	<i>Operation and maintenance</i>	Subsection 40(2)	
	Maintain oil-water separator according to the Regulations:	Sections 35–39	
	<i>Take monthly measurements of layers or have a continuous monitoring system</i>		
	<i>Have procedures for the proper disposal of free oil, separated solids and discharged water</i>		
	<i>Keep records of any operation and maintenance</i>		
	Have procedures for the proper disposal of tank bottom water	Subsection 40(1)	N/A
	Follow procedures specified in the Regulations for temporary withdrawal from service of a system or component	Sections 42–43	Tank Tip 9 Withdrawal and Removal of Storage Tank Systems
	<i>Put the system or component back into service within two years. Otherwise, the withdrawal becomes permanent</i>		
	Follow procedures specified in the Regulations for permanent withdrawal or removal of a system or component	Sections 44– 45	
	<i>Only a person designated under the Regulations is permitted to permanently withdraw or remove a system or component from service</i>		
	Products stored in the system are compatible with the materials used in the manufacturing of the system	Section 11	N/A
	System has a fill pipe and vent line, and all other openings are sealed or connected to piping	Section 12	
	Do <b>not</b> use secondary containment area for storage	Section 13	

## CHECKLIST 2: REQUIREMENTS FOR NEW SYSTEMS

✓	REQUIREMENTS	REGULATIONS	MORE INFORMATION	
<b>GENERAL REQUIREMENTS</b>				
	Corrosion protection	Section 14	Tank Tip 2 New Storage Tank System Installations	
	Overfill protection			
	Containment sumps, as applicable			
	Certification mark indicating tank design meets a standard referenced in the Regulations			
	Design stamped by a professional engineer			Subsection 34(1)
	As-built drawings stamped by a professional engineer			Subsection 34(2)
	Identification number in place before the first fill			Section 28
	System installed by a person designated under the Regulations			Subsection 33(1)
	Oil-water separator meets the requirements of the Regulations, as applicable	CCME Code Sentences 3.10.2, 3.10.3 and 8.7.2		
	The cathodic protection system, if applicable, is tested within one year after installation, and maintenance checks done once a year after that	CCME Code Section 8.6	N/A	
<b>2.1 – REQUIREMENTS FOR NEW SHOP-FABRICATED ABOVEGROUND STORAGE TANKS</b>				
	Spill containment device	Subsection 14(2) (See Regulations for exceptions)	N/A	
	Secondary containment	CCME Code Part 3		
	Horizontal tanks are supported above grade	CCME Code Sentence 3.4.2		
<b>SECTION 2.2 – REQUIREMENTS FOR NEW FIELD-ERECTED ABOVEGROUND STORAGE TANKS</b>				
	Secondary containment	CCME Code Part 3	N/A	
<b>SECTION 2.3 – REQUIREMENTS FOR NEW UNDERGROUND STORAGE TANKS</b>				
	Location and maintenance allows the removal of the system when it is permanently withdrawn	CCME Code Sentence 4.2.7	N/A	
	Double-walled tanks with monitorable interstitial space	CCME Code Sentence 4.2.4	Tank Tip 2 New Storage Tank System Installations	
	Spill containment device on the fill pipe			
	Liquid and vapour-tight connections			
	Overfill protection device			
	Corrosion protection, as applicable			
	Steel tanks are equipped with a corrosion-resistant coating and cathodic protection	Subsection 14(4)		

✓	REQUIREMENTS	REGULATIONS	MORE INFORMATION
	Additional requirements for new underground storage tanks that store used oil:		
	<i>A 50 mm suction pipe for product removal that can be taken off to clear a blockage</i>		
	<i>Product-removal or transfer connections located inside a spill containment device</i>	CCME Code Sentence 4.2.4	N/A
	<i>An overfill device if tank is filled by pump or remote manual fill</i>		
	<i>If fill port is outside, it is equipped with a spill containment device with a capacity of at least 25 litres, a rain cover and a screen to prevent objects from entering the tank</i>		
	<i>In-take vent with an open area of at least twice the open area of the suction pipe to avoid vacuum collapse</i>		
<b>SECTION 2.4 – REQUIREMENTS FOR NEW PIPING</b>			
	Approved materials:		
	<i>Copper</i>	Subsection 14(5)	N/A
	<i>ASTM A 53, "Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless"</i>		
	<i>CAN/CSA Z245.1, "Steel Line Pipe"</i>		
	<i>CAN/ULC-S633, "Flexible Underground Hose Connectors"</i>		
	<i>ORD-C536, "Flexible Metallic Hose"</i>		
	<i>ULC/ORD – C971, Non-metallic Underground Piping for Flammable and Combustible Liquids</i> <i>OR</i> <i>CAN/ULC-S660, Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids</i> <i>whichever was the most recent at the time the storage tank system was manufactured</i>		
	Compliant with the National Fire Code of Canada	CCME Code Sentence 5.2.2	
	Secondary containment systems for underground piping, as applicable, are designed and installed so that leaks either accumulate in a containment sump that can be easily inspected, or are detected by a monitoring system	CCME Code Sentence 5.4.5(1)	
	Underground piping up to and including 75 mm in diameter has secondary containment	CCME Code Sentence 5.4.1	
	Underground piping larger than 75 mm in diameter has secondary containment or cathodic protection	CCME Code Sentence 5.4.2	
	Thermal relief valve	CCME Code Sentence 5.2.7	
	Piping located below the maximum product level is equipped with a means to prevent the release of liquid from the tank by syphon flow	CCME Code Sentence 5.2.8	
	Lockable manual shut-off valve (unless attached to heating appliance)		
	For a tank with a capacity of 5000 L or more, a liquid and vapour-tight connection at the fill point	CCME Code Sentence 5.3.1	
	Mechanical joints are not buried or concealed	Subsection 14(5)	

### CHECKLIST 3: REQUIREMENTS FOR EXISTING SYSTEMS

✓	REQUIREMENTS	REGULATIONS	MORE INFORMATION
<b>SECTION 3.1 – REQUIREMENTS FOR EXISTING HORIZONTAL ABOVEGROUND STORAGE TANKS</b>			
	Monthly visual inspection or ongoing leak monitoring or detection program in place for horizontal aboveground tanks without secondary containment	Sections 19–21	Tank Tip 4 Leak Detection and Monitoring
	<i>A visual inspection of the walls of the tanks was completed by June 12, 2010</i>		
	Horizontal tanks are supported above grade	Section 7	Tank Tip 9 Withdrawal and Removal of Storage Tank Systems
	Tanks in contact with the ground, as well as partially buried tanks, are removed		
	Aboveground tanks installed below grade or encased within filled secondary containment are removed	Section 5	
<b>SECTION 3.2 – REQUIREMENTS FOR EXISTING VERTICAL ABOVEGROUND STORAGE TANKS</b>			
	Ongoing leak monitoring or leak detection program in place for vertical aboveground tanks without secondary containment	Section 22	Tank Tip 4 Leak Detection and Monitoring
	<i>A visual inspection of the tanks or the floor of the tanks was completed by June 12, 2010</i>		
<b>SECTION 3.3 – REQUIREMENTS FOR EXISTING UNDERGROUND STORAGE TANKS</b>			
	Ongoing leak monitoring or detection program in place for single-walled underground tanks	Section 16	Tank Tip 4 Leak Detection and Monitoring
	<i>A precision leak test of the tank was completed by June 12, 2010</i>		
	Underground tanks installed aboveground or in unfilled secondary containment (e.g. an empty concrete vault) are removed	Section 6	Tank Tip 9 Withdrawal and Removal of Storage Tank Systems
	Single-walled underground tanks without cathodic protection and/or leak detection are removed	Section 9 (See paragraphs 9(1)(a) and 9(1)(b) for exceptions)	
	Leaking single-walled underground tanks immediately and permanently withdrawn from service and removed within two years of the owner or operator becoming aware of the leak	Subsection 3(2)	Tank Tip 4 Leak Detection and Monitoring
<b>SECTION 3.4 – REQUIREMENTS FOR PARTIALLY BURIED TANKS</b>			
	Partially buried tanks are removed	Section 7	Tank Tip 9 Withdrawal and Removal of Storage Tank Systems
<b>SECTION 3.5 – REQUIREMENTS FOR EXISTING PIPING</b>			
	Ongoing leak monitoring or detection program of aboveground piping without secondary containment	Sections 23–24	Tank Tip 4 Leak Detection and Monitoring
	<i>A visual inspection was completed by June 12, 2010</i>		
	Single-walled underground piping without cathodic protection and/or leak detection are removed	Subsection 10(1) (See subsection 10(2) for exceptions)	Tank Tip 9 Withdrawal and Removal of Storage Tank Systems

✓	REQUIREMENTS	REGULATIONS	MORE INFORMATION
	Ongoing leak monitoring or detection program for single-walled underground piping	Section 17	Tank Tip 4 Leak Detection and Monitoring
	<i>A precision leak test according to the Regulations was completed by June 12, 2010</i>		
	Leaking single-walled underground piping is permanently withdrawn from service and removed within two years of the owner/operator becoming aware of the leak	Subsection 3(3)	
	<i>It may be replaced with approved piping</i>		
<b>SECTION 3.6 – REQUIREMENTS FOR EXISTING SUMPS</b>			
	Ongoing leak monitoring program of sumps according to the Regulations	Section 25	Tank Tip 4 Leak Detection and Monitoring
	<i>A visual inspection was completed by June 12, 2010</i>		

For more information, visit our website

[www.canada.ca/petroleum-products-storage-tanks](http://www.canada.ca/petroleum-products-storage-tanks)

If the information you need is not available on our website, contact your regional office or the Storage Tank Program:

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