

Public Service
Electric and Gas
Company

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SEP 20 1996

LR-N96187
LCR S96-14

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

**REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS
AUXILIARY BUILDING VENTILATION (ABVS)
SALEM GENERATING STATION Unit NO. 2
FACILITY OPERATING LICENSE DPR-75
DOCKET NO. 50-311**

Gentlemen:

In accordance with 10CFR50.90, Public Service Electric & Gas (PSE&G) Company hereby requests a revision to the Technical Specification (TS) for the Salem Generating Station Unit No. 2. In accordance with 10CFR50.91(b)(1), a copy of this submittal has been sent to the State of New Jersey.

The proposed Technical Specification changes contained herein clarify Surveillance Requirement (SR) 4.7.7.b.4, to indicate that the specified flowrate applies only to system testing. The basis for testing at this flowrate is also being incorporated into the Bases for specification 3/4.7.7.

PSE&G requests these changes to ensure that operation of the Auxiliary Building Ventilation System (ABVS) is consistent with the NRC approved Design and Licensing Basis and to provide clarity to the operability and surveillance requirements for the system.

The proposed changes have been evaluated in accordance with 10CFR50.91(A)(1), using the criteria in 10CFR50.92(c), and PSE&G has concluded that this request involves no significant hazards considerations.

The basis for the requested change is provided in Attachment 1. A 10CFR50.92 evaluation with a determination of no significant hazards consideration is provided in Attachment 2. The marked up Technical Specification pages affected by the proposed changes are provided in Attachment 3.

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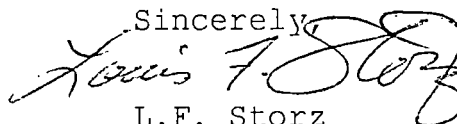
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Upon NRC approval of this proposed change, PSE&G requests that the amendment be made immediately effective on the date of issuance, with a three day implementation period. This change is required to support Salem Unit 2 entry to Mode 4 following completion of the current refueling outage. This Mode change is currently scheduled for November 15, 1996.

Should you have any questions regarding this request, we will be pleased to discuss them with you.

Sincerely,



L.F. Storz
Senior Vice President -
Nuclear Operations

Affidavit
Attachments (3)

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Manager - Joint Owners/Ext Aff Interface (N28)
Manager - Salem Operations (S01)
Manager - System Engineering - Salem (S02)
Manager - Licensing & Regulation (X09)
Principal Engineer [Salem] Operational Licensing (X09)
Onsite Safety Review Engineer - Salem (X15)
Station Licensing Engineer - Salem (X09)
General Solicitor, R. Fryling, Jr. (Newark, 5G)
Mark J. Wetterhahn, Esq.
Records Management (N21)
Microfilm Copy
Files Nos. 1.2.1 (Salem, 2.3 (LCR S96-14)

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CHANGE TO TECHNICAL SPECIFICATIONS (TS)
AUXILIARY BUILDING VENTILATION SYSTEM (ABVS)

BASIS FOR REQUESTED CHANGE

REQUESTED CHANGE AND PURPOSE

Revise SR 4.7.7.b.4 and its Bases to clarify that the intent of the test is to validate the design flowrate of the system when aligned to the HEPA + Charcoal filtration train. This will align the existing specification with the system design basis which allows for lower flowrates under certain environmental conditions.

BACKGROUND

The intent of the existing TS is to ensure the ABVS is available to process released fission product gases through the HEPA + Charcoal filter train in the event of a Loss of Coolant Accident (LOCA). Surveillance testing on the system is performed at a flowrate of 21,400 CFM \pm 10%. SR 4.7.7.b.4 requires a verification of this flowrate "...during system operation." This has been interpreted to imply that the system operates at a flowrate of 21,400 CFM \pm 10% at all times, which is inconsistent with the system design as described in the Salem Updated Final Safety Analysis Report (UFSAR) Section 9.4.2.2.2.

JUSTIFICATION OF REQUESTED CHANGES

The UFSAR describes the design function of the ABVS relating to control of radioactive iodine releases to the environment following a Loss of Coolant Accident (LOCA). Contaminated coolant is drawn from the containment sump by the RHR pumps and supplied to other Emergency Core Cooling System (ECCS) equipment for return to the Reactor Coolant System during the post-LOCA recirculation phase. Leakage from valve packing and pump seals may result in the spread of contamination to the Auxiliary Building and potentially to the external environment.

As described in UFSAR Section 9.4.2, flow from the ECCS equipment areas is processed through the charcoal adsorber to remove radioiodine released to the building atmosphere prior to its release to the environment through the plant vent. A flowrate of 21,400 CFM \pm 10% is required during testing to assure that the HEPA + Charcoal filtration train is challenged at design basis flowrates during filter capability testing. Filter capability at system flowrates below this value are enveloped by the filter capability at the design flowrate.

Attachment 1 to LR-N96187
(Continued)

The ABVS is normally running with one supply and two exhaust fans operating with flow through one or more HEPA filters associated with the Charcoal filter. This alignment provides the necessary air flow for temperature and pressure control. During normal and emergency operation, the supply fan flows are automatically selected (Summer/Winter mode) in response to external ambient temperature changes. The exhaust fan flows automatically modulate to maintain the necessary differential pressure between the building and the environment. During accident conditions, ECCS equipment area exhaust flows are administratively aligned to the charcoal filter as necessary to facilitate the removal of radio-iodine. With the supply fan operating in the Winter mode, actual flow through the charcoal filter can be less than the maximum design value of 23,540 CFM (21,400 CFM + .10%). The system has sufficient capability to maintain the required building differential pressure at the reduced flowrate.

Operability of the HEPA + Charcoal train is based upon demonstrating a radio-iodine removal efficiency consistent with design basis assumptions at the limiting operating condition. The removal efficiency of the charcoal filter is a function of the residence time of the radio-iodine passing through the charcoal bed. Residence time is a function of the filter cell configuration, bed depth and system flowrate. As the cell configuration and bed depth are fixed, the system flowrate becomes the controlling parameter. High flow results in the lowest removal efficiency (i.e., shortest residence time) with the opposite being true for lower flows. Lower flows are therefore acceptable and conservative and the bed remains operable as this condition provides for a higher removal efficiency.

CONCLUSIONS

The proposed change enhances the TS by clarifying the specific criteria that must be met in order to consider the system OPERABLE. These clarifications are consistent with the ABVS design basis and ensure the system will respond to and mitigate the radiological consequences of a LOCA or other significant radioactive release occurring in the Auxiliary Building.

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10CFR50.92 EVALUATION

Public Service Electric & Gas (PSE&G) has concluded that the proposed changes to the Salem Generating Station Unit No. 2 Technical Specifications (TS) do not involve a significant hazards consideration. In support of this determination, an evaluation of each of the three standards set forth in 10CFR50.92 is provided below.

REQUESTED CHANGE

This submittal provides information required to accurately assess ABVS operability. The requested change clarifies the Surveillance Requirements (SRs) to specify that the flowrates associated with surveillance testing are design maximums associated with the limiting operational configuration of the system.

BASIS

1. *The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.*

The accident considered in this proposed change is the Loss of Coolant Accident (LOCA) as described in Section 15.4 of the UFSAR. The assumption is that: "The Auxiliary Building Ventilation System will discharge the vapor (from recirculation liquid leakage) to the atmosphere through charcoal filters which have an efficiency of 90 percent." As such the system acts to limit the total offsite and control room radiation doses following a LOCA.

The Auxiliary Building Ventilation System is designed to maintain the Auxiliary Building at a negative pressure with respect to the atmosphere during normal and emergency operation. Filtration of radio-iodines is accomplished by administratively aligning the ECCS equipment areas exhaust flows to the standby charcoal adsorber bed if required. The ABVS has no direct impact on reactor operation or on any system connected to the Reactor Coolant Pressure Boundary.

Attachment 2 to LR-N96187
(Continued)

The emergency operation of the Auxiliary Building Ventilation System is not affected by the proposed changes. The acceptance criteria for system performance are not modified by the requested change. The change clarifies the intent of SR 4.7.7.b.4 and the basis for the flowrates used for system acceptance testing. It has been determined that operation of the system at lower flow rates than those specified for surveillance testing is conservative with respect to the radio-iodine removal efficiency assumed for the charcoal adsorber. A higher removal efficiency results in lower total exposures at the site boundary and within the control room. Additionally, the system is capable of maintaining the required negative pressure at the reduced flowrate.

Given the above, it is concluded that the proposed change does not result in an increase in the probability or consequences associated with previously analyzed accidents.

2. *The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.*

The proposed amendment does not result in any design or operational change to the ABVS, to the Nuclear Steam Supply System, to the ECCS System, to the Containment Building, to the fuel or to the electrical power supplies. Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any previously evaluated.

3. *The proposed change does not involve a significant reduction in a margin of safety.*

Specification 3/4.7.7 and the associated Bases were reviewed to determine if the proposed changes result in a reduction in the margin of safety. The change to SR 4.7.7.b.4 continues to assure that the system is operated consistent with the assumptions of the accident analysis. The proposed changes to Bases 3/4.7.7 clarify the basis for flowrates associated with ABVS surveillance test requirements. All changes result in ABVS operation that is just as conservative as that assumed in existing analyses.

The proposed changes do not involve the addition or modification of plant equipment, are consistent with the design basis of the ABVS as described in the UFSAR, and appropriately limit operation to be consistent with the assumptions of the accident analysis. As such there is no reduction in a margin of safety.

CONCLUSION

Based on the above, PSE&G has determined that the proposed changes do not involve a significant hazards consideration.

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Technical Specification Mark Up

Insert A

4. Verify that the system flowrate does not exceed the design limit of 23,540 Cfm (21,400 CFM + 10%) when the HEPA + Charcoal adsorber filter train is aligned to the ECCS equipment areas.

Insert B

The flowrates specified for surveillance testing correspond to the maximum design flow for the charcoal adsorber. This is the limiting condition for system performance under accident conditions. Testing at this flow assures that the charcoal adsorber removal efficiency, and the system bypass leakage are within the assumed values of the accident analysis. Operation at lower flowrates is conservative with respect to the accident analysis assumptions.