

April 28, 2004

MEMORANDUM TO: James W. Clifford, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

FROM: Lee A. Licata, Project Manager, Section 2        /RA/  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

SUBJECT: SEABROOK STATION, DRAFT REQUEST FOR ADDITIONAL  
INFORMATION (TAC NO. MC2364)

The attached draft request for information (RAI) was transmitted on April 27, 2004, to Mr. Michael O'Keefe of FPL Energy, LLC(the licensee). This draft RAI was transmitted to facilitate the technical review being conducted by NRR and to support a conference call with the licensee to discuss the RAI.

This RAI is related to the licensee's amendment request for Seabrook Station (Seabrook) dated March 17, 2004. The proposed amendment would increase the maximum authorized reactor core power level from 3411 megawatt thermal (MWt) to 3587 MWt. This represents a nominal increase of 5.16 percent rated thermal power.

Review of the RAI would allow the licensee to determine and agree upon a schedule to respond to the RAI. This memorandum and the attachment do not convey or represent an NRC staff position regarding the licensee's request

Docket No. 50-443

Attachment: Draft RAI

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DRAFT REQUEST FOR ADDITIONAL INFORMATION  
RELATED TO POWER UPRATE LICENSE AMENDMENT REQUEST

SEABROOK STATION

DOCKET NO. 50-443

By letter dated March 17, 2004, FPL Energy Seabrook, LLC (Seabrook or the licensee) submitted an amendment request. The proposed amendment would increase the maximum authorized reactor core power level for Seabrook from 3411 megawatt thermal (MWt) to 3587 MWt. This represents a nominal increase of 5.16% rated thermal power.

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information the licensee provided that supports the proposed amendment and requests the following additional information to clarify the submittal:

Based on our review of the licensee's submittal dated March 17, 2004, regarding a request for NRC to approve a stretch power uprate (SPU) for Seabrook, it has been determined that the licensee's submittal needs to be supplemented and documented with the following additional information in order to complete our acceptance review:

- The submittal should identify those BOP areas (Matrix 5 of RS-001) that are potentially impacted from a safety perspective (including consideration of licensing basis criteria and commitments that have been made) as a result of the proposed SPU, and those that are not impacted (provide explanation for the "no safety impact determination," such as the original design-basis analysis is bounding). This will help to focus NRC review effort and expedite the completion of the review.
  - + The SPU evaluation of BOP systems (Matrix 5 of RS-001) should include consideration of all design and licensing basis criteria that apply, including any commitments that have been made. Any instances where the plant licensing basis or commitments are not being satisfied as a result of the SPU should be specifically identified and justified in accordance with 10 CFR 50.59 requirements and the licensee's commitment tracking and control program.
- For those BOP areas (Matrix 5 of RS-001) that are potentially impacted:
  - + All instances where existing design and licensing basis criteria and commitments are not satisfied under SPU, where criteria are not used consistently, or where SPU conditions are not bounded by previous analyses, should be clearly identified, discussed in detail (including impact on plant operation), and fully justified. This would include (for example) any changes in analytical methodologies or assumptions, taking credit for additional operator actions or crediting operator response times that are less conservative than previously assumed, and failure to satisfy design specifications. A summary listing of any exceptions should be included in the submittal to facilitate NRC review.

- + All instances where SPU conditions will result in challenges to BOP equipment or marginal performance that could have a safety impact should be highlighted for NRC review and consideration.
- + Measures for assuring compliance with vendor recommendations and standard industry practice, including any restrictions that will be placed on plant operation, should be discussed. Operation that could impact safety that is contrary to existing criteria, vendor recommendations, and/or applicable industry standards should be fully justified.
- + The considerations referred to in the Regulatory Evaluation Sections of RS-001, Section 3.3, Insert 5, should be addressed.
- Acceptance should be based on satisfying all existing licensing-basis criteria, including applicable commitments that have been made. A summary of the basis for acceptance, including a brief discussion of the bounding considerations and acceptance criteria that are impacted by SPU; analyses that have been completed; and a comparison of the existing capability vs. the capability following SPU implementation vs. the licensing-basis acceptance criteria should be included for each area of review.
- A discussion of the startup testing program, including a description of how analytical conclusions will be confirmed, should be provided (see RS-001 for guidance). In particular, where existing design criteria will not be satisfied or marginal performance is expected under SPU conditions, plant performance should be confirmed during plant startup and initial full power operation against suitable acceptance criteria.

#### Specific Observations:

1. Does methodology satisfy licensing basis criteria in all respects; are there any exceptions? [Attachment 1, Section 1.2, Pages 1-4, 1-5]
2. What "expectations" of RS-001 are not satisfied? [Attachment 1, Section 1.3, Page 1-8]
3. With respect to Note 1, what about any impact due to plant modifications? Also, there should not be two different "Note 1" listings. [Attachment 1, Table 1.3-5, Page 1-12]
4. The NSSS parameter acceptance criteria should include "within the bounds of the existing licensing basis." [Attachment 1, page 2-2, Section 2.4]
5. With respect to Note 1, is this consistent with the plant licensing basis? [Attachment 1, Table 4.1-1, Page 4-10]
6. Why is criteria ok? What is steam generator pressure increase following load rejection? What was original licensing basis criteria? [Attachment 1, Section 4.2.3.3.2, Page 4-17]
7. Why not 102% power; do assumptions satisfy licensing basis; any exceptions? [Attachment 1, Section 4.2.3.4.1, Page 4-18]

8. Why are “best estimate” values used? Is this consistent with licensing basis?  
[Attachment 1, Table 8.2-1, Page 8-5]
9. No details about the turbine-generator evaluation, overspeed protection, auxiliaries are provided, just conclusion. [Attachment 1, Section 8.3 Pages 8-11/12]
10. EFW: What elements of current licensing basis are affected; how does current capability compare with SPU capability (quantitative discussion); what is the licensing basis acceptance criteria; why acceptable?