PRIORITY 1
(ACCELERATED RIDS PROCESSING)

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9408030024 DOC.DATE: 94/07/25 NOTARIZED: YES DOCKET #
FACIL:50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co. 05000389
AUTH.NAME AUTHOR AFFILIATION
SAGER,D.A. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
Document Control Branch (Document Control Desk)

SUBJECT: Application for amend to license NPF-16,proposing TS upgrading TS 3/4.7.1.6 for main feedwater line isolation valves to be consistent w/NUREG-1432,standard TS for C-E plants.

DISTRIBUTION CODE: A001D COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 12+4
TITLE: OR Submittal: General Distribution

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD2-2 LA	1	1	PD2-2 PD	1	1
	NORRIS,J	2	2			
INTERNAL:	ACRS	6	6	NRR/DE/EELB	1	1
	NRR/DORS/ONDD	1	1	NRR/DRCH/HICB	1	1
	NRR/DRPW	1	1	NRR/DSSA/SPLB	1	1
	NRR/DSSA/SRXB	1	1	NUDOCS-ABSTRACT	1	1
	OC/LFDCB	1	0	OGC/HDS3	1	0
	REG FILE 01	1	1			
EXTERNAL:	NRC PDR	1	1	NSIC	1	1

NOTE TO ALL "RIDS" RECIPIENTS:
PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 504-2083) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTTR 22 ENCL 20

PRIORITY 1 DOCUMENT

Florida Power & Light Company, P.O. Box 128, Fort Pierce, FL 34954-0128

July 25, 1994

L-94-139
10 CFR 50.90

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

Re: St. Lucie Unit 2
Docket No. 50-389
Proposed License Amendment
Main Feedwater Isolation Valves

Pursuant to 10 CFR 50.90, Florida Power & Light Company (FPL) requests to amend Facility Operating License NPF-16 for St. Lucie Unit 2. The amendment will upgrade Technical Specification (TS) 3/4.7.1.6 for the Main Feedwater Line Isolation Valves to be consistent with NUREG-1432, Standard Technical Specifications for Combustion Engineering Plants. The changes include all related requirements of NUREG-1432, Revision 0, specification 3.7.3. Accordingly, the proposal is consistent with the Commission's Final Policy Statement on Technical Specifications Improvements (58 FR 39132).

FPL requests that the proposed amendment, if approved, be issued by February 1, 1995.

Attachment 1 is an evaluation of the proposed TS changes. Attachment 2 is the "Determination of No Significant Hazards Consideration." Attachment 3 contains a copy of the appropriate TS pages marked-up to show the proposed changes.

The proposed amendment has been reviewed by the St. Lucie Facility Review Group and the Florida Power & Light Company Nuclear Review Board. In accordance with 10 CFR 50.91 (b)(1), a copy of the proposed amendment is being forwarded to the State Designee for the State of Florida.

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

Very truly yours,

D. A. Sager
Vice President
St. Lucie Plant

DAS/RLD/kw
DAS/PSL #1167-94

Attachments
cc: See next page

A001
1/1

cc: Stewart D. Ebneter, Regional Administrator, Region II, USNRC.

Senior Resident Inspector, USNRC, St. Lucie Plant.

Mr. W.A. Passetti, Florida Department of Health and Rehabilitative Services.

STATE OF FLORIDA)
) ss.
COUNTY OF ST. LUCIE)

D. A. Sager being first duly sworn, deposes and says:

That he is Vice President, St. Lucie Plant for the Nuclear Division of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.

D. A. Sager

STATE OF FLORIDA

COUNTY OF ST. LUCIE

The foregoing instrument was acknowledged before me this 25th day of July, 1994 by D.A. Sager, who is personally known to me and who did take an oath.

Karen West

KAREN WEST
Name of Notary Public

My Commission expires 4-18-98

Commission No. CC 359926

KAREN WEST
MY COMMISSION # CC359926 EXPIRES
April 18, 1998
BONDED THRU TROY FAIN INSURANCE, INC.

St. Lucie Unit 2
Docket No. 50-389
Proposed License Amendment
Main Feedwater Isolation Valves

ATTACHMENT 1

EVALUATION OF PROPOSED TS CHANGES

EVALUATION OF PROPOSED TS CHANGES

Introduction

Florida Power and Light Company (FPL) proposes to change the St. Lucie Unit 2 Technical Specifications (TS) for the Main Feedwater Line Isolation Valves (MFIVs). The revision will upgrade the action completion times imposed for inoperable MFIVs to account for the redundancy afforded by the existing feedwater system design. The proposed applicability of TS 3/4.7.1.6 will be in agreement with related TS established for the automatic closure signals which are provided to the MFIVs to perform their design safety function. The proposal is consistent with the Commission's Final Policy Statement on Technical Specifications Improvements (58 FR 39132).

Description of Changes

TS 3/4.7.1.6 will be revised in its entirety to be consistent with the corresponding specification of NUREG-1432, Standard Technical Specifications for Combustion Engineering Plants. Bases section 3/4.7.1.6 (Page B 3/4 7-3) will be updated to reflect the bases for the proposed action completion times. Attachment 3 contains the marked-up pages of the existing TS and the proposed replacement text.

Background

The St. Lucie Unit 2 (PSL2) Main Feedwater (MFW) System includes four electro-hydraulic MFIVs which serve to isolate the safety related portion from the non-safety related portion of the system. Two of the safety-grade MFIVs are arranged in series in each feedwater line. These valves are located outside of the reactor containment and upstream of the Auxiliary Feedwater (AFW) System injection points. Inside containment, a check valve is installed in each feedwater line near the feedwater nozzle to preclude backflow from the associated steam generator (SG).

The MFIVs will automatically close when actuated by the Engineered Safety Features Actuation System (ESFAS) Main Steam Isolation Signal (MSIS), or the Auxiliary Feedwater Actuation System (AFAS). All four MFIVs will close upon receipt of an MSIS generated by low SG pressure (in either SG) or high containment pressure. In response to a low liquid level in a non-faulted SG, an AFAS signal will close the MFIVs associated with that SG and initiate AFW flow.

Automatic closure of the MFIVs is assumed in the success paths identified for mitigation of various accidents and transients, including certain steam line breaks (SLB), feedwater line breaks, loss of coolant accidents, and steam generator tube ruptures. The redundancy of two MFIVs per feedwater line provides a capability for accomplishing this feedwater isolation safety function considering single-failure criteria. In addition, analyses have been performed to show that the containment design pressure would not be exceeded in the event an MFIV failed to close (single-active failure) following a large SLB inside containment.

Bases for TS Change

The MFIVs are considered OPERABLE when they can be closed with an isolation actuation signal and they are capable of full-closure within the time assumed in the plant safety analyses. The proposed Limiting Condition for Operation (LCO) requires all four MFIVs to be OPERABLE except when an MFIV is closed and deactivated. Since the feedwater isolation safety function is satisfied when at least one MFIV is closed in each feedwater line, the LCO provides assurance that the MFIV safety function can be performed considering single-failure criteria. The proposed LCO implements NUREG-1432 specification 3.7.3.

The proposed APPLICABILITY during MODES 1, 2, and 3 is in agreement with existing St. Lucie Unit 2 TS 3.3.2 for the MSIS and AFAS functions, which initiate the automatic closure signals to the MFIVs. In MODES 4, 5, and 6, automatic actuation of the ESFAS and AFAS functions is not required since SG and feedwater energy is low. In addition, the MFIVs are normally closed for these lower modes since MFW is not required, e.g., startup and shutdown are performed using the AFW system. The proposed APPLICABILITY is consistent with NUREG-1432 and the plant safety analyses.

With one inoperable MFIV in one or more main feedwater lines, ACTION-a requires the inoperable MFIVs to be returned to OPERABLE status, closed, or isolated within 72 hours. The 72 hour action completion time takes into account the redundancy afforded by the remaining OPERABLE valves such that the isolation function is still available, and the low probability that an event will occur during this period that would require isolation of the MFW flowpaths. The 72 hour action completion time is reasonable, based upon operating experience, and is consistent with NUREG-1432.

With more than one inoperable MFIV in the same flowpath, then there is no redundant system to automatically isolate main feedwater. Therefore, the double failure is treated the same as a loss of the isolation capability for this flowpath. Under these conditions, ACTION-b requires at least one of the affected MFIVs to be returned to OPERABLE status or closed within 4 hours. This action will return the feedwater system to the condition where at least one valve in each flowpath is capable of performing, or is performing, the required safety function. The proposed action interval is more conservative than that contained in NUREG-1432, and is in agreement with the St. Lucie TS for Main Steam Isolation Valves (MSIV). Four hours to complete the required actions is based on operating experience and the low probability of an event requiring feedwater isolation during the time period.

If the MFIVs cannot be restored to OPERABLE status, closed, or isolated as required by ACTIONS a or b, the unit must be placed in a MODE for which the LCO does not apply. To achieve this status, the proposed LCO requires the unit to be placed in at least MODE 3 within 6 hours, and in MODE 4 within the following 6 hours. Based on operating experience, the allowed completion times are reasonable to reach the required unit status from full power conditions in an orderly manner, and without challenging plant systems. The time to complete each action is consistent with NUREG-1432 and is in agreement with the existing PSL2 shutdown ACTION requirements which must be implemented when an LCO is not met pursuant to TS 3.0.3.

Proposed surveillance requirement (SR) 4.7.1.6.a specifies that operability of each MFIV be demonstrated by verifying full closure within 5.15 seconds. This closure criterion considers instrument response time and maximum allowable valve stroke time, and is consistent with the PSL2 safety analyses. The MFIVs are tested pursuant to an NRC approved Inservice Testing (IST) Program. The closure criterion has not been changed from the existing LCO and operating experience shows that the MFIVs normally pass this SR when performed at the frequency required by the IST Program.

In accordance with existing plant procedures, the full-closure test required by SR 4.7.1.6.a is normally performed in MODE 3, when returning the unit to operation, following a cold shutdown as described in the IST program. Until the test, the MFIVs are maintained closed and feedwater is added to the SG, as appropriate, by the AFW system. For these reasons, FPL considers the proposed exception to the provisions of TS 4.0.4 for entry into MODE 3, which would otherwise prevent entry into MODE 3 prior to performing the test, to be acceptable.

Proposed SR 4.7.1.6.b is consistent with the actions required by NUREG-1432. The SR ensures that MFIVs which cannot be restored to OPERABLE status within the required action completion time, but are closed or isolated, are verified on a periodic basis to be closed or isolated. This ensures that assumptions in the safety analyses remain valid. In view of the valve status indications available in the control room and existing plant administrative controls, the 7 day completion time is reasonable to verify that the applicable valves remain closed or isolated.

Conclusion

The changes proposed for St. Lucie Unit 2 TS 3/4.7.1.6 are consistent with the plant safety analyses, and the existing technical specifications for the automatic MSIS and AFAS functions. The proposed amendment includes the related requirements of NUREG-1432, Revision 0, Specification 3.7.3, and is consistent with the Commission's Final Policy Statement on Technical Specification Improvements (58 FR 39132). Therefore, FPL considers the proposed amendment to be acceptable.

St. Lucie Unit 2
Docket No. 50-389
Proposed License Amendment
Main Feedwater Isolation Valves

ATTACHMENT 2

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

Pursuant to 10CFR50.92, a determination may be made that a proposed license amendment involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Each standard is discussed as follows:

(1) Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed amendment will upgrade the existing Limiting Condition for Operation (LCO) associated with the Main Feedwater Line Isolation Valves (MFIVs) to be consistent with NUREG-1432, Standard Technical Specifications for Combustion Engineering Plants. The MFIVs are not initiators of accidents previously evaluated, but are included as part of the success paths associated with mitigating various accidents and transients. The redundancy afforded by two MFIVs per feedwater line in conjunction with the requirements of the proposed LCO assure that the feedwater isolation safety function of these valves can be accomplished considering single failure criteria. Neither the feedwater system design nor the safety function of the MFIVs have been altered from those previously evaluated, and the proposed amendment does not change the applicable plant safety analyses. Therefore, operation of the facility in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

(2) Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed amendment will not change the physical plant or the modes of operation defined in the facility license. The changes are administrative in nature in that they do not involve the addition of new equipment or the modification of existing equipment, nor do they otherwise alter the design of St. Lucie Unit

2 systems. Therefore, operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated.

(3) Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

The safety function of the MFIVs is to terminate main feedwater flow and isolate the safety related portion from the non-safety related portion of the feedwater system. The proposed amendment, in conjunction with the redundancy afforded by the feedwater system design, assures that this safety function can be accomplished considering single-failure criteria. The bases for required actions and the action completion times specified for inoperable MFIVs is consistent with the corresponding specifications in NUREG-1432, which are equally applicable to St. Lucie Unit 2. The safety analyses for applicable accidents and transients remain unchanged from those previously evaluated and reported in the Updated Final Safety Analysis Report. Therefore, operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety.

Based on the discussion presented above and on the supporting Evaluation of Proposed TS Changes, FPL has concluded that this proposed license amendment involves no significant hazards consideration.

St. Lucie Unit 2
Docket No. 50-389
Proposed License Amendment
Main Feedwater Isolation Valves

ATTACHMENT 3

ST. LUCIE UNIT 2 MARKED-UP TECHNICAL SPECIFICATION PAGES

Page 3/4 7-10

Insert - A

Page B 3/4 7-3

Insert - B