

September 15, 2004

MEMORANDUM TO: John T. Larkins, Executive Director  
Advisory Committee on Reactor Safeguards and  
Advisory Committee on Nuclear Waste

FROM: Ledyard B. Marsh, Director */RA/*  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

SUBJECT: SEABROOK STATION, UNIT NO. 1 - ADVISORY COMMITTEE ON  
REACTOR SAFETY REVIEW OF STRETCH POWER UPRATE  
AMENDMENT (TAC NO. MC2364)

The purpose of this memorandum is to request that the Advisory Committee on Reactor Safeguards (ACRS) consider not reviewing the stretch power uprate (SPU) proposed by the Seabrook Station, Unit No. 1 (Seabrook) licensee. Below are the details regarding the Seabrook SPU and the Nuclear Regulatory Commission (NRC) staff's recommendation.

The NRC staff has defined three categories for power uprates: measurement uncertainty recapture (MUR), SPU, and extended power uprates (EPU). MUR power uprates are less than two percent and are based on the use of more accurate feedwater flow measurement techniques. SPUs are uprates that do not require major modifications and usually involve changes to instrumentation setpoints. EPUs are uprates that require major modifications to the plant and usually require significant modifications to major balance-of-plant equipment such as the high-pressure turbines, condensate pumps and motors, main generators, and/or transformers.

By application dated March 17, 2004 (ADAMS Accession No. ML040860307), as supplemented by a second letter dated March 17, 2004 (ML040850074), and letters dated April 1, 2004 (ML041050175), and May 26, 2004 (ML041560339), FPL Energy Seabrook, LLC (FPLE or the licensee), requested an amendment to the Seabrook Operating License and Technical Specifications (TSs) to increase the licensed rated power level by approximately 5.2 percent, from 3411 megawatts thermal (MWt) to 3587 MWt.

Based on its review of this application, the NRC staff has categorized it as an SPU. The basis for this categorization is the limited modifications required for the plant to achieve the requested power level. The high-pressure turbine steam path is being modified to provide sufficient steam flow for the SPU. This is being accomplished by modifying the high-pressure turbine rotor and replacing the fixed diaphragms.

The SPU license amendment request (LAR) also relies, in part, on two previous LARs submitted by FPLE. The amendments assumed to be implemented prior to approval of the SPU LAR are as follows:

- (1) On March 23, 2004, the NRC staff approved an amendment to relocate cycle-specific boron parameters and departure from nuclear boiling related parameters to the Core Operating Limits Report (ML040350482). As part of the review, the staff found the changes to be consistent with the generic TSs changes approved in Generic Letter 88-16, "Removal of Cycle Specific Parameter Limits from Technical Specifications"; WCAP-14483-A, "Generic Methodology for Expanded Core Operating Limits Report"; and the Standard Technical Specifications for Westinghouse Plants, NUREG-1431, Revision 2.
- (2) The second LAR adopts the Alternate Source Term (AST) methodology for Seabrook. The NRC staff is currently reviewing, under a separate effort, the implementation of AST as outlined in Title 10 of the *Code of Federal Regulations*, Section 50.67 and Regulatory Guide 1.183 for the Seabrook exclusion area boundary, low population zone and the control room. The staff is conducting independent calculations to support its review in these areas.

Based on the established ACRS review threshold of five percent, the ACRS could require that it review the current Seabrook SPU request. However, the NRC staff believes that the 5-percent threshold was originally established to: (1) differentiate between power uprates within the design capacity of the plant, and more complex power uprates with more important changes and potentially higher impacts on the plant; and (2) ensure that the ACRS has an opportunity to review the more complex power uprates. Based on this, and based on the staff's determination that the Seabrook 5.2-percent power uprate request is approximately at the 5-percent ACRS threshold with minor modifications, the staff requests the ACRS to consider not reviewing the SPU proposed by the Seabrook licensee. This request is similar to the September 16, 2003, request (ML032090215) for Kewaunee Nuclear Power Plant that the ACRS decided not to review on October 9, 2003 (ML040620143). To adequately schedule the staff's resources and review, we request the ACRS provide its decision regarding review of the Seabrook SPU as soon as reasonably feasible.

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