



Research Reactor Center
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Ms. Michele Sampson
Acting Chief, Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

25 February 2013

RE: Request for renewal of authorization to ship Type B quantities of radioactive material

Dear Ms. Sampson,

This letter is a request for renewal of authorization to ship limited Type B quantities of radioactive material in DOT Specification 20WC-1 and 6M packages. This authorization was granted by NRC (accession number ML12363A357) to the University of Missouri Research Reactor (MURR) and is scheduled to expire on March 31, 2013.

MURR currently operates a Type B package fleet under DOT Special Permit SP-14657 which expires on December 31, 2013. We request that NRC authorization to ship under this special permit be renewed for a period of nine (9) months from March 31, 2013 in tandem with the DOT-approved Special Permit.

Authorized Shipment Totals

As of this writing 1,334 shipments of Type B quantities of material have been made under this NRC authorization with no adverse incidents. We are currently authorized by NRC to make 1,500 shipments in total.

Regulatory Approval and Production Efforts

We continue our efforts to replace our fleet of DOT Specification packages with packages that are compliant with 10CFR71.

The SAFKEG-LS fleet is in active service at MURR. The SAFKEG-HS package design is under active review by NRC and the at-risk manufacturing program is well underway to support the deployment of this package as rapidly as possible upon issuance of the Certificate of Compliance by NRC.

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Definitions

“Croft” refers to Croft Associates, Ltd., the radioactive material package design and manufacturing firm that was awarded the contract.

“CHT” refers to Columbiana Hi-Tech Nuclear, the sub-contractor hired by Croft for package fabrication.

“DU” refers to Depleted Uranium, which will be used in the SAFKEG-HS containment vessel (CV) for shielding.

SAFKEG-LS

A fleet of forty-five (45) SAFKEG-LS packages have been received and deployed for use at MURR.

As of this writing, MURR has made 10 shipments of Type B quantities of radioactive materials in the new SAFKEG-LS packaging that would have otherwise shipped under the DOT Special Permit.

SAFKEG-HS

The Safety Analysis Report for Packaging (SARP) for the SAFKEG-HS (Croft Model 3977A) was submitted to NRC in September 2012. NRC issued a Request for Supplemental Information (RSI) to Croft in November, to which they have responded. The SARP has been formally accepted by NRC and we anticipate a Request for Additional Information (RAI) to be issued by the end of February.

The at-risk manufacturing program for the SAFKEG-HS packages is well underway:

- Placement of material and outside vendor purchase orders completed in late January
- Placement of purchase order for the Depleted Uranium, material only, is complete – machining to begin only upon direct instruction from Croft to CHT after the DU shield design has been reviewed by NRC and all questions answered to NRC staff satisfaction
- Placement of purchase order with the leak testing sub-contractor for Helium Leakage Testing and CALT Pressure Testing to be conducted once manufacturing is underway on CV Lid and Body parts
- Placement of purchase order with the materials testing sub-contractor for over-checks on 1C-5950 O-Rings, to be conducted once O-Rings are closer to being delivered
- Raw Materials received or on-order as follows:
 - Major materials for the Keg (0C-5900) i.e. plate, sheet and square tube
 - CV Outer Wall (2C-5958)
 - CV Lid Top (1C-5953) and CV Flange/Cavity Wall (2C-5957)
 - CV Assembly (1C-5950)
 - Supporting items such as bar material, heli-coil inserts, fasteners, etc.



- CHT scheduling underway for manufacturing work (welding and machining), including a full project schedule in final stages
- Travelers and Dimensional Data Sheets are under review by CHT Quality Engineering

While we anticipate delivery of the HS package fleet in Q3 of 2013, with full implementation by Q4 of 2013, this is heavily dependent upon the SARP review process. We continue to work with the appropriate NRC staff to ensure an efficient and thorough review of the package.

Summary and Contact

The SAFKEG-LS fleet is in active service at MURR. The SAFKEG-HS package design is under active review by NRC and the at-risk manufacturing program is well underway to support the deployment of this package as rapidly as possible upon issuance of the Certificate of Compliance by NRC.

We request that NRC provide MURR with authorization to ship for a period of nine (9) months from March 31, 2013 until December 31, 2013, in tandem with the DOT-approved Special Permit.

The point of contact for inquiries is Mr. Michael Flagg, who may be reached at (573) 882-5364 or via email at flaggm@missouri.edu.

Sincerely,

Ralph A. Butler
Director, University of Missouri Research Reactor

25 Feb 2013
Date