REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8411120329 DOC. DATE: 84/10/31 NOTARIZED: YES DOCKET #
FACIL: 50-387 Susquehanna Steam Electric Station, Unit 1, Pennsylva 05000387
AUTH. NAME AUTHOR AFFILIATION
CURTIS, N. W. Pennsylvania Power & Light Co.
RECIP. NAME RECIPIENT AFFILIATION
SCHWENCER, A. Licensing Branch 2

SUBJECT: Forwards application for amend to License NPF-14, revising Tech Specs re MSIV closure setpoint to Level 1 to reduce number of challenges to safety-relief valves, per NUREG-0737, Item II.K.3.

DISTRIBUTION CODE: A001D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3+7
TITLE: OR Submittal: General Distribution

NOTES: 1cy NMSS/FCAF/PM. LPDR 2cys Transcripts. 05000387
OL: 07/17/82

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	NRR LB2 BC	01	7	7				
INTERNAL:	ACRS	09	6	6	ADM/LFMB		1	0
	ELD/HDS4		1	0	NRR/DE/MTEB		1	1
	NRR/DL DIR		1	1	NRR/DL/ORAB		1	0
	NRR/DSI/METB		1	1	NRR/DSI/RAB		1	1
	REG FILE	04	1	1	RGN1		1	1
EXTERNAL:	LPDR	03	2	2	NRC PDR	02	1	1
	NSIC	05	1	1	NTIS		1	1
NOTES:			3	3				

Rec'd w/check $150.00 #524506

TOTAL NUMBER OF COPIES REQUIRED: LTTR 30 ENCL 27

[illegible]

PP&L Pennsylvania Power & Light Company
Two North Ninth Street • Allentown, PA 18101 • 215 / 770-5151

Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
215/770-7501

OCT 31 1984

Director of Nuclear Reactor Regulation
Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT 54 TO LICENSE NO. NPF-14
ER 100450 FILE 841-8
PLA-2344 Docket No. 50-387

Dear Mr. Schwencer:

The purpose of this letter is to propose a change to the Susquehanna SES Unit 1 Technical Specifications. The setpoint change being requested will be made during the first refueling outage; we therefore request that your approval of this change be conditioned to become effective prior to startup following that outage.

The setpoint in question is the MSIV isolation on reactor vessel water level. Currently, the Technical Specifications require isolation at Level 2 (reference Table 3.3.2-2); we propose that it be lowered to Level 1. The reason we are requesting the change is in order to reduce the number of challenges to our safety-relief valves. The change is consistent with NRC recommendations, in Item 16 of NUREG-0737 Section II.K.3, "Reduction of Challenges and Failures of Relief Valves-Feasibility Study and System Modification." Although the NRC has approved the generic issue via this document, an independent overview of our considerations relative to the FSAR safety analyses is provided below.

FSAR Chapters 5, 6, and 15 were reviewed to determine the impact of changing the MSIV closure setpoint on the transient and accident analyses. Seven MCPR transients and the loss of coolant accidents result in MSIV closures on L2 water level.

The transient events include generator load rejection with and without bypass, turbine trip with and without bypass, two recirculation pump trip, recirculation pump seizure, and loss of feedwater flow. The first six events result in a loss of feedwater flow due to the L8 feedwater pump trip followed by a rapid drop in water level due to the void collapse after the L8 turbine trip and scram. The L2 setpoint is reached approximately 30 seconds later since the water level decreases slowly following the initial drop. Changing the MSIV closure setpoint to L1 will result in HPCI and RCIC initiation at 30

Rec'd w/ check #524506 for $150.00

A001
1/1

seconds with no MSIV closure. Water level will increase following the HPCI and RCIC injection and MSIV closure is not expected to occur for these six transients. Since the reactor is scrammed 30 seconds prior to the L2 trip, the MCPR has increased well above the safety limit. Therefore, changing the MSIV closure setpoint does not affect the thermal margin for the first six transients listed above. The loss of feedwater flow event results in a slightly different scenario. Upon loss of feedwater flow, the reactor water level decreases to the L3 setpoint which results in a reactor scram. Since the water level is at the L3 setpoint, the void collapse following the scram causes water level to drop to the L2 setpoint. Changing the MSIV closure setpoint to L1 will result in HPCI and RCIC initiation with no MSIV closure. Water level will increase following the HPCI and RCIC injection and the MSIV closure is not expected to occur. Since reactor power decreases prior to the scram due to the reduced core inlet subcooling and since the reactor scrammed a few seconds prior to water level reaching the L2 setpoint, the MCPR has increased well above the safety limit prior to the time L2 is reached. Therefore, changing the MSIV closure setpoint does not affect the thermal margin evaluation for the loss of feedwater flow event.

The loss of coolant accidents also result in a rapid drop in reactor water level. As stated in FSAR Table 6.3-1, a loss of offsite power is assumed coincident with the LOCA. Chapter 15 of the FSAR shows MSIV closure will occur upon a loss of auxiliary power. Therefore, changing the MSIV closure setpoint from L2 to L1 does not affect the LOCA analysis since the MSIVs close due to the loss of offsite power. For a LOCA with offsite power available, changing the MSIV closure setpoint from L2 to L1 will result in a faster pressure decrease which results in earlier low pressure ECCS injection and lower peak clad temperature.

This proposed modification reduces the probability of a malfunction of equipment. It will delay or eliminate MSIV closures for many transient events which will reduce the number of SRV openings and MSIV closures. Challenges to the HPCI and RCIC systems are reduced by preserving the availability of the feedwater system which allows the operator to suppress those systems' cyclical operation. This reduces the probability of a stuck open relief valve and failure of HPCI, RCIC, or MSIVs.

NO SIGNIFICANT HAZARDS CONSIDERATIONS

The proposed changes do not:

(1) involve a significant increase in the probability or consequences of an accident previously evaluated,
(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.

This determination is based on the sensitivity studies performed relative to the existing analysis, as described above, and therefore is an example as provided in 48FR14870, Column 3, paragraph (vi).

OCT 31 1984

Any questions on this proposal should be directed to Mr. R. Sgarro at (215) 770-7855. Pursuant to 10CFR170.22, the appropriate fee is enclosed.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

Attachment

cc: R. L. Perch USNRC
R. H. Jacobs USNRC

T. M. Gerusky, Director
Bureau of Radiation Protection
Pennsylvania Dept. of Environmental Resources
P.O. Box 2063
Harrisburg, PA 17120

[illegible]