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Mr. James P. O'Reilly, Director, Region II
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

Re: RII:JPO
50-250, 50-251
IE Bulletin 79-03A

Florida Power & Light has reviewed the subject Bulletin and has determined that the hoop stress for all fusion welded stainless steel piping used in safety related systems is within 85 percent of the Code allowable stress. Supporting information is included as an attachment.

Very truly yours,

Robert E. Uhrig
Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/PLP/md

cc: Director, Office of Inspection and Enforcement
Harold Reis, Esquire

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ATTACHMENT

Re: RII:JPO
50-250, 50-251
IE Bulletin 79-03A

LONGITUDINAL WELD DEFECTS IN
ASME SA-312 TP-304 STAINLESS STEEL PIPE

The original IE Bulletin 79-03 was directed at ASME SA-312 TP 304 or other fusion welded pipe manufactured by Youngstown Welding and Engineering and used in safety related piping systems. Because of the use of the term "other fusion welded pipe," the use of ASTM A-312 pipe was pursued in Turkey Point Plants Units 3 and 4.

The information requested in IE Bulletin 79-03A supersedes the requests for information in the IE Bulletin 79-03. This bulletin specifically requests hoop stress calculations on all SA-312 and A-312 type 300 series fusion welded pipe. For those piping components using greater than 85% of the Code allowable stress, the licensee is expected to identify the application and supply other information.

We have determined that only pipe designed to ASME Section III is affected by this request. Whereas ASME Section III provides only one allowable stress for both seamless and welded pipe, ANSI B31.1 provides two. ANSI B31.1 has accounted for a possible lack of fusion by reducing the allowable stress by a joint efficiency of .85. This efficiency corresponds to the 85% of the Code allowable for seamless. Attachment 1 summarizes the stress allowables for SA-312 TP 304 and TP 316 for ASME Section III and ANSI B31.1, respectively.

The potential for material substitutions was evaluated by performing Code hoop stress calculations using 85% joint efficiency. The results of this evaluation are summarized in Attachment 2. It is concluded that the hoop stress for all fusion welded stainless steel piping used in safety related systems is within 85% of the ANSI B31.1, 1967 Code allowable for seamless piping.

ATTACHMENT 1

Sheet 1 of 1

RESPONSE TO IE BULLETIN 79-03A

1971 ASME SECTION III CODE ALLOWABLE

<u>Material</u>	<u>Temperature (°F)</u>					
	<u>100</u>	<u>200</u>	<u>300</u>	<u>400</u>	<u>500</u>	<u>600</u>
SA-312 TP 304 and 304H (Seamless and Welded)	18.8	17.8	16.6	16.2	15.9	15.9
SA-312 TP 316 and 316H (Seamless and Welded)	18.8	18.8	18.4	18.1	18.0	17.0

1967 ANSI B31.1 CODE ALLOWABLE

<u>Material</u>	<u>Temperature (°F)</u>					
	<u>100</u>	<u>200</u>	<u>300</u>	<u>400</u>	<u>500</u>	<u>600</u>
A-312 TP 304H (Seamless)	18.75	16.55	15.55	14.95	14.55	14.35
	18.75	16.00	13.75	12.25	11.40	10.80
A-312 TP 304H (Fusion Welded)	15.95	14.05	13.20	12.70	12.35	12.20
	15.95	13.60	11.70	10.40	9.70	9.20
A-312 TP 316H (Seamless)	18.75	17.50	16.90	16.30	16.20	16.00.
	18.75	16.10	14.60	13.50	12.60	11.90
A-312 TP 316H (Fusion Welded)	15.95	14.85	14.35	13.85	13.60	13.60
	15.95	13.70	12.00	11.45	10.70	10.10

RESPONSE TO USNRC IE BULLETIN 79-03ASUMMARY OF POSSIBLE USE OF FUSION WELDED STAINLESS STEEL PIPING

<u>P&ID NUMBER</u>	<u>SYSTEM</u>	<u>CLASS</u>	<u>PIPE MAT'L</u>	<u>PIPE SCH.</u>	<u>PIPE SIZE (IN.)</u>	<u>DESIGN PRESS/TEMP (PSIG/°F)</u>	<u>ALLOWABLE PRESS. @ 600°F OR AS NOTED (PSIG)</u>
5610-M-12 Rev. 0	Containment Sump Pumps to Waste Hold- up Tank	151	A-312 TP 304	10S	3	45/220	750
5610-M-410-91 Rev. 7 - Sh.1	Connections to Reactor Coolant Pump (Stand Pipe)	151	A-312 TP 304	10S	6	200/100	438
Sh. 2	Primary Water (CVCS) to Pressurizer Relief Tank	151	A-312 TP 304	10S	3	200/100	750
5610-M-420-3 Rev. 9 - Sh.2	Boric Acid Tanks to DH	151	A-312 TP 304	10S	3	150/250	750
Rev. 8 - Sh.3	Chemical and Volume Control System	151	A-312 TP 304	10S	3	75/250	750
		151	A-312 TP 304	10S	4	75/250	580
5610-M-2 Rev. 13	Auxiliary Feedwater Pump Suction	T	A-312 TP 304	40S	8	ATM/100	818
		T	A-312 TP 304	40S	6	ATM/100	930
5610-M-470-5 Rev. 8 - Sh. 1	Safety Injection	151	A-312 TP 304	10S	16	210/300	253
		151	A-312 TP 304	10S	14	210/300	289
		151	A-312 TP 304	10S	10	210/300	331
		151	A-312 TP 304	10S	8	210/300	371
		151	A-312 TP 304	10S	4	210/300	580

ATTACHMENT 2

Sheet 2 of 2

<u>NUMBER</u>	<u>SYSTEM</u>	<u>CLASS</u>	<u>PIPE MAT'L</u>	<u>PIPE SCH.</u>	<u>PIPE SIZE (IN.)</u>	<u>DESIGN PRESS/TEMP (PSIG/°F)</u>	<u>ALLOWABLE PRESS. @ 600°F OR AS NOTED (PSIG)</u>
1-470-5 3 - Sh.2	Safety Injection	151	A-312 TP 304	10S	6	210/300	438
		301	A-312 TP 304	40S	6	300/300	930
		601	A-312 TP 304	40	14	700/400	814 @ 400°F
		601	A-312 TP 304	40S	8	700/400	818
		601	A-312 TP 304	40S	6	700/400	930
		1501	A-312 TP 316	80S	3	1500/300	2170
		1501	A-312 TP 316	80S	4	1500/300	1881
3	Safety Injection	1501	A-312 TP 316	80S	6	1500/300	1626
		601	A-312 TP 304	40S	10	700/400	743
M-500-27 2 - Sh.2	Reactor Coolant Drain	151	A-312 TP 304	10S	3	100/267	750
		151	A-312 TP 304	10S	4	100/267	580
M-450-53 7	Auxiliary Coolant System (RHR)	601	A-312 TP 304	40S	14	600/400	814 @ 400°F
		601	A-312 TP 304	40S	12	600/400	667 @ 400°F
		601	A-312 TP 304	40S	10	600/400	743
		601	A-312 TP 304	40S	8	600/400	818
		601	A-312 TP 304	40S	3	600/400	1377