



Date: June 27, 2017  
To: Tom Best, MHF  
CC: Jeff Willman, EnergySolutions RSOs/RPMs  
From: Mark Ledoux, CRSO  
RE: EnergySolutions Unrestricted Release Criteria for Return of MHF Containers

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This document provides unrestricted release criteria for returned containers that MHF will use as guidance in contract negotiations with MHF customers.

Since MHF does not have a radioactive material license, all leased containers to customers that transport radioactive material must be released from license control or other regulatory authority (i.e. unrestricted use) before returning to MHF after the lease is over unless otherwise approved by MHF. This requires that a radioactive-licensed facility, using their license criteria for unrestricted use (i.e. NRC RG-1.86 or equivalent); release the container depending on the isotopic mix of fixed and removable contamination remaining on the container.

Since most of these containers have been in service for an extended period of time with many different isotopic mixes and physical and chemical forms of the radioactive material within, it is difficult to determine the actual isotopic mixes on the container, especially the hard-to-detect and alpha-emitters. Therefore, at a minimum, EnergySolutions requests that returned containers be surveyed and released to the following criteria unless there are quantitative data or specific license conditions that support less restrictive release criteria. These criteria provide EnergySolutions with a reasonable assurance of the radiological condition of unrestricted containers.

Fixed contamination:

Beta-gamma:  $\leq 1,000$  dpm/100 cm<sup>2</sup>

Alpha:  $\leq 100$  dpm/100 cm<sup>2</sup>

Removable contamination:

Beta-gamma:  $\leq 200$  dpm/100 cm<sup>2</sup>

Alpha:  $\leq 20$  dpm/100 cm<sup>2</sup>

Also recommend that the container surveys be reviewed prior to return of containers or that MHF receive a certification statement from the RSO certifying that the containers have been unrestricted released.