WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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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
NRC INSPECTION REPORT 90-20
RESPONSE TO EOP INSPECTION TEAM ISSUES

Reference: Letter, RP Zimmerman (NRC) to GC Sorensen (SS), same subject, dated October 23, 1990

As requested in the referenced cover letter to the subject inspection report, the purpose of this correspondence is to provide comments pertaining to those findings and concerns identified during the NRC Emergency Operating Procedures (EOPs) Team Inspection. Specifically, the NRC identified two findings, which were identified in the inspection report as open items, that pertained to 1) the lack of EOP guidance for determining the temperature near reactor vessel level instrument runs in the Reactor Building and 2) errors in certain EOP graphs that may have caused inappropriate operator actions had the graphs been used. Although we were requested to respond in writing to only these two issues, this response also addresses the other open items which were discussed in the report.

The Supply System acknowledges the concern pertaining to Open Item 90-20-05, "Implementation of EOP Caution 1 (RPV Level Instrumentation)". With the WNP-2 plant-specific design, the Supply System is unable to properly implement Caution 1 in its present form due to the inability to determine Reactor Building temperatures in the areas of the RPV level instrument legs. Our initial evaluation of this problem did not reveal a clear method of either resolving or implementing this issue (from a symptomatic standpoint). However, the Supply System has identified the plant-specific events that could result in secondary containment temperatures that would be high enough to adversely affect the RPV level instrument sensing lines. (It should be noted that area temperatures greater than or equal to 212 degrees fahrenheit are required before the RPV level instrumentation would be adversely affected.) Accordingly, we have concluded that the only credible events that could cause these temperatures to exist would either be a fire or an unisolated high energy line break (HELB).

In the case of a fire, WNP-2 has both smoke and thermal detectors which indicate or alarm in the Control Room. Because events such as this are readily identifiable, proper mitigative guidance is given to the Operations staff through our event-based fire protection procedures and pre-fire plans. Examples of existing mitigative actions for a fire include automatic fire suppression systems and fire brigade response. However, to ensure an understanding of the effects that a fire can have on the accuracy of RPV level instrumentation, we will conduct a review of our existing fire response procedures and make any changes necessary to ensure that proper procedural guidance is provided relative to this issue. This review will be completed during January, 1991.

For high energy line breaks, current design analyses indicate that events such as these could result in temperatures which exceed 212 degrees fahrenheit. However, due to automatic mitigation design features, the higher temperatures would only be present for approximately two minutes. This two minute duration is an insufficient amount of time to raise the temperature of the level sensing lines to a point where it would affect the corresponding vessel level instrumentation. For these reasons, we believe only an unisolated HELB (an event requiring multiple failures) could result in elevated temperatures of sufficient duration to be of concern. Pertaining to this scenario, the existing EOP guidance in Secondary Containment Control requires that a reactor scram be initiated and an automatic depressurization of the reactor be performed. These actions result in complete reactor depressurization and; therefore, minimize the effect that an HELB would have on RPV level instrumentation. Current plans are to correlate leak detection capabilities with vessel level sensing line locations and ensure that procedures are adequate to mitigate such events, and provide for safe shutdown of the plant. The review and corresponding procedure development activities are expected to be completed by March, 1991.

In the interim, existing plant procedures are considered adequate to cope with events that fall within the design basis of the plant (an unisolated HELB is beyond the WNP-2 design basis). Furthermore, the Supply System has raised this issue with the BWR Owners Group and we are pursuing a solution in parallel with the efforts described above.

With regard to Open Item 90-20-06, "Calculation Errors in EOP Graphs", the Supply System acknowledges the validity of this issue in that, although the final calculations were correct, they were not incorporated into the procedures. Following NRC discovery of this discrepancy, the item was determined to be reportable as a condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident. The reason this situation was reportable was because the discrepancies could have delayed those required Plant Operator actions if an emergency situation had occurred during the time-frame that the nonconservative direction was included in the procedures. Accordingly, LER 90-019 was written and submitted to the NRC on October 12, 1990.

The cause of this event was personnel error due to inadequate communication during the procedure revision process. During revision of the EOPs, development of the design calculations and the associated procedure revisions were being performed concurrently by two separate groups. Supply System Engineering personnel were responsible for performing the calculations and Plant Operations personnel were responsible for the procedure development. In this particular situation, preliminary calculations were initially used as the basis for the curves in the procedure. However, during final review of the calculations, the results were changed and the new information from the final calculations was not incorporated into the revised EOPs. This oversight was not discovered prior to implementation of the revised EOPs, nor during a special review of the procedures by the Technical Assessment Group. A contributing factor could have been Engineering personnel re-assignments during this process; however, it could not be precisely determined where in the process the oversight occurred.

As a further corrective action, it was stated in LER 90-019 that a review of all curves in the EOPs was performed to verify accuracy with the corresponding design calculations. As a result of that review, two additional problems were discovered. Our current plans are to verify correct incorporation of all EOP calculations into the existing EOPs. Any problems identified as a result of this effort will be resolved by means of our Problem Evaluation Request (PER) process. It was also stated in LER 90-019 that the root cause of this event would be completed and the results, including any further corrective actions, would be addressed in a supplemental report. This supplemental LER is currently in the process of being written. Included in the revised LER will be a discussion of any additional problems discovered with the implementation of the EOP calculations and the applicable follow-up corrective actions as provided in this response. The current target date for submitting the revised LER is January 14, 1991.

The inspection report also identified three Open Items (90-20-01, 90-20-02 and 90-20-03) pertaining to deviations from the BWROG EPGs, Revision 4. The Supply System acknowledges there is a concern with regard to these deviations. Accordingly, we have and will continue to discuss this issue with the BWR Owners Group. We also plan to discuss these issues and our justifications with the Office of Nuclear Reactor Regulation (NRR) at their convenience.

The final concern in the inspection report is Open Item 90-20-04, which pertains to development, verification and validation of the EOPs and EOP support procedures. The Supply System acknowledges the validity of this concern. As a result, a comprehensive review of <u>all</u> issues identified in the inspection report was performed. Each issue identified in the inspection report was analyzed for process applicability, significance and implementation. As a result of this review and the issues identified in the inspection report, the following actions will be taken:

1. Appropriate corrective action for the majority of the issues identified by our comprehensive review either has been or will be taken. However, the review identified some items that we have elected not to implement. As a result, we would propose to provide the results of our review to the NRC. It is also our intent to schedule a meeting with NRC, Region V, personnel to discuss the items identified in the inspection report.

2. The human factors guidance currently provided in the procedure writer's guides will be reviewed by a Human Factors Engineer. The intent of this review is to have the writer's guides reflect good human factors engineering. Following this review, the procedure writer's guides will be modified accordingly. Current plans are to promptly obtain the services of a Human Factors Engineer and develop an action plan for this activity. Once developed, the action plan will be submitted to NRC, Region V, personnel for review.

3. The entire population of EOPs, ESPs and associated flow chart will be revalidated. This effort will begin following completion of the human factors review of the writer's guide and associated changes to the EOPs. It is recognized that additional staffing increases will be necessary to support this task, while maintaining our current ongoing procedure development effort. A completion schedule will be developed based on the results of the Human Factors Engineer review and modification of the procedure writer's guides. The scope of this activity will also be dictated by the actions as described in item number 2 above.

As a result of our review of all issues identified in the inspection report, it is recognized that improvements can be made. Accordingly, our improvement initiatives are intended to significantly enhance our procedures and procedure development process. We also plan to provide the NRC with periodic updates with regard to this improvement effort.

Very truly yours,

G. C. Sorensen, Manager
Regulatory Programs

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