



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

August 5, 2015

Mr. Bryan Bower, Director
Department of Energy
West Valley Demonstration Project
10282 Rock Springs Road
West Valley, NY 14171-9799

SUBJECT: SPECIAL PACKAGE AUTHORIZATION FOR THE WEST VALLEY MELTER
TRANSPORTATION PACKAGE (DOCKET NUMBER 71-9797)

Dear Mr. Bower:

By letter dated October 16, 2014, and supplemented April 16, 2015, the U.S. Department of Energy (DOE) West Valley Demonstration Project (WVDP) submitted an application for a Special Package Authorization for a transportation package for the West Valley Melter Package (WVMP). The WVMP will be transported from the West Valley site to the Waste Control Specialist (WCS) disposal site in Texas. The staff has reviewed the application, as supplemented, and determined that a Special Package Approval is acceptable for a one-time only shipment of the WVMP under the provisions of Title 10 of the *Code of Federal Regulations* (CFR) Part 71. The results of the staff's review are documented in the enclosed safety evaluation report.

The melter was used in the WVDP vitrification facility to process high level waste into an homogenized glass form; after shutdown, electrodes were cut and shield plugs installed. The exterior surface of the melter was coated with a polymeric system to ensure fixation of the surface contamination. The WVMP is a rectangular shaped package, encased in low density cellular concrete, 15'9" long by 12'7" wide by 12'6.5" high, with eight shock absorbers and an impact limiter. The maximum fully loaded weight is approximately 390,800 lbs.

The maximum quantity of material is greater than a Type A quantity of radioactive material, i.e., about 215 A₂ with a total activity of 3,554 curies from Cesium (Cs-137) and Strontium (Sr-90) and their daughter products. There are approximately 82 grams of fissile material within the WVMP; however, the WVMP meets the exemption standards in 10 CFR 71.15.

In addition to the requirements of Subpart G of 10 CFR Part 71, the following conditions apply to the Special Package Authorization under 71.41(d):

- (1) The package is a one-time only exclusive use shipment.
- (2) The package is constructed and assembled in accordance with Drawing Nos. 4005-DW-001, Revision 7, sheets 1-8; and R-R3-A-00063, Revision 1.
- (3) The package must be conspicuously and durably marked with the trefoil symbol and the following information: Type B(U), Model No. 9797, Package Identification Number USA/9797/B(U)-96.
- (4) The package authorized by this letter must be transported on a motor vehicle or on a railroad car assigned for the sole use of the shipper.

- (5) The package must be prepared for shipment and transported in accordance with Chapter 7 of the application.
- (6) The package must be acceptance tested in accordance with Chapter 8 of the application.
- (7) Transport of the package may only be initiated if the ambient temperature all along the transport routes, for both heavy haul truck and rail, is greater than 15°F. The ambient temperature will be monitored throughout the transport process and transportation will be stopped should the temperature fall below 15°F.
- (8) The railcar attachment plates on the bottom of the package shall not be used for lifting or tie-down of the package for transport and shall be conspicuously marked "Not for Lifting or Tie-Down."
- (9) Prior to shipment, package dose rates shall be measured at all locations necessary to demonstrate compliance with 10 CFR 71.47. The measurement procedure must be comprehensive in nature and cover the entire package surface and projected surfaces at 1 and 2 meters as required by 10 CFR 71.47(b)(2), or (b)(3).
- (10) The Special Package Authorization will expire on August 31, 2020.

The WVMP package that is authorized by this Special Package Authorization is hereby approved for use under the general license provisions of 10 CFR Part 71.

If you have any questions regarding this authorization, please contact Pierre Saverot of my staff at (301) 415-7505.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Michele Sampson, Chief
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9797
TAC No. L24959

Enclosure: Safety Evaluation Report

cc w/encl: R. Boyle, Department of Transportation
J. Shuler, Department of Energy c/o L. F. Gelder

- (5) The package must be prepared for shipment and transported in accordance with Chapter 7 of the application.
- (6) The package must be acceptance tested in accordance with Chapter 8 of the application.
- (7) Transport of the package may only be initiated if the ambient temperature all along the transport routes, for both heavy haul truck and rail, is greater than 15°F. The ambient temperature will be monitored throughout the transport process and transportation will be stopped should the temperature fall below 15°F.
- (8) The railcar attachment plates on the bottom of the package shall not be used for lifting or tie-down of the package for transport and shall be conspicuously marked "Not for Lifting or Tie-Down."
- (9) Prior to shipment, package dose rates shall be measured at all locations necessary to demonstrate compliance with 10 CFR 71.47. The measurement procedure must be comprehensive in nature and cover the entire package surface and projected surfaces at 1 and 2 meters as required by 10 CFR 71.47(b)(2), or (b)(3).
- (10) The Special Package Authorization will expire on August 31, 2020.

The WVMP package that is authorized by this Special Package Authorization is hereby approved for use under the general license provisions of 10 CFR Part 71.

If you have any questions regarding this authorization, please contact Pierre Saverot of my staff at (301) 415-7505.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION
/RA/

Michele Sampson, Chief
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9797

TAC No. L24959

Enclosure: Safety Evaluation Report

cc w/encl: R. Boyle, Department of Transportation
J. Shuler, Department of Energy c/o L. F. Gelder

DISTRIBUTION:

G:\SFST\Saverot\WVDPMelter\Special Authorization.doc; SER.doc

ADAMS ML:

Closes TAC No. L24959

ADAMS Package: ML15222A856 Letter: ML15222A875 SER: ML15222A947

OFC	SFM	E	SFM	SFM	SFM	SFM	SFM
NAME	PSaverot		SEverard	Jlreland	JSolis	CHrabal	
DATE	06/29/2015		06/30/2015	06/30/2015	07/14/2015	06/30/2015	
OFC	SFM		SFM	SFM	SFM	C	SFM
NAME			CAraguas	MRahimi	MDeBose	MSampson	
DATE			07/10/2015	07/06/2015	07/08/2015	08/05/2015	