

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-397/87-03
Docket No. 50-397
License No. NPF-21
Licensee: Washington Public Power Supply System
P. O. Box 968
Richland, Washington 99352
Facility Name: Washington Nuclear Project No. 2 (WNP-2)
Inspection at: WNP-2 Site, Benton County, Washington
Inspection conducted: February 23 - 27, 1987

Inspector: C. W. Caldwell 3/18/87
C. W. Caldwell, Project Inspector Date Signed
Approved By: P. H. Johnson 3/18/87
P. H. Johnson, Chief, Date Signed
Reactor/Projects Section 3

Inspection Summary:

Inspection on February 23 -27, 1987 (Report No. 50-397/87-03)

Areas Inspected: Routine project inspection in the areas of calibration of instrumentation, IE Bulletin followup, licensee action on previous inspection findings, licensee action on items of non-compliance, Part 21 followup, and in-office review of licensee event reports. Inspection procedures 30703, 56700, 92703, 25573, 92701, 92702, 36100, and 90712 were covered.

Results: No violations or deviations were identified.

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DETAILS

1. Persons Contacted

- * C. M. Powers, Plant Manager
- * J. W. Baker, Assistant Plant Manager
- * D. S. Feldman, Plant Quality Assurance Manager
- * J. F. Peters, Plant Administration Manager
- * D. H. Walker, Plant Outage Manager
- * A. G. Hosler, Nuclear Safety Assurance Group Manager
- * J. D. Harmon, Assistant Maintenance Manager
- * E. R. Ray, I&C Maintenance Supervisor
- J. Massey, I&E Supervisor
- * S. L. Washington, Lead Compliance Engineer
- * J. Arbuckle, Compliance Engineer
- J. Grazziani, NSAG Engineer

*Denotes those attending the final exit meeting on February 27, 1987.

The inspector also contacted licensee operators, engineers, technicians, and other personnel during the course of the inspection.

2. Calibration of Instrumentation

The inspector reviewed the licensee's implementation of their program for calibration of plant instrumentation to determine if it is in accordance with license requirements, technical specifications, licensee commitments and industry guides and standards. This effort included a review of procedures, completed test packages, and surveillances in progress.

a. Verification of Frequency of Calibration Requirements

The inspector sampled 50% of the channel calibrations and channel functional tests listed in Section 3.3 of the station Technical Specifications (TS) for instrumentation in the reactor protection, emergency core cooling activation, and isolation activation systems. In addition, the inspector sampled 20% of the channel calibrations listed in the TS for instrumentation in reactivity control, plant auxiliary, reactor coolant, emergency core cooling, containment, and electrical distribution systems. These surveillances were compared to the plant master surveillance schedule to verify that these surveillances were performed within the required frequency specified in the TS.

The inspector found that, for the sample of procedures examined, the frequency of calibration for the instrumentation in the plant systems described was performed in accordance with the TS requirements.

- b. The inspector sampled twenty procedures to review the technical content. Examples of the types of surveillance procedures reviewed are the following:

- 7.4.3.2.6, Rev. 0, "Turbine Overspeed Protection Instrumentation"
- 7.4.3.3.4, Rev. 3, "Low Pressure Core Spray Actuation on Reactor Vessel Low Water Level"
- 7.4.3.2.3.4, Rev. 2, "Primary Containment Isolation on Main Steam Line High Radiation"
- 7.4.8.4.2.10, Rev. 1, "6.9 KV Circuit Breaker Protective Relays"
- 7.4.8.4.3.3, Rev. 10, "MOV Thermal Overload Group 3-CC"
- 7.4.3.1.1.2, Rev. 10, "IRM Channel A Calibration"

The inspector found that the procedures reviewed provided tolerances, as necessary, for instruments to be calibrated and test instruments were referenced by number to minimize confusion. Controls were placed on components and systems when removing and returning them to service. In addition, prerequisites and precautions were provided, as necessary, to facilitate performance of the procedure. Acceptance criteria were provided in the body of the procedure and the materials, tools, and test equipment required to perform the procedure were listed. In general, the procedures appeared to be technically adequate to ensure proper performance of the surveillance.

- c. Completed procedures and test data packages were also reviewed to determine if the documentation was complete, the acceptance criteria were met, approved procedures were used, and that procedure deviations were used when it was necessary to make a change to the procedure. The following completed surveillance procedures were reviewed:
- 7.4.3.1.1.38, "APRM RPS - Channel Calibration Channel B"
 - 7.4.3.1.1.8, "RPS and Isolation - Reactor Vessel Water Level Low Division 1 - Channel Calibration"
 - 7.4.3.2.1.20, "RCIC Isolation on Steam Line High Flow - Channel Calibration"
 - 7.4.3.3.1.44, "ADS Trip System B on ADS Timer - Channel Functional/Channel Calibration"
 - 7.4.3.6.4.2, "Control Rod Block APRM Channel B Upscale, Downscale, Inoperative - Channel Calibration"
 - 7.4.3.6.18, "Control Rod Block on SDV Level High - Channel E-H - Channel Functional Test"
 - 7.4.3.7.5.2, "Acoustic Monitoring Instrumentation - Reactor Vessel Pressure - Channel Calibration"

- 7.4.3.9.1.2, "Feedwater/Turbine Trip Activation on High Reactor Water Level - Channel Calibration"

The finalized test documentation reviewed by the inspector was found to be complete and acceptance criteria were met. The test procedures used had been reviewed and approved prior to and upon completion of the surveillance. The prerequisites for the test were listed, and "as-found" conditions were recorded. In addition, procedural steps were properly initialed and "as-left" values were recorded. Procedure deviation forms were attached to the surveillance to indicate changes to the procedure.

Of the items reviewed, the inspector considers that the licensee is meeting commitments with regards to calibration of instrumentation. In addition, the inspector found that a considerable amount of procedure rewriting was in progress to increase the technical accuracy. The inspector did note that, in a few cases, procedure deviations were not clear as to the reason for the deviation. Discussions with several technicians indicated that a lack of clarity in deviation reasoning generally did not affect performance of the procedure. However, they indicated that there was some potential for a lack of understanding as to why a procedural requirement was changed which could lead to confusion as to whether or not acceptance criteria were met. The inspector discussed this concern with the responsible licensee personnel who stated that they would evaluate this item to determine if enhancements are required.

Within this area inspected, no violations or deviations were identified.

3. Followup of IE Bulletin 85-03, Motor Operated Valve Common Mode Failures (Open)

The inspector reviewed the licensee's response to IE Bulletin 85-03, dated October 1, 1986, and held discussions with licensee personnel regarding the program for implementing the requirements of the Bulletin. As a result of this review, the inspector expressed concerns over the techniques the Supply System used to set the motor operated valve torque and limit switches in the plant. Some of the methods were similar to the methods used by sites identified in the Bulletin that had valves that were found to be inoperable. During these discussions, the licensee indicated that the Supply System plans to use Motor Operated Valve Analysis and Testing System (MOVATS) testing equipment to perform testing of the motor operated valves and that this testing will begin during the refueling outage scheduled for April, 1987. However, the inspector learned that the licensee does not plan to test all the valves indicated in their original response to Bulletin 85-03. Due to the fact that the Reactor Core Isolation Cooling (RCIC) System is no longer considered as a safety-related system, the licensee stated that they would not perform MOVATS testing of all the RCIC valves indicated in their response. Instead, they plan to perform testing of other safety related valves in place of the RCIC valves not tested. The inspector informed the licensee that they need to perform the required actions for the valves indicated in their response or else they need to amend their response. In addition, they

will need to provide adequate justification for not testing the RCIC valves.

In the exit meeting of February 27, 1987, (see paragraph 6) licensee management committed to complete the actions required for the valves identified in the Bulletin within two years of its issue date. These actions will be performed for the valves indicated in the licensee's original response unless the Supply System notifies NRC and provides adequate justification for not completing the actions for the valves indicated. The inspector will continue to follow the licensee's program in future inspections to satisfy the requirements of Bulletin 85-03.

Within this area inspected, no violations or deviations were identified.

4. Licensee Actions On Previous NRC Inspection Findings

a. (Open) Followup Item 86-36-01, Organization and Administration

This item dealt with the inspector's comparison of the licensee's on-site organizational structure to that described in TS Section 6.2 and FSAR Section 13.1.2. The intent was to verify that the lines of authority and responsibilities were clearly described and in conformance with the TS. The inspector found several discrepancies between the existing structure and that described in the TS and FSAR. In particular, no TS change had been made to reflect the addition of the Assistant Maintenance Manager, the FSAR did not provide the prerequisite education and experience for personnel filling the Assistant Maintenance Manager and the Assistant Operations Manager positions, nor were the job descriptions listed in the FSAR for these people as is done for other key plant positions. In addition, the inspector also found that the TS listed two Plant Engineering Supervisors while the FSAR listed only one. These discrepancies have not been corrected as of this inspection period since the licensee is in the process of determining what TS and FSAR documentation requirements are necessary for these plant personnel. This item will remain open pending further review.

b. (Open) Followup Item 86-33-01, Seismic and Security Requirements for the Fire Protection System

This item identified the inspector's concerns with regards to the ability to lock the doors to the structure that houses the fire pumps and the ability of the fire system to withstand a seismic event. The inspector reviewed National Fire Protection Association code (NFPA)-20 which specifies the requirements to protect the fire pumps and fire protection system from vandalism and seismic activity. The inspector discussed these requirements with licensee personnel who detailed the Supply System's methods for meeting the requirements of the code. However, the inspector noted during this inspection that the crane used in the pump house was parked directly above the battery for the starting circuitry of the diesel fire pump. The inspector is concerned that a crane failure could damage this battery or other fire protection equipment. Therefore, this item will remain

open pending further review of the licensee's controls for securing the crane to protect fire protection equipment within the pump house.

c. (Closed) Open Item DW-84-01, Part-21 on Brown Boveri ITE-27N Undervoltage Relays

This item was brought to the attention of the Supply System on October 16, 1986, by the NRC since it was determined that the Supply System had not received this notification by other methods. During this inspection period, the inspector reviewed the nonconformance report (NCR) that the licensee issued on this matter. NCR 287-031 was issued to perform an evaluation of the applicability and implications of this Part-21 at WNP-2. The licensee's disposition of the NCR indicated that there was one relay of this type used on-site and that it was placed in an application that was outside of the range that had been identified as a problem. In particular, the relay is used for slow voltage degradation protection. The Part-21 identified that relay failures had been identified only in instantaneous or load shedding applications. The disposition also specified that repairs to the relay would be made as a precautionary measure as soon as the replacement parts were provided from the vendor. The inspector considers that the licensee's actions are adequate and that this item is closed.

d. (Closed) Violation 86-36-02, Failure To Document The Factors Used To Demonstrate The Abilities Of A NSAG Member

This item identified a problem with regards to a review of the qualifications of individuals in the Nuclear Safety Assurance Group (NSAG). During that review, the inspector identified one NSAG member who did not possess a four year degree. The Technical Specifications (TS) referred to ANS.3.1 which specified that other factors can be used in lieu of the formal educational requirements, on a case-by-case basis, provided that the other factors are reviewed, approved, and documented by the plant manager. However, the inspector found no documentation or evidence to indicate that the plant manager had evaluated and approved the factors used in place of the formal education requirements for the individual concerned.

This item was discussed with the licensee who acknowledged the oversight and promptly evaluated the qualifications of the NSAG member in question. In a memorandum from the Plant Manager to the Manager of Operational Assurance Programs, dated November 5, 1986, the licensee indicated that they reviewed the experience and other positive factors regarding the individual and found them to be satisfactory to meet the requirements of the TS. The inspector considers that these actions are satisfactory to resolve this issue. Therefore, this item is closed.

e. (Closed) Open Item 86-04-01, Housekeeping In Low Traffic Areas

This item identified that housekeeping in areas of low traffic or of difficult access was poor. As a result of this concern, the Supply System assigned special crews to conduct a thorough cleanup of low

traffic and limited access areas. In addition, PPM 1.3.19, Rev. 8, "Housekeeping," was revised to provide for Floor/Area Coordinators to conduct detailed inspections of their areas on a frequent basis.

The inspector noted that continued attention is needed with regards to cleaning up tools after completion of maintenance and outages. The inspector found tools and equipment laying in and around a contaminated area in front of the 501 foot elevation personnel hatch into the drywell. This equipment remained there for at least 24 hours after the completion of maintenance without any indication of continued work activities in the area. Generally, however, improvement in housekeeping conditions has been noted, and this followup item is closed.

Within this area inspected, no violations or deviations were identified.

5. IE Information Notice Followup

The inspector reviewed the licensee's evaluation of the applicability and impact of the following IE notices to WNP-2. In addition, the recommendations suggested by licensee personnel in response to the notice were reviewed to determine if they satisfactorily addressed the concerns identified. Based upon these reviews, the inspector considers that the following notices are closed:

a. (Closed) IE Information Notice 85-66, As-Built Construction Drawing Discrepancies

In general, the licensee indicated that they feel that their configuration control method is acceptable. They know the as-built configuration of systems and can analyze the impact of changes. Also, the number of changes made in the past has not affected safety. Recommendations were made for engineering to identify drawing inconsistencies and to try to control the backlog of drawing changes. These items are to be completed by June 30, 1987. Also, an engineering review in August, 1986, identified discrepancies between shipping parts lists and drawings. Those discrepancies identified will be completed by April 1, 1987.

b. (Closed) IE Information Notice 84-70, Reliance On Water Level Instrumentation With A Common Reference Leg

The licensee identified that reactor water level instruments are the only equipment with a common reference leg. Their evaluation of this problem led to the following actions: 1) common reference leg problems were discussed with the operators during their requalification training, 2) the Supply System issued procedure PPM 10.24.144, "Backfilling Instrument Sensing Lines," Revision A, to provide better guidance to operators on backfilling lines, and 3) a separate startup checklist, PPM 3.1.6, was issued for instrument lineups.

Within this area inspected, no violations or deviations were identified.

6. Exit Meeting

On February 27, 1987, an exit meeting was held with the licensee representatives identified in paragraph 1. The inspector summarized the inspection scope and findings as described in this report. During this meeting, licensee management committed to implement a program to perform testing of motor operated valves and that they would complete the actions required for the valves identified in IE Bulletin 85-03, "Motor-Operated Valve Common Mode Failures During Plant Transients Due To Improper Switch Testings," within two years of the date of the Bulletin. Thus, by November 15, 1987, these actions will be performed for the valves indicated in the licensee's original response to the Bulletin, unless the Supply System notifies NRC and provides adequate justification for not completing the actions for the valves indicated.