

Technical Bulletin PSF-001
May 2010

SPILL CONTAINMENT and RUNOFF COLLECTION
at PRODUCT TRANSFER AREAS
for Petroleum Products and Allied Petroleum Products
for Aboveground Storage Tanks Systems 5000 Litres or Larger

Requirement

For petroleum storage facilities with aboveground tanks 5000L or greater, Manitoba Sustainable Development requires that spills and overfills from *product transfer areas* shall be **contained, treated and disposed of**. In the absence of spill containment and runoff collection, a facility can not receive fuel deliveries.

This technical bulletin provides acceptable options to meet this requirement for:

- a) Petroleum storage facilities having an aggregate capacity of 5000 L to 50,000 L, and
- b) Petroleum storage facilities having an aggregate capacity of greater than 50,000 L.

Definition

Product transfer area means the area around the connection point between a delivery truck, railcar, or vessel and a storage tank system with a capacity of 5000 L or more.

Background

Manitoba Regulation MR 188/2001 *Storage and Handling of Petroleum Products and Allied Products Regulation* (Petroleum Storage Regulation) under *The Dangerous Goods Handling and Transportation Act* specifies standards for petroleum storage and handling:

- **For existing petroleum storage facilities** a schedule of required upgrades, to allow the facility to remain in compliance with the regulation has been in place since 2004. In 2008 an amendment to the *Upgrade Schedule 3, Aboveground Single & Double Wall Storage Tank Systems* extended the deadline for the upgrade requirement for spill containment and runoff collection at the product transfer area from December 31, 2008 to December 31, 2010. A revised upgrade schedule was distributed. Owners and operators were informed that the Department would provide further direction on its requirements for spill containment and runoff collection.
- **All petroleum storage facilities constructed after December 31, 2010** will be required to include a product transfer area that will allow any spill or overfill to be contained, treated and disposed of.

Options

a) Petroleum storage facilities having an aggregate capacity of 5000 L to 50,000 L

- Must provide spill containment at all connection points during a fuel delivery.
- Spill containment may be provided in the form of spill containment basins (figure 1), or drive-through berms (figure 2). Spill containment basins, also known as tank containment and containment pools, are designed to collect small spills and leaks under vehicles. Spill containment basins can also be used to collect small leaks and spills under hose valves and tank connections. Drive-through berms, also known as containment berm or spill berms are used to collect runoff or contain spills from vehicles and equipment.
- May use any of the options outlined below in section in **b)**.

Figure 1. Examples of spill containment basins.



Figure 2. Examples of drive-through berms.



b) Petroleum storage facilities having an aggregate capacity of greater than 50,000 L require one of the following:

- Construction of a concrete pad sloped in such a way that water and fuel is directed to an oil-water separator or a sump.
- Construction of a concrete pad that contains spills or overfills.
- Construction and maintenance of an impermeable, hydrocarbon resistant, non-combustible barrier that contains spills or overfills. Testing must be undertaken to verify that the impermeable barrier has a hydraulic conductivity of 1×10^{-6} cm/s. The barrier must be covered with a hydrocarbon resistant, non-combustible material of such nature and thickness that it will not fail when exposed to vehicular traffic.
- Proposed solutions other than those outlined here. Proposals shall be submitted to Manitoba Sustainable Development for approval by the director.

Other Useful information

Section 20 (a) of the Petroleum Storage Regulation allows for construction or alteration work relating to a storage tank system, where the work does not require the technical expertise of a licensed petroleum technician (LPT), to be completed by someone other than an LPT. This would be the case for the construction of **spill containment and runoff collection** provided the work did not involve alterations to the tank system.

Useful Links

Manitoba Sustainable Development's Petroleum Storage Program web page:

<http://www.gov.mb.ca/sd/envprograms/psp/index.html>

Canadian Council of the Ministers of the Environment web page:

<http://www.ccme.ca/publications/>

For more information, please contact:

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