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SUBJECT: Requests enforcement discretion from TS surveillance requirement 3.8.4.7 for one time exemption for completion of battery svc test for Division 2,125 VDC,Battery E-B1-2.TS amend request is being submitted under separate cover.

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July 16, 1998
GO2-98-125

Docket No. 50-397

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21, REQUEST FOR ENFORCEMENT DISCRETION FROM TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT 3.8.4.7**

Reference: USNRC Administrative Letter 95-05 dated November 7, 1995, "Revisions to Staff Guidance for Implementing NRC Policy on Notices of Enforcement Discretion"

The Supply System hereby requests enforcement discretion from Technical Specification Surveillance Requirement (SR) 3.8.4.7. Specifically, the Supply System requests a one time exemption for completion of the battery service test for Division 2, 125 VDC, Battery E-B1-2. The Supply System has determined that the verbatim requirements of SR 3.8.4.7 have not been fulfilled within the Frequency plus the allowed extension time specified in the Technical Specifications. At the time of this letter, WNP-2 is using the provision SR 3.0.3 to delay taking compensatory measures required by Technical Specification LCO 3.8.4, while enforcement discretion is being pursued. It is requested that enforcement discretion remain in effect until the forthcoming Technical Specification amendment is approved.

By separate cover, the Supply System is submitting a request for a Technical Specification amendment to extend the Frequency for SR 3.8.4.7 until entry into Operational Mode 4 (cold shutdown) for the R-14 maintenance and refueling outage or an outage of sufficient duration, whichever occurs first.

A001

Each of the 12 criteria in NRC Inspection Manual Part 9900 is addressed below:

1. **The Technical Specification or other license condition that will be violated.**

   The Supply System has determined that the Frequency plus the allowed extension time has been exceeded for performance of the battery service test on Division 2, 125 VDC, Battery E-B1-2 in accordance with Surveillance Requirement 3.8.4.7.

2. **The circumstances surrounding the situation, including root causes, the need for prompt action and identification of any relevant historical events.**

   A short description of the types of battery tests involved is germane to the discussion of the issue.

   The battery service test required by the 24 month SR 3.8.4.7 is a special test of the battery's capability, as found, to satisfy the design requirements (battery duty cycle) of the DC Electrical power system. The test discharge rate and test length correspond to the design duty cycle requirements specified in the WNP-2 FSAR (Section 8.3.2).

   The 60 month SR 3.8.4.8 is satisfied by performance of a battery performance discharge test or a modified battery performance discharge test.

   A battery performance discharge test is an as found test of the constant current capacity of the battery intended to determine overall battery degradation due to age and usage. The battery is subjected to a constant discharge rate.

   A modified battery performance discharge test is a combination of the two aforementioned tests and is considered a more severe test of battery capacity. It employs two discharge rates: a short duration discharge rate consistent with the largest current load of the duty cycle, followed by the discharge rate used in the battery performance discharge test. The test is intended to confirm the battery's ability to meet the critical period of the load duty cycle and determine its percentage of rated capacity. The discharge rates envelope the duty cycle of the service test described above.

   Technical Specification SR 3.8.4.7 (Note 1) allows the modified performance discharge test of SR 3.8.4.8 to be performed in lieu of the 24 month battery service test in order to fulfill the requirements of SR 3.8.4.7 and SR 3.8.4.8 with one test. The provision of this note was not fully implemented the last time surveillance was performed for the Division 2 125 VDC battery (April 1997) in that the test that was performed was the performance discharge test and not the modified performance discharge test.

   The apparent cause for the noncompliance is an inadequate surveillance procedure resulting from failure to fully reflect the changes enacted through the implementation of Improved Technical Specifications. Specifically, the performance discharge was not modified to incorporate the short

duration discharge rate which corresponds to the largest current load of the duty cycle, prior to using it to satisfy SR 3.8.4.7. Prior to the implementation of Improved Technical Specifications (ITS), the Technical Specifications allowed for only the performance test (vice the modified performance test) to satisfy the service test surveillance requirements.

Failure to meet the battery service test SR requires the Division 2 125 VDC battery to be declared inoperable. This requires entry into Condition A and Required action A.1 of LCO 3.8.4 with a Completion Time of 2 hours. Since this Completion Time cannot be met, LCO 3.8.4 Actions D.1 and D.2 would require taking the plant to cold shutdown. Technical Specifications prohibit the performance of SR 3.8.4.7 and SR 3.8.4.8 in Modes 1, 2, or 3. The Supply System believes that it is more prudent to rely on the demonstrated capability of the battery to perform its intended safety function than in requiring an unnecessary plant shutdown.

There are no relative historical events involving the failure to incorporate ITS surveillance requirements into our surveillance procedures.

3. **The safety basis for the request, including an evaluation of the safety significance and potential consequences of the proposed course of action. This evaluation should include at least a qualitative risk assessment derived from the licensee's PRA.**

The service test requires a discharge rate of 400 amps for the first six seconds then drops to less than 250 amps for a duration of two hours. The performance test requires a constant 350 amps throughout the test. Therefore a difference of 50 amps for the first six seconds is not enveloped by the performance test. The service test requirement of 400 amps is small compared to the manufacturer's one-minute discharge rating of the battery (922 amps). The performance test completed in April of 1997 demonstrated a battery capacity of 104.7% which is above the replacement value of 80% capacity. Additionally, the battery has been installed for less than five years and should be in the prime of its service life. Based on the substantial battery capacity demonstrated by the performance test and the short duration peak load required by the service test (400 amps) as compared to the one-minute rating of the battery (922 amps), the battery is fully capable of meeting the requirements of the modified performance test and the service test. On-going surveillances include inspection of intercell connector resistance, specific gravity, visual condition and battery terminal voltage. The manufacturer has been consulted and stated in writing that the difference between the performance discharge test and the modified performance discharge test is not significant relative to the battery capacity and its short duration discharge rate. Therefore the proposed course of action has no safety significance.

The proposed enforcement discretion negates the requirement to unnecessarily shutdown the plant by mitigating the need to comply with SR 3.8.4.7. The battery will not be removed from service during plant operation. Therefore, there is no change in availability of the Division 2 125 VDC battery, charger, or distribution system, and as such, there is no change in the base assumptions of our PRA models. Thus there is no impact on the WNP-2 PSA.

4. **The basis for the licensee's conclusion that the noncompliance will not be of potential detriment to public health and safety and that neither an unreviewed safety question nor a significant hazard consideration is involved.**

   a. **Operation of WNP-2 in accordance with the enforcement discretion will not involve a significant increase in the probability or consequences of an accident previously evaluated.**

   The safety function of the Battery E-B1-2 is to provide 125 VDC power to the Division 2 safety-related loads including; RCIC Turbine Exhaust Valve, CAC Isolation Valves, Diesel (DG-2) Engine Backup Lube and Fuel Oil Pumps, Critical Switchgear control power, Critical Instrument Power Supply Inverter, NSSS Instrument and Control Board power, and control power to the Remote Shutdown Panel. This establishes the Division 2, 125 VDC Power system as an accident mitigation system, and not as a system which potentially causes accidents. The difference between the Technical Specification "Modified" Performance Test short duration load of 400 amperes and the 350 ampere load defined in Performance Test Procedure ESP-B12-F101 are small when compared to the 922 ampere one-minute rating of the battery; and testing at the levels defined in either situation does not increase the probability or consequences of an accident previously evaluated. The ability of the Division 2 125 VDC battery to mitigate the consequences of an accident remain unchanged.

   b. **Operation of WNP-2 in accordance with the enforcement discretion will not create the possibility of a new or different kind of accident from any accident previously evaluated.**

   The safety function of the Battery E-B1-2 is to provide 125 VDC power to Division 2 safety-related loads. This establishes the Div 2, 125 VDC Power system as an accident mitigation system, and not as a system which potentially causes accidents. When compared to the 922 ampere one-minute rating of the battery, the 50 amperes for six seconds difference between the Technical Specification "modified" performance test and the performance test defined in Surveillance Procedure ESP-B12-F101 does not create the possibility of a different kind of accident from any accident previously evaluated. There are no new failure modes of the 125 VDC distribution system introduced as result of this request.

   c. **Operation of WNP-2 in accordance with the enforcement discretion will not involve a significant reduction in the margin of safety.**

   The margin of safety for the Division 2, 125 VDC battery is the two hour operating time defined in the DC System design basis. Battery E-B1-2 is properly sized using the methodology prescribed in IEEE Standard 485-1983 and includes the emergency loads anticipated during a Loss Of Coolant Accident (LOCA) with a coincident Loss Of Offsite Power (LOOP), for two hours. The Battery Service Test (ESP-B12-B101)

encompasses the safety-related two hour duty cycle and demonstrates that the battery is able to supply and maintain the operable status of all emergency loads for their respective duty times. The Performance Test uses the manufacturer's two hour discharge rate and is used to establish baseline capacity for trending battery degradation and is not used to determine whether or not the battery can fulfill its safety function of supplying safety-related loads. The "Modified" Performance Test required by the Technical Specifications draws approximately 700.1 ampere-hours and the Performance Test defined in Surveillance Procedure ESP-B12-F101 draws 700 ampere-hours. Both of these tests are more severe than the Service Test which, when corrected for temperature, removes approximately 413 amp-hours. Since the Performance Test performed in April 1997 demonstrated a capacity of 104.7% (of 700 A-h) there is no decrease in the margin of safety when compared to the demands of the LOCA with LOOP duty cycle, (i.e., the Service Test).

5. The basis for the licensee's conclusion that the noncompliance will not involve adverse consequences to the environment.

Allowance of discretion from compliance with SR 3.8.4.7 will not result in a reduction in the margin of safety and does not present a change in the ability of any safety related equipment to perform its intended safety function. There is no change in the type or amount of any effluents that may be released offsite because the battery will not be removed from service during plant operation and thus will remain capable of performing its intended safety function. Therefore allowance of the enforcement discretion will not have an adverse impact on the environment.

6. Any proposed compensatory measures.

The noncompliance has resulted from a change management issue. Functionality of equipment and adequate margin to safety is assured by engineering analysis of battery test results and normal surveillance activities. Additionally, a compensatory measure to verify battery connection resistance instead of the standard visual corrosion inspection will be conducted on a 92 day interval.

7. The justification for the duration of the noncompliance.

By separate cover letter WNP-2 is submitting a request for amendment to Technical Specifications which will request the Frequency of SR 3.8.4.7 to be extended until the time WNP-2 enters mode 4 for the R-14 maintenance and refueling outage scheduled for mid 1999 or a forced outage of sufficient duration to perform the testing and accomplish the necessary post test battery recovery actions. This extension is to accommodate performing the battery service test while the unit is in cold shutdown. The duration of this request is reasonable based on the following:

- The service test requirement of 400 amps is small compared to the manufacturer's one-minute discharge rating of the battery (922 amps).
- The performance test completed in April of 1997 demonstrated a battery capacity of 104.7% which is above the replacement value of 80% capacity.
- The battery has been installed for less than five years and should be in the prime of its service life.
- On-going surveillances include inspection of intercell connector resistance, specific gravity, visual condition and battery terminal voltage.
- The manufacturer has been consulted and stated in writing that the difference between the performance discharge test and the modified performance discharge test is not significant relative to the battery capacity and its short duration discharge rate

8. **A statement that the request has been approved by the facility organization that normally reviews safety issues.**

   The request for enforcement discretion has been reviewed and approved by the WNP-2 Plant Operations Committee.

9. **The request must specifically address how one of the NOED criteria for appropriate plant conditions specified in section B is satisfied.**

   WNP-2 is presently operating. This enforcement discretion meets criterion 1(a) of section B of Part 9900. It is intended to avoid an undesirable plant shutdown. Failure to meet the battery service test SR requires the Division 2 125 VDC battery to be declared inoperable. This directs entry into Condition A and Required Action A.1 of LCO 3.8.4 with a Completion Time of 2 hours. Since this Completion Time cannot be met, LCO 3.8.4 Actions D.1 and D.2 requires taking the plant to cold shutdown. The Supply System believes that it is more prudent to rely on the demonstrated capability of the battery to perform its intended safety function than in requiring an unnecessary plant shutdown.

   Accordingly, this enforcement discretion also meets criterion 1(b) of section B Part 9900 in that the performance of the battery service test is inappropriate for the current plant conditions.

10. **If a follow-up license amendment is required, the NOED request must include marked-up TS pages showing the proposed changes. The actual license amendment request must follow within 48 hours.**

    Attachment 1 contains the marked up page for the Technical Specifications. The actual license amendment request will be submitted by separate cover letter within 48 hours.

11. A statement that prior adoption of approved line-item improvements to the TS or the ITS would not have obviated the need for the NOED request.

No line item improvement exists for Technical Specifications which would have obviated the need for this NOED request.

12. Any other information the NRC staff deems necessary before making a decision to exercise discretion enforcement.

None identified at this time.

Should you have any questions or desire additional information regarding this matter, please call me or Mr. PJ Inserra at (509) 377-4147.

Respectfully,

JV Parrish
for Chief Nuclear Officer
Mail Drop 1023

Attachment

cc: EW Merschoff - NRC-RIV
DF Kirsch - NRC-RIV, WCFO
C Poslusny, Jr. - NRC-NRR
NRC Sr. Resident Inspector - 927N
DL Williams - BPA/399
PD Robinson - Winston & Strawn

SURVEILLANCE REQUIREMENTS (continued)

	SURVEILLANCE	FREQUENCY
SR 3.8.4.5	Verify battery connection resistance is ≤ 24.4 E-6 ohms for inter-cell connectors of the Division 1 and 2 batteries, ≤ 169 E-6 ohms for inter-cell connectors of the Division 3 battery, and ≤ 20% above the resistance as measured during installation for inter-tier and inter-rack connectors.	12 months
SR 3.8.4.6	Verify each required battery charger supplies the required load for ≥ 1.5 hours at: a. ≥ 126 V for the 125 V battery chargers; and b. ≥ 252 V for the 250 V battery charger.	24 months
SR 3.8.4.7	----------NOTES---------- 1. The modified performance discharge test in SR 3.8.4.8 may be performed in lieu of the service test in SR 3.8.4.7 once per 60 months(*) 2. This Surveillance shall not be performed in MODE 1, 2, or 3. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify battery capacity is adequate to supply, and maintain in OPERABLE status, the required emergency loads for the design duty cycle when subjected to a battery service test.	24 months

(continued)

*Note 1 is modified to allow the performance discharge test in SR 3.8.4.8 to be performed in lieu of the service test in SR 3.8.4.7 for Battery E-B1-2 until the R-14 refueling outage or a forced outage of sufficient duration to perform the service test and accomplish the necessary post test battery recovery actions.