APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION

REGION V

Inspection Report: 50-460/94-01
50-508/94-01

Construction Permits: CPPR-134
CPPR-154

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

Facility Name: Washington Nuclear Project No. 1 (WNP-1)
Washington Nuclear Project No. 3 (WNP-3)

Inspection at: WNP-1 Site near Richland, Washington
WNP-3 Site near Elma, Washington

Inspection Conducted: March 21-22, 1994 (WNP-1)
March 23-25, 1994 (WNP-3)

Inspector: W. Wagner, Reactor Inspector

Approved by: W. P. Ang
W. P. Ang, Chief, Plant Support Branch

4-20-94
Date

Inspection Summary

Areas Inspected (Units 1 and 3): A routine, announced inspection was conducted of Quality Assurance activities associated with implementation of the plant preservation program, at WNP-1 and WNP-3, during the extended construction delay. NRC Inspection Procedure 92050 was used as guidance for this inspection.

Results (Units 1 and 3): The preservation program for the extended construction delay activities were effectively implemented, at WNP-1 and WNP-3, to ensure that plant structures, systems, and components were properly preserved and maintained.

Attachment:

- Attachment - Persons Contacted and Exit Meeting

DETAILS

1 WNP-1 PLANT PRESERVATION DURING EXTENDED CONSTRUCTION DELAY (92050)

1.1 Equipment and Material Storage

The inspector conducted a walkthrough inspection of various Level A and B storage areas located in the containment building, general service building, control room, diesel generator room, and the main warehouse. Plant equipment was being maintained according to a preventive maintenance program which implements the storage requirements of ANSI/ASME N45.2.2-1978, "Packing, Shipping, Receiving, and Handling of Items for Nuclear Power Plants." The licensee had designated storage areas, Levels A and B, which were consistent with ANSI/ASME N45.2.2-1978 classifications. The inspector observed equipment storage for cleanliness, material corrosion, and temperature and humidity controls. No signs of material corrosion were observed, and cleanliness and protection of equipment were satisfactory. The inspector found the hygrothermographs were properly calibrated for monitoring humidity and temperature inside these storage areas. The inspector concluded that preservation activities were adequate to ensure that equipment and materials were properly stored and maintained.

1.2 Quality Assurance Program Activities

The inspector reviewed two reports of audits performed during 1993. The purpose of this review was to determine the scope of the audits and whether significant deficiencies were identified. The first audit, Audit 93-641, was performed in accordance with the Design and Construction Quality Assurance Requirements Manual (WMC-015) which required audits of the WNP-1 preservation program to be performed annually. The scope of Audit 93-641 evaluated the following elements of the QA program: preservation maintenance, preservation engineering, QA/receiving inspection, material/document control/ warehousing, and implementation of QA Audit 92-600 corrective action responses. The inspector found the audit to adequately cover the major elements of the QA program for preserving plant equipment. No significant deficiencies were identified.

The second audit report reviewed by the inspector was of an audit conducted by the American Society of Mechanical Engineers (ASME). This audit was the scheduled annual audit of WNP-1 ASME QA Manual implementation. The scope of this audit was limited to procedure revisions, training for those procedure revisions, and preservation of records, material and equipment. The audit scope was limited due to the lack of work activity associated with preserving ASME N- Certificate safety-related equipment. No significant deficiencies were identified during the ASME audit.

The inspector also reviewed the QA quarterly surveillance schedule for 1993. The inspector verified that 15 surveillances were performed, as scheduled, during this period.

The inspector reviewed Plant Site Procedure (PSP) 17.3, Revision 7, entitled, "Control of Nonconforming, Material Item, and Processes." This procedure required all nonconformance reports (NCRs) to be reviewed by the Design Engineering Manager for impact on plant preservation. The inspector reviewed two recently issued NCRs and found each was sent to the design engineering manager with the following statement: "This nonconformance has been reviewed for impact on preservation and it is determined that a disposition is not required at this time." The inspector found the NCRs were processed in accordance with the requirements of PSP 17.3.

The inspector concluded that the licensee's QA Program audits and surveillances were being effectively implemented to ensure that preservation activities were being accomplished in accordance with NRC requirements and licensee commitments.

1.3 Preventive Maintenance Program

The inspector reviewed the latest revision to the licensee's preventive maintenance program. This program was described in WMC-056 entitled, "WNP-1 Preventive Maintenance Program," Revision 18, of August 11, 1993. The inspector noted that some of the changes constituted a relaxation of equipment preservation practices. The licensee, prior to implementing Revision 18, had requested Babcock and Wilcock's (BW) technical advice regarding the proposed changes. The changes proposed elimination of desiccants and humidity indicators based on preservation program records and corrosion monitoring program results. The proposed changes were for motor operated valves, drive motors, heat exchangers, auxiliary system tanks, and steam generators. The inspector reviewed BW's response which provided recommendations if the proposed changes where implemented into the preventive maintenance program. The inspector found that Revision 18 had incorporated the BW recommendations for each proposed change that BW had found acceptable. The proposed change to delete all desiccants and humidity indicators from the steam generators was not included in Revision 18 because BW stated that no data was presented to justify doing so. The inspector concluded that the licensee had taken the appropriate actions to ensure that Revision 18 would minimize the risk of equipment degradation due to corrosion.

WMC-056, Appendix B entitled, "WNP-1 Structural Material Corrosion Monitoring Program," required the Corrosion Engineer to perform an annual plant walkdown. This walkdown was to ensure that plant installed equipment and structural materials were being maintained in a condition that prevents their degradation by corrosion related mechanisms. The inspector verified that these walkdowns were being performed as required by WMC-056. The inspector reviewed the latest walkdown report of April 6, 1993, and found the report addressed a thorough inspection of the areas covered.

1.4 Preventive Maintenance Records

The inspector randomly selected 12 items from the computerized scheduled maintenance system (SMS) list to verify that the scheduled preventive maintenance tasks were performed. The items selected were four pumps and their associated motors to verify quarterly shaft rotation, one fire pump to verify annual flow test, and four Class 1E electronic cabinets to verify biannual four hour energized test. The preventive maintenance program utilizes SMS task cards and maintenance work requests (MWRs) to perform the work. The task card described the preventive maintenance scheduled to be performed on plant equipment and the MWR described the actual work performed. The inspector's review of the task cards and associated MWRs indicated that the required preventive maintenance was performed as scheduled. The inspector also verified, by reviewing the measuring and test equipment usage card, that the Digistrobe tachometer used to record the fire pump flow test was calibrated at the time the task was performed. The inspector concluded that the records were sufficient to furnish evidence that preventive maintenance was performed as scheduled.

2 WNP-3 PLANT PRESERVATION DURING EXTENDED CONSTRUCTION DELAY (92050)

2.1 Equipment and Material Storage

The inspector conducted a walkthrough inspection of various Level A and B storage areas located in the reactor building, reactor auxiliary building, control room, and Warehouse 1 and 2. The inspector found no evidence of water or abnormal corrosion during this walkdown. Hygrothermographs inside these storage areas were in calibration. The inspector concluded that housekeeping, preservation and protection of equipment, in all areas inspected, were satisfactory.

2.2 Quality Assurance Program Activities

The inspector reviewed the annual QA audit report conducted by the programs and audits department. The scope of QA Audit 93-619 evaluated the following elements of the QA program: quality assurance, preservation engineering, maintenance preservation/procurement, material control/warehousing, and document control/records management.

The inspector also reviewed 11 surveillance reports and the corrosion monitoring program walkdown inspection report. These were reports of surveillances and inspections which were performed in 1993. The inspector concluded that these QA activities were thorough and well documented. No significant deficiencies were identified.

2.3 Observation of Work

The inspector observed facility personnel performing the following maintenance activities:

2.3.1 Preservation Calibration of the Containment Bleed Off Flow Transmitter Located at the 370 Foot Level of the Reactor Building

The inspector observed that quality control was notified prior to starting this work as specified on Preventive Maintenance (PM) Task Card No. 3-RC-FT-156. The inspector also observed that the instruments used for this work were calibrated.

2.3.2 Work Performed on Maintenance Work Request (MWR) No. AW 8327

The work requested was to replace the internal space heater wiring in the 480 VAC Motor Control Center A121. The inspector observed that the wiring was replaced with Anaconda 200 degree centigrade #12 range wire as specified on the MWR. The inspector also noted that the crimping tool was calibrated.

2.3.3 Rotation of Shaft Pump and Motor on High Purity Waste Pumps 1A and 1B

This work was performed as specified on PM Task Card Nos. 3-SH-PP-1A and 3-SH-PP-1B.

The inspector reviewed the qualifications records of the maintenance technicians that performed the work observed. These records were being properly maintained and easily retrievable. The inspector's review of the records revealed that the technicians were qualified to perform their respective tasks.

The inspector concluded that these work activities were performed in accordance with the appropriate procedures which were part of the MWR.

2.4 Preventive Maintenance Program

The inspector reviewed the licensee's preventive maintenance program as described in WMC-051 entitled, "Preservation of Assets Preventive Maintenance Program." Paragraph 3.3.1 stated that the preservation goal inside the reactor auxiliary building (RAB) was to establish an average relative humidity of 50 percent or less. This goal was established in 1989. The inspector reviewed the relative humidity trend data taken at the 335 foot level of the RAB during the period 1989 to 1993. The inspector concluded that the licensee goal of maintaining the relative humidity at 50 percent or less was continuing to be met.

2.5 Preventive Maintenance Records

The inspector reviewed the SMS cards to verify that the required PM tasks were performed when scheduled. Included in this review was a computer printout of 178 tasks for all equipment requiring rotations (pumps, motors, fans, and gear reducers). A random selection of MWRs associated with these tasks was also reviewed for status of work completion. The inspector concluded that the records provided evidence that the required PM tasks and rotations were performed as scheduled.

ATTACHMENT

1 PERSONS CONTACTED

1.1 WNP-1

*T. Houchins, Project Quality Assurance Manager
*W. David, Manager Projects, WNP-1/3
*A. Edmondson, Engineering Manager (Raytheon Engineering & Contractors)
*M. Rau, Property and Materials Control Manager
*L. Peters, Quality Assurance Technical Specialist
*J. Burke, Maintenance Manager
*G. Hansen, Site Manager
H. Kadinger, Preventive Maintenance Project Leader
L. Oates, Engineering Manager
M. Banta, Scheduled Maintenance System Coordinator
M. Hill, Site Support Manager
E. Priludik, Industrial Safety and Fire Protection Representative

*Attended the WNP-1 exit meeting on March 22, 1994

1.2 WNP-3

#W. Drinkard, Quality Assurance Manager
#P. Dodger, Administrative Specialist
#J. Cooper, Project Business Manager
#J. Hayes, Warehouse Supervisor
#M. DeBoard, Preservation Program Support Leader
#T. Houchins, Project Quality Assurance Manager
#L. Hill, Plant Preservation Manager
#R. Jenkins, Deputy Site Manager
#S. DeLoe, Administration Manager
#C. Reid, Preservation Engineering Manager
#S. Ratcliff, Maintenance Manager
#J. Perreault, Engineering Manager
C. Butros, Plant Manager

#Attended the WNP-3 exit meeting on March 25, 1994

2 EXIT MEETING

Exit meetings were conducted at WNP-1 on March 22, 1994, and at WNP-3 on March 25, 1994. During these exit meetings, the inspector reviewed the scope and findings of the report. The licensee acknowledged the inspector's findings as identified in this report. The licensee did not identify as proprietary any of the information provided to, or reviewed by, the inspector during these inspections.