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 SORENSEN, G. C. Washington Public Power Supply System  
 RECIP. NAME RECIPIENT AFFILIATION  
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SUBJECT: Application for temporary amend to License NPF-21, waiving  
 limit of 1,500 lb max weight above fuel storage pool to  
 allow erection of temporary protective cover over pool. Fee  
 paid.

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 #13312



## Washington Public Power Supply System

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G02-88-038

February 18, 1988

Docket No. 50-397

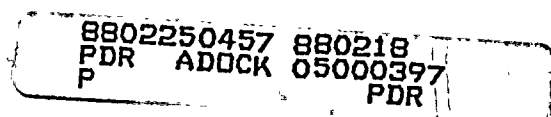
U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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Gentlemen:

Subject: NUCLEAR PLANT NO. 2  
OPERATING LICENSE NPF-21, REQUEST FOR A ONE  
TIME ONLY TEMPORARY AMENDMENT TO TECHNICAL  
SPECIFICATION 3.9.7 (CRANE TRAVEL - SPENT FUEL  
STORAGE POOL) UNDER EMERGENCY CIRCUMSTANCES

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90, 2.101, and 50.91(a)(5), the Supply System hereby submits a request for amendment to the WNP-2 Technical Specifications on an emergency basis as provided for in the regulations. Specifically, the Supply System is requesting that the limit of 1500 pounds maximum weight above the fuel storage pool be waived (as attached) to allow erection of a temporary protective cover over the pool. The cover is necessary to facilitate repairs to the roof of the Reactor Service Building damaged in an overpressure transient which relieved, as allowed for in the design, through the roof.

On February 14, 1988 while WNP-2 was shut down, inspections of Westinghouse breakers were being conducted per NRC bulletin 88-01. While restoring power to electrical breakers for the reactor building supply and exhaust fans the air supply fan inadvertently started. The inadvertent start was compounded by the trip circuitry being inoperable resulting in an overpressurization of the Reactor Building and damage to the roof. The requested temporary change is to allow the fuel storage pool to be protected from inadvertent missiles which might occur during the repair efforts. This request is submitted on a one time only basis for the duration of repairs to the roof.



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REQUEST FOR A ONE TIME ONLY TEMPORARY AMENDMENT TO TS 3.9.7 (CRANE TRAVEL - SPENT FUEL STORAGE POOL) UNDER EMERGENCY CIRCUMSTANCES

Absent this request on an emergency basis, undue hardship resulting from delay in returning the plant to power will be experienced. Present schedules contemplate repair, testing, readiness review, and return to power being completed within two to three weeks. Administration of this request on other than an emergency basis, would delay the construction of the cover and roof repair well beyond that presently anticipated. Such a delay, in effect a derating, would significantly alter power forecasts for the region. Generation capability for the region is predominately hydroelectric. Hence replacement power generation is resulting in drawdown of existing reservoirs during an abnormally low rain/snowfall season. Delay will contribute to lower reservoirs than anticipated in an already marginal year. Obviously this incident could not have been anticipated, hence the submittal of this request under emergency circumstances.

A temporary cover is necessary. Roof repair plans call for scaffolding to be erected near the fuel storage pool and repair equipment being used on the roof. Hence the possibility of a missile is credible. Absent a cover a missile could be dropped from the roof into the pool damaging a fuel bundle. The maximum credible missile has been identified as a length of scaffolding pipe approximately eight feet long by 2 inches in diameter dropped end on from 50 ft., the height of the roof above the fuel pool. As designed the cover will protect the fuel pool given this missile.

It should be noted that a limited number of structural members will be moved above the fuel pool. This movement involves relocating the beams to their original configuration which will require the use of a crane external to the building. Specifically a Manitowoc 4100 Series 1 crawler crane with high lift tower attachment having a minimum lift capacity of 8600 lbs at the maximum boom extension and a maximum 32,500 lb capacity. In repairing the roof this situation is unavoidable. In the worst case, up to 3 members weighing approximately 700 pounds each may have to be replaced (W-12 I beams one 27 feet long, two 24 foot lengths). The method of handling these members will result in these members being tethered whenever unbolted from the structure. Per the guidance of NUREG 0612, "Control of Heavy Loads at Nuclear Power Plants" section 5.1.6, all crane lifting will be done such that the load will not exceed 50% of the rated capacity of the crane and "below the hook" rigging will be redundant. Furthermore the crane will not be used over safety related equipment until a satisfactory 10 CFR 50.59 evaluation has been completed. Other hand tools and equipment will be tied off during use over openings in the roof. Administrative controls such as this will ensure no other missiles are credible and that the beams described above do not represent a dropped object threat.

The intent of the bases for this technical specification is 1) that no load in excess of the nominal weight of a fuel assembly be dropped thereby releasing activity greater than that assumed in the WNP-2 safety analysis, and 2) any possible distortion of fuel in the racks due to missile will not result in a critical array. No fuel assemblies are contemplated to be moved during this repair and, with the cover in place and the administrative controls discussed above, no missile will be capable of penetrating into the fuel storage pool causing a critical array. Hence with the cover in place and with the administrative controls discussed above the bases of the technical specification are not challenged.



REQUEST FOR A ONE TIME ONLY TEMPORARY AMENDMENT TO TS 3.9.7 (CRANE TRAVEL - SPENT FUEL STORAGE POOL) UNDER EMERGENCY CIRCUMSTANCES

As discussed with members of your staff the cover itself will exceed 1500 pounds. Assembled dimensions 38 by 45 feet to cover the pool dimensions of 34 by 40 feet, each of three sections weighing approximately 7 tons. To ensure the bases of the technical specification remains unchallenged during fabrication of the cover the following compensatory measures will be adhered to:

- o The cover will be fabricated in three sections well away from the spent fuel storage pool ensuring that no construction immediately over the pool is allowed.
- o The cover sections will be moved over the pool with the Reactor Building Crane such that the sections overlap both edges of the pool by at least a foot at all times. This will ensure that in the event a section is dropped it will not contact the pool but rest on the edges of the pool. The Reactor Building Crane meets the requirements for a "single failure proof crane" as per NUREG 0612, Appendix C.
- o The cover sections will be moved across the pool at a height of approximately twenty inches for obstruction clearance. However, at all times during movement supports will be in place to ensure that the section does not drop more than approximately six inches and designed so that no part of the cover section will come in contact with the pool.
- o The sections will be fastened together beyond the edge of the pool in the overlap area such that no fastening will be done immediately over the pool and no objects dropped into the pool.
- o The cover will be secured in a manner to assure that it will not shift in a design seismic event.
- o Disassembly will be conducted in the reverse manner with the same precaution.

Hence with these compensatory measures the intent of the technical specification bases will be preserved during assembly and disassembly.

The Supply System has evaluated this request per 10 CFR 50.59 and determined that the technical specification change is appropriate. With respect to 10 CFR 50.92 the Supply System proposes that this request does not represent a significant hazard relative to fuel pool integrity. Further, the proposed change will not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated because with the cover in place and the administrative controls imposed on repair tools, equipment and materials no credible missile will be able to penetrate into the fuel storage pool hence there is no significant increase in the probability or consequences of a previously evaluated accident. Furthermore compensatory actions taken during placement and removal of the cover will ensure that no increases in the probability or consequences of a previously evaluated accident result from the cover.

REQUEST FOR A ONE TIME ONLY TEMPORARY AMENDMENT TO TS 3.9.7 (CRANE TRAVEL - SPENT FUEL STORAGE POOL) UNDER EMERGENCY CIRCUMSTANCES

- 2) Create the possibility of a new or different kind of accident than previously evaluated because the cover will not impose any new conditions on the fuel storage pool over those presently in effect and the administrative controls on the repair tools, equipment and material will ensure no new accidents due to these objects are credible.
- 3) Involve a significant reduction in a margin of safety because, as discussed above, the intent of the technical specifications bases is preserved. The cover is designed such that with administrative controls the maximum credible missile will not penetrate into the fuel pool and compensatory precautions during placement and removal of the cover will not create a missile hazard of the cover. Additionally administrative controls on the repair tools, equipment and material will ensure that the margin of safety is maintained. Hence the present margin of safety is not significantly decreased.

As discussed above, the Supply System considers that this change does not involve a significant hazards consideration, nor is there a potential for significant change in the types or significant increase in the amount of any effluents that may be released offsite, nor does it involve a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion set forth in 10CFR 51.22(c)(9) and therefore, per 10CFR 51.22(b), an environmental assessment of the change is not required.

This Technical Specification change has been reviewed and approved by the WNP-2 Plant Operations Committee (POC) and the Supply System Corporate Nuclear Safety Review Board (CNSRB).

In accordance with 10CFR170.21, an application fee of One hundred fifty dollars (\$150.00) accompanies this request. In accordance with 10CFR 50.91, the State of Washington has been provided a copy of this letter.

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

Very truly yours,



G. C. Sorensen, Manager  
Regulatory Programs

PLP/bk  
Attachments

cc: C Eschels - EFSEC  
JB Martin - NRC RV  
NS Reynolds - BCP&R  
RB Samworth - NRC  
DL Williams - BPA/399  
NRC Site Inspector - 901A

STATE OF WASHINGTON )  
COUNTY OF BENTON )

Subject: Technical Specification change  
request to TP 3.9.7

I, P. L. POWELL, being duly sworn, subscribe to and say that I am the Manager, WNP-2 Licensing, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information and belief the statements made in it are true.

DATE February 18, 1988

P. L. Powell  
P. L. POWELL, Manager  
WNP-2 Licensing

On this day personally appeared before me P. L. POWELL to me known to be the individual who executed the foregoing instrument and acknowledged that he signed the same as his free act and deed for the uses and purposes herein mentioned.

GIVEN under my hand and seal this 18th day of February, 1988.

Bernice Kasko  
Notary Public in and for the  
State of Washington

Residing at Kennelworth, Wa



