

January 16, 2009

Donald R. Krause, Manager  
Regulatory Compliance & EHS  
GE Hitachi Nuclear Energy, LLC  
Vallecitos Nuclear Center  
6705 Vallecitos Rd.  
Sunsol, CA 94586

SUBJECT: AUTHORIZATION FOR LIMITED SHIPMENTS IN THE MODEL  
NO. 1500 PACKAGE, CERTIFICATE OF COMPLIANCE NO. 5939

Dear Mr. Krause:

As requested by your application dated September 29, 2008, as supplemented by your email dated January 16, 2009, and pursuant to 10 CFR Part 71, Certificate of Compliance No. 5939 for the Model No. 1500 package is amended to authorize the following limited shipments, subject to the conditions listed below.

1. The packaging is constructed in accordance with General Electric Company Drawing Nos. 129D4748, Rev. 7; 129D4749, Rev. 5; and 129D4750, Rev. 9. An optional canister insert is constructed in accordance with the following Chem-Nuclear Systems, Inc., Drawing Nos., supplement dated March 1, 1993: C-110-D-48019-001, Rev. D; and C-110-A-48019-002, Rev. C.
2. Contents
  - (a) Type and form of material  

Byproduct material and special nuclear material meeting the requirements of special form radioactive material and antimony pins encased in stainless steel, or byproduct material as  $^{90}\text{SrF}_2$  or  $^{137}\text{CsCl}$  capsules meeting Condition No. 6 in Certificate of Compliance No. 5939, or solid nonfissile irradiated metal hardware and reactor control rods (blades), or stainless steel encapsulated solid metal Co-60 sources, or byproduct material as  $^{137}\text{CsCl}$  capsules meeting Condition No. 7 in Certificate of Compliance No. 5939.
  - (b) Maximum quantity of material per package  

As specified in Certificate of Compliance No. 5939.
3. Shipment will be by closed-transport or flat-bed transport vehicle, as exclusive use.
4. Eight shipments will be to J. L. Shepherd and Associates, San Fernando, California.

D. Krause

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5. Package inspections are required before each use of the 1500.
6. Authorization is for a maximum of eight shipments, and expires December 31, 2010.

All other conditions of Certificate of Compliance No. 5939 remain the same. GE-Hitachi has been issued Quality Assurance Program Approval for Radioactive Material Packages No. 0170 under the provisions of 10 CFR Part 71.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

/RA/

Eric J. Benner, Chief  
Licensing Branch  
Division of Spent Fuel Storage and Transportation  
Office of Nuclear Material Safety  
and Safeguards

Docket No. 71-5939  
TAC No. L24282

Enclosure: Safety Evaluation Report

cc w/encl: J. Shuler, Department of Energy  
R. Boyle, Department of Transportation

D. Krause

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- 5. Package inspections are required before each use of the 1500.
- 6. Authorization is for a maximum of eight shipments, and expires December 31, 2010.

All other conditions of Certificate of Compliance No. 5939 remain the same. GE-Hitachi has been issued Quality Assurance Program Approval for Radioactive Material Packages No. 0170 under the provisions of 10 CFR Part 71.

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cc w/encl: J. Shuler, Department of Energy  
 R. Boyle, Department of Transportation

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**SAFETY EVALUATION REPORT  
DOCKET NO. 71-5939  
MODEL NO. 1500 PACKAGE  
GE HITACHI**

**SUMMARY**

By application dated September 29, 2008, as supplemented by a GE Hitachi Nuclear Energy, LLC (GE Hitachi) email dated January 16, 2009, GE Hitachi requested authorization to use the Model No. 1500 package beyond the package authorization expiration date of October 1, 2008.

Based on the statements and representations in the application, staff agrees that the extension of use of the package, with the additional conditions stated below, meets the requirements of 10 CFR Part 71.

**BACKGROUND**

NRC amended the regulations in 10 CFR Part 71, effective October 1, 2004, to be compatible with the 1996 edition of the International Atomic Energy Agency (IAEA), "Regulations for the Safe Transport of Radioactive Material" (TS-R-1, as amended in 2000). As a result, certain transportation packages that are compatible to the IAEA 1967 edition will no longer be authorized for use under the 10 CFR Part 71 general license after October 1, 2008.

**EVALUATION**

By application dated September 29, 2008, GE Hitachi requested authorization to use the Model No. 1500 package beyond the package authorization expiration date of October 1, 2008. GE Hitachi submitted supplemental information by email dated January 16, 2009. GE Hitachi provided the information as described in U.S. Nuclear Regulatory Commission, Regulatory Issue Summary 2008-18, "Information on Requests for Extending Use of Expiring Transportation Packages."

- (1) Package Information. Byproduct material and special nuclear material meeting the requirements of special form radioactive material and antimony pins encased in stainless steel, or byproduct material as  $^{90}\text{SrF}_2$  or  $^{137}\text{CsCl}$  capsules meeting Condition No. 6 in Certificate of Compliance No. 5939, or solid nonfissile irradiated metal hardware and reactor control rods (blades), or stainless steel encapsulated solid metal Co-60 sources, or byproduct material as  $^{137}\text{CsCl}$  capsules meeting Condition No. 7 in Certificate of Compliance No. 5939. Maximum quantity of material per package is as specified in Certificate of Compliance No. 5939.
- (2) Identification of Shipment. GE Hitachi requested eight shipments be made prior to December 31, 2010. All shipments will be from the GE Hitachi's Vallecitos Nuclear Center, Sunol, California, to J. L. Shepherd and Associates San

Fernando, California. All shipments will be by closed-transport or flat-bed transport vehicle, as exclusive use.

- (3) Reasons for Requesting Extended Use. The GE Hitachi application states that extended use of the package is needed since GE Hitachi needs to resolve technical deficiencies with the design of the replacement package. GE Hitachi expects to have a replacement package available by December 31, 2010.
- (4) Safety Justification for Continued Use and Proposed Compensatory Measures. GE Hitachi proposed specific compensatory measures to assure that shipments would have equivalent safety. These include exclusive use shipment and transport during times of low road usage and off-rush hour traffic.
- (5) A Plan and Schedule to Acquire Replacement Packages or Complete Necessary Shipments. GE Hitachi expects to resolve technical deficiencies with the design of the replacement package and to have the replacement package available for use by December 31, 2010.

## CONDITIONS

Based on the statements and representations in the application, as supplemented, authorization is given for the transport of radioactive material by GE Hitachi using the Model No. 1500 package with the following conditions:

1. The packaging is constructed in accordance with General Electric Company Drawing Nos. 129D4748, Rev. 7; 129D4749, Rev. 5; and 129D4750, Rev. 9. An optional canister insert is constructed in accordance with the following Chem-Nuclear Systems, Inc., Drawing Nos., supplement dated March 1, 1993: C-110-D-48019-001, Rev. D; and C-110-A-48019-002, Rev. C.
2. Contents
  - (a) Type and form of material

Byproduct material and special nuclear material meeting the requirements of special form radioactive material and antimony pins encased in stainless steel, or byproduct material as  $^{90}\text{SrF}_2$  or  $^{137}\text{CsCl}$  capsules meeting Condition No. 6 in Certificate of Compliance No. 5939, or solid nonfissile irradiated metal hardware and reactor control rods (blades), or stainless steel encapsulated solid metal Co-60 sources, or byproduct material as  $^{137}\text{CsCl}$  capsules meeting Condition No. 7 in Certificate of Compliance No. 5939.
  - (b) Maximum quantity of material per package

As specified in Certificate of Compliance No. 5939.
3. Shipment will be by closed-transport or flat-bed transport vehicle, as exclusive use.

4. Eight shipments will be to J. L. Shepherd and Associates, San Fernando, California.
5. Package inspections are required before each use of the 1500.
6. Authorization is for a maximum of eight shipments, and expires December 31, 2010.

All other conditions of Certificate of Compliance No. 5939 remain the same.

#### **CONCLUSIONS**

Based on the statements and representations in the GE Hitachi application dated September 29, 2008, as supplemented by GE Hitachi email dated January 16, 2009, the staff agrees that the use by GE Hitachi of the Model No. 1500 package meets the requirements of 10 CFR Part 71, subject to the conditions listed above.

Issued on January 16, 2009.