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 FACIL: 50-250 Turkey Point Plant, Unit 3, Florida Power and Light C 05000250
 50-251 Turkey Point Plant, Unit 4, Florida Power and Light C 05000251

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 PLUNKETT, T.F. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Provides response to request for addl info re Rev 1 to GL
 92-01, "Reactor Vessel Structural Integrity."

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FPL

AUG 20 1993

L-93-200

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

Gentlemen:

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Request for Additional Information (RAI) -
Generic Letter 92-01, Revision 1
Reactor Vessel Structural Integrity

By letter L-92-174, dated July 1, 1992, Florida Power and Light Company (FPL) responded to questions regarding Generic Letter 92-01, Revision 1, Reactor Vessel Structural Integrity. By letter dated July 29, 1993, the NRC requested additional information to support the review of FPL's response to Generic Letter 92-01. The response to these NRC questions is enclosed.

Should there be any questions, please contact us.

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Nuclear

Enclosure

TFP/RJT/rt

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

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FLORIDA POWER AND LIGHT COMPANY

TURKEY POINT UNITS 3 AND 4

RESPONSE TO NRC QUESTIONS:

GENERIC LETTER 92-01, REVISION 1
REACTOR VESSEL STRUCTURAL INTEGRITY



RESPONSE TO NRC QUESTIONS

By letter dated July 29, 1993, the NRC requested additional information to support the review of FPL's response to Generic Letter (GL) 92-01. The response to these NRC questions is enclosed.

Question 1:

Your response to question 2b in GL 92-01 refers to Table 3 of BAW-2166 which indicates that a generic initial RT_{NDT} of $-5^{\circ}F$, which is the mean RT_{NDT} value for 34 Linde 80 welds (BAW-1803, Revision 1), is used for all welds except weld SA-1101. Please provide justification for not using the generic mean value for Linde 80 welds of $0^{\circ}F$ as required by 10 CFR 50.61.

Response:

The requirement from 10 CFR 50.61 (b)(2)(i) is as follows:

- (i) "I" means the initial reference temperature (RT_{NDT}) of the unirradiated material measured as defined in the ASME Code, Paragraph NB-2331. Measured values must be used if credible values are available; if not, the following generic mean values must be used: $0^{\circ}F$ for welds made with Linde 80 flux, and $-56^{\circ}F$ for welds made with Linde 0091, 1092 and 124 and ARCOS B-5 weld fluxes.

The value used for SA 1101 for Turkey Point Units 3 and 4 is $+10^{\circ}F$ which is both measured per ASME NB-2331 and credible. This value is more conservative than $0^{\circ}F$ and has been approved for use by NRC Safety Evaluation Report (SER) dated April 26, 1984 authored by P. Niel Randall and attached to a letter from S. Varga (USNRC) to J. W. Williams (FPL), dated April 26, 1984, entitled "Evaluation of Reactor Materials Data for Turkey Point Plant Units 3 and 4 Reactor Vessels."

Weld SA 1484 receives an order of magnitude less fluence than the limiting SA 1101. Weld SA 1135 receives three orders of magnitude less fluence than the limiting weld. This results in approximately 3.2×10^{18} neutrons/cm² accumulated fluence for SA 1484 and $< 10^{16}$ neutrons/cm² for SA 1135. These welds are not considered in the selection of the most limiting material in the reactor vessel beltline with regard to irradiation damage. Therefore, these materials are not considered in 10 CFR 50.61 evaluations.

The value of $-5^{\circ}F$ for welds reported is the statistical mean value of 34 Linde 80 welds tested by Babcock and Wilcox Company (as documented in BAW-1803).

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Question 2:

Your response to questions 2b(5) in GL 92-01 refers to Table 5 of BAW-2166 and indicates that the copper content for beltline material 122S146VA1 is not known. Please confirm this and justify that embrittlement for this material is not a concern.

Response:

The copper was not determined for this forging. Forging 122S146VA1 is a nozzle belt forging and as such is not a beltline material. Table 5.2-1 on pages 5-14 of BAW-2166 shows accumulated fluence predictions for forging 122S146VA1 as 3.2×10^{18} neutrons/cm², which is an order of magnitude lower than the belt line environment. Typical copper concentration for these forgings is less than 0.1% and combined with such low fluence do not present an embrittlement concern.

