ENCLOSURE 1

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-90-16)

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3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY ~~SYSTEM~~ SUBSYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent ~~trains of both the~~ containment spray SUBSYSTEMS ~~and residual heat removal spray~~ shall be OPERABLE with each ~~train~~ SUBSYSTEM comprised of:

a. A Containment Spray train with:

1. One OPERABLE Containment Spray pump.

2. One OPERABLE Containment Spray heat exchanger.

3. An OPERABLE CONTAINMENT SPRAY PUMP flow path capable of taking suction from the refueling water storage tank and transferring suction to the containment sump, and R73

b. A RHR Spray train with:

1. One OPERABLE residual heat removal pump,

2. One OPERABLE residual heat removal heat exchanger, and

3. An OPERABLE RESIDUAL HEAT REMOVAL PUMP flow path capable of taking suction from the containment sump AND SUPPLYING FLOW TO THE SPRAY HEADER.

APPLICABILITY: MODES 1, 2, 3 and 4.*

ACTION:

With one ~~train of~~ containment spray SUBSYSTEM ~~or residual heat removal spray~~ inoperable, restore the inoperable SUBSYSTEM ~~spray train~~ to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable ~~spray train~~ SUBSYSTEM to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the next 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1.1 Each Containment Spray train shall be demonstrated OPERABLE: R73

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

*OPERABILITY of RHR Spray trains is not required in MODE 4. R73

3/4.6.1.8 EMERGENCY GAS TREATMENT SYSTEM (EGTS)

The OPERABILITY of the EGTS cleanup subsystem ensures that during LOCA conditions, containment vessel leakage into the annulus will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere. This requirement is necessary to meet the assumptions used in the accident analyses and limit the site boundary radiation doses to within the limits of 10 CFR 100 during LOCA conditions. Cumulative operation of the system with the heaters on for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the absorbers and HEPA filters. ANSI N510-1975 will be used as a procedural guide for surveillance testing. FP R118

3/4.6.1.9 CONTAINMENT VENTILATION SYSTEM

Use of the containment purge lines is restricted to only one pair (one supply line and one exhaust line) of purge system lines at a time to ensure that the site boundary dose guidelines of 10 CFR Part 100 would not be exceeded in the event of a loss of coolant accident during purging operations. The analysis of this accident assumed purging through the largest pair of lines (a 24 inch inlet line and a 24 inch outlet line), a pre-existing iodine spike in the reactor coolant and four second valve closure times.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY ~~SYSTEM~~ SUBSYSTEMS

The OPERABILITY of the containment spray ~~system~~ SUBSYSTEMS ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

3/4.6.2.2 CONTAINMENT COOLING FANS

The OPERABILITY of the lower containment vent coolers ensures that adequate heat removal capacity is available to provide long-term cooling following a non-LOCA event. Postaccident use of these coolers ensures containment temperatures remain within environmental qualification limits for all safety-related equipment required to remain functional. R71

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA. By letters dated March 3, 1981, and April 2, 1981, TVA will submit a report on the operating experience of the plant no later than startup after the first refueling. This information will be used to provide a basis to re-evaluate the adequacy of the purge and vent time limits. R8

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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY ~~SYSTEM~~ SUBSYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent ~~trains of both the~~ containment spray SUBSYSTEMS ~~and residual heat removal spray~~ shall be OPERABLE with each ~~train~~ SUBSYSTEM comprised of:

a. A Containment Spray train with:

1. One OPERABLE Containment Spray pump.

2. One OPERABLE Containment Spray heat exchanger. R61

3. An OPERABLE CONTAINMENT SPRAY PUMP flow path capable of taking suction from the refueling water storage tank and transferring suction to the containment sump, and

b. A RHR Spray train with:

1. One OPERABLE residual heat removal pump.

2. One OPERABLE residual heat removal heat exchanger, and

3. An OPERABLE RESIDUAL HEAT REMOVAL PUMP flow path capable of taking suction from the containment sump, AND SUPPLYING FLOW TO THE SPRAY HEADER.

APPLICABILITY: MODES 1, 2, 3 and 4.*

ACTION:

With one ~~train of~~ containment spray SUBSYSTEM ~~or residual heat removal spray~~ inoperable, restore the inoperable SUBSYSTEM ~~spray train~~ to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours, restore the inoperable SUBSYSTEM ~~spray train~~ to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1.1 Each Containment Spray train shall be demonstrated OPERABLE: R61

a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked sealed, or otherwise secured in position, is in its correct position.

*OPERABILITY of RHR Spray trains is not required in MODE 4. R61

3/4.6.1.8 EMERGENCY GAS TREATMENT SYSTEM (EGTS)

The OPERABILITY of the EGTS cleanup subsystem ensures that during LOCA conditions, containment vessel leakage into the annulus will be filtered through the HEPA filters and charcoal adsorber trains prior to discharge to the atmosphere. This requirement is necessary to meet the assumptions used in the accident analyses and limit the site boundary radiation doses to within the limits of 10 CFR 100 during LOCA conditions. Cumulative operation of the system with the heaters on for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the absorbers and HEPA filters. ANSI N510-1975 will be used as a procedural guide for surveillance testing.

3/4.6.1.9 CONTAINMENT VENTILATION SYSTEM

Use of the containment purge lines is restricted to only one pair (one supply line and one exhaust line) of purge system lines at a time to ensure that the site boundary dose guidelines of 10 CFR Part 100 would not be exceeded in the event of a loss of coolant accident during purging operations. The analysis of this accident assumed purging through the largest pair of lines (a 24 inch inlet line and a 24 inch outlet line), a pre-existing iodine spike in the reactor coolant and four second valve closure times.

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

3/4.6.2.1 CONTAINMENT SPRAY ~~SYSTEM~~ SUBSYSTEMS

The OPERABILITY of the containment spray ~~system~~ SUBSYSTEMS ensures that containment depressurization and cooling capability will be available in the event of a LOCA. The pressure reduction and resultant lower containment leakage rate are consistent with the assumptions used in the accident analyses.

3/4.6.2.2 CONTAINMENT COOLING FANS

The OPERABILITY of the lower containment vent coo ensures that adequate heat removal capacity is available to provide long-term cooling following a non-LOCA event. Postaccident use of these coolers ensures containment temperatures remain within environmental qualification limits for all safety-related equipment required to remain functional. R51

3/4.6.3 CONTAINMENT ISOLATION VALVES

The OPERABILITY of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

ENCLOSURE 2

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-90-16)

DESCRIPTION AND JUSTIFICATION FOR
CLARIFYING THE REQUIREMENTS OF CONTAINMENT SPRAY AND
RESIDUAL HEAT REMOVAL SPRAY OPERABILITY

ENCLOSURE 2

Description of Change

TVA proposes to modify the Sequoyah Nuclear Plant (SQN) Units 1 and 2 Technical Specifications (TSs) to revise the containment spray system Limiting Condition for Operation (LCO) 3.6.2.1. The wording for TS 3.6.2.1 LCO is being revised to clarify the operability requirements for containment spray (CS) and residual heat removal (RHR) spray. This clarification ensures that an entire train of CS and RHR spray (i.e., comprised of all A Train or all B Train CS and RHR spray components) is operable when in the action for TS 3.6.2.1. This is achieved by using the subsystem approach (similar to TS 3.5.2 for emergency core cooling system) that requires two independent subsystems comprised of a pump, heat exchanger, and flow path for both CS and RHR spray. The action statement associated with this LCO is revised accordingly to support the subsystem approach. In addition, the index and bases have been revised to reflect the title of "Containment Spray Subsystems."

Reason for Change

The present wording for LCO 3.6.2.1 has led to confusion as to which pumps are allowed to be inoperable and be within the action statement requirements. The wording has caused Operations' personnel to be unsure of when TS 3.0.3 would be applicable. This revision will resolve this confusion.

Justification for Change

By implementing this revision, assurance will be provided that an entire containment spray subsystem is available when in the action statement for LCO 3.6.2.1. The requirements of TS 3.0.3 will be complied with for loss of equipment in both subsystems. This clarification ensures that the required CS system components are available as assumed in the accident analysis to supply a spray flow of 6,750 gallons per minute (gal/min). This flow is achieved by having at least one complete subsystem with a CS pump capable of delivering 4,750 gal/min of spray and an RHR pump capable of delivering 2,000 gal/min of spray. The title changes in the index and bases have been made to provide consistency with the LCO. This change does not alter the operation, testing, or maintenance of the CS system or compromise nuclear safety.

Environmental Impact Evaluation

The proposed change request does not involve an unreviewed environmental question because operation of SQN Units 1 and 2 in accordance with this change would not:

1. Result in a significant increase in any adverse environmental impact previously evaluated in the Final Environmental Statement (FES) as modified by the staff's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or decisions of the Atomic Safety and Licensing Board.

2. Result in a significant change in effluents or power levels.

3. Result in matters not previously reviewed in the licensing basis for SQN that may have a significant environmental impact.

ENCLOSURE 3

PROPOSED TECHNICAL SPECIFICATION CHANGE

SEQUOYAH NUCLEAR PLANT UNITS 1 AND 2

DOCKET NOS. 50-327 AND 50-328

(TVA-SQN-TS-90-16)

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

ENCLOSURE 3

Significant Hazards Evaluation

TVA has evaluated the proposed technical specification (TS) change and has determined that it does not represent a significant hazards consideration based on criteria established in 10 CFR 50.92(c). Operation of Sequoyah Nuclear Plant (SQN) in accordance with the proposed amendment will not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

   This clarification to Limiting Condition for Operation (LCO) 3.6.2.1 will provide operators the requirements to ensure SQN's accident analysis is maintained by the containment spray (CS) system. There is no change to the equipment or method of operation, but only wording enhancements are utilized to ensure proper application of the TSs. These changes to LCO 3.6.2.1 requirements are explicitly consistent with the SQN design criteria and the Final Safety Analysis Report (FSAR) design basis loss of coolant accident analysis. The index and bases changes to use the title "Containment Spray Subsystems" have been made to ensure consistency with the LCO. This revision will not increase the probability or consequence of an accident but will ensure adequate CS capabilities to support the analysis.

2. Create the possibility of a new or different kind of accident from any previously analyzed.

   No changes to plant design, testing, or operation are involved and therefore no possibility exists for a new or different kind of accident being created. This clarification will ensure proper application of LCO 3.6.2.1 action requirements.

3. Involve a significant reduction in a margin of safety.

   By clarifying the operability requirements, this revision ensures that two independent containment spray subsystems are delineated, each with the ability to supply spray flow of 6,750 gallons per minute (gal/min). While under LCO 3.6.2.1 action requirements, at least one complete subsystem will be maintained or the requirements of TS 3.0.3 will be applicable. The 6,750 gal/min spray flow meets the required capacity for the FSAR accident analysis, and therefore the margin of safety for containment integrity is maintained without any reduction. The index and bases revision provides consistency for the "Containment Spray Subsystems" title.