



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37379-2000

February 25, 1998

TVA-SQN-TS-97-06

10 CFR 50.90

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

Gentlemen:

In the Matter of ) Docket Nos. 50-327  
Tennessee Valley Authority ) 50-328

**SEQUOYAH NUCLEAR PLANT (SQN) - UNITS 1 AND 2 - TECHNICAL SPECIFICATION (TS) CHANGE NO. 97-06, "EMERGENCY DIESEL GENERATOR (D/G) SURVEILLANCE REQUIREMENT (SR) CHANGES"**

In accordance with the provisions of 10 CFR 50.4 and 50.90, TVA is submitting a request for an amendment to SQN's licenses DPR-77 and 79 to change the TSs for Units 1 and 2. The proposed change revises the emergency D/G SRs to: (1) delete the requirement for an 18-month inspection in accordance with procedures prepared in conjunction with vendor recommendations, (2) modify the SRs associated with verifying the capability of the D/Gs to reject loads to allow them to be performed at any operational level, (3) modify the SR associated with the 24-hour D/G run to allow it to be performed at any operational level, (4) separate the 5-minute diesel hot restart test requirements from the 24-hour test run requirements, and (5) revise several SRs and the bases to more clearly define D/G steady state allowable voltage range.

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TVA has determined that there are no significant hazards considerations associated with the proposed change and that the change is exempt from environmental review pursuant to the provisions of 10 CFR 51.22(c)(9). The SQN Plant Operations Review Committee and the SQN Nuclear Safety Review Board have reviewed this proposed change and determined that

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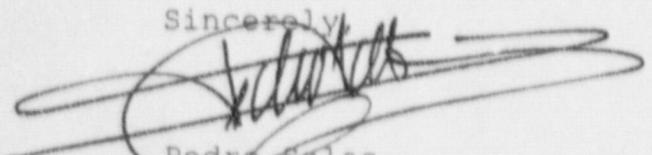
operation of SQN Units 1 and 2, in accordance with the proposed change, will not endanger the health and safety of the public. Additionally, in accordance with 10 CFR 50.91(b)(1), TVA is sending a copy of this letter to the Tennessee State Department of Public Health.

Based on the scope of work planned for baseline outages and the additional time that will be required if the 24-hour diesel runs must be performed during such outages, the additional cost that will be incurred by TVA is conservatively estimated at \$120,000 per outage. Accordingly, it is requested that this change be approved by early August 1998 in order to support the Unit 1 Cycle 9 refueling outage currently scheduled for early September 1998.

Enclosure 1 to this letter provides the description and evaluation of the proposed change. This includes TVA's determination that the proposed change does not involve a significant hazards consideration, and is exempt from environmental review. Enclosure 2 contains copies of the appropriate TS pages from Units 1 and 2 marked-up to show the proposed change. Enclosure 3 forwards the revised TS pages for Units 1 and 2, which incorporate the proposed change

TVA requests that the revised TS be made effective within 45 days of NRC approval. If you have any questions about this change, please telephone me at (423) 843-7170 or J. D. Smith at (423) 843-6672.

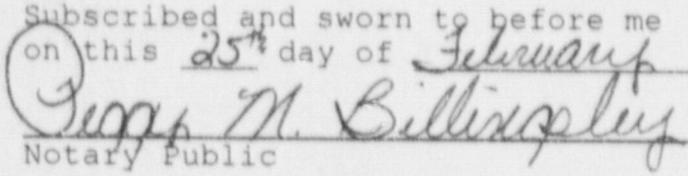
Sincerely,



Pedro Salas

Licensing and Industry Affairs Manager

Subscribed and sworn to before me  
on this 25<sup>th</sup> day of February



George M. Billingsley  
Notary Public

My Commission Expires Oct 21, 1998

Enclosures

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## ENCLOSURE 1

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

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TS-97-06  
DESCRIPTION AND EVALUATION OF THE PROPOSED CHANGE

### I. DESCRIPTION OF THE PROPOSED CHANGE

TVA proposes to modify the Sequoyah Nuclear Plant (SQN) Units 1 and 2 technical specifications (TSS) to revise Surveillance Requirements (SRs) 4.8.1.1.2.d.1, 4.8.1.1.2.d.2, 4.8.1.1.2.d.3, and 4.8.1.1.2.d.7. This revision will: (1) delete the requirement for an 18-month inspection in accordance with procedures prepared in conjunction with vendor recommendations, (2) relocate the SRs associated with verifying the capability of the D/G to reject loads to allow them to be performed at any operational level, (3) relocate the SR associated with the 24-hour diesel generator (D/G) run to allow it to be performed at any operational level, (4) separate and relocate the 5-minute diesel hot restart test requirements from the 24-hour test run requirements, and (5) revise several SRs and the bases to more clearly define the D/G steady state allowable voltage range. These changes are described as follows:

#### Part 1 - Vendor Recommended Inspections:

- SR 4.8.1.1.2.d.1 - Delete the requirement for subjecting the diesel to an 18-month inspection during shutdown, in accordance with procedures prepared in conjunction with its manufacturers recommendations.

#### Part 2 - D/G Online Testing:

- SR 4.8.1.1.2.d.2 - Relocate the requirement for verifying the generator capability to reject a 600 kW load to a new SR 4.8.1.1.2.g.1 to allow it to be performed at any operational level.
- SR 4.8.1.1.2.d.3 - Relocate the requirement for verifying the generator capability to reject a 4400 kW load to a new SR 4.8.1.1.2.g.2 to allow it to be performed at any operational level.

run to new SR 4.8.1.1.2.g.3 to allow it to be performed at any operational level. Relocate the "within 5 minutes" start to new SR 4.8.1.1.2.g.4 to allow it to be performed after the D/G has operated between 3960 kW and 4400 kW and between 2140 VAR and 2370 VAR for  $\geq 2$  hours.

- SR 4.8.1.1.2.g.1 - Add the relocated requirement for verifying the generator capability to reject a 600 kW load.
- SR 4.8.1.1.2.g.2 - Add the relocated requirement for verifying the generator capability to reject a 4400 kW load.
- SR 4.8.1.1.2.g.3 - Add the relocated requirement for the 18-month surveillance associated with the 24-hour diesel run.
- SR 4.8.1.1.2.g.4 - Add the relocated requirement for the "within 5 minutes" start.

**Part 3 - D/G Steady State Allowable Voltage Range:**

- SR 4.8.1.1.2.a.4 - Revised the  $\leq 10$  seconds voltage and frequency revised the D/G steady state allowable voltage range and clarified footnote.
- SR 4.8.1.1.2.d.4.b - Revised the D/G steady state allowable voltage range.
- SR 4.8.1.1.2.d.5 - Revised the  $\leq 10$  seconds voltage and frequency and revised the D/G steady state allowable voltage range.
- SR 4.8.1.1.2.d.6.b - Revised the D/G steady state allowable voltage range.
- SR 4.8.1.1.2.e - Revised the D/G steady state allowable voltage range.
- SR 4.8.1.1.2.g.3 (Relocated SR 4.8.1.1.2.d.7) - Revised the  $\leq 10$  seconds voltage and frequency and revised the D/G steady state allowable voltage range.
- SR 4.8.1.1.2.g.4 (Relocated SR 4.8.1.1.2.d.7) - Revised the  $\leq 10$  seconds voltage and frequency and revised the D/G steady state allowable voltage range.

## II. REASON FOR THE PROPOSED CHANGE

### Part 1 - Vendor Recommended Inspections:

TVA requests the proposed deletion of SR 4.8.1.1.2.d.1 to remove requirements from the SQN TSs. These requirements are not included in Standard TSs (NUREG-1431) and are inconsistent with the normal TS content.

### Part 2 - D/G Online Testing:

TVA proposes to allow verifying the capability of the D/G to reject a 600 kW and a 4400 kW load to be performed during any mode of operation by establishing new SRs 4.8.1.1.2.g.1 and 4.8.1.1.2.g.2. This change allows testing, to be performed during outages, to be moved to periods with lighter less complex maintenance schedules.

TS SR 4.8.1.1.2.d.7 currently requires that a 24-hour D/G endurance test be performed once every 18 months during shutdown conditions. By establishing a new SR 4.8.1.1.2.g.3, TVA proposes to allow this endurance test to be performed during any mode of operation. This change will reduce the amount of required outage critical path surveillance testing during outage periods with heavy maintenance schedules, increase operational flexibility in scheduling surveillance testing activities, and enable the staggering of D/G 24-hour endurance run tests. The proposed change will lessen the total time that the D/Gs remain in test mode with units operating, provide operational flexibility and economic benefits.

By establishing a new SR 4.8.1.1.2.g.4, TVA proposes to allow the "within 5 minutes" start test to be performed after the D/G has operated between 3960 kW and 4400 kW and between 2140 VAR and 2370 VAR for  $\geq 2$  hours. This new SR requires demonstration of the hot restart capability and not the initiation of a loss of offsite power (LOOP) test as currently required. The LOOP test will continue to be performed as currently required by SR 4.8.1.1.2.d.4.b. This new SR provides increased flexibility in scheduling the 5-minute hot restart D/G testing and has the potential to lessen the period of time the generator is in the test mode.

### Part 3 - D/G Steady State Allowable Voltage Range:

TVA is taking this opportunity to revise the TSs by conservatively specifying more restrictive plant specific limits for D/G steady state allowable voltage range and by

clarifying the required voltage and frequency after 10 seconds. These values were identified using technical justification that is consistent with that used in developing the values in the Watts Bar TSs. The basis for these values is being added to the TS Bases. The footnote was clarified to indicate that the 10 second requirements did not apply when the modified start occurs consistent with Standard TS, NUREG-1431.

### **III. SAFETY ANALYSIS**

The standby D/Gs serve as the plant emergency standby alternating current (ac) power source. They are designed, installed, and tested to requirements necessary to assure their availability. The D/Gs are also designed to operate in parallel with the normal power source for test and exercise purposes.

The D/Gs consist of four self-contained, water-cooled, automatic-starting, diesel engine driven, and stationary electric generators. Two D/Gs in the same train are required to mitigate a design basis event (DBE) in one unit; redundancy for single failure is provided by maintaining four D/Gs in ready condition for automatic start.

#### **Part 1 - Vendor Recommended Inspections:**

The proposed change to delete the 18-month inspection from the TS is consistent with Standard TS (NUREG-1431). In NUREG-1431, requirements are not included for the 18-month inspections. The D/Gs are design features that function during accidents or transients to support features that prevent the propagation of an event to systems that are part of the primary success path for accident mitigation. Their availability and reliability is assured through surveillance testing whose frequency and content are unchanged by this request and by implementation of 10 CFR 50.65 the "Maintenance Rule," which trends unavailability and unreliability of the D/Gs. Vendor recommended maintenance will continue to be performed consistent with owners group recommendations.

The NRC, through the Maintenance Rule, monitors the effectiveness of maintenance at nuclear power plants. This rule is performance based rather than prescriptive, which further supports deletion of maintenance inspections from the TSs. Generic Letter 94-01 recognizes that implementation of the Maintenance Rule provides a program to assess D/G performance.

## Part 2 - D/G Online Testing:

Justification for the proposed change to SRs 4.8.1.1.2.d.2 and 4.8.1.1.2.d.3, by relocating the requirements to SRs 4.8.1.1.2.g.1 and 4.8.1.1.2.g.2, is based on the following:

- The performance of these surveillances does not render any safety system or component inoperable. These surveillances are performed by paralleling the D/G in test to offsite power similar to the currently monthly testing during plant operation (Modes 1, 2 or 3). If problems with the D/G are encountered during testing, the D/G will separate from the shutdown board allowing the offsite circuit to continue to supply the board. Failure to meet these SRs when performed at power would result in an inoperable D/G, which in and of itself, does not result in a challenge to plant safety systems.
- The load rejection SRs require the tested D/G to be loaded to a specified kW load and the D/G output breaker opened. Opening of the D/G output breaker separates the L/G from the shutdown board and allows the offsite circuit to continue to supply the shutdown board. These SRs provide assurance that the D/G governor and regulator function properly to control the D/G. The performance of the load rejection SRs will not cause significant perturbations to the electrical distribution systems as the D/G is separated from the shutdown board and the power system loading is well within the rating of the transformers, switchgear, and breakers before and after load rejection. Furthermore, a D/G full-load rejection will not actuate the current protective relays (differential or overcurrent) of the common station service transformer (CSST) or shutdown board.

The proposed change to SR 4.8.1.1.2.f.7, by relocating the requirements to SRs 4.8.1.1.2.g.3 and 4.8.1.1.2.g.4, is justified based upon the following:

- SQN currently tests its D/Gs parallel to offsite power monthly, during plant operation (Modes 1, 2 or 3), for one to two hours. This requires parallel testing of one D/G at a time when both units are operating.
- Performing a 24-hour endurance run instead of a one- to two-hour monthly load run continues to be only a small fraction of the time with both units operating that D/Gs are parallel tested.

- The intent of the endurance test, which is to show the D/Gs ultimate load carrying capability, would be met with the unit operating or shutdown.
- The intent of the "within 5-minutes" hot restart test, which is to demonstrate that the D/Gs ability to start and be ready to accept load is unaffected at full operating temperature, is met if such temperature is reached in a shorter time period (i.e., 2 hours at full load instead of 24).
- Other aspects of D/G parallel testing (protective devices, risks, interactions with offsite power, capabilities, and operation) are unaffected by the proposed TS change.

Further justification is provided through the reduction of time that testing occurs and improved maintenance scheduling capabilities permitted by the more flexible SR. This flexibility allows the 24-hour endurance test to be conducted in other than shutdown conditions when heavy and complex maintenance schedules occur. These factors are further supported by maintaining the capability to safely complete emergency shutdown procedures following a DBA coincident with a single failure throughout the surveillance test. This justification is analogous to that approved by the NRC staff in the Safety Evaluation Report for the Hope Creek Generating Station, dated March 30, 1995.

The D/G and its support systems will remain operable throughout the surveillance test, and the onsite Class-1E ac electrical distribution system and its support systems will remain capable of completing plant shutdown and maintaining safe shutdown conditions following a DBA. If the D/G fails the 24-hour endurance test, it will be declared inoperable and the appropriate TS action statements will be followed.

Concerns about operating D/Gs in parallel with the grid have been raised in NRC Information Notice 84-69, Standard Review Plan Section 8.3.1, and in other industry documents related to similar testing proposals. The following paragraphs summarize the concerns and provide responses to them.

Concern:

One concern focused on when a D/G is connected to offsite or nonvital loads, the emergency power system is not independent of disturbances on the nonvital and offsite power systems that can adversely affect emergency power

availability (a trip may result due to overcurrent or reverse power or a lockout device may be actuated, requiring local operator action to reset the lockout).

Response:

The primary concern of D/G operation in parallel to offsite or nonvital loads is that loss of the offsite source could result in loss of the D/G. During surveillance tests, no more than one D/G is operated in parallel to the offsite power grid. This configuration provides for sufficient independence of the onsite power sources from the offsite power grid while still enabling operations to prove that the D/Gs are operable by surveillance testing. In this configuration, it is possible for only one D/G to be affected by an unstable offsite power grid such that an operator will be required to manually reset the lockout relay so that the one affected D/G can be restarted. In this scenario alone, or coincident with a loss-of-coolant accident (LOCA), the plant will remain within its design basis since at all times safe shutdown can be achieved with the three remaining D/G sets, because two are of the same train.

Concern:

If a fault develops while the D/G is connected to nonemergency loads, the D/G may not trip, but the operation of the LOOP load sequencer may be adversely affected (the load sequencer timers are linked with the closing of the D/G output breaker or with detection of loss of voltage on the bus).

Response:

The D/Gs are designed such that any fault between the D/G undergoing test and the offsite power system will abort the test by tripping the D/G breaker and the normal feeder breaker. If the D/G breaker failed to trip for such a fault, the load sequencer for that channel would not initiate nor would it be adversely affected because of logic design. However, if a loop condition were to occur, the other three independent channels will respond and be supported by the initiation of their respective D/Gs. In this scenario, the plant will remain within its design basis since at all times safe shutdown can be achieved with the three remaining D/G sets, because two are of the same train.

Concern:

Another concern deals with the vulnerability of the D/G to

trip signals, which are bypassed for emergency demands, but are operable for manual starts and during running for test purposes. The D/G would be more vulnerable to such trips.

Response:

When running in the test mode, the D/Gs are more conservatively protected, therefore, they are more susceptible to perturbations in the offsite power grid causing a D/G to be tripped and locked out should an event occur. Only the D/G operating in the test mode is affected, and as previously stated, the plant will remain within its design basis since at all times safe shutdown can be achieved with the three remaining D/G sets, because two are of the same train.

Concern:

An accident concurrent with a LOOP and a single failure preventing the opening of the feeder isolation breaker through which the paralleling of the power systems is being accomplished could cause the total loss of power to the safety buses.

Response:

NUREG-0800 states that an accident concurrent with a LOOP and a single failure preventing the opening of the feeder isolation breaker through which the paralleling of the power systems is being accomplished could cause the total loss of power to the safety buses. For the 24-hour endurance run test, the opposite train vital buses will be connected to the preferred offsite power circuit that is not paralleled to a D/G. In this configuration, the opposite (nontest) train will respond to a simultaneous LOOP/LOCA accident (coincident with a single failure described above) appropriately in the following situations:

- a. During online testing of a D/G, the unlikely event of a complete LOOP affecting both preferred offsite power circuits and a failure of the isolation breaker for the diesel under test to trip for a LOCA (accident signal) or LOOP (degraded or loss of voltage) would not affect the three nontest 6.9-kV vital buses. A complete loss of both preferred offsite power circuits will result in degraded or loss of voltage. The nontest buses would be connected to the nonparalleled preferred offsite power circuit and subsequent LOOP would cause their feeder breakers (connection to preferred offsite power) to trip free, D/Gs to start, and sequence loads

appropriately. The 6.9-kV vital buses at Sequoyah are designed to automatically transfer from their normal or alternate source (preferred offsite power circuits) to their respective D/G set following a LOOP (degraded or loss of voltage). The 6.9-kV buses do not automatically transfer from normal to alternate for a LOOP (degraded or loss of voltage).

- b. If a partial LOOP occurs, affecting only one preferred offsite power circuit and the test D/G is operating in parallel, the nontest 6.9-kV vital buses would not be affected since no transfers would take place.
- c. If a fault initiated LOOP occurs affecting only the preferred offsite power circuit that the two opposite train nontest 6.9-kV vital buses are tied to, a fast bus transfer from the normal to the alternate (unaffected offsite circuit) would take place. Sequoyah's 6.9-kV start buses, along with their connected safety buses, are designed to fast transfer from normal to alternate if the transfer is initiated by transformer or line failure relaying such as fault pressure, transformer overcurrent, ground current, line protection or differential relaying. If the partial LOOP is due to a loss of voltage alone, which could be caused by inadvertent opening of the common station service transformer power circuit breaker (high side), the start buses are designed for voltage supervised (slow bus) transfers following a 2 second time delay. However, the safety buses disconnect in 1.25 seconds and transfer to their associated D/Gs, which will automatically start and sequence loads appropriately.

Concern:

During operation with the reactor critical, performance of the 24-hour endurance test could cause perturbations to the electrical distributions systems that would challenge continued steady state operation, and as a result, plant safety systems.

Response:

The possibility that the D/G could induce electrical distribution system perturbations (i.e., generator catastrophic failure, feeder failure) during the 24-hour endurance test is acknowledged. The above risks of testing the D/G at power have been found acceptable by the NRC for existing TS SRs for the monthly one-hour test. Also, testability is required to satisfy General Design Criterion 18. The initial version and Supplement 1 to the Sequoyah safety evaluation report (SER) (NUREG-0011)

conclude that the onsite power system is designed to be tested during station operation.

Since the electrical distribution system response to the above D/G related failures is the same for the proposed online 24-hour endurance run test, TVA has determined that the SER (NUREG-0011) conclusion is unaffected by this proposal.

As presently written, SR 4.8.1.1.2.d.7 specifies the demonstration of D/G hot restart capability by initiating a LOOP test within 5 minutes of completing the 24-hour D/G run. This requirement is derived from Regulatory Guide 1.108, Revision 1, "Periodic Testing of Diesel Units Used as Onsite Power Systems at Nuclear Power Plants." The current requirements, however, create scheduling demands by reducing flexibility and imposing unnecessary operational burdens without a corresponding increase in D/G reliability. The requirement to start and load the D/G, rather than just starting the D/G, does not contribute to verifying the ability of the D/G to start from normal operating temperature. As previously stated by NRC in the October 18, 1993, SER for Nine Mile Point Unit 2, requiring a LOOP test, in conjunction with a hot restart, imposes a strain on multiple systems/components without measurable benefit.

The LOOP test will continue to be performed at shutdown conditions, as required by SR 4.8.1.1.2.d.4.b, to provide assurance that the D/G is capable of responding to a LOOP as assumed in the accident analyses. Proposed SR 4.8.1.1.2.g.4 does satisfy the intent of Regulatory Guide 1.9, Revision 3, Paragraph 2.2.10.

Additionally, the proposed change provides an economic benefit derived from increased operational flexibility in maintenance scheduling. Since the proposed change to SR 4.8.1.1.2.g.3 would allow the 24-hour endurance test to be conducted in other than shutdown conditions, the plant operators could reduce the number of critical path activities that must take place during the refueling outages and shorten the schedule for D/G maintenance activities by typically a minimum of 6 hours per outage.

Finally, the proposed change provides a safety benefit from the potential to lessen the period of time the D/G is in test mode. Since the proposed new SR 4.8.1.1.2.g.4 would allow the "within 5 minutes" hot start to be performed after the D/G has operated between 3960 kW and 4400 kW and between 2140 VAR and 2370 VAR for  $\geq 2$  hours, should some happenstance prevent or delay the start, it is not necessary to run the D/Gs for an additional 24 hours

or leave them running.

### **Part 3 - D/G Steady State Allowable Voltage Range:**

The revisions to the D/G steady state allowable voltage range are in the conservative direction, i.e., more restrictive direction. The allowable steady state voltage is being reduced from a range of 6210V (6900V-690V) to 7590V (6900V+690V) to a range of  $\geq 6800V$  to  $\leq 7260V$ . As such, safety is unaffected.

The clarification of required voltage and frequency after 10 seconds to a minimum value, rather than a range, emphasizes the required safety function when starting the D/G, and achieving minimum voltage and frequency. These requirements have been revised in the conservative direction for voltage with values going from 6210V (6900V-690V) to 7590V (6900V+690V) to  $\geq 6800V$ . Minimum frequency values remain unchanged as the requirement of 58.8Hz (60Hz-1.2Hz) to 61.2Hz (60Hz+1.2Hz) changes to  $\geq 58.8Hz$ . The upper end limit is ultimately controlled via the steady state upper limit. The SR 4.8.1.1.2.a.4 footnote clarification is consistent with NUREG 1431, reflects current operating practice and makes this revision internally consistent. As such, safety is unaffected.

## **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 (or operating license[s]), 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).

### **Part 1 - Vendor Recommended Inspections:**

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

The proposed revision to the TS deletes the requirements for 18-month inspections from the TS. TVA does not consider the inspections to be the source of any accident; therefore, this deletion will not increase the possibility of an accident. The D/Gs come within the purview of 10 CFR 50.65, which monitors the effectiveness of maintenance at nuclear power plants. The capability of the D/Gs to provide the required safety function in support of accident mitigation will be unaffected. Therefore, the

proposed deletion of the inspection requirements will not increase the consequences of an accident.

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

The emergency D/Gs provide support for mitigation functions associated with previously evaluated accidents and are not the initiator of any accident. The proposed change does not alter the current functions of the D/Gs; therefore, it will not create the possibility of a new or different kind of accident.

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

The requirements for emergency D/Gs are unchanged by the proposed deletion of the requirements from TSs. The function of the emergency D/Gs and surveillances to ensure operability will remain the same as currently required by the TS. NRC will continue to monitor the effectiveness of D/G maintenance as required by 10 CFR 50.65. Therefore, the proposed change will not result in a reduction in a margin of safety.

#### Part 2 - D/G Online Testing:

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

The proposed amendment to allow the load rejection tests and the 24-hour D/G endurance run to be conducted during any mode of operation does not significantly increase the probability or consequences of an accident previously evaluated in Chapter 15 of the Final Safety Analysis Report (FSAR) since the capability to safely shutdown the plant following a LOOP, LOCA or LOCA/LOOP coincident with a single failure is maintained throughout the surveillance test. Other aspects of D/G parallel testing (protective devices, risks interactions with offsite power capabilities, and operation) are unaffected by the proposed TS change. Required Class-1E onsite power operability during normal operation, shutdown cooling, LOOP, and accident conditions will be the same.

Performance of the new SR 4.8.1.1.2.g.4 requires the

D/Gs to be at the same system conditions prior to the test (stabilized operating temperature) as previously required. The LOOP start will continue to be performed as required by SR 4.8.1.1.2.d.4.b.

In addition, the performance of proposed SRs 4.8.1.1.2.g.1, 4.8.1.1.2.g.2, 4.8.1.1.2.g.3 or 4.8.1.1.2.g.4 during Modes 1, 2 or 3 will not significantly increase the consequences of perturbations to any of the electrical distribution systems that could result in a challenge to steady state operation or to plant safety systems.

Performance of proposed SR 4.8.1.1.2.g.1, 4.8.1.1.2.g.2 or 4.8.1.1.2.g.3 during Modes 1, 2 or 3 or failure of the surveillance, will not cause, or result in, an anticipated operational occurrence with attendant challenges to plant safety systems that has not been previously analyzed for the existing monthly surveillances.

Therefore, TVA concludes that the above change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

The requested changes do not result in a new or different kind of accident from that previously analyzed in SQN's FSAR. The changes propose to eliminate restrictions of the plant operating modes in which standby D/G system testing may be performed, but does not change the type of testing performed and are not due to modification of the system design. NRC's assessment of the testing of the D/Gs in the configuration proposed is documented in Section 8.3.1, Supplement 1 of the SER (NUPEG-0011).

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

As previously stated, performance of proposed SRs 4.8.1.1.2.g.1, 4.8.1.1.2.g.2, 4.8.1.1.2.g.3 or 4.8.1.1.2.g.4 during Modes 1, 2 or 3 will not cause, or result in, an anticipated operational occurrence with attendant challenges to plant safety systems that has not been previously analyzed for the existing monthly surveillances. It also does not change any setpoints or limits established for accident mitigation. Therefore, implementation of

the proposed amendment will not reduce the margin of safety for this system.

**Part 3 - D/G Steady State Allowable Voltage Range:**

- 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 SRs conservatively restrict the allowable range of the D/G steady state voltage. The capability of the D/Gs to provide the required safety function, in support of accident mitigation, will be unaffected or enhanced. Therefore, the proposed revision of the SRs will not increase the consequences of an accident.

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

The proposed changes do not alter the current functions of the D/Gs; therefore, they will not create the possibility of a new or different kind of accident.

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

The requirements for emergency D/Gs are unchanged by the conservative revision of the allowable range of the D/G steady state voltage or clarification of the required voltage and frequency after 10 seconds. The function of the emergency D/Gs and surveillances to ensure operability will remain the same as currently required by the TS. Therefore, the proposed changes will not result in a reduction in a margin of safety.

**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.