FPL

P.O. Box 029100, Miami, FL 33102-9100

L-92-27
10 CFR 50.61
FEB 13 1992

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
10 CFR 50.61 (b)(1) Report

By letter L-86-09 dated January 23, 1986, Florida Power and Light Company (FPL) submitted the projected values for Reference Transition Temperature, Pressurized Thermal Shock (RT_{PTS}) for Turkey Point Units 3 and 4, in accordance with the requirements of 10 CFR 50.61 (b)(1). On May 15, 1991, the NRC issued a revision to 10 CFR 50.61. In accordance with the revised 10 CFR 50.61 (b)(1), an updated estimate of the RT_{PTS} for Turkey Point Units 3 and 4 is provided in Table 1; Table 2 provides the beltline materials data for Turkey Point Units 3 and 4. The critical beltline materials, initial properties, chemistry data of the critical beltline materials, and the limiting circumferential weld (SA 1101) specified in L-86-09 remain unchanged. The fluence reduction program, implemented by FPL and verified by the NRC per NRC letter dated February 27, 1985, remains unchanged. The fluence reduction program consists of low-leakage fuel loading patterns coupled with part-length burnable absorbers, located so an to reduce the neutron flux to the pressure vessel circumferential weld from high importance core locations.

The RT_{PTS} calculations were performed using equation 1 of 10 CFR 50.61 (b)(2). An M value of 34 was used for forgings and an M value of 56 was used for welds. Initial properties based on drop weight and Charpy tests were used for both forgings and welds.

The updated estimate of the RT_{PTS} for Turkey Points Units 3 and 4 provided in Table 1 demonstrates adequate margins of safety to the screening criterion for circumferential welds of 300°F, as specified in 10 CFR 50.61.

Should there be any questions, please contact us.

Very truly yours,

T. F. Plunkett
Vice President
Turkey Point Nuclear

TFP/OIH

Attachments

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

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TABLE 1

CURRENT AND PROJECTED RT_{PTS}

TURKEY POINT UNIT 3

Date	Fluence ($\times 10^{19}$) neutrons/cm^2 (E > 1.0 MeV)	Intermediate Shell (°F)	Lower Shell (°F)	Girth Weld (°F)
August 24, 1992	1.501	115	121	266
April 27, 2007	2.342	120	127	287
July 19, 2012	2.641	121	128	293

TURKEY POINT UNIT 4

Date	Fluence ($\times 10^{19}$) neutrons/cm^2 (E > 1.0 MeV)	Intermediate Shell (°F)	Lower Shell (°F)	Girth Weld (°F)
October 15, 1991	1.366	121	112	262
April 27, 2007	2.210	125	117	285
April 10, 2013	2.533	126	118	291

TABLE 2

MATERIALS DATA FOR TURKEY POINT
UNITS 3 AND 4 BELTLINE MATERIALS

UNIT	LOCATION	HEAT NO.	LOT NO.	%Cu	%Ni	INITIAL RT_{NDT} (°F)
3	Intermediate shell	123 P 461 VA-1	N/A	0.058	0.70	40
3	Lower shell	123 S 266 VA-1	N/A	0.079	0.68	30
3	Intermediate to lower girth weld	71249	8445	0.26	0.60	10
4	Intermediate shell	123 P 481 VA-1	N/A	0.054	0.71	50
4	Lower shell	122 S 180 VA-1	N/A	0.056	0.70*	40
4	Intermediate to lower girth weld	71249	8445	0.26	0.60	10

* Changed from 0.71%; typographical error on the January 23, 1986 submittal.