

U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-397/89-03
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 on: January 9 through 13, 1989

Inspector: *P.H. Johnson* 2/16/89
for C. W. Caldwell, Project Inspector Date Signed
Approved By: *P.H. Johnson* 2/16/89
P. H. Johnson, Chief Date Signed
Reactor Projects Section 3

Inspection Summary:

Inspection on January 9 - 13, 1989 (Report No. 50-397/89-03)

Areas Inspected: Routine project inspection of licensee quality assurance (QA) program implementation, followup of inspector identified items, licensee action on items of noncompliance, and licensee event report followup. Inspection procedures 35502, 92701, 92702, 93702, and 30703 were covered.

Safety Issues Management System (SIMS) Items:

None

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Results:

- General Conclusion and Specific Findings:

In general, the licensee's QA program has undergone substantial revision since the end of the last SALP period. The inspector noted a number of enhancements that show a positive trend in effectiveness of the QA program. The inspector was concerned regarding the number of repeat problems identified in QA audits and surveillance reports, and the backlog of open audit and surveillance findings. However, the licensee's program has identified and trended repeat problems, and the Supply System was making a concerted effort to reduce the backlog of open corrective action followup items.

- Significant Safety Matters:

None

- Summary Of Violations:

None

- Open Items Summary:

Three followup items and two violations were reviewed and closed during this inspection. One followup item and one deviation were reviewed that will remained open awaiting further licensee action. No new items were identified.



DETAILS

1. Persons Contacted

Licensee Personnel

- *G. D. Bouchey, Director, Licensing and Assurance
- C. M. Powers, Plant Manager
- *L. J. Garvin, Manager, QA Programs and Audits
- *J. W. Baker, Assistant Plant Manager
- *C. H. McGilton, Manager, Operations Assurance Programs
- R. L. Koenigs, Plant Technical Manager
- *D. R. Kobus, Plant QA Manager
- A. G. Hosler, Licensing Manager
- *S. L. McKay, Operations Manager
- M. R. Wuestefeld, Assistant Plant Technical Manager
- *S. L. Washington, Lead Compliance Engineer
- *D. A. Kerlee, Principal QA Engineer
- *J. A. Arbuckle, Compliance Engineer

Other Personnel

- *J. Irish, Program Analyst, BPA

* Denotes those attending the final exit meeting on January 13, 1989.

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

2. Evaluation Of Licensee Quality Assurance Program Implementation (35502)

The purpose of this review was to evaluate the effectiveness of the licensee's implementation of the quality assurance program, and to determine whether, based on this evaluation, a follow-up regional inspection is warranted. This effort consisted of a comprehensive review of several program audits and surveillances. In addition, discussions with the Supply System's Program and Audits, Operational Assurance, and Engineering Assurance personnel and management were held to determine whether recent changes in personnel and program direction were enhancing the effectiveness of the quality programs in finding problems and weaknesses in Supply System activities. This inspection did not evaluate the licensee's operating experience review (OER) program or activities performed by the nuclear safety assurance group (NSAG). Some inspection of the OER program was performed and documented in inspection report (397/88-32). This review also did not include Supply System licensing activities.

Surveillances Reviewed

The inspector reviewed recent surveillances that were performed of maintenance, surveillance, and operational activities as follows:

- 2-88-215, "Residual Heat Removal (RHR)-V-41C Mundane Task Report #E-00012"
- 2-88-224, "Standby Liquid Control (SLC) Pumps Operability Test (Quarterly)"
- 2-88-208, "Motor Operated Valve Work"
- 2-88-252, "Control Room Shift Turnover"
- 2-88-235, "Standby Service Water Loop A Valve Position Verification"
- 2-88-218, "Damaged and Overranged Gauges"
- 2-88-205, "Plant QA Overview of R-3 Modifications"
- 2-88-187, "I&C Maintenance Backlog"
- 2-88-084, "Design Review"

The inspector noted that most of the surveillances had substantive findings regarding activities conducted in the plant. For example, surveillance report 2-88-208 contained several significant findings concerning motor operated valve limit switches. The surveillances reviewed also identified several recurring plant problems. For example, surveillance report 2-88-187 identified recurring deficiencies with terminations and timely completion of instrument calibrations, and surveillance report 2-88-084 noted recurring problems with design calculations for basic design changes in the residual heat removal (RHR) system. The inspector also noted that QA was conducting reviews of operations activities such as shift turnovers, as documented in surveillance report 2-88-252. This type of effort had not been performed in the past and was considered a positive trend in surveillance activities. However, the inspector noted that the individual performing the surveillance was not reactor operator (RO) or senior reactor operator (SRO) qualified. The inspector considered that additional effectiveness of the surveillance program may be achieved by having qualified ROs or SROs performing surveillances of operations activities.

Audits Reviewed

The inspector reviewed recent audits that were performed by the licensee in areas of known weakness such as engineering design, modification control, and corrective actions as follows:

- 88-446, "Plant 2 Compliance to Technical Specifications and Licensing Conditions"
- 88-434, "Design Modification Control and Associated Engineering Activities"
- 88-426, "WNP-2 Corrective Action"

- 88-445, "WNP-2 Corrective Action & Corporate Nuclear Safety Review Board (CNSRB) Activities"
- 88-457, DRAFT, "Plant 2 Corrective Actions"

The inspector noted that the audits reviewed had substantive findings regarding activities conducted by the various organizations audited. For example, audit 88-434 was very critical of the modification process; and audits 88-426, 88-445, and 88-457 identified a number of recurring deficiencies.

The inspector reviewed the responses from the audited organizations to audit findings and considered that a number of the responses were less than adequate. In a few cases, the responses were submitted after the due date (about a week overdue) and some responses did not adequately address the concerns identified in the audit report (primarily audit 88-434). As a result, the inspector perceived that a few personnel might consider the QA organization to be in an adversarial role. With regard to the discrepancies above, the inspector noted that QA had implemented a program to elevate untimely responses to the proper levels of management for resolution, had rejected inadequate responses, and had pursued submittal of better responses or corrective actions when necessary.

The inspector noted that in several of the audit reports reviewed, auditors attempted to identify the root cause of the problems found concerning the audited activity. For example, in audit 88-434, the QA auditors attempted to identify the root cause of the problems associated with the design modification process. However, the inspector noted that the audited organizations did not always specifically respond to the root cause determination in the audit response. Although the inspector noted that a root cause determination could not be done for all audit findings, the inspector encouraged the licensee to continue with this effort to try to identify the fundamental root cause for large scale problems and to ask the responsible organizations to respond to these root cause assessments.

The inspector compared the findings in audits 88-426 and 88-445 on corrective actions. In addition, the inspector discussed the results of the most recent corrective action audit, 88-457, that was being prepared for issue. The inspector noted a number of recurring problems with such issues as licensee event report (LER) corrective action followup, nonconformance report (NCR) closure times, Technical Specification compliance, and evaluation of NCRs for safety significance. Many of these recurring problems were identified in the past by the NRC. The inspector was concerned that these repetitive deficiencies were still occurring, but noted that QA had compiled a matrix of findings from audits in various areas and had highlighted problems with common themes. These recurring problems were then being identified to responsible levels of management in an attempt to demonstrate that inadequate corrective actions had been taken in the past.

The inspector noted that there was quite a backlog in followup and review of corrective actions for deficiencies identified, particularly in the audit area. This backlog was due to several circumstances, primarily personnel availability. The inspector noted that the licensee was attempting a concerted effort to reduce the backlog of items, including the solicitation of an independent contractor to help in one area. The inspector considered that timely evaluation of corrective actions was necessary to prevent further recurring problems. The inspector noted that the Supply System had allocated additional resources to ensure that personnel were available to make quality assessments and provide timely followup and evaluation of corrective actions. The inspector encouraged licensee representatives to continue their evaluation of resource allocation so that quality assessments and timely followup can continue.

The inspector noted that a few managers have specifically requested audits or surveillances of selected activities within their area of responsibility. The inspector encouraged line managers to continue to utilize the quality groups in this fashion to evaluate perceived problems in their area of responsibility.

Principal Enhancements To Increase QA Effectiveness

As a followup to discussions held during recent management meetings, the inspector discussed program and personnel changes, and reviewed associated documentation in detail with responsible personnel in the Licensing and Assurance Organization. The inspector noted a number of enhancements to the program implementation. Some of the more noteworthy changes were as follows:

- Standardization of assessment and finding forms used by quality groups
- Increased staffing allocation
- Utilization of a performance based inspection program
- Increased interface among groups (e.g., program audits sent to plant QA and surveillances sent to Operational Assurance for inclusion in respective audits and surveillances)
- Trending of repeat or recurring problems
- Monthly meetings held and reports issued to consolidate findings, to prepare a concise message or theme, and to identify such things as recurring problems to management
- Quarterly meeting held with the Managing Director to discuss such concerns as recurring problems
- Quality finding, concern, and observation data revised to a more understandable format

- QA plans to tabulate audit findings and organizational responses in an attempt to better evaluate problems and responses (self critique)
- Increased communication between quality groups and plant personnel
- QA borrowing specialists from other groups and sites to perform audits
- Establishing audit and surveillance specialists in various functional areas
- Addition of an NRC and INPO Commitment List
- Training exchange program for personnel
- Plant probabilistic risk analysis used for audit and surveillance preparation

Summary

Based upon the documents reviewed and discussions held with Supply System personnel, the inspector considered that the licensee's quality groups were headed in a positive direction. The recent enhancements provided evidence that the Supply System was attempting to increase the effectiveness of the quality oversight groups. The inspector considered that, in general, the quality groups appeared to be identifying more substantial findings during the performance of audits and surveillances; taking a more forceful role in conveying identified problems to the plant; and elevating large problems (such as recurring deficiencies) to sufficiently high levels of management for resolution. However, the inspector perceived that, in a few cases, there was still some resistance to QA findings as evidenced by overdue or inadequate responses. The inspector considered that the true test of the Licensing and Assurance organization's effectiveness would be final resolution of recurring deficiencies, a continued reduction in the backlog of corrective action followup items, and more QA involvement to identify problem precursors before they reach NRC attention and concern. As a result of this review, the inspector concluded that current and projected resident, project, and team inspection efforts are adequate to assess the implementation of quality programs and effectiveness of the Supply System's quality oversight groups.

No violations or deviations were identified.

3. Licensee Action On Previous NRC Inspection Findings (92701)
 - a. (Open) Followup Item (88-32-01), "Discrepancies/Concerns Regarding ATWS Modification"

This item identified several discrepancies/concerns with the Anticipated Transient Without Scram (ATWS) modifications that were



installed in the plant. In particular, the following items were identified:

- The ATWS recirculation pump trip (RPT) logic scheme was different from those approved by NRR for other plants.
- Several ROs and SROs were not aware of the manual reset or the minimum time to reset of the ATWS alternate rod injection (ARI).
- Discrepancies were identified by the licensee in the ATWS Criteria Design Implementation Review document.
- An out-of-service time limit for the standby liquid control (SLC) system needed to be determined, or justification needed to be provided in a design basis calculation or document.

The inspector found that ROs and SROs had been trained on the manual reset function of the ATWS ARI. However, in discussions with NRR and responsible licensee personnel, the inspector found that NRR had not accepted the ATWS RPT logic scheme and that the licensee was evaluating the need for changes. This item will remain open pending resolution of the ATWS RPT logic scheme, resolution of discrepancies identified in the ATWS Criteria Design Implementation Review Document, and resolution of the out-of-service time limit for the SLC system.

b. (Closed) Followup Item (88-09-01), "Licensee Action To Ensure EQ Requirements Are Met When Performing Surveillances"

This concern was raised as a result of a terminal box that was found open after completion of an operations surveillance in the panel. As a result, the inspector was concerned that the necessary environmental qualification (EQ) controls may not have been established for operations surveillance procedures.

The inspector discussed this issue with responsible personnel who indicated that operators had been reminded of the need to restore equipment to original configuration upon completion of surveillances. In addition, the inspector toured the plant and did not find any terminal box covers loose or open. The licensee also completed a review of Technical Specification surveillance procedures in March 1988 to ensure that the necessary EQ controls were established. This item is closed.

c. (Closed) Followup Item (88-20-01), "Licensee's Evaluation Of Need For Additional Training Of QA Inspectors"

This item identified that the licensee would evaluate the inspector's concern that QA inspectors were not familiar with or trained on motor operated valve testing and associated equipment. However, they were performing surveillances on these activities. In addition, from the generic standpoint, QA inspectors were not trained

on many of the specialized processes that took place in the plant, yet they performed surveillances on activities using these processes.

The inspector discussed this item with the QA Manager who stated that the Supply System would have several QA engineers attend motor operated valve analysis and test training which is scheduled to take place before the next refueling outage. In addition, for long range goals, the licensee was attempting to identify the appropriate level of instruction necessary to ensure competent QA engineer performance observations of specialized activities. The pending training program for QA personnel was expected to consist mainly of training already in place for plant technicians. The inspector considered that the licensee was responsive to this concern. Therefore, this item is closed.

d. (Closed) Followup Item (87-28-01), "Licensee Commitments With Regard To Refresher Training For Journeymen Technicians"

This item identified that the work schedule had had not provided most journeymen a chance to attend refresher training.

The inspector discussed this item with responsible personnel who indicated that a refresher training program was being developed along with an upgrade to on-the-job and entry level training. The maintenance department was attempting to establish a cycle that would allow approximately 10% refresher training time for all maintenance personnel. The inspector considered that the licensee's actions were appropriate. This item is closed.

No violations or deviations were identified.

4. Licensee Action On Items Of Noncompliance (92702)

a. (Closed) Violation (88-32-03), "Failure To Prepare A Nonconformance Report For Hydraulic Control Unit Discrepancies"

This item identified two instances wherein neither a problem deficiency report nor a nonconformance report was prepared to identify plant problems experienced with the control rod hydraulic control units (HCUs).

For corrective action, the licensee performed the following actions:

- All HCU hold down bolts were torque checked.
- Engineering calculations were performed to verify the seismic operability of the worst-case nonconforming condition.
- Plant procedure (PPM) 1.3.12, "Plant Problems - Problem Evaluation Request," was revised to define and specify the use of a

problem evaluation request (PER). The PER is a document whose purpose is to establish a controlled method to formally communicate the existence of a plant problem for management action.

In addition, as a result of this problem the licensee was also requested to evaluate the operating experience review (OER) program for its effectiveness in assuring that proper actions are taken when discrepancies are found during OER reviews. As a result of the licensee's evaluation, a note was added to PPM 1.10.4, "External Operating Experience Review," to specify that at any point in the OER process, a problem evaluation report (PER) should be initiated if there is reason to believe that an item of noncompliance may exist. The inspector considered that the licensee's actions in response to these matters were appropriate. Therefore, this item is closed.

b. (Open) Deviation (88-32-02), "Failure To Complete Calibration Of Diesel Generator Tank Level Instruments"

This item identified that the licensee did not complete calibration of the diesel generator (D/G) fuel oil tank level instruments within the specified time. As a result, the instruments were not operable.

The licensee planned to complete calibration of the D/G fuel oil tank level instruments during the next refueling outage. This item will remain open pending completion of work.

c. (Closed) Violation (88-20-02), "Two Examples of Failure To Prepare A Nonconformance Report"

This item identified two instances wherein licensee personnel did not prepare a nonconformance report for plant problems. The first example involved a new fuel bundle that was dropped and the second involved problems with torque switches and degraded grease in motor operated valves.

For corrective action, the licensee revised PPM 1.3.12, "Plant Problems - Problem Evaluation Request," to define and specify the use of a PER. In addition, the affected torque switches were replaced and the licensee inspected a number of valves to ensure that their torque switches were operable. With regard to the degraded grease, an interim inspection was conducted for selected valves in the steam tunnel. For long term action, the licensee has an open item on the plant tracking log to inspect and change the grease in all the motor operators of all safety function valves in the drywell and main steam tunnel during the next refueling outage. The inspector considered that the licensee's actions and long term plans were adequate to resolve this item. This item is closed.

No additional violations or deviations were identified.

5. Licensee Event Report (LER) Followup (93702)

The following LERs were closed based on in-office review:

- LER 88-27, "Reactor Water Cleanup System Isolation On High dP Flow"
- LER 88-32, "Inadvertent Closure Of Reactor Core Isolation Cooling Steam Supply Line Containment Isolation Valve"

No violations or deviations was identified.

6. Exit Meeting (30703)

On January 13, 1989, 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.

The licensee did not identify as proprietary any of the information reviewed by or discussed with the inspector during the inspection.