

**From:** Orf, Tracy  
**Sent:** Wednesday, April 27, 2011 9:47 AM  
**To:** 'Wasik, Chris'  
**Cc:** 'Frehafer, Ken'  
**Subject:** St. Lucie Unit 1 EPU - request for additional information (Fire Protection)

Dear Mr. Wasik,

By letter dated November 22, 2010 (Agencywide Documents Access and Management System Accession No. ML103560415) Florida Power & Light Company (the licensee) submitted a license amendment request for St. Lucie Unit 1.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's submittal and has concluded that additional information is required from the licensee in order for the NRC staff to complete their review. The questions below describe these requests for additional information (RAIs).

The NRC requests that the licensee respond to these RAIs within 30 days of the date of this e-mail. If the licensee concludes that more than 30 days are required to respond to the RAIs, the licensee should request additional time, including a basis for why the extension is needed.

Please contact me at the number below or by e-mail if you have any questions on this issue or if you require additional time to submit your responses.

Sincerely,

**Tracy J. Orf**, Project Manager  
St. Lucie  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation  
Phone: (301) 415-2788

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REQUEST FOR ADDITIONAL INFORMATION (RAI)  
REGARDING LICENSE AMENDMENT REQUEST FOR  
EXTENDED POWER UPRATE  
ST. LUCIE PLANT, UNIT NO.1  
DOCKET NO. 50-335

**AFPB-1:**

Attachment 1 to Matrix 5 ("Supplemental Fire Protection Review Criteria, Plant Systems"), of NRR RS-001, Revision 0, "Review Standard for Extended Power Uprates [EPU]," states that *"power uprates typically result in increases in decay heat generation following plant trips. These increases in decay heat usually do not affect the elements of a fire protection program related to*

*(1) administrative controls, (2) fire suppression and detection systems, (3) fire barriers, (4) fire protection responsibilities of plant personnel, and (5) procedures and resources necessary for the repair of systems required to achieve and maintain cold shutdown. In addition, an increase in decay heat will usually not result in an increase in the potential for a radiological release resulting from a fire. However, the licensee's LAR should confirm that these elements are not impacted by the extended power uprate."*

The NRC staff notes that license amendment request (LAR), Attachment 5, to L-2010-259, "Licensing Report," Section 2.5.1.4.2.3, on page 2.5.1.4-4, specifically addresses only items (1) through (3) above. Provide statements to address items (4) and (5).

#### **AFPB-2:**

LAR, Attachment 5, to L-2010-259, Section 2.5.1.4.2.3., on page 2.5.1.4-5, states that, "*...The impact of plant modifications being implemented in support of EPU (e.g., upgrade of main transformers with new coolers) on the FPP will be addressed in accordance with the plant change/modification process...*"

Are there fire protection program plant modifications planned (e.g., adding new cable trays, or re-routing of existing cables, or increases in combustible loading affecting fire barrier ratings, or changes to administrative controls) at EPU conditions? Clarify whether this request involves plant modifications, or changes to the fire protection program. If any, identify proposed modifications and discuss the impact of these modifications on the plant's compliance with the fire protection program licensing basis, Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.48, or applicable portions of 10 CFR 50, Appendix R.

#### **AFPB-3:**

The staff notes that Attachment 5, to L-2010-259, Section 2.5.1.4.2.3., on page 2.5.1.4-13, states that "*...The above manual actions and manual action time limits following a fire have been reviewed and are not affected for EPU conditions, which include increased decay heat loads. Assumptions of time response considered in performing these operator actions do not change as a result of EPU. No new operator actions are required to be added to the SSA in support of the EPU . . .*"

Discuss (1) the operator action response time, including any assumptions that may have been made in determining that the operator manual actions are feasible and reliable and can be accomplished to achieve and maintain hot and then cold shutdown conditions and (2) how additional heat in the plant environment from the EPU will not interfere with required operator manual actions being performed at their designated time.

#### **AFPB-4:**

Some plants credit aspects of their fire protection system for other than fire protection activities (e.g., utilizing the fire water pumps and water supply as backup cooling or inventory for non-primary reactor systems). If St. Lucie Unit 1 credits its fire protection system in this way, identify the specific situations and discuss to what extent, if any, the extended power and measurement uncertainty recapture uprates affect these "non-fire-protection" aspects of the plant fire protection system. If St. Lucie Unit 1 does not take such credit, verify this as well.

Discuss how any non-fire suppression use of fire protection water will impact the need to meet the fire protection system design demands.