



# Tank Tips 1

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

**What's new in the new regulations?** On June 12, 2008 Environment Canada put in place new regulations governing storage tank systems under federal jurisdiction as described in the regulations. Compliance with these new regulations is mandatory. This fact sheet highlights some important changes that may have an impact on your storage tank system. If you need more information, you'll find our website address, a list of important documents, and contact numbers on the last page.

The costs of failing to control risks associated with storage tank systems are very high; for example, losses of community water supplies have occurred as a result of petroleum product releases.

## **What has changed?**

On June 12, 2008 Environment Canada put in place new regulations governing storage tank systems that are under federal jurisdiction as described in the regulations. These regulations replace the previous *Federal Registration of Storage Tank Systems for Petroleum Products and Allied Petroleum Products on Federal Lands or Aboriginal Lands Regulations* and the associated *Canadian Environmental Protection Act, 1999* technical guidelines. Compliance with these new regulations is mandatory.

## **Who do the regulations apply to?**

The new regulations apply to storage tank systems located on federal and Aboriginal lands, including those operated by band councils, or owned by private companies or individuals. They also cover systems owned or operated by federal departments, boards, or agencies; or owned by the Crown. Storage tank systems owned and operated by federal works and undertakings – specifically railways, port authorities and airports – are also subject to the regulations. If you're unsure if the regulations apply to your system, please see section 2 of the regulations.

Direct contact with contaminated soil (inadvertent ingestion of soil and dermal contact with soil) can be a significant pathway of human exposure to contaminated soil. Studies indicate that children, toddlers in particular, ingest much greater amounts of soil and dust each day than adults, primarily due to greater hand-to-mouth activity and greater time spent playing outdoors.

### **Do the regulations apply to the same storage tank systems as before?**

While tank systems storing petroleum products are still covered, so are tanks storing 'allied petroleum products', including aboveground tanks storing these products. In addition, 'allied petroleum products' are now clearly defined on a list found in the regulations. If your tanks store, for example, general purpose thinners for lacquers or E-85 fuel, then your system may have to comply with the new regulations. To be sure, check the complete list of allied petroleum products in Schedule 1 of the regulations. Tanks storing used oil are also covered by the regulations regardless of the percentage of hydrocarbon (oil) in the mix.

### **What about tank systems associated with heating appliances and emergency generators?**

Under the previous regulations, tank systems associated with heating appliances or emergency generators, that had a capacity of less than 4000 litres, were exempted from the regulations. Under the new regulations the tank capacity for exemption has been reduced. If your tank system stores more than 2500 litres – either in a single tank or in several connected tanks – then the system must comply with the regulations. (paragraph 2(2)(c))

### **Do you still have to register your storage tank system?**

Under the old guidelines you registered your system with the appropriate federal department. Now, all storage tank systems must be identified directly with Environment Canada. This can be done quickly and easily through our website at [www.ec.gc.ca/st-rs](http://www.ec.gc.ca/st-rs) or we can mail you the information and a form. Once your tank system is identified, you'll receive an Environment Canada identification number which must be visible on or near the system. As of June 12, 2010, the person who delivers your petroleum or allied petroleum product will no longer be permitted to fill tanks unless an Environment Canada identification number is visible. (sections 28 and 29)

### **Will you have to upgrade your existing system?**

There is only one upgrading requirement that applies to all tank systems. All systems must have a product transfer area designed to contain spills by June 12, 2012 (section 15). There are, however, specific leak monitoring requirements for single-walled underground tanks and piping, and for aboveground tanks and piping that lack secondary containment. (sections 16 to 24)

Data compiled from gasoline spills and laboratory studies indicate that light-fraction hydrocarbons tend to migrate readily through soil, potentially threatening or affecting groundwater supplies ...

### **Will some tanks or components have to be permanently withdrawn from service and removed?**

Yes. Some tank installations pose a risk to the environment and under the regulations they must be permanently withdrawn from service and removed by June 12, 2012. They are as follows.

- *Single-walled underground tanks* that, as of June 12, 2008, lacked corrosion protection and leak detection, groundwater monitoring wells or vapour monitoring wells. (section 9)
- *Single-walled underground piping* that, as of June 12, 2008, lacked corrosion protection, leak detection, groundwater monitoring wells, vapour monitoring wells, single vertical check valves or mechanical line leak detection devices (see subsection 10(2)).
- *Aboveground tanks installed underground* (section 5)
- *Underground tanks installed aboveground* (section 6)
- *Partially buried tanks* (section 7)

### **Are there new requirements if you find a leak?**

Yes. If you find a leak in your tank system or a component of the system, you must immediately withdraw the system or component from service until the leak is repaired. In the case of a component, you may continue to operate the system only if that component can be isolated from the system. Because single-walled underground tanks and piping pose a significant risk to the environment there are specific requirements that apply when these installations leak.

- *Single-walled underground tanks*: If your single-walled underground tank leaks, you must immediately and permanently withdraw it from service. You then have two years following the discovery of the leak to remove the system entirely. (subsection 3(2))
- *Single-walled piping*: If your single-walled underground piping leaks, it must immediately and permanently be withdrawn from service, removed and, if you wish to bring the system back into operation, replaced by approved piping. (subsection 3(3))

### **Do you have to report a spill or leak?**

If you have a spill or a leak, you must notify your regional spill-notification centre as soon as possible. The telephone numbers are posted on our website. If 100 litres or more of your product is released into the environment (i.e. beyond your secondary containment) then you are also required to follow up with a written report to Environment Canada (section 41).

When both production (“upstream”) and marketing (“downstream”) sectors are considered, over a quarter million actual or potential petroleum product release sites exist in Canada. Liabilities are estimated in the billion dollar plus range.

### **What about installing new storage tank systems? Has anything changed?**

Yes. If you’re considering installing a system it’s important that you get a copy of the regulations. There are requirements governing who may design and install systems, as well as new technical requirements (section 14). As with existing systems, all new systems must have a product transfer area designed to contain spills.

### **Do the new regulations affect your product delivery?**

Yes. As of June 12, 2010, the person who delivers your petroleum or allied petroleum product will no longer be allowed to fill tanks that do not have an Environment Canada identification number visible on the system. Also, delivery personnel are now required to immediately inform the system’s operator of any spills that occur during transfer of the product to your tank, or of any evidence of a leak or spill.

### **Are there any other requirements?**

You must have an emergency plan in place for your storage tank system by June 12, 2010 (paragraph 30(3)(a)). There are also, now, specific records you must keep, including records on any inspections and/or testing. Annual reporting, however, is no longer required.

### **Where do you get more information?**

On our website: [www.ec.gc.ca/st-rs](http://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	<a href="mailto:storage.tanks.pyr@ec.gc.ca">storage.tanks.pyr@ec.gc.ca</a>	604-664-9100
Prairie & Northern		780-951-8600
Ontario	<a href="mailto:EnviroInfo.Ontario@ec.gc.ca">EnviroInfo.Ontario@ec.gc.ca</a>	416-739-4826
Quebec	<a href="mailto:quebec.lavoieverte@ec.gc.ca">quebec.lavoieverte@ec.gc.ca</a>	800-463-4311
Atlantic	<a href="mailto:15th.reception@ec.gc.ca">15th.reception@ec.gc.ca</a>	902-426-7231

*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.*



# Tank Tips 2

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

**Do the new regulations apply to you?** Environment Canada has passed new regulations governing storage tank systems under federal jurisdiction as described in the regulations. This includes tanks located on federal or Aboriginal lands. The regulations cover tanks storing petroleum products and allied petroleum products, and compliance with these regulations is mandatory. This fact sheet will help you determine if the new regulations apply to you and it will provide you with websites and contact numbers for more information.

Petroleum products are found in approximately 66% of the known contaminated sites on federal and Aboriginal lands in Canada.

## What has changed?

Until recently, owners of storage tank systems under federal jurisdiction as described in the regulations were required to register their systems and were provided with technical guidelines to ensure that tanks were properly equipped and maintained to avoid leaks and spills. Compliance with these guidelines, however, was voluntary.

Environment Canada estimates that, of the approximately 10 000 storage tank systems within federal jurisdiction, around 3000 are more than 20 years old and, with no leak detection systems, corrosion protection, or secondary structures to contain spills or leaks, are very likely leaking. To protect communities and the environment, on June 12, 2008 Environment Canada brought in new regulations aimed at preventing leaks and spills.

Under the new *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* both owners and operators of storage tank systems must comply with the regulations, unless only one or the other is specified in a particular requirement. In other words, if you operate a storage tank system the terms in this fact sheet 'your tank system' and 'my tank system' mean 'the storage tank system you operate', and compliance with the regulations is mandatory.

Petroleum products released into soil pose a variety of risks in the geo-environment. These risks include combustion hazards, direct toxic risks to humans, plants and animals, effects on soil processes such as water retention and nutrient cycling, movement to water and air, and aesthetic problems such as objectionable odour and sheen. Left unmanaged, petroleum products in the geo-environment can cause important adverse effects.

## **Do the new regulations apply to your tank system?**

To know if these new regulations apply to your system (i.e. the system you operate or own), you must be able to answer the following questions.

1. *Is my tank system located on federal or Aboriginal land, or within federal jurisdiction as described in the regulations?*
2. *Are the products I'm storing in my tanks covered by these regulations?*
3. *Do these regulations apply to my type of storage tanks or containers?*

### **1) Is my tank system located on federal or Aboriginal land, or within federal jurisdiction as described in the regulations?**

- The new regulations cover storage tank systems located on federal or Aboriginal land. For example, storage tank systems operated by band councils are subject to the regulations, as are tanks owned by private businesses such as lodges or marinas located on Aboriginal land. The regulations also apply to tanks operated by, say, private mining or forestry companies located in a federal park or on Crown land.
- The new regulations also apply to storage tank systems operated by any federal department, board or agency, or owned by the Crown.
- Finally, the regulations apply to storage tank systems operated by or belonging to a federal work and undertaking that is a railway, port authority, or airport.

### **2) Are the products I'm storing in my tanks covered by these regulations?**

The new regulations cover only specific products. The most common are stored petroleum products such as gasoline, diesel, jet fuel and home heating oil. The definition of petroleum product used in the regulations is:

*A single hydrocarbon or a mixture of at least 70% hydrocarbons by volume, refined from crude oil, with or without additives, that is used or could be used as a fuel, lubricant or power transmitter, and includes used oil, but does not include propane or most paints or solvents. (section 1)*

What the regulations refer to as 'allied petroleum products' include substances such as isopropanol, uninhibited ethylene glycol and E85 fuel. A complete list of 'allied petroleum products' is found in Schedule 1 of the regulations and at the end of this fact sheet. If you are storing any of these products, even in an aboveground tank, then the regulations may apply to you. The regulations do not, however, apply to unprocessed petroleum products.

Soils are hydrologically linked to groundwater systems. A major concern with soil contamination is that it can and does lead to groundwater contamination, which may be technically, economically, or otherwise difficult or currently impossible to remediate.

### **3) Do these regulations apply to my type of storage tanks or containers?**

Environment Canada's new regulations apply to both aboveground and underground storage tanks and containers that:

- have a capacity of more than 230 litres
- are vented to the atmosphere (in other words operate at atmospheric pressure)
- and are designed to be installed in a fixed location

The regulations also apply to all the piping and other equipment associated with the tanks.

The following tank systems **DO NOT** fall under the new regulations.

- Containers smaller than 230 litres
- Indoor storage tanks
- Pressurized tanks like those storing propane
- Mobile tanks such as those on the back of pickup or other trucks
- Outdoor, aboveground tanks that have a total combined capacity of 2500 litres or less and are connected to a heating appliance or an emergency generator
- Tanks regulated by the National Energy Board

#### **To summarize, if the tank system you operate or own:**

- falls within federal jurisdiction as described in the regulations (Question 1)
- stores petroleum or an allied petroleum product (Question 2)
- AND falls into a type of tank or container covered by these regulations (Question 3)

you need more information. Please see section 2 of the regulations for specific information on what systems are subject to the regulations.



Petroleum products have been known to affect buried infrastructure, including underground utilities. Of particular concern is the potential for petroleum products to enter water distribution systems, though impacts on other utilities are undesirable as well.

There are now specific requirements for leak detection, corrosion protection and the removal of high risk tanks and piping. While tank owners/operators have between two and four years to comply with many of the requirements, some take effect immediately.

An important new requirement is that storage tank system owners identify their tank systems with Environment Canada by June 12, 2009 for existing systems, and before the first fill for new systems. This can be done quickly online through our website or we can mail you a form. Please note that as of June 12, 2010, suppliers will no longer be allowed to fill tanks that do not display an Environment Canada identification number.

**Where do you get more information?**

On our website: [www.ec.gc.ca/st-rs](http://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).

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

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Quebec	<a href="mailto:quebec.lavoieverte@ec.gc.ca">quebec.lavoieverte@ec.gc.ca</a>	800-463-4311
Atlantic	<a href="mailto:15th.reception@ec.gc.ca">15th.reception@ec.gc.ca</a>	902-426-7231

## **Allied Petroleum Products**

1. Thinner for Vinyl Coatings (CGSB 1-GP-124)
2. Antiblush Thinner for Cellulose Nitrate Lacquer (CGSB 1-GP-136)
3. Boiled Linseed Oil (CGSB CAN/CGSB-1.2-89)
4. Petroleum Spirits Thinner (CGSB CAN/CGSB-1.4-92)
5. High Solvency Thinner (CGSB CAN/CGSB-1.70-91)
6. General Purpose Thinners for Lacquers (CGSB CAN/CGSB-1.110-91)
7. Solvent for Vinyl Pretreatment Coating (CGSB CAN/CGSB-1.164-92)
8. Acetone, Technical Grade (CGSB 15-GP-50)
9. Methyl Ethyl Ketone, Technical Grade (CGSB 15-GP-52)
10. Offset Lithographic Printing Ink (CGSB 21.1-93)
11. Isopropanol (CGSB 3-GP-525)
12. Methanol, Technical Grade (CGSB 3-GP-531)
13. Ethylene Glycol, Uninhibited (CGSB 3-GP-855)
14. Benzene
15. Toluene
16. Biodiesel
17. E85 fuel
18. Oxygenated gasoline

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# Tank Tips 3

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

**Critical timelines for existing systems** Environment Canada's new *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* came into effect on June 12, 2008. While many of the requirements are phased in over the next four years, some come into force immediately. This fact sheet provides you with a checklist of the requirements that come into force immediately and over the next 1, 2, and 4 years. For each entry, the section number in the regulations is given in brackets.

## What has changed?

On June 12, 2008 Environment Canada put in place new regulations governing storage tank systems for petroleum and allied petroleum products that are under federal jurisdiction as described in the regulations. If you are the owner or operator of a storage tank system covered by these regulations there are new requirements in a variety of areas including spill reporting, leak detection and monitoring, and record keeping. You must also identify your storage tank system to Environment Canada by June 12, 2009.

This fact sheet provides you with the checklist covering the major changes coming into force immediately, and over the next four years, for existing storage tanks systems. Compliance with the regulations is mandatory.

## Is your system covered by the regulations?

The regulations apply to storage tank systems under federal jurisdiction as described in the regulations – including privately owned systems located on federal or Aboriginal land – that are used to store petroleum products or 'allied petroleum products'. Allied petroleum products are listed in Schedule 1 of the regulations. If you are unsure whether your storage tank system is covered by the regulations get a copy of *Tank Tips 2: Do the new regulations apply to you?* on our website or consult section 2 of the regulations.

### **Where can you get copies of the regulations?**

Copies of the regulations are available on our website at [www.ec.gc.ca/st-rs](http://www.ec.gc.ca/st-rs) or you can call us at 819-934-2991 and we'll send you a copy. You'll also find *Tank Tips* fact sheets on our website, with each fact sheet covering a different aspect of the regulations.

### **What is an 'existing' storage tank system?**

An existing storage tank system is a system that was operating when the regulations came into effect on June 12, 2008.

### **Do the regulations apply to new systems as well as existing systems?**

There are requirements that apply to the design and installation of storage tank systems. If you are planning to install a new system it is important that you read the regulations before purchasing or installing equipment.

### **Are the requirements and deadlines the same for all storage tank systems?**

No. If you have *single-walled underground tanks or piping*, or *aboveground tanks or piping without secondary containment*, you will note additional requirements in the checklist that apply to your system. For more information on the requirements for these types of storage tank systems please see *Tank Tips 1: What's new in the new regulations*.

### **Where do you get more information?**

On our website: [www.ec.gc.ca/st-rs](http://www.ec.gc.ca/st-rs). If you'd like us to mail you the information below please call us at: 819-934-2991 (M-F: 9:00 am to 5:00 pm EST/EDT).

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

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Atlantic	<a href="mailto:15th.reception@ec.gc.ca">15th.reception@ec.gc.ca</a>	902-426-7231

## Storage Tank Regulations Checklist

√	Requirements now in force
	Leaking systems or components must be immediately withdrawn from service until the leak is repaired (subsection 3(1)).
	If a tank system is suspected of leaking, and it lacks continuous leak monitoring, specified leak tests must immediately be performed (section 26).
	Tank operators must notify their regional spill call-centre of any leak or spill. For spills or leaks of over 100 L, they must also send a written report of the release to Environment Canada (section 41).
	Product delivery personnel must notify operators of any spill that occurs during the transfer of product, or of any sign of a leak or spill observed around the storage tank system (section 29).
	Record keeping requirements (section 46) include inspection records (section 27), installation records (subsection 33(2) and section 34) and operation and maintenance records (subsection 40(2)).
	Oil-water separators are subject to new requirements including record keeping; monthly measurements or continuous monitoring of layers; and procedures around the disposal of free oil, separated solids and discharged water (sections 35 – 38).
	Temporary withdrawal from service of a system or component must follow procedures specified in the regulations. Any withdrawal of over two years is considered a permanent withdrawal from service (sections 42 – 43).
	Only a person designated under the regulations is permitted to permanently withdraw from service or remove a system or component, and only by following the procedures specified in the regulations (sections 42, 44 – 45).
	Tank owners/operators must ensure that all tank-system materials are compatible with the products being stored in the system (section 11).
	The secondary containment area must not be used for storage (for example, of goods or additional product – section 13).
	<b>Leaking single-walled underground piping</b> must be immediately and permanently withdrawn from service and replaced by approved piping, or removed within two years of the owner/operator becoming aware of the leak (subsection 3(3)).
	<b>Leaking single-walled underground tanks</b> must be immediately and permanently withdrawn from service, and removed within 2 years of the owner/operator becoming aware of the leak (subsection 3(2)).
	For <b>vertical aboveground tanks without secondary containment</b> , owners/operators must check the date of last inspection to API 653 Standards. If the inspection was after June 12, 2000, the owner/operator must immediately set up an inspection schedule on a ten-year cycle from the date of the last inspection (subsections 22(5), 22(6)).
√	Requirements in force in 1 year (June 12, 2009)
	Tank systems must be identified with Environment Canada (section 28 and Schedule 2).
	If a storage tank system has not been identified to Environment Canada, then the system's owner must have sent a <i>Storage Tank System Identification Progress Report</i> to Environment Canada (section 28 and Schedule 3).

√	<b>Requirements in force in 2 years (June 12, 2010)</b>
	Tank owners/operators who submitted a <i>Storage Tank System Identification Progress Report</i> have now identified their tank systems to Environment Canada (section 28).
	All storage tank systems are now identified to Environment Canada and an identification number is visible on or near the system (subsection 28(4)).
	Product delivery personnel are no longer permitted to fill tanks without an Environment Canada identification number visible on or near the system (section 29).
	Tank system owners/operators must notify Environment Canada of system changes within 60 days (subsection 28(5)).
	Owners/operators have carried out a visual inspection of sumps and have set up an ongoing leak monitoring program for sumps (section 25).
	An emergency plan is in place for each storage tank system (sections 30 – 32).
	An initial tank precision-leak-test as described in the regulations has been completed on all <b>single-walled underground tanks</b> and an ongoing leak monitoring or detection program is now in place (section 16).
	An initial piping precision-leak-test has been completed on all <b>single-walled underground piping</b> and an ongoing leak monitoring or detection program as prescribed in the regulations is now in place (section 17).
	The walls of <b>horizontal aboveground tanks without secondary containment</b> have been visually inspected for leaks and an ongoing leak monitoring or detection program as prescribed in the regulations is in place (sections 19 – 21).
	<b>Vertical aboveground tanks without secondary containment</b> that have not been inspected since June 12, 2000 are now inspected in accordance with API Standard 653, and an ongoing leak monitoring or leak detection program as prescribed in the regulations is in place (section 22).
	<b>Aboveground piping without secondary containment</b> has been visually inspected and an ongoing leak detection program is now in place (sections 23 – 24)
√	<b>Requirements in force in four years (June 12, 2012)</b>
	All fuel transfer areas are now designed to contain spills (subsection 15(2)).
	<b>Underground tanks installed aboveground or in unfilled secondary containment</b> (e.g. an empty concrete vault) are removed (section 6).
	All <b>partially buried tanks</b> are removed (section 7).
	<b>Aboveground tanks installed below grade or encased within filled secondary containment</b> have been removed (section 5).
	<b>Single-walled underground tanks</b> without corrosion protection and leak detection are removed (section 9: see paragraphs 9(1)(a) and 9(1)(b) for exceptions).
	<b>Single-walled underground piping</b> without corrosion protection and leak detection is removed (subsection 10(1): see subsection 10(2) for exceptions).

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# Tank Tips 4

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

**New storage tank system installations** If you're installing a storage tank system for petroleum or allied petroleum products your system must now comply with new Environment Canada regulations. This fact sheet will give you an overview of the major changes you need to be aware of when choosing equipment and contractors, and it will provide you with contacts and references if you need more detailed information.

Spills occur most often at the fill pipe opening when the delivery truck's hose is being disconnected. Repeated releases of even small volumes of product can cause significant environmental problems.

## What has changed?

On June 12, 2008, Environment Canada implemented new regulations governing storage tank systems under federal jurisdiction as described in the regulations, including tank systems located on federal and Aboriginal lands. These regulations have specific requirements for the design and installation of storage tank systems. You'll need to read the regulations to plan your system. Copies of the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* are available on our website.

Your new system must be identified with Environment Canada before you have it filled for the first time. You'll be issued an identification number which must then be visible on or near your storage tank system. After June 12, 2010, the person who delivers your product will be prohibited from filling tank systems without a visible identification number.

## Can anyone design and install your new system?

Under the regulations your storage tank system must be built using design documents that bear the stamp and signature of a professional engineer (subsection 34(1)). The system must also be installed by a person approved to do so in the province or territory in which the system is being installed. If no approval process exists in your province or territory, then the installation must be supervised by a professional engineer.

The volume of crude oil or petroleum products that is used today dwarfs all other chemicals of environmental and health concern. Due to the numbers of facilities, individuals, and processes and the various ways the products are stored and handled, environmental contamination is potentially widespread.

### **What are the requirements for new tanks and components?**

New storage tank systems must bear a certification mark to indicate that they conform to the standards set out in section 14 of the regulations. Many of these standards are drawn from the Canadian Council of Ministers of the Environment *Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products*. This document is also available on our website. Some of the requirements for new systems are as follows, but for detailed and specific information you will need to read section 14 of the regulations as well as the referenced sections of the CCME *Code of Practice*.

*Underground tanks* must be double-walled with an interstitial space that can be monitored, and have:

- corrosion protection
- overfill protection
- spill containment
- containment sumps
- liquid- and vapour-tight connections

*Aboveground field-erected tanks* must have:

- corrosion protection
- secondary containment
- containment sumps, if applicable
- overfill protection

*Aboveground shop-fabricated tanks* must have:

- corrosion protection
- secondary containment
- containment sumps
- overfill protection

### **What about requirements for new piping?**

Inadequate or badly installed piping is a common source of leaks and can lead to significant soil and groundwater contamination. Under these regulations, new piping must adhere to the following:



Without proper leak detection, a loss of five litres of fuel per day from a relatively large tank (20 000 to 30 000 litres) could go undetected for several years ... Over the lifespan of the tank, such a fuel loss rate would amount to tens of thousands of litres of leaked fuel.

- bear a certification mark and be of steel, copper or non-metallic construction; or be a flexible metallic hose
- no buried or concealed mechanical joints
- underground piping, up to 75 mm in diameter, must have secondary containment and, in the case of double-walled steel piping, cathodic protection
- underground piping larger than 75 mm in diameter must have secondary containment or cathodic protection

### **Are there any other major requirements?**

As with piping and tanks, all components of your system must bear certification marks indicating that they conform to the standards set out in the regulations. In addition, your product transfer area must now be designed to contain spills (section 15). Finally, it is mandatory that you have an emergency plan in place before your system receives its first fill (sections 30 – 32).

### **What about record keeping?**

Under the new regulations you are required to keep records of the design and installation of your system for the life of the system. These must include a record establishing that the system was installed by an approved installer or supervised by a professional engineer, as well as a set of ‘as-built’ drawings bearing the stamp and signature of a professional engineer. Please see section 46 of the regulation for details of this, and other, record keeping requirements.

### **Where do you get more information?**

On our website: [www.ec.gc.ca/st-rs](http://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	<a href="mailto:storage.tanks.pyr@ec.gc.ca">storage.tanks.pyr@ec.gc.ca</a>	604-664-9100
Prairie & Northern		780-951-8600
Ontario	<a href="mailto:EnviroInfo.Ontario@ec.gc.ca">EnviroInfo.Ontario@ec.gc.ca</a>	416-739-4826
Quebec	<a href="mailto:quebec.lavoieverte@ec.gc.ca">quebec.lavoieverte@ec.gc.ca</a>	800-463-4311
Atlantic	<a href="mailto:15th.reception@ec.gc.ca">15th.reception@ec.gc.ca</a>	902-426-7231

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# 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.

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?**

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The following documents are available on our website:

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- *Canadian Environmental Protection Act, 1999*
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Atlantic	<a href="mailto:15th.reception@ec.gc.ca">15th.reception@ec.gc.ca</a>	902-426-7231

### Where do you send your written reports?

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

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# Tank Tips 6

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

**Identifying your system** Under Environment Canada's new *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* you must now identify your storage tank system directly to Environment Canada. This fact sheet will give you information on how to identify your system and contact numbers to call if you need more information.

When petroleum products are released into the environment, changes occur that significantly affect their potential effects. Physical, chemical, and biological processes change the location and concentration of hydrocarbons at any particular site.

## What has changed?

On June 12, 2008 Environment Canada implemented new regulations governing storage tank systems under federal jurisdiction as described in the regulations. Under the previous regulations, you were required to register your tank system with the appropriate federal department. Now, storage tank systems must be identified directly to Environment Canada. Once identified, your system will receive an Environment Canada identification number. Section 28 of the regulations (available on our website) covers the identification of tank systems to Environment Canada.

As of June 12, 2010, the person who delivers your product will no longer be allowed to fill tanks that do not have an Environment Canada identification number visible on or near the system.

## How do you identify your system to Environment Canada?

The easiest and fastest way is online at our tank identification website: [www.ec.gc.ca/FIRSTS](http://www.ec.gc.ca/FIRSTS). If you have all the required information in hand, the process should take only about half an hour per system. If you don't have internet access, call us at 819-934-2991 and we will mail you a form.

Petroleum products with heavier molecular weight constituents, such as fuel oil, are generally more persistent in soils, due to their relatively low water solubility and volatility and high sorption capacity.

### **How long will it take to get your identification number?**

If you have all the required information listed in Schedule 2 of the regulations, and you use our online system, you will receive your ID number immediately. The system automatically issues you your identification number as the last step in the online identification process.

### **What is the deadline for identifying your system?**

For existing systems (i.e. systems already in operation on June 12, 2008) you have until June 12, 2009 to identify your system (see paragraph 28(1)(a) of the regulations). For systems installed after June 12, 2008, you must identify your storage tank system before your tanks receive any product (subsection 28(2)).

### **What information do you need to identify your system?**

The list of the information you require to complete your tank-system identification is found in Schedule 2 of the regulations, which has been reprinted at the end of this fact sheet.

### **What do you do with the identification number once you have it?**

The identification number must be visible on or near your storage tank system. If you have aboveground tanks the number can be painted on the side of a tank or posted in a visible location. For underground systems, a durable tag could be attached to the fill pipe. The only requirement is that the number be visible throughout the year and not obscured by, for example, snow.

### **Can Environment Canada refuse to issue you an identification number?**

No. As long as you provide all the information required in Schedule 2, Environment Canada must issue you an identification number (subsection 28(3)).

### **Can you use a registration number issued by another government department?**

No. You may still require a registration number from another government body for other purposes, but to be in compliance with these regulations, and to ensure delivery of your product after June 12, 2010, an identification number issued by Environment Canada must be visible on your system.

### **Why do you have to identify your storage tank system?**

In Canada, petroleum products spilled or leaked from storage tank systems are present in over 60% of the contaminated sites on federal and Aboriginal lands. The first step in reducing the number and impact of storage tank accidents is knowledge. Owners and operators need a detailed and up-to-date understanding of their tank systems, including tank types,

Statistically, releases of petroleum products from storage tank systems are responsible for approximately 66% of the soil contamination on the contaminated sites on federal and Aboriginal lands in Canada.

capacity, the products being stored and the systems' safety features. Identification in our database provides a secure and central location for your storage tank information, and gives you an effective way to maintain and manage the information, independent of staff or contractor changes. Once your tank is identified with us, you can review and update your information at any time. For Environment Canada, access to information on storage tank systems under federal jurisdiction as described in the regulations allows us to manage the long-term risks inherent in these systems, and to respond in the event of an emergency.

### **What happens if you can't identify your system before the June 12, 2009 deadline?**

If you are unable to identify your tank system by the deadline you must submit a written *Storage Tank System Identification Progress Report* to Environment Canada by June 12, 2009 (subsection 28(1)). The information required in this report is found in Schedule 3 of the regulations, and includes a description of the measures you are taking to collect the information, as well as the problems you might encounter in the course of identifying the system. You then have one additional year (until June 12, 2010) to identify your tank system. No extensions are possible beyond that date.

### **What happens if you don't identify your system?**

As of June 12, 2010, the person who delivers your product is prohibited from filling tanks that do not have an Environment Canada identification number visible on or near the system. You will also be in violation of section 28 of the regulations and may be subject to enforcement measures under the *Canadian Environmental Protection Act, 1999*.

### **Where do you get more information?**

On our website: [www.ec.gc.ca/st-rs](http://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).

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- *Canadian Environmental Protection Act, 1999*

Most petroleum product constituents are toxic to some degree.

- 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	<a href="mailto:storage.tanks.pyr@ec.gc.ca">storage.tanks.pyr@ec.gc.ca</a>	604-664-9100
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Quebec	<a href="mailto:quebec.lavoieverte@ec.gc.ca">quebec.lavoieverte@ec.gc.ca</a>	800-463-4311
Atlantic	<a href="mailto:15th.reception@ec.gc.ca">15th.reception@ec.gc.ca</a>	902-426-7231

### **Schedule 2 of the regulations: Information required to identify your tank**

1. Name of owner of the storage tank system
2. Mailing address of owner
3. Name of operator of the storage tank system, if different from owner
4. Mailing address of operator
5. Type of petroleum product or allied petroleum product stored in each tank of the storage tank system
6. Location of the storage tank system (civic address or, if no civic address exists, Global Positioning System (GPS) coordinates or latitude and longitude)
7. Civic address of the location where the storage tank system records are stored
8. Months during which the storage tank system is in service
9. Nominal capacity of each tank of the storage tank system
10. Year of installation of each tank of the storage tank system
11. Type of each tank of the storage tank system
12. Each tank's ULC or API Standard Number
13. Material used in the construction of each tank
14. Type of corrosion protection of each tank
15. Type of secondary containment of each tank

16. Type of overfill protection of each tank
17. Type of the piping of the storage tank system
18. Material used in the construction of the piping
19. Diameter of the piping
20. Type of corrosion protection of the piping
21. Type of secondary containment of the piping
22. Type of spill containment devices
23. Description of petroleum product and allied petroleum product transfer areas
24. Type of leak detection
25. Type of pump for transfer to the oil-water separator

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# Tank Tips 7

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

**Preparing your emergency plan** Under Environment Canada's new *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* you must prepare an emergency plan for each of your storage tank systems. This fact sheet will tell you what is required in an emergency plan, and give you an idea of how to prepare one. Contact numbers and information on where to get help if you need it are found at the end of the fact sheet.

The top five reasons for spills are equipment failure, human error, corrosion, material failure, and a storm or flood.

## **What has changed?**

On June 12, 2008 Environment Canada implemented new regulations governing storage tank systems under federal jurisdiction as described in the regulations, including tanks systems located on federal and Aboriginal lands. Under the *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, owners or operators of these systems must prepare an emergency plan that meets the requirements set out in the regulations. While Environment Canada does not review or approve emergency plans, you must notify us of the locations where copies of your emergency plan are kept. Compliance with the new regulations is mandatory.

## **What is the deadline for preparing a plan?**

If your tank system was already in operation when the regulations came into force on June 12, 2008, you have until June 12, 2010 to prepare your emergency plan. For new systems, the emergency plan must be in place before the first transfer of product to your tanks (see subsection 30(3) of the regulations).

Several accidents have occurred within the last few years in which storage tanks have failed catastrophically when the flammable vapours inside an atmospheric tank exploded... as a result workers were killed or injured and contents were released into the environment.

### **Why do you need an emergency plan?**

The purpose of an emergency plan is to limit environmental damage and the risks to human health and safety in the event of an accident such as a leak, spill or fire. Developing an emergency plan helps you foresee – and take steps to prevent – the most likely accidents, and it allows you to respond quickly and effectively if an accident does occur. A swift response limits damage and reduces your clean-up costs.

### **How elaborate does the plan have to be?**

The complexity depends on your system: the properties of the products you're storing; the type and capacity of your tanks; the physical and environmental characteristics of your site; and the presence or absence of features such as secondary containment. The key is to have the simplest plan possible – one that is adapted to your system and surroundings while at the same time meeting the requirements in the regulations.

To create such a plan you must assess, for your system, the potential emergencies that could result in harm to the environment or endanger human health, then create a plan to prevent, prepare for, respond to and recover from each emergency scenario. For example, you might want to prepare a scenario for a truck backing into and rupturing a storage tank, and this plan would then cover all similar tank ruptures, regardless of the cause. Planning, however, for a direct hit by a large meteorite – given the likelihood of it happening – would be a waste of time, although creating a plan to deal with a catastrophic tank failure is essential.

### **What does the plan have to include?**

Environment Canada requires specific information in your emergency plan. A brief description of each requirement is given below, but for details, please refer to subsection 30(2) of the regulations.

*Product information:* Your emergency plan must include the properties and characteristics of each product you are storing in each of your system's tanks. This information is available on the Materials Safety Data Sheet (MSDS) you receive from your product supplier.

*Tank system capacity:* Your emergency plan must include the maximum amount of product you expect to have in each of the system's tanks at any time during any calendar year. In most cases this will be the manufacturer's suggested fill limit (i.e. a certain percentage of the tank's nominal capacity).

*Site characteristics:* To effectively plan for an emergency you must assess the characteristics of your site, paying special attention to the factors that increase the risk of harm to the environment and/or danger to human life or health.

The regulations will generate benefits such as the avoidance of loss of watersheds used for drinking water, negative impacts on human health, and emergency response cost associated with spills and leaks from storage tank systems.

Are you near a wetland or above an aquifer used for drinking water? Is your system located on a hill such that spilled product will flow down the slope? Is there a populated area or underground utilities nearby? In many cases a map of the site and the surrounding area, noting relevant geographical features, is helpful. Any additional information – for example aerial photographs, bore-hole logs, the location of any other hazards (e.g. propane tanks) – will help facilitate a fast and effective response in an emergency. Because the determination of site characteristics is so important to your plan, you may choose to hire an emergency planning professional to help you identify these features, although Environment Canada does not and will not recommend specific companies or individuals.

*Emergency response measures:* In this section you lay out your emergency scenarios. You determine:

1. the emergency scenarios that may cause danger to human life or health
2. the emergency scenarios that may harm the environment and
3. for each emergency scenario, you describe – step-by-step – the measures and actions you will take to
  - prevent
  - prepare for
  - respond to
  - recover from

each emergency. If you are unsure of how to go about this, there are emergency planning professionals who can help you develop your plan.

*Emergency response team and training:* The regulations require you to list the people designated to carry out your plan, their roles and responsibilities in an emergency, and any training they have or require to carry out their duties. This information can be presented as a table.

*Emergency response equipment:* Environment Canada requires you to list the type and location of equipment that would be used in your emergency scenarios such as shovels, spill kits and fire extinguishers. If only a small amount of equipment is needed then a simple text description of the locations may be sufficient, but if your emergency plan requires a large quantity of onsite equipment it may be easier to provide locations using a diagram or map of the site/area.



About 44% of reported spills are of less than one tonne.

*Notification of affected public:* Your emergency plan must include the measures you will take to notify members of the adversely affected public in the case of an emergency. This could involve the use of emergency announcements on local radio and television, door-to-door notification and/or the use of emergency e-mail and text messages.

### **What do you do with the finished plan?**

Copies of your plan must be easily accessible to all team members who are required to carry it out, and a copy available at the location of the storage tank system, if that is a place of work. You must also notify Environment Canada of the civic addresses of all of the places where the plan is located. The contact information is listed on our website. Keeping information in the plan up to date – such as the names and contact numbers for emergency team members – is also required (section 31).

### **Can you use a plan already prepared for another government or agency?**

If your existing plan fulfills all of Environment Canada's requirements then you may use it as your emergency plan. If it fulfills some, but not all, of these requirements, amend your existing plan so it meets all of the requirements and then it can be used (section 32).

### **Where do you get more information?**

On our website at [www.ec.gc.ca/st-rs](http://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).

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- *Canadian Environmental Protection Act, 1999*
- *Compliance and Enforcement Policy for the Canadian Environmental Protection Act, 1999*
- *Guidelines for E2 Planning*, CEPA Registry

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

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# Tank Tips 8

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

**Leak detection and monitoring** Storage tank systems that lack secondary containment, have single-walled underground tanks or piping, or make use of sumps pose a greater risk to the environment than other types of installations. Under Environment Canada's *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations*, there are now specific leak detection and/or monitoring requirements for these systems. This fact sheet will help you determine if the requirements apply to your storage tank system and give you the steps you must take if they do. You will also find additional information, resources and contact numbers at the end of the fact sheet.

Even with pre-existing corrosion protection and leak detection, all single-walled underground storage tank systems will eventually leak as they age.

## What has changed?

On June 12, 2008 Environment Canada put in place new regulations governing storage tank systems under federal jurisdiction as described in the regulations. Prior to these regulations there were no leak monitoring or leak detection requirements for storage tank systems. Under the new regulations certain types of tank systems now have specific requirements around leak detection and monitoring which must be in place by June 12, 2010.

Compliance with the regulations is mandatory.

## What systems require leak detection and/or monitoring?

Systems that do not have double walls or secondary containment pose a higher risk to the environment because, in the event of a leak or spill, product is released directly into soil and water. Once there, it can migrate over a considerable distance and cause extensive and long-term damage to the environment. If the system you operate or own has tanks, piping or sumps as described in the list below, then the leak detection and monitoring requirements apply to your installation.

If petroleum products are introduced at any depth within the soil matrix, as in the case of leaks from underground storage tanks, natural weather and biodegradation processes are rendered less effective and the chances are increased that some of the petroleum product fractions may contaminate groundwater.

- single-walled underground tanks
- single-walled underground piping
- aboveground tanks without secondary containment
- aboveground piping without secondary containment
- sumps (turbine, transition, dispenser or pump)

### **What do you need to do if your system has single-walled underground tanks?**

- 1) Carry out a third-party certified tank precision leak test that meets the specifications laid out in section 21 of the regulations by June 12, 2010.
- 2) Immediately following your initial tank precision leak test, set up an ongoing leak detection or monitoring program using one of the three options below: (section 16)
  - carry out a third-party certified tank precision leak detection test once a year (subsection 16(b) and section 21), OR
  - use automatic tank gauging (section 18), OR
  - use continuous in-tank leak detection (section 20).
- 3) Remove your single-walled underground tank no later than June 12, 2012 (section 9). There are two exceptions:
  - Steel tanks that have – as of June 12, 2008 – cathodic protection plus either leak detection, groundwater monitoring wells, or vapour monitoring may stay in place.
  - In addition, single-walled underground tanks made of a material other than steel may stay in place if – as of June 12, 2008 – they have either leak detection, groundwater monitoring wells, or vapour monitoring wells.
- 4) If your single-walled underground tank leaks, immediately and permanently withdraw it from service. You then have two years from the time you found the leak to remove it. (subsection 3(2))

### **What do you need to do if your system has single-walled underground piping?**

- 1) Perform a third-party certified piping precision leak detection test in accordance with section 24 of the regulations by June 12, 2010. (subsection 17(1))

In Canada, pollution of surface water by groundwater is probably at least as serious as the contamination of groundwater supplies.

- 2) Following the initial piping precision leak detection test, immediately set up an ongoing leak detection program using one of the options below:
  - perform an annual third-party certified piping leak detection test (paragraph 17(1)(b) and section 24), OR
  - set up external underground pipe leak monitoring that complies with the requirements in subsection 17(2), OR
  - use automatic tank gauging as described in section 18, OR
  - use in-tank leak detection as described in section 20.
- 3) Remove all single-walled underground piping by June 12, 2012. You may either replace it with piping approved in the regulations (subsection 14(5)), or permanently withdraw your storage tank system from service (section 10). There are two exceptions to the removal requirement (subsection 10(2)) for single-walled piping. You do not need to remove:
  - single-walled steel piping that, as of June 12, 2008, has cathodic protection as well as one of leak detection, groundwater monitoring wells, vapour monitoring wells, single vertical check valves or mechanical line leak detection devices
  - non-metallic or copper piping that – as of June 12, 2008 – has one of leak detection, groundwater monitoring wells, vapour monitoring wells, single vertical check valves or mechanical line leak detection devices.
- 4) If your single-walled piping leaks, immediately and permanently withdraw it from service and remove it (subsection 3(3)). You may either replace the piping with piping approved in the regulations or permanently withdraw the storage tank system from service. If you permanently withdraw the storage tank system from service you have two years from the time you found the leak to remove the system in accordance with the procedures laid out in the regulations (paragraph 3(3)(b)).

**What do you need to do if your system has horizontal aboveground tanks without secondary containment?**

- 1) Visually inspect the walls of your tank for leaks by June 12, 2010. (section 19)
- 2) Immediately following your visual inspection set up an ongoing leak detection program by one of the following methods:

When petroleum products are released directly into water through spills or leaks, certain petroleum fractions will float in water and form thin surface films. Other heavier fractions will accumulate in the sediment at the bottom of the water, which may affect bottom-feeding fish and organisms.

- carry out an annual third-party certified tank precision leak test as described in section 21, OR
- visually inspect the walls of the tanks once per month and do an inventory reconciliation as detailed in subsection 19(2), OR
- use continuous in-tank leak detection (section 20), OR
- use continuous external horizontal aboveground tank leak monitoring (subsection 19(3)).

**What do you need to do if your system has vertical aboveground tanks without secondary containment?**

- 1) Inspect the tank in accordance with subsection 22(2), OR the floor of the tank by the procedure laid out in subsection 22(3) by June 12, 2010.
- 2) Immediately following this inspection set up an ongoing leak detection or monitoring program using one of the following methods/procedures:
  - every 10 years from the date of the initial inspection, inspect the tanks (subsection 22(2)) or the floor of the tanks (subsection 22(3)) following the requirements in the regulations, OR
  - use continuous in-tank leak monitoring as described in section 20, OR
  - use continuous external vertical aboveground tank leak monitoring that complies with the specifications (leak detection rate etc.) laid out in subsection 22(4).
- 3) If your tanks were inspected by one of the approved methods after June 12, 2000, then you must do your initial inspection, and set up your ongoing leak detection/monitoring program, no later than 10 years from the date of that inspection. For example, if you inspected your tanks on July 12, 2004, then your initial inspection under the new regulations must be carried out no later than July 12, 2014, and your ongoing leak detection/monitoring program set up immediately following that inspection (subsections 22(5) and 22(6)).

**What do you have to do if your system has aboveground piping without secondary containment?**

- 1) Visually inspect the piping for leaks by June 12, 2010 (section 23).
- 2) Following the initial inspection immediately set up a leak monitoring program using one of the four methods/procedures below:
  - carry out an annual piping precision leak detection test in accordance with section 24, OR

The frequency, duration and intensity with which people contact pollutants at a contaminated site are related to the nature of the land use. Also, the critical receptor in any land category is dependent on the ease of public access and the activities inherent to that land use.

- do a monthly visual inspection of the piping (paragraph 23(1)(b)), OR
- use continuous external aboveground pipe leak monitoring (subsection 23(2)), OR
- implement a corrosion analysis program for piping that is developed and conducted by a corrosion expert and includes, at a minimum, an annual inspection (subparagraph 23(1)(a)(ii)).

#### **What must you do if your storage tank system has sumps?**

- 1) If you have turbine, transition, dispenser or pump sumps, visually inspect those sumps to determine if they are leaking by June 12, 2010 (subsection 25(1)).
- 2) Immediately following the initial inspection set up an ongoing leak monitoring or detection program using one of the two choices below:
  - visually inspect the sumps annually, OR
  - use continuous sump leak monitoring. If you choose this option, the sump leak monitoring must conform to the specifications laid out in subsection 25(2).

#### **Where do you get more information?**

On our website: [www.ec.gc.ca/st-rs](http://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)

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

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

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# Tank Tips 9

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

**Withdrawing and removing systems** Under the new *Storage Tank Systems for Petroleum and Allied Petroleum Products Regulations*, there are specific requirements if you withdraw from service or remove a storage tank system or a component of a storage tank system. This fact sheet summarizes the requirements, directs you to the relevant sections in the regulations and, at the end of the fact sheet, provides you with telephone numbers and web addresses if you need more information.

Tanks inappropriately disposed of can re-enter the market and cause site contamination or be used for inappropriate purposes, such as bus shelters for children or for watering livestock.

## What has changed?

On June 12, 2008 Environment Canada put in place new regulations governing storage tank systems within federal jurisdiction as described in the regulations. Under the previous regulations, there were no requirements when owners or operators withdrew tank systems from service or removed them. Under the new *Storage Tank Systems for Petroleum and Allied Petroleum Products Regulations* tank owners and operators must follow specified procedures. In addition, the permanent withdrawal from service and removal of systems must be done by a person approved to do the work. Owners or operators are also required to keep records pertaining to the withdrawal from service and removal of storage tank systems and their components.

## Why has Environment Canada put in new requirements for the withdrawal from service and removal of storage tank systems?

Storage tank systems that are not properly withdrawn from service can pose a serious risk to both the environment and to the people who live or work around them. For example:

- tanks that are not properly withdrawn from service contain liquids, sludge and vapours that, with a single spark on a hot day, can cause a catastrophic tank explosion.

Generation of combustible vapours is a hazard not only for the storage of pure flammable liquids, but also for the storage of any sludge or mixture where a combustible component is present or can be produced by reaction.

- tanks that are abandoned – particularly underground tanks – can corrode and leak pollutants. It may take years before the contamination is discovered and the source located.
- ‘decommissioned’ storage tanks have been found ‘recycled’ into items like water troughs or bus shelters, uses that put people at risk.

The new storage tank regulations are designed to protect both Canadians and the environment by putting in place mandatory requirements for the proper withdrawal from service and removal of storage tank systems.

### **Can anyone permanently withdraw a system from service or remove it?**

No. If your tank system is located in a province or territory that licences or certifies contractors to remove storage tank systems, then the system must be permanently withdrawn from service and removed by a person approved to do so. If the province or territory has no licensing or certification procedure, then the work must be supervised by a professional engineer (subsections 44(1) and 45(1)). For an up-to-date list of the provinces and territories that license or certify contractors to withdraw and/or remove storage tank systems, please consult our website.

### **What is the difference between a temporary and a permanent withdrawal from service?**

A temporary withdrawal lasts less than two years (section 42).

Any withdrawal from service of two years or more is considered a permanent withdrawal from service, and you are required to follow the procedures laid out in the regulations for a permanent withdrawal from service (section 44).

### **What is required when you temporarily withdraw a system from service?**

Section 43 of the regulations covers the requirements for temporarily removing either a system, or component of a system, from service. You must:

- ensure that the cathodic protection is maintained and operated during the entire period the system is withdrawn from service if your system has cathodic protection (subsection 43(a));
- attach a label to the system’s fill pipe stating that the system is out of service (subsection 43(d)). This is to guard against a supplier mistakenly filling a system that, for example, is withdrawn from service to repair a leaking tank;
- keep a record of the date on which you withdrew the tank or component from service.

In a 1992 incident, while workers were welding the outside of a tank empty of liquid, the residual vapour in the storage tank exploded and propelled the tank upward and into an adjacent river. Three workers were killed and one was injured.

### **Is there anything you have to do before bringing the system or component back into service?**

If your system or a component of your system has been withdrawn from service for more than a year then you must test it for leaks or inspect it before returning it to service. The test you carry out depends on the tank type:

- *Underground tanks* (except vertically-oriented underground tanks) or *shop-fabricated aboveground tanks* require a tank precision leak detection test (subsection 43(b) and section 21).
- *Field-erected aboveground tanks* or *vertically-oriented underground tanks* require an inspection of the floor in accordance with subsection 43(c).

### **What do you have to do to permanently withdraw a system from service?**

If you permanently withdraw a storage tank system or component of a tank system from service, the withdrawal must be done by a person approved to do the work (subsection 44(1) and see above). You must also keep a record (for example an invoice) to prove that the work was indeed carried out by someone designated to do so, along with a record of the date the withdrawal from service took place (subsection 44(2)). In addition, you must ensure that:

- all the liquids and sludge in the tank are properly removed and disposed of (paragraph 44(3)(a))
- the tank is purged of vapour to less than 10% of the lower flammability limit and checked with a combustible gas meter (paragraph 44(3)(b))
- the withdrawal is done in such a way that it poses no short- or long-term threat to the environment or human health or safety (paragraph 44(3)(c))
- you affix a label to the fill pipe saying that the tank system is permanently out of service (44(4))
- you notify Environment Canada within 60 days that the system has been withdrawn from service (subsection 44(5)). The easiest way to do this is to update your tank identification file through our tank registry at: [www.ec.gc.ca/st-rs](http://www.ec.gc.ca/st-rs).

A socio-economic analysis was undertaken that confirmed that liabilities for remediation of petroleum-contaminated sites in Canada are in the multi-billion dollar range and remediation will take many years to accomplish, given the size of the remediation industry.

### **Do you have to remove a tank that has been permanently withdrawn from service?**

If you permanently withdraw a tank system from service you are required to remove the system (section 4). The removal must be done by a person approved to remove storage tank systems (subsection 45(1)) and the tank system owner/operator must keep a record that establishes that the system was removed by someone designated to do so.

### **When you remove a system do you have to remove tanks, piping and all components?**

Under these regulations you are prohibited from abandoning storage tank systems in place. All systems must be permanently withdrawn from service and removed according to the regulations. The requirements for removal depend on the type of tanks you have (section 4).

- For *underground tanks* and *shop-fabricated aboveground tanks*, you must remove all tanks, piping and components (subsection 4(a)).
- For *field-erected aboveground tanks*, you must remove all piping and components that are outside the tanks (paragraph 4(b)). While field-erected aboveground tanks may remain in place, they still must be properly cleaned following section 44 of the regulations.

### **What kind of records do you have to keep when you withdraw or remove a system or component?**

You must keep the following records for *five years*.

- Temporary withdrawal: you must keep a record of the date you withdrew the system or component (section 43)
- Permanent withdrawal: you must keep a record that includes the date that you withdrew the system and establishes that the withdrawal was done by a person designated in the regulations to withdraw storage tank systems from service (section 44)
- Removal: you must maintain a record that establishes that the removal was done by a person designated within the regulations to remove storage tank systems (section 45)

### Where can I get more information?

On our website: [www.ec.gc.ca/st-rs](http://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)

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Prairie & Northern		780-951-8600
Ontario	<a href="mailto:EnviroInfo.Ontario@ec.gc.ca">EnviroInfo.Ontario@ec.gc.ca</a>	416-739-4826
Quebec	<a href="mailto:quebec.lavoieverte@ec.gc.ca">quebec.lavoieverte@ec.gc.ca</a>	800-463-4311
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# Tank Tips 10

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

**Record keeping for your storage tank system** Environment Canada's new *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* require tank system owners or operators to maintain specific records. This fact sheet will give you an overview of the records you are required to keep, how long you must keep them and where they must be filed. Website addresses, useful documents and contact numbers for additional help are listed at the end.

Recurrent spills or a long history of disposal at specific sites can lead to concerns. Oil dumped onto soils can saturate the soil matrix. This type of very concentrated contamination can be virtually impossible to eliminate without excavating and removing all the soil materials.

## What has changed?

On June 12, 2008 Environment Canada implemented new regulations governing storage tank systems under federal jurisdiction as described in the regulations, including privately owned systems located on federal and Aboriginal lands. Prior to these regulations, tank operators were required to register their storage tank systems with their federal department, and the federal departments reported annually to Environment Canada. There were, however, no record-keeping obligations for tank owners or operators.

Under the new regulations tank owners and operators are now required to maintain specific records on their storage tank systems. While some of these records must be kept for five years, you are required to keep others until the system is removed.

Compliance with these regulations is mandatory.

As [spilled] bulk oil migrates through the soil column, a small amount of the product mass is retained by soil particles. The bulk product retained by the soil particles is known as “residual saturation.”

Depending upon the persistence of the bulk oil, residual saturation can potentially reside in the soil for years.

### **What records do you have to keep for five years?**

You must keep the following records for five years:

- records of all inspections and tests carried out on your system or components of your system, including leak tests carried out on tanks, piping or other components (sections 16 – 27 of the regulations)
- records related to the operation and maintenance of oil-water separators (sections 35 – 38)
- all test results related to maintaining and operating corrosion protection (sections 16 – 27)
- records on the disposal of water from tank bottoms (section 40)
- records documenting the temporary or permanent withdrawal from service of a system or any component of a system (sections 42 – 44)
- records of the removal of any system or component (section 45).

### **What information do you include in leak-testing and inspection records?**

The information required for your records is laid out in section 27 as follows:

- the test or inspection date
- the storage tank system identification number
- the type of petroleum or allied petroleum product stored in the system
- the test or inspection results
- the testing method
- the name and address of the individual and, if applicable, the company that performed the test or inspection
- the components of any corrosion analysis program, if this applies to your system (see subparagraph 23(1)(a)(ii)).

### **What records are required for oil-water separators?**

The record keeping requirements for oil-water separators are covered in detail in sections 35 to 37 of the regulations. If you operate an oil-water separator it is important that you read the applicable sections of the regulations.

Residual saturation of the soil is important as it determines the degree of soil contamination and can act as a continuing source of contamination for individual compounds to separate from the bulk product and migrate independently in air or groundwater.

### **What kind of record do you have to keep when you dispose of water from your tank bottom?**

When you dispose of water from your tank bottom you must ensure that it is disposed of in a way that doesn't harm the environment or pose a risk to human health, and you are required to keep a record of its disposal (section 40) as follows:

- the quantity of tank-bottom water removed
- the date of its removal
- the name and address of the individual (and company, if applicable) who removed it
- the disposal method
- the place where it was disposed of.

### **What happens if you withdraw your system, or a component of the system, from service?**

If, for any reason, you decide to withdraw your system, or a component of your system, from service either temporarily or permanently, there are specific records you must keep. For a temporary withdrawal (less than 2 years) you must keep a record of the date on which you withdrew the system or component from service (section 43). For a permanent withdrawal, you must keep a record of the date on which the system or component was withdrawn from service, and a record establishing that the work was carried out by a person designated to do so as laid out in the regulations. (subsection 44(2))

### **What records are required if you remove a system, and how long do you keep those records?**

If you remove a component of a system or an entire storage-tank system you need a record establishing that the procedure was carried out by a person designated to do so under the regulations. You must retain these records for five years after the removal (subsection 45(2)).

### **Are there any exceptions to the five-year requirement for holding records?**

Yes. Several records must be kept until the system is removed. They are:

- for *vertical aboveground tanks without secondary containment*, all inspection records (section 22 and paragraph 46(2)(a))



If a release of bulk oil is persistent in the environment, there can be impacts to extensive areas as the individual compounds continue to separate and migrate away from the spill area via air or groundwater.

- for *aboveground piping without secondary containment*, any inspection records related to components of a corrosion analysis program (subparagraph 46(2)(a)(ii)).
- for new systems, the records listed in the next section.

### **What records are required for a new system?**

The regulations require owners or operators of new storage tank systems (installed after June 12, 2008) to maintain ‘as-built drawings’ for the life of the system (section 34 and paragraph 46(2)(b)). This is to ensure that the system’s design and precise layout are not lost with staff, operator or contractor changes, given the long life of some of these systems. The regulations also require that the drawings bear the stamp and signature of a professional engineer and show:

- the outline of all tanks
- the centreline of all piping
- the centreline of all underground electrical power and monitor sensor conduits
- the building foundation outlines
- the property lines
- secondary containment systems.

It is important to note that these as-built drawings must be kept up-to-date. If you alter your system in any way that affects the required information, the drawings must be updated, restamped and signed by a professional engineer.

Under the regulations your storage tank system must also be installed by a person approved to install tank systems in the province or territory where the system is located. If that jurisdiction does not approve installers, then the work must be supervised by a professional engineer. You are required to keep a record of who installed your storage tank system. The information in the record (for example, an invoice) must have sufficient information to establish that the system was installed by a person designated under the regulations to do so (subsection 33(2)), and the record must be kept until the system is removed.

## **Do all types of storage tank systems have the same record-keeping requirements?**

If you have:

- *single-walled underground tanks or piping*
- *aboveground tanks or piping without secondary containment*
- *sumps*

there are specific inspection and leak monitoring requirements that apply to you. In addition to the records already mentioned, you must maintain records of the initial leak-test or inspection required in the regulations, as well as records on your ongoing leak-detection program (sections 16 to 27). These records must be held for a minimum of five years. (See Tank Tips 8: Leak detection and monitoring)

## **Where must you keep your records?**

The records must be kept at the owner's or operator's place of work nearest to the system (subsection 46(1)).

## **Where do you get more information?**

On our website: [www.ec.gc.ca/st-rs](http://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)

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# Tank Tips 11

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

**If you deliver products** On June 12, 2008 Environment Canada brought in new regulations governing storage tank systems for petroleum and allied petroleum products that are under federal jurisdiction as described in the regulations. If you deliver petroleum or allied petroleum products to storage tank systems covered by these regulations you have new responsibilities. This fact sheet explains who is covered by the regulations, and the new responsibilities for delivery personnel. If you have questions, contact information is listed at the end.

Processed petroleum products provide up to 50% of the world's total energy supply, major forms of transportation, electric utilities, and space heating.

## **What has changed?**

Under the new *Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations* there are specific requirements for people who deliver petroleum products and allied petroleum products to storage tank systems under federal jurisdiction as described in the regulations. Compliance with these regulations is mandatory.

## **What are your new responsibilities?**

If you deliver petroleum products or allied petroleum products to storage tanks systems covered by these regulations you are now required to:

- immediately report any spill of product that occurs during transfer to the system's operator
- immediately report to the system's operator any evidence of a leak or spill that you note on or around the tank system
- as of June 12, 2010, keep a record of the Environment Canada identification number of the tank system you are filling.

*After June 12, 2010 you are prohibited from filling tanks that do not have an Environment Canada identification number visible for you to record.*

Petroleum products released to the soil may move through the soil to the groundwater. Individual compounds may then separate from the original mixture, depending on the chemical properties of the compound. Some of these compounds will evaporate into the air and others will dissolve into the groundwater and move away from the release area.

### **How do you know if a storage tank system is under federal jurisdiction as described in the regulations?**

For a complete explanation of which tanks are covered you must read section 2 of the regulations, but the following summary will provide you with some guidance. The regulations apply to:

- *Storage tank systems operated by federal departments, boards or agencies; or owned by the Crown.* This includes tanks owned or operated by groups such as the Department of National Defence, Fisheries and Oceans Canada, Parks Canada, the RCMP, Canada Post, and Public Works and Government Services Canada (PWGSC). If, for example, you have customers who pay you through contracts or standing offers with PWGSC, then their tank systems are under federal jurisdiction as described in the regulations and must comply with the regulations.
- *Storage tank systems owned or operated by federal works and undertakings that are railways, port authorities or airports.*
- *Storage tank systems located on federal and Aboriginal lands.* This includes storage tank systems operated by band councils, as well as those owned by private companies or individuals operating on federal or Aboriginal land. For example, a company mining within a federal park must comply with the regulations, as must a forestry operation sited on federal Crown land, or private lodges and marinas located on Aboriginal land.

### **What is an Environment Canada identification number?**

Under the regulations, owners of storage tank systems have until June 12, 2009 to identify their systems to Environment Canada (or provide us with an identification progress report). The process of identifying their tank system with Environment Canada can be done online and, if the tank system owner has provided all the required information, they will receive their Environment Canada identification number immediately as the last step in the identification process. They are then required to post the number on or near the tank system in a location that is readily visible. This is the number that – after June 12, 2010 – must be visible, and you must record, in order to fill the tank.

### **What products are covered by the regulations?**

The regulations cover tank systems storing petroleum products and allied petroleum products. For the purposes of the regulations, a petroleum product is defined as “a single hydrocarbon or a mixture of at least 70% hydrocarbons by volume, refined from crude oil, with or without additives, that is used or

Furthermore, the effects of groundwater contamination do not end with the loss of well-water supplies. Several studies have documented the migration of contaminants from disposal or spill sites to nearby lakes and rivers as this groundwater passes through the hydrologic cycle, but the processes are not as yet well understood.

could be used as a fuel, lubricant or power transmitter, and includes used oil, but does not include propane or most paints or solvents.”

A complete list of ‘allied petroleum products’ can be found in Schedule 1 of the regulations. If you are delivering, for example, general purpose thinners for lacquers or E-85 fuel, then the tank system may fall within the regulations.

### **Do the regulations cover all types of tanks and containers storing these products?**

Environment Canada’s new regulations apply to outdoor aboveground and underground storage tanks and containers that:

- have a capacity of more than 230 litres
- operate at atmospheric pressure and
- are designed to be installed in a fixed location.

The following tank systems **DO NOT** fall under the new regulations.

- containers with a capacity of 230 litres or less
- indoor storage tanks
- pressurized tanks like those storing propane
- mobile tanks such as those on the back of pickup or other trucks
- outdoor, aboveground tanks that have a total combined capacity of 2500 litres or less and are connected to a heating appliance or an emergency generator
- tanks regulated by the National Energy Board
- tanks that contain unprocessed petroleum products

### **If you think a tank is leaking do you have to report it to Environment Canada?**

No, but you are required to report any evidence of a leak or spill to the operator of the tank system. It is their responsibility to notify the proper authorities and take action.

### **What do you do if you arrive at a storage tank system in a remote location and there is no identification number?**

As of June 12, 2010, you are *prohibited* from transferring product into a storage tank unless the identification number is visible on or near the storage tank system. If you have not called ahead to confirm that the owner has

Many federal contaminated sites are located in remote regions with harsh climates. It is impossible to work at some of these locations year-round, lengthening the time required to remediate the sites.

identified the tank system to Environment Canada, as a first course of action check with the system's operator. The system may have been identified but the identification number not posted where you can see it. Once the number is visible, you may go ahead and fill the tank.

If the owner has not yet identified the system with Environment Canada, and they have onsite access to the internet, they can identify their storage tank system and have the number available for posting within a relatively short period of time, if they have all the required information in hand (see Schedule 2 of the regulations). In the worst case scenario, however, if it is after June 12, 2010, the system is not identified, and the owner is unwilling or unable to do so while you wait, then you are prohibited from transferring any petroleum or allied petroleum product into their storage tank system.

#### **After June 12, 2010, what are the penalties for filling a tank without an identification number?**

If you fill a tank that does not have an identification number you will be in violation of the regulations. Environment Canada's enforcement officers can take a wide variety of enforcement measures, as indicated in the Compliance and Enforcement Policy for the *Canadian Environmental Protection Act, 1999* (CEPA 1999). Among these possible measures are warnings, environmental protection compliance orders and prosecutions. The sections in CEPA 1999 including and following section 272 identify the offences and punishment for persons who commit an offence under the Act and regulations.

#### **Is Environment Canada taking steps to inform tank owners of the new regulations and how they affect delivery?**

The regulations have been in development for over five years and Environment Canada has consulted extensively with industry groups, First Nations, federal departments and product suppliers regarding both the new requirements and the timelines for their implementation. With the regulations now in force, we are making every effort to inform tank owners and operators in the regulated community so they are aware of their responsibilities. We have a website, a series of fact sheets covering various aspects of the regulations written in plain language, and compliance promotion officers trained to answer any questions tank owners, operators or suppliers might have.

#### **Is there any information you can give out to your customers to make sure they identify their tanks with Environment Canada by June 12, 2010?**

As suppliers and delivery personnel, you have direct access to tank owners and operators covered by these regulations. If you need information to

hand out to your customers *Tank Tips 1: What's new in the new regulations* and *Tank Tips 2: Do the new regulations apply to you?* are both available in .pdf format on our website. These fact sheets will cover your clients' basic questions about the new regulations and provide them with contacts, websites and additional information. *Tank Tips 6: Identifying your system* covers the specifics of how to identify your tank system with Environment Canada. Again, it is available as a .pdf file on our website and can be sent electronically to your clients or printed off and handed to them.

**Where do you (or your customers) get more information?**

On our website: [www.ec.gc.ca/st-rs](http://www.ec.gc.ca/st-rs). If you'd like us to mail you the information below please call: 819-934-2991 (M-F 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.

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Prairie & Northern		780-951-8600
Ontario	<a href="mailto:EnviroInfo.Ontario@ec.gc.ca">EnviroInfo.Ontario@ec.gc.ca</a>	416-739-4826
Quebec	<a href="mailto:quebec.lavoieverte@ec.gc.ca">quebec.lavoieverte@ec.gc.ca</a>	800-463-4311
Atlantic	<a href="mailto:15th.reception@ec.gc.ca">15th.reception@ec.gc.ca</a>	902-426-7231

*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.*