

# How Highland Oil/Water Separators Can Be Used To Meet SPCC Requirements

Highland patented oil/water separators greatly reduce the level of oil, grease, and oily coated solids discharged by petroleum storage facilities and transportation related facilities with vehicle maintenance, fueling, and washing facilities. The separators are equipped with Corella™ inclined parallel plate coalescers that combines the features of both a flat plate coalescer and a corrugated plate coalescer into a new “self-cleaning” design that performs better than traditional plate separators

Highland’s patented oil/water separators help many petroleum, industrial, commercial, military, and municipal facilities comply with the EPA’s regulations for the proper treatment and discharge of contaminated storm water runoff. They help these facilities comply with their NPDES permit and satisfy SPCC requirements for spill control and secondary containment.

When referring to the EPA’s Guidance for Regional Inspectors ( <http://www.epa.gov/oilspill/guidance.htm> ), we can cite four specific instances where oil/water separators can be applied to meet SPCC secondary containment requirements. They are:

1. “Section 112.7(c) requires “appropriate containment and/or diversionary structures or equipment to prevent a discharge as described in §112.1(b).” An oil/water separator may be used to satisfy this requirement for onshore or offshore facilities. This separator must be constructed to contain oil and prevent an escape of oil from the system prior to cleanup in order to comply with the secondary containment provision for which it is intended (§112.7(c)). A description explaining how an oil/water separator complies with secondary containment provisions, and how it is operated and maintained, should be included in the SPCC Plan. BMPs or O&M manuals which detail operation and maintenance procedures for oil/water separators used specifically for secondary containment may be referenced in the SPCC Plan and maintained separately.”
2. “Section 112.7(h)(1) requires “a quick drainage system” for areas where a tank car or tank truck loading or unloading rack is present. An oil/water separator may be used as part of a quick drainage system to meet this requirement. This containment system must hold at least the maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility (§112.7(h)(1)).”
3. “Sections 112.8(b), 112.9(b), and 112.12(b) set forth design specifications for drainage systems associated with secondary containment at onshore facilities. Environmentally equivalent measures can be used to satisfy these requirements... In order to comply with secondary containment requirements, facilities might use ponds, lagoons, or catchment basins as part of the design criteria for facility drainage systems. However, an oil/water separator might serve as an environmentally equivalent measure to the ponds, lagoons, or catchment basins required by §§112.8(b)(3) and 112.12(b)(3). In this instance, EPA recommends that the oil/water separator be designed to handle the flow rate and volume of oil and water expected to be generated by facility operations. When certifying a facility’s SPCC Plan, the PE must verify that the oil/water separator is adequately designed, maintained, and operated to provide environmentally equivalent protection (in accordance with §112.7(a)(2)) under the potential

discharge scenarios it is aimed to address, in order to comply with the corresponding secondary containment provision.

4. Sections 112.8(c)(2), 112.8(c)(11), 112.12(c)(2), and 112.12(c)(11) require that all bulk storage containers be provided with secondary containment for “the entire capacity of the largest single container and sufficient freeboard to contain precipitation.” An oil/water separator may be used for this purpose, but it *must be appropriately sized* to meet the requirements of the rule provision for which it is intended to comply. The oil/water separator must be capable of handling both the oil and precipitation that come into the separator from the general drainage area, and from any accidental discharge from the largest bulk storage container located within the drainage area for which the separator provides secondary containment (§112.8(c)(2), 112.8(c)(11), 112.12(c)(2), and 112.12(c)(11)). Good engineering practice would suggest that the use of oil/water separators for the specific secondary containment provisions be on a very limited basis and typically with smaller capacity container storage areas (e.g., drum storage area).

The EPA document states that “the capacity of an oil/water separator used to meet secondary containment requirements does not count toward a facility’s overall storage capacity. Any volume of oil that would flow into the oil/water separator would come from another source within the drainage area that is already generally counted in the facility storage capacity determination. Containers used to store recovered oil after oil/water separation, however, represent additional oil storage and count toward a facility’s total storage capacity. These include slop tanks or other containers used to store waste oil.”

Further, the EPA document establishes that “the SPCC rule does not require redundant secondary containment around oil/water separators used for secondary containment (i.e., tertiary containment is not required).”

To read how oil/water separators are applied to a sample SPCC Plan, go to <http://www.epa.gov/oilspill/guidance.htm#Content> and get Appendix D. This document is intended to provide examples and illustrations of how a sample bulk storage facility could address a variety of scenarios involving oil/water separators in its SPCC Plan.