

L. M. Stinson (Mike)  
Vice President

Southern Nuclear  
Operating Company, Inc.  
40 Inverness Center Parkway  
Post Office Box 1295  
Birmingham, Alabama 35201

Tel 205.992.5181  
Fax 205.992.0341



May 20, 2005

Docket Nos.: 50-348  
50-364  
72.42

NL-05-0883

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant, Units 1 and 2  
Request for Exemption from 10 CFR 72.212(a)(2) and 10 CFR 72.214

Pursuant to 10 CFR 72.7, Southern Nuclear Operating Company (SNC) requests an exemption from the requirements of 10 CFR 72.212(a)(2) and 10 CFR 72.214 for its Joseph M. Farley Nuclear Plant (FNP) facility. The general license provisions of 10 CFR 72, Subpart K, require, in part, storage of spent fuel in casks approved under the provisions of Part 72. Specifically, an exemption is requested to permit cask loading in accordance with proposed Amendment 2 to Certificate of Compliance (CoC) 1014 granted to Holtec International (Holtec) for the HI-STORM 100 System. SNC further requests that NRC approval of the proposed exemption include treatment of casks authorized for loading in accordance with the exemption as approved casks listed in 10 CFR 72.214 for the purpose of compliance with the remainder of the requirements of Part 72. In addition, SNC will perform helium leak testing of the multi-purpose canister vent and drain port covers in accordance with the leak tight criteria provided in American National Standard Institute (ANSI) N14.5-1997, "American National Standard for Radioactive Materials – Leakage Tests on Packages for Shipment."

An initial amendment request, as supplemented, was submitted to the NRC by Holtec on March 4, 2002. The request included changes to materials used in construction, types of fuel that can be loaded, shielding and confinement methodologies and assumptions, temperature limits, and allowable fuel enrichments. Accordingly, proposed Amendment 2 was published in the Federal Register on February 28, 2005, as a direct final rule with an effective date of May 16, 2005 (70 FR 9504). The direct final rule was subsequently withdrawn on May 12, 2005, due to the receipt of comments (70 FR 24936). Concurrent with publication of the direct final rule, the NRC also published an identical proposed rule in the Federal Register on February 28, 2005, and rulemaking associated with the proposed rule remains active pending NRC resolution of the comments (70 FR 9550).

The delay in issuance of this amendment, directly impacts the cask loading campaign at FNP Unit 1. The spent fuel pool (SFP) currently does not contain sufficient space to allow a full offload of fuel from the reactor core and staging of fresh fuel for refueling operations. Loading of HI-STORM cask must be completed in order to regain sufficient space to allow staging of fresh fuel prior to the upcoming FNP Unit 1 outage.

1125501

The proposed amendment has been reviewed by the NRC and a preliminary Safety Evaluation Report (SER) has been issued. The changes requested in the proposed amendment request do not reduce margins of safety in the loading or storage of spent fuel in the HI-STORM 100 cask system. Accordingly, SNC requests a temporary exemption to 10 CFR 72.212(a)(2) and 10 CFR 72.214 to allow loading of HI-STORM 100 cask systems in accordance with CoC 1014, proposed Amendment 2. Upon NRC approval of CoC 1014, Amendment 2, SNC will modify the licensing bases for the loaded casks to incorporate CoC 1014, Amendment 2, within 90 days of issuance of the approved amendment. Accordingly, the exemption is requested to remain in effect for 90 days following NRC approval of CoC 1014, Amendment 2.

Enclosure 1 contains the Request for Exemption. SNC requests approval of the proposed exemption by July 1, 2005, to support the planned loading campaign scheduled to begin July 2005.

Mr. L. M. Stinson states he is a Vice President of Southern Nuclear Operating Company, is authorized to execute this oath on behalf of Southern Nuclear Operating Company and to the best of his knowledge and belief, the facts set forth in this letter are true.

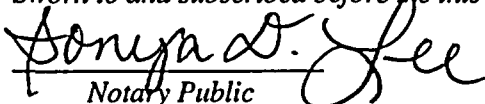
The NRC commitments contained in this letter are provided as a table in Enclosure 2. If you have any questions, please advise.

Respectfully submitted,

SOUTHERN NUCLEAR OPERATING COMPANY

  
L. M. Stinson

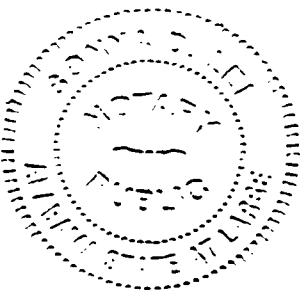
Sworn to and subscribed before me this 20<sup>th</sup> day of May, 2005.

  
Notary Public

My commission expires: 7/1/2006

LMS/CHM

- Enclosures: 1. Request for Exemption  
2. List of Regulatory Commitments



U. S. Nuclear Regulatory Commission

NL-05-0883

Page 3

cc: Southern Nuclear Operating Company  
Mr. J. T. Gasser, Executive Vice President  
Mr. J. R. Johnson, General Manager – Plant Farley  
RTYPE: CFA04.054; LC# 14275

U. S. Nuclear Regulatory Commission  
Dr. W. D. Travers, Regional Administrator  
Mr. J. J. Shea, NRR Project Manager – Farley  
Mr. C. A. Patterson, Senior Resident Inspector – Farley  
Mr. C. Regan, Project Manager - SFPO

Alabama Department of Public Health  
Dr. D. E. Williamson, State Health Officer

**Joseph M. Farley Nuclear Plant, Units 1 and 2  
Request for Exemption from 10 CFR 72.212(a)(2) and 10 CFR 72.214**

**Enclosure 1**

**Request for Exemption**

**Joseph M. Farley Nuclear Plant, Units 1 and 2  
Request for Exemption from 10 CFR 72.212(a)(2) and 10 CFR 72.214**

**Enclosure 1**

**Request for Exemption**

**1.0 Request for Exemption**

Pursuant to 10 CFR 72.7, Southern Nuclear Operating Company (SNC) requests an exemption from the requirements of 10 CFR 72.212(a)(2) and 10 CFR 72.214 for its Joseph M. Farley Nuclear Plant (FNP) facility. The general license provisions of 10 CFR 72, Subpart K, require, in part, storage of spent fuel in casks approved under the provisions of Part 72. Specifically, an exemption is requested to permit cask loading in accordance with proposed Amendment 2 to Certificate of Compliance (CoC) 1014 granted to Holtec International (Holtec) for the HI-STORM 100 System. SNC further requests that NRC approval of the proposed exemption include treatment of casks authorized for loading in accordance with the exemption as approved casks listed in 10 CFR 72.214 for the purpose of compliance with the remainder of the requirements of Part 72. In addition, SNC will perform helium leak testing of the multi-purpose canister vent and drain port covers in accordance with the leak tight criteria provided in American National Standard Institute (ANSI) N14.5-1997, "American National Standard for Radioactive Materials – Leakage Tests on Packages for Shipment."

**2.0 Background**

A license amendment request (proposed Amendment No. 2), which included changes to materials used in construction, types of fuel that can be loaded, shielding and confinement methodologies and assumptions, temperature limits, and allowable fuel enrichments, was submitted to the NRC by Holtec on March 4, 2002 and supplemented by letters dated October 3, 2002; August 6, November 14, 2003; and February 20, April 23, July 22, August 13, October 14, and December 3, 2004. A preliminary CoC Amendment 2 and corresponding Safety Evaluation Report (SER) was prepared and issued by the NRC to Holtec on December 6, 2004. Accordingly, proposed Amendment 2 was published in the Federal Register on February 28, 2005, as a direct final rule with an effective date of May 16, 2005 (70 FR 9504). The direct final rule was subsequently withdrawn on May 12, 2005, based on receipt of comments (70 FR 24936). Concurrent with publication of the direct final rule, the NRC also published an identical proposed rule in the Federal Register on February 28, 2005, and rulemaking associated with the proposed rule remains active pending resolution of the comments (70 FR 9550).

The delay in issuance of this amendment, directly impacts the cask loading campaign at FNP Unit 1. The spent fuel pool (SFP), currently does not contain sufficient space to allow a full offload of fuel from the reactor core and staging of fresh fuel in the SFP for refueling operations. Accordingly, cask loading operations must be completed prior to the next FNP Unit 1 outage. Current plans call for loading three HI-STORM 100 casks fabricated in accordance with CoC 1014,

proposed Amendment 2, with spent fuel from the FNP Unit 1 spent fuel pool during the summer of 2005. Based on incorporation of METAMIC<sup>®</sup> as a fixed neutron absorber in the casks to be loaded at FNP, loading of these casks requires: (1) approval of CoC 1014, Amendment 2; or (2) an exemption to the requirements of 10 CFR 72.212(a)(2) and 10 CFR 72.214 to allow loading operations to begin prior to NRC approval of CoC 1014, Amendment 2.

### **3.0 Technical Considerations**

In accordance with the provisions of 10 CFR 72.244, Holtec submitted an application to amend CoC 1014 to the NRC by letter dated March 4, 2002. As stated in Section 2.0 above, Holtec subsequently revised its application and provided supplemental information to address NRC staff comments. Based on satisfactory resolution of NRC staff comments, the NRC completed its preliminary SER documenting the results of the NRC review. As a result, preliminary CoC 1014, proposed Amendment 2, and SER were published in the Federal Register for incorporation into the list of approved casks provided in 10 CFR 72.214. Based on the above actions, changes to the cask design reflected in CoC 1014, proposed Amendment 2, have been demonstrated by Holtec and found acceptable by the NRC to not have a significant impact on the health and safety of the public. To further support the proposed exemption request, SNC will perform helium leak testing of the multi-purpose canister vent and drain port covers in accordance with the leak tight criteria provided in American National Standard Institute (ANSI) N14.5-1997, "American National Standard for Radioactive Materials – Leakage Tests on Packages for Shipment."

NRC approval of the exemption request to allow use of CoC 1014, proposed Amendment 2, prior to completion of the rulemaking process will not alter the NRC staff conclusion discussed above. Accordingly, NRC approval of the requested exemption will not have a significant impact on the health and safety of the public.

### **4.0 Regulatory Consideration**

SNC has reviewed 10 CFR 72 and determined that an exemption to a portion of 10 CFR 72.212(a)(2) and 10 CFR 72.214 are necessary to allow loading in accordance with proposed Amendment No. 2 to CoC 1014. 10 CFR 72.210 issues a general license for storage of spent fuel in an Independent Spent Fuel Storage Installation (ISFSI) at reactor sites as long as the Part 50 reactor license remains in effect. 10 CFR 72.212(a)(2) limits the storage of spent fuel to casks approved in accordance with 10 CFR 72 Subpart K and included in the list of approved casks provided in 10 CFR 72.214. The HI-STORM 100 casks for use at FNP incorporate the use of METAMIC<sup>®</sup> as a fixed neutron absorber and cannot be loaded in accordance with the CoC 1014, Amendment 1. Accordingly, an exemption to 10 CFR 72.212(a)(2) and 10 CFR 72.214 granted in accordance with the provisions of 10 CFR 72.7 is required to allow loading in accordance with CoC 1014, proposed Amendment 2, as reviewed by the NRC and published for addition to the list of approved casks in 10 CFR 72.214.

A preliminary license and SER for proposed Amendment No. 2 to the CoC 1014 was issued by the NRC on December 6, 2004. This SER documented the NRC staff's review and concurrence with the proposed changes to the HI-STORM 100 cask system described in the license amendment request and concluded that the proposed changes comply with the requirements of 10 CFR Part 72.

In Environmental Assessment and Finding of No Significant Impact on the Proposed Amendment, dated January 2005, the NRC documented the staff's detailed review of the proposed amendment. The review found that the occupational exposure is not significantly increased, and offsite dose rates remain well within the 10 CFR Part 20 limits. In addition, the NRC staff determined that the proposed action would not change the potential environmental effects assessed in the initial rulemaking. Therefore, the NRC staff determined that an acceptable safety margin is maintained and that no significant environmental impacts occur as a result of the amendment. In addition, the staff found that there was reasonable assurance that public health and safety and the environment will be adequately protected.

The specific requirements for granting exemptions to 10 CFR Part 72 licensing requirements are set forth in 10 CFR 72.7, Specific Exemptions, which reads as follows, "The Commission may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest."

As discussed above, loading in accordance with CoC 1014, proposed Amendment 2, has no safety significance and therefore, will not endanger life and property of the common defense and security. It is also in the public's best interest to grant an exemption in order to provide sufficient space in the spent fuel pool to allow full core off-load capability and staging of fresh fuel to avoid impacting refueling operations for FNP Unit 1.

While 10 CFR 72.7 does not specify a showing of "special circumstances" like those required for 10 CFR 50 exemptions, SNC exemption request can be clarified by using three of the special circumstances identified in 10 CFR 50.12. The applicable special circumstances are discussed below:

1. 10 CFR 50.12(a)(2)(ii) - Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose.

The underlying purpose of 10 CFR 72.212 is to allow reactor licensees to utilize dry fuel storage casks that have previously been found to be appropriately analyzed for use by the cask designer and approved by the NRC. As described above, the loading of dry fuel storage casks in accordance with proposed Amendment 2 to CoC 1014, provides reasonable assurance that public health and safety and the environment will be adequately protected.

2. 10 CFR 50.12(a)(2)(iii) - Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or those incurred by others similarly situated.

The FNP Unit 1 SFP currently does not contain enough space to allow a full offload of fuel from the reactor core and staging of fresh fuel to facility refueling operations on FNP Unit 1. The HI-STORM 100 cask systems purchased for cask loading operations at FNP incorporate the use of METAMIC<sup>®</sup> as the fixed neutron absorber and absent NRC approval of the requested exemption, would require NRC approval of CoC 1014, Amendment 2 prior to use. In addition, failure of NRC to grant the requested exemption will result in refueling operations delays, thereby unnecessarily extending the FNP Unit 1 refueling outage. As a result, compliance with 10 CFR 72.212(a) and 10 CFR 72.214 will result in both an undue hardship and costs that are significantly in excess of those contemplated when the regulation was adopted.

3. 10 CFR 50.12(a)(2)(v) – The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation.

Since an amendment has been submitted by Holtec to amend the CoC for general license use, the SNC request for exemption is limited to the interim period until Amendment 2 to CoC 1014 is approved and incorporated into the list of approved casks in 10 CFR 72.214. Good faith efforts have been made by Holtec to have the CoC amended prior to the actual need date by submitting the initial request for Amendment 2 in March, 2002. Within 90 days following NRC approval of CoC 1014, Amendment 2, SNC will take the necessary actions to allow certification of the casks to CoC 1014, Amendment 2, thereby eliminating the need for the exemption.

## 5.0 Summary

In conclusion, SNC requests an exemption from the requirements of 10 CFR 72.212(a)(2) and 10 CFR 72.214. Specifically, an exemption is requested to permit loading of HI-STORM 100 cask systems in accordance with CoC 1014, proposed Amendment 2. SNC further requests that NRC approval of the proposed exemption include treatment of casks authorized for loading in accordance with the exemption as approved casks listed in 10 CFR 72.214 for the purpose of compliance with the remainder of the requirements of Part 72. In addition, SNC will perform helium leak testing of the multi-purpose canister vent and drain port covers in accordance with the leak tight criteria provided in American National Standard Institute (ANSI) N14.5-1997, "American National Standard for Radioactive Materials – Leakage Tests on Packages for Shipment." Upon NRC approval of CoC 1014, Amendment 2, SNC will modify the licensing bases for the loaded casks to incorporate CoC 1014, Amendment 2. As discussed above, the requested exemption has no safety significance and therefore, will not endanger life or property or the common defense and security.



**Joseph M. Farley Nuclear Plant, Units 1 and 2  
Request for Exemption from 10 CFR 72.212(a)(2) and 10 CFR 72.214**

**Enclosure 2**

**List of Regulatory Commitments**

**Joseph M. Farley Nuclear Plant, Units 1 and 2  
Request for Exemption from 10 CFR 72.212(a)(2) and 10 CFR 72.214**

**Enclosure 2**

**List of Regulatory Commitments**

The following table identifies those actions committed to by Southern Nuclear Operating Company in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

Commitment	Type		Scheduled Completion Date (if applicable)
	One-Time Action	Continuing Compliance	
For the three Unit 1 Cask loaded in 2005, SNC will perform helium leak testing of the multi-purpose canister vent and drain port covers in accordance with the leak tight criteria provided in American National Standard Institute (ANSI) N14.5-1997, "American National Standard for Radioactive Materials – Leakage Tests on Packages for Shipment."	X		During the first cask loading campaign on Unit 1.
Upon NRC approval of CoC 1014, Amendment 2, SNC will modify the licensing bases for the loaded casks to incorporate CoC 1014, Amendment 2.	X		90 days after approval of CoC 1014, Amendment 2.