

June 23, 2015

Ms. Sarah Bryson
Licensing Engineer
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Building 4F, Culham Science Centre
Culham Abingdon
Oxfordshire, OX14 3DB, United Kingdom

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR REVIEW OF THE MODEL
NO. 3979A PACKAGE

Dear Ms. Bryson:

By letter, dated April 20, 2015, Croft Associates submitted an application for the Model No. 3979A package. To assist with our review, the U.S. Nuclear Regulatory Commission staff needs the information identified in the enclosure to this letter. Discussion of this request for additional information and a response date occurred on June 17, 2015 (ML15174A033).

We request that you provide this information by July 17, 2015. Inform us at your earliest convenience, but no later than July 10, 2015, if you are not able to provide the information by that date. If you are unable to provide a response by July 17, 2015, please propose a new submittal date and the reasons for the delay.

Please reference Docket No. 71-9337 and TAC No. L25010 in future correspondence related to this amendment request. The staff is available to discuss these questions as well as your proposed responses. If you have any questions regarding this matter, feel free to contact me at (301) 415-6877.

Sincerely,

/RA/

Chris Allen, Project Manager
Spent Fuel Licensing Branch
Division of Spent Fuel Management
Office of Nuclear Material Safety
and Safeguards

Docket No. 71-9337
TAC No. L25010

Enclosure: Request for Additional Information

Ms. Sarah Bryson
Licensing Engineer
Croft Associates Limited
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Oxfordshire, OX14 3DB, United Kingdom

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Request for Additional Information
Docket No. 71-9337
Model No. 3979A Package

By application dated January 30, 2015, Croft Associates Limited submitted an amendment request for the Model No. 3979A package to add additional contents, allow the use of an equivalent material for Loctite 270 and correct a licensing drawing error. This request identifies information needed by staff in connection with its review of the application. The staff reviewed the application using the guidance in NUREG-1609, "Standard Review Plan for Transportation Packages for Radioactive Material."

Each individual request for additional information describes information needed by the NRC staff for it to complete its review of the application to determine whether the applicant has demonstrated compliance with the regulatory requirements.

General Description Review

- 1.1 Identify the following information relative to the keg closure studs (item 16) on licensing drawing OC-6042:
 - a. the manufacturing techniques used to fabricate the keg closure studs, and
 - b. the source of replacement studs for package users.

There is very little detail about the keg closure studs on licensing drawing OC-6042. Consequently, staff is uncertain of how the closure studs are manufactured and from whom replacement studs are procured.

This information is needed to ensure compliance with 10 CFR 71.107.

Materials Review

- 2.1 Provide the following information for the requested change associated with Loctite 270:
 - a. the drawing(s) which show the use of Loctite 270, and
 - b. how "equivalent" fastening materials will be evaluated to ensure form, fit, and function as well as to preclude material degradation of other Safkeg components.

The use of Loctite 270 is cited in Section 8.2.3.2, paragraph 4, of the safety analysis report, but it is not defined on licensing drawing OC-6042, Rev. E. Revise drawing OC-6042 to identify the critical characteristics and constituents of Loctite 270 or an equivalent, and their importance to safety classification category per NRC guidance.

This information is needed to ensure compliance with 10 CFR 71.33.

Shielding Review

- 5.1 Modify the shielding evaluation to use the ANSI/ANS-6.1.1-1977 dose conversion factors (DCFs).

The DCFs in ICRP 51 are for calculating effective dose equivalent as well as dose to organs. These differ from dose rate which is measured at the time of shipment to determine compliance with the limits in 10 CFR Part 71. The 10 CFR Part 71 limits are in line with the dose rate quantities calculated using ANSI/ANS-6.1.1-1977 DCFs. The application addresses the difference between ICRP 51 DCFs and ANSI/ANS-6.1.1-1977 DCFs as a source of uncertainty. However, depending on the gamma energies, the uncertainties in dose rates could be significant. Thus, the applicant should use the ANSI/ANS-6.1.1-1977 DCFs in its shielding evaluation.

This information is needed to confirm compliance with 10 CFR 71.47 and 71.51.