````````````						
÷ _ 3	REGUL	ATORY INFO	RMATION	DISTRIBUTION	SYSTEM (RIDS	5)
ACCESSION FACIL: 50 AUTH. NA WOODY, C. RECIP. N THADANI,	N [•] NBR: 86100903 D-335 St. Luc AME AU O. Flo NAME REG A.C. PW	342 DOC ie Plant, THOR AFFIL rida Power CIPIENT AF R Project	DATE: E Unit 1, IATION & Light FILIATIC Director	86/10/02 NOT Florida Powe Co. N ate 8	ARIZED: NO r & Light Co.	D8CKET # 05000335
SUBJECT: DISTRIBU TITLE: (	: Forwards re matl proper protection UTION CODE: A DR. Submittal:	sponse to ties for f against pr OO1D COPI General D	NRC 8608 racture essurize ES RECEI Distribut	13 request f toughness re d thermal sh VED:LTR ion	or addl info quirements fo ock events. NCL	те эт 
NOTES:				,		
	RECIPIENT ID CODE/NAM PWR-B EB PWR-B FOB PWR-B FOB PD PWR-B PDB PD PWR-B PEICSB	COP ME LTT 1 01 5 1	TES R ENCL 1 5 1	RECIPIEN ID CODE/N PWR-B PEICS PWR-B PDB L TOURIGNY,E PWR-B RSB	T COP AME LTTR B 2 A 1 1 1	IES ENCL 2 0 1 1
INTERNAL:	ADM/LFMB NRR/DHEI/ISC REG FILE	i B 1 04 1	0 1 1	ELD/HDS2 NRR/DRAS RGN2	1 1 1	0 0 1

٠

EXTERNAL: EQ&G BRUSKE, S 1 1 LPDR 03 1 1 NRC PDR 02 1 1 NSIC 05 1 1

TOTAL NUMBER OF COPIES REQUIRED: LTTR 23 ENCL 19

	COLAN MATTAN KONDUCTOR DISTING MOTAMANA MANA MANA	<b>*</b> ~				
9550030 9550030	BR 10070249 DEC.DATE SEATOR. 2 DOTARIZADO NO 335 De. Lucie Minto Unit 1, Flotica Course & Light Co. AUTHOR AFFILIATION Floride Course & Light Co Floride Course & Light Co	CCECCHEN 1 FACTE: FO 7 AUTH: MER OUDY: J: TE CCCTP, MA	A			
····· 	(NADANY, A. C. PMR Protect Directorate 8 SURJECT: Forward: response to NRC 850813 request for addi info re mati proprises for fracture tougeness requirements for protection egainst pressurized thermal shock events. D.S.F.RHUTICN CODE: 2004D COMIES RECEIVED: LTR E ENCL 5 SIZE:					

1.1111

SE	C (0P)	RECIPTENT	3	EL 407	THEL42039	
ENGL	817 6 1	ID CODE/WANK	Tone	<b>ЯТТ</b> 1	TD WARLARD AT	÷
S	S	EMR-B PEICSE	Z	ţ,	紅子 垣 清醉症	
0	t	AJ 504 0-9W9	1	1	धा)ने भूनभागप	
¢ .	i,	TOURIGNMAR	5	đ	10 04 804 & 884	
1	t	eur-b poi	1	Ł	area dellar	
0	t	ELD/HDS2	0	l,	ADMATHAR	: Jo 19500.
0	£.	SVERVER	1	1	ROAL VEHRAV SISIA	
t	Ļ	RGNZ	ľ	1	10-0 FRF - 04	
t	ì	20 AUAT	t	t	ECSEC BRUSHES C	: JANDER XE
1	L	NSIC 05	1	1	MRC PDR 02	

.

. q	X 14000	, JUNO	BEACH,	FL	33408
-----	---------	--------	--------	----	-------



CTOBER 02 1986

L-86-394

Office of Nuclear Reactor Regulation Attention: Mr. Ashok C. Thadani, Director PWR Project Directorate #8 Division of PWR Licensing-B U. S. Nuclear Regulatory Commission Washington, D. C. 20555

Dear Mr. Thadani:

Re: St. Lucie Unit 1 Docket No. 50-335 Protection Against Pressurized Thermal Shock Event

By letter L-86-20, dated January 23,1986, Florida Power & Light Company (FPL) provided information relating to fracture toughness requirements for protection against pressurized thermal shock events, 10 CFR 50.61, at St. Lucie Unit 1. In its letter dated August 13, 1986 (E. G. Tourigny to C. O. Woody), the NRC staff identified additional information required to continue its review of this topic. The attached information addresses the staff's August 13, 1986 request for additional information.

Should you or your staff have any questions on this information, please contact us.

Very truly yours,

O. Woody С.

Group Vice President Nuclear Energy

COW/EJW/gp

Attachment

8610070342

cc: Dr. J. Nelson Grace, Region II, USNRC Harold F. Reis, Esquire

> 861002 / 05000335

EJW1/011/1

PDR

warra k bi

4

مان ماند با ليكن لا الله المحمد الله المحمد الله المحمد الله المحمد الله المحمد المحمد المحمد المحمد المحمد ال المحمد المحمد

الم المستحدة المستحدة والمحكم المستحدة التي المحالية التي تركيم المحالية المحالية المحالية المحالية المحالية ا المحالية الم المحالية الم المحالية محالية المحالية المح المحالية المحا محالية المحالية الم محالية المحالية

•

Construction of the second second

# REQUEST FOR ADDITIONAL INFORMATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION ST. LUCIE UNIT I MATERIAL PROPERTIES FOR FRACTURE TOUGHNESS REQUIREMENTS FOR PROTECTION AGAINST PRESSURIZED THERMAL SHOCK EVENTS 10 CFR 50.61 TAC NO. 59985

The controlling beltline material from the standpoint of PTS susceptibility was identified to be the lower shell longitudinal weld seams 3-203A, B, and C (weld wire heat No. 34B009), and the copper and nickel contents were reported to be 0.30% copper and 0.64% nickel. Yet, Table 2 of the submittal lists 0.12% copper and 0.20% nickel for weld wire heat number 34B009 for the intermediate shell longitudinal seams. Furthermore, neither of these sets of values are consistent with measurements reported for this weld wire where it appeared in three other vessels. In those three cases the copper content was reported to be about 0.20% and the nickel content was 0.80% in one case and 1.00% in the others. These welds are described as "RACO 3 + Ni 200." Please resolve these discrepancies and justify your conclusion by describing the underlying data base. Specific questions are:

## General Response:

The weld wire heat number, 34B009, reported in FPL letter L-86-20, dated January 23, 1986, is incorrect. The correct number is 305242. The Cu and Ni content reported in that submittal are the correct values. The weld composition was verified with Combustion Eningeering, the NSSS supplier. The discrepancies between the St. Lucie composition of weld 34B009 and that reported for other vessels cannot be explained by FPL.

I. Were weld seams 3-203 made with Ni 200 added?

### Response:

No, weld seams 3-203 were not made with Ni 200 added.

2. We assume the manual shielded metal electrode was used only superficially and does not affect the reported chemistry. If this is not correct, please explain.

### Response:

That is correct. The manual shielded metal electrode was used only superficially and does not affect the reported chemistry.

3. Are the reported copper and nickel values single measurements or averages? If they are averages, please give the individual values also.

## Response:

The reported copper and nickel values are single measurements.

11 A 18

# 

من من من المراجع الذي المراجع الذي العلمي المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع الم المراجع ا المراجع ال المراجع المراج المراجع

### A the Contract of Martin

1 - **1** - 1 - 1

the second and a second second

and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the second and the se

ب ک_و ۱۳۶۹ و

الا المانية المانية المعام المحمد المالية المحمد المالية التي المحمد المحمد المحمد المحمد المحمد المحمد المحمد المراجعة المحمد الم

الم ما المان المحلوم الألمان المحلوم المحلوم الألمان المحلوم المحلوم المحلوم المحلوم المحلوم المحلوم المحلوم ال المراجعة المحلوم المحلوم

لى "مەركە "

# TAC No. 59985 Page two

بن من ا<u>بن</u>ت

G

4. Describe the welds from which the individual values were taken (weld procedure qualification welds, surveillance welds, actual vessel weld trim rings or cutouts, etc.).

## Response:

The value was taken from a weld qualification sample. However, the filler metal was from heat number 305424 with an as welded composition of 0.30% Cu and 0.64% Ni. The heat number and composition is stated in the Surveillance Program.



19 Construction to a construction of the construction of the second of the 44 الى بى 1 مىڭۇ مەلىمە يەلامىمە .

**،** 

 $\star^+$ 

### Sell . c. it

ા પણ સામાન કે પણ પ્રયોગ પ્રથણ દેશી હતા કે છતા તે કે જે જે જે જે દેશી ઉંચર્ગ સ્વાર્ણ તે તે તે તે છે છે છે છે છે કે પ્રયોગ ક પાસ્ટ કે પણ કે પ્રયોગ કે પ્રયોગ કે પ્રયોગ તે પર તે તે તો પ્રયોગ સ્વાર્ગ સ્વાર્ગ એ ઉપરાંગ 2003 કે પ્રયોગ કે પ્રય તે કે પ્રાર્થી કે પ્રચોગ તે પ્રોગ પર્વતા દેવસાર્ગ સાથે પ્રચાન સ્વાર્ગ સ્વાર્ગ કે ઉપરાંગ 2003 કે પ્રયોગ કે પ્રયો તે વ્યવસાર્થ કે પ્રચોગ તે પ્રોગ પર્વતા દેવસાર્ગ સાથે પ્રચાન સાથે કે બ્લેગ સાથે કે પ્રચાન કે પ્રયોગ કે પ્રયોગ કે