U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-397
License No.:	NPF-21
Report No.:	97009
Licensee:	Washington Public Power Supply System
Facility:	Washington Nuclear Project-2
Location:	Richland, Washington
Dates:	April 13 through May 24, 1997
Inspectors:	S. A. Boynton, Senior Resident Inspector G. D. Replogle, Resident Inspector G. W. Johnston, Senior Project Engineer M. D. Tschiltz, Senior Resident Inspector, Diablo Canyon L. T. Ricketson, Senior Radiation Specialist
Approved By:	H. J. Wong, Chief, Reactor Project Branch E

ATTACHMENTS:

Attachment A	Supplemental Information
Attachment B	SALP Public Meeting Presentation Material

EXECUTIVE SUMMARY

Washington Nuclear Project-2
NRC Inspection Report 50-397/97009

Operations

- The operators were generally alert, responsive to alarms, professional, and safety conscious (Section O1.1).

- A life ring in a large plastic bag was found in the wetwell during the initial wetwell entry. The corrective actions to address the failure to properly implement the debris inspection required by plant procedures were adequate and the issue was considered a noncited violation. The licensee's investigation had not considered the management expectation to maintain a material accountability log for wetwell entries. The log was being used in the current refueling outage (Section O1.2).

Maintenance

- Maintenance was generally performed in a thorough and professional manner (Section M1.1).

- Contractor oversight for two maintenance activities was weak. In one instance contract workers initiated work on the wrong diesel generator (DG). In another instance the contract craftman's and craft supervisor's knowledge of foreign material control (FMC) requirements were inadequate to ensure proper implementation of the FMC program (Section M1.2).

Engineering

- A violation of Technical Specification (TS) 3.6.3 was identified. In December 1993, the licensee had determined that containment isolation Valves MS-V-16 and MS-V-19 were inoperable, but failed to deenergize the valves in the closed position within 4 hours. The valves were not deenergized until March 1994. Additionally, a recent engineering evaluation erroneously determined that the valves were operable at the time of the event. The evaluation was narrowly focused on the validity of a single pipe break location and failed to consider other legitimate pipe break locations (Section E8.1).

- Job planning for the Asea Brown-Boveri (ABB) fuel debris filter replacement work was not always thorough. Engineering personnel did not verify the depth of the work platform in the spent fuel pool which resulted in work delays when platform extensions had to be constructed (Section M1.4).

Plant Support

- Radiological controls associated with the ABB fuel debris filter work were appropriate (Section M1.4).

- The requirements of 10 CFR 70.24 for criticality monitoring and drills were properly implemented (Section P1.1).

Report Details

Summary of Plant Status

The plant was in operational Mode 5 for the entire inspection period, from April 13 through May 24, 1997.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

Using Inspection Procedure 71707, the inspectors observed licensed operators in the control room. The operators were generally alert, responsive to alarms, professional, and safety conscious.

O1.2 Foreign Material Found in Wetwell

a. Inspection Scope (71707)

On April 22, 1997, during initial wetwell entry, the licensee identified that a life ring in a plastic bag was inadvertently left inside the wetwell for the entire operating cycle. The life ring was located on the catwalk and was visible from the wetwell hatch. Problem Evaluation Request (PER) 297-0315 documented this concern. The inspectors performed followup inspection of this finding.

b. Observations and Findings

Licensee Investigation: The licensee determined that the previous wetwell closeout inspection was inadequately performed by two contract workers, but during review was unable to locate the original surveillance document.

Plant Procedure Manual (PPM) 2.3.9, "Personnel Entry into Wetwell," Revision 2, states:

> "Verify the loose debris inspection has been completed and all foreign material has been removed from the wetwell."

The licensee also determined that the workers involved in the preclosure verification were not well suited for the task, as they were temporary employees. All processes were considered to be effective and the root cause of the event was deemed to be human performance related.

The licensee determined that the potential safety consequences of the error were minimal. During a postulated event, such as a loss-of-coolant accident, the life ring would likely float above the emergency core cooling system (ECCS) suction strainers and have no impact on system performance. If the bag was to become separated from the life ring, it could potentially cover 18 percent of the surface area of one

strainer (each suction line having two strainers). Per the design basis, 50 percent of the total strainer area could be clogged without challenging the operability of an ECCS. Therefore, the existence of the bag in the wetwell would not likely impact the operability of the ECCS.

As a corrective measure, the licensee plans to revise PPM 2.3.9 to require that an Operations representative perform the final wetwell closeout inspection.

NRC Assessment: The inspectors generally agreed with the licensee's assessments. However, the licensee's investigation could have covered an additional contributor of the problem. There was a management expectation that a foreign material accountability log would be used to track all items taken into the wetwell. This log for Refueling Outage R11 could not be retrieved. The inspectors verified that a foreign material accountability log was being used in the current R12 refueling outage. The use of the log could have prevented the life ring from remaining in the wetwell.

The failure to properly complete the debris inspection required by PPM 2.3.9 was a violation of 10 CFR Part 50, Appendix B, Criterion V, which requires that procedures covering activities important to quality be properly implemented. This licensee-identified and corrected violation is being treated as a noncited violation, consistent with Section VII.B.1 of the NRC Enforcement Policy (NCV 50-397/97009-01).

c. Conclusions

The corrective actions to address the failure to properly complete the debris inspection required by PPM 2.3.9 were adequate. The licensee's investigation had not considered the management expectation for the use of a foreign material accountability log.

O2 Operational Status of Facilities and Equipment

O2.1 Engineered Safety Feature System Walkdowns (71707)

The inspectors walked down accessible portions of the following engineered safety feature systems:

- DGs 2 and High Pressure Core Spray (HPCS)
- Residual Heat Removal (RHR) System, Trains A and B
- Standby Service Water System, Trains A, B and HPCS

The systems were appropriately aligned for the operating mode and plant configuration. Material condition of components was generally very good with deficiencies being properly identified and tracked.

II. Maintenance

M1 Conduct of Maintenance

M1.1 General Comments

a. Inspection Scope (61726, 62707)

The inspectors observed the following maintenance and surveillance activities:

- Work Orders XF42 and BXZ3, DG Cooling Water Heat Exchangers 1B1 and 1B2 Cleaning and Inspection.
- Work Order BKC9, DG Cooling Water Heat Exchanger 2C Repairs (documentation review).
- TS Surveillance 3.6.1.3.2, 31-day observation of closed manual isolation valves and blind flanges utilized for containment isolation (documentation review).
- DG2 Maintenance.

Maintenance was generally performed in a thorough and professional manner. Issues associated with poor contractor oversight are discussed in Section M1.2 below. Additionally, an issue associated with the failure to perform a TS required surveillance is discussed in Section M1.3 below.

M1.2 Contractor Oversight for Maintenance Work

a. Inspection Scope (62707)

The inspectors observed maintenance work and related documents to evaluate the effectiveness of contractor oversight for the maintenance activities.

b. Observations and Findings

Diesel Cooling Water Heat Exchanger 2C Repairs: The licensee identified that two contract craftsmen initiated work on the wrong DG (PER 297-0419). Instead of initiating repairs on the 2C DG cooling water heat exchanger (HPCS DG), the craftsmen were found removing piping from the 2B unit (DG2).

The safety significance of the problem was minimal because both DGs had been taken out of service for maintenance at the time. However, the inspectors considered the contractor oversight for this job to be weak in that contract workers were not adequately briefed on the location of the work prior to starting the job.

Diesel Cooling Water Heat Exchanger 2B Maintenance: During the DG2 work the inspectors identified that the craftsmen and supervisor associated with the DG2 cooling water heat exchanger work had inadequate knowledge of WNP-2 FMC requirements. The inspectors had questioned the craftsman and the supervisor regarding the FMC requirements for the job. Neither individual was aware of the FMC requirements. Additionally, the FMC requirements were not stipulated in the work order.

The FMC controls for WNP-2 are specified in PPM 10.1.13, "Foreign Materials Controls for Systems and Components," Revision 14. As a minimum, the procedure requires an FMC inspection of the system by a craft supervisor prior to system closure. Additionally, craft supervisors are expected to brief the craftsmen on the FMC requirements prior to starting the job.

The inspectors discussed the FMC concerns with the Assistant Maintenance Manager and were informed that craft supervisors are expected to know the FMC program requirements and document the necessary inspection activities in the "Work Completed" section of the work orders. The licensee did not require that an inspection point be included in the work packages because craft supervisors were responsible for ensuring appropriate implementation of the FMC program. The Assistant Maintenance Manager acknowledged that, in this case, the craft supervisor did not have the requisite knowledge of the FMC program to ensure that the required inspections were performed. As a corrective measure, WNP-2 management briefed all of the craft supervisors on the FMC requirements.

As additional followup, the inspectors reviewed Work Orders XF42 and BXZ3 and verified that the required FMC inspections were performed prior to system closure. The adequacy of the licensee's corrective actions in contractor control will be reviewed in future maintenance activities (IFI 50-397/9709-02).

c. <u>Conclusions</u>

Contractor oversight for two maintenance jobs was weak. In one instance, contract workers initiated work on the wrong DG, and in another instance the contract craft supervisor's knowledge of FMC requirements was inadequate to ensure proper implementation of the FMC program.

M1.3 TS Surveillance 3.6.1.3.2

a. Inspection Scope (61726)

On March 21, 1997, the licensee identified that the TS Surveillance Requirement (SR) 3.6.1.3.2 for visual inspection was not performed (since initial plant startup in some cases) for seven blind flanges in the RHR system (PER 297-0233). The inspectors performed followup of this licensee-identified finding.

b. Observations and Findings

Background: TS SR 3.6.1.3.2 requires that "each primary containment. . . blind flange that is located outside primary containment and is required to be closed during an accident be verified closed every 31 days." (At the time of the missed verifications, the applicable requirement was TS Surveillance 4.6.1.1.b.) Procedure OSP-CONT-M101, "Primary Containment Manual Valve and Blind Flange Checklist," implements the requirements of the subject TS SR.

Prior to initial plant licensing, the licensee permanently removed four containment isolation relief valves that were associated with the steam condensing mode of the RHR system. Additionally, in 1993, the licensee removed the final RHR relief valve associated with the plant modification. Per the Safety Evaluation Report, the NRC had accepted the removal of the steam condensing mode capability. In place of the relief valves, the licensee installed mass duplicators that were designed to seal each relief valve opening with blind flanges, the blind flanges being an integral part of the assembly. The mass duplicators simulated the mass of the relief valves and, in doing so, negated the need to reperform the seismic analysis for the piping runs. As part of the modification effort, the licensee failed to ensure that the flanges were referenced in the TS surveillance procedure.

As part of a generic review of the problem, the licensee identified two additional blind flanges in the RHR system that were not within the scope of OSP-CONT-M101. These flanges were installed as a result of a plant modification completed in 1993, which was intended to improve the drainage of the containment atmospheric control system. A new drainage line was installed and the old line was capped with conventional blind flanges.

Licensee Corrective Actions: The licensee immediately verified that all the subject blind flanges were in place in accordance with the requirements of TS SR 3.6.1.3.2. Additionally, the licensee revised Procedure OSP-CONT-M101 to include the flanges within the scope of the surveillance procedure, including the mass duplicators.

The licensee initially performed a reportability evaluation and determined that the TS did not actually require that the blind flanges be visually inspected; therefore, the event was not reportable to the NRC under the requirements of 10 CFR 50.73. The

licensee supported their conclusion by referencing a section from the TS Bases, which states, in part:

> "This SR does not require any testing or valve manipulation. Rather, it involves verification that those isolation devices outside primary containment, and capable of being mispositioned, are in the correct position."

The licensee concluded that blind flanges are extremely difficult to misposition, when compared to a manual valve, and therefore, the surveillance was not applicable to blind flanges, as they were not capable of being mispositioned.

NRC Assessment: The inspectors questioned the licensee's initial reportability evaluation in that the inspectors did not identify any provision in the TS that provided relief from the SR to verify the existence of the blind flange when a blind flange would be difficult to remove. Furthermore, the TS Bases discuss the necessity of performing the surveillance for blind flanges. The licensee reevaluated the need to report this event and determined that the failure to visually inspect the standard blind flanges associated with the containment atmospheric control drain line modification was a TS violation and was reportable. The licensee is planning to submit an LER to address this TS violation. However, the licensee indicated disagreement that the failure to inspect the mass duplicator assemblies was a violation of the TS and did not plan to report those issues as such. The NRC will further review the licensee's position on whether the mass duplicators are required to be included for visual inspection under TS 3.6.1.3.2 and the licensee's submittal of the LER (URI 50-397/9709-03).

c. Conclusions

The licensee identified the failure to visually inspect blind flanges in accordance with a TS SR. This item is an unresolved item pending the licensee's submittal of an LER.

M1.4 Fuel Debris Filter Removal

a. Inspection Scope (62707 and 71750)

The inspectors observed portions of the activities associated with the removal of the debris filters installed in the 104 fuel bundles supplied by ABB. The inspectors focused upon the radiological controls implemented in conjunction with the work.

b. Observations and Findings

Revision 8 of Plant Procedure 6.3.9, "Fuel Handling and Refuel Activities Procedures," was written to provide guidance for the work. Radiation Work Permit 97-31, ALARA Task CDT8 03, was prepared to provide radiation protection instructions. The radiation work permit required constant job coverage by radiation protection technicians and it included special instructions on removing items from the

spent fuel pool. The radiation work permit also required the use of area radiation monitors during work activities to prevent removing highly radioactive objects from the spent pool inadvertently. The inspectors interviewed refueling fuel coordinators and radiation protection technicians assigned to refueling floor duties and determined that they were knowledgeable of potential hazards involved with the work and the radiation protection measures necessary to counter the hazards.

The removal of the debris filters required a specially constructed piece of equipment called a channeling device. The channeling device was supplied by the contract company. The first attempt at installing the channeling device was halted when the licensee identified that one of the lifting slings was not long enough to lower the channeling device onto its planned position on an underwater table, which was mounted on the wall of the spent fuel pool. The lifting rigging used two 16-foot slings attached to the corners of one end of the channeling device and a 12-foot sling and a come-along attached to the other end. Licensee workers found that, to reach the mounting table, it would have been necessary to lower the come-along into the spent fuel pool. Chemistry representatives advised against this, because to do so would have adversely affected water chemistry and cleanliness.

The second attempt at lowering the channeling device was also unsuccessful because of clearance problems resulting from a channel measuring device. This device, also mounted on the side of the spent fuel pool, interfered with the positioning of the channeling device. Preliminary reviews of a design drawing indicated that there would be sufficient clearance, at a depth of 10 feet below the water surface. However, licensee workers discovered that the table was not mounted at a depth of 10 feet, as expected, but rather at a depth of approximately 14 feet below the water surface. Licensee representatives reviewed the situation and determined that during the planning stage, engineers used a design drawing that showed the table was mounted at a depth of 10 feet. No actual measurements to confirm the position of the table were made prior to the first attempt to install the channeling device. Engineers later found there was an additional drawing that showed the table could be mounted at multiple heights. Rather than attempt to mount the table at a higher elevation, the licensee decided to modify the channeling device by adding 4-foot legs, designed by the contractor. The legs maintained the assemblies with the 10 feet of water coverage assumed in the dose assessment for the work.

c. Conclusions

Radiation protection personnel prepared well for the debris filter removal. Appropriate radiation protection measures were implemented. The failure to verify design information in planning for the debris filter removal resulted in several unsuccessful attempts to install the necessary equipment for the work. This was considered to be a weakness in job planning.

M1.5 DG 2 Inspections

a. Inspection Scope (62707)

The inspectors observed portions of the refueling interval inspections of DG2. Portions included observation of valve clearance measurements, injector timing, piston to cylinder head clearances, bearing lubrication oil change out, and replacement of the diesel air start solenoid valves.

b. Observations and Findings

During the measurement of the exhaust valve clearances the inspectors noted that the activity was well controlled with good communications between the mechanics. The inspectors noted that the clearances were within expected tolerances. Concurrently, the mechanics adjusted injection valve timing, with only minor adjustments required. Piston to cylinder head clearances were measured and found to be within expected tolerances. The inspectors noted that the maintenance personnel appeared to be cautious with regard to foreign material exclusion whenever the inspection ports and head covers were open. This included counting of tools and measurement devices to ensure that no items were left in the engines.

Housekeeping during the inspection activity was generally good. The exception, noted by the inspectors was during the removal of lubricating oils. A large amount of absorbent paper accumulated during the activity. The paper was used to contain oil that leaked out of the hoses used to drain and fill the bearings on the generator; however, the oil-soaked paper was picked up at the end of the work during a cleanup.

c. Conclusions

The maintenance and inspection of DG 2 was conducted generally very well. The condition of the DG 2 was good, reflecting good maintenance practices.

III. Engineering

E8 Miscellaneous Engineering Issues (92903)

E8.1 (Closed) LER 50-397/94-04-00: containment isolation valve TS actions not met. This LER reported that main steam (MS) drain Valves MS-V-16 and MS-V-19 were incapable of performing their containment isolation safety function under worst-case differential pressure conditions.

Background: MS-V-16 and 19 are inboard and outboard, respectively, MS drain line isolation valves. The valves are utilized: (1) during reactor startup to drain the MS lines of condensate, and (2) to equalize pressure across the main steam isolation valves (MSIVs) prior to opening the MSIVs.

The valves' safety function is to automatically close during design basis events for containment isolation. The most challenging event for these valves is the MS line break outside of containment.

Details: On December 16, 1993, during a review of motor operated valve calculations performed in response to violations cited in NRC Inspection Report 50-397/93-23, plant engineers identified that Valves MS-V-16 and MS-V-19 were inoperable. The torque switches for the valves were set too low to accommodate the worst-case design basis conditions. The operability assessment erroneously concluded that no immediate corrective actions were necessary since the valves were required by procedure to be shut above 5 percent power.

On December 17, 1993, the licensee's Plant Operations Committee (POC) incorrectly interpreted the operability assessment and concluded that Valves MS-V-16 and MS-V-19 remained operable. As a result, the required TS actions for inoperable containment penetration isolation valves were not taken. The POC specified that the valve torque switches be reset during the next refueling outage.

On February 7, 1994, during the conduct of a Quality Assurance (QA) audit, the operability of Valves MS-V-16 and MS-V-19 was questioned and Plant Support Engineering initiated an additional review. However, QA inspectors did not continue to pursue the issue.

Approximately 1 month later, on March 7, 1994, the manager of Plant Support Engineering contacted Operations and was informed that the valves were considered operable. After communicating that the valves should be declared inoperable, Operations deenergized the valves in the closed position in accordance with the TS requirements.

Licensee Assessment and Corrective Actions: The licensee's review of the occurrence determined that: (1) the POC review of the operability assessment was inadequate; (2) the operability assessment contributed to the incorrect conclusions regarding operability since it did not contain a clear, concise, unequivocal statement of operability of the MS drain line isolation valves; (3) engineering personnel did not promptly respond to QA concerns; and (4) QA personnel did not aggressively follow up their concern regarding operability of the valves.

As corrective measures, the licensee: (1) reset the torque switches for the affected motor operated valves to an acceptable range; (2) provided training to improve communication techniques for engineering personnel that may be involved with operability assessments; and (3) provided instructions to reinforce the need for an aggressive questioning attitude and prompt followup of identified concerns with POC and QA personnel.

Recent Actions: On review of the issue in March 1997 from questions raised by the inspectors, the licensee reviewed the circumstances surrounding the event and

initially determined that the valves were not actually inoperable. Specifically, the licensee determined that the postulated break location (downstream side of Valve MS-V-19) was not valid, as it was not a terminal end. Pipe breaks in high energy systems are postulated to occur at terminal ends as defined in Section 3.6.2.1.1.1 of the Final Safety Analysis Report (FSAR). Terminal ends are extremities of piping runs that connect to structures, equipment or pipe anchors that act as rigid constraints to thermal expansion of the pipe. Therefore the valves would not be required to close against a high differential pressure in response to a design basis event.

NRC Assessment: Although the licensee correctly determined that the postulated break location on the downstream side of MS-V-19 was not valid, the inspectors determined that the licensee failed to consider other legitimate break locations that were identified in the FSAR which would also cause a high differential pressure in a design bases event. For example, considering a MS line break downstream of the MSIVs, the differential pressure required for closure would be theoretically very close to the differential pressure assumed for the original break location.

In response to the identification of a single inoperable containment isolation valve, the TS 3.6.3 Action Statement in effect at that time, required, in part, that the penetration be isolated within 4 hours. The acceptable methods of isolation include the use of a closed deactivated automatic valve. On December 16, 1993, the licensee identified that both the inboard and outboard containment isolation valves were inoperable, but did not take corrective actions to deactivate the valves in the closed position until March 7, 1994, over 2 months later. The failure to isolate the penetration, utilizing TS specified methods, within 4 hours is a violation of TS 3.6.3 (VIO 50-397/9709-04).

The safety consequences of the event were minimal in that the valves were in the closed position between December 16, 1993, and March 7, 1994, (except during quarterly stroke time testing when one valve remained closed at all times). However, the licensee did not have controls in place to preclude opening the valves under all potential conditions, for example, during recovery efforts after a plant trip.

The inspectors considered the licensee's corrective actions to be acceptable.

E8.2 FSAR Review: During a review of the FSAR, the inspectors identified that four terminal ends (pipe break locations) were not appropriately documented in FSAR Table 3.6-6, "Design Basis Break Locations Outside Primary Containment." The terminal ends included four locations where the 2-inch-diameter MS line drain piping intersected with the 26-inch-diameter MS lines. Per the criteria specified in FSAR Section 3.6.2.1.1.1, these piping locations should have been identified as terminal ends.

In response to the inspectors' finding, the licensee initiated PER 297-0426 to identify the cause of the omission. The licensee determined that the potential break locations

were originally included in the FSAR table, but were inappropriately removed when the table was updated in 1995.

The potential safety consequences of the FSAR discrepancy were minimal because the plant was previously analyzed for breaks in the noted locations. Additionally, no plant modifications were installed, which could have affected the validity of the previous analysis. At the close of the inspection period, the licensee had not fully investigated the potential generic implications of the finding. 10 CFR 50.71(e)4 requires that the FSAR be accurate within 6 months of the last update. This is considered an unresolved item pending NRC review of the licensee's evaluation (URI 50-397/9709-05).

IV. Plant Support

P1 Conduct of Emergency Preparedness Activities

P1.1 Licensee Preparedness for Criticality Accidents

a. Inspection Scope (71750)

The inspectors examined the implementation of 10 CFR 70.24, "Criticality Accident Requirements."

b. Observations and Findings

The licensee does not have an exemption to the requirements of 10 CFR 70.24 in the operating license. The licensee does have procedures and equipment in place that appear to meet the requirements of 10 CFR 70.24.

The inspectors verified that WNP-2 has two area radiation monitors positioned near the new fuel storage vault intended for the monitoring of potential criticality events. The monitors are capable of detecting a criticality event in the proximity of the new fuel vault, and alarm at a level of 5 mr/hr. When the monitors alarm, the remote alarm panel in the control room will annunciate. The instruments are capable of meeting the requirements of 10 CFR 70.24(a)(1). The instruments are on the licensee's routine instrument calibration program, and were observed to have been in calibration.

The licensee does provide general employee training for radiation workers with instructions regarding the criticality monitors. Specifically, the "Radiation Worker Training Handout" describes the location of the monitors, the type of alarm, and the expected actions when an alarm occurs. The alarm response procedures for the remote alarm feature in the control room have instructions that specify the actions to be taken and the requirements for initiating the emergency response plan. Procedure 1.9.6, "Emergency Signals and Actions," specifies the actions to be taken by personnel on the refueling floor when the criticality monitors alarm.

Nine drills have been conducted since 1983 that have involved evacuation of the refueling floor area, or required evacuation of the reactor building including the refueling floor. These drills had required actions that are common to a criticality event; however, the drills did not involve criticality events. On May 1, 1997, the licensee conducted a specific criticality alarm drill involving refueling floor personnel. The area was evacuated promptly; the personnel were questioned about their responsibilities and the application of the required procedures after the drill was terminated. No problems were noted with the drill exercise.

c. Conclusions

The licensee currently meets the requirements of 10 CFR 70.24 for criticality accidents.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management after the conclusion of the inspection on May 28, 1997. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

X2 Open Public Meeting to Discuss NRC Systematic Assessment of Licensee Performance (SALP) Report

On April 22, 1997, an open public meeting was held at the WNP-2 Office in Richland, Washington, to discuss the NRC SALP Report for the WNP-2 facility (Inspection Report 50-397/97-99) which was issued on April 3, 1997. The discussions were related to the NRC assessment of performance for the period from September 3, 1995, to March 1, 1997. Slides used in the licensee's presentation at the meeting have been included as Attachment B to this report.

ATTACHMENT A

Supplemental Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Bemis, Vice President for Nuclear Operations
D. Atkinson, Quality Assurance Manager
J. Harmon, Nuclear Safety Issues Program Coordinator
M. Monopoli, Operations Manager
P. Inserra, Licensing Manager
G. Smith, Plant General Manager
J. Swailes, Engineering Director
D. Swank, Regulatory Affairs Manager
R. Webring, Vice President Operations Support

INSPECTION PROCEDURES USED

IP 37551:	Onsite Engineering
IP 61726:	Surveillance Observations
IP 62707:	Maintenance Observations
IP 71707:	Plant Operations
IP 92903:	Followup - Engineering

ITEMS OPENED AND CLOSED

Opened

50-397/9709-01	NCV	Failure to Remove Life Ring From Wetwell
50-397/9709-02	IFI	Review of FMC Practices
50-397/9709-03	URI	Failure to Perform TS SR of Blind Flanges
50-397/9709-04	VIO	Failure to Promptly De-Energize Inoperable Containment Isolation Valves
50-397/9709-05	URI	Failure to Include All Terminal Ends in the FSAR

Closed

50-397/94-004	LER	Failure to Promptly De-Energize Inoperable Containment Isolation Valves
50-397/9709-01	NCV	Failure to Remove Life Ring From Wetwell
50-397/9709-04	VIO	Failure to Promptly De-Energize Inoperable Containment Isolation Valves

LIST OF ACRONYMS USED

ABB	Asea Brown-Boveri
DG	diesel generator
ECCS	emergency core cooling system
FMC	foreign material control
FSAR	Final Safety Analysis Report
HPCS	high pressure core spray
IFI	inspection followup item
LER	Licensee Event Report
MS	main steam
MSIV	main steam isolation valve
NRC	U.S. Nuclear Regulatory Commission
PER	problem evaluation request
POC	Plant Operations Committee
PPM	Plant Procedures Manual
QA	quality assurance
RHR	residual heat removal
SR	surveillance requirement
TS	Technical Specifications
URI	unresolved item
VIO	violation
WNP-2	Washington Nuclear Project-2

ATTACHMENT B

SALP PUBLIC MEETING PRESENTATION SLIDES

NRC/SUPPLY SYSTEM

SALP MEETING

April 22, 1997

Richland, WA

OPERATIONS

Concerns and Actions Taken or Planned

Technical Specification requirements were not met prior to changing modes

- Assigned a single point of accountability for PMT to improve outage mode changes, improved system engineering involvement

Procedure adherence by operators is not consistent

- Department wide performance improvement effort scheduled

OPERATIONS

SALP Period Accomplishments

50% dose reduction for department

Fourteen consecutive weeks of error free performance

Clearance order success rate significantly improved (continued improvement needed)

100% success rate for initial license class

MAINTENANCE

Concerns and Actions Planned or Taken

Assurance of Technical Specification compliance, especially during mode changes.

- Assigned a single point of accountability for PMT to improve outage mode changes, improved system engineering involvement

Improve pre-job briefs and attention to detail during maintenance performance.

- Formalized pre-job briefing process, used for more jobs across multiple organizations to promote error free operation
- Instituted advanced performance management strategies, monitoring performance

MAINTENANCE

SALP Period Accomplishments

Individual dose ownership

Control Room CR/CT reduction (37 to 15)

No lost time accidents

Human performance error rate reduction

PM past due rate reduction

Schedule effective increased (71 to 83%)

Corrective maintenance backlog reduction

ENGINEERING

Concerns and Actions Taken or Planned

Inconsistent Engineering quality

Clear expectations have been provided, 13-week systems training provided

Design/License documentation usability

FSAR Upgrade

Occasionally Weak Root Cause Analysis

Refresher root cause analysis training planned

ENGINEERING

SALP Period Accomplishments

Strategic Plan

Performance Indicators

Improvements in System Engineering

13-week systems training

System report cards

SSFI Inspection

Improved Technical Specifications

HEALTH PHYSICS

Concerns and Actions Taken or Planned

3-year average exposure normalized for annual outages above the national average

Three year downward trend in both outage and non-outage exposure. Performance during SALP period improved.

Performance issues were identified concerning radiological worker practices.

Provided advanced radiological worker training for Supply System craft and their supervisors. The Management Observation and Gold Card program being used to improve worker practices.

Inconsistency in the quality of ALARA planning and prejob briefings.

Performed self-assessments on the ALARA planning process and RWPs. Model RWPs developed from the best RWPs and used on future jobs. Written instruction to provide direction and consistency.

HEALTH PHYSICS

Concerns and Actions Taken or Planned

Proper control of high radiation areas have challenged the station.

Back-up battery power for High High radiation area yellow flashing lights. Shielding and flushing programs significantly reduced the number of high radiation areas.

SALP Period Accomplishments

Non-outage exposure at or below industry average

CRD rebuild exposure reduced

Iron and Zinc injection (10% RRC dose rate reduction)

HEALTH PHYSICS

SALP Period Accomplishments

Contamination area reduction

Flushing program built into outage and other routine activities

Extensive shielding to reduce exposure, High and High High radiation areas

RWCU hold-up pump room modifications

Hot spot removals

Use of remote monitoring (cameras, mirrors, robot, radio-link dosimetry)

EMERGENCY PREPAREDNESS

Concerns and Actions Taken or Planned

Incorrect calibration of Radiation Monitor

Identified as part of internal review, monitor recalibrated, other monitors reviewed for correct calibration techniques

Weaknesses in notifications, dose assessment calculations, and protective action recommendations

Training for the appropriate individuals was conducted, procedures were revised to identify expectations, and monitoring of future training in these areas will be performed

EMERGENCY PREPAREDNESS

SALP Period Accomplishments

The WNP-2 Ten-Mile EPZ Evacuation Time Estimate Study was re-calculated and re-issued.

Conducted six team training drills, one non-evaluated and one evaluated exercise.

Provided several training sessions to State and local responders.

Two program self-assessments conducted

Supported the Benton and Franklin County Emergency Management Agencies during the State's flooding emergency in early 1995

Implemented a new ERO automated call out system

Developed and installed the Site Neighbor Application Program (10-mile EPZ)

QUALITY

Concerns and Actions Taken or Planned

Performance of quality assurance activities was inconsistent.

- Quality Review Board created, performance improvement plan for senior management feedback, organizational and personnel changes

QA assessment findings not always converted into actions to improve site performance, investigations and assessments often too narrowly focused

- Evaluating root cause process and potential changes to how significant events are evaluated, including team makeup and skill level

SALP Period Accomplishments

Human performance monitoring

Monthly performance indicator report strengthened

Self-assessment program expanded

SECURITY

Concerns and Actions Taken or Planned

Failure to ensure proper search

Advanced performance management techniques implemented

SALP Period Accomplishments

Conduct challenging tactical contingency interaction drills between Security & Operations

Training by use of video taped security contingency scenarios

Conducted an on-site hostage-type security contingency drill using Local Law Enforcement Agency SWAT teams.

Strong self-assessment effort