



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

March 19, 1990

Docket Nos. 50-327
and 50-328

Mr. Oliver D. Kingsley, Jr.
Senior Vice President, Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: EMERGENCY DIESEL GENERATORS ACTION STATEMENTS (TAC 75567/75568)
(TS 90-04) - SEQUOYAH NUCLEAR PLANT, UNITS 1 AND 2

The Commission has issued the enclosed Amendment No.132 to Facility Operating License No. DPR-77 and Amendment No.119 to Facility Operating License No. DPR-79 for the Sequoyah Nuclear Plant, Units 1 and 2, respectively. These amendments are in response to your application dated January 5, 1990.

These amendments modify the Action Statement "a" for the Limiting Condition for Operation (LCO) 3.8.1.1, Alternating Current Sources, Operating, in the Sequoyah Nuclear Plant, Units 1 and 2, Technical Specifications (TSs). The modified Action Statement "a" states clearly that with a train of diesel generator set(s) 1A-A and/or 2A-A or 1B-B and/or 2B-B inoperable, the units may continue operating for 72 hours before shutting down if the inoperable train can not be returned to operable status. During this 72 hours until the inoperable train is made operable, the remaining alternating current sources in LCO 3.8.1.1 shall be demonstrated operable by Surveillance Requirement (SR) 4.8.1.1.1.a within one hour, and at least once per eight hours thereafter, and by SR 4.8.1.1.2.a.4 within 24 hours.

In the letter dated January 5, 1990, you requested that we review this TS change request on an exigent basis per 10 CFR 50.91(a)(6) so that work on the Unit 1 essential raw cooling water (ERCW) system strainers could begin as scheduled in January 1990. We responded to this request in our letter dated January 18, 1990. In that letter, we stated that Action Statement "d" of LCO 3.8.1.1 allowed you to have one diesel generator train inoperable for up to 72 hours before the units must begin shutting down. Because Action Statement "a" was confusing regarding the loss of a single train of diesel generators, we evaluated your application dated January 5, 1990. Because Action Statement "d" allowed you to have one diesel generator train inoperable for up to 72 hours before the units must begin shutting down, we evaluated the application on a non-exigency basis.

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Mr. Oliver D. Kingsley, Jr.

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A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,

Original signed by

Suzanne Black, Assistant Director
for Projects
TVA Projects Division
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 132 to License No. DPR-77
- 2. Amendment No. 119 to License No. DPR-79
- 3. Safety Evaluation

cc w/enclosures:
See next page

Changes done 3/15/90

Re-changed

SB

OFC	:NRR:TVA/RM	:NRR:TVA/BC	:TVA:AD/TP	:OGC	:TVA:AD/P	:	:
NAME	:JDSnohew:as	:EMarinos	:RPIerson	:	:SBlack	:	:
DATE	:2/15/90	:3/2/90	:3/12/90	:3/16/90	:3/19/90	:	:

cc w/enclosure:
General Counsel
Tennessee Valley Authority
400 West Summit Hill Drive
ET 11B 33H
Knoxville, Tennessee 37902

Mr. F. L. Moreadith
Vice President, Nuclear Engineering
Tennessee Valley Authority
400 West Summit Hill Drive
WT 12A 12A
Knoxville, Tennessee 37902

Dr. Mark O. Medford
Vice President and Nuclear
Technical Director
Tennessee Valley Authority
6N 38A Lookout Place
Chattanooga, Tennessee 37402-2801

Manager, Nuclear Licensing
and Regulatory Affairs
Tennessee Valley Authority
5N 157B Lookout Place
Chattanooga, Tennessee 37402-2801

Mr. Joseph Bynum
Acting Site Director
Sequoyah Nuclear Plant
Tennessee Valley Authority
P. O. Box 2000
Soddy Daisy, Tennessee 37379

Mr. Mark J. Burzynski
Site Licensing Manager
Sequoyah Nuclear Plant
P. O. Box 2000
Soddy Daisy, Tennessee 37379

County Judge
Hamilton County Courthouse
Chattanooga, Tennessee 37402

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street, N.W.
Atlanta, Georgia 30323

Mr. Kenneth M. Jenison
Senior Resident Inspector
Sequoyah Nuclear Plant
U.S. Nuclear Regulatory Commission
2600 Igou Ferry Road
Soddy Daisy, Tennessee 37379

Mr. Michael H. Mobley, Director
Division of Radiological Health
T.E.R.R.A. Building, 6th Floor
150 9th Avenue North
Nashville, Tennessee 37219-5404

Dr. Henry Myers, Science Advisor
Committee on Interior
and Insular Affairs
U.S. House of Representatives
Washington, D.C. 20515

Tennessee Valley Authority
Rockville Office
11921 Rockville Pike
Suite 402
Rockville, Maryland 20852

AMENDMENT NO. 132 FOR SEQUOYAH UNIT NO. 1 - DOCKET NO. 50-327 and
AMENDMENT NO. 119 FOR SEQUOYAH UNIT NO. 2 - DOCKET NO. 50-328
DATED: March 19, 1990

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 132
License No. DPR-77

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated January 5, 1990, 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.

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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

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 132, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne Black, Assistant Director
for Projects
TVA Projects Division
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 19, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 132

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3/4 8-1

INSERT

3/4 8-1

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Four separate and independent diesel generator sets each with:
 1. Two diesels driving a common generator
 2. Two engine-mounted fuel tanks containing a minimum volume of 250 gallons of fuel, per tank
 3. A separate fuel storage system containing a minimum volume of 62,000 gallons of fuel,
 4. A separate fuel transfer pump, and
 5. A separate 125-volt D.C. distribution panel, 125-volt D.C. battery bank and associated charger.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With either an offsite circuit or diesel generator set(s) 1A-A and/or 2A-A or 1B-B and/or 2B-B of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours; restore at least two offsite circuits and four diesel generator sets to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one offsite circuit and one diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two offsite circuits and four diesel generator sets to OPERABLE status within 72 hours from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

TENNESSEE VALLEY AUTHORITY
DOCKET NO. 50-328
SEQUOYAH NUCLEAR PLANT, UNIT 2
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 119
License No. DPR-79

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated January 5, 1990, 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.

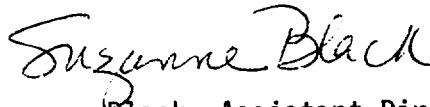
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-79 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 119, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Suzanne Black, Assistant Director
for Projects
TVA Projects Division
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 19, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 119

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE

3/4 8-1

INSERT

3/4 8-1

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Four separate and independent diesel generator sets each with:
 1. Two diesels driving a common generator
 2. Two engine-mounted fuel tanks containing a minimum volume of 250 gallons of fuel, per tank
 3. A separate fuel storage system containing a minimum volume of 62,000 gallons of fuel,
 4. A separate fuel transfer pump, and
 5. A separate 125-volt D.C. distribution panel, 125-volt D.C. battery bank and associated charger.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With either an offsite circuit or diesel generator set(s) 1A-A and/or 2A-A or 1B-B and/or 2B-B of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 24 hours; restore at least two offsite circuits and four diesel generator sets to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one offsite circuit and one diesel generator set of the above required A.C. electrical power sources inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirements 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter, and Surveillance Requirement 4.8.1.1.2.a.4 within 8 hours; restore at least one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two offsite circuits and four diesel generator sets to OPERABLE status within 72 hours from the time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

ENCLOSURE

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 132 TO FACILITY OPERATING LICENSE NO. DPR-77

AND AMENDMENT NO. 119 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

In its letter dated January 5, 1990, the Tennessee Valley Authority (TVA) requested a change to Action Statement "a" of the Limiting Condition for Operation (LCO) 3.8.1.1, Alternating Current (AC) Sources, Operating, of the Sequoyah Nuclear Plant, Units 1 and 2, Technical Specifications (TSs). The proposed change is to replace "diesel generator set" by "diesel generator set(s) 1A-A and/or 2A-A or 1B-B and/or 2B-B" to allow the units to continue operating for 72 hours, before shutting down, with only one train of diesel generator sets inoperable. A diesel generator set is diesel generator 1A-A, 2A-A, 1B-B or 2B-B.

In the letter dated January 5, 1990, TVA also requested that the staff review this TS application on an exigent basis in accordance with 10 CFR 50.91(a)(6). This was requested to allow the work on the Unit 1 essential raw cooling water (ERCW) system strainers to begin as scheduled in January 1990. The staff responded to this request in its letter dated January 18, 1990. In that letter, the staff stated that Action Statement "d" allowed TVA to have one train of diesel generator sets (i.e., 1A-A and/or 2A-A or 1B-B and/or 2B-B) inoperable for up to 72 hours before the units must begin shutting down. Because Action Statement "a" is confusing regarding the loss of a single train of diesel generators, the staff stated that it would review TVA's application dated January 5, 1990. Because Action Statement "d" allowed TVA to have one diesel generator train inoperable for 72 hours before the units must begin shutting down, the staff evaluated this application on a non-exigency basis.

2.0 EVALUATION

In its application, TVA stated that the Action Statements "a" and "d" of LCO 3.8.1.1 are inconsistent in that Action "a" allows continued operation for 72 hours with a single diesel generator set inoperable, whereas Action "d" allows operation to continue for the same period of time with two diesel generator sets inoperable provided both diesel generator sets are on the same train (i.e., 1A-A and 2A-A or 1B-B and 2B-B). This fact was the basis for the staff's letter dated January 18, 1990 that TVA could begin work of the Unit 1 ERCW strainers before the proposed TS changes in the application dated January 5, 1990 were approved.

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TVA stated that the requested change to Action Statement "a" of LCO 3.8.1.1 provides consistency within the LCO as well as consistency with similar LCOs that have actions written with regard to "equipment train" availability. TVA also stated that the requirements of General Design Criterion 17 of Appendix A to 10 CFR 50, which specify the minimum independent and redundant AC power sources, continue to be met with the proposed change to Action Statement "a."

The requirements in the TSs on the operability of the AC power sources during power operation ensures that sufficient power will be available to supply the safety-related equipment required for the safe shutdown of the facility and the mitigation and control of accident conditions within the facility. To meet single failure criteria the safety-related equipment including the diesel generators are normally organized into two 100% separate trains. The proposed TS change will allow the units to continue operating for 72 hours before shutting down as long as only one train of diesel generator sets is inoperable. If two trains are inoperable, Action Statement "d" requires one train to be made operable within two hours or have the units in Hot Standby within the next six hours and in the Cold Shutdown within the next 30 hours. Action Statement "d" is not being revised by the proposed TS changes.

The proposed TS changes are consistent with (1) requirements in the NRC Standard Technical Specifications for Westinghouse Pressurized Water Reactors (STSWPWR), NUREG-0452, Revision 4A, September 1987 and (2) similar requirements in the TSs for one train of safety-related equipment being inoperable, as for example the ERCW system which is the ultimate heat sink for the units. In addition, as stated above, Action Statement "d" allows continued operation of the units for 72 hours with only one train of diesel generator sets inoperable. The problem is that Action Statement "a" is confusing about the situation for one train of diesel generator sets being inoperable.

Therefore, based on the above, the staff concludes that the proposed TS changes in the application dated January 5, 1990 are acceptable. Action Statement "a" will clearly state that with only one train of diesel generator sets being inoperable the units may continue operating for 72 hours.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendments involve 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendments meet 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 nor environmental assessment need be prepared in connection with the issuance of these amendments.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (55 FR 2447) on January 24, 1990, and consulted with the State of Tennessee. No public comments were received and the State of Tennessee did not have any comments.

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendments will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor: J. Donohew

Dated: March 19, 1990