

Public Service  
Electric and Gas  
Company

**Steven E. Miltenberger**

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Vice President and Chief Nuclear Officer

**AUG 26 1992**

NLR-N92132

United States Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Gentlemen:

EXIGENT REQUEST FOR LICENSE AMENDMENT  
PRESSURIZER LEVEL CHANNEL FUNCTIONAL TESTING FREQUENCY AND  
ASSOCIATED ACTION STATEMENT  
SALEM GENERATING STATION UNIT NO. 1 AND 2  
FACILITY OPERATING LICENSE NOS. DPR-70 AND 75  
DOCKET NOS. 50-272 AND 50-311

By letter dated May 11, 1992, (NLR-N91115), Public Service Electric and Gas (PSE&G) submitted a request to amend the Reactor Trip System and Engineered Safety Features Actuation System Sections of the Salem Technical Specifications. This request extended Surveillance Test Intervals and Allowed Outage Times.

PSE&G requests approval of the Pressurizer Level Channel Functional Testing Frequency extension (from the present monthly to the proposed quarterly) and associated Action Statement portion of our May 11 submittal, prior to midnight on August 29, 1992.

Attachment 1 provides background information, description of the proposed change, justification for the proposed change, justification for exigent circumstances, justification for categorical exclusion, and determination of no significant hazards consideration. Attachment 2 contains the Technical Specifications marked-up pages to reflect the requested changes.

Sincerely,



Affidavit  
Attachment

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C Mr. J. C. Stone  
Licensing Project Manager

Mr. T. Johnson  
Senior Resident Inspector

Mr. T. Martin, Administrator  
Region I

Mr. Kent Tosch, Chief  
New Jersey Department of Environmental Protection  
Division of Environmental Quality  
Bureau of Nuclear Engineering  
CN 415  
Trenton, NJ 08625

STATE OF NEW JERSEY )  
 ) SS.  
COUNTY OF SALEM )

Steven E. Miltenberger, being duly sworn according to law deposes and says:

I am Vice President and Chief Nuclear Officer of Public Service Electric and Gas Company, and as such, I find the matters set forth in the above referenced letter, concerning the Salem Generating Station, Units No. 1 and 2, are true to the best of my knowledge, information and belief.

*Steven E. Miltenberger*

Subscribed and Sworn to before me  
this 26<sup>th</sup> day of August, 1992

*Kimberly A. Hill*  
Notary Public of New Jersey

KIMBERLY A. HILL  
NOTARY PUBLIC OF NEW JERSEY  
My Commission Expires March 9, 1997

My Commission expires on \_\_\_\_\_

The following is a brief history behind the submittal of May 11, 1992, regarding the amendment request and supporting statements for this exigent request.

## BACKGROUND

### 1. History of the Westinghouse Owners Group Program

Many utilities expressed concern over the level of testing and maintenance requirements, and their impact on plant operation, particularly in instrumentation systems. The Westinghouse Owners Group (WOG) initiated a program to respond to these concerns, by developing a justification for revising generic and plant specific Instrumentation Technical Specifications. This program is documented in WCAP-10271 and its supplements, and referred to as the Technical Specification Optimization Program (TOPS).

Many operating plants experienced inadvertent reactor trips and safeguards actuations while performing instrumentation surveillances. These actions resulted in unnecessary plant transients and safety system challenges. Plant personnel devote a significant amount of time and effort to performing, documenting, reviewing, and tracking required surveillance activities. Many of these surveillances are unwarranted due to the high level of equipment reliability. An opportunity for significant benefits existed through revised instrumentation test and maintenance requirements.

The NRC Staff issued a Safety Evaluation Report (SER) for WCAP-10271 and supplement 1 in a letter dated February 21, 1985. The SER approved quarterly testing, 6 hours to place a failed channel in a tripped condition, and increased AOT for testing RTS analog channels.

### 2. Hardware Modifications

Plant modifications are not required to implement the requested changes. WCAP-10271 allows testing in the bypass mode, but Salem Units 1 and 2 do not have bypass testing capability for any RTS or ESFAS analog instrumentation, with the exception of the Containment Pressure High-High channels.

## DESCRIPTION OF PROPOSED CHANGE

The May 11, 1992 amendment request included a proposal to revise Salem Unit 1 and 2 Technical Specification Sections 3/4.3.1 (RTS) and 3/4.3.2 (ESFAS) as follows:

### 1. Limiting Condition for Operation 3.3.1.1

#### A. Table 3.3-1

- 1) (Units 1 and 2) Functional Unit 11. Change applicable ACTION from 7 (present) to 6 (proposed).
- 2) (Units 1 and 2) ACTION 6. Change the time an inoperable channel may be maintained in an untripped condition from 1 (present) to 6 (proposed) hours. Allow placing the inoperable channel in bypass while testing another channel in the same function, instead of placing the tested channel in bypass. Change the time an inoperable channel may remain in bypass to support testing another channel in the same function from 2 (present) to 4 (proposed) hours.

#### B. Table 4.3-1

- 1) (Units 1 and 2) Functional Unit 11. Change CHANNEL FUNCTIONAL TEST frequencies from monthly (present) to quarterly (proposed).

## JUSTIFICATION FOR THE PROPOSED CHANGE

Increasing the RTS STIs minimizes the potential number of inadvertent reactor trips. Less frequent surveillance testing is estimated to result in 0.5 fewer inadvertent reactor trips per unit, per year. Increasing the STIs enhances the operational effectiveness of plant personnel. Reducing the amount of time devoted to surveillance testing allows manpower reallocation to tasks such as preventive maintenance. Increased AOTs result in fewer human factors errors, since more time is allotted to perform corrective actions.

WCAP-10271 results indicate that the reduction in testing frequency and the increase in maintenance AOTs do not adversely affect public health and safety. The proposed changes will reduce the number of inadvertent reactor trips and support better utilization of plant resources.

## JUSTIFICATION FOR EXIGENT CIRCUMSTANCES

PSE&G respectfully requests that this submittal be approved prior to the Technical Specification requirement to perform the CHANNEL FUNCTIONAL Test of Pressurizer level Channel I on Saturday, August 29, 1992 at 24:00 hours. PSE&G requests expeditious review of this submittal.

PSE&G entered Limiting Condition for Operation (LCO) 3.3.1.1 functional unit 11 on August 13, 1992 at 2026 hours. Pressurizer level channel 3 was declared inoperable because it was out of specification low when compared to the other two level channels. (CHANNEL CHECK)

PSE&G has been experiencing difficulties (channel checks) with this channel since early August 1992. In early August Instrument and Control (I&C) personnel satisfactorily performed a channel calibration on this channel. The calibration data indicated a 200 millivolts (low) discrepancy.

On August 13, 1992 the channel was declared inoperable due to failing its channel check. I&C personnel found the channel 90 millivolts high. The channel was satisfactorily recalibrated, however the technical specification action statement was not exited. At this time a channel check indicated a good correlation (within 3% as required by technical specifications) with channel I (of pressurizer level) but marginally met the required band for channel II. PSE&G (I&C) supervision decided to perform a sensor calibration on channel II to ensure that it was not the source of problem. However, while preparing for this sensor calibration, channel III drifted out of specification.

PSE&G I&C supervision and Technical department System Engineering opted to replace the transmitter circuit boards with new ones prior to recalibrating the channel. The channel could not be satisfactorily calibrated with the new circuit boards. The old circuit boards were re-installed however, the channel still could not be calibrated.

PSE&G decided to replace the level transmitter and sought Westinghouse's assistance.

NOTE: All pressurizer level transmitters had been replaced during the past refueling outage as required by BULL 90-01. In addition, the bellow's assembly was also replaced.

During the transmitter replacement the reference sealed leg must be drained. Prior to draining the reference leg the bellows must be protected by inserting a protection device which will prevent the bellows from collapsing. During this evolution, it was noted that the bellows assembly (Pressurizer level channel 3) was collapsed, indicating either a leak in the bellows or a loss of filled fluid.

With the new transmitter installed and vendor support a series of tests were conducted. A Westinghouse standard pressure test on the bellows was conducted. This test pressurizes the bellows to about 15psi and it is maintained for about 6 to 7 hours. At the conclusion of the pressure test the line is evacuated to check for vacuum loss. No leaks were identified. The reference leg was then filled with deaerated demineralized water and the bellows housing is installed. A depth test of the bellows was performed followed by an external pressure test (up to 3000psi). This pressure is left on for approximately 1/2 to 1 hour. At the conclusion of the test, the line is depressurized and a second depth test is performed. This second measurement indicated approximately at 1/4th of an inch depression, which is indicative of a potential small leak on the bellows assembly.

PSE&G is presently replacing the bellows assembly. The bellows are located approximately 100 ft from the transmitter on elevation 150 ft of the Pressurizer. Work at this particular location has been restricted due to heat stress considerations, and has significantly hampered the ability of PSE&G to accomplish this work.

PSE&G is, with Westinghouse assistance, aggressively pursuing the bellows assembly replacement.

Midnight on August 29, pressurizer level channel I becomes overdue for its channel functional test. Because of the present Technical Specification surveillance requirement, Salem Unit 1 will have to shut down since it can not perform the required surveillance without incurring a reactor trip.

Therefore, if approved, the request will preclude placement of the Salem Unit 1 into an undesirable shutdown transient. PSE&G respectfully requests that this submittal be approved prior to the Technical Specification requirement to perform the CHANNEL FUNCTIONAL Test of Pressurizer level Channel I on Saturday, August 29, 1992 at 24:00 hours. PSE&G requests expeditious review of this submittal.

#### JUSTIFICATION FOR CATEGORICAL EXCLUSION

10CFR51.22 allows a categorical exclusion from environmental assessments for License Amendment Requests provided the following criteria are met:

- i) The amendment involves no significant hazards consideration.

PSE&G's Determination of No Significant Hazards Consideration is presented in the following section.

- ii) There is no significant change in the types and no significant increase in the amounts of effluents that may be released offsite.

The proposed amendment is administrative in nature and does not change or increase the amount of effluents that may be released offsite.

- iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed change does not involve any increase in occupational radiation exposure.

Therefore, PSE&G has concluded that the proposed change qualifies for a categorical exclusion pursuant to 10 CFR 51.22.

#### DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

The request proposed herein does not invalidate the Determination of No Significant Hazards Consideration presented in our original submittal of May 11, 1992.

The proposed exigent approval of this line item, as described in the DESCRIPTION OF PROPOSED CHANGE section, does not involve, or affect any probability, consequence or margin of a previously analyzed accident. The Pressurizer Water Level (high) Reactor Trip is not assumed to function nor credit is taken for its actuation to mitigate the consequences of any of our design/licensing basis analysis. This function is included as part of the Reactor Protection System (RPS), and the Salem Technical Specifications, solely to enhance the overall reliability of the RPS.

The following is the Determination of No Significant Hazards Consideration as originally presented in May 11, 1992:

" The proposed Technical Specification changes:

1. Do not involve a significant increase in the probability or consequences of an accident previously evaluated.

SERs issued for WCAP-10271, WCAP-10271 Supplement 1, WCAP-10271 Supplement 2 and WCAP-10271 Supplement 2 Revision 1, document the determination that the proposed changes are within acceptable limits. Implementation of the proposed changes decreases the total Reactor Protection System (RPS) yearly availability, primarily due to less frequent surveillance testing. Decreased availability causes a higher probability of Anticipated

Transient Without Scram (ATWS), with an associated increase in the core melt contribution resulting from an ATWS. Decreased ESFAS availability slightly increases the CDF. The proposed changes result in a significant reduction in the core melt probability from inadvertent reactor trips. This reduction is primarily attributable to less frequent surveillance testing.

The reduction in inadvertent reactor trip core melt frequency is large enough to counter the increase in ATWS core melt probability, resulting in an overall reduction in total core melt probability.

The WOG determined values for the increase in CDF were documented in the WCAP, and independently verified by Brookhaven National Laboratory, as part of an NRC Staff audit and sensitivity analysis. Based on the small increase in CDF compared to the range of uncertainty, the increase is considered acceptable. (\*) Salem Functional Unit 9, evaluated on a plant-specific basis, falls within the same criteria and is considered acceptable. (\*) Not applicable to functional unit 11.

Therefore, it may be concluded that the proposed changes do not increase the severity or consequences of an accident previously evaluated. The proposed changes do affect the probability of RPS failure, but do not alter the manner in which protection is afforded, nor the manner in which limiting criteria are established.

2. Do not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed changes do not involve hardware modifications or result in changes to RPS provided plant protection. RPS functionally is not altered. Therefore, it may be concluded that the proposed changes do not create the possibility of a new or different kind of accident from any previously evaluated.

3. Do not involve a significant reduction in a margin of safety.

The proposed changes do not alter the manner in which Safety Limits, Limiting Safety System Setpoints, or Limiting Conditions for Operation are determined. The impact of reduced testing is a longer time interval over which instrument uncertainties (e.g., drift) may act. Experience indicates that the initial uncertainty assumptions are valid for reduced testing.

Therefore, it may be concluded that the proposed changes do not involve a significant reduction in a margin of safety.

ATTACHMENT 2

ATTACHMENT 2