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 AUTH. NAME AUTHOR AFFILIATION  
 PARRISH, J.V. Washington Public Power Supply System  
 RECIP. NAME RECIPIENT AFFILIATION

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SUBJECT: Responds to NRC 940422 ltr re violations noted in insp rept  
 50-397/94-12. Corrective actions: issued memo to Operations  
 & staff.

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May 27, 1994  
G02-94-126

Docket No. 50-397

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NO. NPF-21  
NRC INSPECTION REPORT 94-12  
REPLY TO NOTICE OF VIOLATION**

Reference: Letter, dated April 22, 1994, AB Beach (NRC) to JV Parrish (SS), "NRC Inspection Report 50-397/94-12 (Notice of Violation)"

The Washington Public Power Supply System hereby replies to the Notice of Violation contained in your letter dated April 22, 1994. Region IV personnel in the Walnut Creek field office concurred with an extension of the due date from May 22 to May 27, 1994. Our reply, pursuant to the provisions of Section 2.201, Title 10, Code of Federal Regulations, consists of this letter and Appendix A (attached).

The Supply System shares your concern that a number of deficiencies associated with the control room chiller could have been identified and corrected by our staff. The Supply System also shares your concern that prompt corrective action was not taken to correct degraded conditions associated with this chiller. These concerns are addressed within this response to NOV 94-12.

In reply to your concern regarding timely review of fuel loading options for Cycle 10, Engineering performed timely evaluations of available options. In early December when the cycle extension was first being discussed, planning evaluations were performed to provide assurance that the WNP-2 generation goals could be met for the remainder of Cycle 9 and Cycle 10. It is important to note that our planning model assumes a statistical outage rate and considers that the plant may be placed on economic dispatch in March. The regulatory impact of decisions regarding plant operation that influence reload design were streamlined by the provision of Generic Letter (GL) 88-16. The primary purpose of GL 88-16 was to relieve the NRC staff and the licensee of the unnecessary burden of having to submit cycle specific reload

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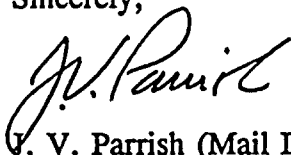
**NRC INSPECTION REPORT 94-12  
REPLY TO NOTICE OF VIOLATION**

license applications three to four months in advance of restart. The WNP-2 Technical Specifications have been revised to allow the implementation of a Core Operating Limits Report (COLR) rather than the cumbersome cycle specific application. With a good understanding of how long it takes to perform or modify a reload design, the Supply System evaluated the acceptability of the design in mid-January and found it acceptable. A final decision to extend the cycle was made on January 26, 1994. At the same time, an evaluation regarding delaying the implementation of Power Uprate was under way. When the final decisions were made and redesign initiated on February 17, 1994, over four months were available to complete the design prior to the scheduled late June 1994 restart. Application of the flexibility provided by the Technical Specifications and the COLR allows the Supply System to provide an optimum reload design for each operating cycle.

On page 4 of Inspection Report 94-12 it was stated that all the control rods were considered operable by the Plant Manager "with the exception of Control Rods 54-47, 54-15, 30-31, and 10-15, which were out-of-specification slow on start of initial rod motion and had been fully inserted." These control rods met the Technical Specification requirement for start of motion time (time to position 45). These four control rods were inserted and declared inoperable due to start of motion times that were slower than expected. This was a conservative declaration of inoperability by plant management that was not required by the Technical Specifications. These four control rods were not out-of-specification slow on start of initial rod motion time.

If you have any questions or desire additional information regarding this matter, please contact me or D. A. Swank at (509) 377-4563.

Sincerely,



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

KBL/bk  
Attachments

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 - 927N

## Appendix A

### Violation

During an NRC inspection conducted on February 22 through April 2, 1994, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C, the violations are listed below:

- A. 10 CFR 50, Appendix B, Criterion XVI, states in part, "Measures shall be established to assure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected."

Contrary to the above, conditions adverse to quality concerning control room Chiller CCH-CR-1B were not promptly corrected, with the result that the chiller was inoperable for approximately 13 months. One deficiency tag dated February 4, 1993, indicated that the chiller's motor tripped on overload. A second deficiency tag on Chiller CCH-CR-1B dated April 19, 1993, indicated that the input temperature to the temperature controller indicated zero. However, as of March 18, 1994, effective corrective actions to correct these degraded conditions had not been implemented.

This is a Severity Level IV violation (Supplement I).

### RESPONSE TO VIOLATION A

The Supply System accepts this violation.

### REASON FOR THE VIOLATION

The failure to promptly repair control room chiller CCH-CR-1B deficiencies was caused by a lack of appropriate sensitivity to the importance of this equipment; consequently, the proper work-prioritization was not established. This was due to the chiller not being viewed as a safety-affecting system or as an essential component, as the chiller was never intended to serve as an emergency backup to the Standby Service Water System (SW). Therefore, the chiller was worked on a lower-priority schedule. This caused the failure to provide prompt corrective action to correct chiller deficiencies.

The NRC inspectors reviewed prior NRC inspection reports to determine if previous commitments to resolve problems with the control room chillers as identified in IR 90-05 had been implemented effectively. Specifically, IR 90-05 indicated that the Supply System committed to determining reasonable allowed outage times for the chillers and making

assessments of chiller operability status as necessary. In response to NOV 94-12, an evaluation indicated that the Supply System failed to adequately track and implement these commitments. This precluded the appropriate corrective actions from being taken. This failure, in addition to the lack of sensitivity to the importance of this equipment, caused the recently reported chiller deficiencies to remain uncorrected.

LER 93-31 identified that the safety-related main control room heating and ventilation system would not maintain control room temperature below the design basis limit of 104 degrees Fahrenheit following a Design Basis Accident (DBA). This value is the equipment qualifications limitation for the control room. This postulated event involves extreme warm-weather conditions with only SW available for heat removal. A Probabilistic Risk Assessment (PRA) of this postulated event was performed. Because the probability for this postulated event was determined to be  $5.5 \times 10^{-5}$ , procedures were revised to prevent the control room temperature from exceeding 104 degrees Fahrenheit, rather than initiating hardware changes. The procedure revisions direct monitoring of control room temperatures and shedding of various control room heat loads to preclude control room temperatures from exceeding 104 degrees Fahrenheit. Therefore, the conditions described in this violation had no actual impact on the safety of the plant or the public.

Even with chiller "B" being out of service during 1993 and 1994, Chiller "A" was available to maintain the control room, post accident, at required temperatures. Further, SW alone could have maintained control room temperature below 85 degrees Fahrenheit equivalent temperature (the control room habitability temperature limit is 85 degrees Fahrenheit). This equivalent temperature corresponds to 110 degrees Fahrenheit dry bulb and 20% relative humidity. With degraded cooler efficiency, the control room temperature would have stayed below 108 degrees Fahrenheit and 15% relative humidity with SW alone acting as the control room heat sink during DBA conditions (and with no manual action to shed control room loads to preclude the control room temperature from peaking at 108 degrees Fahrenheit). The 85 degree Fahrenheit equivalent temperature was specified in NUREG/CR-3788 as the maximum limit for habitability. Therefore, the control room would have been habitable under extreme environmental conditions with no reliance on either chiller to provide an alternate heat sink to the control room.

Although this violation had no actual safety significance, the Supply System acknowledges that this violation had regulatory significance because the chiller is part of the WNP-2 Operating License.

#### CORRECTIVE STEPS TAKEN/RESULTS ACHIEVED

1. Plant Maintenance corrected the two deficiencies associated with chiller CCH-CR-1B and it was returned to service on April 11, 1994. The chiller units have since experienced maintenance problems rendering them inoperable. The chillers were again returned to service on May 27, 1994.

2. Rather than on a quarterly basis, monthly preventive maintenance checks are now being performed on these chillers to identify actions needed to maintain their operability.
3. The Work Control Manager issued a memorandum to his staff reminding them of the requirement to promptly repair and return the chillers to service. The memorandum also reminded staff that it is part of their job to identify and track chiller inoperability via the Work Request/Work Order process. This memorandum provided the necessary guidance to Work Control personnel to remind them of the proper sensitivity for working and returning the chillers to service.
4. The Operations Division Manager issued a memorandum to the Operations and Maintenance organizations indicating that the chillers should be treated like Technical Specification related equipment. The manager emphasized that the organizations must prioritize the importance of the chillers to ensure they are available and capable of performing their intended function.

#### CORRECTIVE STEPS TO BE TAKEN

1. Technical Services, with support from Maintenance and Operations, will identify the reasonable allowed outage times for the chillers and the actions required when allowed outage times cannot be met. This information will be developed by August 31, 1994.  
  
Licensing will ensure that this information will be incorporated into a document supplementing the Technical Specifications. This supplemental document will act as a repository for information approved for removal from the Technical Specifications and for such instructions as those developed for the chillers. Licensing will incorporate the information developed by Engineering, Operations, and Maintenance by October 31, 1994.
2. The NRC inspectors stated in their inspection report that our company's walkdowns of the control room heating and ventilation system were not of sufficient depth to identify a number of deficiencies identified by the inspectors. The assigned system engineer had identified many of these deficiencies and had submitted work orders to correct them. However, due to the lack of sensitivity to the importance of this equipment, these work orders were not corrected in a timely manner.

System Engineering will implement more detailed walkdowns at the appropriate frequency to ensure deficiencies of the noted level of detail are identified. The criteria for these walkdowns will be incorporated into the appropriate Technical Services guideline documents. These walkdowns will begin by October 1, 1994.

#### DATE OF FULL COMPLIANCE

Full compliance was achieved when Plant Maintenance corrected the two deficiencies associated with chiller CCH-CR-1B and it was returned to service on April 11, 1994.

B. Section 6.8.1 of the Technical Specifications states, in part:

"Written procedures shall be established, implemented, and maintained covering the activities referenced below:

- a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978."

Appendix A of Regulatory Guide 1.33 states in Paragraph 4:

"Instructions for energizing, filling, venting, draining, startup, and changing modes of operation should be prepared, as appropriate, for the following systems:

- s. Control Room Heating and Ventilation Systems
- t. Radwaste Building Heating and Ventilation System"

WNP-2 Plant Procedures Manual (PPM) 2.10.3, Revision 21, "Control Cable and Critical Switchgear Heating Ventilation and Air Conditioning (HVAC)" requires the following:

1. In paragraph 4.9, of the precautions and limitations section of the procedure, the following setpoints were to be established for control room HVAC controllers:

WMA-TIC-12A1      74 to 76 degrees

WMA-TIC-12B1      74 to 76 degrees

WMA-TIC-12A2      70 to 72 degrees

WMA-TIC-12B2      70 to 72 degrees

WMA-TS-12A	Knob A- 71 to 73 degrees, Knob B- 69 to 71 degrees
WMA-TS-12B	Knob A- 71 to 73 degrees, Knob B- 69 to 71 degrees

2. Step 5.5(7)e of PPM 2.10.3 requires temperature control point of the local temperature control module to be set at 6 increments for the "Raise" position.
3. Step 5.5(7)e of PPM 2.10.3 requires the maximum load adjustment of the local temperature control module to be set at 69 percent of full scale.
4. Step 5.5(9) of PPM 2.10.3 requires the operators to ensure that WMA-TIC-11B is set between 74°F and 76°F.

Contrary to the above, as of March 17, 1994,

- (1) All of the setpoints for the controllers listed above in PPM 2.10.3 were set improperly.
- (2) WNP-2 PPM 2.10.3, Revision 21, was not appropriate as follows:
  - a. Step 5.5(19) twice refers to controlling the temperature of the emergency chillers using Gage WCH-PI-6B. Gage WCH-PI-6B was not the proper gage designation.
  - b. On Page 39 of the breaker lineup sheet, the required position for breakers WMA-EHC-51B, -52B, and -53B was stated as "OFF May through September," and "ON October through April." The appropriate position for these three breakers was "Locked OFF during Modes 1, 2, and 3."
  - c. On page 40 of the breaker lineup sheet, the breaker positions for Space Heaters WRA-EUH-52, -53, -54 and -56 was listed as "ON/OFF(+)" with no amplifying instructions to explain the "(+)." The appropriate position for these breakers was "OFF May through September," and "ON October through April."

This is a Severity Level IV violation (Supplement I).





## RESPONSE TO VIOLATION B

The Supply System accepts this violation. The violation consists of two issues: 1) procedural inadequacies in operating procedure PPM 2.10.3 "Control, Cable, and Critical Switchgear Rooms HVAC," Revision 21, and 2) procedure noncompliance. Each issue consists of several examples. Each issue is addressed separately below.

### ISSUE #1: PROCEDURAL INADEQUACIES

#### REASON FOR THE VIOLATION

The NRC inspectors noted the following errors in PPM 2.10.3:

- a. The procedure directed the operator to use gage "WCH-PI-6B" to control pressure. The stipulated gage should have read "CCH-PI-6B." This error was introduced into the procedure during a temporary change to the procedure, rather than during formal revision of the procedure.
- b. The procedure's breaker lineup sheet stated that the required position for breakers WMA-EHC-51B, 52B, and 53B was "OFF May through September" and "ON October through April." The appropriate position for these breakers was "Locked OFF during modes 1, 2, and 3." Additionally, the procedure's breaker lineup sheet indicated that the required positions for space heaters WRA-EUH-52, 53, 54, and 56 were ON/OFF(+) with no instructions to explain the (+).

The cause of these two errors was related. During the development of Revision 20 to PPM 2.10.3, the preparer electronically removed a piece of information from the procedure breaker lineups tables. Due to a lack of a complete understanding of the computer software being used, the preparer did not notice that the deletion caused footnote/amplifying information to be separated from respective WMA/WRA tabulated lineup data. This error resulted in a confusing presentation of WMA/WRA breaker lineup data in the procedure.

#### CORRECTIVE STEPS TAKEN/RESULTS ACHIEVED

1. The procedural deficiencies cited in NOV 94-12 as violations have been revised in Revision 21 of PPM 2.10.3.
2. The person who prepared Revision 20 of PPM 2.10.3 has received guidance on how to prevent similar errors from being introduced electronically. The person has also been counseled to perform more thorough reviews of changes made to procedures.



#### DATE OF FULL COMPLIANCE

As stated, the procedural deficiencies cited in NOV 94-12 as violations have been revised in Revision 21 of PPM 2.10.3. Full compliance was achieved when this revision was approved on April 27, 1994.

#### ISSUE #2: PROCEDURE NONCOMPLIANCE

#### REASON FOR THE VIOLATION

The cause of this violation was a failure to consult applicable procedures to ensure as-left controller setpoints were within procedure limitations. A review of control room documents on which control room temperatures from March 1, 1994 to April 31, 1994 were logged, determined that the control room temperature did not exceed its Technical Specification value as a result of these incorrect settings. However, the review did determine that the control room temperature exceeded a FSAR upper-temperature limitation of 78 degrees Fahrenheit on six shifts. This limitation is associated with the FSAR requirement that "during normal operation (Radwaste Building chillers operating) the main control room ambient conditions shall be maintained at 75 degrees Fahrenheit, plus or minus 3 degrees Fahrenheit." The highest recorded temperature was 82.8 degrees Fahrenheit. Based on these determinations, there was no actual safety significance associated with the incorrect controller settings.

#### CORRECTIVE STEPS TAKEN/RESULTS ACHIEVED

1. Placards were mounted near the misadjusted control room temperature controllers to remind operators to refer to PPM 2.10.3 prior to manipulating the controllers. This job-aid will prevent personnel from making adjustments to the controllers without verifying that the as-left setting is within procedure limitations.
2. The NRC inspectors commented in Inspection Report 94-12 that a Problem Evaluation Request (PER) had been written to evaluate the incident in which the control room temperature controllers were set incorrectly. The inspectors further commented that the evaluation appeared to suggest that precautions and limitations were not mandatory steps in a procedure.

The person who prepared this PER and the associated evaluation did not intend to suggest that precautions and limitations were not an integral part of plant operating procedures. Rather, the evaluation was intended to document potential conflict and confusion over setpoint requirements, and through the PER disposition, to resolve the confusion. To



ensure this requirement is clearly understood, a Night Order was written to remind operations personnel that the precautions and limitations section of a procedure has the same requirements for adherence as a step in the procedure.

#### CORRECTIVE STEPS TO BE TAKEN

1. Further evaluation of temperature switch WMA-TS-12A and -12B determined that the switches were calibrated to within the "degrees Fahrenheit" temperature band specified in the PPM 2.10.3 "Precautions." The settings of these switches are displayed in "percent of span." This led to confusion as to whether the switches were actually set correctly. Although the NOV cited these switches as being set incorrectly, instrument calibration data indicates that the switches were set correctly.

By June 30, 1994, PPM 2.10.3 "Precautions" will be clarified to preclude the user of the procedure from inadvertently misadjusting WMA-TS-12A and -12B as a result of the confusion introduced by the instrument "percent of span" scales.

#### DATE OF FULL COMPLIANCE

Plant staff verified that the chiller temperature controllers and the local temperature control module discussed in Notice of Violation 94-12 have been adjusted to within the required procedural limits. Plant staff also verified that the chiller temperature switch as-left calibration settings were set within the required procedural band. Full compliance with the required procedural instrument settings for these components was verified by May 20, 1994.

