



Affaires autochtones et
Développement du Nord Canada

Aboriginal Affairs and
Northern Development Canada



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Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations

Murray Heap, Senior Environment Officer, AANDC Alberta
Lands Training Symposium November 23, 2015



1. Authority

Canadian Environmental Protection Act, 1999 (CEPA 1999)

- Government of Canada's primary legislation for control of harmful substances in the environment
- Some guiding principles:
 - sustainable development
 - pollution prevention
 - precautionary principle





Compliance & Enforcement Policy Guiding Principles

- Compliance with the Act and its Regulations are mandatory
- Apply the Act in a manner that is **fair, predictable** and **consistent**
- Administer the Act with an emphasis on prevention of damage to the environment
- Examine every suspected violation and apply the C&E policy
- Encourage reporting of suspected violations
- **Reference:** <http://www.ec.gc.ca/CEPARegistry/enforcement/>



Responses to Alleged Violations (CEPA 1999)



No formal court action

- Warnings
- Directions by Enforcement Officers
- Ministerial Orders
- Tickets
- Environmental Protection Compliance Orders (cease & desist)

Court action

- Injunctions
- Prosecution
- Court orders upon conviction
- Civil suit for recovery of costs

Fine range:

- Penalties now range from a minimum of \$5,000 for a first offence by an individual (for serious offences) to a maximum of \$6 million for a large corporation. The fines are doubled for second and subsequent offenders
- Prison up to 3 years is also possible



2. Purpose

Reduce leaks into environment

Reduce impact of spill events

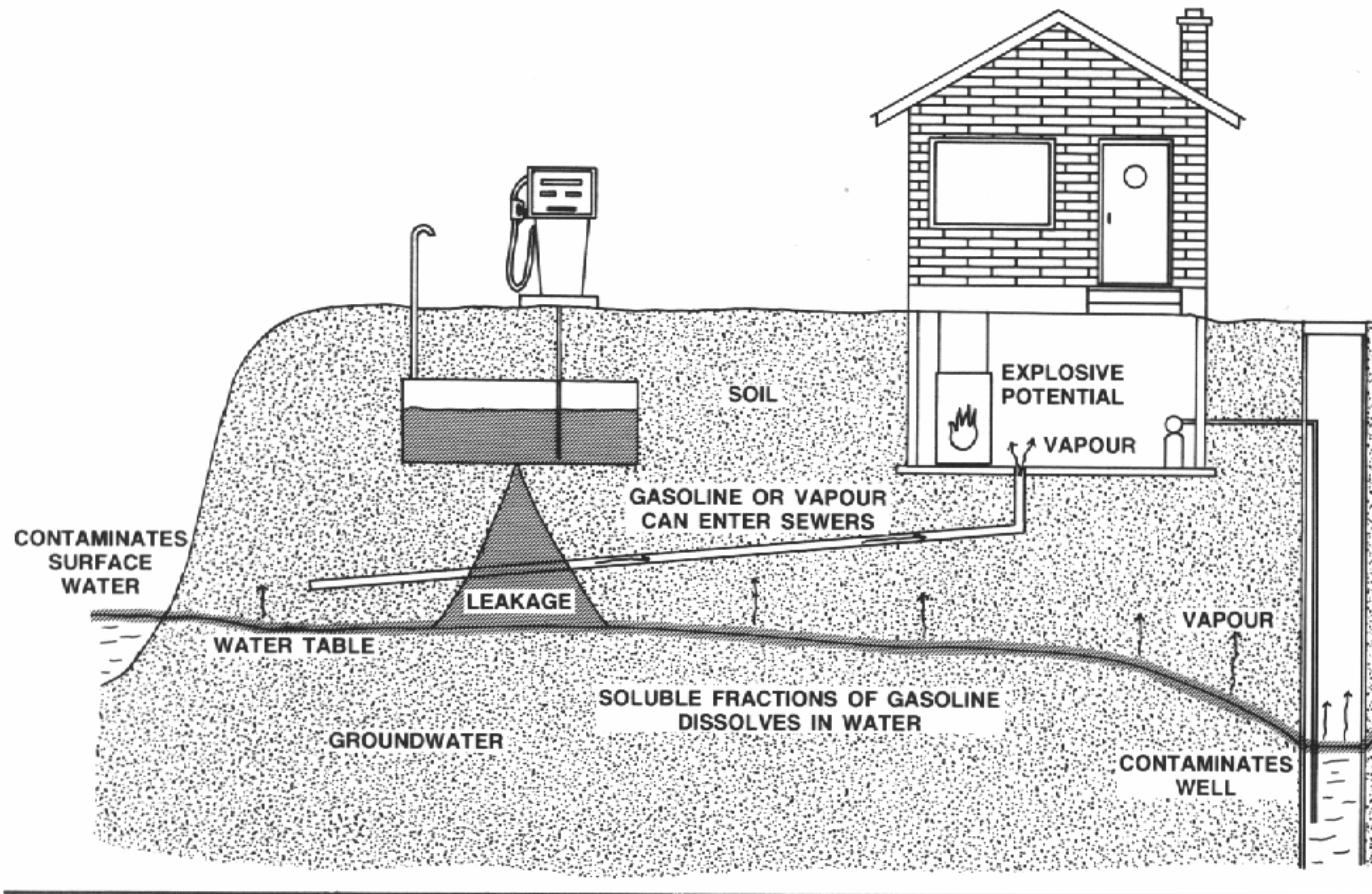
Protect Soil and Groundwater





3. Introduction

LEAKING UNDERGROUND PETROLEUM STORAGE TANKS TANK LEAKAGE CAN CAUSE A NUMBER OF PROBLEMS





You have responsibilities if you:

- Own a storage tank system; OR
- Operate a storage tank system; OR
- Deliver fuel to a storage tank system.





The Storage Tank Regulations came in to force on **June 12, 2008.**

An “**existing tank**” for the purposes of the regulations was installed prior to **June 12, 2008**

There was a phased-in for some parts of the regulations up to June 12, 2012.

All parts of the regulations are now in force.

More information, FAQs, “Tank Tips”, legislation, available at:

<http://www.ec.gc.ca/rs-st/>



4. Application

Which systems are covered by the Regulations?

- All underground storage tank systems
- For aboveground storage tank systems:
 - attached to a heating appliance or emergency generator: 2500L or larger
 - all other outdoor tanks over 230L

*2500 liters = 550
Imperial Gallons



5. Responsibility

Roles of owner / operator:

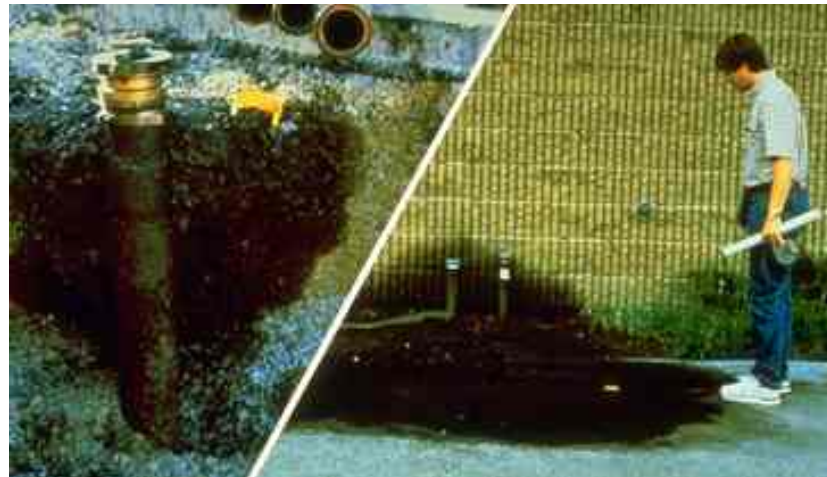
- Addressing out-of compliance issues
- Installation as per requirements
- Identification / record keeping
- Leak detection
- Withdrawal of systems
- Operation / maintenance
- Spill responses/emergency planning





Suppliers' responsibilities...

- Not transfer products into storage system unless ID visible and record ID
- Immediately notify the operator of spill or leak or evidence of “old” leaks or spills
- Keep a record of the EC ID number

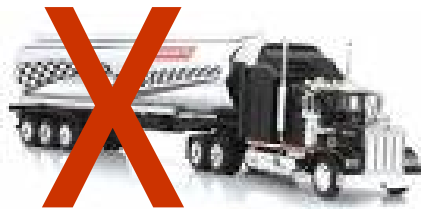




6. Definitions

Definition: Storage tank

- Closed container
- Capacity larger than 230 liters (50 Imperial gallons = 227 liters)
- Designed to be installed in a fixed location



Not a “tank”



Not a “tank”



Definition: Product transfer area

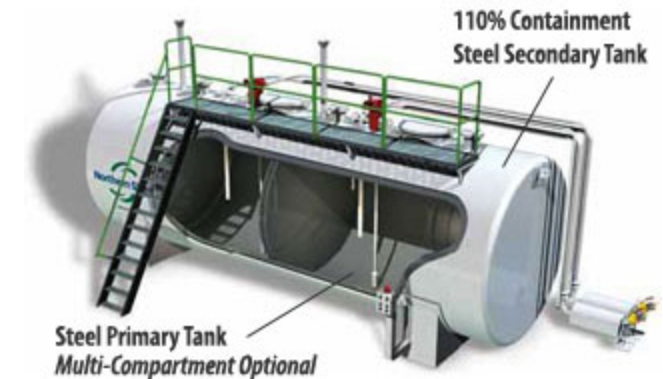
- Area around connection point
- Between delivery and storage tank systems
- Tanks have combined capacity of more than 2500 liters





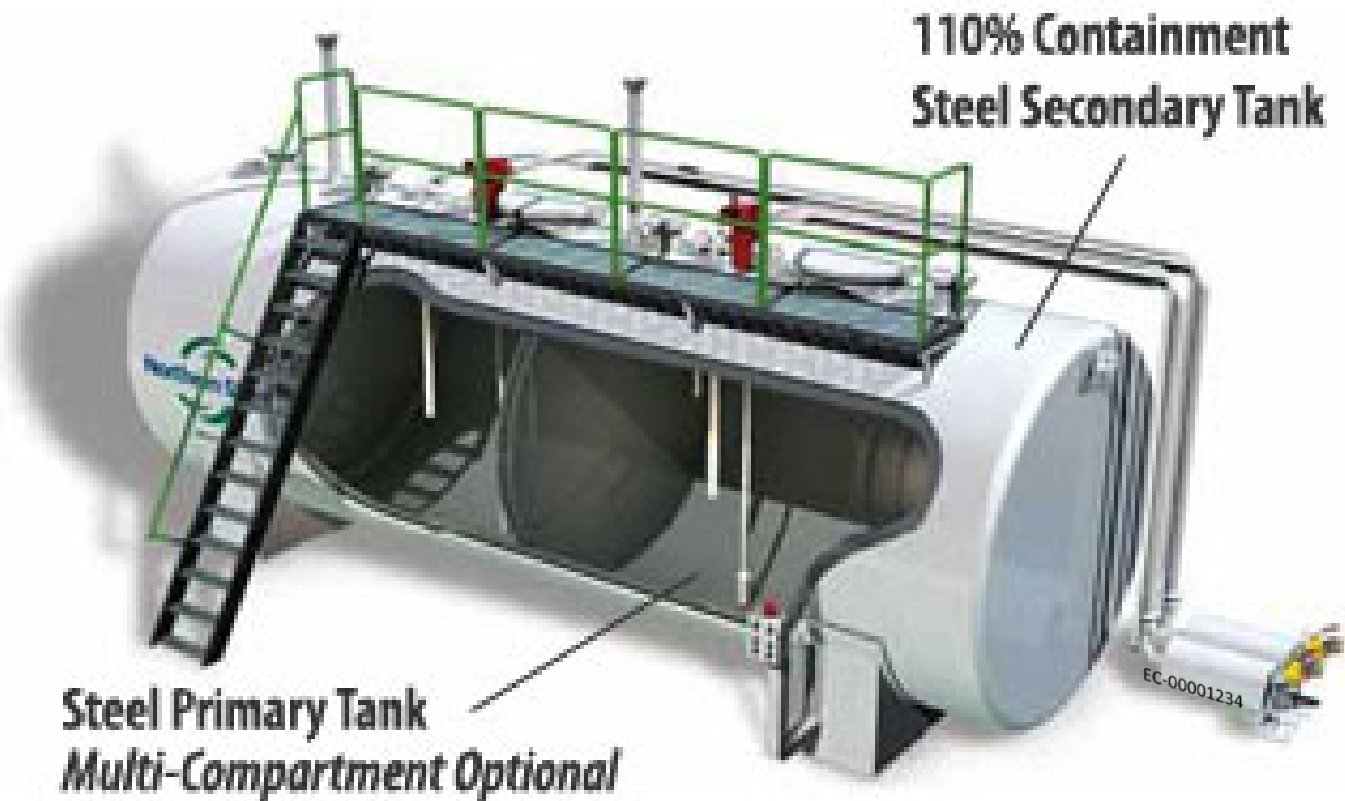
Definition: Secondary containment

- Containment that confines leaks and includes:
 - Double walled tanks
 - Double walled piping
 - Liners
 - Impermeable barriers e.g. steel





Examples of Secondary Containment – Double-Walled Tank



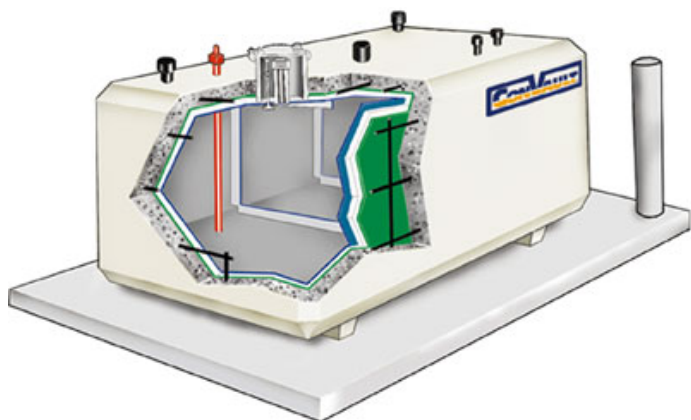


Examples of Secondary Containment - Berm





Examples of Secondary Containment – Concrete Encased





Examples of Secondary Containment – Contained Tank Assembly





7. The Regulations

Vol. 142, No. 13

Canada Gazette

Part II

OTTAWA, WEDNESDAY, JUNE 25, 2008

Statutory Instruments 2008

SOR/2008-184 to 214 and SI/2008-63 to 73

Pages 1390 to 1624



Gazette du Canada

Partie II

OTTAWA, LE MERCREDI 25 JUIN 2008

Textes réglementaires 2008

DORS/2008-184 à 214 et TR/2008-63 à 73

Pages 1390 à 1624

NOTICE TO READERS

The *Canada Gazette* Part II is published under authority of the *Statutory Instruments Act* on January 9, 2008, and at least every second Wednesday thereafter.

Part II of the *Canada Gazette* contains all "regulations" as defined in the *Statutory Instruments Act* and certain other classes of statutory instruments and documents required to be published therein. However, certain regulations and classes of regulations are exempted from publication by section 15 of the *Statutory Instruments Regulations* made pursuant to section 20 of the *Statutory Instruments Act*.

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For residents of Canada, the cost of an annual subscription to the *Canada Gazette* Part II is \$67.50, and single issues, \$3.50. For residents of other countries, the cost of a subscription is US\$67.50 and single issues, US\$3.50. Orders should be addressed to Government of Canada Publications, Public Works and Government Services Canada, Ottawa, Canada K1A 0S5.

The *Canada Gazette* is also available free of charge on the Internet at <http://canadagazette.gc.ca>. It is accessible in Portable Document Format (PDF) and in HyperText Mark-up Language (HTML) as the alternate format. The PDF format of Part I, Part II and Part III is official since April 1, 2003, and is published simultaneously with the printed copy.

Copies of Statutory Instruments that have been registered with the Clerk of the Privy Council are available, in both official languages, for inspection and sale at Room 418, Blackburn Building, 85 Sparks Street, Ottawa, Canada.

AVIS AU LECTEUR

La Partie II de la *Gazette du Canada* est publiée en vertu de la *Loi sur les textes réglementaires* le 9 janvier 2008, et au moins tous les deux mercredis par la suite.

La Partie II de la *Gazette du Canada* est le recueil des « règlements » définis comme tels dans la loi précitée et de certaines autres catégories de textes réglementaires et de documents qu'il est prescrit d'y publier. Cependant, certains règlements et catégories de règlements sont soustraits à la publication par l'article 15 du *Règlement sur les textes réglementaires*, établi en vertu de l'article 20 de la *Loi sur les textes réglementaires*.

On peut consulter la Partie II de la *Gazette du Canada* dans la plupart des bibliothèques.

Pour les résidents du Canada, le prix de l'abonnement annuel à la Partie II de la *Gazette du Canada* est de 67,50 \$ et le prix d'un exemplaire, de 3,50 \$. Pour les résidents d'autres pays, le prix de l'abonnement est de 67,50 \$US et le prix d'un exemplaire, de 3,50 \$US. Veuillez adresser les commandes à : Publications du gouvernement du Canada, Travaux publics et Services gouvernementaux Canada, Ottawa, Canada K1A 0S5.

La *Gazette du Canada* est aussi disponible gratuitement sur Internet au <http://gazetteducanada.gc.ca>. La publication y est accessible en format de document portable (PDF) et en langage hypertexte (HTML) comme média substitut. Le format PDF en direct de la Partie I, de la Partie II et de la Partie III est officiel depuis le 1^{er} avril 2003 et est publié en même temps que la copie imprimée.

Des exemplaires des textes réglementaires enregistrés par le greffier du Conseil privé sont à la disposition du public, dans les deux langues officielles, pour examen et vente à la Pièce 418, Edifice Blackburn, 85, rue Sparks, Ottawa, Canada.



7.1 Identification with EC

What is the identification process?

- Identify storage tank system to EC:
 - Before first fill for new tank systems
 - Existing tank systems: **ASAP!!**
- Receive ID number from EC
- Display ID number on or near tank system
- On-line, or mail or FAX



On-line
"FIRSTS"

Environment Canada website screenshot showing the "Petroleum and Allied Petroleum Products Storage Tanks Regulations" page. The page includes a navigation menu, a search bar, and a sidebar with links to "Petroleum and Allied Petroleum Products Storage Tanks", "Regulations", "Tips and Tools", "Identification Registry", "Federal Identification Registry User's Guide (December 2013)", "Certified Installers", "FAQ", "Contact Information", "Links", and "Site Map". The main content area features the title "Petroleum and Allied Petroleum Products Storage Tanks Regulations" and a red circle highlighting the "Storage Tank Registry" link in the sidebar. Below the title, there is a paragraph of text and a "New-You Tube Video" section. The footer contains links for "Terms and conditions", "Transparency", "About Us", "News", "Contact Us", and "Stay Connected".



Fax # 819-953-7253

**Mail or FAX Hard
Copy**

**Remember: no ID = no
delivery**

Identification of Storage Tank Systems for the Purpose of the Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations Environment Canada (EC) Storage Tank System Identification Form One form per storage tank system. Mailing instructions on last page.		ENVIRONMENT CANADA USE ONLY	
		ID Number	
		Date Received	
		Date Entered	
		Entered By	
		Comments	
PART I: PURPOSE OF NOTIFICATION			
<input checked="" type="checkbox"/> Check all that apply:			
<input type="checkbox"/> Identification of new (not previously registered) system	<input type="checkbox"/> Temporary withdrawal (Part V)	<input type="checkbox"/> Change in tank contents (Part IV)	
<input type="checkbox"/> Change in system (e.g. upgrade) (Part IV)	<input type="checkbox"/> Permanent withdrawal and removal (Part V)	<input type="checkbox"/> New owner / operator (Part II & III)	
<input type="checkbox"/> Other (specify):		<input type="checkbox"/> Change in owner / operator address (Part II & III)	
PART II: OWNERSHIP OF TANK SYSTEM		PART III: LOCATION OF TANK SYSTEM	
A. Owner Name		H. Facility Name	
B. Owner Address (include: City, Province/Territory, Postal Code)		I. Street Address or location of system (if no street address provide latitude & longitude)	
		J. Street Address or location of tank system records (if no street address provide latitude & longitude)	
C. Name of Contact Person		K. Name of Operator (if different from owner)	
D. Title of Contact Person		L. Title of Operator (if different from owner)	
E. Phone Number ()	Fax Number ()	M. Operator Address (if different from owner)	
F. E-mail Address		N. Phone Number (if different from owner) ()	Fax Number (if different from owner) ()
G. Name of Previous Owner (if applicable)		O. E-mail Address (if different from owner)	



Split Tanks = Multiple EC Numbers





Multiple Tanks Connected = One EC Number





ID Number Displayed



The Regulations require that the identification number be displayed "in a readily visible location on or near the storage tank system." There is no prescribed way of marking the tank, and Environment Canada does not provide any type of placard or sign.



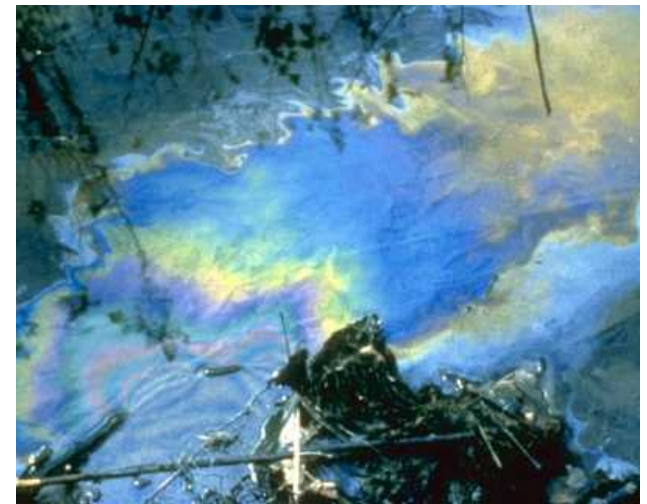
7.2 Withdraw leaking systems

Leaking systems

- must immediately be temporarily withdrawn from service
- After *repairs* and *leak detection*, system may be *returned to service*

OR

- *Permanently withdraw and removed*





Leaking single-walled UST

When they leak

- immediately permanently withdraw from service and
- remove by June 12, 2010 or within two years of becoming aware of the leak





7.3 Remove 'high risk' systems

High-risk systems

- Aboveground tanks installed underground
- Underground tanks installed aboveground
- Partially buried tanks
- Single-walled underground tanks and piping without corrosion protection and leak detection

**Permanent withdrawal & removal was required by June
12, 2012**



High-risk systems



UST installed aboveground



Partially buried



If you have an existing single-walled underground storage tank system that isn't leaking, you may keep it in service for the life of the system, as long as it has existing (as of June 12, 2008):

- leak detection, and
- corrosion protection.



7.4 New Systems

What are the design requirements for new systems?

- ASTs, USTs, and piping in accordance with certain clauses of CCME Code of Practice
- Tank system design stamped by a professional engineer





What are the installation requirements for new systems?

- System installation by:
 - provincially approved installer
- As-built drawings stamped by a professional engineer

<http://www.ptmaa.ab.ca/>



Shop-fabricated ASTs

- Corrosion control
- Built to an approved standard
- Secondary containment
- Containment sumps as applicable
- Overfill protection as specified
- Horizontal AST supported above grade level





Aboveground systems for storing used oil:

- Secondary containment
- Specific design standards based on whether they are manually or mechanically filled





Secondary containment volume:

- If one tank, **≥110%** of tank capacity
- If 2 or more tanks, **≥100%** of largest tank **plus 10%** of greatest volume of either largest tank or aggregate of others





Overfill protection (shop-fabricated):

- Compatible with filling method
- Device to prevent fill to greater than 95% capacity **or** audible / visual alarm at 90% capacity with person

OR

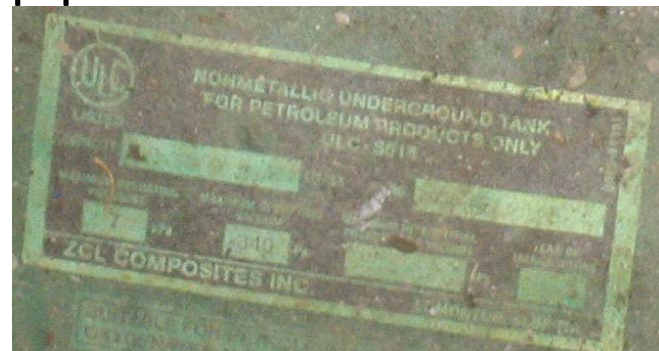
- If less than 5000 liters, constant visual monitoring and level gauging by trained personnel





UST requirements

- Double-walled tank with monitorable interstitial space
- Overfill protection device
- Spill containment device on fill pipe
- Containment sumps
- Leak detection
- Corrosion protection



Remember...

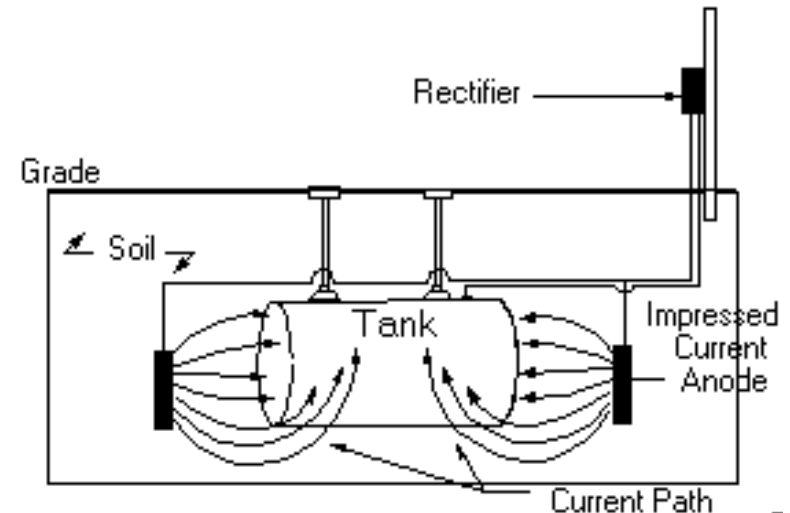
Certification mark is required.



Cathodic protection – Steel Tanks

- Galvanic (sacrificial) anode systems

- Impressed current systems

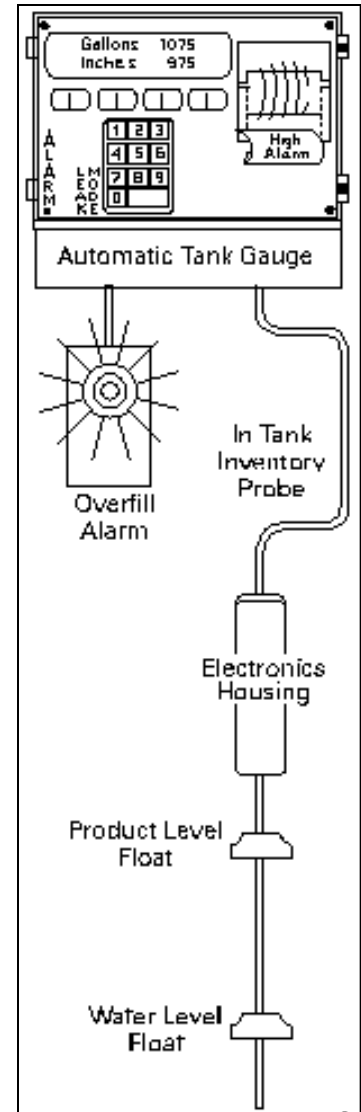
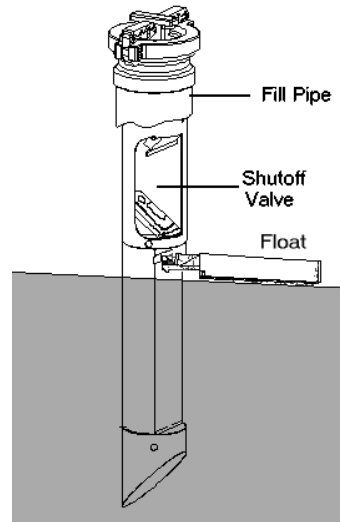
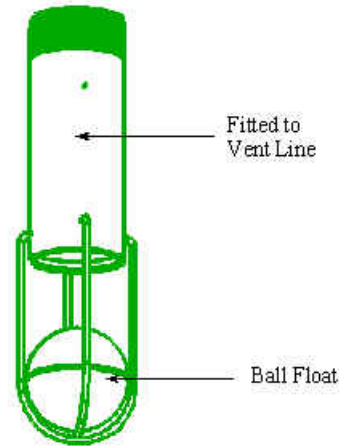




USTs

Overfill protection

- Required by Regulations
- Three examples:
 - Overfill alarm
 - Automatic shut-off
 - Ball float valves





USTs

Spill containment device

- Fill pipe spill containment device required
- Where applicable, containment sumps needed





Piping Systems

All storage tanks must have

- Fill pipe and vent line installed **s.12**
- All other system openings sealed or connected to piping **s.12**

National Fire Code of Canada

- Protected from impact (aboveground)
- Allowable design load (underground)





Vents must
be installed





Piping Systems

- Steel – aboveground
- Double-walled non-metallic below ground



Transition Sump



Piping Systems

Piping requirements:

- Meet a standard
- Secondary containment
- Leak detection
- Manual shut-off valve (lockable)
- Thermal relief valve
- Anti-syphon devices



Remember...

Conform with standards.



Piping Systems

Secondary containment

- Required for underground
- Types
 - Double-walled steel
 - Double-walled FRP
 - Metal with flexible secondary containment piping





7.4.5 New Systems – Piping Systems

Corrosion control - Steel

- Required (various forms)
- Cathodic protection
 - Required for double-wall steel underground piping
 - Designed by corrosion expert





7.4.5 New Systems – Piping Systems

Product transfer

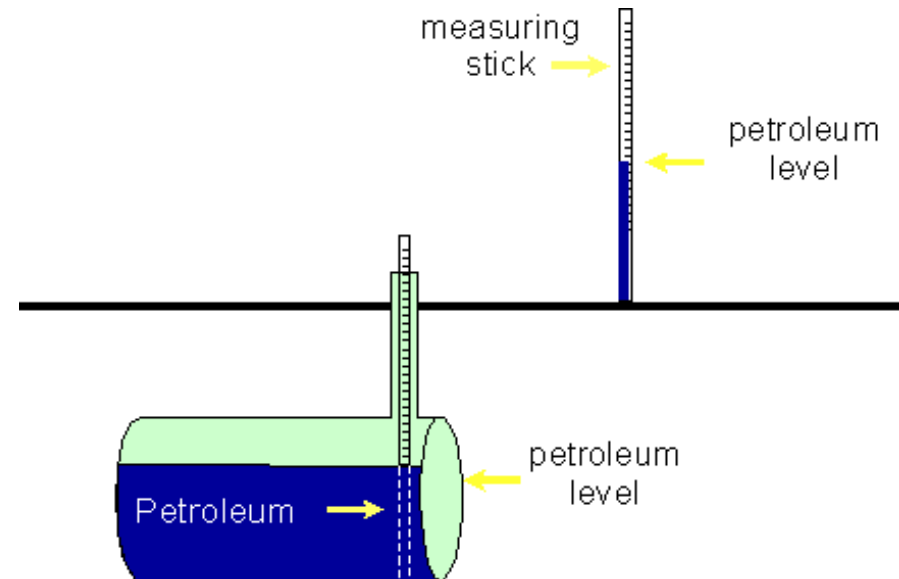
- Where **greater than 5000 liters**, fill pipe:
 - Liquid / vapour tight connection at filling
 - Otherwise sealed with liquid / vapour tight cap
- Where **used oil**, suction tube:
 - Liquid tight fitting when in use
 - Otherwise sealed with liquid tight cap





7.5 Leak Detection

- Should be part of regular operation and maintenance of storage tank system





What are the leak detection requirements?

- Leak detection by June 12, 2010
- Ongoing leak detection or monitoring on prescribed **frequency**





Single-walled underground storage tanks:

- Precision leak test by June 12, 2010
- Then:
 - annual precision leak test, or
 - use automatic tank gauging, or
 - use continuous in-tank leak detection





Horizontal aboveground storage tanks without secondary containment:

- Visually inspect walls for leaks by June 12, 2010,
- Then:
 - annual precision leak detection test, or
 - monthly visual inspection of walls and inventory reconciliation at least weekly, or
 - continuous in-tank leak detection, or
 - continuous external leak monitoring





What's Wrong with Farm Tanks?

Compliance

New Installation

Forms

Guides

Industry Con

[Home](#) >> [Guides](#) >> [Farm Tanks](#)

FARM TANKS



What is Wrong With This Tank?

The Alberta Fire Code does not apply to storage tanks which are used for agricultural purposes. "Farm tanks" are not constructed to a recognized safety standard, including Underwriters Laboratory of Canada (ULC). Storage tanks must be built to a ULC standard to be in conformance with the Fire Code. Common farm tank characteristics include:

- steel thickness of approximately 2 mm (ULC-S601 tanks of similar size have head and shell thickness of 3mm)
- a single opening which serves as the tank vent as well as the fill opening
- a 25mm drain plug
- light-weight metal supports to allow for gravity dispensing
- no emergency pressure relief to protect against catastrophic failure if exposed to fire - excessive pressure could turn the vessel into a rocket
- often not provided with suitable diking or other containment measures to control accidental spills or leaks from exposing nearby equipment, buildings, waterways, or adjacent property
- no automatic shut-off valves
- suitable "Flammable-Keep Open Flames Away," "Turn Off Ignition," "No Smoking" signage absent
- grounding and bonding connections not provided for dispensing and bulk delivery operations
- weeds and other combustible materials often allowed to accumulate around tanks

<http://www.ptmaa.ab.ca/index.php/guide/farm-tanks>



- annual precision leak detection test, or
- monthly visual inspection of walls and inventory reconciliation at least weekly, or
- -continuous in-tank leak detection, or
- -continuous external leak monitoring

SAMPLE

MONTHLY INVENTORY RECORD

TANK IDENTIFICATION & TYPE OF FUEL: 4 MIDGEARDE UUL

MONTH/YEAR: 9, 93

FACILITY NAME: LAST CHANCE #2

DATE OF WATER CHECK: 9/1 LEVEL OF WATER (INCHES): 0

DATE	O START STOCK INVENTORY (GALLONS)	P GALLONS BELIEVED	Q GALLONS PUMPED	R BOOK INVENTORY (GALLONS)	S END STOCK INVENTORY (INCHES) (GALLONS)	T DAILY OVER (+) OR SHORT (-) ("Leak" - "Book")	U REMARKS	
1	4047 (+)	---	233 (-)	3714	37 7/8	3670	-24	2D
2	2670 (-)	---	104 (-)	3646	38	3638	-12	2D
3	2668 (-)	---	324 (-)	3322	35 3/4	3223	-6	2D
4	3323 (+)	---	60 (-)	3263	35	3235	-12	2D
5	3225 (+)	---	145 (-)	3130	33 3/4	3117	-13	2D
6	2117 (+)	---	228 (-)	2879	31 1/2	2790	-89	2D
7	2290 (+)	6124	117 (-)	2807	30	2744	-427	2D
8	2744 (+)	---	127 (-)	2717	28 1/2	2732	+15	2D
9	2732 (+)	---	182 (-)	2550	27 1/2	2591	-41	2D
10	2591 (+)	---	205 (-)	2386	25 1/2	2379	-7	2D
11	2379 (+)	---	204 (-)	2175	23 3/8	2173	-2	2D
12	2173 (+)	---	166 (-)	2007	22	1991	-16	2D
13	1991 (+)	---	380 (-)	1617	69 3/8	1780	-459	2D
14	1730 (+)	---	307 (-)	1423	67	1402	-21	2D
15	1402 (+)	---	76 (-)	1326	66 1/2	1342	+16	2D
16	1342 (+)	---	229 (-)	1112	64 1/2	1020	-88	2D
17	1050 (+)	---	390 (-)	660	61	6657	-3	2D
18	6657 (+)	---	296 (-)	6361	58 1/2	6354	-7	2D
19	6354 (+)	---	28 (-)	6276	58 1/2	6290	-44	2D
20	6290 (+)	---	424 (-)	5866	54 1/2	5767	+3	2D
21	5767 (+)	---	205 (-)	5642	52 1/2	5639	-29	2D
22	5639 (+)	4177	403 (-)	4413	49 1/2	4623	+10	2D
23	4423 (+)	---	87 (-)	4336	45 1/2	4343	+7	2D
24	4343 (+)	---	311 (-)	4032	42	4026	+4	2D
25	4026 (+)	---	239 (-)	3797	39 1/2	3752	-40	2D
26	3752 (+)	---	256 (-)	3501	34 3/8	3526	+25	2D
27	3526 (+)	---	264 (-)	3262	34 1/2	3270	+8	2D
28	3270 (+)	---	268 (-)	2982	32	2991	-16	2D
29	2991 (+)	---	185 (-)	2804	29	2811	-15	2D
30	2811 (+)	---	116 (-)	2695	28	2690	-5	2D
31	(+)	---	(-)	(=)	(=)	(=)	(=)	(=)

W TOTAL GALLONS PUMPED > 6594 TOTAL GALLONS OVER OR SHORT > -34 X

DROP THE LAST 2 DIGITS from the PUMPED number and enter on the F line below

F LEAK CHECK: 65 + 130 = 195 gallons

Compare these 2 numbers

Is "TOTAL GALLONS OVER OR SHORT" LARGER than "LEAK CHECK" result? YES (NO) (circle one) **2**

If answer is "YES" for 2 MONTHS IN A ROW, notify regulatory agency as soon as possible.

KEEP THIS PIECE OF PAPER ON FILE FOR AT LEAST 1 YEAR



7.6 Product Transfer Areas

s.15

- Designed to *contain spills*
- Applies to storage tank systems greater than 2,500 liters (550 Gallons)
- All systems now require them



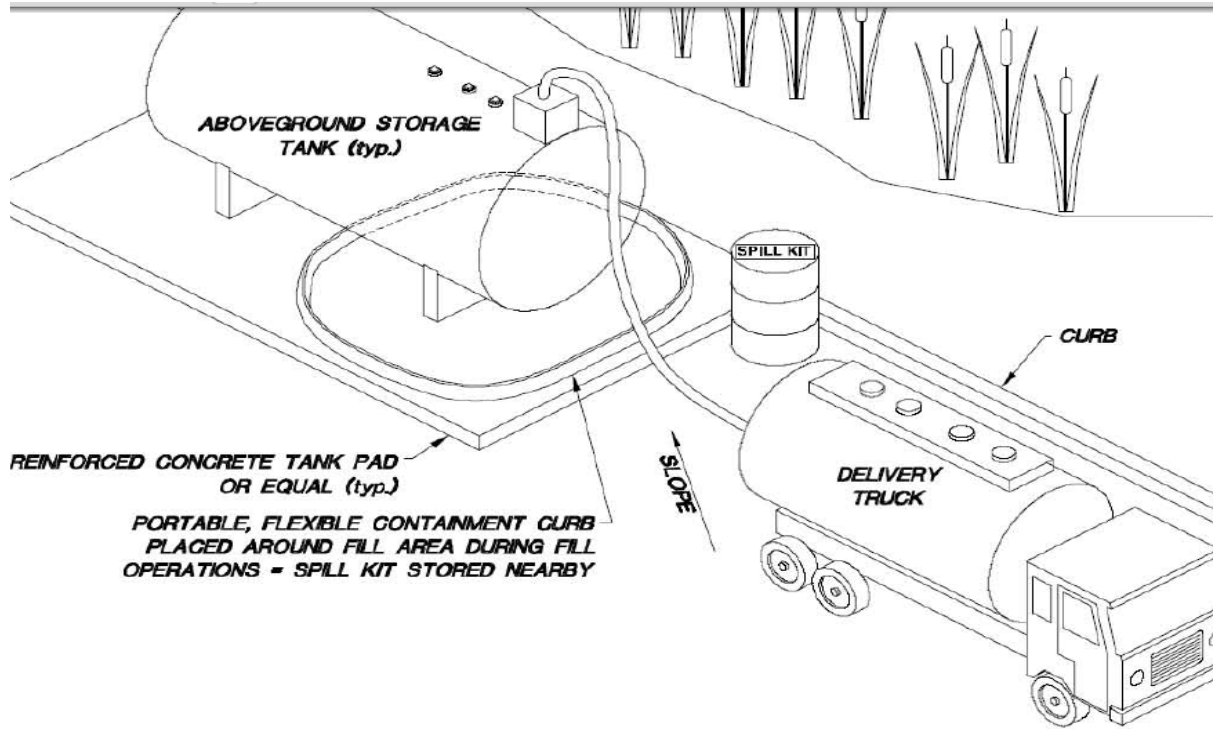


Why Environment Canada requires spill containment at product transfer areas!



- Volume = as much product as could be released before measures to stop the release can be taken
- **Various** configurations of containment







A design to contain spills at the PTA will generally involve a combination of:

- **physical containment,**
- **proper standard operating procedures to reduce risk, and**
- **good personnel training**



- Step 1: Assess your STS and its environment
- Step 2: Identity potential incidents during product transfer and potential volume of spills
- Step 3: Generate options to prevent the incidents from occurring and to contain the spill
- Step 4: Test & implement your spill containment
- Step 5: Document the results



7.7 Emergency Plans

Considerations for preparation of emergency plans s. 30(1)

- Properties and characteristics of product(s)
- Max. quantity product(s) stored at one time
- Characteristics of site and surrounding area
 - Sensitivity of environment or human health risks





Contents of plan s. 30(2)

- ☑ Properties, characteristics and max. volume of product(s)
- ☑ Characteristics and sensitivity of site / surrounding area
- ☑ Measures used to prevent, prepare for, respond to and recover from any emergency
- ☑ List of individuals to implement plan, including roles
- ☑ Identification of training required
- ☑ List of emergency response equipment and their location
- ☑ Measures to notify members of the public, as required



Emergency Plan

Emergency Spill Plan for Diesel Storage Tanks

W.B.N.P. Operations Compound Raven St.
Fort Smith, N.T.



HAZARD! Spilled heating fuel emits vapour that can explode.
HAZARD! Spilled heating fuel will pollute land and/or water.

EMERGENCY PHONE NUMBER

NWT Spill Line (24-hour service) (867) 920-8130

PARKS CANADA

Bob Smith (h)872-XXXX (w) 872-XXXX Cell:872-XXXX
Bruce McGregor (h)872-XXXX (w) 872-XXXX Cell:872-XXXX
Resource Conservation Emergency Staff: 872-XXXX

LARGE EMERGENCY NUMBERS SIGN LOCATED ON SITE

Health Centre	872-6200
Ambulance	872-3111
Fire Department	872-2222
RCMP	872-1111

Please be aware of the need to indicate to Environment Canada the locations where emergency plans are kept. Notification can be done by sending an e-mail to tankregistry@ec.gc.ca, by sending a fax to 819-953-7253 or by completing the information on the identification form.



7.8 Approved Installers



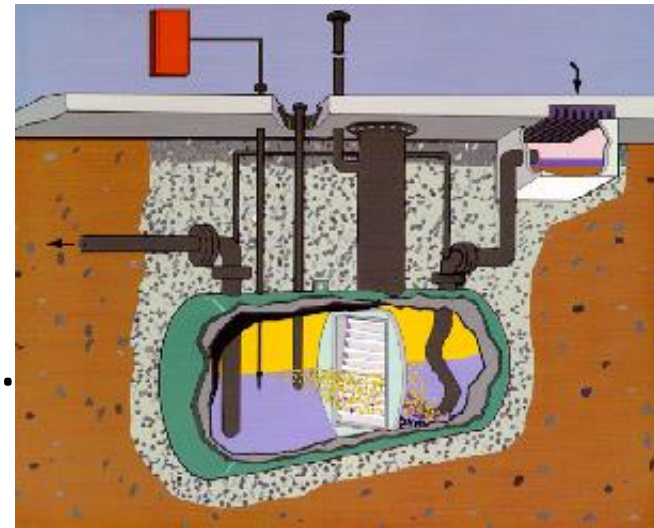


7.8 Operation and Maintenance

Regular Operation and Maintenance is the key to safe & environmentally responsible operation of your storage tank system

-e.g. empty water from secondary containment

The regulations have specific requirements for oil-water separator maintenance and disposal from oil-water separators.





7.9 Release Reporting

Spill reporting requirements **s.41**

- Verbal notification as soon as possible
- Alberta Provincial Spill Line – one number to call

1-800-222-6541

- Written follow-up for spills 100 liters or larger



Contents of spill report **s.41**

- Name of owner and operator
- ID number of the system
- Date of spill or leak (estimated)
- Type and quantity of product(s) released
- Circumstances and mitigations
- Prevention measures taken

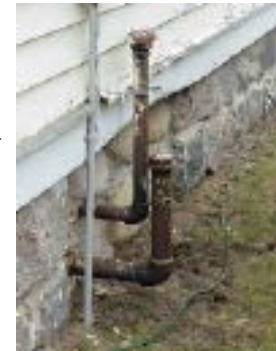




7.10 Withdrawal from Service

Temporary withdrawal s.43

- Either returned to service (<2 yrs) or becomes permanent
- Cathodic protection maintained
- If withdrawn for > 1 year
 - Precision leak detection for USTs or shop-fabricated ASTs
 - Internal inspection for field-erected ASTs
- Label affixed to fill pipe
- Keep record with date of withdrawal





Permanent withdrawal s.44

- Remove and dispose of liquids and sludge
- Vapours purged to less than 10% of lower flammability limit (verify via combustible gas meter)
- No immediate or long-term harmful effects
- Label affixed to fill pipe
- Keep record with date of withdrawal
- Written notification to Minister within 60 days
- Must be removed, except field erected





Removal of system s.45

- Must be completed by approved person or supervised by P.Eng.
- Appropriate records kept





7.11 Record Keeping

ID & New installations

- ID of system **s.28(2)**
 - Information and certification **Schedule 2**
- Design and construction records
 - Installer or supervision **s.33(2)**
 - Design plans, drawings & specifications **s.34(1)**
 - As-built drawings **s.34(2)**

**Keep these for the
life of the tank!**



Operation and maintenance

- Leak tests or inspections of any component
- Free oil and separated solids thicknesses for oil-water separators
- Disposal of free oil and separated solids and liquid discharge from oil-water separators
- Disposal of tank bottom water



Keep for 5 years



Emergency plans and releases

- Up-to-date emergency plan both on-site and available to responsible persons **s.31(1)**
- Spill report for product 100 liters or larger **s.41**

Keep copy of spill report



Temporary withdrawal

- Date of withdrawal **s.44(2)**
- Proof of operation of cathodic protection system **s.43(a)**
- Results of leak tests or inspections on tanks out of service for more than a year



Permanent withdrawal and removal

- Date of withdrawal **s.44(2)**
- Withdrawal by approved person or supervised by P.Eng. **s.44(1)**
- Liquid and sludge disposal **s.44(3)**
- Proof of tank purge **s.44(3)**





8. Tank Operator Training

PTMAA
Petroleum Tank Management
Association of Alberta

Compliance New Installation Forms Guides Industry Contacts About PTMAA

PETROLEUM TANK MANAGEMENT ASSOCIATION OF ALBERTA

Our Mission
To promote the safe management of petroleum storage tanks in Alberta and enhance the protection of human life, health and the environment.

Our Vision
The prevention of releases to the environment with well-equipped and managed storage systems.

Mandate
The PTMAA mandate is set in accordance with various legislative instruments. The Association has an Administration Agreement with the Minister of Alberta Municipal Affairs. This agreement sets the policies which ensure that functions, duties and activities delegated to the PTMAA are appropriately discharged.

Recent News [See All News](#)

Alberta Fire Code Updated
Alberta Municipal Affairs published an updated Fire Code (2014) on...

OPERATOR TRAINING

API TANKS



Online Tank Operator Training Program Available

The PTMAA is pleased to be offering free online training to storage tank operators in Alberta. The 14-module program is intended to improve safety and compliance with storage tank regulations in the province. Any employee that has responsibility for operating underground storage tanks or underground piping connected to aboveground tanks, is encouraged to take the training.

Although there are 14 short modules, not all of the content may apply to your tank responsibilities. For example, there's a module on corrosion protection of steel tanks and piping. Your tank system may be constructed of non-corrosive material like fiberglass so there's no need for you to take that training. The first five and last four modules will apply to all users. The second module will help you understand the equipment you have and what modules apply to you. After each module is a quiz with questions based on the material you've just covered. After all five questions have been answered you can submit your answer sheet and the quiz will be scored. The quiz requires a score of 100% to be complete. All the answers are in the content of the training module so review the material again and re-take the quiz if you don't get 100%. After taking all the modules that apply to you, a Certificate of Completion can be printed. It will list all the modules you've taken and scored 100% on. This training is presently not a mandatory requirement of Alberta's tank regulations but the PTMAA will use your participation to identify training opportunities in its enforcement of the Fire Code. There is no limit for the number of employees registering through each Site Code. This training program is for instructional purposes only. The program does not constitute a complete training package. It is intended for educational purposes only. The training is not a substitute for Alberta Fire Code regulations or any other regulation it does not impose legally binding requirements. No responsibility is accepted by the PTMAA, any of its members or the Government of Alberta regarding its content, preparation or publication or for any statement herein or omission there from which may result in any loss, damage or injury to any party using or consulting this training material. [Take the online training here.](#)



Modules

Active Modules

[1. Introduction](#)

Get an understanding of why this training material is being made available to people responsible for tank systems.

[2. Tank System Layout](#)

Petroleum systems use a variety of equipment to store and dispense fuel. This module gives you an overview of what various underground tank and piping systems look like. It will help in identifying some of the modules you should take during your training sessions.

[3. Fuel Delivery](#)

You don't deliver fuel to your storage tanks but you do have responsibilities to ensure safe bulk transfer.

[4. Containment Sumps](#)

Sumps serve as your window into your underground tank system.

[5. Dispensers](#)

If you dispense fuel into vehicles, aircraft or marine craft this module is important. Your dispenser may tell you about a leaking pipe and it's the most likely place for a fire to occur.

[6. Steel Tanks and Piping Corrosion Protection](#)

If you are responsible for underground steel tanks or underground steel piping, your maintenance duties are greater and the likelihood of a leak is also greater.

[7. Leak Detection for Underground, Single-Walled Tank and Suction Pipe Systems](#)

A leak from a single-walled tank or piping goes straight into the ground which could result in an expensive cleanup.



9. Resources / Contacts

Useful websites

- EC's Storage Tank website for Petroleum and Allied Petroleum Products – <http://www.ec.gc.ca/rs-st/>
- CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products – <http://www.ec.gc.ca/ceparegistry/documents/regs/CCME/toc.cfm>
- Compliance and Enforcement Policy for the *Canadian Environmental Protection Act, 1999* - <http://www.ec.gc.ca/CEPARegistry/documents/policies/candepolicy/toc.cfm>
- National Fire Code of Canada http://www.nationalcodes.ca/nfc/index_e.shtml
- Petroleum Tank Management Association of Alberta <http://www.ptmaa.ab.ca>



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Tanks a lot!

