



Fuels Safety Program	Ref. No.: FS-202-12	Rev. No.:
Fuel Oil Code Adoption Document Amendment	Date: November 1, 2012	Date:

**IN THE MATTER OF:
THE TECHNICAL STANDARDS AND SAFETY ACT 2000,
S.O. 2000, c. 16 (the "Act")**

- and -

**ONTARIO REGULATION 213/01 (Fuel Oil)
made under the Act**

- and -

**ONTARIO REGULATION 223/01 (Codes and Standards Adopted by Reference)
made under the Act**

Subject: Amendment to the Fuel Oil Code Adoption Document – Double wall tanks, double bottom tanks and spill containment.

The Director of Ontario Regulation 213/01 (Fuel Oil) pursuant to section 5 of Ontario Regulation 223/01 (Codes and Standards Adopted by Reference) hereby provides notice that the Fuel Oil Code Adoption Document published by the Technical Standards & Safety Authority, dated June 1, 2001, as amended, is further amended as follows:

All sections of the Fuel Oil Code Adoption Document dated June 1, 2001 are revoked and replaced with the following:

1. The *CSA Ontario Installation Code for Oil-burning Equipment (Based on CSA B139, with Ontario Amendments) 1st edition / 2006*, published by the Canadian Standards Association, is adopted with the following amendment:

- 1.1 Clause 2.1 is amended by revoking the first paragraph and the following is substituted for it:

Reference publications

This Code refers to the following publications. For the list of approved standards, please refer to the TSSA document, "Titles of Standards and Laboratory Test Report Authorized in the Province of Ontario".

- 1.2 Clause 2.1 is amended by adding the following under the subheading "ULC":

CAN/ULC-S601-07

Standard for Shop Fabricated Steel Aboveground tanks for Flammable and Combustible Liquids

CAN/ULC-S602-07

Aboveground Steel Tanks for Fuel Oil and Lubricating Oil

CAN/ULC-S661-10

Standard for Over fill Protection Devices for Flammable and Combustible Liquid Storage Tanks

1.3 Clause 6.2.2 is revoked and the following is substituted for it:

6.2.2 – Where the static head may exceed 36 kPa (5 psi) gauge at the bottom of the tank, the tank shall be designed by a professional engineer and constructed using a recognized standard, such as CSA B51 or the ASME Boiler and Pressure Vessel Code. Any openings in the tank shall be located above the highest liquid level. The tank shall be provided with emergency venting. The tank design and pressure test report shall be submitted to TSSA for approval.

1.4 Section 6.4 is amended by adding the following:

6.4.12 – Steel tanks shall be provided with

- (a) a double bottom tank construction consisting of the tank shell and double contained heads, with a minimum coverage of 50 mm above the bottom of the tank, and a visual interstitial monitoring device located above the highest level of the tank;
- (b) secondary containment; or
- (c) a minimum 300° integral secondary containment with monitoring of the interstitial space.

1.5 Clause 6.11.1.2 is revoked and the following is substituted for it:

6.11.12.2 – Only underground tanks with double-wall containment and level 2 leak detection shall be installed.

1.6 Clause 6.11.12.3 is revoked and the following substituted for it:

6.11.1.12.3 – The following shall be considered level 2 leak detection:

- (a) Vacuum monitoring of the Interstitial space:
 - 1. A vacuum of at least 35 kPa shall be monitored by a certified leak detection system;
 - 2. A means shall be provided to monitor an electrical short or a disconnection in the vacuum switch;
 - 3. The vacuum monitoring system shall be equipped with a readily accessible and visible vacuum gauge;
 - 4. The system shall be tested and maintained annually through vacuum testing.
- (b) Liquid monitoring of the interstitial space:
 - 1. Certified sensors shall be installed as per the manufacturer's certified installation instructions using the appropriate liquid solution and associated leak detection system;
 - 2. Dual sensors shall be installed at high water level locations; and
 - 3. The system shall be tested and maintained annually through level testing; or
- (c) For double wall underground piping:

1. Certified sensors at the lowest point in the sumps with a certified leak detection system;
2. The sensors shall be tested annually for operation;
3. The sumps shall be hydrostatically tested annually; and
4. The interstitial space of the piping shall be pressure tested annually.

1.7 The “note” in Clause 6.14.2 is revoked.

1.8 Clause 6.15.2 is revoked and the following is substituted for it:

6.15.2 – all tanks installed inside a building, except tanks referred to in 6.15.1, shall have at least one of the following:

- (a) a gauge that meets the requirements of ULC/ORD-C180;
- (b) a device that meets the requirements of ULC/ORD-C58.15 or ULC/ORD-C180, to indicate at the point of filling when the liquid level in the tank has reached a predetermined level.

1.9 Clause 8.3.1.2 is revoked and the following is substituted for it:

8.3.1.2 – All aboveground fill or vent pipes shall be of steel or galvanized construction. Galvanized pipes, except as fill or vent pipes for storage or supply tanks, shall not be used when exposed to heat or for conveying preheated fuel oil.

1.10 Clause 13.2.2.1 is revoked and the following is substituted for it:

13.2.2.1 – For metallic end outlet tanks installed outdoors, test for water at the bottom of the tank. When water is found, remove the water.

1.11 Section 15 is revoked.

2. TSSA-FA-2012, the *TSSA Field Approval Code* (August, 2012), is adopted.

3. The TSSA *Environmental Management Protocol for Fuel Handling Sites in Ontario* (August, 2012) is adopted.

4. This amendment is effective on January 1, 2013.

Any person involved in an activity, process or procedure to which this document applies shall comply with this document.

Dated at Toronto this 1st. day of November, 2012



John Marshall,
Director, Ontario Regulation 213/01, appointed under the *Technical Standards and Safety Act, 2000*

This document has been developed in consultation with the Liquid Fuels Advisory Council and the Fuel Oil Risk Reduction Group.