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AUTH. NAME AUTHOR AFFILIATION
KEISER, H. W. Pennsylvania Power & Light Co.
RECIP. NAME RECIPIENT AFFILIATION
ADENSAM, E. BWR Project Directorate 3

SUBJECT: Application for amend to License NPF-22, changing Tech Specs to lower MSIV isolation on reactor vessel water level & to Level 1 to reduce challenges to safety/relief valves, per NUREG-0737, Section II.K.3. Fee paid.

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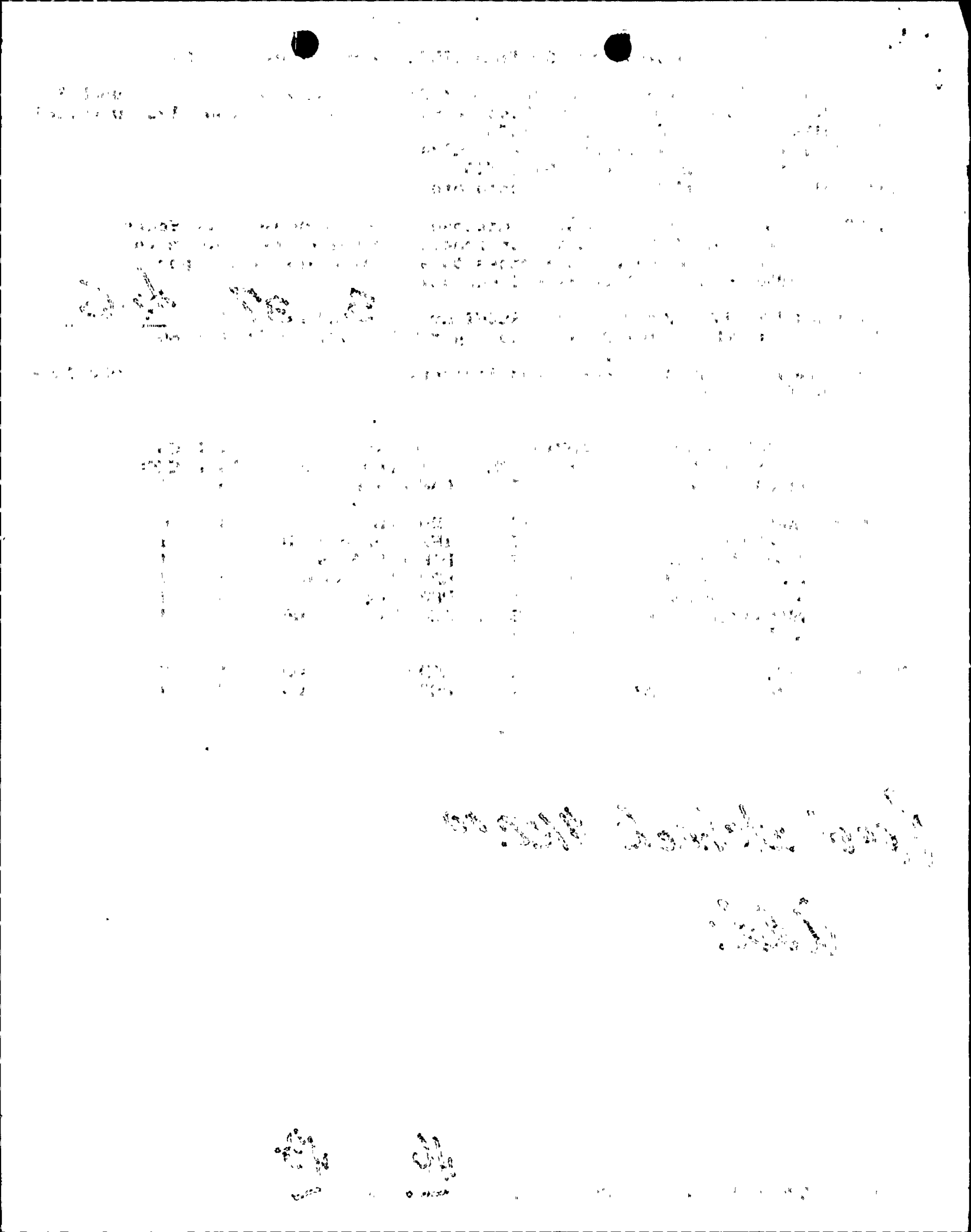

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Harold W. Keiser
Vice President-Nuclear Operations
215/770-7502

DEC 19 1985

Director of Nuclear Reactor Regulation
Attention: Ms. E. Adensam, Project Director
BWR Project Directorate No. 3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
PROPOSED AMENDMENT 30 TO LICENSE NO. NPF-22
ER 100450 FILE 841-8
PLA-2569 Docket No. 50-388

Dear Ms. Adensam:

The purpose of this letter is to propose a change to the Susquehanna SES Unit 2 Technical Specifications.

The specification 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 via the No Significant Hazards Considerations below.

NO SIGNIFICANT HAZARDS CONSIDERATIONS

I. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

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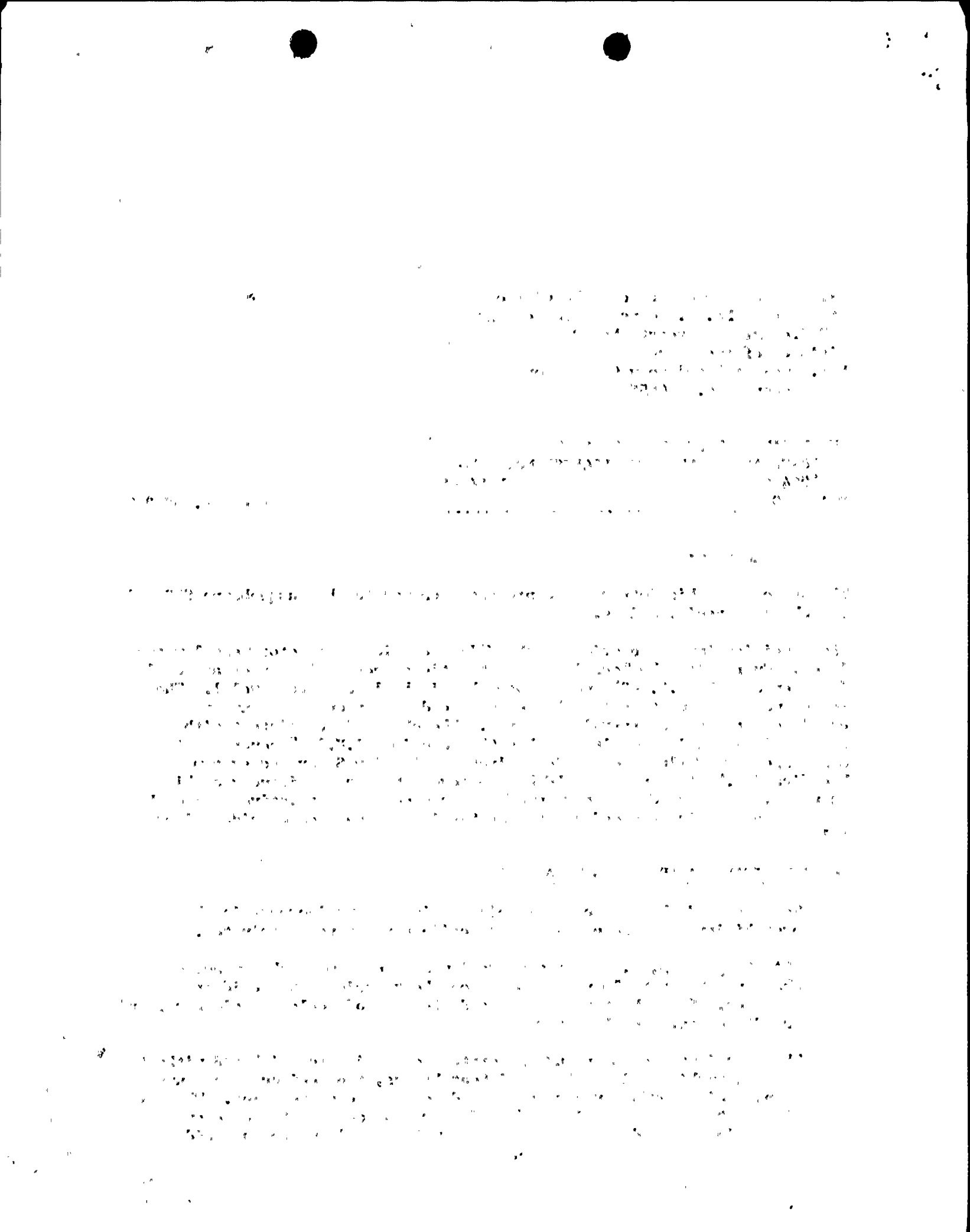

collapse after the L8 turbine trip and scram. The L2 setpoint is reached approximately 30 seconds later since the water level decreases slowly following the initial drop. Changing the MSIV closure setpoint to L1 will result in HPCI and RCIC initiation at 30 seconds with no MSIV closure. Water level will 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.

II. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

As described above, the change involves revising the setpoint of a previously evaluated trip function. This item can change the results of a previous analysis, but cannot create a different type of accident.

III. The proposed changes do not involve a significant reduction in a margin of safety.

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. Therefore, safety margin is improved due to this change.

IMPLEMENTATION

In order to reduce challenges to safety systems as described above and as experienced during the December 2, 1985 scram of Unit 2, we request that this change be processed on a priority basis; we would like to be able to install it during the next available opportunity. At the latest, we request that this change be approved prior to the Unit 2 first refueling and inspection outage, during which we will perform this modification. In either case, we request that the change be conditioned to become effective upon completion of the modification, associated testing, and procedural updates.

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,

H. W. Keiser
Vice President-Nuclear Operations

Attachment

cc: M. J. Campagnone 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

BEFORE THE
UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of :

PENNSYLVANIA POWER & LIGHT COMPANY : Docket No. 50-388

PROPOSED AMENDMENT NO. 30

FACILITY OPERATING LICENSE NO. NPF-22

SUSQUEHANNA STEAM ELECTRIC STATION
UNIT NO. 2

Licensee, Pennsylvania Power & Light Company, hereby files proposed Amendment No. 30 to its Facility Operating License No. NPF-22 dated March 23, 1984.

This amendment contains a revision to the Susquehanna SES Unit 2 Technical Specifications.

PENNSYLVANIA POWER & LIGHT COMPANY
BY:

H. W. Keiser
Vice President - Nuclear Operations

Sworn to and subscribed before me
this 19th of December, 1985.

Notary Public
MARTHA C. BARTO, Notary Public
Allentown, Lehigh County, Pa.
My Commission Expires Jan. 13, 1986