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RECIP. NAME RECIPIENT AFFILIATION  
Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 930812 ltr re violations noted in insp rept  
50-397/93-20.C/As: all remaining applicable maint  
surveillance procedures reviewed & revised to ensure that  
drywell-to-wetwell TS bypass leakage limits not challenged.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

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September 10, 1993  
G02-93-230

Docket No. 50-397

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

Gentlemen:

Subject: WNP-2, OPERATING LICENSE NO. NPF-21  
NRC INSPECTION REPORT 93-20  
RESPONSE TO NOTICE OF VIOLATION

The Washington Public Power Supply System hereby replies to the Notice of Violation contained in your letter dated August 12, 1993. Our reply, pursuant to the provisions of Section 2.201, Title 10, Code of Federal Regulations, consists of this letter and Appendix A (attached).

In Appendix A, the violation is addressed with an explanation of our position regarding validity, corrective action and date of full compliance.

Sincerely,

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

CDM/bk  
Attachments

cc: BH Faulkenberry - NRC RV  
NS Reynolds - Winston & Strawn  
JW Clifford - NRR  
DL Williams - BPA/399  
NRC Site Inspector - 901A

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## Appendix A

During an NRC inspection conducted on April 2 through May 17, 1993, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the violation is listed below:

10 CFR Part 50, Appendix B, Criterion XVI, states that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the conditions is determined and that corrective action is taken to preclude repetition.

Licensee Technical Specification (TS) 3.6.2.1 states that the suppression chamber shall be operable with drywell-to-suppression chamber bypass leakage less than or equal to 10% of the acceptable  $A/\sqrt{k}$  design value of .050 square feet.

Contrary to the above, licensee corrective actions in response to a Notice of Violation issued in March 1992 (Inspection Report 50-397/92-03), involving deficiencies in a test procedure that would have resulted in exceeding TS 3.6.2.1 suppression chamber bypass leakage limits, did not preclude repetition. Specifically, the licensee failed to correct similar deficiencies in Plant Procedure 7.4.6.6.1.3.C, "Hydrogen Recombiner 1A Flow Instrumentation," resulting in the licensee exceeding the limit of TS 3.6.2.1 during performance of that procedure on March 31, 1993.

This is a Severity Level IV violation (Supplement 1).  
This is a repeat violation.

### Validity of Violation

The Supply System acknowledges the validity of this violation. License Event Report (LER) 93-016 reported a March 31, 1993, event where a deficiency in Plant Procedure (PPM) 7.4.6.6.1.3C, "H2 Recombiner 1A Flow Instrumentation - CC," resulted in the Technical Specification 3.6.2.1 primary containment drywell-to-suppression chamber bypass leakage limit being exceeded. During the performance of PPM 7.4.6.6.1.3C in Operational Mode 1 (Power Operation), a jumper was installed as directed by the procedure that unknowingly energized relays associated with containment isolation valve control. These relays automatically opened Containment Atmosphere Control (CAC) containment isolation valves CAC-V-4, CAC-FCV-4A, CAC-V-6, and CAC-FCV-1A creating a bypass pathway between the containment drywell and the wetwell through the CAC "A" hydrogen recombiner skid. This bypass leakage opening exceeded the 0.005 ft<sup>2</sup> (10% of 0.050 ft<sup>2</sup> design value) Technical Specification limit.



The containment drywell-to-suppression chamber interface is designed so that steam released to the drywell during a Loss of Coolant Accident (LOCA) flows through the downcomers and is quenched by the suppression pool. The design basis drywell-to-suppression chamber leakage flow is  $A\sqrt{k}$ , or the equivalent of a 0.05 ft<sup>2</sup> hole. As stated in the Notice of Violation (NOV), the Technical Specification allowable value is 10% of this design limit. The open CAC System containment isolation valves would introduce a 0.022 ft<sup>2</sup> hole based on the minimum system piping size of 2 inches. Thus, based strictly on piping size, the drywell-to-suppression chamber bypass leakage would exceed the Technical Specification 0.005 ft<sup>2</sup> limit, but would remain well below the 0.05 ft<sup>2</sup> design basis limit. The 0.022 ft<sup>2</sup> value is conservative because bypass steam flow to the suppression chamber would actually be further restricted by the CAC System moisture separator/demister and the approximate 200 feet of system piping, fittings, etc.. The most recent results of Surveillance Procedure PPM 7.4.6.2.1, "Drywell/Wetwell Bypass Leak Rate Test (BLRT)," verified that the drywell-to-suppression chamber leakage was a small fraction of the Technical Specification 0.005 ft<sup>2</sup> limit. Therefore, the total bypass leakage, including that introduced by the open CAC System containment isolation valves, would have been significantly below that assumed in the accident analyses had a LOCA occurred with the CAC containment isolation valves open. Also, there is a high probability that the CAC System protective trips such as high blower outlet temperature, blower motor overload, or high moisture separator/demister outlet temperature would have caused an isolation of the CAC System very early in a LOCA transient. The Supply System believes that this event had minimal safety significance, but acknowledges that the event could have been avoided by effectively implementing corrective actions for similar conditions identified in NOVs 91-44 and 92-03.

In response to NOV 91-44, a CAC System review was conducted during the first quarter of 1992. Several tests and some physical modifications were performed to assure operability of the system. In addition, an internal Safety System Functional Inspection (SSFI) was performed to identify problems in the CAC System. As part of the SSFI, a sample of the CAC instrument surveillance procedures were verified to be correct for the Operational Mode in which they were intended to be performed. However, the sample selection did not identify a Scheduled Maintenance System (SMS) error. If identified, the error would have been corrected and would have prevented PPM 7.4.6.6.1.3C from being performed on March 31, 1993, in an inappropriate Operational Mode. The SMS allowed the procedure to be performed in Operational Mode 1, but should have restricted performance to Operational Modes 4 and 5 (Cold Shutdown and Refueling) only. The sampling review also missed the PPM 7.4.6.6.1.3C deficiency that led to the March 31, 1993, drywell-to-suppression chamber bypass leakage event. Identification and correction of either the SMS error or the procedure deficiency would have avoided the containment bypass event.

In response to NOV 92-03, a review of all systems that could present a challenge to the containment drywell-to-wetwell Technical Specification bypass leakage limits was conducted. The CAC and Containment Purge and Exhaust Systems were the only systems meeting this criterion, and their operating procedures were reviewed for caution statements to prevent bypass leakage paths when the Plant is in Operational Modes 1, 2, or 3. In addition to the NOV corrective action, Nonconformance Report (NCR) 92-0288 contained a corrective action to incorporate caution statements or other actions into all applicable procedures to ensure that activities are not performed which might compromise the bypass leakage limits of Technical Specification 3.6.2.1. Due to misinterpretation of the respective corrective actions, the NCR corrective action was not completed and incorrectly closed out based on completion of the NOV corrective action. Consequently, a second opportunity to identify and correct the PPM 7.4.6.6.1.3C deficiency was missed.

The root causes for this violation were:

1. Less than adequate procedures in that the initial and periodic revisions of PPM 7.4.6.6.1.3C did not include information that the CAC System containment isolation valves would open during the course of the surveillance.
2. Less than adequate corrective action followup for a related problem in that a corrective action prescribed in NCR 92-0288 was not completed.
3. Technical inadequacies in the SMS in that PPM 7.4.6.6.1.3C was allowed to be performed in an inappropriate Operational Mode (Mode 1).

Corrective Steps Taken/Results Achieved

1. An Incident Review Board and formal Root Cause Analysis were commissioned in response to the March 31, 1993, drywell-to-suppression chamber bypass leakage event. As a result, all surveillance procedures with greater than a six-month performance frequency and a scheduled due date prior to the R-8 (Spring 1993) refueling outage were reviewed to assure that they were appropriate for performance during Operational Modes 1, 2, and 3.
2. Counseling was provided to those personnel involved in the corrective action followup aspects of the March 31, 1993, drywell-to-suppression chamber bypass leakage event to reinforce expectations pertaining to corrective action identification and closeout.





3. The SMS was modified to provide a consistent method for designating procedure performance plant conditions. Specifically, applicable operating modes in which a surveillance is required to be current were verified in SMS. In addition, a review was conducted to confirm the correct operating mode designation for surveillance procedures performed during power operation. The ongoing Technical Specification Surveillance Improvement Project (TSSIP), as referenced in LER 93-010, will provide confirmation of allowable operating modes in which surveillances may be performed.
4. Applicable CAC maintenance surveillance procedures were revised as necessary to ensure the containment isolation valves remain closed during testing or to require that testing only be performed during Operational Condition Modes 4 or 5.
5. All remaining applicable maintenance surveillance procedures were reviewed and revised as necessary to ensure that the drywell-to-wetwell Technical Specification bypass leakage limits are not challenged.
6. TSSIP Procedure TSSIP-01, "Surveillance Test Technical Review Work Instruction," was written to establish a process for performing technical verifications on Volume 7 surveillance procedures.
7. The Performer Validation Checklist in PPM 1.2.6, "PPM Evaluation Program," was revised to include the question: "Were there any unanticipated actions or indications?"

#### Corrective Action to be Taken

The Supply System is confident that the corrective actions taken will preclude recurrence of a similar containment bypass leakage event. There are currently no additional corrective actions under consideration.

#### Date of Full Compliance

Full compliance was achieved on April 5, 1993. On this date, all surveillance procedures with greater than a six-month performance frequency and a scheduled date prior to the R-8 refueling outage were placed on administrative hold. The procedures were placed on hold pending a review to assure that they were appropriate for performance during Operational Modes 1, 2, and 3. All of the above corrective actions were verified to be completed on September 7, 1993.

