



MAY 11 2001

L-2001-121  
10 CFR 54

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Response to Request for Additional Information for the  
Review of the Turkey Point Units 3 and 4  
License Renewal Application

By letter dated March 30, 2001 (L-2001-61), FPL responded to the Requests for Additional Information (RAIs) associated with Subsection 3.6.1 Containment and Subsection 3.6.2 Other Structures of the LRA. Based on NRC review of our responses, the NRC requested additional information regarding FPL's response to RAI 3.6.1.2-4 related to the aging management program for containment liners and pressure retention components. During a telephone conversation with FPL, the NRC staff requested additional information concerning hydrogen damage to steel in fluid structures. Accordingly, Attachment 1 to this letter contains the supplemental response to RAI 3.6.1.2-4 and the additional information requested.

Should you have any further questions, please contact E. A. Thompson at (305)246-6921.

Very truly yours,

A handwritten signature in black ink, appearing to read 'R. J. Hovey', with a horizontal line extending to the right from the end of the signature.

R. J. Hovey  
Vice President - Turkey Point

RJH/EAT/hlo

Attachment

A084

cc: U.S. Nuclear Regulatory Commission, Washington, D.C.

Chief, License Renewal and Standardization Branch  
Project Manager - Turkey Point License Renewal  
Project Manager - Turkey Point

U.S. Nuclear Regulatory Commission, Region II  
Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

Other

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Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251

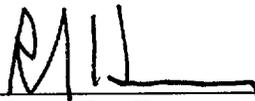
Response to Request for Additional Information for the Review of  
the Turkey Point Units 3 and 4, License Renewal Application

STATE OF FLORIDA                    )  
  ) ss  
COUNTY OF MIAMI-DADE            )

R. J. Hovey being first duly sworn, deposes and says:

That he is Vice President - Turkey Point of Florida Power and  
Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements  
made in this document are true and correct to the best of his  
knowledge, information and belief, and that he is authorized to  
execute the document on behalf of said Licensee.

  
\_\_\_\_\_  
R. J. Hovey

Subscribed and sworn to before me this  
11th day of May, 2001.

**CHERYL A. STEVENSON**  
NOTARY PUBLIC - STATE OF FLORIDA  
COMMISSION # CC929876  
EXPIRES 6/19/2004  
BONDED THRU ASA 1-888-NOTARY1

\_\_\_\_\_  
*Cheryl A. Stevenson*  
\_\_\_\_\_  
Name of Notary Public (Type or Print)

R. J. Hovey is personally known to me.

**ATTACHMENT 1**  
**SUPPLEMENTAL INFORMATION TO SUPPORT THE RESPONSE TO**  
**REQUEST FOR ADDITIONAL INFORMATION**  
**LETTER L-2001-61, DATED MARCH 30, 2001**  
**TURKEY POINT UNITS 3 AND 4,**  
**LICENSE RENEWAL APPLICATION**

**RAI 3.6.1.2-4:**

Section 3.2.1.2 of Appendix B of the LRA states that ASME Section XI, Subsection IWE Inservice Inspection Program meets the requirements of 10 CFR 50.55(a) and ASME Section XI, Subsection IWE, for inspection of Class CC metallic liners and pressure retention components without a discussion of the program contents. Provide a discussion of any plant-specific program contents, including how the visual inspection of the internal and external surfaces and fasteners is to be implemented, thereby providing assurance that the containment shell and internal structures have not degraded due to corrosion and/or cracking. 10 CFR Part 50 endorsed ASME Section XI, Subsection IWE with the condition that 10 CFR 50.55a(b)(2)(ix) provisions are met. The FPL submittal is not clear regarding this requirement. Confirm that both the scope and the detail of the inspection implemented in accordance with ASME Section XI Table IWE-2500-1 also complies with the requirements of 10 CFR 50.55a(b)(2)(ix). In addition, NUREG 1611, "Aging Management of Nuclear Power Plant Containments for License Renewal," states that applicants for license renewal need to evaluate, on a case-by-case basis, the acceptability of inaccessible areas even though conditions in accessible areas may not indicate the presence of degradation to inaccessible areas. Describe how the aging effects for such inaccessible areas will be addressed.

**FPL SUPPLEMENT RESPONSE:**

At a meeting between FPL and NRC staff on April 11, 2001, the NRC staff requested FPL to provide additional discussion of the plant operating history concerning for containment liners and pressure retention components. Accordingly, the following information is provided to supplement the response to RAI 3.6.1.2-4 transmitted with letter L-2001-61 dated March 30, 2001.

FPL performed an extensive search of plant operating history, including condition reports, maintenance rule inspection reports, pre-ILRT structural inspection results, and interviews with appropriate site engineers. There were no reported instances of cracking identified for the subject concrete over the containment floor liner plate. However, this search did identify several instances of localized degradation of the moisture barrier between the containment liner plate and the concrete floor. In each case, the condition was evaluated and addressed under the corrective action program to ensure the joint seal was maintained.

**ADDITIONAL NRC REQUEST:**

LRA Section 3.6.2.2.2 (Page 3.6-34) states, "Based on the evaluation using the methodology described in Appendix C, fatigue, hydrogen damage, and stress corrosion cracking were evaluated for steel in fluid structural components..." Appendix C does not appear to address hydrogen damage. Applicant is requested to address hydrogen damage.

**ADDITIONAL FPL RESPONSE:**

During a telephone conversation between NRC and FPL, the NRC staff requested additional information concerning hydrogen damage to steel in fluid structures. Accordingly, the following additional information is provided to support the review of the Turkey Point License Renewal Application.

FPL evaluated cracking for steel in fluid structures and determined that cracking due to hydrogen damage is not an aging effect requiring management during the period of extended operation. The following information supports this conclusion.

Hydrogen damage results from the absorption of hydrogen into metals. It includes the degradation mechanisms of hydrogen blistering and embrittlement in ferrous metals. In most cases austenitic stainless steels and copper alloys are immune to hydrogen damage, although nickel-base alloys may be somewhat susceptible. Hydrogen blistering is most prevalent in the petroleum industry. A review of failure data for PWR treated water systems showed no evidence of hydrogen blistering or significant problems with hydrogen embrittlement.

The structural components subject to fluid environment identified in LRA Subsection 3.6.2.2 (page 3.6-32) are all constructed of stainless steel and exposed to treated water-borated, except the intake structure travelling screens, which are carbon steel exposed to raw water. As discussed above, most stainless steel materials are not susceptible to hydrogen damage. Additionally, a review of Turkey Point plant operating experience did not identify any instances of hydrogen damage to carbon steel components exposed to raw water environments, such as the intake structure travelling screens.

Based on the above, cracking due to hydrogen damage was determined not to be an aging effect requiring management during the period of extended operation.