April 30, 2007

Mr. Anthony Patko
Director, Licensing
Engineering
NAC International
3930 East Jones Bridge Road, Suite 200
Norcross, GA 30092

SUBJECT: NAC-LWT REVIEW TELEPHONE CALL AND REQUEST FOR ADDITIONAL INFORMATION (TAC L24043)

Dear Mr. Patko:

By letter dated November 17, 2006, as supplemented March 2, 2007, NAC International (NAC) submitted a revised application in accordance with 10 CFR Part 71 for an amendment to Certificate of Compliance No. 9225 for the Model No. NAC-LWT package to incorporate various changes to the authorized contents and the operating procedures.

The U. S. Nuclear Regulatory Commission (NRC) staff reviewed the information provided and requested additional information to clarify issues by a telephone calls with NAC on April 23 and 25, 2007. The meeting attendees were:

NRC: Kim Hardin, Bob Einziger, David Tang, Ron Parkhill, and Drew Barto

NAC International: Tom Danner, Holger Pfeifer, Gary Tjersland, Tony Patko, and Mike Yash

Based on these calls, the following issues were discussed and are described below.

Section 1 General Information

1-1 Table 1.2-12. Verify that the maximum content length allowed for the solid irradiated hardware is 171.5 inches as listed.

Drawing 315-40-03 shows the cask cavity length of 180.9 inches, measuring from the crown of the slightly bulged bottom forging to the top surface of the lower flange of the upper forging. As depicted in Drawings 315-40-04 and 315-40-145, subtraction of the lid insert and spacer depths of 3.3 inches and 6.5 inches, respectively, from the cavity length, will result in a net cavity length of 171.1 inches. This discrepancy needs to be clarified.

Complete and accurate information must be provided in the application in accordance with the 71.7(a) requirements.

1-2 ANSTO Fuel Basket Weldment. Revise Drawings 315-40-140, -141, and -142, as appropriate, to add chamfer preparation details for the top, support, and bottom plates of the basket modules, respectively.

The application recognizes the bottom plate edge details for bearing load transfer by stating, "The base plate of the base module is either supported by... or supported by the chamfered plate periphery interfacing with the transition of the cask inner shell and the bottom forging." Chamfer details such as those for the DIDO basket modules should be added to the drawings.

Complete and accurate information must be provided in the application in accordance with the 71.7(a) requirements.

1-3 In Table 1-1, the definition of damaged fuel is incomplete. The definition of damaged fuel should be changed to "damaged fuel rods." The definition does not entail hardware damage. Under this definition, assemblies with severe hardware damage could be considered undamaged.

Complete and accurate information must be provided in the application in accordance with the 71.7(a) requirements.

1-4 In Section 1.2.3, changes are indicated by change bars that are not in agreement with the request in the reference letter. Changes to this section and Tables 1.2-1 and 1.2-2 need to be clearly stated.

Complete and accurate information must be provided in the application in accordance with the 71.7(a) requirements.

1-5 Table 1.2-12 indicates that the irradiated hardware is just stainless or carbon steel. Table 1.1 allows any structural material such as inconel, Zircalloy, besides stainless, and carbon steel. Tables 1.1 and 1.2-12 need to be consistent.

Complete and accurate information must be provided in the application in accordance with the 71.7(a) requirements.

Section 3 Thermal Safety

3-1 Justify the assumption of modeling air as the gas in the cask cavity (Sections 3.5.1.2 & 3.4.1.7.2) for the HAC fire, when helium has been added to the cask during loading operations (Section 7.1.1, Step 32). Air has a conductivity of approximately 5 times less than helium and would tend to insulate the fuel from the fire temperatures, thus resulting in a non-conservative fuel cladding temperature identified in Table 3.5.1. Correct the affected SAR sections and tables.

10 CFR Part 71.107 Package Design Control requires that the applicant shall...assure that...the package design.....are correctly translated into... procedures and instructions.

Section 6 Criticality Safety

6-1 Revise Section 1.1 of the application, as well as any similar statements, to reflect that the regulations regarding fissile exemptions have moved to 10 CFR 71.15. Additionally, specify which exemption under §71.15 applies to the requested contents.

Section 1.1 of the application, as well as several similar statements throughout the application, references §71.53 to limit fissile material associated with irradiated and contaminated hardware. As of October 1, 2004, §71.53 was revised and moved to §71.15 in the regulations. Additionally, the regulations regarding exemption from classification as fissile material were revised, and now include six paragraphs ((a)-(f)) of potential exemptions. The application should state which of these exemptions the irradiated and contaminated hardware will meet for shipment in the NAC-LWT.

This information is needed to ensure that the package meets the requirements of §71.15 for contents consisting of irradiated and contaminated hardware.

The additional information to address these issues is expected to be submitted by Mid-May, 2007. You may contact me at 301-492-3300 if you have any questions regarding our review of the amendment request.

Sincerely,

/RA/

Kimberly J. Hardin, Project Manager
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

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