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NAC INTERNATIONAL

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March 26, 1996

Dr. William Travers, Director
Spent Fuel Project Office, NMSS
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, MD 20852

Subject: Renewal of NLI-1/2 Certificate of Compliance No. 9010

Dear Dr. Travers:

In accordance with your staff's request for additional information regarding the annual maintenance program for the NLI-1/2 packaging, NAC International Inc. (NAC) herein submits eight (8) copies of the revised pages for the NLI-1/2 Safety Analysis Report (SAR) dated March 1996. The revised pages should be inserted into the consolidated NLI-1/2 SAR dated February 1996. Also enclosed is a "List of Effective Pages" dated March 1996 that should be inserted into the SAR after the Record of Revision page.

The SAR revision has been prepared to identify the pressure tests to be performed on components of the NLI-1/2 packaging during the annual maintenance program when the packaging is planned to be used for transport of authorized contents with a total decay heat load of 4.0 kW or less. Specifically, a 23.5 psig helium, 30 minute pressure drop test has been added to the cask cavity leak testing sequence to provide confidence in the integrity of the inner shell welds. Also, a pressure test of the neutron shield tank using 40 psig air has been added to verify the integrity of the neutron shield tank. NAC has revised Section XVI of the SAR to incorporate these additional annual test requirements.

If the packaging is to be utilized for the transport of authorized contents having a total decay heat load of greater than 4.0 kW, the hydrostatic tests of the containment cavity and water jacket and expansion tank are required to be performed as specified in the Maintenance Program. To clarify when hydrostatic testing of the cavity and water jacket and expansion tank are required, NAC proposes the following condition be added to Certificate of Compliance No. 9010:

> "19.(c) When the package is to be used for the transport of authorized contents having a decay heat load of greater than 4.0 kW, a 220 psig hydrostatic test of the containment cavity, and a 405 psig hydrostatic test of the water jacket and expansion tank shall be performed as part of the maintenance program as specified in Section XVI of the application."

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NAC has performed calculations to ascertain the appropriate values for the pressure tests specified for package operations having decay heat loads of 4.0 kW or less. A maximum normal operating pressure (MNOP) of 18.8 psig has been calculated based on a one atmosphere (absolute) backfill pressure after closure and one percent failed fuel under normal transport conditions. Therefore, a test pressure of 23.5 psig has been specified for the helium pressure test of the cavity which is 125 percent of the MNOP. The calculations also conclude that the temperature in the water jacket and expansion tank with a 4.0 kW content decay heat load, full insolence, and a 100°F ambient temperature will be less than 212°F. Therefore, the water jacket and expansion tank pressure under the normal operating conditions will be atmospheric and the specified pressure test at 40 psig provides continuing confidence in the integrity of the water jacket and expansion tank.

If you have any questions or comments on the enclosed SAR change pages, please do not hesitate to contact me at (770) 447-1144.

Sincerely,

Gary T. Tjersland
Manager, Cask Design and Licensing

Enclosure: NLI-1/2 Spent Fuel Cask Safety Analysis Report, T-95001, March 1996 Revision
Change pages, 8 Copies