

August 16, 1989

Docket No. 50-397

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

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Dear Mr. Sorensen:

SUBJECT: ISSUANCE OF AMENDMENT NO. 72 TO FACILITY OPERATING LICENSE
NO. NPF-21 - WPPSS NUCLEAR PROJECT NO. 2 (TAC NO. 74196)

The U.S. Nuclear Regulatory Commission has issued the enclosed amendment 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 letters dated August 13, 1989 (G02-89-136) and August 14, 1989 (G02-89-137).

This amendment revises Technical Specification Table 3.8.4.2-1, "Primary Containment Penetration Conductor Protective Devices," by changing the backup protection device for the 480VAC fused disconnects from a 125 ampere circuit breaker to a fused disconnect.

Because the plant was shutdown on August 11, 1989 under the requirement of Technical Specification Section 3.0.3, and because this amendment is needed to permit restart, this amendment is authorized on an emergency basis.

A copy of the related safety evaluation supporting the amendment is enclosed. A Notice of Issuance will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

/s/

Robert B. Samworth, Senior Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

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Enclosures:

1. Amendment No. 72 to Facility
Operating License No. NPF-21
2. Safety Evaluation

cc: w/enclosures See next page

[WNP2 FUSES4]

*see previous page for concurrence

DRSP/PD5

DRSP/PD5

JLee*

RSamworth:dr*

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Because the plant was shutdown on August 11, 1989 under the requirement of Technical Specification Section 3.0.3, and because this amendment is needed to permit restart, this amendment is authorized on an emergency basis.

A copy of the related safety evaluation supporting the amendment is enclosed. A Notice of Issuance will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

Robert B. Samworth, Senior Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 72 to Facility
Operating License No. NPF-21
2. Safety Evaluation

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[WNP2 FUSES4]

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

August 16, 1989

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. 72 TO FACILITY OPERATING LICENSE
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Because the plant was shutdown on August 11, 1989 under the requirement of Technical Specification Section 3.0.3, and because this amendment is needed to permit restart, this amendment is authorized on an emergency basis.

A copy of the related safety evaluation supporting the amendment is enclosed. The notice of issuance and final determination of no significant hazards consideration and opportunity for hearing will be included with the Commission's biweekly Federal Register notices.

Sincerely,

A handwritten signature in cursive script, reading "Robert B. Samworth", is positioned above the typed name and title.

Robert B. Samworth, Senior Project Manager
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 72 to Facility
Operating License No. NPF-21
2. Safety Evaluation

cc: w/enclosures
See next page

Mr. G. C. Sorensen

WPPSS Nuclear Project No. 2
(WNP-2)

cc:

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Richland, Washington 99352

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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. 72
License No. NPF-21

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 licensee), dated August 13, 1989, and supplemental letter dated August 14, 1989, comply 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 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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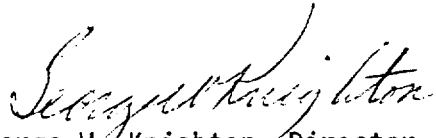
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-21 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 72, 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.

FOR THE NUCLEAR REGULATORY COMMISSION


George W. Knighton, Director
Project Directorate V
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 16, 1989

ENCLOSURE TO LICENSE AMENDMENT NO. 72

FACILITY OPERATING LICENSE NO. NPF-21

DOCKET NO. 50-397

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains a vertical line indicating the areas of change. Also to be replaced is the following overleaf page.

AMENDMENT PAGE

3/4 8-23

OVERLEAF PAGE

3/4 8-24

TABLE 3.8.4.2-1

PRIMARY CONTAINMENT PENETRATION CONDUCTOR
OVERCURRENT PROTECTIVE DEVICES

<u>EQUIPMENT</u>	<u>PRIMARY PROTECTION</u>	<u>BACKUP PROTECTION</u>
<u>a. 6900V Circuit Breakers</u>		
RRC-P-1A	E-CB-RRA (Relay)	E-CB-S5 (Relay) E-CB-N2/5 (Relay)
RRC-P-1B	E-CB-RRB (Relay)	E-CB-S6 (Relay) E-CB-N2/6 (Relay)
<u>b. 480VAC Fused Disconnects</u>		
MS-V-16	MC-8B-A Fused	MC-8B Fused
RWCU-V-1	MC-8B-A Fused	MC-8B Fused
RHR-V-9	MC-8B-A Fused	MC-8B Fused
RCIC-V-63	MC-8B-A Fused	MC-8B Fused
RCC-V-40	MC-8B-A Fused	MC-8B Fused
RHR-V-123B	MC-8B-A Fused	MC-8B Fused
RCIC-V-76	MC-8B-A Fused	MC-8B Fused
RHR-V-123A	MC-8B-A Fused	MC-8B Fused



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 72 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 August 13, 1989 (G02-89-136) and supplement dated August 14, 1989 (G02-89-137), Washington Public Power Supply System proposed certain changes to the Technical Specifications for Nuclear Project No. 2. Specifically the Supply System requested that Table 3.8.4.2-1 be revised to show that backup protection for the 480 volt AC fused disconnects would be achieved by a 90 ampere fused disconnect rather than by a 125 ampere circuit breaker. This change is requested in order to achieve the necessary coordination of protective devices. It does not change the conceptual design or function of any component.

2.0 EVALUATION

The need for this change was identified on August 11, 1989 as a result of a review of the plant event that occurred on August 8, 1989. In that event, a feeder breaker to the non-safety related motor control center (MCC) MC-8A-2C tripped as a result of a fault on a hoist coincident with the clearing (blowing) of the hoist fuse. This indicated a potential coordination problem between the hoist feeder (a fuse disconnect) and load motor control center (MCC) feeder (a molded case breaker). Subsequent review identified a general concern that a fault on loads or on associated cables routed in non-seismic raceways, supplied by some safety-related motor control centers could result in a loss of the entire 1E MCC. This could occur because some existing safety-related control center feeder breakers (those of the molded case design) have instantaneous short circuit protection that does not allow for coordination with downstream fuses for branch circuit faults.

Lacking evidence of proper coordination between all loads and lacking evidence of adequate electrical isolation between 1E and non-1E systems, the plant was shutdown on August 11, 1989 under the requirement of Technical Specification Section 3.0.3.

As a short term resolution of the identified concern, the licensee has placed jumpers around the molded case breakers used to subfeed MCCs 7A-A, 7B-A, 7B-B, 8A-A and 8B-B. With these jumpers installed, the primary design functions of providing bus and cable protection are provided by existing backup protection. Fault or short circuit protection will be provided by the primary motor control center feeder circuit breaker located on the unit substation. Overload protection will be ensured by the individual load fuses since the sum of the fuses do not exceed the ampacity of the cable or bus. Note that the safety function of these five breakers is passive in that they must not inadvertently clear. They have no safety function to open.

While the installation of the jumpers is technically adequate to ensure operability of the safety related MCC's, a design effort will continue for a permanent correction of the circuit coordination issue.

A jumper may not be used for MCC 8B-A as it provides the backup containment penetration protection required by Regulatory Guide 1.63 for those components listed in Technical Specification Table 3.8.4.2-1 (Section b). For this situation, the licensee will replace the 125 ampere molded case circuit breaker with 90 ampere fuses. The Technical Specification table identifies the 125 ampere circuit breaker. This proposed license amendment changes the Technical Specification table accordingly.

The existing 125 ampere circuit breaker for the feeder from MC-8B to MC-8B-A has time delay and instantaneous trip characteristics. The breaker is not capable of providing selective coordinated tripping with the branch circuit fault protective devices (fuses) on the motor control center which it feeds for any branch circuit fault which exceeds the instantaneous trip setting. The proposed Technical Specification change of replacing the circuit breaker with 90 ampere current limiting fuses will provide coordinated fault clearing for faults beyond the branch circuit fuses for any magnitude of fault current. This has been ensured since the 90 ampere fuses are at least two times larger than the largest load fuse as required by the fuse manufacturer to ensure coordination.

The second function of this particular breaker was to provide backup protection for the eight penetration circuits which are supplied power from MC-8B-A. The smallest circuit penetration protected consists of two #10 AWG penetrations in parallel. The time-current melting characteristics of the 90 Ampere fuses show that it will operate before the time-current limit on the penetration wire is reached.

The staff agrees that the fused disconnect provides adequate backup protection to the containment penetrations and that there is no safety significance to utilizing the fused disconnect instead of the circuit breaker. Therefore the staff finds the proposed change to the technical specifications acceptable.

3.0 EMERGENCY CIRCUMSTANCES

The need for this change was identified on August 11, 1989 as a result of a review of the plant event that occurred on August 8, 1989. The plant was shutdown on August 11, 1989 under the requirement of Technical Specification Section 3.0.3.

As the problem did not become apparent until the August 8, 1989 trip of MC-8A-2C, it was not possible for the Supply System to anticipate the need for the described modification that would have allowed for submittal of this request in a more timely manner.

This amendment is needed on an emergency basis to allow the unit to return to power now that the problem has been corrected.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation and use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that this 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. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). 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.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of the facility in accordance with the amendment would not:

1. Involve a significant increase in the probability or the consequences of any accident previously evaluated; or
2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or
3. Involve a significant reduction in a margin of safety.

The amendment has been evaluated against these standards in 10 CFR 50.92. A discussion of these standards as they relate to the amendment request follows:

Standard 1 - Involve a significant increase in the probability or consequence of any accident previously evaluated. The safety function of the breaker was to provide short circuit and overload protection of downstream equipment including containment penetrations. The proposed 90 Ampere fused disconnect has similar electrical characteristics (I^2t) and is dual element providing short circuit and overload protection. The licensee has reviewed the reduction in rating from 125 to 90 Amperes to ensure that the fuse will not trip due to normal load currents. Thus, protection against short circuit and overload and protection against spurious failure are not significantly changed.

Standard 2 - It does not create the possibility of a new or different kind of accident from any previously evaluated as the backup protection provided the penetrations is equivalent to that provided in the original design.

Standard 3 - It does not involve a significant reduction in a margin of safety. The fused disconnect provides the same short circuit and overload protection as does the circuit breaker. As such, the margin between current interruption and containment penetration failure is not significantly changed.

Accordingly, the Commission has determined that this amendment involves no significant hazards consideration.

6.0 CONTACT WITH STATE OFFICIAL

In accordance with 10 CFR 50.91, the licensee provided the State of Washington with a copy of its August 13, 1989 letter. The NRC staff advised the Washington Energy Facility Siting Council of the final determination of no significant hazards considerations by telephone on August 15, 1989. The State of Washington did not have any comment on this determination.

7.0 CONCLUSION

In summary, based on the assertion that no significant hazard is created by the proposed amendment and that the proposed change in the backup protection provided the containment penetration provides reliable protection against failure of the penetration's containment function, approval of the proposed amendment does not represent an undue risk to the health and safety of the public.

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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Robert B. Samworth

Dated: August 16, 1989