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Mr. George Lear	Florida Power & Light Company Miami, Florida Robert E. Uhrig	10/17/77	10/20/77

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DESCRIPTION

Consists of info. re fracture toughness and lamellar tearing potential for steam generator and reactor coolant pump supports..

(2-P)

PLANT NAME: Turkey Point Units 3 & 4
RJL 10/21/77

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FLORIDA POWER & LIGHT COMPANY

October 17, 1977
L-77-320

Office of Nuclear Reactor Regulation
Attn: Mr. George Lear, Chief
Division of Operating Reactors, Branch #3
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Lear:

Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 and 50-251
Fracture Toughness and Lamellar Tearing Potential
for Steam Generator and Reactor Coolant Pump Supports

Your letter of September 13, 1977, requested information relative to fracture toughness and lamellar tearing potential for steam generator and reactor coolant pump supports. This request stems from concerns related to the fracture toughness of A572 steel at the specified operating temperature.

Our steam generator and reactor coolant pump supports do not utilize A572 steel. Further, the Turkey Point facility is located in southern Dade County, thus there is little likelihood of support materials experiencing temperatures low enough to cause a toughness concern.

The integral portion of the reactor coolant pump and steam generator supports are not subject to lamellar tearing since they are cast integral with the pressure boundary. There are no weld stresses and the materials meet the requirements of Section III of the ASME code. Steam generator lugs are SA-216 Gr. WCC and pump lugs are 316 stainless steel.

Non-integral support materials are as follows:

Plates	SA-302 Gr. B
Structural Steel	ASTM-A-588 Gr. A
Embed Plates	A-516 Gr. 55 or 60
Weld Metal	Low Hydrogen, such as E-7018

Non-integral support material toughness properties were developed based on available test data and discussions with the manufacturers. Minimum lateral expansion for these materials was obtained for SA-302. Test data for this material indicates a lateral expansion of 35 mils at 60°F.

Paragraph NF-2300, "Fracture Toughness Requirements for Materials," of Subsection NF, Section III requires 25 mils lateral expansion at the specified temperature for thick plate. Since the supports are not likely to experience temperatures below 60°F in South Florida, it is concluded that the non-integral support materials comply with the fracture toughness requirements of Subsection NF.

Based on the above, we do not believe that the generic concern identified by your September 13, 1977 letter is relevant to the Turkey Point design. Accordingly, this letter is considered to be responsive to your information request.

Yours very truly,

Robert E. Uhrig
Vice President

REU/FGF:ltm

cc: Robert Lowenstein, Esq.
J. P. O'Reilly