

Technical Bulletin PSF-004  
March 2015

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**IMPACT PROTECTION REQUIREMENTS**  
**for**  
**Aboveground Storage Tanks Systems**

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**Requirement**

*Storage tank systems* located aboveground shall be *protected* from physical damage due to impact. This technical bulletin provides acceptable options to meet this requirement.

**Definitions**

*Protected* means having impact, projectile, and fire resistance qualities for an *aboveground storage tank system*.

*Storage tank system* means a system for the storage and dispensing of petroleum or allied petroleum product and is not limited to storage tanks, associated piping, vents, pumps, and dispensing equipment.

**Background**

Manitoba Regulation MR 188/2001 Storage and Handling of Petroleum Products and Allied Products Regulation under The Dangerous Goods Handling and Transportation Act requires that *storage tank systems* be protected from impact.

**Options**

1. Concrete Filled Bollards

- 15 cm (6") concrete filled schedule 80 steel pipe
- 100 cm (40") below grade (minimum)
- 75 cm (30") above grade (minimum)
- 140 cm (55") center to centre, or maximum of 125 cm (49") between posts
- 1.5 m (66") from tank
  - a distance of 120 cm (48") will be accepted where 1.5 m is not practical

2. Jersey Barriers

- minimum of 900 kg (2000 lbs)
- 60 cm (24") wide at base
- 80 cm (36") high
- 15 cm (6") wide at top
- anchored with #6 re-bar, 60 cm (24") long
- maximum of 125 cm (49") between barriers
- 1.5 m (66") from tank
  - a distance of 120 cm (48") will be accepted where 1.5 m is not practical

Proposed solutions other than those outlined above shall be submitted to Manitoba Sustainable Development for approval by the Director.

### **Useful Links**

Manitoba Sustainable Development Petroleum Storage Program web page:  
<http://www.gov.mb.ca/sd/envprograms/psp/index.html>

Canadian Council of Ministers of the Environment web page:  
<http://www.ccme.ca/publications/>

### **For more information, please contact:**

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Or your Regional Environment Officer.