Environment Canada Environnement Canada

Tank Tips 5

on *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*

If you suspect or find a leak Under the new *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* you must take immediate action if you discover, or even suspect, a leak. In this fact sheet you'll find information on the regulations related to leaking tanks, piping and other storage tank system components, including when and how to report a leak.

Even tanks appearing to be empty may pose a hazard if they still contain combustible vapours.

What has changed?

On June 12, 2008 Environment Canada put in place new regulations governing storage tank systems for petroleum or allied petroleum products that are under federal jurisdiction as described in the regulations, including privately owned tanks located on federal and Aboriginal land.

Under the new *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* if you find, or even suspect, a leak in your storage tank system, you must take immediate action, and compliance with these regulations is mandatory.

If your storage tank system has *single-walled underground tanks or piping*, there are specific sections of the regulations that apply to you. Please be sure to read the last sections of this fact sheet that apply to these types of installations.

What do you do if you suspect a leak in your tank?

If you suspect a leak in your storage tank system – if, for example, your inventory doesn't reconcile or there's an uncharacteristically strong odour of product around your site – you must immediately perform a leak test or inspection. The kind of leak test or inspection required depends on the type of tanks you have.

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If petroleum-based products have leaked from underground storage tanks and entered the groundwater, you may drink water from a well contaminated with petroleum products. You may breathe in some of the compounds evaporating from a spill or leak if you are in the area where an accidental release has occurred. Children may be exposed by playing in soil contaminated with these products.

- *For underground tanks:* You must do a tank precision leak test as outlined in section 21 of the regulations (available on our website). This includes the requirement that the test be carried out by someone trained in the procedure using a documented and validated method.
- *For aboveground vertical tanks:* You must immediately inspect the tank or the floor of the tank. The inspection must be done by a person trained in the procedure, and subsections 22(2) and 22(3) of the regulations give you detailed information on the tests required.
- *For aboveground horizontal tanks:* You must do a careful visual inspection of the walls of the tank, looking for any traces of product that would indicate a leak.

What do you do if you suspect a leak in your piping or a sump?

- *For aboveground piping:* do a careful visual inspection of the walls of the piping to determine if there is a leak.
- *For underground piping:* you are required to do a piping precision leak test. (see section 24 for details)
- *For turbine, transition and dispenser or pump sumps:* You are required to test the sump immediately using a static liquid media detection test. Details on how to carry out the test are outlined in paragraph 26(f) of the regulations.

What do you do if you find a leak?

If you discover a leak you must take immediate action. If the leaking component cannot be isolated from the rest of the storage tank system, then the entire system must be withdrawn from service until the leak is repaired. If the leak is in a component that can be isolated from the system, then you may continue to operate your storage tank system as long as the component remains isolated from it. The component cannot be returned to service until the leak is repaired or the component replaced.

What is a temporary withdrawal from service?

There are specific requirements governing both the temporary (section 43) and permanent (section 44) withdrawal from service of storage tank systems and their components. This was included in the regulations so that, for example, suppliers don't mistakenly fill a leaking tank that has been withdrawn from service for repairs, and corrosion protection is maintained throughout the period of withdrawal. For a withdrawal from service to be considered temporary, the period of withdrawal must be less than two years in duration (section 42).

A 1984 study found that the compounds most likely to be measured in water in contact with gasoline, kerosene, and fuel oil #2 were the light-fraction, aromatic hydrocarbons such as benzene, toluene, ethylbenzene, and xylenes.

What do you do if you can't immediately withdraw the leaking component or system from service?
If circumstances make it impossible for you to temporarily withdraw the component or system from service you must:

- take immediate measures to minimize any short- or long-term harm to the environment and/or danger to human life or health. In practical terms, this usually means taking immediate action to reduce the amount of product escaping into the environment. In some aboveground systems this may be as simple as placing a bucket under the leak to contain it, or building an ice tub beneath the tank and lining it with a tarp. If your leak is part way up a tank, reduce the level of product in your tank so that it sits below the leak.
- Without delay, notify Environment Canada, in writing, of the circumstances that have made it impossible for you to temporarily withdraw the component or system from service and the measures that you will be taking to comply with this requirement. The addresses are listed at the end of the fact sheet.

By decreasing the amount of product coming in contact with the soil and groundwater, you not only reduce the damage to the environment and the risk to human health, you also minimize your clean-up costs (subsection 3(4)).

If you find a leak do you need to report it?
You must call your regional spill centre to notify them of any release of product into the environment. The telephone numbers are listed below. If 100 litres or more of your product has been released into the environment, then you must follow up the initial notification with a written report. The details of what must be in that report are in subsection 41(1) and the contact information for your region can be found on our website and at the end of this fact sheet.

The compounds in different petroleum product fractions affect the body in different ways. Some of the compounds, particularly the smaller compounds such as benzene, toluene, and xylene (which are present in gasoline), can affect the human central nervous system.

Where do I call to report a leak or spill?

Region	Emergency Number
Alberta	780-422-4505 • 1-800-222-6514*
British Columbia	1-800-663-3456
Manitoba	204-944-4888
New Brunswick	902-426-6030 • 1-800-565-1633*
Newfoundland and Labrador	709-772-2083 • 1-800-563-9089*
Northwest Territories	867-920-8130
Nova Scotia	902-426-6030 • 1-800-565-1633*
Nunavut	867-920-8130
Ontario	416-325-3000 • 1-800-268-6060
Prince Edward Island	902-426-6030 • 1-800-565-1633*
Quebec	514-283-2333 • 1-866-283-2333*
Saskatchewan	1-800-667-7525
Yukon	867-667-7244

**Telephone number accessible in province/region.*

What about a leak in a single-walled underground tank?

Because single-walled underground tanks pose a significant risk to the environment, if you find a leak in a single-walled tank the system must be immediately and permanently withdrawn from service following the requirements in section 44. You then have two years from the date on which you found the leak to remove the system entirely, following the procedures in section 45.

What do you do if you find a leak in single-walled underground piping?

Single-walled underground piping also poses a risk to the environment and is no longer permitted in new installations. If you have single-walled underground piping that leaks, you have two options.

- You can temporarily withdraw your system from service, then remove and replace the piping (sections 44 and 45). Your new piping must conform to the standards laid out in paragraph 14(1)(c) and subsection 14(5).
- Your other choice is to immediately and permanently withdraw the system from service (section 44). You then have two years from the date on which you found the leak to remove the system entirely (section 45).

Is there anything else you need to know?
If you carry out an inspection or leak test for any reason, including a suspected leak, you must keep a record of this. Please see section 27 for what must be in the record.

Where do you get more information?
On our website: www.ec.gc.ca/st-rs. If you'd like us to mail you the information below please call: 819-934-2991 (0900 h – 1700 h EST/EDT).

The following documents are available on our website:

- *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*
- *Tank Tips* fact sheets, each one covering a specific part of the new regulations
- *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products*, Canadian Council of Ministers of the Environment
- *Canadian Environmental Protection Act, 1999*
- Compliance and Enforcement Policy for the *Canadian Environmental Protection Act, 1999*

If you have specific questions on the regulations please contact your regional office.

Pacific & Yukon	storage.tanks.pyr@ec.gc.ca	604-664-9100
Prairie & Northern		780-951-8600
Ontario	EnviroInfo.Ontario@ec.gc.ca	416-739-4826
Quebec	quebec.lavoieverte@ec.gc.ca	800-463-4311
Atlantic	15th.reception@ec.gc.ca	902-426-7231

Where do you send your written reports?

Pacific and Yukon Region	Manager of Inspection Program Environment Canada 201-401 Burrard Street (4th floor) Vancouver BC V6C 3S5	Fax: 604-666-9059
Prairie and Northern Region	Manager of Inspection Program Environment Canada Twin Atria Building 4999-98th Avenue NW Room 200 Edmonton AB T6B 2X3	Fax: 780-495-2451
Ontario Region	Manager of Inspection Program Environment Canada 845 Harrington Court Burlington ON L7N 3P3	Fax: 905-333-3952
Quebec Region	Manager of Inspection Program Environment Canada 105 McGill Street (3rd floor) Montreal QC H2Y 2E7	Fax: 514-496-2087
Atlantic Region	Manager of Inspection Program Environment Canada Queen Square 45 Alderney Drive Dartmouth NS B2Y 2N6	Fax: 902-426-7924

This material has been prepared for convenience of reference and accessibility and does not have an official character. It is of a general nature only. For all purposes of interpreting and applying the regulations, users must consult the official version of the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations.