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

NOV 22 1985

Docket No. 50-397

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

Dear Mr. Sorensen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 19 TO FACILITY OPERATING LICENSE NPF-21, WPPSS NUCLEAR PROJECT NO. 2

The U. S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 19 to Facility Operating License NPF-21 to the Washington Public Power Supply System for WPPSS Nuclear Project No. 2, located in Benton County near Richland, Washington. This amendment is in response to your request of May 16, 1985 as supplemented by your letter dated May 22, 1985.

This action amends the WNP-2 Technical Specifications changing the Surveillance Requirement 4.8.1.1.2 by modifying the minimum allowable voltage required for auto starting of diesel generators DG-1 and DG-2 making it consistent with the output breaker closure permissive setpoint.

A copy of the related safety evaluation supporting Amendment No. 19 to Facility Operating License No. NPF-21 is enclosed.

Sincerely,

Walter R. Butler

Walter R. Butler, Chief
Licensing Branch No. 2
Division of Licensing

Enclosures:
1. Amendment No. 19 to Facility Operating License NPF-21
2. Safety Evaluation

cc w/enclosures:
See next page

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

WPPSS Nuclear Project No. 2
(WNP-2)

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Original signed by:

Walter R. Butler, Chief
Licensing Branch No. 2
Division of Licensing

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cc w/enclosures:
See next page

*Previously concurred

DL:LB#2	DL:LB#2	OELD	DL:LB#2	AD/L/DL
*JBradfute/dh	*EHylton	*AHodgdon	WButler	TMNovak
10/25/85	11/19/85	10/25/85	11/19/85	11/22/85

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

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by

Walter R. Butler, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure:
Changes to Technical Specifications

Date of Issuance: NOV 22 1985

*Previously concurred:

*DL:LB#2	*DL:LB#2	*OELD	DL:LB#2	AD/L/DL	DSI/CPS
EHylton	JBradfute:dh	AHodgdon	WButler	TNovak	LRubenstein
10/21/85	10/21/85	10/ /85	10/19/85	10/ 11 /85	10/ 19 /85

Issuance of Amendment No. 19 to Facility Operating License No. NPF-21
WPPSS Nuclear Project No. 2

DISTRIBUTION
Docket File
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

DOCKET NO. 50-397

WPPSS NUCLEAR PROJECT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

License No. NPF-21
Amendment No. 19

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

   A. The application for amendment filed by the Washington Public Power Supply System (the Supply System, also the licensee) dated May 22, 1985, 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 as amended, the provisions of the Act, and the 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 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, Facility Operating License No. NPF-21 is amended to revise the Technical Specifications as indicated in the attachments to this amendment and paragraph 2.C.(2) of Facility Operating License 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. 19, 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.

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

FOR THE NUCLEAR REGULATORY COMMISSION

Walter R. Butler

Walter R. Butler, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure:
Changes to Technical Specifications

Date of Issuance: NOV 2 2 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 19
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.

REMOVE	INSERT
3/4 8-3	3/4 8-3
3/4 8-5	3/4 8-5
3/4 8-6	3/4 8-6

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments and indicated power availability, and

b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring, manually and automatically, unit power supply from the normal circuit to the alternate circuit.

4.8.1.1.2 Each of the above required diesel generators shall be demonstrated OPERABLE:

a. In accordance with the frequency specified in Table 4.8.1.1.2-1 on a STAGGERED TEST BASIS by:

1. Verifying the fuel level in the day fuel tank.

2. Verifying the fuel level in the fuel storage tank.

3. Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day fuel tank.

4. Verifying the diesel starts from ambient condition and accelerates to at least 900 rpm (60 Hz) in less than or equal to 10 seconds* for DG-1 and DG-2 and 13 seconds* for DG-3. The generator voltage and frequency shall be 4160 (+420, -250) volts and 60 ± 3.0 Hz within 10 seconds* for DG-1 and DG-2 and 4160 ± 420 volts within 13 seconds* for DG-3 after the start signal. The diesel generator shall be started for this test by using one of the following signals:

a) Manual.
b) Simulated loss-of-offsite power by itself.
c) Simulated loss-of-offsite power in conjunction with an ESF actuation test signal.
d) An ESF actuation test signal by itself.

5. Verifying the diesel generator is synchronized, loaded to greater than or equal to 4400 kW for DG-1 and DG-2 and 2600 kW for DG-3 in less than or equal to 60 seconds*, and operates with these loads for at least 60 minutes.

6. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.

7. Verifying the pressure in all diesel generator air start receivers to be greater than or equal to 230 psig for DG-1 and DG-2 and 200 psig for DG-3.

*These diesel generator starts from ambient conditions shall be performed at least once per 184 days in these surveillance tests and all other engine starts for the purpose of this surveillance testing shall be preceded by an engine prelube period and/or other warmup procedures recommended by the manufacturer so that mechanical stress and wear on the diesel engine is minimized.

SURVEILLANCE REQUIREMENTS (Continued)

4. Simulating a loss-of-offsite power by itself, and:

   a) For divisions 1 and 2:

      1) Verifying deenergization of the emergency busses and load shedding from the emergency busses.

      2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds, energizes the autoconnected shutdown loads through the load sequencer and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 3.0 Hz during this test.

   b) For division 3:

      1) Verifying deenergization of the emergency bus.

      2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency bus with the permanently connected loads within 13 seconds and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady-state voltage and frequency of the emergency bus shall be maintained at 4160 ± 420 volts and 60 ± 3.0 Hz during this test.

5. Verifying that on an ECCS actuation test signal, without loss-of-offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be 4160 (+420, -250) volts for DG-1 and DG-2, 4160 ± 420 volts for DG-3 and 60 ± 3.0 Hz within 10 seconds for DG-1 and DG-2 and 13 seconds for DG-3 after the auto-start signal; the steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and the above frequency limit during this test.

6. Simulating a loss-of-offsite power in conjunction with an ECCS actuation test signal, and:

   a) For divisions 1 and 2:

      1) Verifying deenergization of the emergency busses and loads shedding from the emergency busses.

      2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency busses with permanently connected loads within 10 seconds, energizes the autoconnected loads through the load sequencer and operates

SURVEILLANCE REQUIREMENTS (Continued)

for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 4160 ± 420 volts and 60 ± 3.0 Hz during this test.

b) For division 3:

1) Verifying deenergization of the emergency bus.

2) Verifying the diesel generator starts on the auto-start signal, energizes the emergency bus with the permanently connected loads and the auto-connected emergency loads within 30 seconds and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency bus shall be maintained at 4160 ± 420 volts and 60 ± 3.0 Hz during this test.

7. Verifying that all automatic diesel generator trips are automatically bypassed upon loss of voltage on the emergency bus concurrent with an ECCS actuation signal except:

a) For division 1 and 2, engine overspeed and generator differential current, incomplete starting sequence and emergency manual stop.

b) For division 3, engine overspeed, generator differential current and emergency manual stop.

8. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4650 kW for DG-1 and DG-2 and 2850 kW for DG-3. During the remaining 22 hours of this test, the diesel generator shall be loaded to 4400 kW for DG-1 and DG-2 and 2600 kW for DG-3. The generator voltage and frequency shall be 4160 (+420, -250) volts for DG-1 and DG-2, 4160 ± 420 volts for DG-3 and 60 ± 3.0 Hz within 10 seconds for DG-1 and DG-2 and 13 seconds for DG-3 after the start signal; the steady-state generator voltage and frequency shall be maintained within 4160 ± 420 volts and the above frequency limit during this test.

Within 5 minutes after completing this 24-hour test, perform Surveillance Requirement 4.8.1.1.2.e.4.a)2) and b)2).*

*If Surveillance Requirements 4.8.1.1.2.e.4.a)2) and/or b)2) are not satisfactorily completed, it is not necessary to repeat the preceding 24-hour test. Instead, the diesel generator may be operated at 4400 kW for DG-1 or DG-2 or 2600 kW for DG-3 for 1 hour or until operating temperature has stabilized.

UNITED STATES
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SAFETY EVALUATION

AMENDMENT NO. 19 TO NPF-21

WPPSS NUCLEAR PROJECT NO. 2

DOCKET NO. 50-397

INTRODUCTION

By letter dated May 22, 1985, the Washington Public Power Supply System proposed certain changes to the Technical Specifications for WNP-2.

The proposed change to Surveillance Requirement 4.8.1.1.2 would make the minimum allowable voltage uncertainty on auto starting of diesel generator units, DG-1 and DG-2, consistent with the diesel generator breaker closure permissive setpoint.

EVALUATION

The current technical specification of WNP-2 potentially allows the establishment of a condition that could preclude operation of the diesel generators without additional operator action. Design of the Division 1 and 2 diesel generator breakers will not allow closure of the breaker until the voltage is within 94% of rated voltage (3910 volts). Current technical specifications require voltage to be 4160 ± 420 volt. Thus the minimum allowable voltage, 3740 volts, can be less than the breaker closure permissive setpoint.

The 94% setpoint was established to ensure that the diesel generators will be able to accept the first load block during initial loading. Based on a voltage analysis, a minimum voltage of 3910 volts (94% of rated voltage) was established so as to maintain the diesel generator output voltage above 80% of rated voltage from no load to full load without operator action.

The new technical specification on voltage range for starting will be between 4160 + 420 volts and 4160 - 250 volts. This diesel generator voltage with uncertainties specifies a minimum allowable voltage for the diesel generator consistent with the permissible voltage setpoint to close the output breaker. Based on our evaluation of the change and its justification, the staff concludes that the proposed change to the technical specifications reflects appropriate system coordination to improve the availability of the diesel generators and is, therefore, acceptable.

The licensee has determined that this change has little safety significance and that the proposed amendment will not alter any of the accident analyses. The staff has reviewed these determinations and the associated change and concurs with the licensee's determinations.

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ENVIRONMENTAL CONSIDERATION

This amendment involves a change to the requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposures. The Commission has determined that this amendment involves no significant hazards consideration. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

CONCLUSION

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

Dated: NOV 2 2 1985

Principal Contributor: Sang Rhow