

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9704210077 DOC. DATE: 97/04/17 NOTARIZED: NO DOCKET # 05000389
 FACIL: 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co.
 AUTH: NAME AUTHOR AFFILIATION
 STALL, J.A. Florida Power & Light Co.
 RECIP: NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Notifies NRC of util determination that FSAR discussion concerning compliance w/NRC RG 1.63 is inconsistent w/current design of power sources for RCP breaker over current protection scheme.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 0 SIZE: 3
 TITLE: OR Submittal: General Distribution

NOTES:

	RECIPIENT		COPIES			RECIPIENT		COPIES	
	ID CODE/NAME	LTR	ENCL	ID CODE/NAME		LTR	ENCL		
	PD2-3 LA	1	1	PD2-3 PD	1	1			
	WIENS, L.	1	1						
INTERNAL:	ACRS	1	1	<u>FILE CENTER</u> 01	1	1			
	NRR/DE/ECGB/A	1	1	NRR/DE/EMCB	1	1			
	NRR/DRCH/HICB	1	1	NRR/DSSA/SPLB	1	1			
	NRR/DSSA/SRXB	1	1	NUDOCS-ABSTRACT	1	1			
	OGC/HDS3	1	0						
EXTERNAL:	NOAC	1	1	NRC PDR	1	1			

NOTE TO ALL "RIDS" RECIPIENTS:
 PLEASE HELP US TO REDUCE WASTE. TO HAVE YOUR NAME OR ORGANIZATION REMOVED FROM DISTRIBUTION LISTS OR REDUCE THE NUMBER OF COPIES RECEIVED BY YOU OR YOUR ORGANIZATION, CONTACT THE DOCUMENT CONTROL DESK (DCD) ON EXTENSION 415-2083

TOTAL NUMBER OF COPIES REQUIRED: LTR 14 ENCL 0

C
A
T
E
G
O
R
Y
1
D
O
C
U
M
E
N
T





April 17, 1997

L-97-95
10 CFR 50.4
10 CFR 50.9

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

RE: St. Lucie Unit 2
Docket No. 50-389
Containment Electrical Penetrations
Correction of Docketed Correspondence

The purpose of this letter is to notify the NRC of a Florida Power & Light Company (FPL) determination that the Final Safety Analysis Report (FSAR) discussion concerning compliance with NRC Regulatory Guide (RG) 1.63 is inconsistent with the current design of the power sources for the reactor coolant pump (RCP) breaker over current protection scheme. The FSAR states that independent power supplies are provided to the primary and backup trip devices. In fact, both the primary and backup breaker mechanisms and protection schemes are provided from a single safety related battery. This condition was identified as part of a comprehensive review of the FSAR against plant procedures.

Background

The implementation of modifications to meet RG 1.63 and commitments for this circuit were included in St. Lucie Unit 2 Operating License Condition 2.C.11, which stated:

Prior to start-up following the first refueling outage, the licensee shall complete the design modifications to provide independent primary and backup fault protection for each electrical conductor penetrating containment.

To satisfy to this license condition, FPL implemented plant change/modification (PC/M) 15-283, which installed backup protection relays to trip the bus feeder breaker if an RCP faulted and the RCP breaker failed to clear the fault. FPL letter L-84-333, dated November 20, 1984, provided the status of various St. Lucie Unit 2 Operating License Conditions. This letter stated that, for License Condition 2.C.11, the required modifications had been implemented to provide independent primary and backup fault protection for each electrical conductor penetrating the containment. In January 1985, FPL requested a license amendment to delete License Condition 2.C.11. On September 13, 1988, NRC issued St. Lucie Unit 2 License Amendment Number 34 which deleted various license conditions from the St. Lucie Unit 2 license. In License Amendment Number 34, the NRC stated that the review of the FPL request to delete License

9704210077 970417
PDR ADCK 05000389
P PDR



ADD 1/0





Condition 2.C.11 was continuing. The NRC reviewed the implementation of License Condition 2.C.11, documented the review in NRC Inspection Report 50/389/89-07, and on May 17, 1989, the NRC deleted License Condition 2.C.11 in License Amendment Number 41. The NRC safety evaluation stated:

The review of licensee actions included portions of PCM 15-28[3], which initially implemented modifications to satisfy licensing conditions 2.[C].10 and 2.[C].11; some PC/M drawings, BCS-015-283-3000 (series numbers), and records of the licensee's re-review for compliance to RG 1.63 and RG 1.75 commitments following the issuance of URI-87-17-01. . . . Licensing Conditions 2.[C].10 and 2.[C].11 which are tracked on NRC Region II tracking system as FPL 88-01 and 02 are also closed based on the above.

Discussion

A review by FPL of the installed primary and backup protection for the RCP containment penetrations against RG 1.63 criteria was performed in 1996. Certain aspects of the design meet the RG criteria; backup protection is provided by the bus feeder breaker; the bus feeder breaker is tripped by a separate relay other than the one which provides the trip signal to the primary protection breaker; and the control and protection power is separately fused so that a fault in one scheme will not affect the power to the other scheme. It has been concluded, however, that the existing design does not meet the literal intent of RG 1.63 (which refers to IEEE 279-1971) with respect to independence of power supplies. The failure of a single safety related battery power supply would prohibit both the primary and backup protection breakers from opening if a fault was to occur. Although the license condition was removed by license amendment, it has been determined that the plant design (PC/M 15-283) does not meet the literal intent of RG 1.63.

FPL has determined that the existing configuration does not present an operability concern. The coincident events which could result in failure of an electrical penetration are a fault in an RCP motor or feeder cables inside containment, and failure of a safety-related DC power source to the 6.9KV switchgear supplying power to the faulted RCP. These two failures are completely independent of each other and there is no credible mechanism linking the two. Neither of the failures is considered in the plant's design basis to be an event initiator requiring containment integrity to limit an offsite dose. Furthermore, the probability of the coincidence of events which could lead to exceeding a safety limit, given the condition, is extremely low. It should be noted that, for plants which are not committed to RG 1.63, the existing St. Lucie Unit 2 design configuration is acceptable.

FPL has determined this condition does not meet any of the reporting criteria in 10CFR 50.9, 50.72, 50.73, 73.71, or 10 CFR Part 21.

St. Lucie Unit 2
Docket No. 50-389
L-97-95 Page 3

FPL will implement a modification to the plant to provide separate power feeds to the feeder breakers for the 2A1 and 2B1 6.9KV switchgear and to the backup protection relays. Power from the A battery, which currently provides control and protection power to the 2A1 startup and auxiliary power transformer breakers, will be routed to the 2B1 switchgear to provide power to the 2B1 auxiliary and startup transformer breakers, and vice versa. The power will be fused to maintain DC power independence. Because the switchgear and turbine building are non-safety related, and the DC feeds are fused feeds, the modification will be classified not nuclear safety related. The design modification is being implemented during the current Spring 1997 refueling outage (SL2-10), which is the first available opportunity.

Commitment

This letter contains a new regulatory commitment to provide independent primary and backup fault protection for the RCP electrical conductors penetrating containment during the Spring 1997 refueling outage (SL2-10).

Please contact us if there are any questions about this submittal.

Very truly yours,



J. A. Stall
Vice President
St. Lucie Plant

JAS/GRM

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

