



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

April 14, 1989

Docket Nos.: 50-413
and 50-414

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

SUBJECT: ISSUANCE OF AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NPF-52 - CATAWBA
NUCLEAR STATION, UNITS 1 AND 2 (TACS 69497/69498)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 61 to Facility Operating License NPF-35 and Amendment No. 55 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TS) in response to your application dated September 19, 1988, and supplemented December 28, 1988, and March 6, 1989.

The amendments modify the TS to revise the setpoints for Unit 2 steam generator level trips due to the planned relocation of level taps.

A copy of the related safety evaluation supporting Amendment No. 61 to Facility Operating License NPF-35 and Amendment No. 55 to Facility Operating License NPF-52 is enclosed.

Notice of issuance of amendments will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

Kahtan N. Jabbour

Kahtan N. Jabbour, Project Manager
Project Directorate II-3
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 61 to NPF-35
2. Amendment No. 55 to NPF-52
3. Safety Evaluation

cc w/enclosures:
See next page

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DATED: April 14, 1989

AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NPF-35 - Catawba Nuclear Station, Unit 1
AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NPF-52 - Catawba Nuclear Station, Unit 2

DISTRIBUTION:

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Catawba R/F

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ACRS (10)	P-135
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E. Butcher	11-F-23
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K. Desai, DEST	11-F-23
S. Rhow, DEST	7-E-12

Mr. H. B. Tucker
Duke Power Company

Catawba Nuclear Station

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April 14, 1989

Docket Nos.: 50-413
and 50-414

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

SUBJECT: ISSUANCE OF AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NPF-52 - CATAWBA
NUCLEAR STATION, UNITS 1 AND 2 (TACS 69497/69498)

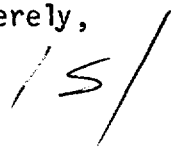
The Nuclear Regulatory Commission has issued the enclosed Amendment No. 61 to Facility Operating License NPF-35 and Amendment No. 55 to Facility Operating License NPF-52 for the Catawba Nuclear Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TS) in response to your application dated September 19, 1988, and supplemented December 28, 1988, and March 6, 1989.

The amendments modify the TS to revise the setpoints for Unit 2 steam generator level trips due to the planned relocation of level taps.

A copy of the related safety evaluation supporting Amendment No. 61 to Facility Operating License NPF-35 and Amendment No. 55 to Facility Operating License NPF-52 is enclosed.

Notice of issuance of amendments will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,



Kahtan N. Jabbour, Project Manager
Project Directorate II-3
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 61 to NPF-35
2. Amendment No. 55 to NPF-52
3. Safety Evaluation

cc w/enclosures:
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3/29/89

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

DUKE POWER COMPANY

NORTH CAROLINA ELECTRIC MEMBERSHIP CORPORATION

SALUDA RIVER ELECTRIC COOPERATIVE, INC.

DOCKET NO. 50-413

CATAWBA NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 61
License No. NPF-35

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Catawba Nuclear Station, Unit 1 (the facility) Facility Operating License No. NPF-35 filed by the Duke Power Company acting for itself, North Carolina Electric Membership Corporation and Saluda River Electric Cooperative, Inc., (licensees) dated September 19, 1988, as supplemented December 28, 1988, and March 6, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-35 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 61, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification Changes

Date of Issuance: April 14, 1989

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-35 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 61, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

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David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification Changes

Date of Issuance: April 14, 1989

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

DUKE POWER COMPANY

NORTH CAROLINA MUNICIPAL POWER AGENCY NO. 1

PIEDMONT MUNICIPAL POWER AGENCY

DOCKET NO. 50-414

CATAWBA NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 55
License No. NPF-52

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Catawba Nuclear Station, Unit 2 (the facility) Facility Operating License No. NPF-52 filed by the Duke Power Company acting for itself, North Carolina Municipal Power Agency No. 1 and Piedmont Municipal Power Agency, (licensees) dated September 19, 1988, as supplemented December 28, 1988, and March 6, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-52 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 55, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification Changes

Date of Issuance: April 14, 1989

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachments to this license amendment, and Paragraph 2.C.(2) of Facility Operating License No. NPF-52 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 55, are hereby incorporated into the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification Changes

Date of Issuance: April 14, 1989

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ATTACHMENT TO LICENSE AMENDMENT NO. 61

FACILITY OPERATING LICENSE NO. NPF-35

DOCKET NO. 50-413

AND

TO LICENSE AMENDMENT NO. 55

FACILITY OPERATING LICENSE NO. NPF-52

DOCKET NO. 50-414

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf page is also provided to maintain document completeness.

Amended Page

Overleaf Page

2-5

3/4 3-29

3/4 3-30

3/4 3-31

B 2-7

B 2-8

TABLE 2.2-1 (Continued)
 REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
13. Steam Generator Water Level Low-Low					
a. Unit 1	17	14.2	1.5	>17% of span from 0% to 30% RTP* increasing linearly to > 40.0% of span from 30% to 100% RTP*	>15.3% of span from 0% to 30% RTP* increasing linearly to >38.3% of span from 30% to 100% RTP*
b. Unit 2	11.8	1.7	2.0	>36.8% of narrow range span	>35.1% of narrow range span
14. Undervoltage - Reactor Coolant Pumps	8.57	0	1.0	>77% of bus voltage (5082 volts) with a 0.7s response time	>76% (5016 volts)
15. Underfrequency - Reactor Coolant Pumps	4.0	0	1.0	>56.4 Hz with a 0.2s response time	>55.9 Hz
16. Turbine Trip					
a. Stop Valve EH Pressure Low	N.A.	N.A.	N.A.	>550 psig	>500 psig
b. Turbine Stop Valve Closure	N.A.	N.A.	N.A.	>1% open	>1% open
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	N.A.	N.A.

*RTP = RATED THERMAL POWER

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
4. Steam Line Isolation					
a. Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
c. Containment Pressure-High-High	12.7	0.71	1.5	≤ 3 psig	≤ 3.2 psig
d. Steam Line Pressure - Low	4.6	1.31	1.5	≥ 725 psig	≥ 694 psig*
e. Steam Line Pressure-Negative Rate - High	8.0	0.5	0	≤ 100 psi	≤ 122.8 psi**
5. Feedwater Isolation					
a. Automatic Actuation Logic Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
b. Steam Generator Water Level-High-High (P-14)					
1. Unit 1	5.4	2.18	1.5	≤ 82.4% of narrow range instrument span	≤ 84.2% of narrow range instrument span
2. Unit 2	21.9	1.7	2.0	≤ 77.1% of narrow range instrument span	≤ 78.9% of narrow range instrument span
c. T _{avg} -Low	4.0(6.0 [#])	1.12(0.71 [#])	1.2(0.8 [#])	≥ 564°F	≥ 562°F(561°F [#])
d. Doghouse Water Level-High	1.0	0	0.5	11 inches above 577' floor level	12 inches above 577' floor level
e. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.				

CATAWBA - UNITS 1 & 2

3/4 3-29

Amendment No. 61 (Unit 1)
Amendment No. 55 (Unit 2)

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TOTAL ALLOWANCE (TA)</u>	<u>Z</u>	<u>SENSOR ERROR (S)</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
6. Turbine Trip					
a. Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
c. Steam Generator Water Level-High-High (P-14)					
1. Unit 1	5.4	2.18	1.5	< 82.4% of narrow range instrument span	< 84.2% of narrow range instrument span
2. Unit 2	21.9	1.7	2.0	< 77.1% of narrow range instrument span	< 78.9% of narrow range instrument span
d. Trip of All Main Feedwater Pumps	N.A.	N.A.	N.A.	N.A.	N.A.
e. Reactor Trip (P-4)	N.A.	N.A.	N.A.	N.A.	N.A.
f. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.				
7. Containment Pressure Control System					
a. Start Permissive	N.A.	N.A.	N.A.	≤ 0.4 psid	≤ 0.45 psid
b. Termination	N.A.	N.A.	N.A.	≥ 0.3 psid	≥ 0.25 psid
8. Auxiliary Feedwater					
a. Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT		TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
CATAWBA - UNITS 1 & 2	8. Auxiliary Feedwater (Continued)					
	c. Steam Generator Water Level - Low-Low					
	1) Unit 1	17	14.2	1.5	> 17% of span from 0% to 30% RTP increasing linearly to \geq 40.0% of span from 30% to 100% RTP	\geq 15.3% of span from 0% to 30% RTP increasing linearly to \geq 38.3% of span from 30% to 100% RTP
	2) Unit 2	11.8	1.7	2.0	\geq 36.8% of narrow range span	\geq 35.1% of narrow range instrument span
	d. Safety Injection	See Item 1. above for all Safety Injection Setpoints and Allowable Values.				
	e. Loss-of-Offsite Power	N.A.	N.A.	N.A.	\geq 3500 V	\geq 3200 V
	f. Trip of All Main Feedwater Pumps	N.A.	N.A.	N.A.	N.A.	N.A.
	g. Auxiliary Feedwater Suction Pressure-Low					
	1) CAPS 5220, 5221, 5222	N.A.	N.A.	N.A.	\geq 10.5 psig	\geq 9.5 psig
	2) CAPS 5230, 5231, 5232	N.A.	N.A.	N.A.	\geq 6.2 psig	\geq 5.2 psig
a. Unit 1	N.A.	N.A.	N.A.	\geq 6.2 psig	\geq 5.2 psig	
b. Unit 2	N.A.	N.A.	N.A.	\geq 6.0 psig	\geq 5.0 psig	
3/4 3-31	9. Containment Sump Recirculation					
	a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
	b. Refueling Water Storage Tank Level-Low Coincident With Safety Injection	N.A.	N.A.	N.A.	\geq 177.15 inches	\geq 162.4 inches
		See Item 1. above for all Safety Injection Setpoints and Allowable Values.				

Amendment No. 61 (Unit 1)
Amendment No. 55 (Unit 2)

LIMITING SAFETY SYSTEM SETTINGS

BASES

Steam Generator Water Level

The Steam Generator Water Level Low-Low trip protects the reactor from loss of heat sink in the event of a sustained steam/feedwater flow mismatch resulting from a loss of normal feedwater or a feedwater system pipe break. The specified Setpoint provides allowances for starting delays of the Auxiliary Feedwater System as well as for errors in the level instrumentation.

Undervoltage and Underfrequency - Reactor Coolant Pump Busses

The Undervoltage and Underfrequency Reactor Coolant Pump Bus trips provide core protection against DNB as a result of complete loss of forced coolant flow. The specified Setpoints assure a Reactor trip signal is generated before the Low Flow Trip Setpoint is reached. Time delays are incorporated in the Underfrequency and Undervoltage trips to prevent spurious Reactor trips from momentary electrical power transients. For undervoltage, the delay is set so that the time required for a signal to reach the Reactor trip breakers following the simultaneous trip of two or more reactor coolant pump bus circuit breakers shall not exceed 1.2 seconds. For underfrequency, the delay is set so that the time required for a signal to reach the Reactor trip breakers after the Underfrequency Trip Setpoint is reached shall not exceed 0.3 second. On decreasing power the Undervoltage and Underfrequency Reactor Coolant Pump Bus trips are automatically blocked by P-7 (a power level of approximately 10% of RATED THERMAL POWER; with a turbine impulse chamber pressure at approximately 10% of full power equivalent); and on increasing power, reinstated automatically by P-7.

Turbine Trip

A Turbine trip initiates a Reactor trip. On decreasing power the Reactor trip from the Turbine trip is automatically blocked by P-9 (a power level of approximately 69% of RATED THERMAL POWER); and on increasing power, reinstated automatically by P-9.

Safety Injection Input from ESF

If a Reactor trip has not already been generated by the Reactor Trip System instrumentation, the ESF automatic actuation logic channels will initiate a Reactor trip upon any signal which initiates a Safety Injection. The ESF instrumentation channels which initiate a Safety Injection signal are shown in Table 3.3-3.

LIMITING SAFETY SYSTEM SETTINGS

BASES

Reactor Trip System Interlocks

The Reactor Trip System interlocks perform the following functions:

- P-6 On increasing power P-6 allows the manual block of the Source Range trip (i.e., prevents premature block of Source Range trip), deenergizes the high voltage to the detectors. On decreasing power, Source Range Level trips are automatically reactivated and high voltage restored.
- P-7 On increasing power P-7 automatically enables Reactor trips on low flow in more than one reactor coolant loop, reactor coolant pump bus undervoltage and underfrequency, pressurizer low pressure and pressurizer high level. On decreasing power, the above listed trips are automatically blocked.
- P-8 On increasing power P-8 automatically enables Reactor trips on low flow in one or more reactor coolant loops. On decreasing power, the P-8 automatically blocks the above listed trips.
- P-9 On increasing power P-9 automatically enables Reactor trip on Turbine trip. On decreasing power, P-9 automatically blocks Reactor trip on Turbine trip.
- P-10 On increasing power P-10 allows the manual block of the Intermediate Range trip and the Low Setpoint Power Range trip; and automatically blocks the Source Range trip and deenergizes the Source Range high voltage power. On decreasing power, the Intermediate Range trip and the Low Setpoint Power Range trip are automatically reactivated. Provides input to P-7.
- P-13 Provides input to P-7.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NPF-35
AND AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NPF-52

DUKE POWER COMPANY, ET AL.

CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DOCKET NOS. 50-413 AND 50-414

1.0 INTRODUCTION

By letter dated September 19, 1988, and supplemented December 28, 1988, and March 6, 1989, Duke Power Company, et al., (the licensee) requested changes to the Technical Specifications (TSs) and Bases associated with the relocation of steam generator (SG) lower instrument taps for Catawba Unit 2. These changes, which revise the setpoints for SG level trips, are applicable to Unit 2 only. Unit 1 is included administratively because the TSs are combined in one document for both units. The proposed changes for Unit 2 would revise:

- (1) Table 2.2-1, Item 13.b
- (2) Table 3.3-4, Items 5.b.2., 6.c.2., and 8.c.2)
- (3) the Bases for Steam Generator Water Level, page B 2-7

The March 6, 1989, submittal clarified certain aspects of the request. Therefore, the substance of the changes noticed in the Federal Register and the proposed no significant hazards determination were not affected.

2.0 EVALUATION

Catawba Unit 2 is equipped with Westinghouse Model D5 SGs while Unit 1 has Model D3. A major difference between those two models is the design of the moisture separator section. Due to this design difference, the narrow range span (NRS) currently used for control and protection functions is different. Specifically, the lower instrument tap for the narrow range level instrumentation was located above the transition cone and lower deck plate on the D5 SG at Catawba Unit 2 as opposed to below the transition cone in the downcomer in the D3 SG on Unit 1. Due to the location of the lower tap in the D5 SG, the shrink and swell characteristics are more pronounced than in the D3. This makes plant control more difficult and more susceptible to trips. The proposed modification will relocate instrument tap on the D5 SG to a location similar to the D3.

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In order to determine the potential gain in operational control characteristics of the D5 SG if the lower instrument tap were relocated to the equivalent location as the D3, the licensee and Westinghouse installed pilot instrumentation on the Catawba 2C SG to determine the potential gain in operational control characteristics due to the proposed modification. Transient data indicated that the modified D5 level instrumentation will perform similarly to the D3 in terms of post-trip response. Also, the current Unit 2 transmitters will be replaced by Barton 764 transmitters, of the same type used in Unit 1, which are environmentally qualified for post-accident conditions.

By relocating the lower tap, the high level trip, lower level trip and operating level trip setpoints will be reduced. With this proposed arrangement, the margin between the operating level setpoint and low level trip setpoint will be increased from a current 42" to 58". This will make Unit 2 more tolerant to feedwater system malfunctions at power, thus reducing unnecessary reactor trips and challenges to safety systems.

Relocating the narrow range instrumentation lower sensing tap on the Westinghouse model D5 SG to the same elevation as the model D3 SG would provide the following safety enhancements:

- (1) The effects of level shrink and swell at low power levels will be greatly reduced, thus reducing the potential for reactor trips.
- (2) The time necessary to recover indicated level following a reactor trip will be greatly reduced, thus reducing the potential for an overcooling event due to excessive auxiliary feedwater.
- (3) The margin to low level trip will be increased thus reducing the potential for reactor trips at power.

Relocation of the level sensing tap to the downcomer region requires that the velocity induced error be accounted for in the determination of trip and operating level setpoints. This can be accomplished without reducing any current margin to trip. The proposed values for trip setpoints are based on the latest component error data and the same approved Westinghouse setpoint methodology is used.

The licensee performed a detailed evaluation to assess the effect of this design modification on the Catawba Final Safety Analysis Report (FSAR) transients and accident analyses. Most of the analyses remain bounded except the Steam Generator Tube Rupture (SGTR) event and a few feedwater related transients. As a result, the feedwater related transients were reanalyzed and it was concluded that the auxiliary feedwater system is adequate to provide sufficient heat removal from the reactor coolant system following reactor trip.

The licensee has previously reanalyzed the SGTR event (Ref. 1) to comply with the appropriate license condition for Units 1 and 2. This analysis is currently undergoing staff review. It has been determined that the design modification would have a minor impact on the dose calculations for a SGTR event by increasing the time the steam generator tubes may be uncovered from 12 to 13 minutes. The licensee stated that a 15-minute tube uncover time was used for the dose calculations and therefore bounds the impact of relocating the lower instrument taps. The licensee's dose calculations showed compliance with 10 CFR 100 requirements.

Although the staff's review of the licensee's SGTR analysis is not yet complete, we concur with the licensee's assessment that relocation of the level taps will have only a minor impact on the resultant dose consequences for a SGTR event. Furthermore, we find that the licensee's analysis provides a reasonable assurance that the 10 CFR 100 requirements can be met.

Based on its review, the staff concludes that implementation of the design modification, while the staff completes its review of the SGTR analysis, has no adverse impact on safety and does not pose an undue risk to the public health and safety, and is, therefore, acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

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

4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (54 FR 6191) on February 8, 1989. The Commission consulted with the state of South Carolina. No public comments were received, and the state of South Carolina did not have any comments.

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

5.0 REFERENCE

1. Letter from Hal B. Tucker (Duke Power Company) to USNRC, dated August 24, 1988, regarding License Conditions 16 (Unit 1) and 10 (Unit 2) on Steam Generator Tube Rupture Analysis and Technical Specification Amendments.

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