



Arctic-Shield Berm Certification

Federal CAN/ULC-S668-12 Standard Certification with Provincial Requirements

SEI Industries' Arctic-Shield berm liners are now Intertek-certified to meet the requirements of CAN/ULC-S668-12, making SEI the first company to manufacture a berm that meets this new standard.

What is CAN/ULC-S668-12?

[CAN/ULC-S668](#) is the standard for liners used for secondary containment of aboveground flammable and combustible liquid tanks. The standard sets forth minimum requirements for the material properties and performance of liners used for secondary containment under and around the area of tanks that are installed aboveground for the storage of flammable and combustible liquids.



CAN/ULC-S668 replaces ORD-C58.9-1997, a standard listed under section 3.9.2(1) of the [CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products](#). Section 3.9.2(1) reads that "a secondary containment impermeable barrier shall be designed, built and approved in conformance with ORD-C58.9-1997."

In January, 2013, a Note to Reader was added to the CCME Code of Practice stating that ULC had published the First Edition of CAN/ULC-S668 which complements current referenced standards within the CCME Code. The Note to Reader also stated that ULC had already withdrawn ORD-C58.9-1997, effective March 31, 2009.

Compliance with section 3.9.2(1) of the CCME Code of Practice is required as per regulations [SOR/2008-197](#) (Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations) made under [The Canadian Environmental Protection Act, 1999](#)

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When and where must this standard be met?

As per the "[Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations](#)," CAN/ULC-S668-12 must be met on secondary containment for any storage tank system located in Canada in which petroleum products or allied petroleum products are stored and:

- That is operated by a federal department, board or agency, or belongs to Her Majesty in right of Canada.
- That is operated by or belongs to a federal work or undertaking that is:
 - A port authority set out in the schedule to the Canadian Marine Act,
 - An airport within the meaning of the Aeronautics Act, or
 - A railway;
- That is located on federal land or aboriginal land; or
- That is operated by a Crown corporation

When do these regulations not apply?

- Storage tank systems located in a building that provides secondary containment equivalent to a maximum hydraulic conductivity of 1×10^{-6} cm/s, on a continuous basis;
- Storage tank systems containing unprocessed petroleum products resulting from or used during oil or natural gas exploration
- Storage tank systems that have aboveground tanks in which the aggregate capacity of the tanks is 2 500 L or less and the systems are connected to a heating appliance or emergency generator
- Storage tank systems regulated under the National Energy Board Act or the Canada Oil and Gas Operations Act

Provincial Requirements

In addition to the federal regulations described above, a number of provincial regulations and codes also incorporate the CCME Code requirements and by extension, the CAN/ULC-S668 standard.

British Columbia – There are currently no specific provincial regulations to govern petroleum storage tanks. The National Fire Code of Canada specifies that any combustible or flammable product must be contained by a dike system.

Alberta – Storage tank systems are regulated through the Alberta Fire Code. Secondary containment is required for all aboveground storage tanks in Alberta.

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Saskatchewan – Operators shall provide an appropriate secondary containment system for aboveground storage tanks with an internal volume equal to or greater than 5m³ (5000L) for any of the following products:

- Refined Product: Refined chemical product such as acids, amine, base, diesel, gasoline, glycol, methanol and solvents.
- Produced Products: Upstream oil and gas products (unrefined), byproducts, wastes and materials contaminated with produced products. They include, but not limited to, crude oil, condensate, drilling fluids, drilling waste, frac fluids, frac sands, liquid petroleum gas, oily byproduct, produced water, produced sand and any other material contaminated with produced products.

[Saskatchewan Upstream Petroleum Industry Storage Standards, 2015](#)

Manitoba – Aboveground tanks must have approved secondary containment as per Technical Bulletin PSF-003 Regulatory Requirements for Aboveground Storage Tanks and Storage Tank Systems.

https://www.gov.mb.ca/conservation/envprograms/psp/pdf/technical_bulletin_fsp003.pdf

In addition, Manitoba's [Storage & Handling of Petroleum Products and Allied Petroleum Regulations \(MR 188 2001\)](#) were amended in 2011. The current version incorporates by reference the requirements of the [CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products](#).

Ontario – As per [Ontario Fire Code](#), the membrane of a secondary containment shall conform to ULC/ORD-C58.9, "Secondary Containment Liners for Underground and Aboveground Flammable and Combustible Liquid Tanks". This reference is obsolete as ULC has already withdrawn ORD-C58.9 and replaced it with CAN/ULC-S668-12. Ontario Liquid Fuels Handling Code is currently being amended and the new version, which is expected to be released in 2016, formally refers to CAN/ULC-S668-12.

Quebec – An aboveground tank installed after the coming into force of the [act respecting petroleum products and equipment](#) shall be equipped with a dike to form a diked area around the aboveground tank or tank farm holding 5,000 liters or more.

Newfoundland and Labrador – Aboveground storage tank systems in Newfoundland and Labrador are regulated through the [Storage and Handling of Gasoline and Associated Products Regulations](#). According to the regulations, aboveground storage tanks shall be surrounded by a dyke.

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PEI – No person shall install an aboveground storage tank with a capacity of 2300 litres or greater without a secondary containment system. Section E-9 Part 17 – <http://www.gov.pe.ca/law/regulations/pdf/E&09-13.pdf>

Nova Scotia – Nova Scotia's [Petroleum Management Regulations](#) do not contain any specific requirements for secondary containment.

[Nova Scotia Standards for Construction and Installation for Petroleum Storage Tank Systems](#) state that all aboveground storage systems shall have secondary containment. Since the document was last amended in 2005, it refers to ULC/ORD-C58.9, which has been withdrawn in 2009 and replaced with CAN/ULC-S668 in 2012.

New Brunswick – Single-walled storage tanks must be installed in an impervious secondary containment with a minimum holding capacity of 110%. <http://www2.gnb.ca/content/dam/gnb/Departments/10/pdf/Agriculture/PetroleumStorage.pdf>

[Petroleum Product Storage and Handling Regulation NB Reg. 87-97](#) requires that the area surrounding a storage tank or group of storage tanks shall be designed to accommodate accidental spillage by surrounding the storage tank or tanks with a dike.

Nunavut – No information on secondary containment requirements found.

Northwest Territories – No information on secondary containment requirements found.

Yukon – [Yukon Storage Tanks Regulations](#) require the issuance of a permit from the Minister for the construction, installation and operation of aboveground and underground storage tank systems. The regulations also require the Minister to take into account the [CCME Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products](#) when considering an application for a permit.

Disclaimer: The information provided is SEI's interpretation of the legislative, regulatory and policy framework. This document should not be used as a legal advice. SEI recommends that clients confirm local requirements with the authority having jurisdiction.

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