March 9, 2000

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

SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS REGARDING A TECHNICAL SPECIFICATION CHANGE RELATED TO EXTENSION OF SURVEILLANCE INTERVAL AND ACTION TIMES OF REACTOR TRIP AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEMS (TAC NOS. MA5448 AND MA5450)

Dear Mr. O'Hanlon:

The Commission has issued the enclosed Amendment Nos. 221 and 202 to Facility Operating License Nos. NPF-4 and NPF-7 for the North Anna Power Station (NAPS), Unit Nos. 1 and 2. The amendments consist of changes to the Technical Specifications (TS) in response to your letter dated May 6, 1999, as supplemented June 22 and December 16, 1999.

The proposed changes will revise the surveillance frequency for the Reactor Trip System (RTS) and Engineered Safety Features Actuation System (ESFAS) analog instrumentation channels. In addition, the allowed outage times and action times for the RTS and ESFAS analog instrumentation channels and the actuation logic are being modified. As requested by Mr. T. Shaub of your licensing staff in a telephone conversation on January 13, 2000, the implementation time for these amendments has been extended to 90 days.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notice. By this letter we are closing TACs MA5448 and MA5450.

Sincerely,

/RA/
Gordon E. Edison, Senior Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339
Enclosures:
1. Amendment No. 221 to NPF-4
2. Amendment No. 202 to NPF-7
3. Safety Evaluation
cc w/encls: See next page

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DATED: March 9, 2000

AMENDMENT NO. 221 - FACILITY OPERATING LICENSE NO. NPF-4-NORTH ANNA UNIT 1
AMENDMENT NO. 202 - FACILITY OPERATING LICENSE NO. NPF-7-NORTH ANNA UNIT 2

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

March 9, 2000

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

SUBJECT: NORTH ANNA POWER STATION, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS REGARDING A TECHNICAL SPECIFICATION CHANGE RELATED TO EXTENSION OF SURVEILLANCE INTERVAL AND ACTION TIMES OF REACTOR TRIP AND ENGINEERED SAFETY FEATURES ACTUATION SYSTEMS (TAC NOS. MA5448 AND MA5450)

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Sincerely,

G E Edison

Gordon E. Edison, Senior Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-338 and 50-339

Enclosures:
1. Amendment No. 221 to NPF-4
2. Amendment No. 202 to NPF-7
3. Safety Evaluation

cc w/enclosures: See next page

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

North Anna Power Station
Units 1 and 2

cc:
Mr. J. Jeffrey Lunsford
County Administrator
Louisa County
P.O. Box 160
Louisa, Virginia 23093

Mr. W. R. Matthews
Site Vice President
North Anna Power Station
P.O. Box 402
Mineral, Virginia 23117

Mr. Donald P. Irwin, Esquire
Hunton and Williams
Riverfront Plaza, East Tower
951 E. Byrd Street
Richmond, Virginia 23219

Mr. E. S. Grecheck
Site Vice President
Surry Power Station
Virginia Electric and Power Company
5570 Hog Island Road
Surry, Virginia 23883

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

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

Old Dominion Electric Cooperative
4201 Dominion Blvd.
Glen Allen, Virginia 23060

Mr. J. H. McCarthy, Manager
Nuclear Licensing & Operations Support
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Blvd.
Glen Allen, Virginia 23060

Office of the Attorney General
Commonwealth of Virginia
900 East Main Street
Richmond, Virginia 23219

Senior Resident Inspector
North Anna Power Station
U.S. Nuclear Regulatory Commission
1024 Haley Drive
Mineral, Virginia 23117

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

VIRGINIA ELECTRIC AND POWER COMPANY

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-338

NORTH ANNA POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 221
License No. NPF-4

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

   A. The application for amendment by Virginia Electric and Power Company et al., (the licensee) dated May 6, 1999, as supplemented June 22 and December 16, 1999, 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.D.(2) of Facility Operating License No. NPF-4 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 221 , 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 90 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard L. Emch, Jr.

Richard L. Emch Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachments:
Changes to the Technical
Specifications

Date of Issuance: March 9, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 221

TO FACILITY OPERATING LICENSE NO. NPF-4

DOCKET NO. 50-338

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove Pages	Insert Pages
3/4 3-1	3/4 3-1
3/4 3-2	3/4 3-2
3/4 3-3	3/4 3-3
3/4 3-4	3/4 3-4
---	3/4 3-4a
3/4 3-5	3/4 3-5
3/4 3-6	3/4 3-6
3/4 3-7	3/4 3-7
3/4 3-12	3/4 3-12
3/4 3-13	3/4 3-13
---	3/4 3-13a
3/4 3-14	3/4 3-14
3/4 3-15	3/4 3-15
3/4 3-16	3/4 3-16
3/4 3-17	3/4 3-17
3/4 3-18	3/4 3-18
3/4 3-19	3/4 3-19
3/4 3-20	3/4 3-20
3/4 3-20a	3/4 3-20a
3/4 3-21	3/4 3-21
3/4 3-22	3/4 3-22
3/4 3-31	3/4 3-31
3/4 3-32	3/4 3-32
3/4 3-33	3/4 3-33
---	3/4 3-33a
3/4 3-34	3/4 3-34
B 3/4 3-1	B 3/4 3-1
---	B 3/4 3-1a
B 3/4 3-2	B 3/4 3-2
6-14	6-14

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1.1 (**Risk-Informed**) As a minimum, the reactor trip system instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1.1 Each reactor trip system instrumentation channel, interlock, and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

4.3.1.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Response of the neutron flux signal portion of the channel time shall be measured from the detector output or input of the first electronic component in the channel. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	2	1	2	1, 2	12
	2	1	2	3*, 4*, and 5*	15
2. Power Range, Neutron Flux	4	2	3	1, 2	2#
3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2#
4. Power Range, Neutron Flux, High Negative Rate	4	2	3	1, 2	2#
5. Intermediate Range, Neutron Flux	2	1	2	1###, 2	3
6. Source Range, Neutron Flux					
A. Startup	2	1	2	2##	4
B. Shutdown	2	1	2	3*, 4* and 5*	15
C. Shutdown	2	0	1	3, 4 and 5	5
7. Overtemperature ΔT	3	2	2	1, 2	7#

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
8. Overpower ΔT	3	2	2	1, 2	7#
9. Pressurizer Pressure – Low	3	2	2	1, 2	8#
10. Pressurizer Pressure – High	3	2	2	1, 2	7#
11. Pressurizer Water Level – High	3	2	2	1, 2	8#
12. Loss of Flow – (Above P-7)	3/loop	2/loop in any loop > P-8 2/loop in any 2 loops > P-7	2/loop in each loop	1	8#
13. Deleted					
14. Steam Generator Water Level – Low-Low	3/loop	2/loop	2/loop	1, 2	7#
15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	2/loop-level and 2/loop-flow mismatch	1/loop-level coincident with 1/loop-flow mismatch in same loop	1/loop level and 2/loop-flow mismatch or 2/loop-level and 1/loop-flow mismatch	1, 2	7#

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION	
16. Undervoltage – Reactor Coolant Pump Busses	3 – 1/bus	2	2	1	8#	|
17. Underfrequency – Reactor Coolant Pump Busses	3 – 1/bus	2	2	1	8#	|
18. Turbine Trip						
A. Low Auto Stop Oil Pressure	3	2	2	1	9#	|
B. Turbine Stop Valve Closure	4	4	3	1	9#	|
19. Safety Injection Input from ESF	2	1	2	1, 2	16	|
20. Reactor Coolant Pump Breaker Position Trip Above P-7	1/breaker	1 > P-8 2 > P-7	1/breaker	1	8#	|
21. A. Reactor Trip Breakers	2	1	2	1, 2	1, 14	
	2	1	2	3*, 4*, 5*	15	
B. Reactor Trip Bypass Breakers	2	1	1	***	13	
22. Automatic Trip Logic	2	1	2	1, 2	16	|
	2	1	2	3*, 4*, 5*	15	

TABLE 3.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
23. Reactor Trip System Interlocks					
A. Intermediate Range Neutron Flux, P-6	2	1	2	2**	17
B. Low Power Reactor Trips Block, P-7					
P-10 Input	4	2	3	1	17#
or					
P-13 Input	2	1	2	1	17#
C. Power Range Neutron Flux, P-8	4	2	3	1	17#
D. Power Range Neutron Flux, P-10	4	2	3	1,2	17#
E. Turbine Impulse Chamber Pressure, P-13	2	1	2	1	17#

TABLE 3.3-1 (Continued)

TABLE NOTATION

* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.

** Below the P-6 (Intermediate Range Neutron Flux) setpoint.

*** With the Reactor Trip Breaker open for surveillance testing in accordance with Specification Table 4.3-1 (item 21A).

\# The provisions of Specification 3.0.4 are not applicable.

\#\# High voltage to detector may be de-energized above the P-6 setpoint.

\#\#\# Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint.

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1 provided the other channel is OPERABLE. One channel may be bypassed for up to 4 hours for concurrent surveillance testing of the reactor trip breaker and automatic trip logic, provided the other channel is OPERABLE.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of the redundant channel(s) per Specification 4.3.1.1.1.

c. Either, THERMAL POWER is restricted to $\leq$ 75% of RATED THERMAL POWER and the Power Range Neutron Flux trip setpoint is reduced to $\leq$ 85% of RATED THERMAL POWER within 78 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours.

d. The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75 percent of RATED THERMAL POWER with one Power Range Channel inoperable by using the moveable incore detectors to confirm that the normalized symmetric power distribution, obtained from 2 sets of 4 symmetric thimble locations or a full-core flux map, is consistent with the indicated QUADRANT POWER TILT RATIO at least once per 12 hours.

ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

a. Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint.

b. Above the P-6 setpoint, but below the P-10 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-10 setpoint.

c. Above the P-10 setpoint, POWER OPERATION may continue.

ACTION 4 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

a. Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint.

b. Above the P-6 setpoint, operation may continue.

ACTION 5 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1 or 3.1.1.2, as applicable, within 1 hour and at least once per 12 hours thereafter.

ACTION 6 - Not applicable.

ACTION 7 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

If the conditions are not satisfied in the time permitted, place the unit in HOT STANDBY in 6 hours, HOT SHUTDOWN within the next 6 hours and COLD SHUTDOWN in the following 30 hours.

ACTION 8 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

If the conditions are not satisfied in the time permitted, reduce power to less than the P-7 setpoint in 6 hours.

TABLE 3.3-1 (Continued)

ACTION 9 - With the number of channels OPERABLE less than the Total Number of Channels OPERABLE requirement, STARTUP and POWER OPERATION may proceed provided the inoperable channel is placed in the tripped condition within 72 hours and the Minimum Channels OPERABLE requirement is met, or reduce power to less than the P-8 setpoint in the next 4 hours.

ACTION 10 - Deleted

ACTION 11 - With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 12 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours.

ACTION 13 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within (1) hour or terminate testing of the Reactor Trip Breaker and open the Reactor Trip Bypass Breaker.

ACTION 14 - With one of the diverse trip features (undervoltage or shunt trip device) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply Action 1. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

ACTION 15 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

ACTION 16 - With the number of channels OPERABLE one less that required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

ACTION 17 - With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant conditions or apply Specification 3.0.3.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	R(8)	1, 2 and *
2. Power Range, Neutron Flux				
A. High Setpoint	S	D(2)(6), M(3)(6) and R(6)	Q	1, 2
B. Low Setpoint	S	R(6)	S/U(1)	1***, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(6)	Q	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(6)	Q	1, 2
5. Intermediate Range, Neutron Flux	a. S b. Q(12)	R(6, 13) N.A.	S/U(1), Q(12) N.A.	1***, 2 3*, 4*, 5*
6. Source Range, Neutron Flux	S(7)	R(6)	S/U(1), Q(12)	2, 3, 4, 5
7. Overtemperature ΔT	S	R(6)	Q	1, 2
8. Overpower ΔT	S	R(6)	Q	1, 2
9. Pressurizer Pressure – Low	S	R	Q	1, 2
10. Pressurizer Pressure – High	S	R	Q	1, 2
11. Pressurizer Water Level – High	S	R	Q	1, 2
12. Loss of Flow	S	R	Q	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED	
13. Deleted					|
14. Steam Generator Water Level – Low-Low	S	R	Q	1, 2	|
15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	S	R	Q	1, 2	|
16. Undervoltage – Reactor Coolant Pump Busses	N.A.	R	N.A.	1	|
17. Underfrequency – Reactor Coolant Pump Busses	N.A.	R	N.A.	1	|
18. Turbine Trip					
A. Low Auto Stop Oil Pressure	N.A.	N.A.	S/U(1)	1, 2	
B. Turbine Stop Valve Closure	N.A.	N.A.	S/U(1)	1, 2	
19. Safety Injection Input from ESF	N.A.	N.A.	M(4) & (5)	1, 2	
20. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R	N.A.	
21. A. Reactor Trip Breaker	N.A.	N.A.	M(5), (9), & (11)	1, 2, & *	|
B. Reactor Trip Bypass Breaker	N.A.	N.A.	M(5), (9), & R(10)	1, 2, & *	|
22. Automatic Trip Logic	N.A.	N.A.	M(5)	1, 2, & *	

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
23. Reactor Trip System Interlocks				
A. Intermediate Range Neutron Flux, P-6	N.A.	R(6)	R	2(7)
B. Low Power Reactor Trips Block, P-7	N.A.	R(6)	R	1
C. Power Range Neutron Flux, P-8	N.A.	R(6)	R	1
D. Power Range Neutron Flux, P-10	N.A.	R(6)	R	1, 2
E. Turbine Impulse Chamber Pressure, P-13	N.A.	R	R	1

TABLE 4.3-1 (Continued)

NOTATION

* – With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.

*** – Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint.

(1) – If not performed in previous 31 days.

(2) – Heat balance only, above 15% of RATED THERMAL POWER.

(3) – Compare incore to excore axial offset above 15% of RATED THERMAL POWER. Adjust channel if absolute difference ≥ 3 percent.

(4) – Manual ESF functional input check every 18 months.

(5) – Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(6) – Neutron detectors may be excluded from CHANNEL CALIBRATION.

(7) – Below the P-6 (Intermediate Range Neutron Flux Interlock) setpoint.

(8) – The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).

(9) – Local manual shunt trip the reactor trip bypass breaker immediately after placing the bypass breaker into service, but prior to commencing reactor trip system testing or reactor trip breaker maintenance.

(10) – Automatic undervoltage trip.

(11) – The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.

(12) – Quarterly Surveillance in Modes 3*, 4* and 5* shall also include verification that Permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window.

(13) – Detector plateau curves shall be obtained and evaluated. The provisions of Specification 4.0.4 are not applicable for entry into Mode 2 or 1.

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2.1 **(Risk-Informed)** The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.

b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1.1 Each ESFAS instrumentation channel, interlock, and the automatic actuation logic and relays shall be demonstrated OPERABLE by the performance of the Engineered Safety Features Actuation System instrumentation surveillance requirements specified in Table 4.3-2.

4.3.2.1.2 The ENGINEERED SAFETY FEATURE RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. SAFETY INJECTION					
a. Manual Initiation	2	1	2	1, 2, 3, 4	18
b. Automatic Actuation	2	1	2	1, 2, 3, 4	13
c. Containment Pressure – High	3	2	2	1, 2, 3	14*
d. Pressurizer Pressure – Low-Low	3	2	2	1, 2, 3#	14*
e. Differential Pressure Between Steam Lines – High	3/steam line	2/steam line twice and 1/3 steam lines	2/steam line	1, 2, 3	14*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
f. Steam Flow in Two Steam Lines – High	2/steam line	1/steam line any 2 steam lines	1/steam line	1, 2, 3##	14*
COINCIDENT WITH EITHER					
T_{avg} – Low-Low	1 T_{avg}/loop	1 T_{avg} any 2 loops	1 T_{avg} any 2 loops	1, 2, 3##	14*
OR, COINCIDENT WITH					
Steam Line Pressure – Low	1 pressure/ line	1 pressure any 2 lines	1 pressure any 2 lines	1, 2, 3##	14*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
2. CONTAINMENT SPRAY					
a. Manual	2 sets 2 switches/set	1 set	2 sets	1, 2, 3, 4	18
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
c. Containment Pressure – High-High	4	2	3	1, 2, 3	16*
3. CONTAINMENT ISOLATION					
a. Phase "A" Isolation					
1) Manual	2	1	2	1, 2, 3, 4	18
2) From Safety Injection Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
b. Phase "B" Isolation					
1) Manual	2 sets 2 switches/set	1 set	2	1, 2, 3, 4	18
2) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
3) Containment Pressure – High-High	4	2	3	1, 2, 3	16*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
4. STEAM LINE ISOLATION					
a. Manual	2/steam line	1/steam line	2/steam line	1, 2, 3	21
b. Automatic Actuation Logic	2	1	2	1, 2, 3	20
c. Containment Pressure – Intermediate High-High	3	2	2	1, 2, 3	14*
d. Steam Flow in Two Steam Lines – High	2/steam line	1/steam line any 2 steam lines	1/steam line	1, 2, 3##	14*
COINCIDENT WITH EITHER					
T_{avg} – Low-Low	1 T_{avg}/loop	1 T_{avg} any 2 loops	1 T_{avg} any 2 loops	1, 2, 3##	14*
OR, COINCIDENT WITH					
Steam Line Pressure – Low	1 pressure/ line	1 pressure any 2 lines	1 pressure any 2 lines	1, 2, 3##	14*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water Level – High-High	3/loop	2/loop	2/loop	1, 2, 3###	14*
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3###	20
c. Safety Injection (SI)	See #1 above (All SI initiating functions and requirements)				
6. AUXILIARY FEEDWATER PUMP START					
a. Manual Initiation	2	1	2	1, 2, 3	21
b. Automatic Actuation Logic	2	1	2	1, 2, 3	20
c. Steam Generator Water Level Low-Low	3/stm. gen.	2/stm. gen.	2/stm. gen.	1, 2, 3	14*
d. Safety Injection (SI)	See #1 above (All SI initiating functions and requirements)				
e. Station Blackout	1/bus on 2 busses	1/bus on 2 busses	1/bus on 2 busses	1, 2, 3	21
f. Main Feed Pump Trip	2/pump	1/pump	1/pump	1, 2	17*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. LOSS OF POWER					
a. 4.16 Kv Emergency Bus Undervoltage (Loss of Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*
b. 4.16 Kv Emergency Bus Undervoltage (Grid Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	22*
b. Low-Low T_{avg}, P-12	3	2	2	1, 2, 3	22*
c. Reactor Trip, P-4	2	1	2	1, 2, 3	21

TABLE 3.3-3 (Continued)

TABLE NOTATION

Trip function may be blocked in this MODE below the P-11 setpoint.

Trip function may be blocked in this MODE below the P-12 setpoint.

Except when all MFIVs, MFRVs, and associated bypass valves are closed and de-activated or isolated by a closed manual valve.

* The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

ACTION 13 – With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 14 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 15 – Deleted

ACTION 16 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the inoperable channel is placed in the blocked condition within 72 hours; one additional channel may be blocked for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 17 – With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours.

ACTION 18 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 19 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 20 – With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and at least HOT SHUTDOWN within the following 6 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other Channel is OPERABLE.

ACTION 21 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable Channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 22 – With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant condition or apply Specification 3.0.3.

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. SAFETY INJECTION					
a. Manual Initiation	N.A.	N.A.	R(1)	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3, 4
c. Containment Pressure – High	S	R	Q(3)	N.A.	1, 2, 3
d. Pressurizer Pressure – Low-Low	S	R	Q	N.A.	1, 2, 3
e. Differential Pressure Between Steam Lines – High	S	R	Q	N.A.	1, 2, 3
f. Steam Flow in Two Steam Lines – High Coincident with T_{avg} – Low-Low or Steam Line Pressure – Low	S	R	Q	N.A.	1, 2, 3
2. CONTAINMENT SPRAY					
a. Manual Initiation	N.A.	N.A.	R(1)	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3, 4
c. Containment Pressure – High-High	S	R	Q(3)	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
3. CONTAINMENT ISOLATION					
a. Phase "A" Isolation					
1) Manual	N.A.	N.A.	$R^{(1)}$	N.A.	1, 2, 3, 4
2) From Safety Injection Automatic Actuation Logic	N.A.	N.A.	$M^{(2)}$	$Q^{(4)}$	1, 2, 3, 4
b. Phase "B" Isolation					
1) Manual	N.A.	N.A.	$R^{(1)}$	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic	N.A.	N.A.	$M^{(2)}$	$Q^{(4)}$	1, 2, 3, 4
3) Containment Pressure – High-High	S	R	$Q^{(3)}$	N.A.	1, 2, 3
4. STEAM LINE ISOLATION					
a. Manual	N.A.	N.A.	$R^{(1)}$	N.A.	1, 2, 3
b. Automatic Actuation Logic	N.A.	N.A.	$M^{(2)}$	$Q^{(4)}$	1, 2, 3
c. Containment Pressure – Intermediate High-High	S	R	$Q^{(3)}$	N.A.	1, 2, 3
d. Steam Flow in Two Steam Lines – High Coincident with T_{avg} – Low-Low or Steam Line Pressure – Low	S	R	Q	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
5. TURBINE TRIP AND FEEDWATER ISOLATION					
a. Steam Generator Water Level – High-High	S	R	Q	N.A.	1, 2, 3#
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	M(2)	Q(4)	1, 2, 3#
c. Safety Injection (SI)	See 1 above (all SI Surveillance Requirements)				
6. AUXILIARY FEEDWATER PUMPS					
a. Manual	N.A.	N.A.	R(1)	N.A.	1, 2, 3
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3
c. Steam Generator Water Level – Low-Low	S	R	Q	N.A.	1, 2, 3
d. Safety Injection (SI)	See 1 above (all SI Surveillance Requirements)				
e. Station Blackout	N.A.	R	N.A.	N.A.	1, 2, 3
f. Main Feedwater Pump Trip	N.A.	N.A.	R	N.A.	1, 2

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
7. LOSS OF POWER 4.16 KV Emergency Bus					
a. Loss of Voltage	N.A.	R	Q(5)	N.A.	1, 2, 3, 4
b. Degraded Voltage	N.A.	R	Q(5)	N.A.	1, 2, 3, 4
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	N.A	R	R	N.A.	1, 2, 3
b. Low - Low T_{avg}, P-12	N.A.	R	R	N.A.	1, 2, 3
c. Reactor Trip, P-4	N.A.	N.A.	R	N.A.	1, 2, 3

TABLE 4.3-2 (Continued)

TABLE NOTATION

Except when all MFIVs, MFRVs and associated bypass valves are closed and deactivated or isolated by a closed manual valve.

(1) Manual actuation switches shall be tested at least once per 18 months during shutdown.

(2) Each train or logic channel shall be functionally tested at least every other 31 days up to and including input coil continuity testing to the ESF slave relays.

(3) The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter.

(4) Only slave relays that do not satisfy any of the following criteria will be functionally tested:

1. A single failure in the Safeguards Test Cabinet circuitry would cause an inadvertent RPS or ESF actuation.
2. The test will adversely affect two or more components in one ESF system or two or more ESF systems.
3. The test will create a transient (reactivity, thermal, or hydraulic) condition on the RCS.

(5) Each train or logic channel shall be functionally tested up to and including input coil continuity testing to the ESF slave relays.

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM (RTS) AND ENGINEERED SAFETY FEATURE ACTUATION SYSTEM (ESFAS) INSTRUMENTATION

The OPERABILITY of the RTS and ESFAS instrumentation and interlocks ensure that 1) the associated ESF action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof reaches its setpoint, 2) the specified coincidence logic and sufficient redundancy are maintained to permit a channel to be out of service for testing or maintenance consistent with maintaining an appropriate level of reliability of the RTS and ESFAS instrumentation and interlocks, and 3) sufficient system functional capability is available for protective and ESF purposes from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the accident analyses.

The surveillance requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability. Specific surveillance intervals and surveillance and maintenance outage times have been determined in accordance with WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Trip Instrumentation System," and supplements to that report, WCAP-10271 Supplement 2 "Evaluation of Surveillance Frequencies and Out of Service Times for the Engineered Safety Features Actuation System," and supplements to that report, and WCAP-14333P, "Probabilistic Risk Analysis of the RPS and ESF Test Times and Completion Times," as approved by the NRC and documented in SERs dated February 21, 1985, February 22, 1989, the SSER dated April 30, 1990 for WCAP-10271 and July 15, 1998 for the WCAP-14333P.

Surveillance testing of instrument channels is routinely performed with the channel in the tripped condition. With the exception of the Power Range Neutron Flux instrument channels, only those instrument channels with hardware permanently installed that permits bypassing without lifting a lead or installing a jumper are routinely tested in the bypass condition. However, an inoperable channel may be bypassed by lifting a lead or installing a jumper to permit surveillance testing of another instrument channel of the same functional unit.

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the accident analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either 1) in place, onsite or offsite test measurements or 2) utilizing replacement sensors with certified response times.

3/4.3.3 MONITORING INSTRUMENTATION

3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION

The OPERABILITY of the radiation monitoring channels ensures that 1) the radiation levels are continually measured in the areas served by the individual channels and 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded.

3/4.3.3.2 MOVABLE INCORE DETECTORS

The OPERABILITY of the movable incore detectors with the specified minimum complement of equipment ensures that the measurements obtained from use of this system accurately represent the spatial neutron flux distribution of the reactor core. The OPERABILITY of this system is demonstrated by irradiating each detector used and normalizing its respective output.

For the purpose of measuring $F_Q(Z)$ or $F^N_{\Delta H}$ a full incore flux map is used. Quarter-core flux maps, as defined in WCAP-8648, June 1976, may be used in recalibration of the excore neutron flux detection system, and full incore flux maps or symmetric incore thimbles may be used for monitoring the QUADRANT POWER TILT RATIO when one Power Range Channel is inoperable.

3/4.3.3.3 SEISMIC INSTRUMENTATION

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility to determine if plant shutdown is required pursuant to Appendix "A" of 10 CFR Part 100. The instrumentation is generally consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes," April 1974.

3/4.3.3.4 METEOROLOGICAL INSTRUMENTATION

The OPERABILITY of the meteorological instrumentation ensures that sufficient meteorological data is available for estimating potential radiation doses to the public as a result of routine or accidental release of radioactive materials to the atmosphere. This capability is required to evaluate the need for initiating protective measures to protect the health and safety of the public and is consistent with the recommendations of Regulatory Guide 1.23, "Onsite Meteorological Programs," February 1972. A meteorological data collection program as described above is necessary to meet the requirements of subparagraph 50.36(a)(2) of 10 CFR Part 50, Appendix E to 10 CFR Part 50, and 10 CFR Part 51.

3/4.3.3.5 AUXILIARY SHUTDOWN PANEL MONITORING INSTRUMENTATION

The OPERABILITY of the remote shutdown instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT STANDBY of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criterion 19 of 10 CFR 50.

Configuration Risk Management Program (continued)

3) Provisions for performing an assessment after entering the LCO Action Statement for unplanned entry into the LCO Action Statement.

4) Provisions for assessing the need for additional actions after the discovery of additional equipment out of service conditions while in the LCO Action Statement.

5) Provisions for considering other applicable risk significant contributors such as Level 2 issue and external events, qualitatively or quantitatively.

Current risk-informed action statements include: Action 3.8.1.1.b; 3.4.3.2.A.2; 3.3.1.1; 3.3.2.1

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Director of the Regional Office of Inspection and Enforcement unless otherwise noted.

STARTUP REPORTS

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (a) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.

6.9.1.2 The startup report shall address each of the tests identified in the FSAR and shall include a description of the measured values of the operating conditions or characteristics obtained during the test program and a comparison of these values with design predictions and specifications. Any corrective actions that were required to obtain satisfactory operation shall also be described. Any additional specific details requested in license conditions based on other commitments shall be included in this report.

6.9.1.3 Startup reports shall be submitted within (1) 90 days following completion of the startup test program, (2) 90 days following resumption or commencement of commercial power operation, or (3) 9 months following initial criticality, whichever is earliest. If the Startup Report does not cover all three events (i.e., initial criticality, completion of startup test program, and resumption or commencement of commercial power operation), supplementary reports shall be submitted at least every three months until all three events have been completed.

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

VIRGINIA ELECTRIC AND POWER COMPANY

OLD DOMINION ELECTRIC COOPERATIVE

DOCKET NO. 50-339

NORTH ANNA POWER STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 202
License No. NPF-7

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

   A. The application for amendment by Virginia Electric and Power Company et al., (the licensee) dated May 6, 1999, as supplemented June 22 and December 16, 1999, 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. NPF-7 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 202 , 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 90 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard L. Emch, Jr.

Richard L. Emch Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachments:
Changes to the Technical
Specifications

Date of Issuance: March 9, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 202

TO FACILITY OPERATING LICENSE NO. NPF-7

DOCKET NO. 50-339

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

Remove Pages	Insert Pages
3/4 3-1	3/4 3-1
3/4 3-2	3/4 3-2
3/4 3-3	3/4 3-3
3/4 3-4	3/4 3-4
---	3/4 3-4a
3/4 3-5	3/4 3-5
3/4 3-6	3/4 3-6
3/4 3-7	3/4 3-7
3/4 3-12	3/4 3-12
3/4 3-13	3/4 3-13
---	3/4 3-13a
3/4 3-14	3/4 3-14
3/4 3-15	3/4 3-15
3/4 3-16	3/4 3-16
3/4 3-17	3/4 3-17
3/4 3-18	3/4 3-18
3/4 3-19	3/4 3-19
3/4 3-20	3/4 3-20
3/4 3-21	3/4 3-21
3/4 3-22	3/4 3-22
3/4 3-23	3/4 3-23
3/4 3-33	3/4 3-33
3/4 3-34	3/4 3-34
3/4 3-35	3/4 3-35
3/4 3-36	3/4 3-36
3/4 3-37	3/4 3-37
B 3/4 3-1	B 3/4 3-1
---	B 3/4 3-1a
6-14d	6-14d

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1.1 **(Risk-Informed)** As a minimum, the reactor trip system instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1.1 Each reactor trip system instrumentation channel, interlock, and the automatic trip logic shall be demonstrated OPERABLE by the performance of the Reactor Trip System Instrumentation Surveillance Requirements specified in Table 4.3-1.

4.3.1.1.2 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Neutron detectors are exempt from response time testing. Response of the neutron flux signal portion of the channel time shall be measured from the detector output or input of the first electronic component in the channel. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	2	1	2	1, 2	12
	2	1	2	3*, 4* and 5*	15
2. Power Range, Neutron Flux	4	2	3	1, 2	2#
3. Power Range, Neutron Flux High Positive Rate	4	2	3	1, 2	2#
4. Power Range, Neutron Flux, High Negative Rate	4	2	3	1, 2	2#
5. Intermediate Range, Neutron Flux	2	1	2	1###, 2	3
6. Source Range, Neutron Flux					
A. Startup	2	1	2	2##	4
B. Shutdown	2	1	2	3*, 4* and 5*	15
C. Shutdown	2	0	1	3, 4 and 5	5
7. Overtemperature ΔT	3	2	2	1, 2	7#

TABLE 3.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
8. Overpower ΔT	3	2	2	1, 2	7#
9. Pressurizer Pressure - Low	3	2	2	1, 2	8#
10. Pressurizer Pressure – High	3	2	2	1, 2	7#
11. Pressurizer Water Level – High	3	2	2	1, 2	8#
12. Loss of Flow – (Above P-7)	3/loop	2/loop in any loop > P-8 2/loop in any 2 loops > P-7	2/loop in each loop	1	8#
13. Deleted					
14. Steam Generator Water Level – Low-Low	3/loop	2/loop	- 2/loop	1, 2	7#
15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	2/loop-level and 2/loop-flow mismatch	1/loop-level coincident with 1/loop-flow mismatch in same loop	1/loop level and 2/loop-flow mismatch or 2/loop-level and 1/loop-flow mismatch	1, 2	7#

TABLE 3.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION	
16. Undervoltage–Reactor Coolant Pump Busses	3–1/bus	2	2	1	8#	|
17. Underfrequency–Reactor Coolant Pump Busses	3–1/bus	2	2	1	8#	|
18. Turbine Trip						
A. Low Auto Stop Oil Pressure	3	2	2	1	9#	|
B. Turbine Stop Valve Closure	4	4	3	1	9#	|
19. Safety Injection Input from ESF	2	1	2	1, 2	16	|
20. Reactor Coolant Pump Breaker Position Trip Above P-7	1/breaker	1 > P-8 2 > P-7	1/breaker	1	8#	|
21. A. Reactor Trip Breakers	2	1	2	1, 2	1, 14	
	2	1	2	3*, 4*, 5*	15	
B. Reactor Trip Bypass Breakers	2	1	1	***	13	
22. Automatic Trip logic	2	1	2	1, 2	16	|
	2	1	2	3*, 4*, 5*	15	

TABLE 3.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
23. Reactor Trip System Interlocks					
A. Intermediate Range Neutron Flux, P-6	2	1	2	2**	17
B. Low Power Reactor Trips Block, P-7					
P-10 Input	4	2	3	1	17#
or P-13 Input	2	1	2	1	17#
C. Power Range Neutron Flux, P-8	4	2	3	1	17#
D. Power Range Neutron Flux, P-10	4	2	3	1, 2	17#
E. Turbine Impulse Chamber Pressure, P-13	2	1	2	1	17#

TABLE 3.3-1(CONTINUED)

TABLE NOTATION

* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.

** Below the P-6 (Intermediate Range Neutron Flux) setpoint.

*** With the Reactor Trip Breaker open for surveillance testing in accordance with Specification Table 4.3-1 (item 21A).

\# The provisions of Specification 3.0.4 are not applicable.

\#\# High voltage to detector may be de-energized above the P-6 setpoint.

\#\#\# Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint.

ACTION STATEMENTS

ACTION 1 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1 provided the other channel is OPERABLE. One channel may be bypassed for up to 4 hours for concurrent surveillance testing of the reactor trip breaker and automatic trip logic, provided the other channel is OPERABLE.

ACTION 2 – With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of the redundant channel(s) per Specification 4.3.1.1.1.

c. Either, THERMAL POWER is restricted to ≤ 75% of RATED THERMAL POWER and the Power Range Neutron Flux trip setpoint is reduced to ≤ 85% of RATED THERMAL POWER within 78 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours.

d. The QUADRANT POWER TILT RATIO shall be determined to be within the limit when above 75 percent of RATED THERMAL POWER with one Power Range Channel inoperable by using the movable incore detectors to confirm that the normalized symmetric power distribution, obtained from 2 sets of 4 symmetric thimble locations or a full-core flux map, is consistent with the indicated QUADRANT POWER TILT RATIO at least once per 12 hours.

ACTION 3 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

a. Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint.

b. Above the P-6 setpoint, but below the P-10 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-10 setpoint.

c. Above the P-10 setpoint, POWER OPERATION may continue.

ACTION 4 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

a. Below the P-6 setpoint, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 setpoint.

b. Above the P-6 setpoint, operation may continue.

ACTION 5 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1 or 3.1.1.2, as applicable, within 1 hour and at least once per 12 hours thereafter.

ACTION 6 – Not applicable.

ACTION 7 – With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

If the conditions are not satisfied in the time permitted, place the unit in HOT STANDBY in 6 hours, HOT SHUTDOWN within the next 6 hours and COLD SHUTDOWN in the following 30 hours.

ACTION 8 – With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.1.1.

If the conditions are not satisfied in the time permitted, reduce power to less than the P-7 setpoint in 6 hours.

ACTION 9 – With the number of channels OPERABLE less than the Total Number of Channels OPERABLE requirement, STARTUP and POWER OPERATION may proceed provided the inoperable channel is placed in the tripped condition within 72 hours and the Minimum Channels OPERABLE Requirement is met, or reduce power to less than the P-8 setpoint in the next 4 hours.

ACTION 10 – Deleted

ACTION 11 – With less than the Minimum Number of Channels OPERABLE, operation may continue provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 12 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 48 hours or be in HOT STANDBY within the next 6 hours.

ACTION 13 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within (1) hour or terminate testing of the Reactor Trip Breaker and open the Reactor Trip Bypass Breaker.

ACTION 14 – With one of the diverse trip features (undervoltage or shunt trip device) inoperable, restore it to OPERABLE status within 48 hours or declare the breaker inoperable and apply Action 1. The breaker shall not be bypassed while one of the diverse trip features is inoperable except for the time required for performing maintenance to restore the breaker to OPERABLE status.

ACTION 15 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement restore the inoperable channel to OPERABLE status within 48 hours or open the reactor trip breakers within the next hour.

ACTION 16 – With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours, however one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.1.1, provided the other channel is OPERABLE.

ACTION 17 – With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant conditions or apply Specification 3.0.3.

TABLE 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	N.A.	N.A.	R(8)	1, 2 and *
2. Power Range, Neutron Flux				
A. High Setpoint	S	D(2)(6), M(3)(6) and R(6)	Q	1, 2
B. Low Setpoint	S	R(6)	S/U(1)	1***, 2
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(6)	Q	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(6)	Q	1, 2
5. Intermediate Range, Neutron Flux	a. S b. Q(12)	R(6, 13) N.A.	S/U(1), Q(12) N.A.	1***, 2 3*, 4*, 5*
6. Source Range, Neutron Flux	S(7)	R(6)	S/U(1), Q(12)	2, 3, 4, 5
7. Overtemperature ΔT	S	R(6)	Q	1, 2
8. Overpower ΔT	S	R(6)	Q	1, 2
9. Pressurizer Pressure – Low	S	R	Q	1, 2
10 Pressurizer Pressure – High	S	R	Q	1, 2
11. Pressurizer Water Level – High	S	R	Q	1, 2
12. Loss of Flow	S	R	Q	1

TABLE 4.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED	
13. Deleted					|
14. Steam Generator Water Level – Low-Low	S	R	Q	1, 2	|
15. Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	S	R	Q	1, 2	|
16. Undervoltage – Reactor Coolant Pump Busses	N.A.	R	Q	1	|
17. Underfrequency – Reactor Coolant Pump Busses	N.A.	R	Q	1	|
18. Turbine Trip					
A. Low Auto Stop Oil Pressure	N.A.	N.A.	S/U(1)	N.A.	
B. Turbine Stop Valve Closure	N.A.	N.A.	S/U(1)	N.A.	
19. Safety Injection Input from ESF	N.A.	N.A.	M(4) & (5)	1, 2	
20. Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R	1	
21. A. Reactor Trip Breaker	N.A.	N.A.	M(5), (9), & (11)	1, 2, & *	
B. Reactor Trip Bypass Breaker	N.A.	N.A.	M(5), (9), & R(10)	1, 2, & *	
22. Automatic Trip Logic	N.A.	N.A.	M(5)	1, 2, & *	

TABLE 4.3-1 (CONTINUED)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
23. Reactor Trip System Interlocks				
A. Intermediate Range Neutron Flux, P-6	N.A.	R(6)	R	2(7)
B. Low Power Reactor Trips Block, P-7	N.A.	R(6)	R	1
C. Power Range Neutron Flux, P-8	N.A.	R(6)	R	1
D. Power Range Neutron Flux, P-10	N.A.	R(6)	R	1, 2
E. Turbine Impulse Chamber Pressure, P-13	N.A.	R	R	1

TABLE 4.3-1 (CONTINUED)

NOTATION

* – With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.

*** – Below the P-10 (Low Setpoint Power Range Neutron Flux Interlock) setpoint.

(1) – If not performed in previous 31 days.

(2) – Heat balance only, above 15% of RATED THERMAL POWER. Adjust channel if absolute difference >2 percent.

(3) – Compare incore to excore axial offset above 15% of RATED THERMAL POWER. Recalibrate if absolute difference ≥ 3 percent.

(4) – Manual ESF functional input check every 18 months.

(5) – Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(6) – Neutron detectors may be excluded from CHANNEL CALIBRATION.

(7) – Below the P-6 (Intermediate Range Neutron Flux Interlock) setpoint.

(8) – The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip circuits for the Manual Reactor Trip Function. The test shall also verify the OPERABILITY of the Bypass Breaker trip circuit(s).

(9) – Local manual shunt trip the reactor trip bypass breaker immediately after placing the bypass breaker into service, but prior to commencing reactor trip system testing or reactor trip breaker maintenance.

(10) – Automatic undervoltage trip.

(11) – The CHANNEL FUNCTIONAL TEST shall independently verify the OPERABILITY of the undervoltage and shunt trip attachments of the Reactor Trip Breakers.

(12) – Quarterly Surveillance in Modes 3*, 4* and 5* shall also include verification that Permissives P-6 and P-10 are in their required state for existing plant conditions by observation of the permissive annunciator window.

(13) – Detector plateau curves shall be obtained and evaluated. The provisions of Specification 4.0.4 are not applicable for entry into Mode 2 or 1.

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2.1 **(Risk-Informed)** The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.

b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1.1 Each ESFAS instrumentation channel, interlock, and the automatic actuation logic and relays shall be demonstrated OPERABLE by the performance of the Engineered Safety Features Actuation System instrumentation surveillance requirements specified in Table 4.3-2

4.3.2.1.2 The ENGINEERED SAFETY FEATURE RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

TABLE 3.3-3

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. SAFETY INJECTION					
a. Manual Initiation	2	1	2	1, 2, 3, 4	18
b. Automatic Actuation	2	1	2	1, 2, 3, 4	13
c. Containment Pressure – High	3	2	2	1, 2, 3	14*
d. Pressurizer Pressure – Low-Low	3	2	2	1, 2, 3#	14*
e. Differential Pressure Between Steam Lines – High	3/steam line	2/steam line twice and 1/3 steam lines	2/steam line	1, 2, 3	14*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
f. Steam Flow in Two Steam Lines – High	2/steam line	1/steam line any 2 steam lines	1/steam line	1, 2, 3##	14*
COINCIDENT WITH EITHER					
T_{avg} – Low-Low	1 T_{avg}/loop	1 T_{avg} any 2 loops	1 T_{avg} any 2 loops	1, 2, 3##	14*
OR, COINCIDENT WITH					
Steam Line Pressure – Low	1 pressure/ line	1 pressure any 2 lines	1 pressure any 2 lines	1, 2, 3##	14*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
2. CONTAINMENT SPRAY					
a. Manual	2 sets 2 switches/set	1 set	2 sets	1, 2, 3, 4	18
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
c. Containment Pressure – High-High	4	2	3	1, 2, 3	16*
3. CONTAINMENT ISOLATION					
a. Phase "A" Isolation					
1) Manual	2	1	2	1, 2, 3, 4	18
2) From Safety Injection Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
b. Phase "B" Isolation					
1) Manual	2 sets 2 switches/set	1 set	2	1, 2, 3, 4	18
2) Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
3) Containment Pressure – High-High	4	2	3	1, 2, 3	16*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
4. STEAM LINE ISOLATION					
a. Manual	2/steam line	1/steam line	2/steam line	1, 2, 3	21
b. Automatic Actuation Logic	2	1	2	1, 2, 3	20
c. Containment Pressure – Intermediate High-High	3	2	2	1, 2, 3	14*
d. Steam Flow in Two Steam Lines – High	2/steam line	1/steam line any 2 steam lines	1/steam line	1, 2, 3##	14*
COINCIDENT WITH EITHER					
T_{avg} – Low-Low	1 T_{avg}/loop	1 T_{avg} any 2 loops	1 T_{avg} any 2 loops	1, 2, 3##	14*
OR, COINCIDENT WITH					
Steam Line Pressure – Low	1 pressure/ line	1 pressures any 2 lines	1 pressure any 2 lines	1, 2, 3##	14*

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water Level – High-High	3/loop	2/loop	2/loop	1, 2, 3###	14*
b. Automatic Actuation Logic and Actuation Relays	2	1	2	1, 2, 3###	20
c. Safety Injection (SI)	See #1 above (All SI initiating functions and requirements)				
6. AUXILIARY FEEDWATER PUMP START					
a. Manual Initiation	2	1	2	1, 2, 3	21
b Automatic Actuation Logic	2	1	2	1, 2, 3	20
c. Steam Generator Water Level Low-Low	3/stm. gen.	2/stm. gen.	2/stm. gen.	1, 2, 3	14*
d. Safety Injection (SI)	See #1 above (All SI initiating functions and requirements)				
e. Station Blackout	1/bus on 2 busses	1/bus on 2 busses	1/bus on 2 busses	1, 2, 3	21
f. Main Feed Pump Trip	2/pump	1/pump	1/pump	1, 2	17

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
7. LOSS OF POWER					
a. 4.16 Kv Emergency Bus Under Voltage (Loss of Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*
b. 4.16 Kv Emergency Bus Under Voltage (Grid Degraded Voltage)	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	19*
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS					
a. Pressurizer Pressure, P-11	3	2	2	1, 2, 3	22*
b. Low-Low T_{avg}, P-12	3	2	2	1, 2, 3	22*
c. Reactor Trip, P-4	2	1	2	1, 2, 3	21

TABLE 3.3-3(Continued)

TABLE NOTATION

Trip function may be blocked in this MODE below the P-11 setpoint.

Trip function may be blocked in this MODE below the P-12 setpoint.

Except when all MFIVs, MFRVs, and associated bypass valves are closed and de-activated or isolated by a closed manual valve.

* The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

ACTION 13 – With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 14 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 12 hours for surveillance testing of other channels per Specification 4.3.2.1.

ACTION 15 – Deleted

ACTION 16 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the inoperable channel is placed in the blocked condition within 72 hours; one additional channel may be blocked for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

TABLE 3.3-3 (Continued)

ACTION 17 – With the number of OPERABLE channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours.

ACTION 18 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

ACTION 19 – With the number of OPERABLE Channels one less than the Total Number of Channels, STARTUP and POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 72 hours.

b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 12 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 20 – With the number of OPERABLE Channels one less than the Minimum Channels OPERABLE requirement, restore the inoperable channel to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and at least HOT SHUTDOWN within the following 6 hours; however one channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.1 provided the other Channel is OPERABLE.

ACTION 21 – With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable Channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

ACTION 22 – With less than the Minimum Channels OPERABLE, within 1 hour determine by observation of the associated permissive annunciator window(s) that the interlock(s) is in its required state for the existing plant condition or apply Specification 3.0.3.

TABLE 4.3-2

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. SAFETY INJECTION					
a. Manual Initiation	N.A.	N.A.	R(1)	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3, 4
c. Containment Pressure – High	S	R	Q(3)	N.A.	1, 2, 3
d. Pressurizer Pressure – Low-Low	S	R	Q	N.A.	1, 2, 3
e. Differential Pressure Between Steam Lines – High	S	R	Q	N.A.	1, 2, 3
f. Steam Flow in Two Steam Lines – High Coincident with T_{avg} – Low-Low or Steam Line Pressure – Low	S	R	Q	N.A.	1, 2, 3
2. CONTAINMENT SPRAY					
a. Manual Initiation	N.A.	N.A.	R(1)	N.A.	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3, 4
c. Containment Pressure – High-High	S	R	Q(3)	N.A.	1, 2, 3

TABLE 4.3-2 (CONTINUED)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
3. CONTAINMENT ISOLATION					
a. Phase "A" Isolation					
1) Manual	N.A.	N.A.	R(1)	N.A.	1, 2, 3, 4
2) From Safety Injection Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3, 4
b. Phase "B" Isolation					
1) Manual	N.A.	N.A.	R(1)	N.A.	1, 2, 3, 4
2) Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3, 4
3) Containment Pressure – High-High	S	R	Q(3)	N.A.	1, 2, 3
4. STEAM LINE ISOLATION					
a. Manual	N.A.	N.A.	R(1)	N.A.	1, 2, 3
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3
c. Containment Pressure – Intermediate High-High	S	R	Q(3)	N.A.	1, 2, 3
d. Steam Flow in Two Steam Lines – High Coincident with T_{avg} – Low-Low or Steam Line Pressure – Low	S	R	Q	N.A.	1, 2, 3

TABLE 4.3-2 (CONTINUED)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED
5. TURBINE TRIP AND FEEDWATER ISOLATION					
a. Steam Generator Water Level – High-High	S	R	Q	N.A.	1, 2, 3, #
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	M(2)	Q(4)	1, 2, 3, #
c. Safety Injection (SI)	See 1 above (All SI Surveillance Requirements)				
6. AUXILIARY FEEDWATER PUMPS					
a. Manual	N.A.	N.A.	R(1)	N.A.	1, 2, 3
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	Q(4)	1, 2, 3
c. Steam Generator Water Level – Low-Low	S	R	Q	N.A.	1, 2, 3
d. Safety Injection (SI)	See 1 above (all SI Surveillance Requirements)				
e. Station Blackout	N.A.	R	N.A.	N.A.	1, 2, 3
f. Main Feedwater Pump Trip	N.A.	N.A.	R	N.A.	1, 2

TABLE 4.3-2 (CONTINUED)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	SLAVE RELAY TEST	MODES IN WHICH SURVEILLANCE REQUIRED	
7. LOSS OF POWER 4.16 KV Emergency Bus						
a. Loss of Voltage	N.A.	R	Q(5)	N.A.	1, 2, 3, 4	|
b. Degraded Voltage	N.A.	R	Q(5)	N.A.	1, 2, 3, 4	|
8. ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INTERLOCKS						|
a. Pressurizer Pressure, P-11	N.A.	R	R	N.A.	1, 2, 3	|
b. Low-Low T_{avg}, P-12	N.A.	R	R	N.A.	1, 2, 3	|
c. Reactor Trip, P-4	N.A.	N.A.	R	N.A.	1, 2, 3	|

TABLE 4.3-2 (Continued)

TABLE NOTATION

Except when all MFIVs, MFRVs and associated bypass valves are closed and deactivated or isolated by a closed manual valve.

(1) Manual actuation switches shall be tested at least once per 18 months during shutdown.

(2) Each train or logic channel shall be functionally tested at least every other 31 days up to and including input coil continuity testing to the ESF slave relays.

(3) The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter.

(4) Only slave relays that do not satisfy any of the following criteria will be functionally tested:

1. A single failure in the Safeguards Test Cabinet circuitry would cause an inadvertent RPS or ESF actuation.
2. The test will adversely affect two or more components in one ESF system or two or more ESF systems.
3. The test will create a transient (reactivity, thermal, or hydraulic) condition on the RCS.

(5) Each train or logic channel shall be functionally tested up to and including input coil continuity testing to the ESF slave relays.

3/4.3.1 and 3/4.3.2 REACTOR TRIP SYSTEM (RTS) AND ENGINEERED SAFETY FEATURE ACTUATION SYSTEM (ESFAS) INSTRUMENTATION

The OPERABILITY of the RTS and ESFAS instrumentation and interlocks ensure that 1) the associated ESF action and/or reactor trip will be initiated when the parameter monitored by each channel or combination thereof exceeds its setpoint, 2) the specified coincidence logic and sufficient redundancy are maintained to permit a channel to be out of service for testing or maintenance consistent with maintaining an appropriate level of reliability of the RTS and ESFAS instrumentation and interlocks, and 3) sufficient system functional capability is available for protective and ESF purposes from diverse parameters.

The OPERABILITY of these systems is required to provide the overall reliability, redundancy and diversity assumed available in the facility design for the protection and mitigation of accident and transient conditions. The integrated operation of each of these systems is consistent with the assumptions used in the accident analyses.

The surveillance requirements specified for these systems ensure that the overall system functional capability is maintained comparable to the original design standards. The periodic surveillance tests performed at the minimum frequencies are sufficient to demonstrate this capability. Specific surveillance intervals and surveillance and maintenance outage times have been determined in accordance with WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Trip Instrumentation System," and supplements to that report, WCAP-10271 Supplement 2 "Evaluation of Surveillance Frequencies and Out of Service Times for the Engineered Safety Features Actuation System," and supplements to that report, and WCAP-14333P, "Probabilistic Risk Analysis of the RPS and ESF Test Times and Completion Times," as approved by the NRC and documented in SERs dated February 21, 1985, February 22, 1989, the SSER dated April 30, 1990 for WCAP-10271 and July 15, 1998 for the WCAP-14333P.

Surveillance testing of instrument channels is routinely performed with the channel in the tripped condition. With the exception of the Power Range Neutron Flux instrument channels, only those instrument channels with hardware permanently installed that permits bypassing without lifting a lead or installing a jumper are routinely tested in the bypass condition. However, an inoperable channel may be bypassed by lifting a lead or installing a jumper to permit surveillance testing of another instrument channel of the same functional unit.

The measurement of response time at the specified frequencies provides assurance that the protective and ESF action function associated with each channel is completed within the time limit assumed in the accident analyses. No credit was taken in the analyses for those channels with response times indicated as not applicable.

Response time may be demonstrated by any series of sequential, overlapping or total channel test measurements provided that such tests demonstrate the total channel response time as defined. Sensor response time verification may be demonstrated by either 1) in place, onsite or offsite test measurements or 2) utilizing replacement sensors with certified response times.

3/4.3.3 MONITORING INSTRUMENTATION

3/4.3.3.1 RADIATION MONITORING INSTRUMENTATION

The OPERABILITY of the radiation monitoring channels ensures that 1) the radiation levels are continually measured in the areas served by the individual channels and 2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded.

Configuration Risk Management Program (continued)

3) Provisions for performing an assessment after entering the LCO Action Statement for unplanned entry into the LCO Action Statement.

4) Provisions for assessing the need for additional actions after the discovery of additional equipment out of service conditions while in the LCO Action Statement.

5) Provisions for considering other applicable risk significant contributors such as Level 2 issue and external events, qualitatively or quantitatively.

Current risk-informed action statements include: Action 3.8.1.1.b; 3.4.3.2.A.2; 3.3.1.1; 3.3.2.1

6.9 REPORTING REQUIREMENTS

ROUTINE REPORTS

6.9.1 In addition to the applicable reporting requirements of Title 10, Code of Federal Regulations, the following reports shall be submitted to the Director of the Regional Office of Inspection and Enforcement unless otherwise noted.

STARTUP REPORTS

6.9.1.1 A summary report of plant startup and power escalation testing shall be submitted following (a) receipt of an operating license, (2) amendment to the license involving a planned increase in power level, (3) installation of fuel that has a different design or has been manufactured by a different fuel supplier, and (4) modifications that may have significantly altered the nuclear, thermal, or hydraulic performance of the plant.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 221 AND 202 TO

FACILITY OPERATING LICENSE NOS. NPF-4 AND NPF-7

VIRGINIA ELECTRIC AND POWER COMPANY

NORTH ANNA POWER STATION, UNITS NO. 1 AND NO. 2

1. INTRODUCTION

By letter dated May 6, 1999, as supplemented June 22, 1999, the Virginia Electric and Power Company submitted a request to amend the Technical Specifications (TS) for the North Anna Power Stations, Units 1 and 2. The proposed changes will revise the surveillance frequency, allowed outage time, and action time for the Reactor Trip System (RTS) and Engineered Safety Feature Actuation System (ESFAS) instrumentation. Following a conference call on November 10, 1999, the licensee provided additional information by letter dated December 16, 1999. The letters of June 22, and December 16, 1999, provided additional information only and did not change the initial no significant hazards consideration determination.

2. EVALUATION

The Westinghouse Owners Group (WOG) has previously issued the following reports recommending extension of RTS and ESFAS instrument test intervals:

a. WCAP-10271, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System," January 1983. By letter dated February 21, 1985, the NRC issued a safety evaluation (SE) approving this report.

b. WCAP-10271, Supplement 1, "Evaluation of Surveillance Frequencies and Out of Service Times for the Reactor Protection Instrumentation System," July 1983. By letter dated February 21, 1985, the NRC issued a safety evaluation (SE) approving this report.

c. WCAP-10271, Supplement 2, "Evaluation of Surveillance Frequencies and Out of Service Times for the Engineered Safety Features Actuation System," February 1986.

d. WCAP-10271-P-A, Supplement 2, Revision 1, "Evaluation of Surveillance Frequencies and Out of Service Times for the Engineered Safety Features Actuation System," June 1989. Supplement 2 and Supplement 2, Revision 1, were approved by an NRC-issued SE dated February 22, 1989.

ENCLOSURE

WCAP-10271, Supplements 1 and 2, basically proposed the following TS changes:

- The analog channel functional test frequency may be reduced from monthly to quarterly.

- Surveillance testing of most permissives may be extended from monthly to every refueling interval.

- The time allowed for a channel to be inoperable or out of service in an untripped condition may be increased from one to six hours.

- The time a channel in a functional group can be bypassed for surveillance testing may be increased from two to four hours.

The proposed TS changes would reduce inadvertent reactor trips and engineered safety feature actuations which can cause unnecessary transients and challenges to safety systems. In addition, extension of RTS and ESFAS instrument test intervals would save significant time and effort on the part of the plant operating staff in performing, reviewing, documenting, and tracking the various surveillance activities. The reports indicated that the overall increase in the core damage frequency (CDF) attributable to the proposed changes would be less than six percent.

The NRC performed an independent evaluation of the CDF and large early release frequency (LERF) that would result from extension of these surveillance intervals and allowed outage times. The NRC's evaluation indicated that the increase in CDF would be about 3.2 percent and the increase in the LERF would be only 4 percent. Furthermore, the NRC issued the following reports:

a. NUREG-1366, "Improvement to Technical Specifications Surveillance Requirements" dated December 1992.

b. Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation" dated September 27, 1993.

In the SEs approving the WCAP-10271, Supplements 1 and 2, the NRC stipulated specific requirements and the licensee addressed them as follows:

- Requirement: Staggered test plan for RTS channels with quarterly functional test frequency. Reference: SE for WCAP-10271, Supplement 1.

  Response: The NRC removed this requirement for RTS by the SE for WCAP-10271, Supplement 2, which eliminated staggered test for ESFAS and RTS.

- Requirement: The plant procedures should address a common cause evaluation for failures in the RTS analog channels with quarterly channel functional test frequency.

Response: The licensee committed to review the existing plant programs and procedures to evaluate plausible common cause failures prior to implementing the proposed TS changes.

- Requirement: Testing of the RTS analog channels in the bypassed condition by use of temporary jumpers or by lifting leads is not acceptable.

  Response: In the submittal dated May 6, 1999, the licensee stated, "In order to perform the zero current adjustment during the routine surveillance of the power range channels the power/signal cable must be removed, which is effectively a bypass operation." The licensee, further, stated that they do not have the hardware capability to perform bypass testing of this channel. However, in a conference call on November 10, 1999, the licensee confirmed that the zero current adjustment of the power range channels is performed by removing the control power fuses from the Power Range Nuclear instrument drawer which places the power range channels in the tripped condition and then disconnecting the two power range detector signal cables to test the power range bistable trip setpoint. In a letter dated December 16, 1999, the licensee confirmed that this test is performed in the tripped condition and that the statement in the May 6, 1999, submittal was conservative. The licensee further stated that the removal and reinstallation of these cables is strictly controlled by plant procedure, and the reinstallation of these cables is easily recognized by the technicians performing the test and by the operators when the reactor is at power. The staff concludes that this response is acceptable.

- Requirement: A review of the 'as found' and 'as left' data over a twelve-month period should provide sufficient information to address the adequacy of the existing setpoints and allowable values.

  Response: The licensee evaluated the 'as found' and 'as left' plant data. In every case the drift with 95 percent confidence level was well below one percent per quarter. Permissive drifts were less than one percent over any 18 month period and the drifts of the control parameters were within acceptable limits of the plant control systems.

- Requirement: Confirm the applicability of the generic analysis to the plant-specific applications.

  Response: The licensee confirmed that the RTS and ESFAS trip functions and the associated logic schemes evaluated in WCAP-10271, Supplements 1 and 2, are representative of the three loop protective functions and logic schemes at North Anna.

In May 1995, the WOG issued Topical Report WCAP-14333 (proprietary and non-proprietary versions), "Probabilistic Risk Analysis of the RPS and ESFAS Test Times and Completion Times," proposing additional time for surveillance testing and allowed outage time for RTS and ESFAS, and the NRC approved this report by letter dated July 15, 1998. The report indicates the overall increase in CDF attributable to the proposed changes is only 3.1 percent.

WCAP-14333 proposed the following generic TS changes:

- For analog channels, the allowed outage time may be increased from 6 hours to 72 hours and the test bypass time from 4 to 12 hours.

- For logic cabinets and master and slave relays the allowed outage times may be increased from 6 to 24 hours.

In the SEs approving WCAP-14333 the NRC stipulated specific requirements for the utilities to comply with, and the licensee addressed them as follows:

- Requirement: Provide applicability of WCAP-14333 for the individual plant.

  Response: The licensee provided comparative data in Tables 1, 2, and 3 of Attachment 1 of their submittal dated May 6, 1999. The data presented are acceptable to the staff.

- Requirement: Perform Tier 2 and 3 analysis including configuration risk management program (CRPM) insights which confirm that these insights are incorporated into the decision making process before taking equipment out of service.

North Anna has incorporated a configuration risk management program (CRMP), consistent with RG 1.177, into TS to support risk-informed changes. The licensee indicated that the CRMP applies to the currently proposed changes. For Tier 2, the licensee examined the impact of outages of the analog instruments and the logic trains in order to identify potential limitations of concurrent equipment outages. When compared to the base case with all risk significant equipment available, there was no significant increase in component importance due to the unavailability of any of the channels or trains identified above. Therefore, the licensee did not identify the need for special restrictions to avoid risk significant configurations. The staff finds that the licensee met the intent of the Tier 2 and 3 guidance in RG 1.177.

The specific TS changes and the licensee's justifications are listed in the licensee's submittal dated May 6, 1999, Attachment 1 (Pages 9 through 17) and Attachment 2, as supplemented June 22 and December 16, 1999. The staff has reviewed all these changes based on the generic evaluation provided earlier and finds them acceptable.

The staff reviewed each of the changes and found that they are either of editorial nature or conform with NUREG-1431, Standard Technical Specifications for Westinghouse Plants, or changes proposed in the NRC-approved reports WCAP-10271, Supplements 1 and 2, and WCAP-14333. Where applicable, the licensee addressed the NRC's requirements specified in the SERs for WCAP-10271, Supplements 1 and 2, and WCAP-14333.

The licensee performed plant-specific studies to ensure that the recommendations of WCAP-10271, Supplements 1 and 2, and WCAP-14333 are applicable for the North Anna plant.

The licensee's submittal has met the acceptance guidelines and criteria set forth in RGs 1.177 and 1.174. In conclusion, risk findings and insights support the proposed changes made in accordance with the staff-approved topical reports.

The licensee has incorporated a CRMP which ensures that planned configurations of high risk are avoided or minimized even though the licensee's study shows that there is no significant increase in CDF and LERF due to unavailability of any RTS or ESFAS analog instrument or logic train.

In view of these findings, the staff concludes that the proposed TS changes are acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

These 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 change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluent 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
(64 FR 32291). Accordingly, these 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 or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: Subinoy Mazumdar
Ian Jung

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