

Annex K (normative)

Maintenance — Aboveground and underground tanks, and underground piping

Note: *This Annex is a mandatory part of this Code.*

K.1 Aboveground tanks installed outdoors at grade level — Secondary containment

Secondary containment shall be inspected on a regular basis, not less than once per week, to ensure the removal of any accumulated surface water, snow, drums, portable containers, objects, or product that would reduce the fluid volume capacity below that required by Clauses 8.7.3 of CSA B139.1.0 and Clause 7.3.4 a) i) of CSA B139.2. The owner or operator shall maintain a written record of this inspection for the life of the tank.

Where secondary containment is provided with valves that allow the removal of accumulated surface water or product, they shall be closed and locked when not engaged in a supervised draining operation, and the valve positions shall be clearly marked, whether opened or closed.

K.2 Aboveground vertical tanks

K.2.1

An aboveground tank constructed to CAN/ULC-S601 or API 650, and installed prior to the coming into force of this Code shall be internally inspected using the procedure for inspection in API 653. The interval criteria shall be

- a) the fifteenth year of age;
- b) within ten years of its last internal inspection prior to the date of the coming into force of this Code; or
- c) within five years of the date of coming into force of this Code.

After the required interval, inspection shall be in accordance with the requirements of Clause K.2.3.

K.2.2

Aboveground tanks constructed to CAN/ULC-S601, or API 650 shall be given an in-service external inspection at intervals not exceeding five years according to the requirements of API 653.

K.2.3

Aboveground tanks constructed to CAN/ULC-S601 or API 650 and installed at grade level shall be internally inspected at least every ten years, beginning with its fifteenth year of age or in accordance with the interval criteria stated in API 653.

K.2.4

The inspections required by Clauses K.2.1, K.2.2, and K.2.3 shall be documented, and the documentation shall be retained for the life of the tank. The following requirements shall apply:

- a) If the inspection required by Clauses K.2.1, K.2.2, and K.2.3 does not confirm the acceptability of an aboveground tank for continued service, the owner of the tank shall stop using the tank and shall immediately withdraw all product from the tank and notify the distributor; or

- b) if the owner upon further investigation wishes to continue using the tank, the owner shall
- i) take corrective action to ensure the acceptability of the tank for continued service; and
 - ii) have a report prepared by an engineer that confirms the acceptability of the tank for continued service, and submit a copy of the report to the regulatory authority.

K.3 Aboveground and underground tank disuse

Notes:

- 1) In Clause K.3, “not used” means out of service or unsupervised. It is not intended to apply to seasonally used equipment or equipment used for emergency or standby purposes only.
- 2) Any time periods identified in Clause K.3 are effective following the date of adoption of this Code by the authority having jurisdiction.

K.3.1

Where an aboveground or underground tank is not used for more than 180 days, but not exceeding three years, the owner or operator of the tank shall empty the tank and all associated piping of fluid content and make the tank and connected piping vapour-free.

K.3.2

Where an aboveground or underground tank is not used for more than three years, the owner or operator of the tank and the owner of the property on which the tank is located shall remove the tank and all associated piping.

K.4 Underground piping and sumps

K.4.1

Except for an approved self-diagnosing leak detection system, all electronic or mechanical leak-detection equipment shall be inspected and tested for satisfactory operation at least annually, and in accordance with the manufacturer’s instructions.

K.4.2

Sumps shall be internally visually inspected on an annual basis and a report shall be provided to the owner or operator of the tank system, and the leak monitoring detection device shall be tested to ensure its proper operation.

K.4.3

The interstitial space of underground product piping shall be pressure tested annually.

K.4.4

A corrosion protection system that uses sacrificial anodes or an impressed-current system for an underground metallic tank system shall be tested and verified in writing to the owner to be in working order by a corrosion protection tester at intervals not exceeding two years, and the record of testing and certification shall be retained by the owner.

K.4.5

Where it is found that the cathodic protection system cannot be verified as required by Clause K.4.4, the owner shall bring the corrosion protection system to proper working order within 180 days or discontinue handling fuel with that system.