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SUBJECT: Requests waiver of compliance from Tech Spec 3.8.1.2 re ac
 sources - shutdown.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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July 11, 1990
G02-90-123

Docket No. 50-397

JD Partlow, Associate Director for Projects
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gentlemen:

Subject: NUCLEAR PLANT NO. 2, OPERATING LICENSE NPF-21
REQUEST FOR WAIVER OF COMPLIANCE RELATIVE TO
TECHNICAL SPECIFICATION 3.8.1.2, A.C. SOURCES
- SHUTDOWN

Reference: 1) Letter, G02-90-112, CM Powers (SS) to
JD Partlow (NRC), same subject, dated June 26, 1990
2) Letter, RP Zimmerman (NRC) to AL Oxsen (SS),
"Request for Waiver of Compliance Relative to
Technical Specification 3.8.1.2, AC Sources -
Shutdown", dated June 28, 1990

Reference 1 requested a waiver of compliance from Action a. of the subject Technical Specification to provide for the removal of the Division 2 diesel generator from service while the Division 1 generator was also out of service. The request was granted by Reference 2 for a specified period of time. The purpose of the waiver request was to allow for the performance of rotor pole A.C. voltage drop test on the Division 2 generator. The test results showed one pole of the generator to have shorted turns.

The Supply System plans to conduct a 72 hour run of the Division 2 generator operating in parallel with the offsite source with the unit loaded to rated conditions. During the test the generated waveforms, field current and generator vibration will be monitored and recorded. During the performance of the 72 hour run should any of the off-site sources be lost for more than a few seconds or the grid stability be challenged we will terminate the run.

This test is to provide confirmation that for an extended run, degradation and/or propagation of the shorted turn condition will not occur. Upon completion of the run it will be necessary to perform visual examination of the rotor and repeat the rotor pole A.C. voltage drop test. As was the case for the situation described in Reference 1, this will require removal of the Division 2 diesel generator from service.

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It is expected that these inspection and test activities will require no more than twelve hours, including the time for removal and restoration of diesel generator operability. This time does not include time that may be required to perform surveillance testing of the diesel generator after the unit is restored to service as the unit would be available during such testing (i.e., is capable of responding to an undervoltage condition). Should operation of the diesel generator be required during the twelve hour inspection and testing period it could be restored to service in two hours.

This letter is a request for waiver of compliance from the subject technical specification requirements and is similar to the request of Reference 1.

Performing the Division 2 inspections on the proposed schedule (i.e., with Division 1 out of service) is not consistent with the above mentioned technical specification action statement that requires power sources be restored as soon as practical. However, by completing these activities as proposed, we could save several days of outage time for both the case that confirmatory data is obtained and the case that such data is not obtained.

The request for this waiver could not have been avoided as we have only recently established the significance of the shorted turn condition.

We believe that the safety significance and potential consequences of performing the inspection while the Division 1 diesel is out of service are acceptable in view of the following:

- WNP-2 will have been shutdown for 84 days and approximately 28 percent of the core is fuel that makes a negligible contribution to decay heat. As such, the decay heat level is very low. Should a loss of offsite power occur and the full two hours mentioned above be required to restore the Division 2 diesel or an offsite power source, the reactor coolant temperature would only increase from the current temperature of 135 to 159 degrees F. A temperature of up to 200 degrees F would be acceptable for this condition.
- Under these conditions, the spent fuel pool temperature would increase from 90 to 92 degrees F. A temperature of at least 125 F would be acceptable.
- The reactor coolant pressure boundary status is that the reactor pressure vessel head is on and tensioned.
- High Pressure Core Spray with its diesel will be available for ECCS and, with the Safety Relief Valves, for shutdown cooling. This would provide adequate decay heat removal for at least two days while maintaining an acceptable suppression pool temperature.

- The reliability of the Bonneville Power Administration (BPA) grid has been evaluated to be very high. This is particularly true at this time in that Pacific Northwest is operating with an energy surplus.

During the performance of the above discussed activities, should the waiver be granted, we would take the following compensatory actions:

- Maintenance activities and surveillance on the plant A.C. electrical systems will be carefully controlled so as to reduce the risk of any plant centered loss of offsite power. We will communicate to the Bonneville Power Administration the need to control any maintenance activities on those portions of the 500, 230 and 115 kV systems that, if failed, would have high risk of causing a loss of that supply to WNP-2. In particular no work on the on-site electrical distribution systems, or work which can effect the reliability of the off-site ring buss at the H. J. Ashe substation, will be conducted unless concurred in by the Plant Manager. Arrangements to this effect will be agreed upon between the Supply System and BPA prior to removing the Division 2 diesel generator from service.
- No core alterations, handling of irradiated fuel, crane operation over the spent fuel pool, or activities that could potentially drain the vessel will be performed while the Division 2 diesel is inoperable.
- No work will be conducted on the High Pressure Core Spray System including all sub-systems necessary for its operation unless concurred in by the Plant Manager.
- Secondary Containment will be maintained.
- With the exception of interlock and local leak rate testing of the containment personnel hatch, primary containment integrity will be maintained and containment isolation ability will be available. At a minimum, either the inner or outer door of the containment personnel hatch will be shut at all times.
- The removal of the diesel generator from service, inspection and testing activities and return of the unit to service will be performed to an approved Maintenance Work Request.
- A loss of power recovery plan will have been prepared and approved, which lists the specific actions required to restore the diesel generator to an operable condition. The procedures for doing the work on the Division 2 generator will be completed and approved in accordance with regulatory requirements.



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- Prior to initiating this activity we will contact the weather service for any forecast of thunderstorm or other severe weather near the Hanford Site.
- The plant electrical distribution system will be lined up with offsite power supplied from the 500 kV source. This will allow automatic sequential transfer to the 230 and then the 115 kV sources upon loss of the 500 kV source.
- During the performance of the inspection should any of the offsite sources be lost for more than a few seconds we will implement the loss of power recovery plan (e.g., restore Division 2 operability as soon as practical). We will not resume the activity until the reliability of that source has been established.
- A portable power supply will be staged near the Division 2 diesel generator room with portable lights and connecting cables to be used to provide lighting if offsite power were lost.

A time and task analysis will be conducted prior to removal of the diesel generator from service that substantiates the unit can be restored to operability in approximately two hours.

We have also established that a 210 KW diesel generator is available from the Department of Energy for use at WNP-2 during the period the Division 2 diesel generator would be removed from service should an extended loss of off-site power occur. Equipment and personnel will be available to complete installation, if necessary.

The Supply System concludes that the proposed activity does not involve a significant hazards consideration for the following reasons:

- It would not involve a significant increase in the probability or consequences of an accident. Loss of shutdown cooling is classified as a moderate frequency event. With the very low risk of a two hour loss of offsite power during the twelve hour time period (by NUREG-1032, figure 3.2, this is about 5×10^{-5} for plant-centered, grid and weather related causes) and the compensatory actions committed to above, the relatively high frequency of occurrence already assigned to a loss of shutdown cooling event (i.e., about once per year) would not be impacted. In the very unlikely event of a loss of shutdown cooling for two hours, the resulting reactor coolant temperature increase would not challenge the fuel cladding or any of the other fission product boundaries. Likewise the increase in spent fuel pool temperature would be acceptable for a two hour loss of spent fuel pool cooling. Thus the consequences of a loss of shutdown cooling and spent fuel pool cooling are not increased.
- It would not create the possibility of a new or different kind of accident. With the current plant status, the only significant accident considerations are losses of shutdown and spent fuel pool cooling, both of which are previously evaluated events.

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REQUEST FOR WAIVER OF COMPLIANCE RELATIVE TO
TS 3.8.1.2, AC SOURCES - SHUTDOWN

- It would not create a significant decrease in a margin of safety as the temperature increases that would accompany a loss of shutdown cooling and spent fuel cooling do not challenge previously established margins for fission product barriers and suppression pool temperature.

The issuance of the requested waiver would have no environmental consequences even should the postulated loss of shutdown cooling and spent fuel cooling events occur. This request has been approved by the WNP-2 Plant Operations Committee. It is requested that the waiver be granted for a twelve hour consecutive period to occur within the time period from 8:00 a.m. (PDT) July 15, 1990 to 7:00 p.m. July 18, 1990. All other technical specifications will remain in effect.

Very truly yours,



C.M. Powers
Plant Manager, WNP-2

AGH/bk

cc:

JB Martin - NRC RV
NS Reynolds - BCP&R
PL Eng - NRC
DL Williams - BPA/399
NRC Site Inspector - 901A
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CR Wallis - EFSEC