Docket No. 50-397 June 15, 1992

Mr. G. C. Sorensen, Manager
Regulatory Programs
Washington Public Power Supply System
3000 George Washington Way
P. O. Box 968
Richland, Washington 99352

Dear Mr. Sorensen:

SUBJECT: ISSUANCE OF AMENDMENT FOR THE WASHINGTON PUBLIC POWER SUPPLY SYSTEM NUCLEAR PROJECT NO. 2 (TAC NO. M79393)

The Commission has issued the enclosed Amendment No.106 to the Facility Operating License No. NPF-21 for WPPSS Nuclear Project No. 2. The amendment consists of changes to the Technical Specifications (TS) in response to your application dated December 31, 1990 and supplemented by your letter of May 20, 1992.

The amendment revises Technical Specification (TS) 2.2.1, "Reactor Protection System Instrumentation Setpoints," and its bases, as well as TS 3.3.6, "Control Rod Block Instrumentation," to reflect minor adjustments to protection system instrumentation setpoints associated with the scram discharge volume (SDV).

A copy of the related Safety Evaluation is also enclosed. A notice of issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

Original signed by

William M. Dean

William M. Dean, Project Manager
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No.106 to NPF-21
2. Safety Evaluation

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

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Mr. G. C. Sorensen
Washington Public Power Supply System

WPPSS Nuclear Project No. 2
(WNP-2)

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

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

DOCKET NO. 50-397

NUCLEAR PROJECT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.106
License No. NPF-21

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

   A. The application for amendment by the Washington Public Power Supply System (licensee) dated December 31, 1990, as supplemented by letter dated May 20, 1992, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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-21 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 106 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This amendment is effective as of the date of issuance and must be fully implemented within 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Theodore R. Quay

Theodore R. Quay, Director
Project Directorate V
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 15, 1992

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 106 TO FACILITY OPERATING LICENSE NO. NPF-21

DOCKET NO. 50-397

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 pages are also provided to maintain document completeness.

REMOVE	INSERT
ix	ix
2-5	2-5
B 2-9	B 2-9
3/4 3-55	3/4 3-55

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

TABLE 2.2.1-1 (Continued)

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS

FUNCTIONAL UNIT	TRIP SETPOINT	ALLOWABLE ALLOWABLE VALUES
7. Primary Containment Pressure - High	≤ 1.68 psig	≤ 1.88 psig
8. Scram Discharge Volume Water Level - High		
a. Level Transmitter	≤ 529'7" elevation	≤ 529' 9" elevation
b. Float Switch	≤ 529'7" elevation	≤ 529' 9" elevation
9. Turbine Stop Valve - Closure	≤ 5% closed	≤ 7% closed
10. Turbine Control Valve Fast Closure, Trip Oil Pressure - Low	≥ 1250 psig	≥ 1000 psig
11. Reactor Mode Switch Shutdown Position	N.A.	N.A.
12. Manual Scram	N.A.	N.A.

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS (Continued)

8. Scram Discharge Volume Water Level-High

The scram discharge volume receives the water displaced by the motion of the control rod drive pistons during a reactor scram. Should this volume fill up to a point where there is insufficient volume to accept the displaced water at pressures below 65 psig, control rod insertion would be hindered. The reactor is therefore tripped when the water level has reached a point high enough to indicate that it is indeed filling up, but the volume is still great enough to accommodate the water from the movement of the rods at pressures below 65 psig when they are tripped. The scram discharge volume high level alarm setpoint for scram discharge volume 'A' (525'4 1/2" elevation) provides 87.1 gallons of margin above the required 617.9 gallons of free volume required for a reactor scram. The scram discharge volume high level alarm setpoint for scram discharge 'B' (524'7" elevation) provides 91.3 gallons of margin above the required 617.9 gallons of free volume required for a reactor scram. The rod block setpoint for scram discharge volume 'A' and 'B' (527'3" elevation) provides 89.6 gallons of margin above the required 617.9 gallons of free volume required for a reactor scram. The scram setpoint for scram discharge volume 'A' and 'B' (529'7" elevation) provides 64.9 gallons of margin above the required 617.9 gallons of free volume for a reactor scram.

9. Turbine Stop Valve-Closure

The turbine stop valve closure trip anticipates the pressure, neutron flux, and heat flux increases that would result from closure of the stop valves. With a trip setting of 5% of valve closure from full open, the resultant increase in heat flux is such that adequate thermal margins are maintained during the worst case transient assuming the turbine bypass valves fail to operate and an RPT occurs.

10. Turbine Control Valve Fast Closure, Trip Oil Pressure-Low

The turbine control valve fast closure trip anticipates the pressure, neutron flux, and heat flux increase that could result from fast closure of the turbine control valves due to load rejection with or without coincident failure of the turbine bypass valves. The Reactor Protection System initiates a trip when fast closure of the control valves is initiated by the fast acting solenoid valves and in less than 30 milliseconds after the start of control valve fast closure. This is achieved by the action of the fast acting solenoid valves in rapidly reducing hydraulic trip oil pressure at the main turbine control valve actuator disc dump valves. This loss of pressure is sensed by pressure switches whose contacts form the one-out-of-two-twice logic input to the Reactor Protection System. This trip setting, a faster closure time, and a different valve characteristic from that of the turbine stop valve, combine to produce transients which are very similar to that for the stop valve. Relevant transient analyses are discussed in Section 15.2.2 of the Final Safety Analysis Report.

11. Reactor Mode Switch Shutdown Position

The reactor mode switch Shutdown position is a redundant channel to the automatic protective instrumentation channels and provides additional manual reactor trip capability.

REACTOR PROTECTION SYSTEM INSTRUMENTATION SETPOINTS (Continued)

12. Manual Scram

The manual scram is a redundant channel to the automatic protective instrumentation channels and provides manual reactor trip capability.

TABLE 3.3.6-2

CONTROL ROD BLOCK INSTRUMENTATION SETPOINTS

TRIP FUNCTION	TRIP SETPOINT	ALLOWABLE VALUE
1. ROD BLOCK MONITOR		
a. Upscale	$\leq$ 0.66 W + 40%	$\leq$ 0.66 W + 43%
b. Inoperative	N.A.	N.A.
c. Downscale	$\geq$ 5% of RATED THERMAL POWER	$\geq$ 3% of RATED THERMAL POWER
2. APRM		
a. Flow Biased Neutron Flux Upscale	$\leq$ 0.66 W + 42%*	$\leq$ 0.66 W + 45%*
b. Inoperative	N.A.	N.A.
c. Downscale	$\geq$ 5% of RATED THERMAL POWER	$\geq$ 3% of RATED THERMAL POWER
d. Neutron Flux - Upscale, Startup	$\leq$ 12% of RATED THERMAL POWER	$\leq$ 14% of RATED THERMAL POWER
3. SOURCE RANGE MONITORS		
a. Detector not full in	N.A.	N.A.
b. Upscale	$< 1 \times 10^5$ cps	$< 1.6 \times 10^5$ cps
c. Inoperative	N.A.	N.A.
d. Downscale	$\geq$ 0.7 cps	$\geq$ 0.5 cps
4. INTERMEDIATE RANGE MONITORS		
a. Detector not full in	N.A.	N.A.
b. Upscale	$<$ 108/125 divisions of full scale	$<$ 110/125 divisions of full scale
c. Inoperative	N.A.	N.A.
d. Downscale	$\geq$ 5/125 divisions of full scale	$\geq$ 3/125 divisions of full scale
5. SCRAM DISCHARGE VOLUME		
a. Water Level-High	$<$ 527 ft 3 in. elevation	$<$ 527 ft 5 in. elevation
b. Scram Trip Bypass	N.A.	N.A.
6. REACTOR COOLANT SYSTEM RECIRCULATION FLOW		
a. Upscale	$\leq$ 108/125 divisions of full scale	$\leq$ 111/125 divisions of full scale
b. Inoperative	N.A.	N.A.
c. Comparator	$\leq$ 10% flow deviation	$\leq$ 11% flow deviation

*The Average Power Range Monitor rod block function is varied as a function of recirculation loop flow (W). The trip setting of this function must be maintained in accordance with Specification 3.2.2.

TABLE 4.3.6-1

CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS

TRIP FUNCTION	CHANNEL CHECK	CHANNEL FUNCTIONAL TEST	CHANNEL CALIBRATION(a)	OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED
1. ROD BLOCK MONITOR				
a. Upscale	N.A.	S/U(b)(c), Q(c)	Q	1*
b. Inoperative	N.A.	S/U(b)(c), Q(c)	N.A.	1*
c. Downscale	N.A.	S/U(b)(c), Q(c)	Q	1*
2. APRM				
a. Flow Biased Neutron Flux Upscale	N.A.	S/U(b), Q	Q	1
b. Inoperative	N.A.	S/U(b), Q	N.A.	1, 2, 5
c. Downscale	N.A.	S/U(b), Q	Q	1
d. Neutron Flux - Upscale, Startup	N.A.	S/U(b), Q	Q	2, 5
3. SOURCE RANGE MONITORS				
a. Detector not full in	N.A.	S/U(b), W(#)	N.A.	2, 5
b. Upscale	N.A.	S/U(b), W	Q	2, 5
c. Inoperative	N.A.	S/U(b), W	N.A.	2, 5
d. Downscale	N.A.	S/U(b), W	Q	2, 5
4. INTERMEDIATE RANGE MONITORS				
a. Detector not full in	N.A.	S/U(b), W(#)	N.A.	2, 5
b. Upscale	N.A.	S/U(b), W	Q	2, 5
c. Inoperative	N.A.	S/U(b), W	N.A.	2, 5
d. Downscale	N.A.	S/U(b), W	Q	2, 5
5. SCRAM DISCHARGE VOLUME				
a. Water Level-High	N.A.	Q	R	1, 2, 5**
b. Scram Trip Bypass	N.A.	Q	N.A.	5**
6. REACTOR COOLANT SYSTEM RECIRCULATION FLOW				
a. Upscale	N.A.	S/U(b), Q	Q	1
b. Inoperative	N.A.	S/U(b), Q	N.A.	1
c. Comparator	N.A.	S/U(b), Q	Q	1

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO.106 TO FACILITY OPERATING LICENSE NO. NPF-21

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

NUCLEAR PROJECT NO. 2

DOCKET NO. 50-397

1.0 INTRODUCTION

By letter dated December 31, 1990, Washington Public Power Supply System submitted a request for changes to the Technical Specifications (TS) for Nuclear Project No. 2. The proposed changes would modify both the control rod block and reactor protection system instrumentation setpoints and allowable values associated with the scram discharge volume (SDV). This amendment request was supplemented by a letter dated May 20, 1992, to correct a calculational error noted in the bases of the TS being amended.

2.0 EVALUATION

The modifications requested to the SDV setpoints and allowable values associated with the control rod block and reactor protection system instrumentation are an effect of a recent plant modification that resulted in a more accurate assessment of elevation references. New calibration procedures and hardware installation eliminated subtle inaccuracies that previously existed in determining appropriate reference points. Now, the pertinent level switches cannot be calibrated to current Technical Specification setpoints as they have insufficient adjustment spans. The Supply System proposes slightly altering the applicable setpoints and allowable values to allow for satisfactory calibration of the instruments, including reasonable allowances for setpoint drift. The SDV Water Level-High trip setpoint listed in TS Table 2.2.1-1, "Reactor Protection System Instrumentation Setpoints," is approximately 1/2" below the lowest adjustment span of the 4 scram level switches installed on the SDV. These level switches are permanently mounted and taking into account the new reference, the lower to mid-adjustment span allows little room for adjustment. To ensure that the instruments are not set at the low adjustment stops and to permit satisfactory calibration of the instruments, the proposed change increases the current scram setpoint by 1" to 529' 7". The licensee has determined that this results in a 0.8% decrease in the free volume margin above the required 617.9 gallons of free volume required to accommodate a reactor scram.

The same situation exists for the rod block instrumentation setpoints listed in TS Table 3.3.6-2. The SDV Water Level-High trip setpoint is affected by

the same reference level error, and as with the reactor scram level switches, the setpoint needs to be adjusted upwards to permit for adequate calibration of the instruments. Therefore, the facility proposes increasing the setpoint 1" to 527' 3". The licensee has determined that this represents a 0.5% decrease in the previous margin.

Both of these setpoints are conservative relative to the listed allowable values in TS. The facility also proposes increasing the allowable values by 1" to allow for the same margin as currently exists to accommodate setpoint drift. The licensee has determined that these adjustments would decrease the existing margins by 0.8% for the scram function and by 0.5% for the rod block function.

The Supply System noted that the bases for these setpoints provided no method for determining the amount of remaining margin, nor did it state the significance of the various level setpoints relative to the system safety function. Therefore, the licensee proposes modifying TS Bases 2.2.1.8 to provide both elevation and safety margins as appropriate.

The Supply System has evaluated this amendment per 10 CFR 50.92 and determined that it does not represent a significant hazard because it does not:

1) Involve a significant increase in the probability or consequences of an accident previously evaluated because as discussed, the decrease in margin for the trip setpoints and allowable values is insignificant. In both cases it is less than 0.8%. Therefore the probability or consequences of an accident previously evaluated are not significantly increased by these changes.

2) Create the possibility of a new or different kind of accident from any accident previously evaluated because SDV operation, including the Scram and Rod Block functions, remains unaffected. No new modes of operation of any equipment result due to this change. Therefore this change will not result in, nor create, a new of different kind of accident from any accident previously evaluated.

3) Involve a significant reduction in a margin of safety because, as discussed above, the reduction in margins represented by these changes is insignificant, less than 0.8%. Therefore, this change will not involve a significant reduction in the margin of safety.

The staff finds acceptable the Supply System's request of December 31, 1990, as supplemented by its May 20, 1992, letter, to amend the license of WNP-2 for the proposed Technical Specification changes to the reactor scram system and control rod block instrumentation setpoints and allowable values. This determination is based on the minimal effect that the changes have on a margin of safety.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 37591). Accordingly, the amendment meets 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 amendment.

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

Principal Contributor: William M. Dean

Date: June 15, 1992

Docket No. 50-397

Mr. G. C. Sorensen, Manager
Regulatory Programs
Washington Public Power Supply System
3000 George Washington Way
P. O. Box 968
Richland, Washington 99352

Dear Mr. Sorensen:

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DATE	4/30/92	4/30/92	5/14/92	5-18-92	/92

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