

# CATEGORY 1

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 BEMIS, P.R.      Washington Public Power Supply System  
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SUBJECT: Responds to NRC 971203 ltr re violations noted in insp rept  
 50-397/96-22 on 960924-0926. CAS: Supply sys was granted  
 Notice of Enforcement Discretion not to enforce compliance  
 w/actions in TS SR 3.3.1.1.15, 3.3.6.1.7 & 3.3.5.1.7.

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WASHINGTON PUBLIC POWER SUPPLY SYSTEM

P.O. Box 968 • Richland, Washington 99352-0968

January 20, 1998  
GO2-98-012

Docket No. 50-397

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

Gentlemen:

Subject: **WNP-2, OPERATING LICENSE NPF-21,  
RESPONSE TO APPARENT VIOLATIONS  
IN NRC INSPECTION REPORT 50-397/96-22**

- References:
- 1) Letter dated December 3, 1997, TP Gwynn (NRC) to JV Parrish (SS), "NRC Inspection Report 50-397/96-22"
  - 2) GE Nuclear Energy, BWR Owners' Group Licensing Topical Report, NEDO-32291-A, "System Analyses for Elimination of Selected Response Time Testing Requirements," October 1995
  - 3) Generic Letter 93-08 dated December 29, 1993, NRC to All Holders of Operating Licenses for Nuclear Power Reactors, "Relocation of Technical Specification Tables of Instrument Response Time"

The purpose of this letter is to provide a response to the five apparent violations outlined in Reference 1. The referenced report documents an inspection of changes made to the Response Time Testing Program at Washington Nuclear Plant No. 2 (WNP-2). The inspection took place at the WNP-2 facility September 24-26, 1996 and continued through meetings and correspondence between NRC and WNP-2 from September 30, 1996 until November 18, 1997. The length of time to review these matters reflects the careful scrutiny given by the NRC and Supply System, as well as the complex nature of the issues. //

The Supply System's response to these apparent violations, is enclosed as Attachment A. Each apparent violation is addressed with a description of the violation, reasons for the violation, corrective actions taken, and date of full compliance. Teo/



9801270091 980120  
PDR ADDCK 05000397  
Q PDR

**RESPONSE TO APPARENT VIOLATIONS IN NRC INSPECTION REPORT 50-397/96-22**

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The Supply System acknowledges these five apparent violations and agrees that our activities were not conducted in full compliance with NRC regulations. It is important to note that the apparent violations did not adversely impact safe plant operations or place in question the ability of the affected equipment to perform properly. We acknowledge that our implementation of the NEDO 32291 (Reference 2) was not consistent with the NRC's expectations. Nevertheless, the qualitative Response Time Testing (RTT) methodology employed at WNP-2 was ultimately acceptable to the NRC as demonstrated by the approval of Technical Specification Amendment 150.

The Supply System is currently reviewing safety evaluations and associated changes made to the facility to determine if interpretation of generic guidance has resulted in other instances of failure to identify the need to submit a license amendment request.

While we are disappointed in our performance which resulted in noncompliance with NRC regulations, we believe this matter has prompted a better understanding of NRC regulatory objectives. Our priority is to direct our efforts to promote effective communication and cooperation with the NRC.

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

Respectfully,



PR Bemis  
Vice President, Nuclear Operations  
Mail Drop PE23

Attachment

cc: EW Merschoff - NRC-RIV  
KE Perkins, Jr. - NRC-RIV, Walnut Creek Field Office  
C Poslusny, Jr. - NRC-NRR  
NRC Sr. Resident Inspector - 927N  
DL Williams - BPA/399  
PD Robinson - Winston & Strawn



STATE OF WASHINGTON )  
COUNTY OF BENTON )

Subject: Response to Apparent Violations  
in Inspection Report 50-397/96-22

I, J. P. Kane, being duly sworn, subscribe to and say that I am the Acting, Vice President, Nuclear 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 January 20, 1998

J. P. Kane  
J. P. Kane  
Acting, Vice President, Nuclear Operations

On this date personally appeared before me J. P. Kane, 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 20<sup>th</sup> day of January 1998.

Len A. Mix  
Notary Public in and for the  
STATE OF WASHINGTON

Residing at W. Richland

My Commission Expires 3-29-01

## RESPONSE TO APPARENT VIOLATIONS IN NRC INSPECTION REPORT 50-397/96-22

Attachment A

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### APPARENT VIOLATIONS 50-397/96022-01, -02, -03 and -04

These four apparent violations are discussed together in this section because they are related. Apparent Violations 96022-01, -02, and -03 describe events that occurred subsequent to and resulting from Apparent Violation 96022-04.

#### Description of Apparent Violations

96022-01 Failure to demonstrate response time limits were not exceeded for Reactor Vessel Steam Dome Pressure - High and Reactor Vessel Water Level - Low, Level 3 trip functional units in the Reactor Protection System (RPS) in accordance with Technical Specification Surveillance Requirement 4.3.1.3.

96022-02 Failure to demonstrate response time limits were not exceeded for trip functional units in the Isolation Actuation System (IAS) in accordance with Technical Specification Surveillance Requirement 4.3.2.3.

96022-03 Failure to demonstrate response time limits were not exceeded for trip functional units in the Emergency Core Cooling System (ECCS) in accordance with Technical Specification Surveillance Requirement 4.3.3.3.

96022-04 On April 3, 1996 WNP-2 staff failed to follow provisions outlined in 10 CFR 50.59 by not identifying a need for NRC approval when implementing activities described in Safety Evaluation 96-017. The Screening for Licensing Basis Changes associated with 10 CFR 50.59 Safety Evaluation 96-017 incorrectly indicated that the proposed activity did not involve a change to the Technical Specifications despite the fact that Technical Specifications still contained surveillance requirements and definitions describing RTT methodology and the modified response time limit tables had previously been located in the Technical Specifications prior to being relocated under Amendment 139 in June 1995.

#### Reason for Apparent Violations

Prior to NRC approval of NEDO 32291 (Reference 2), WNP-2 submitted a Technical Specification amendment request to relocate response time limit tables from the Technical Specifications to the Final Safety Analysis Report in accordance with Generic Letter 93-08 (Reference 3). In June 1995, this request was granted as Amendment 139 and the tables removed from the Technical Specifications. After implementing Amendment 139, the WNP-2 Technical Specifications were not configured in a manner which would allow preparation of a submittal to implement NEDO 32291 in the manner advised by the NRC's December 1994 Safety Evaluation Report. This document suggested marking up the response time limit tables in accordance with Appendix H of NEDO 32291 and writing a license amendment request using Appendix I of NEDO 32291 as an example. At that point in time WNP-2 proceeded to modify the response time limit tables and implement NEDO 32291 using the provisions outlined in 10 CFR 50.59.

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Failure to request guidance from the NRC at that point in time on how to implement NEDO 32291 when the response time limit tables were not contained in Technical Specifications was a contributing cause to Apparent Violation 96022-04. Another cause of Apparent Violation 96022-04 was failure to fully consider the NRC Safety Evaluation Report for Amendment 139 (which indicated that moving the response time limit tables into the Final Safety Analysis Report did not alter the surveillance requirements) when revising the tables originally contained in the Technical Specifications. This resulted in effectively changing the Technical Specifications when the tables were revised as described above. The Screening for Licensing Basis Changes failed to identify the need to change the Technical Specifications when implementing NEDO 32291.

Response Time Testing performed on the trip functional units in the RPS, IAS, and ECCS systems employed a test methodology described in NEDO 32291 (System Analyses for Elimination of Selected RTT Requirements) in which instrument channel response was qualitatively assessed. This was thought to be an acceptable method based on the Screening for Licensing Basis Changes which implemented qualitative testing methods at WNP-2. This method of implementation did not address the Technical Specification surveillance requirements and definitions applicable to the RPS, IAS, and ECCS systems which required response time to be demonstrated within limits by measuring the time interval from when the monitored parameter exceeded its actuation setpoint at the channel sensor until the appropriate actuations were completed. The inconsistency between the response time test methodology employed and the Technical Specifications resulted in Apparent Violations 96022-01, -02, and -03.

### Corrective Actions Taken and Results Achieved

On March 24, 1997 the Supply System was granted a Notice of Enforcement Discretion not to enforce compliance with the specific required actions in Technical Specification Surveillance Requirements 3.3.1.1.15, 3.3.6.1.7, and 3.3.5.1.7 for instrumentation in the three systems. This allowed WNP-2 to remain at power operation conditions until the scheduled refueling outage in April 1997.

Incorporation of Amendment 150 into Technical Specifications excluded selected sensors from RTT surveillance requirements. This resolved the inconsistency between Technical Specifications surveillance requirements regarding RTT and the qualitative testing methodology employed by incorporating the following:

- 1) A note was added to Surveillance Requirement 3.3.1.1.15 granting an exclusion for performing RTT on the Reactor Vessel Steam Dome Pressure - High and Reactor Vessel Water Level - Low, Level 3 sensors (96022-01).



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- 2) A note was added to Surveillance Requirement 3.3.6.1.7 granting an exclusion for performing RTT on the Reactor Vessel Water Level - Low, Low Level 2, Main Steam Line Pressure - Low, and Main Steam Line Flow - High sensors. Technical Specification Amendment 149 incorporated the Improved Technical Specifications at WNP-2, eliminating the requirement to perform RTT for all other isolation actuation instrumentation functions (96022-02).
- 3) Surveillance Requirement 3.3.5.1.7 was deleted and a new Surveillance Requirement 3.5.1.8 was added to verify the ECCS response time for each ECCS injection/spray subsystem is within limits every 24 months. A note was added to Surveillance Requirement 3.5.1.8 to exclude ECCS actuation instrumentation from RTT (96022-03).

New guidance in Regulatory Affairs Department Instructions has been added to ensure NRC expectations regarding licensing document change processes are understood when alternative methods for accomplishing licensing activities are considered. This was done as a corrective action associated with LER 97-003-00 which was written to report events that resulted in Apparent Violations 50-397/96022-01, -02, and -03. Additionally, a corrective action completed on November 13, 1997 provided training for Licensing personnel specifically addressing the subject that Technical Specification requirements are not to be interpreted by guidance contained in any other regulatory document (96022-04).

#### Corrective Actions That Will be Taken to Avoid Further Violations

The next training session for personnel qualified to prepare Screenings for Licensing Basis Changes and 10 CFR 50.59 Safety Evaluations will include a discussion of Apparent Violation 96022-04 and focus on determining which activities require NRC approval prior to implementation.

As a result of Apparent Violation 96022-04 and Reactor Core Isolation Cooling classification issues, a review of safety evaluations and associated activities is being conducted to determine if interpretation of generic guidance has resulted in other instances of failure to identify a need to submit a license amendment request or a Unresolved Safety Question.

#### Date of Full Compliance

Issuance of Technical Specification Amendment 150 on June 11, 1997 reconciled the WNP-2 Technical Specifications with the RTT methodology described in NEDO 32291 and placed WNP-2 in full compliance with RTT surveillance requirements.

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### APPARENT VIOLATION 50-397/96022-05

#### Description of Apparent Violation

The Supply System implemented NEDO 32291 at WNP-2 without ensuring that actions specified in 10 CFR 50.59 Safety Evaluation 96-017 were complete. This resulted in three of seven conditions stipulated in the December 28, 1994 NRC Safety Evaluation Report accepting NEDO 32291 not being met when implementing the changes to the RTT program. The three conditions that were not met are:

- 1) At the time of implementation, a procedure was not developed nor did work planning databases indicate a requirement for performing a hydraulic quantitative response time test prior to installation of new or refurbished sensors within the scope of NEDO 32291. This has been characterized as a violation of 10 CFR 50, Appendix B, Criterion V, which requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances. Lack of this test procedure contributed to a situation in which six pressure switches that sense drywell pressure were replaced without this testing having been performed. Satisfactory post-installation response time for these switches was observed in a qualitative manner at the time of installation.
- 2) Two types of instruments were included in 10 CFR 50.59 Safety Evaluation 96-017 for implementing NEDO 32291 without a review of vendor periodic response time recommendations to confirm their adherence to criteria applied to instrumentation selected for exemption from RTT in NEDO 32291. These instruments were Barksdale Model P1H-M340SS-V pressure switches and ASEA RXMK1 auxiliary relays.
- 3) Procedures were not reviewed or revised as stated in 10 CFR 50.59 Safety Evaluation 96-017 to verify that the response of the instrument is prompt and in all cases qualitatively judged to be less than five seconds, as evidenced by inadequate acceptance criteria in the revised procedures. The acceptance criteria consisted of a sign-off step stating, "Confirm instrument channel response time is acceptable." The procedures contained no provisions for measuring or recording response times. This has also been characterized as a violation of 10 CFR 50 Appendix B, Criterion V, which requires procedures to include appropriate acceptance criteria for determining that important activities have been satisfactorily accomplished.

#### Reason for Apparent Violation

Failure to fully meet the three required conditions described above resulted from the lack of a programmatic approach to implementing the provisions of NEDO 32291. No individual was designated to have overall project responsibility and accountability for delineating, assigning, and reviewing the specific tasks required to properly implement NEDO 32291. Additionally, failure to effectively use project management techniques and procedures which are available at WNP-2 when implementing this program, resulted in this apparent violation. Reasons specific to each of the three conditions not being met are as follows:

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As described in 1) above, NEDO 32291 was implemented without a pre-installation response time test having been developed. Prior to implementation of NEDO 32291 no work group was assigned to complete this task. This activity was identified but not tracked to ensure completion, resulting in failure to meet this conditional requirement for implementing NEDO 32291.

As described in 2) above, two types of instruments were included in the WNP-2 safety analyses for implementation of NEDO 32291 which had not been analyzed by General Electric for inclusion in the list of instruments selected for elimination of RTT requirements. When NEDO 32291 was being developed, lead plants involved submitted lists of components to be evaluated in the General Electric study. These two instruments were inadvertently omitted from WNP-2's submittal of instruments to be evaluated and subsequently were not included in NEDO 32291. Additionally, a failure to recognize these instruments were outside of the scope of NEDO 32291 when 10 CFR 50.59 Safety Evaluation 96-017 was prepared, is a reason for failure to meet this conditional requirement for implementing NEDO 32291.

As described in 3) above, NRC inspectors reviewed a selection of channel calibration test procedures for instrument loops in which RTT for the sensor portion of the instrument channel had been eliminated according to the NEDO 32291 analysis. Each of these procedures was revised to qualitatively assess the response time of the instrument channel. When the procedures were revised to incorporate the qualitative method recommended by NEDO 32291, the procedure reviewers decided that the judgment of test personnel was sufficient to detect response time degradation beyond acceptable limits based on the specialized training they had received. The decision to revise the procedures in this manner resulted in the failure to fully meet this conditional requirement for implementing NEDO 32291. Response Time Testing procedures (i.e., ISP-MS-B612, ISP-MS-B601, et al ) for the non-instrument portions of the instrument loops, for which the sensors have been eliminated, have always had quantitative acceptance criteria and require the performer to measure and record the "As Found" response time value.

### Corrective Actions Taken and Results Achieved

For condition 1) the required pre-installation testing was performed under work orders DVV5 and DVV6 and completed on November 30, 1996. The procedure for performing the testing was written in approved work instructions. Additionally, satisfactory post installation response time for these switches was observed in a qualitative manner at the time of installation. A generic pre-installation RTT procedure was approved on January 19, 1998 and will be used to test all applicable sensors for use at WNP-2. Additionally, the requirements and regulations screen in the work planners database now indicates the requirement for performing pre-installation RTT when sensors within the scope of NEDO 32291 are replaced or refurbished.

For condition 2) the requirement for performing RTT on the two plant components was temporarily suspended when the Notice of Enforcement Discretion was granted on March 24, 1997. This allowed time for an evaluation of the components against NEDO 32291 elimination criteria. An analysis was performed on the components and they were found to be similar to other components of the same type selected for elimination of RTT requirements in NEDO 32291. Periodic functional testing verifies instrument response of these components. Since the Barksdale pressure

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switches are not credited in any WNP-2 accident analysis, there is no reason to continue RTT of these components. The ASEA RXMK1 relay is of the same model series as the ASEA RXMH2 which was evaluated in the NEDO 32291 study. The manufacturer's parts list for both of these relays indicates that they are both comprised of numerous identical parts. The difference between the two is that the RXMK1 is a half-size model which houses one-half the number of contacts of the RXMH2. A review of WNP-2 operating experience data revealed no failures of the RXMK1 relays. In the safety evaluation report for the WNP-2 Technical Specification Amendment 150 the NRC Staff has concurred that the basis for elimination of RTT for both of these components is consistent with the analysis and review scope of the NEDO analysis. This amendment was approved on June 11, 1997

For condition 3) acceptance criteria in qualitative response time procedures were revised on January 16, 1998 to confirm the response of the instrument channels is prompt and in all cases qualitatively judged to be less than five seconds.

### Corrective Actions That Will be Taken to Avoid Further Violations

Upon discovery on November 27, 1996 that the drywell pressure sensors were not tested as described in 1), a corrective action was assigned requiring development of a site-wide process which delineates responsibilities that must be executed during programs and projects. This corrective action is scheduled to be completed by February 16, 1998.

### Date of Full Compliance

In consideration of the completed actions described above, WNP-2 is in full compliance with the actions specified in its 10 CFR 50.59 Safety Evaluation 96-017 and has fulfilled the conditions stipulated in the December 28, 1994 NRC Safety Evaluation Report accepting NEDO 32291.