

September 13, 2006

Mr. Karl W. Singer
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF
AMENDMENT REGARDING NOMINAL TRIP SETPOINTS FOR REACTOR
PROTECTION SYSTEM AND ENGINEERED SAFETY FEATURES
INSTRUMENTATION (TAC NOs. MC4408 AND MC4409) (TS-02-01)

Dear Mr. Singer:

The Commission has issued the enclosed Amendment No. 310 to Facility Operating License No. DPR-77 and Amendment No. 299 to Facility Operating License No. DPR-79 for the Sequoyah Nuclear Plant, Units 1 and 2. These amendments are in response to your application dated August 18, 2004, as supplemented by letters dated April 11, 2005, and July 11, 2006 (TS-02-01).

The amendments revise Technical Specifications (TSs) relating to the reactor protection system and engineered safety features instrumentation. The Trip Setpoint column of TS Tables 2.2-1 and 3.3-4 will be renamed Nominal Trip Setpoint; inequality signs in TS Tables 2.2-1 and 3.3-4 will be removed; the trip setpoint and allowable value for the Intermediate Range Neutron Flux P-6 permissive will be revised; Minimum Channels Operable in TS Table 3.3-3 will be revised; editorial changes will be made to TS Table 3.3-4 to replace \pm signs with inequalities; and a correction will be made to an alarm/trip setpoint in TS Table 3.3-6.

A copy of the safety evaluation is also enclosed. Notice of issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Douglas V. Pickett, Senior Project Manager
Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-327 and 50-328

Enclosures:

1. Amendment No. 310 to License No. DPR-77
2. Amendment No. 299 to License No. DPR-79
3. Safety Evaluation

cc w/enclosures: See next page

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Mr. Karl W. Singer
Tennessee Valley Authority

SEQUOYAH NUCLEAR PLANT

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TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.310
License No. DPR-77

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Tennessee Valley Authority (the licensee) dated August 18, 2004, as supplemented on April 11, 2005, and July 11, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

- (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 310, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. TVA shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance, and shall be implemented no later than 45 days from the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Jennifer Dixon-Herrity, Acting Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Change to the Technical
Specifications

Date of Issuance: September 13, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 310

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace page 3 of Operating License No. DPR-77 with the attached page 3.

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

REMOVE

2-4
2-5
2-6
2-6a
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3/4 3-14
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INSERT

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TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-328

SEQUOYAH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 299
License No. DPR-79

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Tennessee Valley Authority (the licensee) dated August 18, 2004, as supplemented on April 11, 2005, and July 11, 2006, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-79 is hereby amended to read as follows:

- (2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 299, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. TVA shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance, and shall be implemented no later than 45 days from the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Jennifer Dixon-Herrity, Acting Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Change to the Technical
Specifications

Date of Issuance: September 13, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 299

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Replace page 3 of Operating License No. DPR-79 with the attached page 3.

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages is identified by amendment number and contain marginal lines indicating the area of change.

REMOVE

2-4
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3/4 3-27b
3/4 3-28
3/4 3-41

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 310 TO FACILITY OPERATING LICENSE NO. DPR-77
AND AMENDMENT NO. 299 TO FACILITY OPERATING LICENSE NO. DPR-79
TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-327 AND 50-328

1.0 INTRODUCTION

By application dated August 18, 2004 (Agencywide Documents Access and Management System (ADAMS) No. ML042430467), as supplemented on April 11, 2005 (ADAMS No. ML051190262), and July 11, 2006, (ADAMS No. ML061990303), Tennessee Valley Authority (TVA, the licensee) requested changes to the Technical Specifications (TSs) for the Sequoyah Nuclear Plant (SQN) Units 1 and 2.

The requested changes provide a revision to the SQN TSs relating to the reactor protection system and engineered safety features (ESF) instrumentation. Specifically, the proposed changes include the following:

- (1) The "Trip Setpoint" column of TS Tables 2.2-1, "Reactor Trip System Instrumentation Trip Setpoints," and TS Table 3.3-4, "Engineered Safety Feature Actuation System Instrumentation Trip Setpoints," will be renamed to "Nominal Trip Setpoint."
- (2) The inequality signs of TS Tables 2.2-1 and 3.3-4 will be removed.
- (3) Other TSs that currently use the term Trip Setpoint will be changed to Nominal Trip Setpoint. This includes TS 2.2, "Limiting Safety System Settings," TS Table 2.2-1, Functional Unit 13, "Steam Generator Water Level - Low-Low," along with Notes 1, 2, 3, and 4, TS 3/4.3.2, "Engineered Safety Feature Actuation System Instrumentation," and TS Table 3.3-4, Functional Unit 6.c, "Main Steam Generator Water Level - Low-Low."
- (4) The term "nominal" will be removed from the average temperature at rated thermal power (T') definition in TS Table 2.2-1, Note 1.
- (5) Allowable values (AVs) in TS Table 3.3-4 that are currently represented with a numerical value and a tolerance expressed with a \pm sign are revised to utilize an inequality that retains the existing limits.

- (6) The nominal trip setpoint and allowable value for the intermediate range neutron flux P-6 permissive in TS Table 2.2-1 will be revised.
- (7) The fuel storage pool area monitor alarm/trip setpoint in TS Table 3.3-6, "Radiation Monitoring Instrumentation," has been revised to correct a previous error.
- (8) The required minimum channels operable for the auxiliary feedwater (AFW) Load Shed Timers and the emergency diesel generator (EDG) Start and Load Shed Timers and Safety Injection(SI)/Degraded Voltage Logic Enable Timers in TS Table 3.3-3, "Engineered Safety Feature Actuation System Instrumentation," have been revised from 2 per shutdown board to 1 per shutdown board. Actions 34 and 35 of TS Table 3.3-3 are appropriately modified to reflect these revisions.

Notice of these amendments was given in the *Federal Register* on October 12, 2004 (69 FR 60688). The supplemental letters dated April 11, 2005, and July 11, 2006, provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 REGULATORY EVALUATION

The Commission's regulatory requirements for the content of technical specifications are set forth in 10 CFR 50.36. This regulation requires that the TSs include items in five categories: (1) safety limits, limiting safety system settings, and limiting control settings, (2) limiting conditions for operation, (3) surveillance requirements, (4) design features, and (5) administrative controls. Paragraph (c)(1)(ii)(A) of Section 50.36 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Technical Specifications," requires in part, that, where a limiting safety system setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded.

Regulatory Guide (RG) 1.105, Revision 3, "Setpoints for Safety-Related Instrumentation," describes a method acceptable to the staff for complying with the Commission's regulations for ensuring that setpoints for safety-related instrumentation are initially within and remain within the technical specification limits.

3.0 BACKGROUND

The revisions (the trip setpoint column title, the trip setpoint inequality signs, the AV inequality sign, the term "nominal" for limiting values) and the Bases changes are being proposed in response to an NRC identified concern that TVA discontinue using inequalities with nominal trip setpoint values. NRC Inspection Report Nos. 50-327/95-26 and 50-328/95-26, dated January 30, 1996 (NUDOCS 9602120160), includes a non-cited violation where inspectors determined that the licensee failed to provide engineered safety feature actuation system (ESFAS) instrumentation surveillance procedures which met the requirement of TS 3.3.2-1, "Engineered Safety Feature Actuation System Instrumentation." This issue concerned the incorrect use of ESFAS instrumentation "trip setpoint" and "allowable values" when performing instrument calibration. Several of the values in the Sequoyah TS ESFAS instrumentation table are bounded by "equal to or greater" symbols (\geq) or "equal to or less than" symbols (\leq). These values were considered to be nominal values even though they were bounded by the inequality

symbols. The proposed changes are similar to TS changes that have been approved for the Vogtle Electric Generating Plant and Millstone Nuclear Power Station, Unit 3, and the initial TSs for the Watts Bar Nuclear Plant. In addition, the changes are consistent with NRC-approved Technical Specification Task Force (TSTF) item TSTF-355.

The licensee is not requesting implementation of the nominal setpoint philosophy for the containment purge air exhaust radiation monitor in TS Table 3.3-4 in order to continue to set this function at a more conservative value. The licensee plans to submit another TS change to move this function from the ESF requirements to a new specification consistent with the standard TSs, which retain the inequality for these types of setpoints. The staff finds that the retention of this inequality is reasonable based on the standard requirements and their application to radiation monitoring functions. Plus and minus allowances for AVs are changed to inequality signs for consistency with the philosophy that AVs are limits and should use inequalities to indicate the limits.

The licensee proposes to change the setpoint and AV for the intermediate range neutron flux P-6 permissive to provide a value that supports plant operation and will be consistent with the nominal trip setpoint methodology. The licensee replaced the intermediate range channels in 1990 and revised the measurement parameters from amperes to percent reactor thermal power (RTP). The RTP value chosen at that time was the best estimate available; however, operating experience showed this value was not the optimum choice. Achieving the P-6 value during startup allows the trips provided by the source range to be blocked. If the trip is blocked too early in the startup evolution, the source range function could be blocked before sensitive criticality events where the source range function is useful. If the source range function is not blocked when P-6 is achieved, using the function during criticality will degrade a feature that is intended to remind the operators to block a trip function. This would be a human factors concern and could lead to an unnecessary trip of the unit.

The licensee proposed a revision of the trip setpoint for the fuel storage pool area radiation monitor to resolve an identified non-conservatism. During reviews of dose calculations for fuel-handling accidents, the licensee discovered errors in the assumptions that made the current setpoint values less restrictive than required to maintain the assumptions of the accident analysis. The licensee initiated corrective actions and verified that the settings for these monitors acceptably accommodated the identified errors. The licensee is maintaining these monitors administratively in accordance with the Corrective Action Program (CAP) until the TSs can be revised. The proposed revision will establish a new setpoint limit to meet the corrected dose analysis.

The change in the minimum number of channels operable for the AFW Load Shed Timers and the EDG Start and Load Shed Timers and SI/Degraded Voltage Logic Enable Timers of TS Table 3.3-3 will provide a more appropriate requirement in consideration of the plant design. The timers support the actuation of the loss-of-power start of the AFW pumps, the EDGs, and load shed initiation. This function is provided by both trains of power, and the voltage sensors for each train are arranged in a two-out-of-three logic scheme. Using redundant timers in each train of this function after the detection of low voltage exceeds the design requirement. Only one timer is needed to satisfy the loss-of-power start function. Therefore, the required minimum channels operable per shutdown board for the AFW and EDG timers will be reduced from two to one.

4.0 TECHNICAL EVALUATION

4.1 Revision to Nominal Trip Setpoints and Removal of Inequality Signs:

The licensee has proposed to rename the “Trip Setpoint” column of TS Tables 2.2-1, “Reactor Trip System Instrumentation Trip Setpoints,” and the “Trip Setpoint” column of TS Table 3.3-4, “Engineered Safety Feature Actuation System Instrumentation Trip Setpoints,” to become the “Nominal Trip Setpoint.” In addition, the licensee has proposed to eliminate the inequality signs from the same columns of TS Tables 2.2-1 and 3.3-4.

The title change from “Trip Setpoint” to “Nominal Trip Setpoint” and the removal of the inequality signs is not a change in the current application of the TSs. The SQN setpoint methodology considers the values in the trip setpoint column to be nominal values and the calibration procedures have implemented the requirements accordingly. Similar changes from “Trip Setpoint” to “Nominal Trip Setpoint” are included in:

- TS 2.2, “Limiting Safety System Settings,”
- TS Table 2.2-1, Functional Unit 13, “Steam Generator Water Level - Low-Low,”
- TS Table 2.2-1, Notes 1, 2, 3, and 4,
- TS 3/4.3.2, “Engineered Safety Feature Actuation System Instrumentation,” and
- TS Table 3.3-4, Functional Unit 6.c, “Main Steam Generator Water Level - Low-Low.”

In summary, the staff considers the title change from “Trip Setpoint” to “Nominal Trip Setpoint” and the removal of the inequality signs changes to be administrative changes that resolves the staff’s concern associated with using an inequality sign with a nominal value. Therefore, the staff finds these proposed changes acceptable.

4.2 Removal of “Nominal” from Note 1 to TS Table 2.2-1

Note 1 to TS Table 2.2-1 refers to the Overtemperature ΔT trip setpoint. Note 1 defines a parameter T’ as:

$$T' \leq 578.2^{\circ}\text{F (Nominal } T_{\text{avg}} \text{ at RATED THERMAL POWER)}$$

The classification of the Overtemperature ΔT T’ parameter as a nominal value is not accurate with the evolution of the nominal setting philosophy utilized for reactor protection system and engineered safety feature instrumentation. The T’ value is a limiting parameter for TS compliance and should not be described as a nominal value. The description of this value, as a limit with the appropriate inequalities, is the most accurate method for representation.

Therefore, the licensee has proposed revising the definition of T’ to be:

$$T' \leq 578.2^{\circ}\text{F (} T_{\text{avg}} \text{ at RATED THERMAL POWER)}$$

The staff agrees that the value of T’ should not be described as a nominal value. Therefore, the staff finds the proposed change acceptable.

4.3 Replacement of \pm Signs for Allowable Values

The licensee has proposed to revise the representation of AVs in TS Table 3.3-4 as inequalities in place of plus and minus (\pm) allowances. This change is being proposed to be consistent with the philosophy that AVs are limits and should utilize inequalities to properly indicate the limits. The proposed revisions do not change the limits of the AVs and do not change the application of the TSs. The staff considers these proposed changes to be administrative in nature and, therefore, acceptable.

4.4 Revise Intermediate Range Neutron Flux P-6 Setpoint and Allowable Value

The overpower protection provided by the out-of-core nuclear instrumentation system consists of three discrete, overlapping levels (power range, intermediate range, and source range). Power escalation operations require a permissive signal from the higher range instrumentation channels before the lower range channels can be manually blocked by operator action. The P-6 permissive function requires a one-out-of-two intermediate range permissive signal prior to blocking of the source range reactor trip protection function. The source range reactor trip is automatically reactivated when both intermediate range channels return below the P-6 setpoint.

The function of the permissive is to prevent premature blockage of the source range trip function and to automatically reinstate it when power conditions warrant. The P-6 setpoint is intended to prevent the permissive from occurring too early in the startup sequence and cause the operators to delay the block of the source range reactor trip. As such, the P-6 permissive setpoints associated with the source range neutron flux channels do not affect a variable on which a safety limit has been placed.

TS Table 2.2-1, Functional Unit 19, "Intermediate Range Neutron Flux - (P-6) Enable Block Source Range Reactor Trip," provides the Nominal Trip Setpoint and the Allowable Values for the P-6 value. The licensee has proposed to increase the Nominal Trip Setpoint from 1.0E-05 to 1.0E-4 percent Rated Thermal Power (RTP). The proposed value will ensure the ability to block the trip function at the proper time during the startup evolution but will continue to optimize the availability of the source range count feature to support reactor criticality activities. Normal startup evolutions have shown that the criticality point is usually in the range of 1.0E-5 to 1.0E-4 percent RTP on the intermediate range instrumentation. The P-6 actuations during the past four startups of both SQN units were set at 1.0E-4 percent RTP. These actuation values are well below the source range trip value and provide adequate time for the operators to block the trip function. Therefore, the proposed change to the P-6 value from 1.0E-5 to 1.0E-4 percent RTP allows the permissive to occur within or just after the normal reactor criticality range, but well before the source range trip value.

The licensee also proposed to increase the P-6 AV in TS Table 2.2-1 from 6.0E-6 to 6.0E-05 percent RTP. According to the licensee's setpoint methodology, this AV revision is required to be consistent with the proposed setpoint of 1.0E-4 percent RTP. The resulting rack effects portion of the channel statistical allowance equation for the instrument loop is 2.572 percent, which is Rack As-Found Tolerance. The calculation of the AV results in 5.43E-5 percent RTP. This allowable value has been rounded up to 6.0E-5 percent RTP. Also, an error for rack As-Left Value is 0.5 percent channel and the As-Left Value is calculated as 9.0E-5 percent RTP. The TS AV and As-Left Value are established using the more conservative tolerance determined by the TVA setpoint methodology.

Since this loop involves only the rack instrumentation, the error terms for the process error and sensor are not applicable. The source range and intermediate range rack instrumentation use the same detector. The instrumentation is located in an auxiliary and control building area and is not subjected to the harsh environmental parameters of radiation and temperature of a design basis accident. Therefore, the unmeasurable uncertainties during the channel operational test are 1.3332 percent. This calculation provides assurance that the margin between AV and As-Left Value includes all the uncertainties not measured during the channel operational test (COT). On this basis, the staff finds that the revised AV is adequate to provide assurance that the permissive will be given before the source range trip occurs.

Engineering design output Setpoint and Scaling Documents will specify the as-left calibration tolerance and the as-found tolerance for the trip setpoint setting as evaluated within TVA calculations. Periodic plant calibration will incorporate the as-left calibration tolerance value ensuring compliance with design basis requirements during performance of calibration activities. For setpoint values found outside the as-left value and inside the as-found value, the setpoint will be adjusted and left within the as-left tolerance per the surveillance requirement. Also, the licensee committed to using its setpoint calibration procedures to maintain the trip setpoints within the established setting tolerance to ensure that the instrument remains capable of performing its specified safety function.

If the allowable value is exceeded or a potential channel inoperability exists, Plant Procedure SPP-6.7, "Instrument Setpoint, Scaling, and Calibration Program," gives direction for controlling out-of-calibration instrument conditions and contains the requirements for entering the issue into the TVA Corrective Action Program (CAP). SPP-6.7 ensures that the condition is handled in accordance with the CAP including immediate actions to return the instrument to meet TS required functions. Trending, recurrence controls, and cause of the condition are also part of the CAP process. Based on review of the licensee's procedures, the staff finds that the setpoint calibration procedures maintain the trip setpoints within the established setting tolerance to ensure that the instruments will be capable of performing their specified safety functions and are, therefore, acceptable.

4.5 Revise Fuel Storage Pool Area Radiation Monitor Setpoint

Two area type exposure rate radiation detectors are installed in the spent fuel pool area of the auxiliary building to monitor the gross radiation in the air space above the spent fuel pool. The function of the monitors is to initiate isolation of the ventilation paths in the auxiliary building upon detection of high radiation levels and to activate the auxiliary building gas treatment system. The limiting radiation event in the auxiliary building is the fuel handling accident over spent fuel pool. No credit is taken for any of the isolation or filtration functions initiated by the fuel storage pool area radiation monitors. As such, the automatic functions initiated by these monitors are anticipatory only. They are not variables on which a safety limit has been placed.

TS Table 3.3-6, "Radiation Monitoring Instrumentation," Item 1, provides the fuel storage pool area radiation monitor. The licensee has proposed to revise the alarm/trip setpoint from ≥ 200 mR/hr to ≥ 151 mR/hr. The setpoint revision is needed to address identified errors in the dose calculations for a fuel-handling event. The identified errors in the dose calculation have been addressed by the TVA CAP. The licensee evaluated the proposed setpoint in the calculation to ensure that sufficient margin exists to the analytical limit.

According to the licensee's calculation, the analytical limit is 7.149 volts. The AV is derived as follows:

$$\begin{aligned} \text{AV} &= \text{analytical limit} - (\text{uncertainties not measured during COT} + \text{margin}) \\ &= 7.149 - 0.172 \\ &= 6.977 \text{ volts.} \end{aligned}$$

Converting 6.977 volts to mR/hr gives 307 mR/hr of the AV.

$$\begin{aligned} \text{Setpoint} &= \text{AV} - \text{uncertainties measured during COT} \\ &= 6.977 - 0.618 \\ &= 6.359 \text{ volts.} \end{aligned}$$

Converting to mR/hr gives 151 mR/hr of the Setpoint.

The staff concludes that the fuel storage pool area radiation monitor will actuate within the required accident analysis assumptions to support accident mitigation. Therefore, the staff finds the proposed setpoint acceptable.

4.6 Auxiliary Feedwater and Emergency Diesel Generator Loss-of-Power Timers

TS Table 3.3-3, Functional Unit 6.e provides for the automatic actuation of the AFW system upon loss of off-site power. This Functional Unit includes both voltage sensors and load shed timers. TS Table 3.3-3, Functional Unit 7 provides for the automatic actuation of the EDGs upon either loss-of-voltage or degraded voltage at the 6.9 kV Shutdown Board. This Functional Unit includes voltage sensors, load shed timers, and logic enable timers.

The SQN TSs has redundant load shed and logic enable timers for each shutdown board in each train for both Functional Units 6.e and 7. These timers support automatic actuation of the loss-of-power start of the AFW pumps and EDGs. Thus, the Minimum Channels Operable column of TS Table 3.3-3 requires that 2 load shed and logic enable timers per shutdown board remain operable. The licensee has proposed to reduce the Minimum Channels Operable from 2 per shutdown board to only 1 per shutdown board. Since there is no NRC requirement for the licensee to have redundant timers, the staff finds the proposed change acceptable.

Actions 34 and 35 to TS Table 3.3-3 currently require prompt licensee action if one of the two load shed or logic enable timers of Functional Units 6.e or 7 become inoperable. Since the Minimum Channels Operable requirement has been changed from 2 to 1 per shutdown board, the licensee has proposed modifications to Actions 34 and 35 to permit continued plant operation with only a single load shed or logic enable timer. The proposed changes to Actions 34 and 35 support the previous change to the Minimum Channels Operable. The staff considers these changes to be administrative in nature and, therefore, acceptable.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Tennessee State official was notified of the proposed issuance of the amendment. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (69 FR 60688). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: September 13, 2006