

71-5939

# J.L. Shepherd & Associates

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December 16, 2009

United States Nuclear Regulatory Commission  
Document Control Desk  
ATTN: Director, Spent Fuel Storage and Transportation  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-001

SUBJECT: Request to grant J. L. Shepherd and Associates party status as an authorized named user for six (6) additional shipments to two (2) clients and the return of legacy sources to General Electric-Hitachi using the General Electric Model 1500 shipping package.

General Electric-Hitachi has current authorization to make 8 shipments per the attached authorization for Limited shipments in the Model No 1500 Package Certificate of Compliance No. 5939

Dear Director:

By Letter, dated January 16, 2009, from Mr. Eric Benner, the USNRC granted limited use of the above identified package as follows: Paragraph 4: "Eight shipments will be to J.L. Shepherd & Associates, San Fernando, California"; and, paragraph 6: "Authorization is for a maximum of eight shipments, and expires December 31, 2010".

J.L. Shepherd & Associates is seeking modification of that authorization to be added as an authorized named user and for six additional shipments to accommodate the needs of a governmental agency and a commercial medical laboratory, as shown below

1. The package to be used is constructed in accordance with General Electric Company Drawings 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 No: supplement dated March 1, 1993: C-110-D-48019-001, Rev D; and C-110-A-48019-002, Rev C.

NMSS 24

## 2. Contents to be shipped.

(a) Number of Shipments: Revised from eight to fourteen (six (6) additional requested).

(b) Number of packages per shipment: One.

(c) Packaging Serial Numbers: Various per CoC 5939.

(d) Package contents:

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 SrF<sub>2</sub> or CsCl capsules meeting Condition No. 6 in Certificate of Compliance No. 5939, or solid non-fissile irradiated metal hardware and reactor control rods (blades), or stainless steel encapsulated solid metal Co-60 sources, or byproduct material as <sup>137</sup>CsCl capsules meeting Condition No. 7 in Certificate of Compliance No 5939. Maximum quantity of material per package: As specified in Certificate of Compliance No. 5939.

(e) End Use of Radioactive Material.

For the first eight shipments, the end use of the radioactive materials will be for distribution in J.L. Shepherd & Associates irradiators.

Shipment 9: A shipment by J.L. Shepherd & Associates from  
Withheld under 10 CFR 2.390

Shipment 10: From J.L. Shepherd & Associates<sup>Withheld under 10 CFR 2.390</sup>

Shipment 11: From J.L. Shepherd & Associates,<sup>Withheld under 10 CFR 2.390</sup>  
Withheld under 10 CFR 2.390

Shipment 12: Withheld under 10 CFR 2.390, to J. L. Shepherd and  
Associates<sup>Withheld under 10 CFR 2.390</sup>

Shipment 13: From J. L. Shepherd & Associates<sup>Withheld under 10 CFR 2.390</sup>  
Withheld under 10 CFR 2.390

Shipment 14: From J. L. Shepherd & Associates<sup>Withheld under 10 CFR 2.390</sup>  
Withheld under 10 CFR 2.390

(f) All shipments will be by flat-bed transport vehicle, as exclusive use.

(g) Time Frame: 2010.

(h) Last Shipment to be completed by December 31, 2010.

### 3. Reason(s) for Requesting Additional Extended Use.

A government customer located in Pasadena, California is seeking to re-load their existing irradiation facility with new Co-60 sources. This will require movement of a large amount of radioactive materials shipped from General Electric-Hitachi to J. L. Shepherd and Associates in the Model 1500, including the sources for the government customer. The non-government sources will be unloaded at J. L. Shepherd and Associates, then J. L. Shepherd and Associates will ship the government sources to the Pasadena facility. The spent Co-60 sources will be shipped by J. L. Shepherd and Associates in the Model 1500 to General Electric-Hitachi.

A second customer in the Atlanta area, GA, a commercial account, is seeking to re-load a large irradiation facility during the summer of 2010.

In both cases identified, there are no currently available COC packages which are capable of containment/shipment of the Co-60 sources as currently configured in existing Irradiators.

Due to the sunset rules imposed in NRC published final rule (69 FR 3698), January 26, 2004, transportation of Type B quantities of radioactive materials has been restricted to Certificate of Compliance packages having certificates meeting the requirements of the order and certain other packages authorized for extended use by both NRC and Department of Transportation. A review of available CoC packages available for use has not provided a package meeting the size and safety requirements necessary for the shipments identified above. As a consequence of the above matters, J.L. Shepherd & Associates, and General Electric-Hitachi as a separate entity, are in process of designing a new package which capable of meeting the requirements of IAEA TS-R-1. It is anticipated that these designs will be completed by January 2010 or shortly thereafter.

#### (4) Safety Justification for Continued Use and Proposed Compensatory Measures.

By application dated September 29, 2008, GE-Hitachi requested extended use of the Model 1500 package, USNRC Certificate of Compliance No: 5939. Specific reasons cited as justification for the continued use of the package remain unchanged to those cited. Additional safety measures proposed include use of covered or flat-bed transport vehicle in exclusive use and transport during times of reduced traffic/traffic avoidance in metropolitan areas. J.L. Shepherd & Associates will continue to conform with the proposed and accepted restrictions.

(5) A Plan and Schedule to Acquire Replacement Packages or Complete Necessary Shipments.

GE-Hitachi, as stated in its application for extension, expects to resolve technical issues with a proposed design, and have a package available for use no later than December 31, 2010. JLS&A is in process of its own design and anticipates submission of a design for licensing review by end of first quarter 2010.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "J.L. Shepherd", written in a cursive style.

J.L. Shepherd  
President