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SUBJECT: Provides response to GL 94-02.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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August 29, 1994

G02-94-204

Docket No. 50-397

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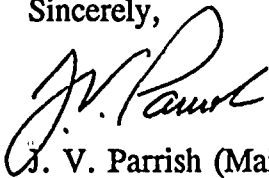
Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21  
RESPONSE TO NRC GENERIC LETTER 94-02**

The purpose of this letter is to provide the Supply System response as required by NRC Generic Letter (GL) 94-02. The actions requested by GL 94-02 and the associated Supply System responses are contained in Attachment A to this letter.

If you have any questions regarding this matter, please contact me or Mr. P. R. Bemis at (509) 377-4027.

Sincerely,



J. V. Parrish (Mail Drop 1023)  
Assistant Managing Director, Operations

JH/kd  
Attachment

cc: LJ Callan - NRC RIV  
KE Perkins, Jr. - NRC RIV, Walnut Creek Field Office  
NS Reynolds - Winston & Strawn  
JW Clifford - NRC  
DL Williams - BPA/399  
NRC Sr. Resident Inspector - 901N

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Subject: Response to Generic Letter 94-02

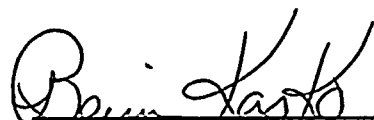
I, J. V. PARRISH, being duly sworn, subscribe to and say that I am the Assistant Managing Director, Operations for the WASHINGTON PUBLIC POWER SUPPLY SYSTEM, the applicant herein; that I have the full authority to execute this oath; that I have reviewed the foregoing; and that to the best of my knowledge, information, and belief the statements made in it are true.

DATE 29 August, 1994

  
\_\_\_\_\_  
J. V. Parrish, Assistant Managing Director  
Operations

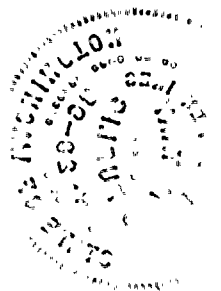
On this date personally appeared before me J. V. PARRISH, to me known to be the individual who executed the foregoing instrument, and acknowledged that he signed the same as his free act and deed for the uses and purposes herein mentioned.

GIVEN under my hand and seal this 29 day of August 1994.

  
\_\_\_\_\_  
Notary Public in and for the  
STATE OF WASHINGTON

Residing at Kennewick, WA

My Commission Expires 4/28/98



## ATTACHMENT A

### NRC Generic Letter 94-02 Action Request No. 1:

All licensees of BWRs, except for Big Rock Point which does not have the capability for operation under variable flow conditions, are requested to review their current procedures and training programs and modify them as appropriate to strengthen the administrative provisions intended to avoid power oscillations or to detect and suppress them if they occur prior to implementation of the long-term solutions. The experience gained at WNP-2 should be a primary guide in this review. In doing this, each licensee of a BWR (except for Big Rock Point) should:

- a. Ensure that procedural requirements exist for initiation of a manual scram under all operating conditions when all recirculation pumps trip (or there are no pumps operating) with the reactor in the RUN mode, and ensure that operators are aware of the potential for very large power oscillations and the potential for exceeding core thermal safety limits before automatic protection systems function following the trip of all recirculation pumps (the procedural manual scram is not necessary after long-term solutions are approved and implemented for individual plants); and
- b. Ensure that factors important to core stability characteristics (e.g., radial and axial peaking, feedwater temperature, and thermal hydraulic compatibility of mixed fuel types) are controlled within appropriate limits consistent with the core design, power/flow exclusion boundaries, and core monitoring capabilities of the reactor in question, and that these factors are controlled through procedures governing changes in reactor power, including startup and shutdown, particularly at low-flow operating conditions. Each licensee should review its procedures and determine if instability can be avoided by these procedures and if the procedures can be carried out using existing instrument information. If it is concluded that a near-term upgrade of core monitoring capability is called for to ease the burden on operators, determine the need to incorporate on-line stability monitoring or monitors for stability sensitive parameters and inform the NRC of the schedule and technical evaluation for such upgrades found to be necessary. (These procedural operation controls will no longer be necessary for licensees which implement fully automatic long-term solutions, such as Options III or IIIa of Reference 2. Licensees should propose for plant-specific review the administrative controls to be retained in conjunction with other long-term solutions.)



### Supply System Response:

This Generic Letter requested the Supply System to review operating procedures and operator training programs and to modify them as appropriate to strengthen administrative provisions intended to avoid power oscillations or to detect and suppress them if they occur.

The Supply System has implemented the Interim Corrective Actions (ICAs) specified in NRC Bulletin 88-07, Supplement 1, and, in addition, has supported the BWR Owners' Group (BWROG) effort to develop improved guidelines for the ICAs to better address startup and low power maneuvering conditions. A copy of the improved BWROG Guidelines for Stability Interim Corrective Actions was provided to the NRC in Reference 4. It is our understanding that, based on a review of an advanced copy of these guidelines (Reference 5), the NRC will accept the improved BWROG guidelines as an adequate response to requested actions 1.a and 1.b of Generic Letter 94-02.

It should be noted that the BWROG Guidelines (Reference 4) are consistent with, but more restrictive than the ICAs which were previously implemented and incorporated in WNP-2 Technical Specifications as a result of the NRC Bulletin 88-07, Supplement 1 guidelines. The original regions defined in the 1988 BWROG ICAs and included in NRC Bulletin 88-07, Supplement 1, were based on stability tests and events known at the time. Subsequent work identified a sensitivity to reactor power shape and feedwater temperature conditions. Because of this sensitivity, the Reference 4 guidelines incorporate an expanded stability region and power distribution control definition to strengthen the oscillation prevention feature. This, in conjunction with the detection and suppression provisions of the guidelines, provides a higher degree of protection against unacceptable power oscillations.

As discussed in Reference 6, following the August 15, 1992 instability event at WNP-2, the Supply System identified the necessary actions to avoid oscillation or to detect and suppress them if they occur. These actions included implementation of power distribution controls, use of a stability monitor, revision of the appropriate operating procedures, and performance of operator training regarding these controls. Since this incident, the BWROG has established the Guidelines for stability interim corrective action as discussed above. Using these BWROG Guidelines, the Supply System will further modify, as necessary, affected operating procedures and operator training to address the recommendations in Reference 4.

Because the guidelines are intended for use until replaced by a stability long-term solution, modification of the WNP-2 Technical Specifications is not appropriate. The Reference 4 Guidelines and resulting plant operating procedures and operator training modifications are intended for use only until the stability long-term solution is implemented. Beyond this, additional procedures and training changes will depend on the long-term solution implemented at WNP-2.



### NRC Generic Letter 94-02 Action Request No. 2:

All licenses of BWRs, except for Big Rock point, are requested to develop and submit to the NRC a plan for long-term stability corrective actions, including design specifications for any hardware modifications or additions to facilitate manual or automatic protective response needed to ensure that the plant is in compliance with General Design Criteria 10 and 12. An acceptable plan could provide for implementing one of the long-term stability solution options proposed by the BWROG and approved by the NRC in Reference 3 or in subsequent documentation. The plan should include a description of the action proposed and a schedule of any submittal requiring plant-specific design review and approval by the NRC and an installation schedule (if applicable). The plan should also address the need for near-term and long-term technical specification modifications. Generic BWROG documents or planned submittal may be referenced in the plan.

### Supply System Response:

The NRC requirement for stability long-term corrective actions to ensure compliance with General Design Criteria 10 and 12 of 10 CFR 50 Appendix A was originally presented in NRC Bulletin 88-07, Supplement 1 (December 30, 1988). The Bulletin acknowledged that the NRC was working with the BWROG to develop generic approaches to resolve this issue. The resulting BWROG efforts have led to the solution concepts and supporting methodology described in NEDO-31960 and NEDO-31960, Supplement 1 "BWR Owners' Group Long-Term Stability Solutions Licensing Methodology" (References 1 and 2). NRC acceptance of the BWROG developed solution concepts and supporting methodology is indicated in Reference 3; the BWROG has formulated plans for implementing a stability long-term solution.

Based on the technical progress that has been made in the BWROG stability program and the degree of NRC acceptance indicated in Reference 3, the Supply System is evaluating the BWROG solution concepts and supporting methodology for implementing a stability long-term solution. To complete this activity, the Supply System is participating with other utilities under a BWROG stability program. Recommendations for Technical Specification changes will be provided as part of the program. These will be incorporated at WNP-2 as appropriate.

The Supply System has been proactive in working with the BWROG and has been focusing on Option III as described in Reference 1. Implementation of the stability long-term solution selected by the Supply System is contingent upon the Supply System's evaluation and selection of the best option for WNP-2 of the BWROG submittal on methodology. This evaluation will be completed by January 15, 1995. After the evaluation is completed and the option selected, the plan for implementing a long-term solution will be provided in a supplemental letter. The Supply System intends to install the selected option prior to the end of R12 which is currently scheduled to be completed July, 1997.



#### REFERENCES:

1. NEDO-31960, "BWR Owners Group Long-Term Stability Solutions Licensing Methodology," June 1991.
2. NEDO-31960, Supplement 1, "BWR Owners Group Long-Term Stability Solutions Licensing Methodology," March 1992.
3. Letter dated July 12, 1993, A. Thandani (NRC) to L. A. England (BWROG), "Acceptance for Referencing of Topical Reports NEDO-31960, Supplement 1, BWR Owners Group Long-Term Stability Solutions Licensing Methodology."
4. Letter dated June 6, 1994, L. A. England (BWROG) to M. J. Virgilio (NRC), "BWR Owners Group Guidelines for Stability Interim Corrective Action."
5. Letter dated April 4, 1994, L. A. England (BWROG) to M. J. Virgilio (NRC), "BWR Owners Group Improved Guidelines for Stability Interim Corrective Actions."
6. Letter dated July 28, 1994, J. V. Parrish (SS) to NRC, "Licensee Event Report No. 92-037-03."

