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 FACIL: 50-397 WPPSS Nuclear Project, Unit 2, Washington Public Powe 05000397  
 AUTH. NAME AUTHOR AFFILIATION  
 SORESENSEN, G. C. Washington Public Power Supply System  
 RECIP. NAME RECIPIENT AFFILIATION  
 ADENSAM, E. G. BWR Project Directorate 3

SUBJECT: Application for amend to License NPF-21 changing Tech Spec  
 Section 3.8.4.2 to remove requirement to list fuse sizes &  
 test fuses on rotating 18-month basis for primary  
 containment penetration conductor protective devices.

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## Washington Public Power Supply System

3000 George Washington Way P.O. Box 968 Richland, Washington 99352-0968 (509)372-5000

October 7, 1986  
G02-86-945

Docket No. 50-397

Director of Nuclear Reactor Regulation  
Attn: E. G. Adensam, Project Director  
BWR Project Directorate No. 3  
Division of BWR Licensing  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Ms. Adensam:

Subject: NUCLEAR PLANT NO. 2  
TECHNICAL SPECIFICATION CHANGE REQUEST:  
SECTION 3.8.4.2, PRIMARY CONTAINMENT  
PENETRATION CONDUCTOR OVERCURRENT  
PROTECTIVE DEVICES

References: 1) Letter, G02-85-312, G. C. Sorensen (SS) to W. R. Butler (NRC), Same Subject, dated June 13, 1985  
2) Letter, G02-85-321, G. C. Sorensen (SS) to W. R. Butler (NRC), Same Subject, dated June 18, 1985

Reference 1 requested that fuse size listings in Table 3.8.4.2-1 and a surveillance requirement (4.8.4.2.a.3) to functionally test fuses be deleted on an emergency basis (see attached). After discussions with your Staff, Reference 2 was submitted to request changes in the sizing of affected fuses only. The changes requested by Reference 2 were subsequently approved as Amendment 14 to the WNP-2 Technical Specifications. Reference 2 further requested that the changes in Reference 1 be approved through the normal process contemplated by 10CFR50.91. The purpose of this letter is to reaffirm the need to process the attached changes as requested and justified in Reference 1 and to provide supplementary information to aid the Staff in completing review and approval of the changes.

The discussions and analyses provided in Reference 1 remain valid and accurately reflect that the listing of fuses and the requirement to surveillance test fuses do not provide any added assurance of safe plant operations. The performance of such testing actually degrades plant performance and imposes an additional burden on plant operations with no apparent increase in safety.

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CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

The following is provided to aid the Staff in completing the review and approval of the Reference 1 request.

Date of Amendment Request: June 13, 1985

Description of Amendment Request (abstract): this proposed amendment, if approved, will modify the WNP-2 Technical Specification by removing a listing of fuses and a surveillance requirement to functionally test fuses on a rotating, 18 month basis.

The fuses are listed in Table 3.8.4.2-1, "Primary Containment Penetration Conductor Overcurrent Protective Devices" the intent of which is to assure primary containment electrical penetrations survive an electrical fault by a fuse opening prior to threatening the design capability of the penetration. However, the fuses are sized to protect the equipment being supplied while the design rating of the penetration is in all cases larger. Consequently, a load and related fuse can be increased and still be within the design rating of the penetration. As a result, the listing of fuse sizes provides no significant safety assurance. Containment penetration protection and safety is assured by the Supply System design process. Design changes are authorized to be performed per 10 CFR 50.59 without prior commission approval; however, listing fuse sizes in the technical specifications interjects Commission approval on the change prior to implementation. This inconsistency provides no safety assurance but rather imposes an administrative burden on both the Supply System and the Commission.

Functional testing of fuses represents a potential safety degradation without a significant compensatory safety enhancement. Such testing requires the removal and replacement of fuses which in turn has the potential for procedural errors or fuse damage. To date an effective surveillance test that could verify the reliability of a fuse in an overcurrent situation is not available. Resistance measurements are impractical; the change that could be measured would be in micro-ohm units not reliably measurable by field equipment and degradation, if any, would be difficult to quantify based on such changes. A fuse is a passive component, with known properties, built to prescribed physical dimensions in a sealed container. The probability of a fuse failure to open has been estimated at  $1 \times 10^{-5}$ /demand (WASH-1400). Normal fuse degradation with respect to containment penetration protection is a conservative event. Given the basic design, simple construction, passive operation, conservative normal degradation characteristics and minute probability for failure, a functional test of a fuse provides no significant safety benefit but introduces a potential for procedural errors or fuse damage.



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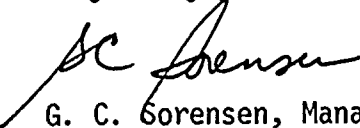
TS CHANGE REQUEST: SECTION 3.8.4.2, PRIMARY CONTAINMENT PENETRATION  
CONDUCTOR OVERCURRENT PROTECTIVE DEVICES

Basis for no significant hazards consideration determination (abstract):  
The NRC Staff has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from an accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The Supply System has determined that the requested amendment per 10 CFR 50.92 does not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated because any change in overload current protection characteristics will be in the conservative direction. Previously evaluated events will remain bounding, therefore no increase in probability or consequence is conceivable. Supply System design processes and audits of such processes will continue to ensure changes remain within design margins; or (2) create the possibility of a new or different kind of accident than previously evaluated because no new accident scenarios are credible. All changes remain within design margin and installed equipment remains the same; or (3) involve a significant reduction in a margin of safety because the sizing of fuses within the design margin does not encroach on the overall margin of safety and the deletion of fuse surveillance testing in all likelihood, will improve plant performance while removing an administrative burden of no benefit to safety.

Should you have further questions, please contact Mr. P. L. Powell, Manager, WNP-2 Licensing.

Very truly yours,



G. C. Sorensen, Manager  
Regulatory Programs

HLA/bk  
Attachment

cc: JO Bradfute - NRC  
JB Martin - NRC RV  
C Eschels - EFSEC  
E Revel1 - BPA  
NS Reynolds - BLCP&R  
NRC Site Inspector

