



2010

January 12, 2009

L-2010-006  
10 CFR 72.7

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

RE: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Request for Exemptions from NUHOMS® HD Certificate of Compliance No.  
1030 Amendment No. 0 for Spent Fuel Storage Casks

Gentlemen:

Pursuant to the provisions of 10 CFR 72.7, "Specific exemptions," Florida Power & Light Company (FPL) requests exemptions from requirements, specified in 10 CFR 72.212, "Conditions of general license issued under §72.210." The exemptions would be from the requirements of 10 CFR 10 CFR 72.212(b)(2)(i)(A), and 10 CFR 72.212(b)(7), both of which require the licensee to comply with the terms and conditions of the NRC issued certificate of compliance (CoC). In connection with these requirements, FPL also requests an exemption from 10 CFR 72.48(c)(1)(B), which allows design or procedure changes if there are no changes to the terms, conditions, or specifications of the CoC.

These exemptions are requested because FPL must use the proposed Amendment No. 1 to CoC 1030 in its entirety for the St. Lucie Unit 1 and Unit 2 independent spent fuel storage installation (ISFSI) fuel loading campaigns. Amendment No. 1 to CoC 1030 is in final NRC review and approval, but its issuance date may not accommodate FPL's scheduled fuel loading campaigns beginning in July 2010.

Attachment 1 contains the full details and justification for these exemption requests, and Attachment 2 provides the Environmental Impact Assessment.

FPL requests that NRC grant these exemption requests such that they become effective by March 1, 2010, to accommodate the planned St. Lucie Unit 1 and Unit 2 fuel loading campaigns.

Because of the timing of these exemption requests relative to the potential timing of the issuance of CoC Amendment 1, it is also requested that, should CoC 1030 Amendment No. 1 be issued prior to the actual loading of fuel into a dry storage canister, then Amendment No. 1 shall govern and these exemption requests, if granted, shall be superseded by Amendment 1. Otherwise, these exemption requests shall govern. FPL


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shall effect changes to procedures, processes, and evaluations pursuant to these conditions.

If you have any questions concerning this matter, please contact Mr. Gary Hollinger at 561-691-7457, or Mr. George Bieberbach at 412-974-1911.

Sincerely yours,

A handwritten signature in black ink that reads "Richard L. Anderson". The signature is written in a cursive style with a large, stylized "R" and "A".

Richard L. Anderson  
Site Vice President  
St. Lucie Plant

RLA/KWF

Attachments:

ATTACHMENT 1

St. Lucie Units 1 and 2

Request For Exemptions From 10 CFR 72.212(b)(2)(i)(A), 10 CFR 72.212(b)(7),  
and 10 CFR 72.48(c)(1)(B)

I. Background

A request for Amendment No. 1 to Certificate of Compliance (CoC) No. 1030 was submitted by Transnuclear, Inc. (TN), to the NRC in an application dated November 1, 2007 (Section IV., References: Reference 1), as supplemented by letters dated December 15, 2008 through September 17, 2009 (References 4, 5, 7, 8, and 12). CoC 1030 Amendment No. 1 includes, for example, the following changes:

- addition of Combustion Engineering (CE) 16x16 class fuel assemblies as authorized contents;
- reduction in the minimum ambient temperature from -20°F to -21°F;
- expansion of the authorized contents of the NUHOMS® HD System to include pressurized water reactor (PWR) fuel assemblies with control components (CCs);
- reduction of the minimum initial enrichment of fuel assemblies from 1.5 wt.% U-235 to 0.2 wt.% U-235;
- clarification of the requirements of reconstituted fuel assemblies;
- addition of requirements to qualify metal matrix composite (MMC) neutron absorbers with integral aluminum cladding; and
- deletion of the use of nitrogen for draining the water from the dry shielded canister (DSC), and allow only helium as a cover gas during DSC cavity water removal operations.

Thus, several changes and clarifications are proposed to the CoC, including the Technical Specifications and Bases, and revisions to the Updated Final Safety Analysis Report (UFSAR).

Florida Power & Light Company (FPL) understands that the NRC staff technical review of Amendment 1 has been completed and that a preliminary NRC Safety Evaluation Report has been prepared (Reference 10). However, following recent discussions with the NRC, FPL has concluded that because of FPL's fuel load schedule requirements, FPL should request an exemption to the current CoC 1030 and thereby request implementation of the Technical Specifications presently contained in the proposed CoC 1030 Amendment No. 1.

II. Exemption Requests

Pursuant to the provisions of 10 CFR 72.7, "Specific exemptions," FPL requests exemptions from requirements, specified in 10 CFR 72.212, "Conditions of general license issued under §72.210." The exemptions would be from the requirements of 10 CFR 72.212(b)(2)(i)(A), and 10 CFR 72.212(b)(7), both of which require the licensee to comply with the terms and conditions of the NRC issued CoC. In connection with these requirements, FPL also requests an exemption

from 10 CFR 72.48(c)(1)(B), which allows design or procedure changes if there are no changes to the terms, conditions, or specifications of the CoC.

These exemptions are requested because FPL must use the proposed Amendment No. 1 to CoC 1030 in its entirety for the ISFSI fuel loading campaigns. Amendment No. 1 to CoC 1030 is in final NRC review and approval (References 1 through 12), but the timing of its issuance may not accommodate FPL's scheduled fuel loading campaigns beginning in July 2010.

One request is for exemption from the requirement of 10 CFR 72.212(b)(2)(i)(A) which states, "Perform written evaluations, prior to use, that establish that conditions set forth in the Certificate of Compliance have been met." This exemption would apply to compliance with specific requirements in CoC No. 1030 Amendment No. 0, issued to Transnuclear, Inc. (TN) for the NUHOMS® HD System (HD-32PTH) which is utilized at St. Lucie. An exemption is requested because Amendment 0 does not include the necessary provisions required for this campaign, and Amendment 1 contains such provisions. Amendment No. 1 to CoC 1030 has not yet been issued by the NRC and FPL must use Amendment 1 in its entirety. Since FPL would then be using CoC Amendment 1 via these exemption requests, then 72.48(c)(1)(B) also requires an exemption because of the change to CoC Amendment 0. For example, FPL plans to base its 10 CFR 72.212 assessment and the accompanying 10 CFR 72.48 documentation on these exemption requests when granted.

Another request is for exemption from the stipulation in 10 CFR 72.212(b)(7) which states "The licensee shall comply with the terms and conditions of the certificate." This request is also made for the reason stated above. FPL wishes to implement CoC 1030 Amendment No. 1 in its entirety for the planned St. Lucie Unit 1 and Unit 2 fuel loading campaigns. For example, for the upcoming loading campaigns FPL plans to load the Combustion Engineering (CE) 16 x16 fuel assemblies that are presently described and analyzed in CoC 1030 Amendment No. 1 but not in Amendment 0.

Because of the timing of these exemption requests versus the timing of the issuance of CoC Amendment 1, it is also requested that, should CoC 1030 Amendment No. 1 be issued prior to the actual loading of fuel into a dry storage canister, then Amendment No. 1 shall govern and these exemption requests, if granted, shall be superseded by Amendment 1. Otherwise, the exemptions request shall govern. FPL shall effect changes to procedures, processes, and evaluations pursuant to these conditions.

### III. Justification

These exemptions are required to prepare for, and to perform, the loading of irradiated nuclear fuel into the ISFSI at St. Lucie Unit 1 and Unit 2. Numerous plans, programs, procedures and processes must be prepared or modified, and instituted, which must be based on these exemption requests considering that the CoC 1030 Amendment No. 1 is not yet a legal basis.

10 CFR 72.7 specifies that the Commission may grant exemptions from the requirements of 10 CFR Part 72 when the exemptions are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

In the preliminary Safety Evaluation Report (SER) prepared by the NRC for Amendment No. 1 (Reference 10), the NRC staff found that the proposed changes do not reduce the safety margin for the NUHOMS® HD Horizontal Modular Storage System for Irradiated Nuclear Fuel. The NRC staff concluded that the proposed changes to the approved contents of the NUHOMS® HD System meet the requirements of 10 CFR Part 72.

The NRC has already reviewed, and documented in the preliminary SER for the proposed CoC 1030 Amendment No. 1, the proposed Technical Specifications that FPL will use. Therefore, the NRC staff has completed the technical review of CoC 1030 Amendment No. 1, as planned to be used by FPL.

The limitations established with the CoC 1030 Amendment No. 1 Technical Specifications will ensure that analyses forming the basis for the NRC conclusions in the preliminary SER are met. Therefore, FPL concludes that these exemptions will not endanger life or property or the common defense and security.

#### IV. References

1. Letter E-25747 from R. Grubb (Transnuclear) to U. S. Nuclear Regulatory Commission, "Application for Amendment 1 of the NUHOMS® HD Certificate of Compliance No. 1030 for Spent Fuel Storage Casks, Revision 0" dated November 1, 2007
2. Letter from B. Jennifer Davis (NRC) to D. Shaw (Transnuclear), "Acknowledgment Review of the Transnuclear NUHOMS® Proposed Amendment No. 1 to the NUHOMS® HD System (TAC No. L24153)" dated June 6, 2008
3. Letter from B. Jennifer Davis (NRC) to D. Shaw (Transnuclear), "Request for Additional Information for Review of Amendment 1 to the NUHOMS® HD System (TAC No. L24153), Including Updated Review Schedule" dated November 14, 2008
4. Letter E-27377 from R. Grubb (Transnuclear) to U. S. Nuclear Regulatory Commission, "Revision 1 to Transnuclear, Inc. (TN) Application for Amendment 1 to the NUHOMS® HD System, Response to Request for Additional Information (Docket No. 72-1030; TAC No. L24153)" dated December 15, 2008
5. Letter E-27737 from J. Bondre (Transnuclear) to U. S. Nuclear Regulatory Commission, "Revision 2 to Transnuclear, Inc. (TN) Application for Amendment 1 to the NUHOMS® HD System (Docket No. 72-1030; TAC No. L24153)" dated February 19, 2009

6. Letter from B. Jennifer Davis (NRC) to D. Shaw (Transnuclear), "Second Request for Additional Information for Review of Amendment 1 to the NUHOMS® HD System (TAC No. L24153)" dated April 3, 2009
7. Letter E-28000 from J. Bondre (Transnuclear) to U. S. Nuclear Regulatory Commission, "Revision 3 to Transnuclear, Inc. (TN) Application for Amendment 1 to the NUHOMS® HD System, Response to Second Request for Additional Information (Docket No. 72-1030; TAC No. L24153)" dated April 30, 2009
8. Letter E-28168 from J. Bondre (Transnuclear) to U. S. Nuclear Regulatory Commission, "Revision 4 to Transnuclear, Inc. (TN) Application for Amendment 1 to the NUHOMS® HD System (Docket No. 72-1030; TAC No. L24153)" dated May 26, 2009
9. Letter E-28236 from J. Bondre (Transnuclear) to U. S. Nuclear Regulatory Commission, "Revision 5 to Transnuclear (TN) Application for Amendment 1 to the NUHOMS® HD System (Docket No. 72-1030; TAC No. L24153)" dated June 10, 2009
10. Letter from B. Jennifer Davis (NRC) to D. Shaw (Transnuclear), "Proposed Certificate of Compliance and Preliminary Safety Evaluation Report for the Transnuclear, Inc. NUHOMS® HD Horizontal Modular Storage System for Irradiated Nuclear Fuel, Amendment 1 (TAC No. L24153)" dated July 28, 2009
11. Letter E-28403 from D. Shaw (Transnuclear) to U. S. Nuclear Regulatory Commission, "Transnuclear, Inc. Comments on the Proposed Certificate of Compliance and Preliminary Safety Evaluation Report for the Transnuclear, Inc. to the NUHOMS® HD Horizontal Modular Storage System for Irradiated Nuclear Fuel, Amendment 1 (Docket No. 72-1030; TAC No. L24153)" dated July 30, 2009
12. Letter E-28479 from J. Bondre (Transnuclear) to U. S. Nuclear Regulatory Commission, "Revision 6 to Transnuclear, Inc. (TN) Application for Amendment 1 to the NUHOMS® HD System (Docket No. 72-1030; TAC No. L24153)" dated September 17, 2009

ATTACHMENT 2  
St. Lucie Units 1 and 2  
Request For Exemptions From 10 CFR 72.212(b)(2)(i)(A), 10 CFR 72.212(b)(7),  
and 10 CFR 72.48(c)(1)(B)  
Environmental Assessment Information

The following information is provided in support of an environmental assessment and finding of no significant impact for the proposed exemptions:

Identification of the Proposed Action

Pursuant to the provisions of 10 CFR 72.7, "Specific exemptions," Florida Power & Light Company (FPL) requests exemptions from requirements, specified in 10 CFR 72.212, "Conditions of general license issued under §72.210." The exemptions would be from the requirements of 10 CFR 72.212(b)(2)(i)(A), and 10 CFR 72.212(b)(7), both of which require the licensee to comply with the terms and conditions of the NRC issued certificate of compliance (CoC). In connection with these requirements, FPL also requests an exemption from 10 CFR 72.48(c)(1)(B), which allows design or procedure changes if there are no changes to the terms, conditions, or specifications of the CoC.

These exemptions are requested because FPL must use the proposed Amendment No. 1 to CoC 1030 in its entirety for the St. Lucie Unit 1 and Unit 2 independent spent fuel storage installation (ISFSI) fuel loading campaigns. Amendment No. 1 to CoC 1030 is in final NRC review and approval, but the timing of its issuance may not accommodate FPL's scheduled fuel loading campaigns beginning in July 2010.

One request is for exemption from the requirement of 10 CFR 72.212(b)(2)(i)(A) which states, "Perform written evaluations, prior to use, that establish that conditions set forth in the Certificate of Compliance have been met." This exemption would apply to compliance with specific requirements in CoC No. 1030 Amendment No. 0, issued to Transnuclear, Inc. (TN) for the NUHOMS<sup>®</sup> HD System (HD-32PTH) which is utilized at St. Lucie. An exemption is requested because Amendment 0 does not include the necessary provisions required for this campaign, and Amendment 1 contains such provisions. Amendment No. 1 to CoC 1030 has not yet been issued by the NRC and FPL requires Amendment 1 in its entirety. Since FPL would then be using CoC Amendment 1 via these exemption requests, then 72.48(c)(1)(B) also requires an exemption because of the change to CoC Amendment 0. For example, FPL plans to base its 10 CFR 72.212 assessment and the accompanying 10 CFR 72.48 documentation on these exemption requests when granted.

Another request is for exemption from the stipulation in 10 CFR 72.212(b)(7) which states "The licensee shall comply with the terms and conditions of the certificate." This request is also made for the reason stated above. FPL requires implementation of CoC 1030 Amendment No. 1 in its entirety for the planned St. Lucie Unit 1 and Unit 2 fuel loading campaigns. For example, for the upcoming loading campaigns FPL plans to load the Combustion Engineering (CE) 16 x16 fuel

assemblies that are presently described and analyzed in CoC 1030 Amendment No. 1 but not in Amendment 0.

Because of the timing of these exemption requests relative to the potential timing of the issuance of CoC Amendment 1, it is also requested that, should CoC 1030 Amendment No. 1 be issued prior to the actual loading of fuel into a dry storage canister, then Amendment No. 1 shall govern and these exemption requests, if granted, shall be superseded by Amendment 1. Otherwise, these exemption requests shall govern. FPL shall effect changes to procedures, processes, and evaluations pursuant to these conditions.

#### The Need for the Proposed Action

These exemptions are required to prepare for, and to perform, the loading of irradiated nuclear fuel into the ISFSI at St. Lucie Units 1 and 2. Numerous planning, programs, procedures and processes need to be prepared, modified, or instituted, which must be based on these exemption requests since the CoC 1030 Amendment No. 1 is not yet a legal basis.

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 to the spent fuel pool, upon the planned restart from the Unit 2 RFO in March 2011 FPL would no longer have the ability to offload a full core of 217 fuel assemblies to the spent fuel pool.

In order to avoid this potential impact, which could significantly impact the ability of FPL to provide reliable electric power to its customers, FPL plans to transfer 256 spent fuel assemblies (8 dry storage casks of 32 assemblies each) from the current spent fuel pool inventories at Unit 1 and Unit 2 to the ISFSI prior to the Unit 2 RFO. The dry shielded canisters (DSCs) and horizontal storage modules (HSMs), for the NUHOMS<sup>®</sup> HD System (HD-32PTH) are available for these fuel loading and transfer operations.

The planned transfer of the 256 fuel assemblies prior to the Unit 2 RFO must be completed in 2010 to allow FPL's resources, including personnel and equipment, to be dedicated to the Unit 2 RFO preparations. These resources will not be available for ISFSI fuel transfer operations. In order to load and transfer eight casks to the ISFSI, loading activities for the first cask must begin by July 2010. FPL requires these exemptions to allow loading in the NUHOMS<sup>®</sup> HD System (HD-32PTH) dry cask storage system prior to the Unit 2 RFO and requests approval of these exemptions by March 1, 2010 to allow sufficient time to load the eight casks.

St. Lucie Unit 1 is currently scheduled to begin an RFO in August 2011. During the Unit 1 RFO approximately 88 irradiated fuel assemblies will be removed from the core for storage in the spent fuel pool. Due to the addition of these 88 assemblies to the Unit 1 spent fuel pool, upon the planned restart from the Unit 1 RFO in November 2011 FPL would no longer have the ability to offload a full core of 217 fuel assemblies to the spent fuel pool. In addition, if no fuel is transferred to the ISFSI prior to the start of the Unit 1 RFO, there would be insufficient space in



the spent fuel pool to pre-stage all 88 new fuel assemblies. This would complicate the fuel handling evolutions required for core reload during the Unit 1 RFO.

In addition to the potential impacts associated with full core offload capability and reload fuel handling discussed above, there would also be a cost impact associated with a delay in any transfer operations until after the 2011 Unit 2 RFO. FPL has currently scheduled personnel, training, and planned for equipment to support a practice dry run during the June-July 2010 time period, to be followed directly by the planned DSC loading. If the loading and transfer of eight casks cannot be accomplished, then FPL would have to reschedule and remobilize the personnel and equipment some time after the Unit 2 RFO.

Transfer of fuel assemblies from the spent fuel pool to the ISFSI according to the planned 2010 schedule would also afford FPL flexibility for fuel storage options to address issues or recommendations resulting from security aspects of spent fuel storage.

10 CFR 72.7 specifies that the Commission may grant exemptions from the requirements of 10 CFR Part 72 when the exemptions are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest. FPL has concluded that these conditions for granting an exemption are met and has provided the justification in this submittal.

Further, there is no identifiable regulatory process that could be completed within the required timeframe that would preclude the need for these exemption requests.

#### Environmental Impacts of the Proposed Action

Since FPL will be implementing Amendment No. 1 as proposed, FPL concludes that the exemption will have no significant environmental impact. The exemption will not significantly increase the probability or consequences of accidents. There are no changes being made in the types or amounts of effluents that may be released offsite, and there is no significant increase in occupational or public radiation exposure as a result of the proposed activities. Therefore, there are no significant radiological environmental impacts associated with the proposed exemption. With regard to potential non-radiological environmental impacts, FPL has determined that the proposed exemption has no potential to affect any historic sites. It does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no significant non-radiological environmental impacts associated with these requested exemptions.

#### Environmental Impacts of the Alternatives to the Proposed Action

As an alternative to the requested exemption, the Commission could consider denial (i.e., the “no-action” alternative). Denial of the exemption would result in no change to the current environmental impacts. FPL considers the “no-action” alternative to potentially severely impact FPL’s ability to provide safe, affordable, competitive, and reliable electrical power generation.

Alternative Use of Resources

These requested exemptions do not involve the use of any different resources than those previously considered in the Final Environmental Statements for St. Lucie Unit 1 and Unit 2. Accordingly, the proposed action is not a major federal action significantly affecting the quality of the environment.