

February 15, 2005

Mr. Thomas C. Thompson
Licensing Manager
NAC International, Inc.
3930 East Jones Bridge Road
Norcross, GA 30092

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION FOR THE PROPOSED
AMENDMENT TO THE NAC-LWT PACKAGE (TAC NO. L23781)

Dear Mr. Thompson:

I am responding to your letter dated November 2, 2004, in which you requested an amendment to the NAC-LWT package, Certificate of Compliance (CoC) No. 9225. You requested approval of additional contents up to 700 intact or damaged PULSTAR fuel elements in either assembly or element form. In my letter to you dated December 21, 2004, I acknowledged receipt of your amendment request and provided you a proposed schedule for our review.

In connection with our review, we need the information identified in the enclosure to this letter. We request that you provide this information within 30 days from the date of this letter. If you are unable to provide a response by that date, our review may be delayed.

Please reference Docket No. 71-9225 and TAC No. L23781 in future correspondence related to this amendment action. If you have any questions regarding this matter, we would be pleased to meet with you and your staff. I may be contacted at either (301) 415-3781, or (301) 415-8500.

Sincerely,

/RA/

Mary Jane Ross-Lee, Senior Project Manager
Licensing Section
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Docket No.: 71-9225
TAC No.: L23781

Enclosure: Request for Additional Information

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 Mary Jane Ross-Lee, Senior Project Manager
 Licensing Section
 Spent Fuel Project Office
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Docket No. 71-9225
 TAC No. L23781
 Enclosure: Request for Additional Information
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Request for Additional Information
NAC International, Inc.
Docket No. 71-9225
NAC-LWT
Certificate of Compliance No. 9225

By application dated November 2, 2004, NAC International, Inc., requested approval of an amendment to the NAC-LWT to allow additional contents up to 700 intact or damaged PULSTAR fuel elements in either assembly or element form. This request for additional information identifies information needed by the U.S. Nuclear Regulatory Commission (NRC) staff in connection with its review of the amendment. The requested information is listed by chapter number and title in the applicant's safety analysis report. NUREG-1617, "Standard Review Plan for the Transportation Packages for Spent Nuclear Fuel," was used by the staff in its review of the application.

Each item describes information needed by the staff for it to complete its review of the amendment and/or SAR and to determine whether the application has demonstrated compliance with the regulatory requirements.

1.0 General Information

- 1.1 Clarify how the maximum depletion for PULSTAR fuel given on Table 1.2-8 of the SAR translates into fuel burnup expressed as MWD/MTU.

This information is needed to assure compliance with 10 CFR 71.7.

- 1.2 Drawing 315-40-130. Add a note to the drawing to require pressure testing of the sealed failed fuel can to meet appropriate ASME Code, Article NB-6000, requirements.

The sealed failed fuel can is designed and evaluated by taking partial credit for the evaluations done for the previously approved TRIGA sealed fuel can. As such, the same hydrostatic testing requirements shall apply.

Sufficient detail to identify the package accurately is required in 10 CFR 71.33.

2.0 Structural Evaluation

- 2.1 Provide a structural evaluation of the PULSTAR intact fuel elements to demonstrate that the analyzed fuel element configurations remain bounded for criticality control after the free drop tests associated with normal conditions of transport and hypothetical accident conditions. All fuel element loading configurations as described in Section 1.2.3.7 of the application must be considered.

The geometric forms of the package contents resulting from the tests must remain bounded by the analyzed configurations for criticality control, as required by 10 CFR 71.55.

3.0 Thermal Evaluation

- 3.1 Identify how the NAC-LWT with PULSTAR fuel will be shipped (under nonexclusive or exclusive use). Provide calculations for the appropriate accessible surface temperature.

The applicant is required to demonstrate that the package satisfies the thermal requirements under normal and accident conditions in accordance with 10 CFR 71.35(a).

- 3.2 Describe how either the screened or sealed fuel can type will be chosen for the damaged fuel to be loaded. Address the role of the 2 different proposed damaged fuel can forms.

The applicant is required to demonstrate that the package satisfies the thermal requirements under normal and accident conditions in accordance with 10 CFR 71.35(a).

- 3.3 Address the thermal impact due to rubblelization during and after the 30-minutes fire event.

The applicant is required to demonstrate that the package satisfies the thermal requirements under normal and accident conditions in accordance with 10 CFR 71.35(a).

- 3.4 Justify the discrepancy between the Table 3.4-20 which shows a 1.8 atm pressure for the mixed payload (14 fuel assemblies and 14 fuel cans) and Section 3.4.4.5, which predicts this internal pressure to be 2.0 atm.

This information is needed to assure compliance with 10 CFR 71.7.

4.0 Containment

- 4.1 Provide the average gas temperatures used for normal and accident conditions.

SAR states that average temperature during normal and accident conditions are summarized in Table 4.5-22 of the SAR but the values are not provided in this Table.

This information is needed to assure compliance with 10 CFR 71.7.

- 4.2 Provide all the necessary units for the numbers given in Tables 4.5-23, 4.5-24, and 4.5-25 of the SAR.

This information is needed to assure compliance with 10 CFR 71.7.