U. S. NUCLEAR REGULATORY COMMISSION

REGION V

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

REPORT NO. 50-397/85-07

FIRST OPERATIONAL CYCLE

FOR

WASHINGTON PUBLIC POWER SUPPLY SYSTEM

WASHINGTON NUCLEAR PROJECT, UNIT 2

MARCH 27, 1985

TABLE OF CONTENTS

I.	Introduction	1
II.	Criteria	1
III.	Summary of Results	2
IV.	Performance Analysis	3
	A. Plant Operations	3
	B. Radiological Controls	5
	C. Maintenance	6
	D. Surveillance	8
	E. Fire Protection	9
	F. Emergency Preparedness	9
	G. Security and Safeguards	10
	H. Quality Programs and Administrative Controls	11
	I. Startup Testing	13
	J. Licensing Activities	14
	K. Construction	15
V.	Supporting Data and Summaries	16
	A. Licensee Activities	16
	B. Inspection Activities	16
	C. Summary of Other Related Data	17
	D. LER Analysis	17

TABLES

1.	Inspection Activities and Enforcement Summary	19
2.	Enforcement Items	20
3.	Synopsis of Licensee Event Reports	23

I. INTRODUCTION

The Systematic Assessment of Licensee Performance (SALP) is an integrated NRC staff effort to collect available observations and data on a periodic basis and evaluate licensee performance based upon this information. SALP is supplemental to normal regulatory processes used to ensure compliance with NRC rules and regulations. SALP is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful guidance to the licensee's management to promote quality and safety of plant construction and operation.

An NRC SALP Board, composed of the staff members listed below, met in the Region V office on March 27, 1985, to review the collection of performance observations and data to assess the licensee's performance in accordance with the guidance in NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance." A summary of the guidance and evaluation criteria is provided in Section II of this report.

This report is the SALP Board's assessment of the licensee's safety performance at WNP-2 for the period August 1, 1983 through January 31, 1985.

SALP Board for WNP-2:

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II. CRITERIA

The following evaluation criteria were applied to each functional area:

1. Management involvement in assuring quality
2. Approach to resolution of technical issues from a safety standpoint
3. Responsiveness to NRC initiatives
4. Enforcement history
5. Reporting and analysis of reportable events
6. Staffing (including management)
7. Training effectiveness and qualification

To provide consistent evaluation of licensee performance, attributes associated with each criterion and describing the characteristics applicable to Category 1, 2, and 3 performance were applied as discussed, in part, in NRC Manual Chapter 0516, Part II and Table 1.

The SALP Board conclusions were categorized as follows:

Category 1: Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used so that a high level of performance with respect to operational safety or construction is being achieved.

Category 2: NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective such that satisfactory performance with respect to operational safety or construction is being achieved.

Category 3: Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appeared to be strained or not effectively used so that minimally satisfactory performance with respect to operational safety and construction is being achieved.

III. SUMMARY OF RESULTS

Overall, the board found the licensee's performance to be acceptable and directed toward safe facility operation. A comparison of overall performance was not made with the previous SALP period, since that assessment gave principal evaluation emphasis to construction activities.

The board identified strengths in several aspects of the licensee's performance, including operator response to plant emergencies; the plant's surveillance program; facility staffing; management involvement in problem resolution; and the physical security program.

Activities identified by the SALP board as needing improvement included procedural adequacy; attentiveness to operational details; timely identification and reporting of operational events; procedural controls governing troubleshooting, clearance orders, and jumpers; management of emergency response training; and screening of license amendment requests.

Overall, the Board's evaluation of inspection findings and events occuring during the assessment period identified a need for routine and frequent management oversight by all departments of day-to-day plant operations activities, along with critical self-appraisal intended to identify potential problem areas.

Functional Areas	Last Construction Cycle Category	First Operational Cycle Category	Trend*
A. Plant Operations	2	2	Declining
B. Radiological Controls	2	2	None Apparent
C. Maintenance		2	Improving
D. Surveillance		1	None Apparent
E. Fire Protection		2	None Apparent
F. Emergency Preparedness	2	2	None Apparent
G. Security and Safeguards	2	2	None Apparent
H. Quality Programs and Administrative Controls		2	Improving
I. Startup Testing		2	Improving
J. Licensing Activities	2	2	None Apparent
K. Construction	2	2	None Apparent

*The trend indicates the SALP Board's perception of the licensee's performance during the current assessment period. It is not necessarily a comparison of performance during the current period with the previous period. For example, performance in the maintenance area was considered to be improving, even though performance in this functional area was not assessed during the previous SALP period.

IV. PERFORMANCE ANALYSIS

The following is the Board's assessment of the licensee's performance in each of the functional areas and the Board's conclusions and recommendations with respect to implementation of the Commission's inspection program.

A. Plant Operations

During this SALP period the operations program was inspected on a routine basis by the resident inspectors and regional inspection staff. In addition, a team inspection was performed to assess the operations program during the Power Ascension Test Program. Regional inspectors conducted operator license examinations for the initial operating crews and for subsequent additional personnel.

Performance of plant operations, particularly in the early portion of the assessment period, was judged to be satisfactory. However, inspection activities identified weaknesses regarding procedural adequacy, operator attentiveness, and timely identification and reporting of operational events. Licensee management was only

partially successful in implementing improvements in response to NRC concerns in these areas, although more aggressive actions were taken during the latter portion of the SALP period. A significant event on January 31, 1985, involving inoperability of the emergency diesel generators, demonstrated that licensee management had not been fully effective in correcting these weaknesses. Four violations (one Severity Level 3 and three Severity Level 4) were cited relative to this event. During an enforcement conference held on February 28, 1985, regional management emphasized a need for more direct involvement by licensee management in day-to-day operations and a meaningful effort to identify weak areas. At this time, licensee management discussed corrective actions to improve performance in the areas of operator attentiveness, diesel generator procedures and reporting of events. Management's attitude at this conference also demonstrated a strong commitment to improve overall performance in the plant operations area.

The ability of the plant operations staff to maintain control of plant conditions and evolutions, particularly during plant emergencies and off-normal situations, is judged to be good. Three violations related to plant operations were identified during the early portion of the assessment period. These involved inoperability of the primary containment airlock, failure to make a required report to the NRC, and improper equipment status control. These violations did not indicate a programmatic breakdown. Twenty-four of the 47 operations-related Licensee Event Reports (LER's) generated during the assessment period involved personnel errors, with several of these errors attributed to failure to follow procedures. Operator attentiveness to control room status appeared to be lacking in some instances where abnormal instrument readings existed. The presence of nuisance alarms for extended periods appeared to foster operator insensitivity to such conditions. Additionally, NRC inspections identified several cases wherein operators failed to recognize or aggressively pursue control room annunciated abnormal plant conditions. The operations staff also experienced difficulty in several instances in the recognition and interpretation of Technical Specifications, as well as in complying with the action statements. These difficulties may be partly attributed to inattention to detail in the control room logs and associated methods of tracking action statements. The SALP Board recognized that the licensee is initiating actions to reduce operator distractions and improve the general environment in the control room.

The licensee's training program is judged to have been effective in supporting plant operations, but was implemented at many levels for a large portion of the staff without full definition in the corporate policy and procedures manuals. For plant staff, efforts have been initiated to develop task oriented training and to eliminate program redundancies. For reactor operators, design and operating experience feedback has been slow, as have prescribed interim actions for unresolved issues. Original operator training resulted in sufficient licensed personnel for six shifts of operation, although recent efforts appeared less successful with

five of nine candidates failing their NRC examinations. However, all reactor operators passed who took the NRC portions of the annual requalification examination, and an evaluation by Region V found the licensee's operator requalification program to be satisfactory.

Conclusion

Performance assessment - Category 2. Declining performance was observed during the latter portion of the assessment period. In general, the plant operations staff did not develop as disciplined a level of performance as had been expected. However, management actions subsequent to the SALP period indicated a strong commitment to provide improved plant operations performance.

Board Recommendation

Licensee management should provide more direct involvement in routine plant operations activities and a purposeful overview of the plant operations staff. This should include emphasis on increased operator attentiveness and initiative regarding both control room status and procedural requirements. Detail in operations logs should be improved to focus operator attention on detail and also to provide management increased insights into plant equipment status and performance. More conservative approaches to Technical Specifications requirements should be displayed by the operations staff. A method for maintaining the status of and tracking Technical Specification Action Statements should be developed. Plans to review alarm procedures and system procedures should be emphasized, and reduction of control room distractions, including nuisance alarms, should be expedited. More attention should be given to appropriate interim actions when longer range corrective actions are under consideration. Initiatives underway for improved operator training should be continued.

B. Radiological Controls

Ten inspections were conducted in the radiological controls area during the appraisal period. A total of 461 hours of onsite direct inspection effort were expended in the areas of radiation protection, radiological environmental protection, radioactive waste management, preoperational and startup testing, NUREG-0737 requirements and confirmatory measurements. In addition, the resident inspectors provided continuing observations in these areas.

During the appraisal period, two violations (severity level IV, V) were identified in the area of test control related to radioactive effluent treatment systems. One other severity level IV violation was issued for incorrect designation of quality class for a safety-related portion of the radiation monitoring system. These violations were characterized as minor violations not representative of a programmatic breakdown. One deviation was issued regarding location of the reactor coolant sample line.

Inspection activities and resident inspector observations showed some minor weaknesses in implementation of the radiological control program. The items identified, although not consistent with the licensee's procedures and policies, were not characterized as violations of NRC requirements.

The licensee's response to NRC identified issues has been weak as evidenced by delays in completion of the radiation and effluent monitoring system, training of PASS operators and initial response to the violation related to quality classification.

The previous SALP assessment identified a concern that the radiation and effluent monitoring systems would not be completed in time to support a September 1983 fuel load date. The systems were not released for operation until March of 1984.

Event reports were complete and submitted in a timely manner. The majority of reported events related to design deficiencies which resulted in spurious actuations of the Control Room Emergency Filtration System. Repetitions were not indicative of programmatic breakdown.

The licensee's staffing of both plant and corporate positions was adequate with vacant positions promptly filled.

Conclusion

Performance assessment - Category 2.

No trend was observed. Adequate resources and management attention appear to be devoted toward the radiological programs.

Board Recommendation

The licensee is encouraged to continue efforts to improve performance in this area.

C. Maintenance

The maintenance program was inspected on a monthly basis by the resident inspectors throughout this SALP period. Regional inspectors also conducted several inspections of the quality assurance elements in this area.

Two violations were identified in the area of maintenance. These involved failures to (1) ensure completion of all work prescribed on a maintenance work request, and (2) take effective corrective action for a deficiency in the emergency core cooling system logic. There were nine licensee reports (LERs) attributed to personnel errors during the many maintenance activities this period. Some NRC issues were identified regarding troubleshooting; control of contract personnel; independent verification on return of equipment to service; housekeeping and fire protection; and handling of clearance orders, jumpers, and lifted leads. The Board felt that management

was slow to act on NRC concerns in some of these areas; for example, concern over control of clearance orders, jumpers and lifted leads was identified by the NRC prior to fuel loading and was not adequately addressed until late in the SALP period.

During this SALP period the licensee's maintenance and supporting engineering activities were burdened with work items which were deferred from the construction and startup phases. To these were added many work items identified during startup and power ascension testing, at a time when engineering resources were strained to support the testing program. The licensee's maintenance organization appeared to handle this additional workload effectively along with regular maintenance items. Significant work items identified by testing, such as diesel generator and pump bearing failures and feedwater piping support problems, were addressed thoroughly with engineering and maintenance resources, and reflected management willingness to resolve safety concerns at the sacrifice of schedule. A comprehensive plant tracking system was developed to prioritize and control the work items, although the general timeliness of some corrective actions still suffered. There also appeared to be a tendency in some cases to overlook the need for interim corrective measures (e.g., related to the main steam leakage control system and the auto depressurization system logic) while permanent solutions were provided. This was most visible in the control room, where resolution was deferred for non-critical issues relating to various activated alarm annunciators.

Shift managers were under the stress of a great deal of maintenance activity and documentation during this period due to the work items from the construction and startup phases. Recently management instituted a priority maintenance identification system for use by the control room staff in obtaining corrective actions. The pace of work delayed full implementation of maintenance craft training, although training program development continued and significant craft training was conducted. Noteworthy is the significant management effort which was applied during the latter portion of the SALP period to optimize the administrative procedure for handling maintenance work requests.

Conclusion

Performance assessment - Category 2. An improving trend was observed during the SALP period.

Board Recommendation

The licensee should continue efforts to reduce backlogs of outstanding work and revisions of associated operations and engineering documents. The priority for resolution of deficiencies which affect operator awareness of plant status should be reinforced. The staff should be more sensitive to required interim actions when permanent resolutions may be delayed or untimely. Management should complete development of the maintenance training

program, and monitor the effectiveness of implementation of administrative controls in the area of troubleshooting, clearance orders, jumpers, and lifted leads.

D. Surveillance

The surveillance program was inspected on a monthly basis by the resident inspectors and periodically by the regional staff throughout this SALP period.

During this SALP period the licensee instituted a comprehensive surveillance program which is maturing under constant management and staff attention. During the earlier part of the period the licensee asked NRC for, and received, changes or schedule relief for some Technical Specification required surveillances. These were submitted on short notice, in some cases involving after-hours telephone requests which might have been avoided through stronger management control, internal communications and planning. Such problems were not experienced in the latter part of the period.

One violation in the surveillance area was identified regarding the installation of jumpers and the independent verification thereof. The NRC considers 14 licensee event reports (LERs) to be attributed to personnel errors during the many surveillance activities this SALP period. Management demonstrated no reluctance to properly report and analyze discrepancies. There were five LERs attributed to deficiencies in surveillance procedures; management and staff gave much attention to this area and routinely issued changes to improve the accuracy and clarity of procedures.

The licensee instituted a computer matrix of surveillance requirements corresponding to Technical Specification requirements, which appears to have been comprehensive with a few exceptions reported in licensee event reports. These were corrected promptly, and the matrix is routinely updated. Computer schedules and monitoring have allowed management visibility of trends in overdue dates, contributing to avoidance of technical specification violations. A program of procedure changes was implemented late in the period to fully incorporate independent verification requirements into surveillance procedures, in response to NRC initiatives.

Conclusion

Performance assessment - Category 1. An improving trend in performance was observed during the SALP.

Board Recommendation

Continue efforts to correct procedure deficiencies and provide training to the staff in their proper use.

E. Fire Protection

The fire protection program was evaluated by three NRC inspections during the SALP period.

During this SALP period, the licensee began plant operation and implemented the fire protection program. The program appears effective in involving plant management at the departmental level in its operation. Each department manager is required to make a monthly inspection which includes fire protection. The site organization includes a Fire Marshall and two qualified fire protection engineers who are involved in implementation of the program on a day-to-day basis. However, the licensee's program does not include routine audits or inspections of fire protection activities by these individuals or other persons trained in fire protection.

As the plant began operation there were several Licensee Event Reports (LER's). The frequency of these reports decreased in number as the plant continued operation and minor problems were corrected. The plant surveillance and maintenance programs appear to have performed well in keeping the fire protection equipment operational.

The licensee appeared to be responsive in following up NRC concerns and is currently conducting a complete reassessment of their safety related cable protection to ensure compliance with the requirements of 10 CRF 50 Appendix R.

There were no violations or deviations identified in the fire protection program during the SALP period.

Conclusion

Performance assessment - Category 2. No trend was observed.

Board Recommendations

The licensee should continue efforts to improve in this area. The onsite fire protection program should also provide more involvement by experienced fire protection personnel in the audit or inspection of day-to-day fire protection activities.

F. Emergency Preparedness

During the appraisal period, Region V conducted three follow-up inspections of open items identified during the emergency preparedness preoperational inspection and observation of the emergency preparedness exercise conducted during the previous SALP appraisal period. One inspection included an examination, as part of the routine inspection program, of the licensee's emergency preparedness training program. The licensee's annual emergency preparedness exercise was also observed during this assessment period. This inspection effort totaled 317 hours onsite. In addition, the resident inspectors have provided continuing

observations in this area. No violations of NRC requirements or significant deficiencies were identified during this inspection effort.

The examination of the emergency preparedness (EP) training program disclosed some weaknesses in its management. The failure to consistently review the status of emergency organization personnel training and the failure to make individuals available for such training were indications of this weakness. The licensee's internal audit, which included the EP training and qualifications program and was conducted prior to the inspection, also reached the same conclusion. It should be noted that the responsibility for the EP training does not rest with a single group. Corrective actions, initiated by the licensee in response to the audit, included a re-assignment of priorities with respect to the EP training program.

The licensee's ability to address technical issues related to emergency preparedness was generally adequate; however, certain delays associated with the installation of visual alarms in high noise areas resulted in the re-opening of a previously closed item. The Supply System's response to NRC initiatives was, for the most part, timely. The staff assigned to the emergency preparedness program is adequate in numbers and positions are well defined. With respect to reporting and analysis of reportable events, the licensee's emergency preparedness staff has demonstrated initiative. Based on the relatively insignificant findings identified during the observation of the emergency preparedness exercise and their ability to effectively respond to the real emergency that occurred during the exercise, the licensee's emergency preparedness program appears to be effective.

Conclusion

Performance assessment - Category 2. No trend was observed in this functional area.

Board Recommendation

The licensee needs to improve the management of the emergency preparedness training program to provide assurance that personnel identified in the emergency response organization will receive appropriate training/retraining in a proper and timely manner.

G. Security and Safeguards

During the period August 1, 1983 through January 31, 1985, four physical security inspections were conducted. In addition, the resident inspectors provided continuing observations in these areas.

The first physical security inspection was part of the pre-operational physical security inspection. This and the remaining physical security inspections to verify continued compliance with security requirements represented a total inspection effort of 545 inspection hours. While several deficiencies were

effort of 545 inspection hours. While several deficiencies were noted in the pre-operational inspection, the licensee's conscientious and prompt action to resolve the technical issues, and to compensate and correct the causes resulted in no violations being identified.

Two material control and accounting inspections, involving 50 inspection hours, were also conducted during the review period. The first material control and accounting inspection identified one violation. The licensee had returned three rejected fuel rods to his supplier without generating the required NRC transaction report.

The licensee's corrective action to preclude recurrence was reviewed in the latter material control and accounting inspection. No further problems were identified.

Corporate management was fully involved in the implementation and review of the security program and the remedial program to expeditiously correct deficiencies identified in the course of the pre-operational security inspection. Records supporting program completion were accurate, complete and available for review.

Two information notices and two event reports (10 CFR 73.71(c)) related to security were issued during the assessment period. The licensee's records relative to their analysis of the information notices and event reports were reviewed with no problems noted.

The licensee's security organization was found to be staffed by qualified individuals dedicated to maintaining high standards in their areas of responsibility.

Conclusion

Performance assessment - Category 2. No conclusions were drawn in the previous SALP cycle. The limited inspection history has identified no apparent trends.

Recommendation

Licensee management is encouraged to maintain their support of the station security program and the material control and accounting program.

H. Quality Programs and Administrative Controls Affecting Safety

During this SALP period the quality programs and administrative controls have been inspected by the resident and regional inspectors, including a team inspection conducted in May-June 1984. Inspections of other specific functional areas, including routine daily activities by the resident inspectors, also relate to conclusions regarding implementation of administrative programs and controls.

Management involvement in quality programs included development and use of a comprehensive operational readiness review plan, by which individual managers attested, for the Managing Director, as to completeness of work in various areas. A corporate level hotline was installed and broadly publicized for receipt of employee quality/safety concerns. Quality performance trend reports to management were initiated at the corporate level. Corporate management routinely visited the site; however, plant management appeared reluctant during the early portion of the SALP period to accept assessments of plant activities by outside examiners having little direct plant operating experience. This included the quality assurance organization, which had been staffed with personnel lacking previous plant operating experience, and who had not been provided with significant technical training. The quality assurance surveillance function obtained limited depth and responsiveness in the operations and testing areas. The licensee initiated training improvements in this area late in the SALP period.

Many errors were identified in plant procedures which had been issued and reviewed under the licensee's controls. In many NRC-identified cases the users of such procedures either did not identify such errors or did not initiate needed changes. This indicated a lack of discipline in adhering to procedures. At the end of this period, the licensee placed increased emphasis on the use of and adherence to plant procedures and initiation of required procedure revisions.

Identification and compilation of test program data were improved under monitoring by the quality assurance organization. Document control of plant procedures and equipment vendor information appeared adequate with some exceptions, which were corrected by the licensee in response to NRC concerns.

The licensee was responsive to NRC observations regarding the general employee training program. A need for training department policies and procedures was observed and the licensee initiated corrective steps. The licensee has been particularly attentive to filling vacant key management positions on a priority basis.

Conclusion

Performance assessment - Category 2. An improving trend was observed.

Board Recommendation

Performance in this area indicates increased management emphasis is warranted. The quality assurance staff should be provided additional plant operations training or augmented with operations-trained personnel. Management should emphasize measures to upgrade the accuracy and adequacy of plant procedures and encourage a stronger sense of personal responsibility for procedure adequacy and implementation. Activities to improve training programs should continue.

I. Startup Testing

The startup testing program was inspected on a monthly basis by the resident inspectors during this SALP period. This included preoperational testing, fuel loading, initial criticality, startup, and power ascension testing. Regional inspectors examined test program procedures and records, including special inspections of readiness for initial fuel loading and performance of the containment integrated leak rate test.

There have been no violations in the area of startup testing and few related licensee event reports. The licensee exhibited no reluctance to properly report deficiencies identified during testing. NRC inspections found procedural errors and lack of vigor in test record completion early in the program, but this improved later with increased monitoring by the licensee's quality assurance organization. Management involvement in planning and prioritization was consistently evident during this period. Outstanding tests were rigorously documented and scheduled, and schedules were adjusted as necessary when technical problems arose. Conservatism was routinely exhibited in areas with potential safety significance.

The Plant Operations Committee (POC) was involved in review of test procedures and test results. The POC was composed of the department managers, who maintained cognizance of current issues discussed at daily planning and review meetings. The POC review of test results relied upon the department managers staff members who were assigned to other priority daily activities, and the POC received only abbreviated test result summaries for review; some FSAR defined criteria were not addressed at all in such summaries. The responsibility for detailed test review was relegated to the shift technical advisors who conducted the test, and who were in some cases the system engineers assigned to other duties, such as processing backlogs of maintenance work requests. Compensating for lack of a designated responsible test review group, initiative of the General Electric Company site representatives was relied upon for independent assessment of tests. After completion of the test program, management provided more detailed test data to the site engineering organization for independent review.

Conclusion

Performance assessment - Category 2. An improving trend was observed.

Board Recommendation

The Board recommends that management provide continued emphasis on strong in-house engineering capability, as demonstrated during the startup test program.

J. Licensing Activities

During the evaluation period WNP-2 was in the preoperational testing phase as well as in the commercial operations phase. In this time period, management involvement with licensing activities was evident. The senior management took an active part in resolving licensing issues in the areas of emergency planning and operator shift staffing.

In some of the requests for license amendments, the information provided was incomplete, and the issues not clearly described. The analysis supporting the no-significant-hazards consideration did not always support the conclusions reached.

In the approach to resolution of technical issues from a safety standpoint, the licensee's responses were, in general, sound and viable. For example, submittals and/or meetings regarding licensing issues in the areas of environmental qualification of equipment, Supplement 1 to NUREG-0737, emergency planning and in a few other areas of licensing were handled well and contained sufficient information for the staff to arrive at the conclusions.

The licensee was generally quite responsive to staff concerns. Requested information was provided in a timely manner, was comprehensive, and directly addressed the issues of concern. Licensee responsiveness was particularly good in addressing several licensing issues prior to the issuance of the WNP-2 license and on the exemption request concerning containment inerting.

In the area of Reporting and Analysis of Reportable Events, the event reports were generally complete and prompt. Aside from formal reporting requirements, the licensee was responsive in reporting delays to staff questions or meeting certain schedule requirements. In general, the NRC staff was notified by telephone when delays were to occur.

During the startup testing program several events delayed completion of the power ascension test program (PATP). On July 9, 1984, during monthly surveillance testing, standby Diesel Generator 1B (DG1B) incurred a high vibration alarm. The slip ring end bearing had turned on the insulation, thus destroying the insulation and allowing the shaft to drop slightly. Inspection of DG1A revealed that it could also have a similar problem. The WPPSS management took prompt action. The modifications were completed and the units declared operable within three weeks. During the PATP phase, seven amendments to the license were issued, including an emergency technical specification change regarding surveillance requirements of certain reactor coolant system pressure isolation valves. The licensee should have known the nature of the requirements and acted accordingly instead of requesting NRC licensing action within a day.

No basis exits for evaluating training and qualification, or enforcement. Staffing of the WNP-2 licensing effort appeared adequate.

Conclusion

Performance assessment - Category 2. No trend was observed.

Board Recommendation

The licensee is encouraged to screen the requests for license amendments to ensure that the issues are clearly described and the evaluation of significant hazards consideration supports the conclusions reached and the requests are filed in a timely manner.

K. Construction

During this SALP period the construction program was inspected on a routine basis by the resident inspectors. Regional office inspectors also conducted several inspections, including a team inspection, to assess the licensee's actions for prior NRC inspection findings, including those of the Construction Assessment Team (CAT). The inspectors also assessed the licensee's control over deferred construction items. There were seven violations in this area which were all resolved prior to fuel load.

The license instituted extensive planning and controls for the transition into operations, including establishment of priorities and involvement of corporate management. However, workloads and oversights led to some untimely presentations and requests for approval to NRC staff which might have otherwise been avoided. The licensee deferred many non-critical items for completion after fuel load, and developed a detailed accounting, scheduling and tracking system for these. A fully staffed test and startup group existed within the licensee organization which exhibited clear understanding of outstanding issues. NRC evaluations of deferred items found the licensee's decisions in this regard generally conservative where the potential for safety significance existed. The licensee deferred the proposed fuel loading date as necessary to assure prior resolution of such issues. The licensee took strong initiative in resolution of some issues, such as the program of induction stress relief of piping to minimize the possibility of future intergranular stress corrosion cracking.

The licensee was responsive to NRC concerns and aggressive in the resolution of construction related discrepancies. Specific NRC issues were resolved satisfactorily for the previous SALP identified areas of: 10 CFR 50.55(e) reporting; CAT issues, including reinforcing steel placement, as-built drawings, cable tray separation, and updating of the FSAR; and completion of the construction reverification program. Inspection findings during the SALP period indicated that the effectiveness of corrective actions was limited in the areas of electrical separation and quality classification. Further corrective actions in these areas appeared acceptable.

Conclusion

Performance assessment - Category 2. This category rating is the same as the previous SALP period.

Board Recommendation

The licensee should continue with resolution of outstanding construction/maintenance items, with necessary dedication of engineering and maintenance resources.

V. SUPPORTING DATA AND SUMMARIES

A. Licensee Activities - August 1, 1983 through January 31, 1985

During the early part of the assessment period, the licensee was completing the final phases of construction. The preoperational test program, which started in January 1983, was approximately 50 percent complete by August and about 95 percent complete in January 1984. The WNP-2 license was issued on December 20, 1983, and fuel loading commenced on December 23, 1983. Initial criticality was achieved on January 19, 1984, and the full power license amendment was issued April 13. Full power was first achieved on November 2 and commercial operation was declared on December 13, 1984.

B. Inspection Activities

Two NRC resident inspectors were onsite for the entire appraisal period. Total NRC activity during this period involved 7,847 inspection hours (resident and region based).

A tabulation of inspection and enforcement activities is shown in Table 1.

During May 29 - June 8, 1984, a special five man team performed continuous around-the-clock inspection of the shift operating crews, concentrating on: information turnover/exchange between crews; awareness of plant/system status, limiting conditions of operation and technical specification compliance; adherence to procedures and administrative controls; removal and restoration of systems/components from/to service during maintenance and surveillance activities; the integration and utilization of technical advisors (STAs) on shift; and management's involvement and awareness of plant status and problems. No violations were identified within the scope of this inspection. However, seven specific weaknesses were identified regarding: awareness of LCOs, annunciators; inconsistency in walkdowns and turnovers; weakness in recording details and events in operations logs; work practices; and lack of visibility of senior management in the control room. These items were addressed in Inspection Report 50-397/84-15.

C. Summary of Other Related Data

1. 10 CFR 50 Part 21 Reports:

- Possible Loss of Secondary Containment Pressure Control.
- Lack of Redundant Means for Detecting Reactor Water Cleanup (RWCU) System Leakage.
- Containment Isolation Valves Installed Improperly.
- Cable Protection for Dedicated Shutdown Systems Inadequate Per Appendix R.
- Nonconservative Assumptions in Calculations for Reactor Building Enviornment which Determine Equipment Qualifications.

2. Investigation Activities:

The Office of Investigations (OI) did not open any cases or inquiries during the assessment period.

3. Escalated Enforcement Actions:

1. Civil Penalties

No civil penalties were issued during the assessment period.

2. Orders

No orders were issued during the assessment period.

4. Management Conferences Held:

February 28, 1985 - Enforcement Conference (Failure of EDGs to reach rated voltage on January 31, 1985 - LER No. 85-08).

5. Confirmation of Action Letters:

No confirmation of action letters were issued during the assessment period.

D. LER Analysis

The licensee submitted 137 LERs during the assessment period. For this review, 50 of the LERs were randomly selected by the NRC's Office of the Analysis and Evaluation of Operational Data (AEOD) from the total submitted in order to provide a statistically significant base for assessment while limiting the number of LERs reviewed. In order to have at least 90 percent of the 137 LERs acceptable at the 95 percent confidence level, 48 of the 50 LERs reviewed would have to be acceptable by AEOD criteria. The LER

review covered the following subjects and the general instructions of NUREG-016.

Within the following areas, AEOD found that:

- The LERs provided sufficient data to give clear and adequate descriptions of the occurrences, their direct consequences, root causes, and where known the corrective actions needed to prevent recurrence.

- All coded entries reviewed appeared to be correct. However, out of the 50 LERs which were reviewed, the licensee did not specify the following in the coding boxes: (1) the failed component and the component manufacturer in two LERs (84-24 and 84-26) and (2) the failed system, the failed component and the component manufacturer in three LERs (84-33, 84-34 and 84-37).

- Most of the LERs reviewed contained supplementary information. The supplementary information provided was clear, concise and adequate.

- The licensee submitted a follow-up report in every case reviewed where such a commitment was made.

- The licensee appropriately referenced similar prior occurrences as necessary.

- The licensee did not report any multiple events in a single LER.

- The region issued six PNs during this review period. Two of the PNs issued should have been followed by an LER. AEOD's review indicates that the licensee did issue LERs 84-084 and 84-113 for these two PNs.

From this sample review, AEOD found that in general the LERs typically provided clear descriptions of the cause and nature of the events as well as adequate explanations of the effects on both system function and public safety. In most cases the described corrective actions taken or planned by the licensee were considered to be commensurate with the nature, seriousness, and frequency of the problems found. In general, none of the LERs reviewed involved what would be considered an especially significant event or serious challenge to plant safety.

In summary, statistically, the review by AEOD indicated that based on the stated criteria, the licensee provided clear and reasonably adequate event reports during the assessment period. No significant deficiencies were found in the LERs reviewed. Region V inspectors also reviewed all LERs following their issuance, as part of the regular inspection program, and concluded that LERs submitted by the licensee were generally accurate and showed improvement during the period of this assessment.

TABLE 1

INSPECTION ACTIVITIES AND ENFORCEMENT SUMMARY (8/1/83 - 1/31/85)

WASHINGTON NUCLEAR PROJECT UNIT 2

Functional Area		Inspections Conducted: Inspection* Hours	Inspections Conducted: Percent of Effort	Enforcement Items: Severity Level** I	II	III	IV	V	Dev.
A.	Plant Operations	2,756	35			1	5		
B.	Radiological Controls	461	6				2	1	1
C.	Maintenance	444	6				2		
D.	Surveillance	511	6				1		
E.	Fire Protection	407	5						
F.	Emergency Preparedness	463	6						
G.	Security and Safeguards Special Report 83-31	119 476 595	8					1	
H.	Quality Programs and Administrative Controls	445	6				2		
I.	Startup Testing	1,066	13						
J.	Licensing Activities	-	-						
K.	Construction	673	9	—	—	—	7	—	—
	Total	7,821	100	0	0	1	19	2	1

*Allocations of inspection hours vs. functional areas are approximations based upon inspection report data, and include onsite and inoffice inspection effort.

**Severity levels are in accordance with NRC Enforcement Policy (10 CFR Part 2, Appendix C).

Data reflects Reports 83-31, 83-33, 83-38 through 85-04, 85-06, and 85-09.

TABLE 2

ENFORCEMENT ITEMS (8/01/83 - 1/31/85)

Inspection Report No.	Subject	Severity* Level	Functional Area
83-33	Failure to document return of three rejected fuel rods to the manufacturer.	V	G
83-38	Installation of weld-o-let fittings with less than the 100% reinforcement of attachment welds.	IV	K
	Three of twelve pipe supports did not include the welds as specified by approved design drawings.	IV	K
	Failure to correctly repair a defective weld.	IV	K
	Installed bolting materials for equipment and structures, were not in accordance with applicable design drawings and specifications.	IV	K
	One of eight reinforcing steel dowels was omitted from two beams, and honeycomb and voids occuring in concrete due to construction deficiencies.	IV	K
	Construction and installation deficiencies.	IV	K
83-58	Contrary to commitments, the reactor coolant sample line was not shielded, lagged or otherwise protected to minimize personnel hazard.	Deviation	B
	Standby gas treatment system was tested released without including applicable acceptance limits.	V	B
	Reactor building ventilation system was put into operation with a documented deficiency.	IV	B
83-60	Failure to ensure all work was completed on leaking valves before returning them to service.	IV	C

Table 2 (Cont'd)

Inspection Report No.	Subject	Severity* Level	Functional Area
84-07	Relocation of the reactor building exhaust plenum radiation monitors resulted in failure to identify the monitors as Quality Class 1 and failure to identify the need to change the Final Safety Analysis Report.	IV	B
84-09	Inoperable primary containment air lock doors due to broken gears in the interlock mechanism.	IV	A
	Failure to secure six U-clamp supports resulting in an installation of the actuating fluid piping for deluge value units of the fire protection program to not conform to the documented drawings.	IV	K
84-11	Failure to re-review changes to a previously approved Plant Modification Record.	IV	H
84-13	Failure to notify the NRC that both doors of the Primary Containment Personnel Airlock were simultaneously opened.	IV	A
	Failure to maintain equipment control when four tags were added to clearance orders without changes initialed by the Shift Manager and without required redundant verification.	IV	A
84-18	Failure to notify Shift Manager prior to installation of two jumpers and failure to perform an independent verification of installation and removal.	IV	D
	Failure to take prompt and effective corrective action for the malfunction/ deficiencies in the emergency core cooling system logic.	IV	C

Table 2 (Cont'd)

Inspection Report No.	Subject	Severity* Level	Functional Area
85-09	Emergency Diesel Generators DG-1 and DG-2 inoperable for a 10-day period.	III	A
	Diesel Generator procedures did not contain instructions for control of voltage regulators.	IV	H
	Failure to enter relevant information into the Control Room Log or Reactor Trip Record.	IV	A
	Failure to report three reportable events to the NRC Operations Center within the time periods specified in 10 CFR 50.72.	IV	A

*Severity levels are in accordance with NRC Enforcement Policy (10 CFR Part 2, Appendix C).

TABLE 3

SYNOPSIS OF LICENSEE EVENT REPORTS **

Functional Area	SALP Cause Code* A	B	C	D	E	X	Totals
A. Plant Operations	24	7	1	3	2	10	47
B. Radiation Protection	2	18	-	1	-	2	23
C. Maintenance	9	2	-	-	1	2	14
D. Surveillance	14	3	-	5	-	10	32
E. Fire Protection	4	3	-	1	-	3	11
F. Emergency Preparedness	-	-	-	-	-	-	0
G. Safeguards	-	-	-	-	-	2	2
H. Quality Programs and Administrative Controls Affecting Safety	1	5	-	-	-	-	6
I. Startup Testing	3	6	-	1	-	2	12
J. Licensing	-	1	-	-	-	-	1
K. Construction	-	2	-	-	-	-	2
TOTALS	57	47	1	11	3	31	150

* A-Personnel Error
B-Design, Manufacturing or Installation Error
C-External Cause
D-Defective Procedures
E-Component Failure
X-Other

** Submitted after issuance of the operating license on December 20, 1983. Synopsis includes LERs with event dates through January 31, 1985.