

May 3, 2006

MEMORANDUM TO: Darrell J. Roberts, Chief  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: G. Edward Miller, Project Manager */RAI/*  
Plant Licensing Branch I-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

SUBJECT: SEABROOK STATION, UNIT NO. 1 - FACSIMILE TRANSMISSION,  
DRAFT REQUEST FOR ADDITIONAL INFORMATION (RAI) TO BE  
DISCUSSED IN AN UPCOMING CONFERENCE CALL  
(TAC NO. MD0696)

The enclosed draft RAI was transmitted by facsimile on May 4, 2006, to Mr. Mike O'Keefe, FPL Energy Seabrook, LLC (FPLE). This draft RAI was transmitted to facilitate the technical review being conducted by the Nuclear Regulatory Commission (NRC) staff and to support a conference call with FPLE in order to clarify certain items in the licensee's submittal. The draft RAI is related to FPLE's submittal dated March 23, 2006, regarding a license amendment request to revise the Seabrook Station, Unit No. 1 Technical Specifications consistent with the NRC-approved Revision 4 to Technical Specification Standard Technical Specification Change Traveler, TSTF-449, "Steam Generator Tube Integrity." Review of the RAI would allow FPLE to determine and agree upon a schedule to respond to the RAI. This memorandum and the attachment do not convey a formal request for information or represent an NRC staff position.

Docket No. 50-443

Enclosure:  
Draft Request for Additional Information

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Plant Licensing Branch I-2  
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# DRAFT

## REQUEST FOR ADDITIONAL INFORMATION

### SEABROOK STATION, UNIT NO. 1

#### (TAC NO. MD0696)

By letter dated March 23, 2006, FPL Energy Seabrook, LLC submitted a license amendment request to revise the Seabrook Station, Unit No. 1 Technical Specifications (TSs) consistent with the Nuclear Regulatory Commission (NRC)-approved Revision 4 to Technical Specification Standard Technical Specification Change Traveler, TSTF-449, "Steam Generator Tube Integrity." The NRC staff requests the following additional information to complete its review.

1. Proposed Action statement "b" under TS 3.4.6.2 indicates that identified leakage greater than the limits should be reduced to within the limits, within 4 hours or the plant should be shut down. Since identified leakage includes primary-to-secondary leakage (per TS definition 1.17), this proposed revision appears to contradict Action statement "a" under TS 3.4.6.2 and Technical Specification Task Force (TSTF) Traveler 449. Please clarify this apparent contradiction or correct Action statement "b" to indicate that it does not apply to primary-to-secondary leakage. In addition, discuss your plans to modify your Bases to reflect this change (page 4 of Insert Bases 3.4.6.2).
2. Please discuss why the proposed TS 6.7.6.k does not include the acronym for steam generator (i.e., SG) in the title (since "SG" is used throughout this section and to make your proposal consistent with TSTF-449, proposed insert 6.8.1.7, and your proposed Bases).
3. In the Background section of Insert B3/4.4.5 (top of second page of the insert), the leakage assumptions for your steam generator tube rupture (SGTR) accident analysis are not clear. For example, in one sentence, you indicate that the leakage is apportioned between the SG (1.0 gallon per minute (1 gpm) total, 500 gallons per day (gpd) to any one SG). However, in the next sentence, the assumption appears to be that one of the non-faulted SGs is assigned a leak rate of 500 gpd (as part of the 1126.67 gpd total). This sentence appears to indicate that a tube rupture is only assigned a leak rate of 313.33 gpd since (unlike TSTF-449) it does not indicate that the leak rate associated with a double-ended rupture of a single tube is added to the 313.33 gpd. The next sentence then appears to indicate that the SGTR analysis only considers the leakage rate associated with the instantaneous rupture of a SG tube (and it is not clear if this is the 313.33 gpd value mentioned above, or the leak rate associated with a double-ended rupture of a single tube). Please clarify the NRC staff's understanding of this section.
4. In the Background section of Insert B3/4.4.5 (middle of second page of the insert), please clarify the statement that your SGTR analysis "considers any leakage changes as a result of the accident induced changes in primary-to-secondary pressure differential." Is this statement implying that in your current accident analysis, you are constantly adjusting your leakage rate based on the actual primary-to-secondary pressure differential throughout the SGTR accident.

5. Near the end of the Background Section for the SG Tube Integrity Program in TSTF-449, there is a phrase that reads “or the NRC approved licensing basis (e.g., a small fraction of these limits).” This phrase is not in the corresponding section of your proposed Bases. In addition, this phrase is also missing from the proposed “Applicable Safety Analysis” Section under Bases Insert 3.4.6.2. Please discuss why this statement was not included in your proposal, or alternatively, propose to include it. In addition, discuss your plans to incorporate reference to General Design Criteria 19, consistent with TSTF-449, in your proposed Bases Section for the SG Tube Integrity Program.
6. In the Limiting Condition of Operation (LCO) Section of the proposed B3/4.4.5 (top of fourth page), the wording is modified from that of TSTF-449 in several places. For each of the following areas, please justify the exception taken to TSTF-449 (by addressing the questions below) or modify the proposed TSs to be consistent with TSTF-449:
  - a. TSTF-449 indicates that “The accident induced leakage performance criterion ensures that the primary to secondary LEAKAGE caused by a design basis accident, other than a SGTR, is within the accident analysis assumptions.” In your proposal you indicate that “The accident induced leakage performance criterion ensures that the primary-to secondary leakage caused by any changes in primary-to-secondary pressure differential during a design basis accident other than SGTR, is considered in the accident dose consequences analysis. Please discuss why you only focused on changes in “primary-to-secondary pressure differential” in your proposal given that other factors can affect leakage under certain circumstances (e.g., axial thermal loads, bending loads, etc.) and that accident-induced leakage includes not only leakage induced by the accident but also any pre-existing leakage. In addition, discuss why you specified “dose consequence analysis” rather than the broader term “accident analysis”.
  - b. TSTF-449 indicates that “The accident induced leakage rate includes any primary to secondary LEAKAGE existing prior to the accident in addition to primary to secondary LEAKAGE induced during the accident.” In your proposal, you indicate that “This accident induced leakage rate conservatively bounds the expected total accident primary-to-secondary leakage and considers any leakage changes as a result of the accident induced changes in primary-to-secondary pressure differential.” The statement in TSTF-449 is intended to indicate that the term “accident induced leakage” includes not just any additional leakage that may be induced as a result of the accident loadings, but also the leakage that was present prior to the accident. Your proposed wording, however, does not contain this “definition”. In addition, your proposed wordings seems to imply that you adjust your leakage (up and down) based on changes in primary-to-secondary pressure. Please clarify whether your existing accident analyses varies the leakage rate as a result of changes in primary-to-secondary differential pressure. In addition, please discuss why leakage can not be affected by loading conditions other than differential pressure.

7. Proposed TS 6.7.6.k.b.3 refers to LCO 3.4.6.2 as “Reactor Coolant System Leakage;” however, in the LCO Section of Insert B3/4.4.5 (middle of fourth page of the insert), you refer to LCO 3.4.6.2 as “RCS [reactor coolant system] Operational Leakage.” Please clarify this apparent discrepancy.
8. In the LCO Section of Insert B3/4.4.5 (bottom of fourth page of the Insert), you have added a paragraph regarding the details of your tube integrity procedures. Either provide full technical justification for each of these conclusions covering all possible degradation mechanisms or modify the proposed TSs consistent with TSTF-449.
9. Reference 7 is cited on the last page of Insert B3/4.4.5 in the text under Surveillance Requirement 4.4.5.2; however, Reference 7 is not listed in the References Section. Please clarify whether there should be a Reference 7 since TSTF-449 has no Reference 7. Also, TSTF-449, Revision 3 is referred to three times in the References Section (with no numbering). Please confirm that these entries should be there. If so, confirm that Revision 3 is the correct reference since Revision 4 was approved by the NRC staff.
10. Several sentences appear to have been eliminated from TS Bases 3/4.4.6.2 and not incorporated into your new Bases section. Specifically, the first three sentences under “Unidentified Leakage” and the last two sentences under “Identified Leakage” do not appear to be incorporated into your new Bases section on operational leakage. Discuss the reason for deleting these sentences (or discuss where they may elsewhere be incorporated into your new proposed Bases).