VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

October 25, 1995

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC. 20555

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Docket Nos. 50-338
50-339
License Nos. NPF-4
NPF-7

Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY
NORTH ANNA POWER STATION UNITS 1 and 2
PROPOSED TECHNICAL SPECIFICATIONS CHANGES
ALLOWED OUTAGE TIME FOR PORV NITROGEN ACCUMULATORS
AND SEPARATE ACTIONS FOR PORV INOPERABILITY

Pursuant to 10 CFR 50.90, the Virginia Electric and Power Company requests amendments, in the form of changes to the Technical Specifications, to Facility Operating License Nos. NPF-4 and NPF-7 for North Anna Power Station Units 1 and 2, respectively. The proposed changes will provide an allowed outage time of 14 days for the pressurizer power operated relief valve (PORV) nitrogen accumulators, as well as provide separate action statements for the PORV depending on the reason for the PORV inoperability.

A discussion of the proposed Technical Specifications changes is provided in Attachment 1. The proposed Technical Specifications changes are provided in Attachment 2. It has been determined that the proposed Technical Specifications changes do not involve an unreviewed safety question as defined in 10 CFR 50.59 or a significant hazards consideration as defined in 10 CFR 50.92. The basis for our determination that these changes do not involve a significant hazards consideration is provided in Attachment 3. The proposed Technical Specifications changes have been reviewed and approved by the Station Nuclear Safety and Operating Committee and the Management Safety Review Committee.

Should you have any questions or require additional information, please contact us.

Very truly yours,

RF Saunders for

James P. O' Hanlon
Senior Vice President - Nuclear

Attachments

A001

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COMMONWEALTH OF VIRGINIA)
)
COUNTY OF HENRICO)

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by R. F. Saunders, who is Vice President - Nuclear Operations, for J. P. O'Hanlon who is Senior Vice President - Nuclear, of Virginia Electric and Power Company. He is duly authorized to execute and file the foregoing document in behalf of that Company, and the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 25TH day of October, 1995.

My Commission Expires: May 31, 1998.

Vicki L. Hull
Notary Public

(SEAL)

Attachment 1

Discussion of Changes

Discussion of Changes

Introduction

Technical Specification 3.4.3.2 requires that both pressurizer power-operated relief valves (PORVs) and their associated block valves be operable in Modes 1, 2, and 3 (when the average coolant temperature is greater than or equal to 350 °F). Each PORV may be operated by either its normal motive force (instrument air) or a backup motive force (nitrogen). The PORVs are considered inoperable when the nitrogen supply is not available, since the nitrogen supply is the safety related motive force for the PORVs.

Existing Technical Specification 3.4.3.2 requires that when the PORVs are inoperable, action statements be entered which require the closing of the associated block valves. For the case of an inoperable automatic pressure control system where the capability of cycling the PORVs in manual mode remains available, or an inoperable backup nitrogen supply system, closure of the block valves is an inappropriate action.

The proposed changes for operation at power (Modes 1-3)

- provide separate ACTION statements for PORVs which are inoperable by virtue of seat leakage, an inoperable backup nitrogen supply, an inoperable automatic control system and other causes (e.g. mechanical valve failure). This allows more specific and appropriate actions for each case.

- provide for a 14 day allowed outage time for inoperable backup nitrogen supplies.

- add a surveillance requirement on backup nitrogen supply accumulator pressure.

In addition, a separate accumulator pressure surveillance requirement has been added for operation in Modes 4-6 with the Low Temperature Overpressure Protection System (LTOPS) required.

The accident analyses assume the PORVs are available to allow a manual reduction of RCS pressure during a steam generator tube rupture. Studies have shown that a 14 day allowed outage time for the backup nitrogen accumulators contributes a negligible increase to the risk of loss of the functional capability of the PORVs in MODES 1-3.

The studies were based on fault tree analyses which show that PORV failure frequencies are dominated by common mode mechanical failure rates for the PORVs. Based on this result and the fact that problems with the backup accumulator system may require in-containment work to correct, we are proposing an allowance of 14 days to return a PORV to operable status provided the PORV is inoperable solely due to an inoperable nitrogen accumulator.

The proposed Technical Specification changes are consistent with the intent of Generic Letter 90-06 and ensure that the PORVs are available and capable of performing their intended safety function. The proposed Technical Specification changes do not involve any physical modifications to the plant nor do they result in a change in a method of operation. In addition, they do not affect any safety limits or limiting safety system settings. Therefore, the proposed Technical Specification changes do not create an unreviewed safety question or a significant hazards consideration.

Background

Licensing Basis

Initially, the PORV power sources were addressed by the NRC as part of NUREG-0737, Item II.G.1, Emergency Power For Pressurizer Equipment to Enhance PORV Reliability. Virginia Electric and Power Company (Virginia Power) responded to NUREG-0737, Item II.G.1, in a letter dated December 15, 1980 (Serial No. 985). With regard to the emergency motive power source required for the PORVs for a loss of offsite power, Virginia Power stated that high pressure supply tanks (nitrogen for North Anna) provide a redundant, seismically supported source of motive power.

Generic Letter 90-06, "Resolution of Generic Issue 70, 'Power-Operated Relief Valve And Block Valve Reliability,' and Generic Issue 94, 'Additional Low-Temperature Overpressure Protection For Light-Water Reactors,' Pursuant to 10 CFR 50.54(f)," dated June 25, 1990, advised licensees of the NRC's position resulting from the resolution of Generic Issue 70. The NRC requested that to enhance safety, actions be taken by all pressurized water reactor (PWR) licensees that use or could use PORVs to perform safety-related functions. The NRC, in its evaluation, determined that over a period of time the role of PORVs has changed such that PORVs are now relied on to perform one or more of the following safety-related functions:

1. Mitigation of a design basis steam generator tube rupture accident,

2. Low-temperature overpressure protection of the reactor vessel during startup and shutdown, or

3. Plant cooldown in compliance with Branch Technical Position RSB 5-1 to SRP 5.4.7, "Residual Heat Removal (RHR) System."

Of these three, only the mitigation of a design-basis steam generator tube rupture accident applies to Mode 1, 2, and 3 operations.

Generic Letter 90-06 required that operating PWR plants modify the limiting conditions for operation of PORVs and block valves in the Technical Specifications for Modes 1, 2, and 3. The letter also recognized that the emergency (backup) power sources serve to enhance the reliability of PORVs and block valves for systems with non safety grade normal power sources, including instrument air. Surveillance requirements were provided to ensure that PORVs and block valves can perform their intended functions. The surveillance requirements included testing the emergency (backup) power sources for the PORVs and block valves by manually transferring the motive and control power from the normal to the emergency power and operating the valves through a complete cycle of full travel. Additionally, plant operation in Modes 1, 2, and 3 with PORVs and block valves inoperable for reasons other than seat leakage was not permitted for periods of more than 72 hours.

Proposed Technical Specification changes to address the requirements of Generic Letter 90-06 were submitted in a letter dated April 15, 1994 (Serial No. 94-238). The NRC approved the proposed Technical Specification changes in License Amendments No. 189 and 170 for North Anna Units 1 and 2, respectively, which was issued on October 5, 1994.

Existing Technical Specification action statements provide requirements for configurations involving inoperable PORVs. These action statements take into consideration the ability to manually cycle the PORVs. However, operability of the backup nitrogen accumulators is not specifically addressed. Furthermore, there are no surveillance requirements associated with the PORV nitrogen accumulators.

Design Basis

The PORVs are air-operated valves that may be operated by either their normal motive force (instrument air), which is non-safety-related, or a backup motive force (nitrogen), which is safety-related. The backup nitrogen supply is used to ensure that the PORVs can perform their safety function in the event of loss of instrument air. One safety function of the PORVs is to mitigate the radiological consequences of a steam generator tube rupture accident by allowing manual reduction of the RCS pressure. This reduces Reactor Coolant System (RCS) leakage into the affected steam generator and thereby reduces the amount of radioactivity released to the atmosphere via the steam generator safety valves.

The PORVs are also components of the safety-related Low Temperature Overpressure Protection System (LTOPS), which provides protection against exceeding the 10 CFR 50 Appendix G reactor vessel operability limits at reduced RCS temperatures. In addition, a non-safety function of the PORVs is to provide pressure control of the RCS to limit the undesired opening of the spring-loaded safety valves during primary overpressure events at power.

Discussion

Operability

North Anna Technical Specifications define operable as the condition wherein a system, subsystem, train or component is capable of performing its specified functions and when all necessary attendant instrumentation, controls, normal and emergency electrical power sources, or other auxiliary equipment that are required for the system, subsystem, train or component to perform its functions are also capable of performing their related support functions.

Analysis Assumptions

Operability of the pressurizer PORVs is an implicit assumption of the steam generator tube rupture accident analysis. While the analysis presented in the UFSAR does not explicitly include any operator controlled actions, the analysis does assume that all releases to the environment (except for minor releases through the intact steam generators) are terminated within 30 minutes of initiation of the event. For this assumption to be valid, operator action must be taken to reduce the reactor coolant system pressure below the pressure of the shell side of the ruptured steam generator.

The two primary means available to the operator for accomplishing this depressurization are the pressurizer PORVs and pressurizer spray. For the case of a loss of offsite power coincident with the tube rupture, normal pressurizer spray is rendered unavailable due to loss of the reactor coolant pumps. The reactor coolant pumps provide the driving head for normal pressurizer spray. Auxiliary spray, which is taken from the normal charging header, is also generally unavailable during the initial phase of a large tube rupture since a safety injection isolates the normal charging

header from the charging pumps. In addition, operation of the auxiliary spray requires instrument air, which is a non-safety system. Thus the pressurizer PORVs become the primary vehicle for RCS depressurization for the case of a loss of offsite power.

Inoperable Backup Power

As stated earlier, the model TS of Generic Letter 90-06 require shutdown within 72 hours for PORVs which are inoperable for any reason other than excessive seat leakage. However, studies have shown that a 14 day allowed outage time for the backup nitrogen accumulators results in an insignificant increase in the risk of a loss of functional capability of the PORVs in MODES 1-3.

The RCS depressurization function via the PORVs was modeled using standard fault tree techniques. The results show that PORV failure frequencies are dominated by common mode mechanical failure rates for the PORVs (approximately E-3/demand). The normal motive power (instrument air) has a failure rate which is two orders of magnitude below this for a typical RCS depressurization mission time of 2 hours. As a result, the overall reliability of the RCS depressurization function via the PORVs is relatively insensitive to the availability of the backup nitrogen accumulators. Therefore, key conclusions of the study were:

1) risk of loss of the PORV capability is dominated by common mode mechanical failures of the PORVs.

2) loss of motive power is a minor contributor to PORV unavailability.

3) because of the high reliability of the instrument air system, accumulator unavailability is a minor contributor to system failure rates

due to a loss of motive power.

4) PORV unavailability is insensitive to allowed outage time for the nitrogen accumulators.

Based on these results and the fact that problems with the backup accumulator system may require in-containment work to correct, the proposed Technical Specification changes add action statements for the backup nitrogen supply commensurate with its contribution to PORV availability. The proposed action statements require that with one or both PORVs inoperable due to an inoperable backup nitrogen supply, the PORV(s) will be returned to operable status within 14 days or be in hot standby within the next 6 hours and in hot shutdown within the following 6 hours.

The proposed action statements do not require the block valves to be closed in the event of an inoperable nitrogen accumulator. The block valves function to isolate a leaking or stuck-open PORV. Since the PORV function is available using the normal supply of instrument air while the backup nitrogen supply is being restored, block valve closure is not necessary. Allowing the block valves to remain open also minimizes the potential for undesirable opening of the pressurizer safety valves during overpressure events. Closing the block valves prohibits relief from the PORVs when the PORVs are automatically actuated.

Transfer of Motive Power

The surveillance requirements discussed in Generic Letter 90-06 included testing the emergency (backup) power sources for the PORVs and block valves by manually transferring the motive and control power from the normal to the emergency power

bus and operating the valves through a complete cycle of full travel. The block valves and the control power for the PORVs are powered from safety grade power sources (electrical). Therefore, the North Anna surveillance requirement need not address the transfer of motive and control power for the PORVs discussed in the Generic Letter.

The remainder of the surveillance requirement involved manually transferring motive power from the normal power source (instrument air) to the emergency power source (nitrogen accumulators) and cycling the PORVs using the nitrogen accumulators. North Anna does not have the capability to manually "transfer" these power sources (i.e., both power sources are continuously available). The requirement to demonstrate that the PORV is operable using the nitrogen accumulators is accomplished in the existing Surveillance Requirement 4.4.3.2.1.b.2. This surveillance requirement cycles the PORV every 18 months using the nitrogen accumulators by isolating the instrument air and the primary plant gas supply system and venting the lines upstream of the check valves. (The primary plant gas supply system is another non safety-related system that can be used to operate the PORVs. It has not previously been discussed because it is normally isolated at the containment penetrations during Modes 1, 2, and 3, except during nitrogen accumulator refilling operations.)

Discussion of Proposed Changes

The proposed Technical Specification 3.4.3.2 ACTION statements have been reformatted to address potential classes of PORV inoperability: excessive seat leakage, an inoperable backup nitrogen supply, malfunction of the automatic pressure controller and other failures.

If a PORV is inoperable because of excessive seat leakage, closure of the block valve is required to restore RCS pressure boundary integrity. However, the pressure control capability could be restored by opening the block valves. Therefore, power is maintained to the block valves so that the PORVs will continue to be available for the safety related function of manual RCS depressurization in the event of a steam generator tube rupture. For this condition, continued operation is allowed.

With one or both PORVs inoperable due to an inoperable backup nitrogen supply, continued operation for 14 days is allowed provided the normal motive force for the PORVs, i.e. the instrument air system continues to be available. Instrument air has a high system reliability, and the likelihood of its being unavailable during a demand for PORV operation is low enough to justify a reasonable length of time (i.e. 14 days) to repair the nitrogen system.

If one or both PORVs are inoperable due to a malfunction in the PORV automatic control system, the PORV should be placed in manual control to limit the potential for spurious opening of the PORV. Closure of the block valve(s) is not required in this case so that the manual function remains readily available.

PORVs which are inoperable due to a failure NOT involving seat leakage, the backup nitrogen supply or the automatic control system (e.g., a mechanical or electrical fault resulting in inability to stroke the valve) are addressed in proposed ACTIONS 3.4.3.2.A.4 and A.5.

If only one PORV is inoperable, 72 hours are allowed to restore the valve since the other PORV is available for RCS pressure control. On the other hand if both valves are inoperable, automatic RCS pressure control via the PORVs has been lost and

immediate action or shutdown is appropriate.

Existing ACTION statements 3.4.3.2.d and e, which address the PORV block valves and the standard exemption from Specification 3.0.4, respectively, have been renumbered to reflect the changes discussed above. In addition the block valve action statement has been split into two statements addressing one and two inoperable block valves, respectively, for ease of readability.

A surveillance requirement will be added to ensure that there is sufficient pressure in the nitrogen accumulators. The proposed surveillance requirement verifies that there is an adequate supply in the backup system to allow the operators to cool down and depressurize the unit in the event of a steam generator tube rupture with concurrent loss of pressurizer spray capability.

The accumulator surveillance limit is based on the following considerations:

1) A review of Emergency Operating Procedures, simulator scenarios and discussions with training personnel were conducted to ascertain the maximum potential number of PORV strokes required to perform the manual depressurization and long term pressure control functions during design basis steam generator tube rupture events with concurrent loss of normal pressure control.

2) A combination of analysis and on-site testing was performed to develop the relationship between number of PORV cycles and nitrogen accumulator pressure change.

3) An analysis of the accuracy of accumulator pressure instrumentation was performed.

4) Based on steps 1)-3) the accumulator pressure surveillance limit for operational Modes 1-3 was developed.

A similar process was followed to develop a limit for operational modes in which the Low Temperature Overpressure Protection System (LTOPS) is required. In this case the limiting LTOPS design event, i.e. inadvertent start of a high head safety injection pump while in a water solid condition, was considered. Analyses were performed to reconfirm the adequacy of the original accumulator design basis, which was to provide a minimum of 120 PORV cycles. The impact of accumulator pressure on PORV stroke time was evaluated based on the testing program discussed above. Based on these data and the requirements of the analyses supporting the current LTOPS setpoints, new accumulator pressure surveillance limits for LTOPS operation were developed.

A surveillance frequency of once per 7 days is proposed for operation in Modes 1-6. Currently, the Control Room logs require that the accumulator pressure be recorded during each operator shift. The surveillance limits for Modes 1-3 and 4-6, respectively, will be specified in administratively controlled plant specific procedures which are subject to the review requirements of 10 CFR 50.59.

The Bases for Technical Specification 3.4.3 will be revised to clarify that the functions required for operability include the required safety functions. This is currently implied, since the Technical Specification definition of operability includes auxiliary equipment necessary for the component to perform its specified functions. In this case, the backup nitrogen supply is required to ensure the PORVs are capable of performing their safety functions.

Specific Changes

The following specific Technical Specification changes apply to both Units 1 and 2:

- Replace existing action statements 3.4.3.2a, b, c, and d with the following:

ACTION:

A. PORV(s):

1. *With one or both PORV(s) inoperable solely because of excessive seat leakage, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s) with power maintained to the block valve(s); otherwise, be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.*

2. *With one or both PORV(s) inoperable because of (an) inoperable backup nitrogen supply(ies), within 14 days either restore the PORV(s) backup nitrogen supply(ies) to OPERABLE status or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.*

3. *With one or both PORV(s) inoperable due to a malfunction in the PORV automatic control system, within 1 hour restore the affected automatic control system(s) to OPERABLE status or place and maintain the affected PORV(s) in manual control.*

4. *With one PORV inoperable due to causes other than those addressed in Actions A.1, A.2 or A.3 above, within 1 hour either restore the PORV to*

OPERABLE status or close its associated block valve and remove power from the block valve; restore the PORV to OPERABLE status within the following 72 hours or be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

5. *With both PORVs inoperable such that Actions A.1, A.2 or A.3 above do not apply, within 1 hour either restore at least one PORV to OPERABLE status or close the associated block valves and remove power from the block valves and be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.*

6. *The provisions of Specification 3.0.4 are not applicable.*

B. Block Valves

1. *With one block valve inoperable, within 1 hour restore the block valve to OPERABLE status or place its associated PORV in manual control; restore the block valve to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.*

2. *With both block valves inoperable, within 1 hour restore the block valves to OPERABLE status or place the PORVs in manual control; restore at least one block valve to OPERABLE status within the next hour; restore the remaining inoperable block valve to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.*

- Renumber existing action statement 3.4.3.2.e to 3.4.3.2.B.3.

- Add the following surveillance requirement as 4.4.3.2.1.c and 4.4.9.3.d:

  At least once per 7 days by verifying that the pressure in the PORV nitrogen accumulators is greater than the surveillance limit.

- Renumber the referenced action statement in surveillance requirement 4.4.3.2.2 to be consistent with changes to specification 3.4.3.2.

- Replace the existing PORV discussion in BASES section 3.4.4.2 and 3/4.4.3, SAFETY AND RELIEF VALVES, with the following:

  The power operated relief valves (PORVs) and pressurizer steam bubble function to relieve reactor coolant system (RCS) pressure during all design transients up to and including the design step load decrease with concurrent operation of the condenser steam dumps. Operation of the PORVs minimizes the undesirable opening of the spring-loaded pressurizer code safety valves. Each PORV has a remotely operated block valve supplied from emergency power to provide isolation capability should a relief valve become inoperable due to:

  1. *seat leakage, or*
  2. *a mechanical or control system problem which results in either the valve sticking open or the potential for a spurious opening of the valve.*

The OPERABILITY of the PORVs and block valves is determined on the basis of their being capable of the following functions:

a. *Manual control of the reactor coolant system pressure. This function is assumed for mitigation of the steam generator tube rupture accident and is therefore considered a safety function.*

b. *Maintaining the integrity of the reactor coolant pressure boundary.*

c. *Manual control of the block valve to (1) unblock an isolated PORV to allow it to be used for manual control of reactor coolant system pressure (Item a, above) and (2) isolate a PORV with excessive seat leakage (Item b, above).*

d. *Automatic control of PORVs to control RCS pressure. This is a function that reduces challenges to the code safety valves for overpressurization events.*

e. *Manual control of a block valve to isolate a stuck PORV or a PORV which has the potential for spurious opening due to a control system malfunction.*

If a PORV is inoperable because of excessive seat leakage, closure of the block valve is required to restore RCS pressure boundary integrity. Power is maintained to the block valves so that the PORVs will continue to be available for the safety related function of manual RCS

depressurization in the event of a steam generator tube rupture. In addition, the automatic pressure control capability could be restored by opening the block valves. Therefore, continued operation is allowed.

With one or both PORVs inoperable due to an inoperable backup nitrogen supply, continued operation for 14 days is allowed provided the normal motive force for the PORVs, i.e., the instrument air system, continues to be available. Instrument air has a high system reliability, and the likelihood of its being unavailable during a demand for PORV operation is low enough to justify a reasonable length of time (i.e., 14 days) to repair the nitrogen system.

If one or both PORVs are inoperable due to a malfunction in the PORV automatic control system, the PORV should be placed in manual control to limit the potential for a spurious opening of the PORV. Closure of the block valves is not required in this case so that the manual function remains readily available.

If one or both block valves are inoperable, the associated PORV(s) are placed in manual control to limit the potential for a spurious PORV opening due to a control system malfunction which would not be isolable via the block valve. The time allowed to restore the block valve(s) to OPERABLE status is based on the remedial action time limits for inoperable PORV control systems since the PORVs are not capable of mitigating an overpressure event when placed in manual control.

Surveillance Requirements provide assurance that the PORVs and block valves can perform their functions. Specification 4.4.3.2.1 addresses

the PORVs, including the backup nitrogen supply system, and Specification 4.4.3.2.2 addresses the block valves. The block valves are exempt from the surveillance requirements to cycle the valves when they have been closed to comply with the ACTION requirements. This precludes the need to cycle the valves with full system differential pressure or when maintenance is being performed to restore an inoperable PORV to OPERABLE status.

Surveillance limits are established for the pressure in the backup nitrogen accumulators to ensure there is adequate motive power for the PORVs tc cope with a steam generator tube rupture coincident with loss of the containment instrument air system.

Surveillance Requirement 4.4.3.2.1.b provides for testing of the mechanical and electrical aspects of the PORVs and their associated control systems. This testing is performed in MODE 3 or 4 to limit the potential of spurious or inadvertent opening of a PORV during power operation while maintaining a temperature and pressure environment which is representative of power operating conditions.

- Add the following paragraph to the BASES section for Specification 3/4.4.4.9:

  Surveillance limits are established for the pressure in the backup nitrogen accumulators to ensure there is adequate motive power for the PORVs to cope with an inadvertent start of a high head safety injection pump in a water solid condition, allowing adequate time for the operators to respond to terminate the event.

- In addition, several other editorial changes have been made to improve readability.

Safety Significance

The backup nitrogen supply is considered the safety-related motive force for the PORVs which are used to mitigate the consequences of a steam generator tube rupture accident as described in the North Anna UFSAR. The steam generator tube rupture accident analysis assumes that the PORVs are available to depressurize the RCS when pressurizer spray is unavailable. The proposed Technical Specification changes add action statements and surveillance requirements for the nitrogen supply commensurate with its significance.

With an inoperable backup nitrogen supply, the proposed action statements will provide operational flexibility by permitting continued PORV availability through use of the normal supply of instrument air while the backup nitrogen supply is being restored. Allowing the block valves to remain open also serves to eliminate challenges to the pressurizer safety valves.

The proposed changes also ensure that the PORVs will be able to perform their design functions by adding a surveillance requirement to verify the pressure in the nitrogen accumulators.

The proposed Technical Specification changes do not involve an unreviewed safety question. The proposed Technical Specification changes do not:

1. Increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report.

The PORVs are used to mitigate the consequences of a steam generator tube rupture as described in the North Anna UFSAR as well as to limit the undesired opening of the pressurizer safety valves for a primary overpressure event. The proposed action statements ensure that the steam generator tube rupture accident analysis requirements are met. The proposed Technical Specification changes require the backup nitrogen supply be available for the PORVs to be considered operable and add action statements and surveillance requirements for the nitrogen supply commensurate with its significance. The proposed action statements enhance the availability of the automatic actuation of the PORVs by not requiring the block valves to be closed when the backup nitrogen supplies are inoperable but the PORVs are otherwise operable. The proposed surveillance requirements enhance the reliability of the backup nitrogen supply to the PORVs by verifying that there is sufficient nitrogen pressure in the accumulators to ensure that the PORVs can perform their design function. The proposed Technical Specification changes do not change any accident analyses, therefore, the probability of an accident and the resulting consequences are not increased.

2. Create the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report.

The proposed Technical Specification changes do not involve any physical modification to the plant or result in a change in a method of operation. The backup nitrogen supply continues to be required for PORV operability. The proposed Technical Specification changes provide operational flexibility and ensure the availability of the PORVs using the normal supply of instrument air while the backup nitrogen supply is being restored. This also prevents undesirable challenges to the pressurizer safety valves. The new surveillance requirements verify that there is sufficient nitrogen pressure in the accumulators to ensure that the PORVs can perform

their design functions.

3. Reduce the margin of safety as defined in the basis for any Technical Specification.

The proposed Technical Specification changes do not affect any safety limits or limiting safety system settings. The availability of the PORVs will be maintained as required in Generic Letter 90-06. The proposed Technical Specification changes will ensure that the PORVs will be capable of performing their intended functions.