

SEP 23 1974

Docket Nos. 50-280
and 50-281

Virginia Electric & Power Company
ATTN: Mr. Stanley Ragone
Senior Vice President
Post Office Box 26666
Richmond, Virginia 23261

Gentlemen:

The Commission has issued the enclosed Amendments No. 1 to Facility License Nos. DPR-32 and DPR-37. The amendments include Change No. 16 to the Technical Specifications, Appendix A for each license and are in response to your request dated July 26, 1974.

The amendments prescribe remedial action to be taken in the event of a loss of bottled air in the main control room ventilation system and modify the surveillance requirements for the main steam line trip valves. As discussed with your staff, please note that an additional provision requiring full closure tests, on the main steam line trip valves, during each cold shutdown and a requirement to prove the operability of the emergency ventilating system has been included.

Copies of the related Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Original Signed by
Karl Goller

Karl R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

Enclosures:

1. Amendment No. 1 to DPR-32
2. Amendment No. 1 to DPR-37
3. Safety Evaluation
4. Federal Register Notice

cc: See next page

28

SEP 23 1974

cc w/enclosures:

George D. Gibson, Esquire
Hunton, Williams, Gay & Gibson
Post Office Box 1535
Richmond, Virginia 23212

Mr. M. Sherlock Holmes
Chairman
Board of Supervisors of Surry
County
Surry County Courthouse, Virginia 23683

Swem Library
College of William & Mary
Williamsburg, Virginia 23185

cc w/enclosures and VEPCO ltr.
dtd. July 26, 1974:
Ms. Susan T. Wilburn
Commonwealth of Virginia
Council on the Environment
Eighth Street Office Building
Richmond, Virginia 23219

Mr. Robert Blanco
Environmental Protection Agency
Curtis Building
6th and Walnut Streets
Philadelphia, Pennsylvania 19106

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Docket Nos. 50-280 & 50-281

Virginia Electric & Power Company
 ATTN: Mr. Stanley Ragone
 Senior Vice President
 Post Office Box 26666
 Richmond, Virginia 23261

Gentlemen:

The Commission has issued the enclosed Amendments No. 1 to Facility License Nos. DPR-32 and DPR-37. The amendments include Change No. 16 to the Technical Specifications, Appendix A for each license and are in response to your request dated July 26, 1974.

The amendments prescribe remedial action to be taken in the event of a loss of bottled air in main control room ventilation system and modify the surveillance requirements for the main steam trip valves. As discussed with your staff, please note that an additional provision requiring full closure tests during each cold shutdown has been included.

Copies of the related Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Karl R. Goller, Assistant Director
 for Operating Reactors
 Directorate of Licensing

Enclosures:

1. Amendment No. 1 to DPR-32
2. Amendment No. 1 to DPR-37
3. Safety Evaluation
4. Federal Register Notice

Chebron (Amend only)
 RSchemel
 ACRS (16)

cc: George D. Gibson, Esquire
 Hunton, Williams, Gay & Gibson
 Post Office Box 1535
 Richmond, Virginia 23212

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S. Hou
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DATE		8/26/74	8/30/74	8/17/74	9/23/74

VIRGINIA ELECTRIC & POWER COMPANY

DOCKET NO. 50-280

SURRY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 1
License No. DPR-32

1. The Atomic Energy Commission (the Commission) having found that:
 - A. The application for amendment by Virginia Electric & Power Company (the licensee) dated July 26, 1974, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended, 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.

2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.3.B(2) of Facility License No. DPR-32 is hereby amended to read as follows:

"(B.) Technical Specifications

The Technical Specifications contained in Appendix A, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes thereto through Change No. 16."

OFFICE						
SURNAME						
DATE						

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

FOR THE ATOMIC ENERGY COMMISSION

Original Signed by
Karl Goller

Karl R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

Attachment:
Change No. 16 to
Technical Specifications

Date of Issuance: SEP 23 1974

OFFICE ➤						
SURNAME ➤						
DATE ➤						

ATTACHMENT TO LICENSE AMENDMENT NO. 1
CHANGE NO. 16 TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NO. DPR-32
VIRGINIA ELECTRIC & POWER COMPANY
SURRY POWER STATION UNIT NO. 1
DOCKET NO. 50-280

Revise Appendix A as follows:

1. Remove pages 3.19-1, 4.7-1 and 4.7-2.
2. Insert pages 3.19-1, 3.19-2, 4.7-1, and 4.7-2.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

3.19 MAIN CONTROL ROOM VENTILATION SYSTEM

Applicability

Applies to the ability to maintain a positive differential pressure in the main control room.

Objective

To specify functional requirements for the main control room ventilation system.

Specification

A. Requirements

A bottled dry air bank shall be available to pressurize the main control room to a positive differential pressure with respect to adjoining areas of the auxiliary, turbine, and service buildings for one hour. A minimum positive differential pressure of 0.05 inches of water must be maintained when the control room is isolated under accident conditions. This capability shall be demonstrated by the testing requirement delineated in Technical Specification 4.1.

B. Remedial Action

If the requirements of Section A are not met, the unit shall be placed in the hot shutdown condition within 8 hours; except that if tests during the 8-hour period demonstrate that the emergency control room ventilation system is functional, the unit shall be brought within the requirements of Section A or placed in the hot shutdown condition within 24 hours.

If the requirements of Section A are not met within 48 hours after achieving hot shutdown condition the unit shall be placed in the cold shutdown condition.

3.19-2
SEP 23 1974

Basis

Following a design basis loss-of-coolant accident the containment will be depressurized to subatmospheric condition in less than one hour, thus terminating leakage from the containment. The main control room is maintained at a positive differential pressure using bottled air during the period when containment leakage may exist to prevent contamination.

4.7 MAIN STEAM LINE TRIP VALVES

Applicability

Applies to periodic testing of the main steam line trip valves.

Objective

To verify the ability of the main steam line trip valves to close upon signal.

Specification

A. Tests and Frequencies

1. Each main steam trip valve shall be tested for full closure each time the reactor is in the cold shutdown condition.
2. Each main steam trip valve shall be inservice tested for partial closure before each startup but at least quarterly.

B. Acceptance Criteria

1. A full closure test of main steam trip valves shall be considered satisfactory if the valve closes fully in 5 sec or less.

SEP 23 1974

2. A partial closure inservice test of a main steam trip valve shall be considered satisfactory if the valve can be stroked at least 3 degrees from its full open position.

16

Basis

The main steam trip valves serve to limit an excessive Reactor Coolant System cooldown rate and resultant reactivity insertion following a main steam line break accident. Their ability to close fully shall be verified each time the reactor is in the cold shutdown condition. A closure time of 5 sec was selected since this is the closure time assumed in the safety evaluation. The inservice testing of partial valve stroke of 3 degrees is sufficient to verify the freedom of the valve disc to function as required. A limit switch in the test circuit prevent the valve disc from entering the flow stream and slamming the valve shut during inservice testing.

16

VIRGINIA ELECTRIC & POWER COMPANY

DOCKET NO. 50-281

SURRY POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 1
License No. DPR-37

1. The Atomic Energy Commission (the Commission) having found that:
 - A. The application for amendment by Virginia Electric & Power Company (the licensee) dated July 26, 1974, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended, 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.
2. Accordingly, the license is amended by a change to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 23.B (2) of Facility License No. DPR-37 is hereby amended to read as follows:

"B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised by issued changes

thereto through Change No. 16."

OFFICE ➤					
SURNAME ➤					
DATE ➤					

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

FOR THE ATOMIC ENERGY COMMISSION

Original Signed by
Karl Goller _____

Karl R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

Attachment:
Change No. 16 to
Technical Specifications

Date of Issuance: SEP 23 1974

OFFICE →						
SURNAME →						
DATE →						

ATTACHMENT TO LICENSE AMENDMENT NO. 1
CHANGE NO. 16 TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NO. DPR-37
VIRGINIA ELECTRIC & POWER COMPANY
SURRY POWER STATION UNIT NO. 2
DOCKET NO. 50-281

Revise Appendix A as follows:

1. Remove pages 3.19-1, 4.7-1, and 4.7-2.
2. Insert pages 3.19-1, 3.19-2, 4.7-1, and 4.7-2.

OFFICE						
SURNAME						
DATE						

3.19 MAIN CONTROL ROOM VENTILATION SYSTEM

Applicability

Applies to the ability to maintain a positive differential pressure in the main control room.

Objective

To specify functional requirements for the main control room ventilation system.

Specification

A. Requirements

A bottled dry air bank shall be available to pressurize the main control room to a positive differential pressure with respect to adjoining areas of the auxiliary, turbine, and service buildings for one hour. A minimum positive differential pressure of 0.05 inches of water must be maintained when the control room is isolated under accident conditions. This capability shall be demonstrated by the testing requirement delineated in Technical Specification 4.1.

B. Remedial Action

If the requirements of Section A are not met, the unit shall be placed in the hot shutdown condition within 8 hours; except that if tests during the 8-hour period demonstrate that the emergency control room ventilation system is functional, the unit shall be brought within the requirements of Section A or placed in the hot shutdown condition within 24 hours.

If the requirements of Section A are not met within 48 hours after achieving hot shutdown condition the unit shall be placed in the cold shutdown condition.

SEP 23 1974

Basis

Following a design basis loss-of-coolant accident the containment will be depressurized to subatmospheric condition in less than one hour, thus terminating leakage from the containment. The main control room is maintained at a positive differential pressure using bottled air during the period when containment leakage may exist to prevent contamination.

4.7 MAIN STEAM LINE TRIP VALVES

Applicability

Applies to periodic testing of the main steam line trip valves.

Objective

To verify the ability of the main steam line trip valves to close upon signal.

Specification

A. Tests and Frequencies

1. Each main steam trip valve shall be tested for full closure each time the reactor is in the cold shutdown condition.
2. Each main steam trip valve shall be inservice tested for partial closure before each startup but at least quarterly.

B. Acceptance Criteria

1. A full closure test of main steam trip valves shall be considered satisfactory if the valve closes fully in 5 sec or less.

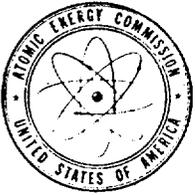
2. A partial closure inservice test of a main steam trip valve shall be considered satisfactory if the valve can be stroked at least 3 degrees from its full open position.

16

Basis

The main steam trip valves serve to limit an excessive Reactor Coolant System cooldown rate and resultant reactivity insertion following a main steam line break accident. Their ability to close fully shall be verified each time the reactor is in the cold shutdown condition. A closure time of 5 sec was selected since this is the closure time assumed in the safety evaluation. The inservice testing of partial valve stroke of 3 degrees is sufficient to verify the freedom of the valve disc to function as required. A limit switch in the test circuit prevent the valve disc from entering the flow stream and slamming the valve shut during inservice testing.

16



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING

AMENDMENTS NO. 1 TO FACILITY OPERATING LICENSE NOS. DPR-32 AND DPR-37

(CHANGE NO. 16 TO TECHNICAL SPECIFICATIONS)

VIRGINIA ELECTRIC & POWER COMPANY

SURRY POWER STATION, UNITS 1 & 2

INTRODUCTION

By letter dated July 26, 1974, VEPCO requested changes to the Technical Specification appended to Facility Operating Licenses Nos. DPR-32 and DPR-37 for the Surry Station. The proposed changes include:

1. Remedial action to be taken in the event of a loss of bottled air in the main control room ventilation system.
2. Modification of the in-service testing requirements for the main steam line trip valves.

DISCUSSION

1. This proposed change would require the restoration of control room ventilation system bottled air supply within a period of twenty-four hours when this supply is found to be in noncompliance with Technical Specification Section 3.19. The present technical specifications do not specify what remedial action to take in this situation.

Bottled air is provided to maintain the control room atmosphere at a positive pressure of 0.05 inches of water and as a source of uncontaminated air for a period of one hour when the control room is isolated under accident conditions.

The pressure requirement (0.05 inches of water) prevents contaminated air from entering the control room by assuring all leakage will be from the control room to the outside. The one hour requirement is based on the time it would take for the reactor containment to return to atmospheric pressure following an accident that ruptured the primary coolant system. The reactor containment is designed and required to be maintained in a leak proof condition and the possibility of fission products escaping from the containment is remote. However, in the unlikely event of such escape, the control room ventilation system is designed to preclude entry of contaminated air into the control room area.

In addition to the bottled air supply an emergency ventilation system is also provided. This system takes air from the turbine building through roughing, particulate and iodine filters and is capable of maintaining a positive control room atmospheric pressure and air supply for as long as the situation may require.

2. This proposed change would change the in-service surveillance requirements on the main steam line trip valve. Steam is conducted from each of the three steam generators within the reactor containment through a swing disc trip valve into the common steam header. This valve has fast closing capabilities and is used to assure that adequate pressure and steam load is maintained at the steam generator in the unlikely event of a main steam line failure. To assure operability of this valve, Section 4.7 of the Technical Specifications requires in-service testing. At the present time, the test stroke on this valve is set at 5 degrees and tests are required monthly. The purpose of in-service testing is to assure the spring loaded air cylinder that closes the valve and valve closure disc are free and capable of operating. Full closure testing of the valves is presently required at every refueling outage.

The applicant has observed that the five degree movement now required has resulted in the closure plate being lowered into the flow stream and the resultant force on the disc being sufficient to cause an inadvertent valve closure. The applicant has also determined the resolution of the testing switches are accurate enough to insure valve operability if the test stroke is reduced to three degrees and conducted quarterly. This determination included the backlash inherent in the valve operator linkage.

EVALUATION

1. In reviewing the request to require remedial action should the bottled control room ventilation air supply fall below the requirements of Technical Specification 3.19, the staff has concluded that since the emergency ventilation system is capable of sustaining the control room requirements as long as necessary (FSAR Section 9.13.3.6), the bottle air supply can be out of service for a period of 24 hours without unduly jeopardizing the habitability of the control room in an accident situation. Putting the reactor in hot shutdown at the end of a 24 hour period and finally to cold shutdown at the end of an additional 48 hour period in the event the bottled air supply is not operable establishes a safe condition under which any additional time required to make repairs or replenishment is available. The incorporation of a specific remedial action to be taken in the event of insufficient bottled air provides added assurance that prompt action will be taken to correct the situation and clearly delineates the requirement for shutting down the reactor when necessary.

The proposed change would be incorporated in the Technical Specifications by adding a Section 3.19.B as follows:

"If the requirements of Section A are not met, the unit shall be placed in the hot shutdown condition within 8 hours; except that if tests during the 8-hour period demonstrate that the emergency control room ventilation system is functional, the unit shall be brought within the requirements of Section A or placed in the hot shutdown condition within 24 hours. If the requirements of Section A are not met within 48 hours after achieving hot shutdown condition the unit shall be placed in the cold shutdown condition."

2. In reviewing the request to change the in-service surveillance requirements on the main steam line trip valves we found that this particular make of valve has been involved in inadvertent closures during in-service tests, not only at Surry but at least one other plant and that all main steam interruption valves are the subject of a generic study at this time. While the generic study has not been completed, the staff has developed a position on the in-service testing of this particular make of valve that is in agreement with the licensee's proposals. The proposed three degree valve movement is sufficient to confirm operability of the valve; the present five degree specification does not represent any significant added assurance. Experience at the Surry station and at other power reactors has demonstrated the sufficiency of quarterly testing; continuation of monthly testing at Surry is not necessary to adequately assure reliable operation of these valves. In addition to the quarterly in-service testing, the Regulatory position requires a full closure test whenever the reactor is brought to cold shutdown. The Surry Technical Specifications presently require full closure tests only during refueling. Requiring full closure tests during each cold shutdown will result in a significant increase in this test requirement. The applicant has agreed to change this provision of his surveillance program to be compatible with the Regulatory position. The Regulatory position is based on the ASME code Section XI.

In-service testing is required to prove operability, and test procedures that result in inadvertent operation of the equipment being tested defeat the purpose of the test, i.e., to prove operability without interfering with normal plant operations. We therefore conclude that this change fulfills the purpose of in-service testing and reduces the possibility of inadvertent valve closures.

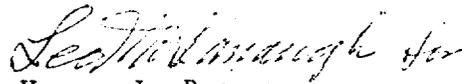
This change would modify Section 4.7 of the Technical Specification as follows:

- 4.7.A.1 "Each main steam trip valve shall be tested for full closure each time the reactor is in the cold shutdown condition."
- 4.7.A.2 "Each main steam trip valve shall be in-service tested for partial closure before each startup, but at least quarterly."

In Section 4.7.B.2, line 3, change "5 degrees" to read "3 degrees", and in the basis change the second sentence to read "Their ability to close fully shall be verified each time the reactor is in the cold shutdown condition" and the fourth sentence to read "The in-service testing by a partial valve stroke of three degrees is sufficient to verify the freedom of the valve disk to function as required."

CONCLUSION

We have concluded, based on the reasons discussed above, that the authorization of this change does not involve a significant hazards consideration. We also conclude that 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 and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.



Vernon L. Rooney
Operating Reactors Branch #1
Directorate of Licensing



Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing

Date: **SEP 23 1974**

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NOS. 50-280 and 50-281

VIRGINIA ELECTRIC & POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

Notice is hereby given that the U.S. Atomic Energy Commission (the Commission) has issued Amendments No. 1 to Facility Operating License Nos. DPR-32 and DPR-37 issued to Virginia Electric & Power Company which revised Technical Specifications for operation of the Surry Power Station, Units 1 and 2, located in Surry County, Virginia. The amendments are effective as of the date of issuance.

The amendments prescribe remedial action to be taken in the event of a loss of bottled air in main Control Room ventilation system and modify the surveillance requirements for the main steam trip valves.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments.

For further details with respect to this action, see (1) the application for amendments dated July 26, 1974, (2) Amendments No. 1 to License Nos. DPR-32 and DPR-37, with any attachments, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. and at the Swem Library, College of William & Mary, Williamsburg, Virginia 23185.

A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this **SEP 23 1974**

FOR THE ATOMIC ENERGY COMMISSION

Original signed by:
Robert A. Purple

Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing

OFFICE >						
SURNAME >						
DATE >						

PRELIMINARY DETERMINATION

NOTICING OF PROPOSED LICENSING AMENDMENT

Licensee: Virginia Electric and Power Company

Request for: Technical Specification change (1) Remedial action to be
taken on loss of bottle air in main Control Room Ventilation
System (2) Surveillance requirements on main steam line
trip valve

Request Date: July 26, 1974

- Proposed Action: () Pre-notice Recommended
 (x) Post-notice Recommended
 () Determination delayed pending completion of Safety Evaluation

Basis for Decision: Item 1 - This proposed change constitutes an additional requirement not presently in the Technical Specifications that will enhance the safety of the facility (corresponds to example No. 4 of RP Procedure 601, Rev. 2, enclosure 3.b).

Item 2 - VEPCO's request to modify the inservice surveillance procedure for testing the main steam trip valve is due to inadvertent closure of these valves during tests. They conclude that the 5 degree closure plate movement presently required can result in the closure plate being lowered into the steam flow which exerts enough force on the plate to cause the valve to close. They propose to improve this procedure by limiting closure plate movement to 3 degrees and by changing the test period.

(continued on back)

CONCURRENCES:

1. LMcDonough LMcDonough 8/20/74
2. RAPurple RAPurple 8/20/74
3. K. R. Goller Karl R. Goller 8/21/74
4. _____
5. Office of General Counsel

Evaluation has been received for review, we will determine basis for the evaluation.
JRB 9/5

The change as proposed by VEPCO is in agreement with the current staff position except that a full valve closure test is required during each cold shutdown instead of the refueling period requirement presently in the Surry Technical Specifications. This requirement will be included in the proposed change. The Regulatory position is based on the requirements of the ASME Code Section 11, Subsection IWV-3410(a).