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50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251  
AUTH. NAME PLUNKETT, T.F. AUTHOR AFFILIATION Florida Power & Light Co.  
RECIP. NAME RECIPIENT AFFILIATION Document Control Branch (Document Control Desk)

SUBJECT: Forwards response to Rev 1 to Generic Ltr 92-01 re reactor vessel integrity. Encl info provides addl info to support response provided in BAW-2166.

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JUL 01 1992

L-92-174  
10 CFR 50.54(f)

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  
Generic Letter 92-01, Revision 1:  
Reactor Vessel Structural Integrity

Gentlemen:

Generic Letter 92-01, Revision 1, dated March 6, 1992, requested licensees to respond to questions regarding reactor vessel integrity. Florida Power and Light Company's (FPL) response for Turkey Point Units 3 and 4 was provided in a letter from J. H. Taylor, Babcock and Wilcox (B&W) Company, to the USNRC dated June 17, 1992, letter number OG-1036. Included in the transmittal from J. H. Taylor is BAW-2166 topical report, B&W Owners Group Response to Generic Letter 92-01.

The enclosed attachment provides additional information to support the response provided in BAW-2166.

In accordance with 10 CFR 50.54 (f), the enclosed response is submitted under oath and affirmation.

Should there be any questions, please contact us.

Very truly yours,

T. F. Plunkett  
Vice President  
Turkey Point Nuclear

TFP/RJT/rt

Attachment

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant

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PDR ADOCK 05000250  
P PDR

an FPL Group company

ADD: D. McDonald  
K. Wickman  
B. Elliot

LT. Encl.

ADD



STATE OF FLORIDA       )  
                              ) ss.  
COUNTY OF DADE       )

T. F. Plunkett being first duly sworn, deposes and says:

That he is Vice President, Turkey Point Nuclear Plant, 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.

*T. F. Plunkett*  
T. F. Plunkett

Subscribed and sworn to before me this

1<sup>st</sup> day of July, 1992.

*Cheryl A Kelly*

CHERYL A. KELLY  
Name of Notary Public (Type or Print)

NOTARY PUBLIC, in and for the County of  
Dade, State of Florida

NOTARY PUBLIC STATE OF FLORIDA  
MY COMMISSION EXP. SEPT. 27, 1992  
BONDED THEN GENERAL REG. AGO.  
My Commission expires \_\_\_\_\_  
Commission No. \_\_\_\_\_

T. F. Plunkett is personally known to me.

ALSO 020 WAR 11 11 11  
M. E. INTERVIEW 11 11 11  
604 020 WAR 11 11 11

Attachment to L-92-174

**Response to Generic Letter 92-01, Revision 1: Reactor Vessel Structural Integrity**

Response for Turkey Point Units 3 and 4:

1. Certain addresses are requested to provide the following information regarding Appendix H to 10 CFR Part 50:

Addressees who do not have a surveillance program meeting ASTM E 185-73, -79, or -82 and who do not have an integrated surveillance program approved by the NRC (see Enclosure 2), are requested to describe actions taken or to be taken to ensure compliance with Appendix H to 10 CFR Part 50. Addressees who plan to revise the surveillance program to meet Appendix H to 10 CFR Part 50 are requested to indicate when the revised program will be submitted to the NRC staff for review. If the surveillance program is not to be revised to meet Appendix H to 10 CFR Part 50, addresses are requested to indicate when they plan to request an exemption from Appendix H to 10 CFR Part 50 under 10 CFR 50.60(b).

Florida Power and Light Company Turkey Point Units 3 and 4 has an Integrated Surveillance Program approved by the NRC, as referenced in enclosure 2 of Generic Letter 92-01. Additional details for Turkey Point Units 3 and 4 are provided in BAW-2166, Table 1.

2. Certain addresses are requested to provide the following information regarding Appendix G to 10 CFR Part 50:

- a. Addressees of plants for which Charpy upper shelf energy is predicted to be less than 50 foot-pounds at the end of their licenses using the guidance in Paragraph C.1.2 or C.2.2 in Regulatory Guide 1.99, Revision 2, are requested to provide to the NRC the Charpy upper shelf energy predicted for December 16, 1991, and for the end of their current license for the limiting beltline weld and the plate or forging and are requested to describe the actions taken pursuant to Paragraph IV.A.1 or V.C of Appendix G to 10 CFR Part 50.

Turkey Point Units 3 and 4 response is provided in Table 2 of BAW-2166. In accordance with Paragraph V.C of Appendix G to 10 CFR Part 50, a volumetric examination of 100 percent of the beltline materials for both Units 3 and 4 was completed by January 1992. These examinations did not locate any unacceptable flaws. (Reference FPL letters to USNRC, L-91-348 dated December 30, 1991 for Turkey Point Unit 3 and L-92-012 dated January 27, 1992 for Turkey Point Unit 4.) Supplemental materials data has been developed through the Babcock & Wilcox Owners Group and additional materials are being irradiated through the Master Integrated Surveillance Program as described in BAW-1543, Revision 3.

- b. Addressees whose reactor vessels were constructed to an ASME Code earlier than the Summer 1972 Addenda of the 1971 Edition are requested to describe the consideration given to the following material properties in their evaluations performed pursuant to 10 CFR 50.61 and Paragraph III.A of 10 CFR Part 50, Appendix G:

- (1) the results from all Charpy and drop weight tests for all unirradiated beltline materials, the unirradiated reference temperature for each beltline material, and the method of determining the unirradiated reference temperature from the Charpy and drop weight test;

Turkey Point Units 3 and 4 reactor vessels were constructed to the Summer 1966 Addenda of the 1965 ASME Code Edition. The requested results are provided in Table 3 of BAW-2166.

- (2) the heat treatment received by all beltline and surveillance materials;

Turkey Point Units 3 and 4 response is provided in Table 4 of BAW-2166.

- (3) the heat number for each beltline plate or forging and the heat number of wire and flux lot number used to fabricate each beltline weld;

Turkey Point Units 3 and 4 response is provided in Table 5 of BAW-2166.

- (4) the heat number for each surveillance plate or forging and the heat number of wire and flux lot number used to fabricate the surveillance weld;

Turkey Point Units 3 and 4 response is provided in Table 6 of BAW-2166.

- (5) the chemical composition, in particular the weight in percent of copper, nickel, phosphorus, and sulfur for each beltline and surveillance material; and

Turkey Point Units 3 and 4 response is provided in Table 7 of BAW-2166.



- (6) the heat number of the wire used for determining the weld metal chemical composition if different than item (3) above.

Not applicable, since the same weld materials are provided in item (3) above.

3. Addressees are requested to provide the following information regarding commitments made to respond to GL 88-11:

- a. How the embrittlement effects of operating at an irradiation temperature (cold leg or recirculation suction temperature) below 525 °F were considered. In particular licensees are requested to describe consideration given to determining the effect of lower irradiation temperature on the reference temperature and on the Charpy upper shelf energy.

Florida Power and Light estimates that Turkey Point Units 3 and 4 have each operated at less than 50 effective full power hours (i.e., equivalent to a fluence of less than  $1.0 \text{ E}+16$  neutrons per centimeter square) with the cold leg temperature less than 525 °F. This exposure is considered negligible relative to the reference temperature and Charpy upper shelf energy.

Typical operating temperatures for Turkey Point Units 3 and 4 are provided in Figure 4-6, of BAW-2166.

- b. How their surveillance results on the predicted amount of embrittlement were considered.

Additional details for Turkey Point Units 3 and 4 are provided in Table 9 of BAW-2166, and the Safety Evaluation to Amendment No. 134 for Turkey Point Unit 3 (DPR-31) and Amendment No. 128 for Turkey Point Unit 4 (DPR-41), dated January 10, 1989.

- c. If a measured increase in reference temperature exceeds the mean-plus-two standard deviations predicted by Regulatory Guide 1.99, Revision 2, or if a measured decrease in Charpy upper shelf energy exceeds the value predicted using the guidance in Paragraph C.1.2 in Regulatory Guide 1.99, Revision 2, the licensee is requested to report the information and describe the effect of the surveillance results on the adjusted reference temperature and Charpy upper shelf energy for each beltline material as predicted for December 16, 1991, and for the end of its current license.

Turkey Point Units 3 and 4 response is provided in Table 10 of BAW-2166.

