

50-335

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO:

Mr. Don K. Davis

FROM:

Florida Power & Light Co.
Miami, Florida
Robert E. Uhrig

DATE OF DOCUMENT

11/18/77

DATE RECEIVED

11/21/77

☒ LETTER☐ NOTORIZED

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DESCRIPTION

Re our 9-14-77 HZ

Consists of information concerning fracture
toughness & lamellar tearing potential for
steam Generator & reactor coolant pump
supports.....

ENCLOSURE

DISTRIBUTION FOR MATERIAL ON REACTOR VESSEL
DATA PER R. INGRAM 5-26-77PLANT NAME: St. Lucie Unit No. 1 (2-P)
RJL 11/21/77

SAFETY

FOR ACTION/INFORMATION

BRANCH CHIEF: (3)

DAVIS

PROJECT MANAGER:

LIC. ASST:

ZWETZIG

INTERNAL DISTRIBUTION

~~REG FILE~~~~NRC-PDR~~

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GRIMES

HAZELTON

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R. GAMBLE

RANDALL

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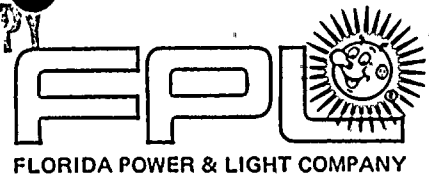
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REGULATORY DOCKET FILE COPY



November 18, 1977
L-77-349



Office of Nuclear Reactor Regulation
Attention: Mr. Don K. Davis, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Davis:

Re: St. Lucie Unit 1
Docket No. 50-335
Steam Generator & Reactor Coolant Pump
Support Materials

Your letter of September 14, 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.

The St. Lucie #1 steam generator and reactor coolant pump supports do not utilize A572 steel. Further, the St. Lucie facility is located in southern Florida, thus there is little likelihood of support materials experiencing temperatures low enough to cause a toughness concern.

The following is a list of steam generator and reactor coolant pump support material used at St. Lucie Unit #1.

<u>Items</u>	<u>Materials</u>	<u>Toughness Values</u> <u>C_v-ft-lbs</u>	<u>Temp °F</u>
1) Structural shapes and plate	A-441	15	10
2) Weld metal	Low hydrogen E70XX series	118	10
3) Bolts, nuts & pins	A-193-B7, A-194-Group 7	63	60
4) Plates	A-36	15	30
5) Studs & nuts	A-307 (A-36)	15	30
6) Anchor bolts	A-490 (4140 or 4150)	40	40
7) Bolts	A-325	40	60

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PEOPLE...SERVING PEOPLE

Office of Nuclear Reactor Regulation
Page Two

<u>Items</u>	<u>Materials</u>	<u>Toughness Values</u>	
		<u>C_v-ft-lbs</u>	<u>Temp °F</u>
8) Clevis	A-515 GR.65	15	30
9) Steam gen. support casting	A-27 GR.70-40	40	0
10) Embedded keys	A-533 CL.2 GR.B	50	34
11) Clevis	A-387 GR.D	15	10

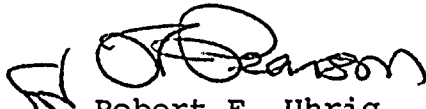
The fracture toughness properties for the above materials were developed based on available test data and various publications, and from discussions with manufacturers.

The data for these materials were conservatively compared and found to be equal to or superior than the fracture toughness properties of A-36 steel.

Other miscellaneous parts are made of AISI 1018, 1020, 1117 and 0.15% carbon free machining steel. These steels are of similar composition but lower carbon content than A-36 steel. It is a recognized property of steel that the notch toughness increases as carbon content decreases. Hence, the fracture toughness properties of these miscellaneous steels are also equal to or superior than A-36 steel.

Based on the above, we do not believe that the generic concern identified by your September 14, 1977 letter is relevant to the St. Lucie design. Accordingly, this letter is considered to be responsive to your information request.

Very truly yours,


Robert E. Uhrig
Vice President

REU/WAK/cpc

cc: Mr. James P. O'Reilly, Region II
Robert Lowenstein, Esquire
Edward Reeves

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