

Mr. Roy A. Anderson
Senior Vice President
Nuclear Operations
Florida Power Corporation
ATTN: Manager, Nuclear Licensing
Crystal River Energy Complex (SA2A)
15760 W Power Line Street
Crystal River, Florida 34428-6708

November 26, 1997

SUBJECT: CRYSTAL RIVER UNIT 3 - REQUEST FOR ADDITIONAL INFORMATION -
LICENSE AMENDMENT RELATED TO TECHNICAL SPECIFICATION CHANGE
REQUEST NO. 210, SMALL-BREAK LOSS-OF-COOLANT ACCIDENT (SBLOCA)
SUBMITTAL (TAC NO. M98991)

Dear Mr. Anderson:

The purpose of this letter is to request additional information (RAI) relating to your license amendment submittal dated June 14, 1997, as supplemented by letter dated September 25, 1997, regarding Florida Power Corporation's (FPC's) approach for addressing certain SBLOCA scenarios. By letter dated November 5, 1997, the staff requested that FPC evaluate the change in risk associated with the proposed plant procedural changes, including the new load management strategies. By letter dated November 15, 1997, FPC responded to the staff's request, however, the response did not contain the necessary information to satisfy the staff's request. As a result, on November 25, 1997, the staff conducted a telephone conference with FPC to further discuss this issue. Based on that conversation, the staff concluded that a more specific request is necessary.

Additionally, the staff has reviewed your submittal dated November 19, 1997, which responded to the staff's RAI dated November 4, 1997, and concluded that additional information is still needed to satisfy the staff's request.

The enclosure provides the details of the requested information. We request your response as soon as possible so that we can schedule our review effort consistent with your restart plan. If you have any questions, please call me at (301) 415-1471.

Sincerely,
Original signed by
L. Raghavan, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: RAI

cc w/enclosure: See next page



draft

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

November 26, 1997

Mr. Roy A. Anderson
Senior Vice President
Nuclear Operations
Florida Power Corporation
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Sincerely,

A handwritten signature in black ink, appearing to read "L. Raghavan", with a long horizontal flourish extending to the right.

L. Raghavan, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: RAI

cc w/enclosure: See next page

Mr. Roy A. Anderson
Florida Power Corporation

cc:

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CRYSTAL RIVER UNIT NO. 3

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Crystal River, Florida 34428

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Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
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Atlanta, GA 30303-3415

Mr. Kerry Landis
U.S. Nuclear Regulatory Commission
61 Forsyth Street, SW., Suite 23T85
Atlanta, GA 30303-3415

REQUEST FOR ADDITIONAL INFORMATION - LICENSE AMENDMENT RELATED TO
TECHNICAL SPECIFICATION CHANGE REQUEST NO. 210, SMALL BREAK LOSS OF
COOLANT ACCIDENT (SBLOCA) SUBMITTAL

1. Provide the initiating event (IE) frequency of Loss-of-Coolant Accident (LOCA)/ Loss of Offsite Power (LOOP). Please provide the initiating frequency of a LOCA, the dependent or conditional probability of LOOP (i.e., the probability of a LOOP given that a LOCA has occurred), and the bases for these frequencies.

In a LOCA/LOOP accident scenario, as postulated in Generic Safety Issue (GSI) 171, "ESF [engineered safety features] failure from LOOP subsequent to LOCA," there is an increase in the likelihood of a LOOP given a LOCA compared to a random (independent) occurrence of the LOOP in the same period. This increased likelihood can be due to a disturbance in the grid caused by the reactor trip which occurs after a LOCA, problems due to bus transfer, or due to the increased loads on the emergency buses in response to a LOCA. To address the issues raised as part of GSI 171, NUREG/CR-6538, "Evaluation of LOCA With Delayed LOOP and LOOP With Delayed LOCA Accident Scenarios" was published in July 1997. This report, in part, quantitatively analyzes LOCA/LOOP accident sequences.

2. Given a LOCA/LOOP² initiating event, what are the plant's mitigating actions, including automatic/manual system/equipment response and operator actions? Please account for all plant and procedural changes (including operator actions and new load management strategy). What are the assigned failure, unavailability, and human error probabilities associated with these mitigating actions?
3. Based on the above parameter estimates, what is the calculated core damage frequency contribution from the LOCA/LOOP sequences for the proposed changes?
4. Validation and verification (V/V) should be conducted for operator actions associated with each of the three single failure events. If either Loss of Battery A (LOBA) or Loss of Battery B (LOBB) is not tested, justification should be provided.
5. Generally, a minimum of 80% of the operating crews should be tested (i.e., if there are six operating crews, five of the crews should be tested). Ideally, all crews should be tested on all three single failure events as a "full" crew and as a "minimum" crew. However, due to limitations in time and availability, alternative testing approaches are acceptable with adequate justification from the licensee. The objective of this testing is to assure as many crews are exposed to the required operator actions as possible, and that each single failure event is tested to demonstrate that it can be mitigated by full and minimum crew complements.

Enclosure

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6. Each event should be tested using a full crew and a minimum crew complement. All tests should be conducted with crews that are "naive" (i.e., have no immediate knowledge or expectation) to the single failure being tested.

Enclosure