

August 8, 2006

Mr. J. A. Stall
Senior Vice President, Nuclear and
Chief Nuclear Officer
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: TURKEY POINT PLANT, UNIT NOS. 3 AND 4 - REQUEST FOR ADDITIONAL
INFORMATION REGARDING PROPOSED LICENSE AMENDMENT FOR A
SPENT FUEL POOL BORAFLEX REMEDY (TAC NOS. MC9740 AND MC9741)

Dear Mr. Stall:

By letter dated January 27, 2006, Florida Power & Light Company submitted requests to amend the Operating Licenses for Turkey Point Nuclear Plant, Units 3 and 4. The proposed amendments would revise the Technical Specifications to include new spent fuel pool storage patterns and the use of Metamic rack inserts, in order to remove reliance on Boraflex as a neutron absorber.

The U.S. Nuclear Regulatory Commission staff has reviewed your submittal and finds that a response to the enclosed Request for Additional Information is needed before we can complete the review.

This request was discussed with members of your staff on August 1, 2006, and Mr. Paul Czaya agreed that a response would be provided within 60 days of the date of this letter.

If you have any questions, please contact me at (301) 415-3974.

Sincerely,

/RA/

Brendan T. Moroney, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure:
Request for Additional Information

cc w/encl: See next page

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Docket Nos. 50-250 and 50-251

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Request for Additional Information

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION RELATED TO
LICENSE AMENDMENT REQUEST FOR SPENT FUEL POOL BORAFLEX REMEDY
FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT NUCLEAR PLANT, UNITS 3 AND 4
DOCKET NOS. 50-250 AND 50-251

By letter dated January 27, 2006 (ML060900250), Florida Power and Light Company (FPL, the licensee) submitted a request for U.S. Nuclear Regulatory Commission (NRC) review and approval of amendments to the operating licenses of Turkey Point Units 3 and 4. The proposed amendments would revise technical specifications Sections 3/4.9.1-Boron Concentration, 3/4.9.14 - Spent Fuel Storage, and 5.5.1 - Criticality, to include new spent fuel storage patterns and the use of Metamic™ rack inserts.

During its review, the NRC staff identified the need for additional information relating to the use of Metamic™ rack inserts. Please provide the following information:

1. Section 2.1, "Technical Specification Changes," of Attachment 1, page 8 of 36, describes the addition of Surveillance Requirement (SR) 4.9.14.2 to perform visual inspection of representative sample of Metamic™ inserts. Specifically, Attachment 5, "Retyped Technical Specifications," page 3/4 9-15, SR 4.9.14.2, states:

A representative sample of inservice Metamic™ inserts shall be visually inspected in accordance with the Metamic™ Surveillance Program described in UFSAR [Updated Final Safety Analysis Report] Section 16.2. The surveillance program ensures that the performance requirements of Metamic™ are met over the surveillance interval.

Based on the staff's safety evaluation dated June 17, 2003 (ML031681432), the use of Metamic™ in the spent fuel pool is conditioned upon a coupon sampling program to ensure consistent performance with that described in Holtec Report HI-2022871, "Use of Metamic in Fuel Pool Applications." SR 4.9.14.2 indicates that a Metamic™ Surveillance Program will visually inspect a sample of the Metamic™ inserts used in the spent fuel storage racks.

- a. Provide the details of this program ensuring expected material performance. The details should include, at a minimum, the following:
 - the selection criteria for the inserts inspected,
 - the methods of inspection and its basis,
 - the surveillance schedule and the basis for the frequency of the surveillance,
 - the acceptance criteria and the bases for these criteria, and
 - the actions to be taken as a result of not meeting the acceptance criteria.

Enclosure

- b. Provide a copy, if available, of the proposed UFSAR Section 16.2 that will describe this program.
2. Based on the following information in the submittal, it appears that the design of the rack insert has not been finalized.
- The second bullet on page 35 of 36 in Section 3.8.2, “Metamic Surveillance Program,” of Attachment 1, states, “If the manufacture process includes welding, the entirety of each weld is available for examination instead of inferring behavior from small coupon welds”
 - The last sentence on page 2-7 of Attachment 9, Holtec Report HI-043149 (Proprietary), “Boraflex Remedy at Turkey Point Nuclear Plant for FPL,” states, “The Metamic inserts may be manufactured by forming operations or by welding contiguous panels and the landing element as shown in Figure 2.5.1.”

Please provide the following information:

- a. Clarify that the amendment request is for review and approval of applying either rack insert design (i.e., mill-finished formed panels of Metamic™ or mill-finished Metamic™ panels welded to a landing element).
- b. Specify the following:
 - (1) weight percent of boron carbide in the Metamic panels,
 - (2) material of the landing element,
 - (3) the weld material to be used to attach the Metamic™ panel to the landing element, and
 - (4) the type of weld used to attach the panel to the landing element.
- c. Discuss how the elements of the Metamic Surveillance Program will differ with respect to the rack insert design (e.g., inspection of welded joint) and provide details in concert with Question 1.
- d. Discuss the results of testing completed on “formed” or bent specimens to demonstrate that the stresses induced will not impact the integrity or functionality of the material. If test data are not available, discuss how the elements of the Metamic Surveillance Program account for this design.
- e. Discuss the results of testing completed on the welded specimens, similar to the proposed design, to demonstrate that the elements of the Metamic Surveillance Program are sufficient to ensure adequate material performance. If test data are not available, discuss how the elements of the Metamic Surveillance Program account for this design.