

National Aeronautics and
Space Administration

John H. Glenn Research Center
Lewis Field
Cleveland, OH 44135-3191



May 15, 2013

Reply to Attn of: QSH

U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Subject: Update to License #34-00507-16, Docket #030-05626

The NASA Glenn Research Center (GRC) would like to add the following items to its allowable inventory of radioactive materials:

Manufacturer: Eckert and Ziegler - Analytics (Atlanta, GA)

Part Number: Gamma Calibration Standards with customer-specific isotope mixture

Isotope and Activity: Each standard to contain a total activity of 0.72 μCi (26.64 kBq), whose approximate makeup would be as follows:

0.50 μCi (18.5 kBq) Europium-152

0.06 μCi (2.22 kBq) Cesium-137

0.16 μCi (5.92 kBq) Americium-241

Quantity: 10

Physical Description: The isotopic mixture will be distributed throughout solid matrices or onto surfaces so as to represent various counting geometries commonly analyzed by gamma spectroscopy systems. These will include:

250 mL marinelli beaker containing sand matrix

133N GA-MA beaker (1 liter) containing polyester matrix

125mL Nalgene jar containing sand matrix

70mm diameter x 12mm thick right cylinder of polyester matrix

47mm diameter glass fiber filter in tape

The standards will be used with gamma spectroscopy systems which support research and development activities as described in 10 CFR 30.4 as well as decommissioning tasks at the Center.

Distributor: Radiological and Environmental Sciences Laboratory (RESL) (U.S. Department of Energy, Idaho Operations Office, Idaho Falls, ID)

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Part Number: Mixed Analyte Performance Evaluation Program (MAPEP) Samples designated as MaW (radiological mixed analyte – water), MaS (radiological mixed analyte – soil), RdF (radiological air filter)

Isotope and Activity: Each sample will contain a mixture of multiple isotopes as shown below. Being part of an environmental laboratory testing program, the samples typically contain very low quantities of radioactivity. Per RESL, the MAPEP standards are not classified as being radioactive per Department of Transportation regulations.

SAMPLE TYPE	Americium-241	Cobalt-57	Cobalt-60	Cesium-134	Cesium-137	Hydrogen-3	Iron-55	Manganese-54	Nickel-63	Potassium-40	Plutonium-238	Plutonium-239	Strontium-90	Technetium-99	Uranium-234	Uranium-238	Zinc-65
MaW	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MaW	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X
RdF	X	X	X	X	X	-	-	X	-	X	X	X	X	-	X	X	X

Quantity: 48

Physical Description: The isotopic mixture will be distributed throughout the sample matrices as described below:

MaW – Sample contains approximately 1 liter of 5 percent (v/v) nitric acid in water in a screw-top plastic bottle

MaS – Sample contains approximately 300 grams of soil in a screw-top plastic bottle

RdF – Sample contains a 47-mm glass fiber air filter in a Ziploc-type plastic bag

The samples will be used with gamma spectroscopy systems which support decommissioning tasks at the Center.

Should you have questions or require additional information, you may contact Mr. Christopher J. Blasio, Radiation Safety Officer at (216) 433-6520.



Osvaldo Rivera
Chief, Safety and Health Division

National Aeronautics and
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