Proposed Federal Storage Tank Regulations

Spring / Summer 2005

Environment Canada

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What is the Application of these Regulations?

- Aboveground and underground storage tank systems
- Petroleum products and allied petroleum products
- Federal House (s.207(1) of the *Canadian Environmental Protection Act*, 1999)

What is meant by Storage Tanks and Storage Tank Systems?

- Storage Tank
  - closed container
  - capacity >230L
  - designed to be installed in a fixed location
- Storage Tank System
  - one or more commonly connected tanks
  - piping, product transfer apparatus, overfill, spill protection, sumps & dispensing equipment

Definition of Storage Tank System

- Means a tank or commonly connected tanks with all piping, vents, pumps, sumps, diking, overfill protection devices, spill containment devices and oil-water separators. In the case of airports, the system ends at the pump discharge.

What is meant by aboveground and underground storage tanks?

- Aboveground Storage Tank
  - operates at atmospheric pressure
  - all storage tank volume above grade, or
  - all storage tank volume encased within an unfilled secondary containment
- Underground Storage Tank
  - all storage tank volume below grade and completely surrounded by fill

What are petroleum products?

- Petroleum Product
  - single product or mixture ≥ 70% volume hydrocarbon, refined from crude oil, or
  - used oil
  - not propane, paint or solvent

Allied Petroleum Products

1. CGSB 1-GP-124, Thinner for Vinyl Coatings
2. CGSB 1-GP-136, Thinner, Antiblush, for Cellulose Nitrate Lacquer
3. CGSB CAN/CGSB-1.2-89, Boiled Linseed Oil
4. CGSB CAN/CGSB-1.4-92, Petroleum Spirits Thinner
5. CGSB CAN/CGSB-1.70-91, High Solvency Thinner
6. CGSB CAN/CGSB-1.94-89, Xylene Thinner (Xylol)
7. CGSB CAN/CGSB-1.110-91, General Purpose Thinners for Lacquers
8. CGSB CAN/CGSB-164-92, Solvent for Vinyl Pretreatment Coating
9. CGSB CAN/CGSB-1.197-92, Thinner for Epoxy Coatings
10. CGSB 15-GP-50, Acetone, Technical Grade
11. CGSB 15-GP-52, Methyl Ethyl Ketone, Technical Grade
12. CGSB 21-GP-1, Ink Printing; Offset Lithographic (Offset Duplicator)
13. CGSB 3-GP-525, Isopropanol
14. CGSB 3-GP-531, Methanol, Technical Grade
15. CGSB 3-GP-855, Ethylene Glycol, Uninhibited
16. Benzene
17. Toluene
18. Biodiesel
19. E-85
20. Oxygenated gasoline

NOTE: The CGSB standards are established by the Canadian General Standards Board

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What underground storage tank systems are included?

- all

What aboveground storage tank systems are included?

- outdoor heating appliance or emergency generator tanks >2500L
- all other outdoor tanks

What will have to be temporarily removed from service?

- Leaking systems
- Temporary withdrawal lasts less than 2 years

What will have to be permanently removed from service?

- Leaking single-walled underground tanks and piping
- Aboveground tanks installed underground
- Underground tanks installed aboveground
- Partially buried tanks
- Single-walled underground tanks without corrosion protection and leak detection
- Single-walled underground piping ≤75mm without corrosion protection and leak detection
- Single-walled underground piping >75mm without corrosion protection
- Permanent withdrawal is required at 2 years

What are the design requirements?

- Aboveground tanks in accordance with CCME Part 3
- Underground tanks in accordance with CCME Part 4
- Piping in accordance with CCME Part 5

Are there any upgrading requirements?

- Transfer areas must be upgraded to contain spills within 3 years
- Transfer area – connection point between delivery and storage tank systems ≥ 2500L

Are there any leak detection requirements?

- Single-walled underground tanks – 0.38 L/hr 95/5 each year
- Single-walled underground piping – 0.38 L/hr 95/5 each year
- Horizontal aboveground tanks without secondary containment – visual inspection each month
- Vertical aboveground tanks without secondary containment – internal inspection at two years and every 10 years after
- Single-walled aboveground piping – visual inspection each month
- Turbine, transition, dispenser, pump sumps – visual inspection once a year

What is the identification process?

- Identify information to EC
  - Within 1 year for existing tank systems
  - Before first fill for new tank systems
- Receive identification number from EC
- Display identification number on or near tank system

What are the identification requirements?

INFORMATION REQUIRED TO IDENTIFY A STORAGE TANK SYSTEM

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 (street address, 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. Tank's ULC or API Standard Number
12. Type of each tank of the storage tank system
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 product transfer areas
24. Type of leak detection
25. Type of pump

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Are there requirements for suppliers?

- Prohibited to deliver to tanks without identification number displayed
- Must record identification number on invoice
- Must immediately notify operator of spill or leak

What about emergency plans?

- Prepare emergency plans
  - Within 1 year for existing tank systems
  - Before first fill for new tank systems
- Description of product stored
- Possible risk to environment or human health
- Prevention, preparedness, response, recovery
- Identify and train individuals
- List response equipment
- Notification to public
- May use existing plan

What are the installation requirements of new systems?

- If available, provincially licensed installer
- If not available, supervised by a professional engineer
- Tank systems designs are stamped by a professional engineer
- As-built drawings

Are there any operational requirements?

- If there is an oil water separator, then:
  - Free oil and separated solids measurements taken monthly / after incident
  - Oil water level ≤ 50mm
  - Separated solids layer ≤ 150mm
  - No centrifugal pump transfer
- Tank bottom water to go to treatment

Are there spill reporting requirements?

- Verbal notification as soon as possible with written follow up for spills ≥100L
  - Name of operator and owner
  - Date
  - Identification number of system
  - Type and quantity of product stored
  - Circumstance, mitigating measures taken and measures to prevent future incidents

What if the system is withdrawn from service?

Temporarily

- Maintain cathodic protection
- Leak test if out of service more than 1 year

Permanently

- Remove liquids and sludge
- Purge vapours to 10% lower flammability limit
- No harmful effect on environment or human health
- Notify Minister within 60 days
- Keep record

What about record keeping?

- Design and installation records for life
- Operation and maintenance records for 5 years

Next Steps

Canada Gazette 1	Targeted for Fall 2005
60 Day Public Comment Period	Immediately after publication in Canada Gazette 1
Canada Gazette 2 (Coming into Force)	Spring / Summer 2006