

# Requirements for Upgrading Underground Petroleum Storage Tank Systems: Farm Fuel, Heating Oil and Stand-by Petroleum System

The Hazardous Substances and Waste Dangerous Goods Regulations incorporate an upgrading deadline extension until December 31, 1997 for underground farm fuel storage systems at "Class A" (high risk) and "Class B" (moderate risk) sites.

Operators of such underground storage systems are required to upgrade their facilities by December 31, 1997. "Class B" sites can be used until tanks reach a known (documented) age of 17 years old.

Existing underground farm petroleum storage tanks at "Class C" (low risk) sites can be used until a leak is detected, provided monitor wells are installed by December 31, 1997.

## What is a Site Classification?

To make construction requirements under the regulations more fairly reflect each individual situation, a system of site classification has been devised. Saskatchewan Environment staff look at a number of factors, including depth to ground water, soil texture and profiles, distance to wells, surface water and residences. In order for a facility to be considered for "Class C" the owner must supply information about the site on a Reclassification / Classification Information form. Contact the department to find out the classification of your particular site.

## Before You Begin

Before you begin any construction or upgrading, you must get approval from the department. Prior to use the system must also be tested for leaks and as-built drawings must be submitted to the department.

Note: Contaminated soil discovered during upgrading must be removed and dealt with according to department guidelines.

## What are the Requirements?

Underground farm fuel and heating oil / stand-by petroleum storage tank systems locations must be constructed to the following standards:

Tank Construction:

At "Class A" Locations:

Double-wall or contained tanks which meet specifications acceptable to the department.

At "Class B" Locations:

Single-wall tanks which meet the following specifications are acceptable:

- ULC/CAN4-S603 Steel Underground Tanks
- ULC/CAN4-S615 Reinforced Plastic Underground Tanks



Note: All underground steel tanks at "Class A" and "Class B" sites are to be cathodically protected by means of sacrificial anodes or impressed current systems. Tanks should be located 1 metre from a building, 1.5 metres from other property lines and 600 mm from adjacent tanks.

**At "Class C" Locations:**

Tanks can be used as is until a leak is detected. Leaks will be detected by annually checking monitor wells (Figure A) installed in the tank bed. Once a leak is detected the system must be decommissioned or rebuilt in accordance with requirements for new "Class B" sites.

**Piping:**

**At "Class A" Locations:**

Secondary containment piping meeting specifications acceptable to the department.

**At "Class B" Locations:**

Single-wall piping which meets the following specifications is acceptable, however, all steel underground piping requires cathodic protection:

- API-5L or CAN/CSAZ245.1-M, Steel Line Pipe
- ASTM A53, Steel Black and Hot Dipped, Zinc-Coated Welded and Seamless
- ULC-C107, Fibreglass Reinforced Plastic Pipe
- ULC-C107.4-1993, Ducted Flexible Piping

**At "Class C" Locations:**

Piping can be used as is until a leak is detected. Once a leak is detected the system must be decommissioned or rebuilt in accordance with requirements for new "Class B" sites.

**Other Requirements:**

At "Class A" and "Class B" Locations (required by December 31, 1997 or, for "Class B" sites, before the tank is 17 years of age):

- Leak detection (Figure A - Monitor wells installed within the tank bed backfill - 1 more than the number of tanks) either a transfer spill prevention system or overfill protection system.
- Corrosion monitoring terminals for underground steel tanks and piping.
- At "Class A" Farm locations: drip collection tray, in-line verification check valve, corrosion monitoring terminals.

At "Class C" Locations (required by December 31, 1995):

- Leak detection (Figure A - Monitor wells installed within the tank bed backfill - 1 more than the number of tanks)

