



71-9010

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March 29, 1999

U. S. Nuclear Regulatory Commission
11555 Rockville Pike
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Attention: Document Control Desk

Subject: Model No. NLI-1/2 Cask (Docket No. 71-9010)

- References:
1. USNRC Certificate of Compliance (CoC) No. 9010, Revision 38, NLI-1/2 Spent Fuel Shipping Cask
 2. Safety Analysis Report for the NLI-1/2 Spent Fuel Shipping Cask USA/9010/B()F, dated March 1996
 3. NAC International Letter, Amendment Request for the NLI-1/2 Spent Fuel Shipping Cask, dated June 9, 1998.
 4. NRC Letter, Request for Additional Information on the NLI-1/2 Cask, dated November 24, 1998.

NAC International (NAC) herewith submits responses to the Reference 4 request for additional information on the NLI-1/2 Spent Fuel Shipping Cask. The responses provided herein are based on NRC's review of the Reference 3 request for amendment to the Cask Certificate of Compliance (CoC) (Reference 1). This submittal contains the formal responses to RAI comments, and NLI-1/2 Revision 99A SAR change pages supporting the RAI responses.

Additionally, NAC is submitting revisions to Sheets 1 and 2 of Drawing 70562F to address issues that have arisen from a recent review of the cask drawings. Based on discussions with NRC staff concerning the extent of the changes, these drawings are included with this submittal. During a review of the cask drawings comprising the Configuration A assembly, several inconsistencies and deficiencies were noted on Sheet 1, Revision 10, and Sheet 2, Revision 6, of Drawing 70562F. To correct these deficiencies the following changes have been made:

Sheet 1, Drawing 70562F

- Change the length of the aluminum region of the BWR basket from 150 inches to 167 inches. The analyses presented in the SAR are based on the correct aluminum region length.

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- Show the maximum useable cavity length in the baskets.
- Show the opening dimensions of the BWR basket.
- Change the depiction of the inner container inlet line and suction drain line to be consistent with that shown on Sheet 3, which depicts the correct configuration. Sheets 2 and 3 of this drawing have shown two separate configurations for the inlet and drain lines on the inner container closure head. Along with Sheet 2, these depictions have been revised to show only the actual configuration of the lines for the as-built inner container.
- Overall improvement of line quality on drawing.

Sheet 2, Drawing 70562F

- With Sheet 1, change the depiction of the inner container inlet line and suction drain line to be consistent with that shown on Sheet 3, which depicts the correct configuration. The previous revision of Sheet 2 depicted an alternate configuration for the inlet and drain lines on the inner container closure head. This configuration is not used, and is superseded by the configuration shown on Sheet 3.
- Overall improvement of line quality on drawing.

In accordance with the requirements of 10 CFR 71.13(c) for this package, these changes to drawings currently listed in the CoC do not involve any modifications to: the design as presented in the technical analyses of the SAR; the existing component hardware as fabricated; the operating characteristics of the package; or the safe performance of the containment system. The changes are made to more accurately reflect the actual condition of the inner container design, and reduce confusing details concerning the length of the BWR basket and closure head drain line configuration. There will be no component fabrication; the revised drawings reflect the existing packaging requirements.

NAC herewith submits 8 copies of the NLI-1/2 SAR, Revision 99A, change pages based on the latest revision of the SAR as modified by the Revision 98A pages submitted in Reference 3. Consistent with NAC administrative practice, this proposed revision is numbered to uniquely identify the applicable change pages. The changes proposed for this submittal are marked by shading or revision bars for clarity. Upon final approval, the changed pages will be reformatted and assigned the next appropriate revision number for the SAR.

NAC is under contract with GE to make BWR fuel rod shipments based on the drawing changes requested herein. Therefore, we respectfully request that this submittal be accorded a priority for review that will support approval of the amendment by June 1, 1999.

If you have any comments or questions, please contact me or Curt Lindner at (770) 447-1144. NAC is available to meet with you at your convenience to discuss the proposed amendment and to resolve any questions that you may have.

Sincerely,



Thomas C. Thompson
Director, Licensing & Competitive Assessment
Engineering & Design Services

Enclosures

cc: C. R. Chappell
D. Tiktinsky

**Responses to NRC Request for Additional
Information on the NLI-1/2 Cask Dated 11/24/98**

OPERATING AND MAINTENANCE PROCEDURES

NRC Comment

1. Revise the Operating Procedures to:
 - a. include appropriate leak tests when the package is used for contents other than spent fuel. Note that the containment evaluation for the package should also address contents other than spent fuel.
 - b. revise Section XV.4, step 15, to include a tamper-proof seal for contents other than spent fuel, as required by 71.43(b).
 - c. verify that the package is in unimpaired physical condition, as required by 71.87(b), and verify the presence of the boral sheets for configuration "C", as required by 71.87(g).

NAC Response

- a. The NLI-1/2 cask is approved for shipment of a variety of spent fuel types, and for non-fissile irradiated hardware used in the same general environment as the spent fuel. Because the irradiated hardware is non-fissile, it contains far fewer releasable radionuclides than spent fuel. Furthermore, the quantity of surface contamination radionuclides that might be present on the irradiated hardware would be similar to those present on a spent fuel assembly. Therefore, the containment evaluation for the spent fuel contents is bounding for the other approved contents. Unless the cask is shipped as an "empty package," the o-rings will be leak tested prior to shipment. Section XV.4 of the SAR has been revised to clarify that leak tests are required unless the cask is to be shipped as "empty."
- b. The SAR has been revised to clarify that tamper indicating seals must be installed unless the cask is to be shipped as "empty."
- c. Section XV.2 of the SAR has been revised to add steps requiring verification of the proper physical condition of the cask and the boral sheets in the Configuration "C" basket in accordance with 10 CFR 71.87(b).

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Information on the NLI-1/2 Cask Dated 11/24/98**

OPERATING AND MAINTENANCE PROCEDURES

NRC Comment

2. Show that blowing gas through the cask for 5 minutes (Section XV.2.1, step 25) is sufficient to comply with the provisions of Condition No. 8 in the Certificate of Compliance for the package. Note that the certificate specifies that the cask cavity is to be purged three times in lieu of vacuum drying.

NAC Response

Section XV.2.1 of the SAR has been revised to require each of the three purge volumes required by Condition No. 8 of the Certificate of Compliance to be at least 400 liters. This will ensure that each purge volume is greater than the containment vessel volume.

OPERATING AND MAINTENANCE PROCEDURES

NRC Comment

3. Revise the Maintenance Procedures to specify the details of the helium leak test to be performed on the package and specify that the minimum sensitivity of the leak test should be 5×10^{-7} std-cm³/sec.

NAC Response

The maintenance procedures in the SAR have been revised to specify the details of the helium leak test, including the minimum sensitivity required for the test. These details have been included as Appendix A to Section XVI of the SAR.

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OPERATING AND MAINTENANCE PROCEDURES

NRC Comment

4. The provisions in the Operating Procedures for leak testing the inner cavity head (Section XV.2.1 and XV.2.2) do not appear to be consistent with the corresponding provisions cross-referenced in the Maintenance Procedures (Section XVI). Revise both the operating and maintenance procedures to specify a helium leak test each time the metallic O-ring is replaced.

NAC Response

The operating procedures specify that helium leak testing must be performed on the inner cavity head in accordance with Section XVI, Appendix A, of the SAR. The maintenance procedures have been revised to clarify that the helium leak test is required each time the metallic o-ring is replaced, in addition to the annual period currently specified.