

Canadian Environmental Technology Verification (ETV) Information Bulletin

Bulletin Number: CETV 2018-09-0001

Subject: Modifications to Section 5.2 “Test Conditions -- Light Liquid Re-entrainment Simulation Test” of the CETV Procedure for Laboratory Testing of Oil Grit Separators

Date: September 18, 2018

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Approved by: Toronto and Region Conservation Authority and GLOBE Performance Solutions (GPS)

Overview

The CETV Procedure for Laboratory Testing of Oil Grit Separators Section 5.0 specifies how to test for Light Liquid Re-entrainment. Running the test has revealed that making some clarifications in Section 5.2 would help make set-up easier and more consistent.

This bulletin proposes to change the name of the test to “*Light Liquid Retention Simulation Test*” and to replace the second paragraph of section 5.2:

“The MTD shall be preloaded with a known volume and mass of plastic beads to a depth of 5 cm over an area equivalent to the MTD sedimentation area, also referred to in this document as the Effective Treatment Area. Thus smaller units shall use a smaller volume of plastic beads than larger units; however, the depth of plastic beads shall remain identical. If the MTD separates oil over an area smaller than its sedimentation area, the depth of plastic beads preloaded in the smaller oil separation area shall exceed 5 cm, since the preloaded volume of plastic beads shall be based on a 5 cm depth over the sedimentation area. This ensures that MTDs with equal sedimentation area are preloaded with equal volumes of plastic beads, representing oil spill capture of identical volume. MTDs with a maximum light liquid storage depth of less than 5 cm over the sedimentation area shall preload with plastic beads to a depth equal to the maximum light liquid storage depth.”

With the following:

“The MTD shall be preloaded with a volume of plastic beads sufficient to fill the effective treatment area to a depth of 5 cm. This volume shall be referred to as the Oil Retention Volume (ORV). Since the ORV is based on treatment area and not spill capture area, for devices in which the spill capture zone area is different than the effective treatment area the depth will be different than 5 cm. For convenience it is permitted to determine the bulk density of the beads using a 1 L sample and then work with the mass equivalent of the required volume.

Pre-loading the beads shall be accomplished by filling the unit to the static water level, then adding beads while water flows through the unit. Following the pre-load, flow to the OGS will be stopped for at least 5 minutes to allow the device to reach a dry-state equilibrium. Any beads that do not make their way into the spill capture zone and any beads that pass into the effluent during pre-loading shall be captured and their volume measured and recorded. This volume is the uncaptured volume.

There shall be no additional flow through the unit prior to the commencement of testing, as described in section 5.3.”

In addition, this bulletin adds the following text to the end of Section 5.3.2:

“If the cumulative volume washed out of the unit for the entire test plus the uncaptured volume recorded in Section 5.2 totals >15% of the ORV then the device may not be designated as a spill capture device.

Vendors of spill capture devices wishing to claim a larger ORV may repeat the test with a larger volume of beads.”