

ENCLOSURE 1

TENNESSEE VALLEY AUTHORITY  
SEQUOYAH NUCLEAR PLANT (SQN)  
UNITS 1 AND 2  
DOCKET NOS 50-327 AND 50-328

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TS-97-02  
DESCRIPTION AND EVALUATION OF THE PROPOSED CHANGE

I. DESCRIPTION OF THE PROPOSED CHANGE

TVA proposes to modify the SQN Units 1 and 2 TSs to revise Surveillance Requirement (SR) 4.6.2.1.1.b. This revision will replace the specific containment spray pump differential pressure requirements with new requirements that allow testing based on required developed head. Additional changes are proposed to Surveillances 4.6.2.1.1.c, 4.6.2.1.1.d, and 4.6.2.1.2.b to provide consistency with the Standard TS, NUREG-1431. These changes are as follows:

- SR 4.6.2.1.1.b - Replace the current pump verification requirements that prescribe a specific differential pressure at a minimum flow rate with a requirement to verify that the pump's developed head at the flow test point is greater than or equal to the required developed head.
- SR 4.6.2.1.1.c - Delete the requirement for the 18-month surveillance to be performed "during shutdown."
- SR 4.6.2.1.1.c.1 - Add the clarification that only automatic valves that are not locked, sealed, or otherwise secured in position are applicable.
- SR 4.6.2.1.1.c.1 and .2 - Replace the specific actuation test signal with the requirement to verify the function on an actual or simulated actuation signal.
- SR 4.6.2.1.1.d and 4.6.2.1.2.b - Delete the specific method for verifying spray nozzles are unobstructed.

II. REASON FOR THE PROPOSED CHANGE

TVA installed flow orifices in the containment spray flow paths in 1991 to prevent excessive flows that could result in damage to the pumps. This change provided limited flow conditions to prevent the potential to create a pump air ingestion condition during switch over from the refueling

water storage tank to the containment sump. The processing of the modification failed to identify the impact to TS requirements; however, proper performance of the containment spray pumps has been verified with the higher required developed head. This revision to the SQN TSs will provide the appropriate requirements to accommodate the new developed head limits.

The other changes proposed by this request are included to provide consistency with the latest version of Standard TS (NUREG-1431) and to incorporate the flexibility provided by the NUREG. These changes do not alter the intent of the TS.

### III. SAFETY ANALYSIS

The current TS requirements are not conservative with respect to the required containment spray pump pressure differential after modification of the flow orifices. The proposed change will require the pumps to perform at the required developed head regardless of changes to the system that result in changes to this value. This revision will require the pumps to perform at the appropriate limits for operability and plant procedures have been implemented to meet this requirement. This change accommodates the new developed head requirements for the containment spray pumps but does not alter the intent of this surveillance.

The remaining changes in this request are not initiated as a result of any change to the plant or to revise the intent of the TS requirements. These changes are proposed to implement requirements that are consistent with NUREG-1431.

The deletion of the "during shutdown" provision of the 18-month surveillances will continue to require the current frequency for these tests based on engineering judgment and operating experience and accommodates the performance of surveillances that require outage conditions. Deleting the "during shutdown" portion of these requirements will not affect performance of surveillances that require shutdown conditions but will provide the flexibility to perform those portions that do not require a unit shutdown.

The exclusion for automatic valves that are locked, sealed, or otherwise secured, with regard to the actuation test, has been added to clarify that valves administratively controlled in the required position do not require the actuation test. Since these valves are administratively controlled in the required position for accident mitigation, there is no benefit in performing this surveillance. This change will also provide

consistency with Surveillance 4.6.2.1.1.a that verifies containment spray valves to be in the correct position with this same exclusion.

The revision for the containment pressure high-high test signal to be changed to an actual or simulated actuation signal does not alter the requirement such that the current source of the actuation signal can not be used. The current requirement limits the type of actuation signal to a simulated test signal and does not have a provision for the use of an actual signal. The proposed change will allow the flexibility to use an actual signal for this actuation consistent with the NUREG wording.

The deletion of the specific method for verifying that spray nozzles are unobstructed will not change the intent of these surveillances. TVA will continue to verify the spray nozzles are open and available to provide flow; however, the method used for this verification does not need to be delineated in the TSs. This change will not alter the current verification method but will allow the technique to be changed if other appropriate methods are discovered that will meet the intent of the surveillances.

These revisions are consistent with NUREG-1431 and are implemented to provide flexibility without changing the intent of the TS requirements.

#### IV. NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

TVA has concluded that operation of SQN Units 1 and 2 in accordance with the proposed change to the TSs does not involve a significant hazards consideration. TVA's conclusion is based on its evaluation, in accordance with 10 CFR 50.91(a)(1), of the three standards set forth in 10 CFR 50.92(c).

A. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed revisions to the containment spray system surveillances for the pumps, valves, and nozzles do not change the intent of the current TS requirements. These revisions only affect the TS operability testing requirements without changing the system functions. These functions are not considered to be accident initiators. The proposed surveillance wording is not based on changes to the plant although a modification to flow orifices for the containment spray pumps created the need to revise the surveillance that verifies pump developed head. The revisions primarily provide flexibility for required methods to verify system operability as well as

utilizing less prescriptive operability limits and conditions for testing. The testing flexibility and less prescriptive requirements do not relax the intent to properly verify operability of the containment spray system but do allow for changes in testing that continue to ensure the appropriate operability requirements. Since these revisions are not directly related to modifications of the plant or result in different methods for operating the plant, there is no change that could increase the probability of an accident. In addition, the consequences of an accident are not increased because there has not been a change that would impact the safety functions of the containment spray system. These revisions will continue to properly verify the operability of the containment spray system.

- B. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The containment spray system functions are not changed as discussed above and the operating practices for the plant remain the same. The testing methods can be modified as a result of the proposed revisions but will continue to maintain appropriate verifications of system operability. These testing methods as well as the containment spray system are not considered to be a potential initiator of accidents. Therefore, these revisions will not impact the operation of systems that could initiate an accident and the possibility of a new or different kind of accident is not created.

- C. The proposed amendment does not involve a significant reduction in a margin of safety.

The proposed revisions do not directly change the limits for containment spray system operability although they do provide the flexibility to properly revise limits resulting from system modifications. This type of limit revision would be necessary to adequately verify system operability. The appropriate limits continue to be required by the proposed TS surveillance requirements. Therefore, the proposed revisions do not allow inappropriate changes to setpoints or operating requirements that maintain the margin of safety and no reduction in this margin is involved in this request.

V. ENVIRONMENTAL IMPACT CONSIDERATION

The proposed change does not involve a significant hazards consideration, a significant change in the types of or significant increase in the amounts of any effluents that may be released offsite, or a significant increase in individual or cumulative occupational radiation exposure. Therefore, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed change is not required.

ENCLOSURE 2

TENNESSEE VALLEY AUTHORITY  
SEQUOYAH PLANT (SQN)  
UNITS 1 AND 2

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TS-97-02  
MARKED PAGES

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I. AFFECTED PAGE LIST

Unit 1

¾ 6-16a

Unit 2

¾ 6-16a

II. MARKED PAGES

See attached.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

THAT EACH PUMP'S DEVELOPED HEAD AT  
THE FLOW TEST POINT IS GREATER THAN  
OR EQUAL TO THE REQUIRED DEVELOPED HEAD

- b. By verifying, ~~that on recirculation flow, each pump develops a differential pressure of greater than or equal to 143 psid at greater than or equal to 4750 gpm when tested pursuant to Specification 4.0.5.~~

R84

- c. At least once per 18 months ~~during shutdown~~, by:

1. Verifying that each automatic valve in the flow path ~~actuates to its correct position on a Containment Pressure High High test signal.~~  
ACTUAL OR SIMULATED ACTUATION SIGNAL.

2. Verifying that each spray pump starts automatically on ~~a Containment Pressure High High test signal.~~  
AN ACTUAL OR SIMULATED ACTUATION

- d. At least once per 10 years ~~by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.~~  
VERIFY

R222

R73

4.5.2.1.2 Each RHR spray train shall be demonstrated OPERABLE:

- a. Per surveillance requirements 4.5.2.b.2 and 4.5.2.f.3;

- b. At least once per 10 years ~~by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.~~  
VERIFY

R222

R73

THAT IS NOT LOCKED,  
SEALED, OR OTHERWISE  
SECURED IN POSITION,

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

THAT EACH PUMP'S DEVELOPED HEAD AT  
THE FLOW TEST POINT IS GREATER THAN  
OR EQUAL TO THE REQUIRED DEVELOPED HEAD

- b. By verifying that on recirculation flow, each pump develops a differential pressure of greater than or equal to 143 psid at greater than or equal to 4750 gpm when tested pursuant to Specification 4.0.5. R71
- c. At least once per 18 months ~~during shutdown~~, by: *THAT IS NOT LOCKED, SEALED, OR OTHERWISE SECURED IN POSITION,*
1. Verifying that each automatic valve in the flow path actuates to its correct position on ~~a Containment Pressure High-High test signal.~~ *AN ACTUAL OR SIMULATED ACTUATION SIGNAL.*
  2. Verifying that each spray pump starts automatically on ~~a Containment Pressure High-High test signal.~~ *AN ACTUAL OR SIMULATED ACTUATION SIGNAL.*
- d. At least once per 10 years ~~by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.~~ *VERIFY* R208
- 4.6.2.1.2 Each RHR Spray train shall be demonstrated OPERABLE: R61
- a. Per surveillance requirements 4.5.2.b.2 and 4.5.2.f.3;
  - b. At least once per 10 years ~~by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.~~ *VERIFY* R208  
R61

ENCLOSURE 3

TENNESSEE VALLEY AUTHORITY  
SEQUOYAH NUCLEAR PLANT (SQN)  
UNITS 1 AND 2

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TS-97-02  
REVISED PAGES

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I. AFFECTED PAGE LIST

Unit 1

¾ 6-16a

Unit 2

¾ 6-16a

II. REVISED PAGES

See attached.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- b. By verifying that each pump's developed head at the flow test point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5. | R84
  - c. At least once per 18 months by:
    - 1. Verifying that each automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to its correct position on an actual or simulated actuation signal. |
    - 2. Verifying that each spray pump starts automatically on an actual or simulated actuation signal. |
  - d. At least once per 10 years verify each spray nozzle is unobstructed. |
- 4.6.2.1.2 Each RHR spray train shall be demonstrated OPERABLE: | R73
- a. Per surveillance requirements 4.5.2.b.2 and 4.5.2.f.3; |
  - b. At least once per 10 years verify each spray nozzle is unobstructed. |

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- b. By verifying that each pump's developed head at the flow test point is greater than or equal to the required developed head when tested pursuant to Specification 4.0.5. | R71
  - c. At least once per 18 months by:
    - 1. Verifying that each automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, actuates to its correct position on an actual or simulated actuation signal. |
    - 2. Verifying that each spray pump starts automatically on an actual or simulated actuation signal. |
  - d. At least once per 10 years verify each spray nozzle is unobstructed. |
- 4.6.2.1.2 Each RHR spray train shall be demonstrated OPERABLE: | R61
- a. Per surveillance requirements 4.5.2.b.2 and 4.5.2.f.3; |
  - b. At least once per 10 years verify each spray nozzle is unobstructed. |