

Secondary Containment Systems

The design processes utilized in the development of the Meridian Secondary Containment Systems are as follows:

- The Meridian Secondary Containment Systems were designed to be in compliance with relevant codes, most notably the National Building Code (NBC – 2010) and the National Fire Code (NFC – 2010). Primarily, Part 4 of the NBC governed all loading conditions and Section 4.3.7 of the NFC provided the fire related requirements for secondary containment.
- Other jurisdictional requirements, such as the Alberta Energy Regulator's Directive 055: Storage Requirements for the Upstream Petroleum Industry (AER Directive 055 – 2001), were also consulted and complied with.
- The Meridian Secondary Containment Systems designs are also in compliance with the relevant requirements of NFPA 30 – Flammable and Combustible Liquids Code (NFPA 30 – 2012), primarily Section 22.11 which deals with the control of spills from aboveground storage tanks.
- The Meridian Secondary Containment Systems have been installed in a number of jurisdictions and to date have satisfactorily met the requirements of the local inspection authorities. It is the local authority that ultimately decides on the acceptability of a product within their jurisdiction. They must be part of the consultation process.
- The Meridian Secondary Containment System is a modular system and can be assembled in a variety of ways to suit a variety of applications. Code compliance usually requires site design requirements, system size requirements, segregation requirements, clearances, procedural issues, etc. The Meridian Secondary Containment Systems can be configured to accommodate these requirements. Such considerations must form part of the original system design.
- The Meridian Secondary Containment Systems are intended for secondary containment only. The erection manual provides “engineered” procedures to ensure the integrity of the final installation.

Secondary Containment System Component Specifications

Galvanized Materials

- 15 Ga. and heavier – ASTM A653 Grade 50 (50,000 psi minimum yield strength, 65,000 psi minimum tensile strength)
- Galvanized coating to ASTM A653
- Corrugation - 5.22” pitch x 0.48” deep

Side Panel Options

- 12 or 15 gauge
- Long panels – 113.375” bolted coverage
- Medium panels – 75.625” bolted coverage

- Short panels – 56.688” bolted coverage
- Panel heights – 17”, 24”, 34”, 47”

Corner Panel Options

- Square (90 degree) corners:
 - 12 gauge
 - Panel heights – 17”, 24”, 34”, 47”
- Radius corner panels:
 - 15 gauge
 - Long panels – 113.375” bolted coverage
 - Medium panels – 75.625” bolted coverage
 - Short panels – 56.688” bolted coverage
 - Panel heights – 17”, 24”, 34”, 47”

Liner Clamp Options

- Top mount
- Base mount

Panel Bracing

- Ground Zero Panel Bracing:
 - Panel heights – 17”, 24”, 34”, 47”
 - 17” & 24” pads / braces -12 gauge
 - 34” & 47” pads / braces – 10 gauge
 - Straight side panel brace locations:
 - Start measurements on the left from the corner or oblong end (where curved panel meets straight panel) to the first vertical brace location. Adjustments should be made so that subsequent braces do not interfere with a wall sheet panel vertical seam, always erring on the conservative side. The spacing from the last brace to the end should be less than or equal to the spacing at the start.
 - Panel height 34” with $SG \leq 1.0$
 - Start: 38” from corner/end
 - ZGD brace spacing: 76”
 - Panel height 47” with $SG \leq 1.0$
 - Start: 28.5” from corner/end
 - ZGD brace spacing: 57” Panel heights 17” or 24” with $SG \leq 1.4$
 - Start: 38” from corner/end
 - ZGD brace spacing: 76”
 - Panel height 34” with $1.0 < SG \leq 1.4$
 - Start: 28.5” from corner/end
 - ZGD brace spacing: 57”
 - Panel height 47” with $1.0 < SG \leq 1.4$
 - Start: 19” from corner/end
 - ZGD brace spacing: 38”

Hardware

- All structural bolts are Gr. 8.2 as per SAE J429
- Bolts are JS1000 zinc plated