ENCLOSURE 2

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Inspection Report: 50-397/95-18

License: NPF-21

Licensee: Washington Public Power Supply System
3000 George Washington Way
P.O. Box 968, MD 1023
Richland, Washington

Facility Name: Washington Nuclear Project-2

Inspection At: WNP-2 Site, near Richland, Washington

Inspection Conducted: May 15-19, 1995

Inspector: Phillip M. Qualls, Reactor Inspector

Approved: _____ 6/23/95
William P. Ang, Chief, Plant Support Branch, Date
Division of Reactor Safety

Inspection Summary

Areas Inspected: Routine, announced inspection of the implementation of the fire protection program and followup of previously identified items. Inspection procedures 64704 and 92904 were used.

Results:

Operations

- Plant operators were using the fire protection water system for non-fire protection activities, with only one water supply available, in violation of a fire protection program implementing procedure requirement (paragraph 2.2).

Plant Support

- The licensee's implementation of fire protection program requirements was adequate to ensure safe plant operation (paragraph 2.3).

Summary of Inspection Findings:

- Violation 397/9518-01 was opened (paragraph 2.2).
- Violation 397/9418-01 was closed (paragraph 3.1).
- Violation 397/9428-01 was closed (paragraph 3.2).

Attachment:

- Attachment - Persons Contacted and Exit Meeting

DETAILS

1 INTRODUCTION

The Washington Public Power Supply System Facility Operating License, Amendment No. 6, dated May 25, 1989, paragraph 2.c.(14), "Fire Protection Program (Generic Letter 86-10)," requires the implementation of the approved fire protection program as described in Section 9.5.1 and Appendix F of the Final Safety Analysis Report. Section 9.5.1 and Appendix F of the Final Safety Analysis Report contain the licensee's commitments for the Washington Nuclear Project-2 (WNP-2) fire protection systems and fire protection program. An inspection was performed to verify the adequacy of the licensee's implementation of its fire protection program commitments. An inspection was also performed to verify the adequacy of licensee corrective actions for previously identified fire protection program violations.

2 FIRE PROTECTION/PREVENTION PROGRAM (64704)

2.1 Fire Brigade and Fire Watch Training

The inspector reviewed training records for the plant fire brigade and fire watch members. The training and qualification of all members was current and up to date. The inspector reviewed the fire brigade drill records for 1994. All shift fire brigade teams had completed the required quarterly drills including an unannounced and a backshift drill. Each member had participated in at least two drills in 1994. The inspector verified that all fire brigade members had completed a required biannual physical examination.

The inspector reviewed the content of the training material and verified that the training was consistent with licensee requirements in the fire hazards analysis. The inspector noted that fire brigade members were trained by actually extinguishing a fire and that fire watch personnel were trained in the use of fire extinguishers.

2.2 Plant Walkthrough

The inspector performed a visual inspection of the reactor building, diesel generator building, auxiliary building, circulating water pumphouse, standby service water pumphouse, and diesel fire pump pumphouse. The purpose of the inspection was to verify that fire protection systems were properly aligned for operation, that fire protection equipment was in good working condition, to observe work in the unit, and controls for transient combustible materials were being implemented.

The unit was in a planned refueling outage at the time of the inspection. Transient combustible materials were being controlled in accordance with licensee procedures. In areas where work was not in progress, housekeeping was good. Where work was in progress, the areas were generally kept in order

and no unusual housekeeping deficiencies were noted. Workers were implementing required fire protection program requirements.

The inspector observed that fire protection equipment was well maintained. All fire extinguishers and fire hoses examined by the inspector had been properly tested and appeared to be in good working order. Fire protection systems were properly aligned for existing plant conditions.

The inspector observed that the licensee had drained the circulating pump water basin. The basin is the normal water supply for three of the licensee's four fire water pumps. The fourth pump takes it's suction water supply from a separate 400,000 gallon tank dedicated to supply firewater. The inspector observed, on May 16, 1995, that diesel firewater pump, FP-P-110, was running. The inspector later determined that the pump had been run to supply water to fill the spray ponds. WNP-2 Technical Specifications section 6.8.1 requires that fire protection procedures be implemented. Licensee procedure 1.3.10, Fire Protection program Implementation, Revision 17, Section 6.5.1, prohibits fire protection system water to be used for non-fire protection activities unless both fire protection water sources are available. Using the firewater system for non-fire protection activities with only one firewater source available is a violation of licensee's procedures (50-397/9518-01).

Licensee staff stated that, during the filling of the spray ponds, an operator was continuously on a telephone at the pond and could secure the filling activity if and when the fire protection system was required. The licensee's fire marshall provided documentation to the inspector dated May 13, 1995, to indicate that plant operators had been informed that the fire system would be degraded. The fire marshall reminded the plant operators, on May 18, 1995, that the Hanford Fire Department would provide backup pumping capability and should be notified if FP-P-110 should become inoperable.

2.3 Conclusion

The inspector concluded that the licensee's fire brigade and fire watch training programs adequately implemented the licensee's program. The inspector concluded that housekeeping and material condition of the licensee's fire protection equipment was satisfactory. The inspector noted one violation of plant operators not following a fire protection procedure. The inspector concluded that the licensee's fire protection program implementation was adequate to ensure safe plant operation.

3 FOLLOWUP - PLANT SUPPORT (92904)

3.1 (Closed) Violation 397/9418-01; Failure to Have a Combustible Material Storage Permit

3.1.1 Original Violation

Wood that had not been treated with fire retardant was being used in the reactor building.

3.1.2 Licensee Actions in Response to this Violation

The licensee responded to the violation by letter dated July 8, 1994. In the letter the licensee stated that the following corrective actions were taken.

- A walkdown was immediately initiated. All untreated wood was either treated or removed from the plant.
- Labels were affixed to doorways and hatches in the reactor, turbine-generator, diesel generator, circulating water pumphouse, and standby service water pumphouse buildings to warn personnel that untreated wood must not be brought into those plant areas, except as prescribed by Procedure 1.3.10.
- Training was conducted to emphasize to Supply System and Bechtel maintenance, project, health physics, and construction personnel concerning the use of untreated wood.

3.1.3 Activity During this Inspection

The inspector reviewed training records to verify that the training had been accomplished. The inspector noted that the signs were posted as stated by the licensee. The inspector performed visual inspections of the Reactor, turbine-generator, diesel generator, circulating water pumphouse, and standby service water pumphouse buildings to verify that no untreated wood was in use inside of the power block buildings.

3.1.4 Conclusion

The inspector concluded that immediate licensee corrective actions were adequate to address the problem. The inspector also concluded that long term actions were successful in resolving the issue. This item is CLOSED.

3.2 (Closed) Violation 458/9428-01; Inadequate Corrective Action

3.2.1 Original Violation

The violation had two examples of inadequate corrective actions. One example was documented in inspection reports 9351 and 9408, and in Licensee Event Report 94-02-01. This violation was cited because the licensee's employee concerns program failed to respond to employee concerns about fire barrier seal deficiencies. The other violation resulted from licensee management failing to take action to resolve fire protection program safe shutdown deficiencies, which were identified in October 1992, until identified in a quality assurance audit in May 1994.

3.2.2 Licensee Actions in Response to this Violation

The licensee responded to the violation by letter dated December 16, 1994. In the letter the licensee stated that "aggressive efforts are underway to address the deficiencies regarding penetration seals and safe shutdown issues as detailed in NRC Inspection Report 94-28. Compensatory measures are being taken and will be continued until these efforts are completed." The licensee also stated that the fire protection organization had been centralized and that the problem evaluation request process had been substantially strengthened to require a follow-up operability assessment in cases where the initial operability assessment was based on engineering judgement.

To address the fire barrier seal deficiencies, the licensee declared that all fire seals were inoperable and implemented fire watch compensatory measures. The licensee implemented a fire barrier seal evaluation program. The program consisted of training for inspectors, a complete inspection of all required fire barrier seals, and a design reverification. At the time of the inspection, the licensee had completed the inspection of about 28 percent of the installed seals. The walkdowns were scheduled to be completed by November 1, 1995.

The licensee also revised Plant Procedure Manual 1.3.12A, "Processing of Problem Evaluation Requests," Revision 2, to require a followup evaluation of operability if the initial evaluation was based on engineering judgement.

The licensee reorganized the fire protection program, centralizing the fire protection program under a single technical services manager. The organizational structure would allow a better focus for identification, evaluation, and resolution of fire protection issues. The technical services manager had major activities in progress to oversee the fire barrier penetration seal verification project, to resolve outstanding Thermo-lag issues, to resolve fire protection safe shutdown issues, and to update the fire hazards analysis. To accomplish these tasks, the licensee provided qualified engineers to oversee each project.

The resolution of the safe shutdown concerns was discussed in Inspection Report 50-397/9428. The resolution involved, as an interim measure, prestaging of operators at several locations in the unit. The operators were to take immediate action upon evacuation of the control room for a design basis fire to prevent spurious actuation of equipment from precluding plant safe shutdown. During the outage, the licensee modified electrical control circuitry to prevent the spurious actuation of the residual heat removal system valves. The remaining concerns dealt with problems involved with potential effects of flooding the main steam lines if the main steam isolation valves (MSIVs) were not closed. The licensee added an immediate action to Plant Procedure Manual 4.12.1.1, "Control Room Evacuation and Remote Shutdown," Revision 23, to trip the MSIVs prior to control room evacuation. Generic Letter 86-10, Section 3.8.4, allows control room actions prior to evacuation provided that they can be accomplished prior to the evacuation and cannot be negated by a single subsequent spurious actuation.

3.2.3 Activity During this Inspection

The inspector reviewed with licensee staff the progress of the penetration seal verification program. The licensee had completed inspection of 867 of the approximately 3000 seals to be inspected. The licensee found 66 that did not meet acceptance criteria. The followup engineering assessment for the seals not meeting inspection acceptance criteria had not been accomplished at the time of this inspection. The inspector reviewed the revisions to licensee procedure 1.3.12A. The procedure revisions appeared adequate to ensure future identified deficiencies are adequately resolved. The inspector verified, through direct observation, that fire watch compensatory measures were being performed for the potentially inoperable fire barrier seals.

The inspector reviewed the licensee's fire protection staffing and organization and concluded that the centralized organization and current staffing should ensure that current problems are resolved and that future fire protection problems receive prompt management attention and resolution.

The inspector reviewed licensee actions to resolve the interim corrective actions for the control room fire safe shutdown issues. At the time of the inspection, the licensee had not completed work on circuitry modifications to preclude spurious actuation of Residual Heat Removal (RHR) system valves during a control room fire. However, the modification, when completed, would correct the identified fire protection safe shutdown deficiencies.

The inspector reviewed the licensee's revised safe shutdown procedure, and associated timeline, to verify that changes that were made could be accomplished during performance of the procedure. During previous inspections documented in inspection reports 50-397/9421 and 50-397/9428, the inspector performed a physical walkdown of the remaining immediate actions, taken for a control room fire, to verify that the actions could be accomplished. The inspector verified that the additional control room action, tripping of MSIVs, could be accomplished prior to the control room evacuation. The inspector verified that the MSIVs could not be reopened by a single fire induced spurious actuation.

The inspector concluded that licensee corrective actions would resolve identified fire protection safe shutdown deficiencies. The inspector also concluded that procedural and organizational changes implemented by the licensee provided sufficient assurance that potential future fire protection program deficiencies would be appropriately reviewed and corrected. This item is CLOSED.

ATTACHMENT

PERSONS CONTACTED AND EXIT MEETING

1 PERSONS CONTACTED

Licensee Personnel

*V. Parrish, Vice President, Nuclear Operations
*T. Meade, Manager, Technical Programs
*M. Widmeyer, Supervisor, Performance Monitoring
*D. Becker, Supervisor, Engineering
*A. Moore, acting Manager, Analytical Support
*W. Harper, Lead Fire Protection Engineer
*M. Pratt, Operations
*A. Chaing, Principal Engineer, Analytical Support
*M. Monopoli, Manager, Maintenance

NRC Attendees

*D. Proulx, Resident Inspector
*J. Whittemore, Reactor Inspector
*R. Barr, Senior Resident Inspector
*J. Dyer, Deputy Director, Division of Reactor Projects

The above personnel were contacted during the inspection. In addition to the personnel listed above, the inspectors contacted other personnel during this inspection period.

* Denotes personnel that attended the exit meeting on May 18, 1995.

2 EXIT MEETING

An exit meeting was conducted on May 18, 1995. During the meeting, the inspector summarized the scope and findings of the report. The licensee acknowledged the inspection findings identified in this report. The licensee did not identify as proprietary any information provided to, or reviewed by, the inspector.