May 2, 1995

Mr. J. P. O'Hanlon
Senior Vice President - Nuclear
Virginia Electric and Power Company
5000 Dominion Blvd.
Glen Allen, Virginia 23060

SUBJECT: SURRY UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: OPERABILITY AND SURVEILLANCE REQUIREMENTS FOR POWER-OPERATED RELIEF VALVES (TAC NOS. M77386, M77387, M81315, AND M81316)

Dear Mr. O'Hanlon:

The Commission has issued the enclosed Amendment No. 198 to Facility Operating License No. DPR-32 and Amendment No. 198 to Facility Operating License No. DPR-37 for the Surry Power Station, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TS) in response to your application transmitted by letter dated June 28, 1991.

These amendments incorporate operability and surveillance requirements for power-operated relief valves to conform with Generic Letter 90-06.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

Bart C. Buckley, Senior Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-280 and 50-281

Enclosures:
1. Amendment No. 198 to DPR-32
2. Amendment No. 198 to DPR-37
3. Safety Evaluation

cc w/enclosures: See next page

OFFICE	LA:PDII-1	PM:PDII-1	D:PDII-1	SRXB	EMEB	OGC
NAME	EDunnington ETD	BBuckley BCB	DMatthews	L. Lois ~~RJones~~	RWessman	
DATE	04/25/95	04/25/95	04/2/95	04/26/95	04/26/95	4/28/95

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where is OGC concurrence block?

CP-1

no legal obj

Not to be issued without consultation if State official and appropriate changes in SE

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DATED: May 2, 1995

AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-32 - SURRY UNIT 1
AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-37 - SURRY UNIT 2

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 2, 1995

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Senior Vice President - Nuclear
Virginia Electric and Power Company
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Glen Allen, Virginia 23060

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Office of Nuclear Reactor Regulation

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Mr. J. P. O'Hanlon
Virginia Electric and Power Company

Surry Power Station

cc:
Michael W. Maupin, Esq.
Hunton and Williams
Riverfront Plaza, East Tower
951 E. Byrd Street
Richmond, Virginia 23219

Attorney General
Supreme Court Building
101 North 8th Street
Richmond, Virginia 23219

Mr. David Christian, Manager
Surry Power Station
Post Office Box 315
Surry, Virginia 23883

Mr. M. L. Bowling, Manager
Nuclear Licensing & Programs
Innsbrook Technical Center
Virginia Electric and Power Company
5000 Dominion Blvd.
Glen Allen, Virginia 23060

Senior Resident Inspector
Surry Power Station
U.S. Nuclear Regulatory Commission
5850 Hog Island Road
Surry, Virginia 23883

Chairman
Board of Supervisors of Surry County
Surry County Courthouse
Surry, Virginia 23683

Dr. W. T. Lough
Virginia State Corporation Commission
Division of Energy Regulation
Post Office Box 1197
Richmond, Virginia 23209

Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, Georgia 30323

Robert B. Strobe, M.D., M.P.H.
State Health Commissioner
Office of the Commissioner
Virginia Department of Health
P.O. Box 2448
Richmond, Virginia 23218

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-280

SURRY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 198
License No. DPR-32

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Virginia Electric and Power Company (the licensee) dated June 28, 1991, 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 3.B of Facility Operating License No. DPR-32 is hereby amended to read as follows:

   (B) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 198 , 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

DBMatthews

David B. Matthews, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 2, 1995

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

VIRGINIA ELECTRIC AND POWER COMPANY

DOCKET NO. 50-281

SURRY POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 198
License No. DPR-37

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Virginia Electric and Power Company (the licensee) dated June 28, 1991, 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 3.B of Facility Operating License No. DPR-37 is hereby amended to read as follows:

   (B) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 198 , 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

David B. Matthews, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 2, 1995

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-32

AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-37

DOCKET NOS. 50-280 AND 50-281

Revise Appendix A as follows:

Remove Pages	Insert Pages
TS 3.1-4	TS 3.1-4
---	TS 3.1-4a
TS 3.1-5	TS 3.1-5
TS 3.1-5b	TS 3.1-5b
TS 3.1-5c	TS 3.1-5c
TS 3.1-22	TS 3.1-22
TS 3.1-23	TS 3.1-23
---	TS 3.1-23a
TS 3.1-24	TS 3.1-24
TS 4.1-1	TS 4.1-1
TS 4.1-1a	TS 4.1-1a
TS 4.1-9c	TS 4.1-9c
TS 4.1-9d	TS 4.1-9d

4. Reactor Coolant Loops

Loop stop valves shall not be closed in more than one loop unless the Reactor Coolant System is connected to the Residual Heat Removal System and the Residual Heat Removal System is OPERABLE.

5. Pressurizer

a. The reactor shall be maintained subcritical by at least 1% until the steam bubble is established and the necessary sprays and at least 125 KW of heaters are operable.

b. With the pressurizer inoperable due to inoperable pressurizer heaters, restore the inoperable heaters within 72 hours or be in at least HOT SHUTDOWN within 6 hours and the Reactor Coolant System temperature and pressure less than 350°F and 450 psig, respectively, within the following 12 hours.

c. With the pressurizer otherwise inoperable, be in at least HOT SHUTDOWN with the reactor trip breakers open within 6 hours and the Reactor Coolant System temperature and pressure less than 350°F and 450 psig, respectively, within the following 12 hours.

6. Relief Valves

Two power operated relief valves (PORVs) and their associated block valves shall be OPERABLE* whenever the Reactor Coolant System average temperature is ≥350°F.

a. With one or both PORVs inoperable but capable of being manually cycled, within 1 hour either restore the PORV(s) to OPERABLE status or close the associated block valve(s) and maintain power to the associated block valve(s). Otherwise, be in at least HOT SHUTDOWN within the next 6 hours and reduce Reactor Coolant System average temperature to <350°F within the following 6 hours.

b. With one PORV inoperable and not capable of being manually cycled, within 1 hour either restore the PORV to OPERABLE status or capable of being manually cycled or close the associated block valve and remove power from the block valve. In addition, restore the PORV to OPERABLE status or capable of being manually cycled within the following 72 hours. Otherwise, be in at least HOT SHUTDOWN within the next 6 hours and reduce Reactor Coolant System average temperature to <350°F within the following 6 hours.

c. With both PORVs inoperable and not capable of being manually cycled, within 1 hour restore at least 1 PORV to OPERABLE status or capable of being manually cycled. Otherwise, close the associated block valves and remove power from the block valves. In addition, be in HOT SHUTDOWN within the next 6 hours and reduce Reactor Coolant System average temperature to <350°F within the following 6 hours.

*Automatic actuation capability may be blocked when Reactor Coolant System pressure is below 2000 psig.

d. With one block valve inoperable, within 1 hour either restore the block valve to OPERABLE status or place the associated PORV in manual. In addition, restore the block valve to OPERABLE status in the next 72 hours or, be in at least HOT SHUTDOWN within the next 6 hours and reduce reactor coolant average temperature to <350°F within the following 6 hours.

e. With both block valves inoperable, within 1 hour either restore the block valves to OPERABLE status or place the associated PORVs in manual. Restore at least 1 block valve to OPERABLE status within the next hour or, be in at least HOT SHUTDOWN within the next 6 hours and reduce reactor coolant average temperature to <350°F within the following 6 hours.

7. Reactor Vessel Head Vents

a. At least two Reactor Vessel Head vent paths consisting of two isolation valves in series powered from emergency buses shall be OPERABLE and closed whenever RCS temperature and pressure are >350°F and 450 psig.

One steam generator capable of performing its heat transfer function will provide sufficient heat removal capability to remove core decay heat after a normal reactor shutdown. The requirement for redundant coolant loops ensures the capability to remove core decay heat when the Reactor Coolant System average temperature is less than or equal to 350°F. Because of the low-low steam generator water level reactor trip, normal reactor criticality cannot be achieved without water in the steam generators in reactor coolant loops with open loop stop valves. The requirement for two OPERABLE steam generators, combined with the requirements of Specification 3.6, ensure adequate heat removal capabilities for Reactor Coolant System temperatures of greater than 350°F.

Each of the pressurizer safety valves is designed to relieve 295,000 lbs. per hr. of saturated steam at the valve setpoint. Two safety valves have a capacity greater than the maximum surge rate resulting from complete loss of load.(2)

The limitation specified in item 4 above on reactor coolant loop isolation will prevent an accidental isolation of all the loops which would eliminate the capability of dissipating core decay heat when the Reactor Coolant System is not connected to the Residual Heat Removal System.

The requirement for steam bubble formation in the pressurizer when the reactor passes 1% subcriticality will ensure that the Reactor Coolant System will not be solid when criticality is achieved.

The requirement that 125 Kw of pressurizer heaters and their associated controls be capable of being supplied electrical power from an emergency bus provides assurance that these heaters can be energized during a loss of offsite power condition to maintain natural circulation at HOT SHUTDOWN.

The power operated relief valves (PORVs) operate to relieve Reactor Coolant System pressure below the setting of the pressurizer code safety valves. The PORVs and their associated block valves may be used by the unit operators to depressurize the Reactor Coolant System to recover from certain transients if normal pressurizer spray is not available. Specifically, cycling of the PORVs is required to mitigate the consequences of a design basis steam generator tube rupture accident. Therefore, whenever a PORV is inoperable, but capable of being manually cycled, the associated block valve will be closed with its power maintained. The capability to cycle the PORVs is verified during each refueling outage (and is not required during power operations). These relief valves have remotely operated block valves to provide a positive shutoff capability should a relief valve leak excessively. The electrical power for both the relief valves and the block valves is supplied from an emergency power source to ensure the ability to seal this possible Reactor Coolant System leakage path.

The accumulation of non-condensable gases in the Reactor Coolant System may result from sudden depressurization, accumulator discharges and/or inadequate core cooling conditions. The function of the Reactor Vessel Head Vent is to remove non-condensable gases from the reactor vessel head. The Reactor Vessel Head Vent is designed with redundant safety grade vent paths. Venting of non-condensable gases from the pressurizer steam space is provided primarily through the Pressurizer PORVs. The pressurizer is, however, equipped with a steam space vent designed with redundant safety grade vent paths.

References

(1) UFSAR Section 14.2.9
(2) UFSAR Section 14.2.10

Basis

By maintaining the oxygen, chloride and fluoride concentrations in the reactor coolant below the limits as specified in technical specification 3.1.F.1 and 3.1.F.4 the integrity of the reactor coolant system is assured under all operating conditions.(1) If these limits are exceeded, measures can be taken to correct the condition, e.g., replacement of ion exchange resin, or adjustment of the hydrogen concentration in the volume control tank.(2) Because of the time dependent nature of any adverse effects arising from oxygen, chloride, and fluoride concentration in excess of the limits, it is not necessary to shutdown immediately if the condition can be corrected. Thus the period of 24 hours for corrective action to restore concentrations within the limits has been established. If the corrective action has not been effective at the end of the 24 hour period, then the reactor will be brought to COLD SHUTDOWN and the corrective action will continue.

In restoring the contaminant concentrations to within specification limits in the event such limits were exceeded, mixing of the primary coolant with the reactor coolant pumps may be required. This will result in a small heatup of short duration which will not increase the average coolant temperature above 250°F.

More than one contaminant transient, in any seven consecutive day period, that results in exceeding normal steady state operation limits, could be indicative of unforeseen chemistry control problems. Such potential problems warrant investigation, correction and measures to insure that the integrity of the Reactor Coolant System is maintained.

References

(1) UFSAR 4.2
(2) UFSAR 9.2

G. Reactor Coolant System Overpressure Mitigation

Specification

1. The Reactor Coolant System (RCS) overpressure mitigating system shall be OPERABLE as described below:
   a. Whenever the RCS average temperature is greater than 350°F, a bubble shall exist in the pressurizer with the necessary sprays and heaters OPERABLE.
   b. Whenever the RCS average temperature is less than or equal to 350°F and the reactor vessel head is bolted:
      (1) A maximum of one charging pump shall be OPERABLE, and
         (a) Prior to decreasing RCS average temperature below 350°F verify a maximum of one charging pump is capable of injecting into the RCS, thereafter
         (b) Once per 12 hours verify that a maximum of one charging pump is capable of injecting into the RCS,
         (c) Two charging pumps may be in operation momentarily during transfer of operation from one charging pump to another.
      (2) The accumulators shall be isolated, (accumulator discharge valves closed and their respective breakers locked open), and
         (a) Prior to decreasing RCS average temperature below 350°F verify that each accumulator is isolated, thereafter
         (b) Once per 12 hours verify that each accumulator is isolated,
         (c) The accumulator discharge isolation valves may be opened for up to 6 hours to perform valve testing.

(3) Two Power Operated Relief Valves (PORV) shall be OPERABLE with a lift setting of ≤ 385 psig, or

(a) When the PORVs are providing the overpressure protection verify the block valves are open at least every 72 hours.

(4) A bubble in the pressurizer with a maximum pressurizer narrow range level of 33% shall be maintained. After the initial 72 hours, two PORVs must also be OPERABLE, or

(5) The RCS shall be vented through one opened PORV or an equivalent size opening.

(a) With the RCS vented through an unlocked vent path verify the path open at least once every 12 hours.

(b) With the RCS vented through a locked vent path verify the path open at least once every 31 days.

2. The requirements of Specification 3.1.G.1.b (3) may be modified as follows:

a. One PORV may be inoperable in INTERMEDIATE SHUTDOWN with the RCS average temperature > 200° F but < 350°F for a period not to exceed 7 days. If the inoperable PORV is not restored to OPERABLE status within 7 days, then completely depressurize the RCS and vent through one open PORV or an equivalent size opening within the next 8 hours.

b. One PORV may be inoperable in COLD SHUTDOWN or REFUELING SHUTDOWN with the reactor vessel head bolted for a period not to exceed 24 hours. If the inoperable PORV is not restored to OPERABLE status within 24 hours then completely depressurize the RCS and vent through one open PORV or an equivalent size opening within 8 hours.

c. With both PORV's inoperable, depressurize the RCS within 8 hours unless Specification 3.1.G.1.b.(4) is in effect. When the RCS has been depressurized, vent the RCS through one open PORV or an equivalent sized opening, or establish the conditions listed below. Maintain the RCS depressurized until both PORV's have been restored to OPERABLE status.

(1) A maximum pressurizer narrow range level of 33%.

(2) The series RHR inlet valves open and their respective breakers locked open or an alternate letdown path OPERABLE.

(3) A maximum of one charging pump is capable of injecting into the RCS.

(4) Safety Injection accumulator discharge valves closed and their respective breakers locked open.

d. When the conditions noted in 3.1.G.2.c.(1) through 3.1.G.2.c.(4) above are required to be established, verify the required conditions are met at least once per 12 hours.

3. In the event that the Reactor Coolant System Overpressure Mitigating System is used to mitigate a RCS pressure transient, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.6 within 30 days. The report shall describe the circumstances initiating the transient, the effect of the mitigating system or the administrative controls on the transient and any corrective actions necessary to prevent recurrence.

Basis

The operability of two PORV's or the RCS vented through an opened PORV ensures that the Reactor Vessel will be protected from pressure transients which could exceed the limits of Appendix G to 10 CFR Part 50 when the Reactor Coolant System average temperature is ≤ 350°F and the Reactor Vessel Head is bolted. When the Reactor Coolant System average temperature is >350°F, overpressure protection is provided by a bubble in the pressurizer and/or pressurizer safety valves. A single PORV has adequate relieving

4.1 OPERATIONAL SAFETY REVIEW

Applicability

Applies to items directly related to safety limits and limiting conditions for operation.

Objective

To specify the minimum frequency and type of surveillance to be applied to unit equipment and conditions.

Specification

A. Calibration, testing, and checking of instrumentation channels and interlocks shall be performed as detailed in Tables 4.1-1, 4.1-1A, and 4.1-2.

B. Equipment tests shall be performed as detailed in Table 4.1-2.A and as detailed below.

1. In addition to the requirements of 4.0.5, each Pressurizer PORV and block valve shall be demonstrated OPERABLE by:

   a. Performing a complete cycle of each PORV with the reactor coolant average temperature >350°F at least once per refueling cycle.
   b. Performing a complete cycle of the solenoid air control valve and check valves on the air accumulators in the PORV control system at least once per refueling cycle.
   c. Operating each block valve through one complete cycle of travel at least once per 92 days. This surveillance is not required if the block valve is closed in accordance with 3.1.6.a, b, or c.

2. The pressurizer water volume shall be determined to be within its limit as defined in Specification 2.3.A.3.a at least once per 12 hours whenever the reactor is not subcritical by at least 1% $\Delta k/k$.

3. Each Reactor Vessel Head vent path remote operating isolation valve not required to be closed by Specification 3.1.A.7a or 3.1.A.7b shall be demonstrated OPERABLE at each COLD SHUTDOWN but not more often than once per 92 days by operating the valve through one complete cycle of full travel from the control room.

4. Each Reactor Vessel Head vent path shall be demonstrated OPERABLE following each refueling by:

   a. Verifying the manual isolation valves in each vent path are locked in the open position.

   b. Cycling each remote operating isolation valve through at least one complete cycle of full travel from the control room.

   c. Verifying flow through the reactor vessel head vent system vent paths.

C. Sampling tests shall be conducted as detailed in Table 4.1-2B.

D. Whenever containment integrity is not required, only the asterisked items in Table 4.1-1 and 4.1-2A and 4.1-2B are applicable.

E. Flushing of wetted sensitized statinless steel pipe sections as identified in the Basis Section shall be conducted only if the RWST Water Chemistry exceeds 0.15 PPM chlorides and/or florides (CL^- and or F^-). Flushing of sensitized stainless steel pipe sections shall be conducted as detailed in TS Table 4.1-3A and 4.1-3B.

TABLE 4.1-2A (CONTINUED)
MINIMUM FREQUENCY FOR EQUIPMENT TESTS

	DESCRIPTION	TEST	FREQUENCY	FSAR SECTION REFERENCE
14a.	Service Water System Valves in Line Supplying Recirculation Spray Heat Exchangers	Functional	Each Refueling Shutdown	9.9
b.	Service Water System Valves Isolating Flow to Non-essential loads on Intake Canal Low Level Isolation	Functional	Each Refueling Shutdown	9.9
15.	Control Room Ventilation System	*Ability to maintain positive pressure for 1 hour using a volume of air equivalent to or less than stored in the bottled air supply	Each Refueling Shutdown	9.13
16.	Reactor Vessel Overpressure Mitigating System (except backup air supply)	Functional & Setpoint	Prior to decreasing RCS temperature below 350°F and monthly while the RCS is <350°F and the Reactor Vessel Head is bolted	4.3
		CHANNEL CALIBRATION	Each Refueling Shutdown	
17.	Reactor Vessel Overpressure Mitigating System Backup Air Supply	Setpoint	Each Refueling Shutdown	4.3
18	Power-Operated Relief Valve Control System	Functional, excluding valve actuation	Monthly	4.3
		CHANNEL CALIBRATION	Each Refueling Shutdown	

TABLE 4.1-2A (CONTINUED)
MINIMUM FREQUENCY FOR EQUIPMENT TESTS

	DESCRIPTION	TEST	FREQUENCY	UFSAR SECTION REFERENCE
19.	Primary Coolant System	Functional	1. Periodic leakage testing[a][b] on each valve listed in Specification 3.1.C.7a shall be accomplished prior to entering POWER OPERATION after every time the plant is placed in COLD SHUTDOWN for refueling, after each time the plant is placed in COLD SHUTDOWN for 72 hours if testing has not been accomplished in the preceding 9 months, and prior to returning the valve to service after maintenance, repair or replacement work is performed.	
20.	Containment Purge MOV Leakage	Functional	Semi-Annual (Unit at power or shutdown) if purge valves are operated during interval[c]	
21.	Containment Hydrogen Analyzers	a. CHANNEL FUNCTIONAL TEST b. CHANNEL CALIBRATION 1. Sample gas used: One volume percent (±0.25%) hydrogen, balance nitrogen Four volume percent (±0.25%) hydrogen, balance nitrogen 2. CHANNEL CALIBRATION will include startup and operation of the Heat Tracing System	Once per 92 days Once per 18 months	
22.	RCS Flow	Flow ≥ 273,000 gpm	Once per refueling cycle	14
23.	RWST Parameters	a. Temperature ≤ 45°F b. Volume ≥ 387,100 gallons	Once per shift Once per shift	

(a) To satisfy ALARA requirements, leakage may be measured indirectly (as from the performance of pressure indicators) if accomplished in accordance with approved procedures and supported by computations showing that the method is capable of demonstrating valve compliance with the leakage criteria.
(b) Minimum differential test pressure shall not be below 150 psid.
(c) Refer to Section 4.4 for acceptance criteria.
* See Specification 4.1.D

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-32

AND AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-37

VIRGINIA ELECTRIC AND POWER COMPANY

SURRY POWER STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-280 AND 50-281

1.0 INTRODUCTION

On June 25, 1990, the staff issued Generic Letter (GL) 90-06, "Resolution of Generic Issue 70, 'Power-Operated Relief Valve and Block Valve Reliability,' and Generic Issue 94, 'Additional Low-Temperature Overpressure Protection for Light-Water Reactors,' Pursuant to 10 CFR 50.54(f)." The GL represented the technical resolution of the above-mentioned generic issues.

Generic Issue 70, "Power-Operated Relief Valve and Block Valve Reliability," involves the evaluation of the reliability of power-operated relief valves (PORVs) and block valves and their safety significance in pressurized water reactor (PWR) plants. The GL discussed how the PORVs are increasingly being relied on to perform safety-related functions and the corresponding need to improve the reliability of both PORVs and their associated block valves. Proposed staff positions and improvements to the plant's technical specifications (TS) were recommended to be implemented at all affected facilities. This issue is applicable to all Westinghouse, Babcock & Wilcox, and Combustion Engineering designed facilities with PORVs.

Generic Issue 94, "Additional Low-Temperature Overpressure Protection for Light-Water Reactors," addresses concerns with the implementation of the requirements set forth in the resolution of Unresolved Safety Issue (USI) A-26, "Reactor Vessel Pressure Transient Protection (Overpressure Protection)." The GL discussed the continuing occurrence of overpressure events and the need to further restrict the allowed outage time for a low-temperature overpressure protection channel in operating modes 4, 5, and 6. This issue is only applicable to Westinghouse and Combustion Engineering facilities.

By letter dated June 28, 1991, the Virginia Electric and Power Company (the licensee) proposed changes to the Surry Power Station, Units 1 and 2 TS in response to GL 90-06.

2.0 EVALUATION FOR GENERIC ISSUE 70

The actions proposed by the NRC staff to improve the reliability of PORVs and block valves represent a substantial increase in overall protection of the public health and safety and a determination has been made that the attendant

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costs are justified in view of this increased protection. The technical findings and the regulatory analysis related to Generic Issue 70 are discussed in NUREG-1316, "Technical Findings and Regulatory Analysis Related to Generic Issue 70 - Evaluation of Power-Operated Relief Valve Reliability in PWR Nuclear Power Plants."

The following is a summary of the proposed changes to the TS as they relate to Generic Issue 70:

<u>Pages 3.1-4, 3.1-4a, 3.1.5, 3.1.5c, 4.1.1 and 4.1.1a</u>

- Page 3.1-4 has been reformatted to accommodate the additional action statements for PORVs. Page 3.1-4a is being added to accommodate the additional requirements.

- On page 3.1-4a, the requirement for OPERABLE PORVs is being changed from "whenever the reactor keff>0.99" to "whenever reactor coolant average temperature is >350°F."

- On page 3.1-4a, the footnote has been added to permit the calibration of the PORV control circuit from the low-temperature overpressure protection setpoints to the high pressure setpoints. The valves are still capable of being manually cycled to mitigate the consequences of a steam generator tube rupture, if necessary.

- On pages 3.1-4a and 5, the operability requirements for the PORVs and the associated block valves are being incorporated into 3.1.6.a through e. The words in the PORV operability requirements of 3.1.6.b, c, and d have been modified from "with excessive or other than excessive seat leakage" to "capable or not capable of being manually cycled." The action statements force the plant to shutdown and cooldown to <350°F if the valve(s) cannot be returned to OPERABLE status or capable of being manually cycled. This change will ensure the operability of the PORV to mitigate the consequences of a steam generator tube rupture. Specifications 3.1.6.b and c, which address the required actions when the PORV is not capable of being manually cycled, have included an additional provision to allow exiting the action statement when the PORV is capable of being manually cycled.

- The statement, "the provisions of specification 3.0.4 are not applicable," is not included. Surry TS do not have the 3.0.4 requirement.

- On page 3.1-5c, the basis section is being changed to include a discussion of the use of the PORVs in the mitigation of a steam generator tube rupture event and note that the PORVs are tested during refueling outages, but not at power. In addition, the

phrase "capable of being" is being removed from the sentence that describes the power supplies for the PORVs and block valves. The PORVs and block valves are powered from the emergency buses.

- On pages 4.1-1 and 4.1-1a, a statement that incorporates the Section XI testing requirements is being added to Specification 4.1.B.1, as well as additional surveillance requirements for the PORVs and their actuation system are being included. These valves are in the existing Section XI program and are being tested accordingly.

The staff has reviewed the licensee's proposed modifications to the TS. Since the proposed modifications are consistent with the staff's position with respect to the GL, and found to be justified in the above-mentioned regulatory analysis, the staff finds the proposed modifications acceptable.

3.0 EVALUATION FOR GENERIC ISSUE 94

The actions proposed by the NRC staff to improve the availability of the low-temperature overpressure protection (LTOP) system represents a substantial increase in the overall protection of the public health and safety and a determination has been made that the attendant costs are justified in view of this increased protection. The technical findings and the regulatory analysis related to Generic Issue 94 are discussed in NUREG-1326, "Regulatory Analysis for the Resolution of Generic Issue 94, Additional Low-Temperature Overpressure Protection for Light-Water Reactors."

The following is a summary of the proposed changes to the TS as they relate to Generic Issue 94:

Pages 3.1-22, 23, 23a, and 24

- Page 3.1-22 and 23a were reformatted and added, respectively, to accommodate the additional requirements. The References are moved from page 3.1-23 to 3.1-22.

- On page 3.1-23, additional surveillance requirements are being added to 3.1.G.1.b.(1) to verify charging pump operability prior to going below 350°F and once every 12 hours thereafter. In addition, statement 3.1.G.1.b.(1)(c) is being added to allow two charging pumps to be operating momentarily when switching pumps if the reactor coolant average temperature is <350°F.

- On page 3.1-23, new requirements 3.1.G.1.b.(2)(a), (b), and (c) are being included, along with a 6-hour period when the discharge isolation valves can be opened for periodic testing of the discharge isolation and check valves. Surveillance requirements are being added to verify accumulator isolation prior to going below 350°F and once every 12 hours thereafter.

- On page 3.1-23, surveillance requirement 3.1.G.1.b.(3)(a) is being added to verify the block valves are open every 72 hours when the PORVs are providing overpressure protection.

- On page 3.1-23a, surveillance requirements 3.1.G.1.b.(5)(a) and (b) are being modified to verify the RCS vent path every 12 hours when the vent path is unlocked open and every 31 days if the vent path is locked open.

- On page 3.1-23a, the operability requirements 3.1.G.2.a. and b. for the PORVs are being changed to provide two different allowed outage times for PORV inoperability consistent with the GL. In Intermediate Shutdown with the reactor coolant average temperature >200°F but <350°F the PORV can be inoperable for 7 days before the RCS must be depressurized and a vent path established. However, in Cold Shutdown or Refueling operations, the PORV can only be inoperable for 24 hours before the reactor coolant system (RCS) must be depressurized and a vent path established.

- On page 3.1-24, the wording of 3.G.2.d is being modified for clarification.

Table 4.1-2A

- On page 4.1-9c, a channel calibration is being added to item 16. This surveillance is being moved from 4.1.B. Also, the appropriate UFSAR section is being referenced for items 16 and 17.

- On page 4.1-9c, Surveillance requirements for the PORV control circuits are being included as item 18. This requirement is being moved from 4.1.B.

- On page 4.1-9d, items 18, 19, 20, 21, and 22 are being renumbered as 19, 20, 21, 22, and 23.

Throughout the change, editorial changes are being made to capitalize defined words and provide consistent terminology.

The staff has reviewed the licensee's proposed modifications to the Surry Power Station, Units 1 and 2 TSs. Since the proposed modifications are consistent with the staff's position with regard to the GL and justified in the above-mentioned regulatory analysis, the staff finds the proposed modifications to be acceptable.

4.0 STATE CONSULTATION

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

5.0 ENVIRONMENTAL CONCLUSION

The amendment involves a change in 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 and changes in surveillance requirements. The 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 exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and that there has been no public comment of such finding (56 FR 49929).

Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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 amendment.

6.0 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public. The staff therefore concludes that the proposed changes are acceptable.

Principal Contributors: Robert Kirkwood (Generic Issue 70)
Edward Throm (Generic Issue 94)
Bart Buckley, Project Manager

Date: May 2, 1995