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SUBJECT: Application for amend to License NPF-21, revising Tech Spec
3.8.1.1 to eliminate unnecessary starts.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352

March 2, 1990
G02-90-037

Docket No. 50-397

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Subject: NUCLEAR PLANT NO. 2, OPERATING LICENSE NPF-21
REQUEST FOR AMENDMENT TO TECHNICAL SPECIFICATION
3.8.1.1, AC SOURCES REDUCING EXCESSIVE TESTING
OF DIESEL GENERATORS

In accordance with the Code of Federal Regulations, Title 10, Part 50.90 and 2.101, the Supply System hereby submits a request for amendment to the WNP-2 Technical Specifications. Specifically, the Supply System is requesting that the testing of diesel generators (DGs), required by the Actions of Specification 3.8.1.1, AC Sources, be revised as attached to eliminate unnecessary starts. Excessive DG starts is known to reduce the availability and reliability of the DG system. In addition to eliminating unnecessary starts the proposed changes will allow plant resources to focus on restoring equipment to operable status. The present technical specifications requiring a large number of DG starts diverts, to some extent, the attention of the plant staff to restoring failed equipment. With implementation of the proposed changes DG availability and reliability will be improved and plant resources in the event of equipment failure more focused on returning equipment to operability rather than starting a diesel generator when its operability is not suspect. The changes requested are generally consistent with Technical Specifications approved by the NRC on all the most recently licensed facilities.

Excessive testing has been shown to result in degradation in diesel engines. This conclusion was stated by the NRC in Generic Letter 84-15, "Proposed Staff Action To Improve and Maintain Diesel Generator Reliability." Moreover, the types of changes proposed by the Supply System are consistent with the types of changes to Action Statements reviewed and approved on the North Anna Power Station, Unit 2 in the NRC SER dated April 25, 1985.

Adol
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PDC

REQUEST FOR AMENDMENT TO TS 3.8.1.1,
AC SOURCES REDUCING EXCESSIVE TESTING OF DIESEL GENERATORS

There are four types of changes being requested to the Action Statements for inoperable DGs. Each one is discussed separately. For clarity, the existing Action a. (one offsite circuit, DG-1 or DG-2 inoperable) has been rewritten as Action a. (for one offsite circuit inoperable) and new Actions b. and h. have been added. New Action b. addresses DG-1 or DG-2 inoperable and new Action h. covers the inoperability of DG-1 and DG-3 or DG-2 and DG-3. The Action h. inoperability is not addressed by the present Technical Specifications. The proposed new action invokes the same requirements as the present Technical Specifications for DG-1 and DG-2 inoperable. Each of the remaining actions are renumbered to account for the new Action.

1. With one offsite circuit inoperable, the required DG start surveillance in Action a. is requested to be assumed to be satisfied if it had been satisfactorily performed within the past 24 hours.

With an offsite circuit inoperable, additional assurance of DG operability is required due to the greater likelihood of needing the DGs during this period. Currently, this is required regardless of when the previous surveillance was performed. Since assurance of DG operability is greatest immediately following a performance verification, there would appear to be no overriding need to re-perform this test if acceptable assurance of operability exists. Twenty-four hours is considered acceptable based on the competing desires to minimize excessive testing and the need for added assurance of operability. This time frame is also consistent with that approved by the NRC on many dockets.

This allowance will preclude a requirement to perform successive DG tests within a short time period solely due to the discovery of an inoperable offsite AC circuit. Due to the physical separation and design independence between offsite circuits and the DGs, the discovery of the inoperable offsite circuit will not, itself, lessen the assurance of DG operability obtained by the recent test.

2. Each of the Actions associated with inoperable AC sources, except renumbered Action e., requires testing operable DGs. This testing is currently required initially within 2 or 4 hours and then repetitively each 8 hours thereafter. The requested change will require only one DG start test, and allow its performance to be within 8 hours (if one DG is required to be tested) or 24 hours (if two or three DGs require testing).

The DG start testing is required to provide assurance that the remaining DGs are operable and provide assurance that a generic or common mode failure does not exist with the DGs. As was discussed in the above item, the competing desires to minimize excessive testing and the need for added assurance of operability can be satisfactorily met with a single test within a recent time frame. Continuing to repeat the surveillance for the limited duration of the Action (in all cases ≤ 72 hours) does not provide sufficient increased assurance of operability to warrant the decreased reliability caused by excessive testing.

Page Three
REQUEST FOR AMENDMENT TO TS 3.8.1.1.,
AC SOURCES REDUCING EXCESSIVE TESTING OF DIESEL GENERATORS

The allowance for 8 hours when testing 1 DG (new Action e.) and 24 hours when testing two or three DGs (new Action a., b., c., d. and f.) is requested to provide more time to prepare for the tests without excessive pressures on the operations staff. In the event of an inoperable AC source, the foremost priority should be directed towards determination and correction of the cause for the inoperability. Although added assurance of the remaining DGs operability and/or verification of no generic problem is warranted, there is no reason to immediately suspect these DGs are not operable. Therefore, a reasonable period of time should be allowed to first assess the known inoperability, then make prudent preparations to perform the required DG surveillances. In the event where two or more DGs require testing, they must be performed sequentially, which accounts for the additional time to complete the surveillances. Relaxing the interval in which the DGs must be tested relieves the plant staff of an immediate priority which can divert resources from other important tasks and allows for more prudent resource and time management decisions to dictate immediate actions. This should also minimize personnel errors which are more prone to occur when under severe time constraints.

3. The requirement for operable DG testing when one or more DGs are inoperable (renumbered Actions b., d. and g.) is requested to be excepted if the inoperability(s) are known to not impact the operability of the other DGs.

Many circumstances, including Technical Specifications required surveillances, result in a DG becoming incapable of automatically responding to an accident signal, e.g., intentional lock out of DGs to 1) perform preventive maintenance, or 2) air rolls prior to engine starts. Other circumstances can also result in an inoperable DG which obviously have no effect on other DGs. e.g., operational error, low fuel oil level in the storage or day tank, fuse blown in a control circuit, the administrative declaration of a DG inoperable due to a Technical Specification Action, etc. Many of these type of inoperabilities can be restored, independently tested, and the DG returned to operable status without that DG being started, while the Technical Specifications would still require the unaffected DGs to be started. This is a clear case of excessive DG testing.

When a DG is inoperable, testing the redundant DGs serves to verify no common mode failure exists which could render all DGs inoperable. The loss of a DG itself does not increase the likelihood of an event which would require the remaining DGs as is the case for an inoperable offsite circuit. Therefore, there is no need to provide added assurance of DG operability above that provided by the normally required surveillances.

REQUEST FOR AMENDMENT TO TS 3.8.1.1.,
AC SOURCES REDUCING EXCESSIVE TESTING OF DIESEL GENERATORS

The exception to not perform additional surveillances on DGs when one or more DGs are discovered inoperable "due to any cause other than preplanned preventive maintenance and testing" is allowed on many dockets. The more conservative change proposed by the Supply System recognizes this intent to minimize unnecessary and excessive DG testing, and more generally apply the same intent to a broader range of similar circumstances. This enhancement over previously NRC approved Actions requires assessing the potential for common mode failure irrespective of "preplanned preventive maintenance and testing" in progress. This is intended to avoid potentially inappropriate interpretations which would allow a potential common mode failure, discovered during (or "caused" due to) a planned surveillance test or preventive maintenance, to go undetected on other DGs.

4. Where the inoperability of DG-3 (previously Action c.) required the starting of DG-1 and DG-2 within 4 hours, the renumbered Action d. no longer requires this action. As described in the WNP-2 FSAR Chapter 8.3, DG-3 shares no commonality with DG-1 and DG-2. DG's 1 and 2 are dual drive units while DG-3 is a single drive unit all of which utilize the same basic diesel engine. A concern for common mode failure of the engines is not reasonable given the operating and maintenance history to date. Once assembled, the divergence of the designs, maintenance schedules, and operating requirements and history removes common mode practices and failures from concern. Assembly and support system designs are different and no support systems are shared. As such a failure of DG-3 cannot imply common mode failure concerns with DG-1 and DG-2. Therefore tests of DG-1 or DG-2 in response to a failure of DG-3 is again a clear case of excessive testing.

The Supply System has evaluated this amendment request per 10CFR 50.92 and determined that it does not represent a significant hazard because it does not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated.

Loss of offsite power is analyzed as an event and is assumed to occur coincident with design basis accidents. The requirements for operability, routine testing and special testing of the offsite AC sources, when operating with inoperable equipment, have not been modified and therefore the reliability of the offsite circuits remains unaffected. The DG system functions to mitigate accident consequences, it is not assumed to be involved in the initiation of any design basis event. therefore, the changes to Actions involving increased testing of DGs will not increase the probability of a design basis event previously evaluated.

The function of the AC sources to mitigate the consequences of an analyzed event is based on supplying sufficient power to equipment assumed to function during an accident. The proposed change does not propose any hardware changes such as changes to load capability or to the required loads assumed in analyzed accidents. The requested changes will affect the need to perform surveillance procedures so as to enhance DG reliability by reducing the number of starts required. Therefore, the consequences of an accident previously evaluated is not increased.

Additionally, the ability of the plant to mitigate accidents is enhanced by allowing plant staff to direct their attention and resources to restoring inoperable equipment to service rather than immediately requiring attention to be focused on equipment whose operability is not suspect (i.e. DG starting). The time and resource used in starting the DG under the present technical specifications can be used to restore failed equipment and thereby return the plant to an optimum condition.

- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated.

The design function and operation of the DG system and the offsite power system is not affected by this change. There are no new modes of operation introduced. The reliability of the DG system to provide an emergency source of power is not reduced as no hardware changes are proposed and the proposed changes are enhancements to DG reliability and plant staff response capability. Therefore, there is no possibility of a new or different kind of accident being introduced due to this change.

- 3) Involve a significant reduction in a margin of safety.

The margin of safety associated with operation with inoperable AC sources is based on probabilities of a design basis event occurring, and the availability and reliability of the remaining operable sources. As discussed above, the probability of an event is not increased due to this requested change. The allowed outage times and minimum required systems and components is not affected by this change. The availability and reliability is being enhanced by the reduction in required DG starts. Therefore, the margin of safety is not reduced by the change.

The possibility of an undetected DG failure existing concurrent with the inoperability of one or more AC sources is the basis for the requirement to test remaining operable DGs. This requirement is assumed to be satisfied in this change request, provided it was performed within the previous 24 hours. This recent performance provides adequate assurance of the DG operability without unduly imposing excessive DG tests. The perceived gain in safety from re-demonstrating the operability of the remaining DGs is offset by the recent assurance of operability and the increase in the margin of safety by reducing tests starts.

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 10CFR 50.91, the State of Washington has been provided a copy of this letter.

Very truly yours,



G. C. Sorensen, Manager
Regulatory Programs

PLP/bk
Attachments

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


STATE OF WASHINGTON)

COUNTY OF BENTON)

Subject: Request for Amendment to
T. S. 3.8.1.1, AC Sources
Reducing Excessive Testing of
Diesel Generators

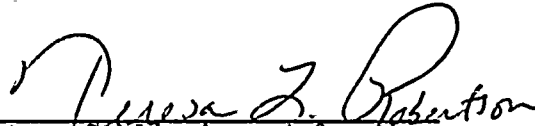
I, G. C. Sorensen, being duly sworn, subscribe to and say that I am the Manager, Regulatory Programs, for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information, and belief the statements made in it are true.

DATE 2 MARCH, 1990


G. C. Sorensen, Manager
Regulatory Programs

On this day personally appeared before me G. C. Sorensen, 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 2nd day of March 1990.


Notary Public in and for the
STATE OF WASHINGTON

Residing at Richland, WA
My commission expires 7/14/91

