

**SAFETY EVALUATION REPORT**  
**EXEMPTION FOR**  
**FLORIDA POWER AND LIGHT**  
**ST. LUCIE UNITS 1 AND 2**  
**INDEPENDENT SPENT FUEL STORAGE INSTALLATION**  
**DOCKETS 72-1030, 50-335 AND 50-389**

**1.0 SUMMARY**

By letter dated January 12, 2010, Florida Power and Light (FPL) requested exemptions from the requirements of 10 CFR Part 72 to permit them to use the proposed Amendment 1 to Certificate of Compliance (CoC) No. 1030 for the NUHOMS® HD Horizontal Modular Storage System for Irradiated Nuclear Fuel. Amendment 1 has been reviewed by staff in the Division of Spent Fuel Storage and Transportation (SFST), and the preliminary Safety Evaluation Report (SER), draft CoC, and draft Technical Specifications (TS) are currently in rulemaking.

In its letter, FPL has requested exemptions to:

- 10 CFR 72.48(c)(1)(ii)(B), which allows design or procedure changes if there are no changes to the terms, conditions or specifications of the CoC.
- 10 CFR 72.212(b)(2)(i)(A), which states “[p]erform written evaluations, prior to use, that establish that conditions set forth in the Certificate of Compliance have been met.”
- 10 CFR 72.212(b)(7), which states that “[t]he licensee shall comply with the terms and conditions of the certificate.”

Transnuclear, Inc. (TN) requested several changes to the NUHOMS® HD CoC, for Amendment 1, which would be adopted by FPL in accordance with the requested exemption.

The Nuclear Regulatory Commission (NRC) has evaluated the exemption request and concludes in the discussion below that the proposed exemption does not pose any increased risk to public health and safety.

**2.0 DISCUSSION**

The licensee requested this exemption in order to be able to use the proposed Amendment 1 in its entirety for the St. Lucie Unit 1 and Unit 2 Independent Spent Fuel Storage Installation (ISFSI) fuel loading campaigns, scheduled to begin in July 2010. St. Lucie Unit 2 is currently scheduled to begin a refueling outage (RFO) in January 2011. During the Unit 2 RFO approximately 76 fuel assemblies will be removed from the core for storage in the Unit 2 spent fuel pool. Due to the addition of these 76 assemblies,

when Unit 2 is scheduled to restart in March 2011, FPL will no longer have full core offload capability. Similarly, for St. Lucie Unit 1, an RFO is scheduled to begin in August 2011. During the Unit 1 RFO, approximately 88 irradiated fuel assemblies will be removed from the core for storage in the Unit 1 spent fuel pool. When Unit 1 is scheduled to restart in November 2011, FPL will no longer have full core offload capability for Unit 1. In addition, if fuel from the Unit 1 spent fuel pool is not transferred to the ISFSI prior to the Unit 1 RFO, there will not be sufficient room in the pool to pre-stage the 88 new fuel assemblies, complicating the fuel handling evolutions required for core reload during the Unit 1 RFO. FPL has requested an exemption to the requirements in 10 CFR Part 72, which require the licensee to comply with the terms of a Certificate of Compliance, specifically:

- 10 CFR 72.48(c)(1)(ii)(B) which allows design or procedure changes if there are no changes to the terms, conditions or specifications of the CoC.
- 10 CFR 72.212(b)(2)(i)(A) which states “[p]erform written evaluations, prior to use, that establish that conditions set forth in the Certificate of Compliance have been met.”
- 10 CFR 72.212(b)(7) which states that “[t]he licensee shall comply with the terms and conditions of the certificate.”

In addition, the NRC has also determined, pursuant to 10 CFR 72.7, to include 10 CFR 72.212(a)(2) and 72.214 within the scope of the exemption request as these provisions would also be implicated in the proposed exemption request.

- 10 CFR 72.212(a)(2), which states that the “general license is limited to storage of spent fuel in casks approved under the provisions of this part.”
- 10 CFR 72.214, which sets forth the list of approved casks.

Under the terms of the general license at St. Lucie Units 1 and 2, FPL is currently using the Transnuclear, Inc. (TN) NUHOMS<sup>®</sup> HD system in accordance with CoC No. 1030. However, the provisions of the existing CoC do not include the necessary provisions for the planned loading campaigns. In November 2007, TN submitted requested approval of an amendment, under the provisions of 10 CFR Part 72 to Certificate of Compliance (CoC) No. 1030, for the NUHOMS<sup>®</sup> HD Horizontal Modular Storage System for Irradiated Nuclear Fuel. One of the major changes to the system included in the request for Amendment 1 is the addition of Combustion Engineering (CE) 16 x 16 fuel assemblies as approved contents. FPL plans to load this type of fuel in the upcoming loading campaigns. Other changes associated with Amendment 1 include the addition of non-fuel assembly hardware as approved contents, and the addition of requirements to qualify metal matrix composite (MMC) neutron absorbers with integral aluminum cladding.

NRC staff completed their technical review of Amendment 1 to CoC No. 1030 in October 2009. The Amendment will be final following completion of the rulemaking process, assuming there are no substantive comments in response to the *Federal Register* Notice. The rulemaking package is currently in the concurrence process. The proposed rule is expected to be published for comment in the *Federal Register* in May 2010, and the rule would be effective (and the Amendment approved) in August 2010, following resolution of any public comments. Details of the technical review are available in the preliminary SER (ML092050840).

### **3.0 CONCLUSION**

The staff has determined that FPL's planned use of Amendment 1 to CoC 1030 for their planned ISFSI loading campaign does not differ in any way from the provisions of the proposed Amendment, which has been approved by technical staff and which is currently in the rulemaking process. In addition, the staff has determined that the generic analysis supporting Amendment 1 to CoC 1030 would apply to the proposed action at the St. Lucie ISFSI site. Therefore, the staff has concluded that the exemption request submitted by FPL for St. Lucie Units 1 and 2 does not pose any increased risk to public health and safety, and is therefore approved.

The exemption is acceptable subject to the following conditions:

- 1) The exemption pertains only to the cask loading campaigns (where spent fuel is transferred from the spent fuel pools to the casks) at the St. Lucie Unit 1 and Unit 2 ISFSI scheduled for the summer 2010, as identified in the FPL January 12, 2010 letter.
- 2) If the NRC receives significant adverse comments (as determined by the NRC) during the public comment period for the direct final rule, and as a result of such comments, changes to the preliminary SER, draft CoC, or draft TS are required, FPL will then be required to address those changes in a manner deemed satisfactory to NRC staff.