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OCT 14 1983

Docket No. 50-397

Washington Public Power Supply System
P. O. Box 968
Richland, Washington 99352

Attention: Mr. C. S. Carlisle
Program Director, WNP-2

Gentlemen:

Subject: SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE (SALP)

The NRC Region V SALP Review Board met on September 20, 1983, and evaluated the performance of the licensed activities at Washington Nuclear Project No. 2. The draft report of our assessment is enclosed.

We will meet with you on October 25, 1983, to discuss our assessment, your plans to improve performance, and any comments you may have regarding our report.

Please inform us in writing within twenty days from the date of this meeting of those actions that you have taken or will take to improve performance in the above areas of weakness. Additionally, you may also include any comments you may have regarding the SALP report.

Following our meeting and receipt of your response, the enclosed report, your response, and a summary of our findings and planned actions will be placed in the NRC Public Document Room.

Your cooperation is appreciated.

Sincerely,

Albert Young Jr.
for T. W. Bishop, Director

Division of Resident, Reactor Projects
and Engineering Programs

Enclosure:

As stated
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R. B. Glasscock, WPPSS
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

OCT 17 1983

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Enclosure:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

1450 MARIA LANE, SUITE 210
WALNUT CREEK, CALIFORNIA 94596

OCT 14 1983

NOTICE OF SIGNIFICANT LICENSEE MEETING

Name of Licensee: Washington Public Power Supply System -

Name of Facility: Washington Nuclear Projects Unit 2

Docket Number: 50-397

Date and Time
of Meeting: October 25, 1983, 1:00 P.M.

Location of
Meeting: Region V, Walnut Creek, California

Purpose of
Meeting: NRC Regional Evaluation of Licensee Performance for the
period of August 1982 through July 1983.

NRC Attendees: J. B. Martin, Regional Administrator
T. W. Bishop, Director, Division of Resident Reactor
Projects and Engineering Programs
R. T. Dodds, Chief, Reactor Projects Section No. 1
A. D. Toth, Senior Resident Inspector
D. J. Willett, Reactor Inspector

NRR Attendees: R. Auluck, Project Manager
A. Schwencer, Chief, Licensing Branch No. 2

Licensee
Attendees: D. W. Mazur, Managing Director
C. S. Carlisle, WNP-2 Program Director
J. D. Martin, WNP-2 Plant Manager
R. B. Glasscock, Quality Assurance Director
Plus Appropriate Support Staff

U. S. NUCLEAR REGULATORY COMMISSION
REGION V
SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE
FOR
WASHINGTON PUBLIC POWER SUPPLY SYSTEM
WASHINGTON NUCLEAR PROJECT
UNIT 2

OCTOBER 25, 1983

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I. INTRODUCTION

1. Purpose and Overview

The Systematic Assessment of Licensee Performance (SALP) is an integrated NRC staff effort to collect the available observations on an annual basis and evaluate licensee performance based on those observations with the objectives of improving the NRC Regulatory Program and licensee performance.

The assessment period is August 1, 1982 through July 31, 1983. This assessment contains pertinent observations of NRC and licensee activities. Evaluation criteria used during this assessment are discussed in Section III. Each criterion was applied using the "Attributes for Assessment of Licensee Performance" contained in NRC Manual Chapter 0516.

2. SALP Board Meeting: September 20, 1983, Region V Office

Board Members: T. W. Bishop (Board Chairman)
R. T. Dodds, Chief, Reactor Projects Section No. 1
A. D. Toth, Senior Resident Inspector - Construction
(Telephone)
R. A. Feil, Senior Resident Inspector, Operations
(Telephone)
J. O. Elin, Reactor Inspector (Telephone)
D. P. Haist, Reactor Inspector
R. F. Fish, Emergency Preparedness Analyst
D. J. Willett, Reactor Inspector
G. Yuhas, Senior Radiation Specialist
L. Norderhaug, Chief, Safeguards and Emergency
Preparedness Branch
R. Auluck, Project Manager, NRR

3. WNP-2 Unit Activities August 1, 1982 through July 31, 1983.

During the assessment period the licensee was completing the final phases of construction. The preoperational test program was officially started in January 1983 and was about 50% complete by August 1, 1983. Significant programs conducted by the licensee included continuation of the quality verification program and initiation of an independent design reverification program. These programs are expected to be completed by October 1983.

4. Inspection Activities

Two NRC resident inspectors were onsite for the entire appraisal period.

Total NRC Inspection Hours: 5995 hours (Resident and region based).
Distribution of inspection hours is shown on Table 2.

A tabulation of inspection activities is shown in Table 2 and a tabulation of violations is shown in Table 4. The Inspection

Report Summary is listed in Table 5.

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: Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used such that a high level of performance with respect to operational safety or construction is being achieved.

Category 2: 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: Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appeared strained or not effectively used such that minimally satisfactory performance with respect to operational safety and construction is being achieved. Licensee attention should be increased.

TABLE 1

III. SUMMARY OF RESULTSWASHINGTON NUCLEAR PROJECT UNIT 2FUNCTIONAL AREASCATEGORY 1 CATEGORY 2 CATEGORY 3

1. Construction			
° Electrical Power Supply and Distribution		X	
° Instrumentation and Control Systems		X	
° Containment and Other Safety Related Structures		X	
° Piping Systems and Supports		X	
° Construction Deficiency Reporting (10 CFR 50.55(e))		X	
° Quality Verification Program		X	
2. Plant Operations		X	
3. Radiological Controls		X	
° Radiation Protection			
° Radioactive Waste Management			
° Transportation			
° Effluent Control & Monitoring			
4. Emergency Preparedness		X	
5. Security and Safeguards		X	
6. Licensing Activities		X	

IV. PERFORMANCE ANALYSIS

The following is the Board 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.

1. Construction ° Electrical Power Supply and Distribution A. Analysis

A major area of concern, discussed in the last two assessment periods, involved the lack of a clear definition of acceptance criteria for insuring the electrical independence of redundant safety related circuits and the assurance by appropriate quality control measures that electrical independence was achieved in

field installations by conforming to electrical separation requirements. At the beginning of this assessment period the construction manager, the installation contractor, and the licensee had not taken an active part in assuring the adequacy of electrical installations with respect to independence and separation requirements. During this assessment period the licensee took actions to resolve these deficiencies. These actions were supervised and directed at the highest levels of management. The actions taken included a major review with the NRC of electrical independence criteria and separation requirements which resulted in the issuance on March 21, 1983 of an "ELECTRICAL SEPARATION PRACTICES DOCUMENT". This document was reviewed by NRC Region V and the NRR Power Systems Branch Reviewer at the WNP-2 site in the Spring of 1983 and was found to be acceptable for meeting the requirements for electrical independence. Additional effort was made by the licensee to identify and resolve technical issues. Panels were reinspected for conformance to the criteria for electrical separation defined in the approved "ELECTRICAL SEPARATION PRACTICES DOCUMENT" and sample inspections were performed for proper separation of the tray and conduit raceway systems. Staffing for this extra effort was adequate and the teams were properly trained. These actions were reviewed by NRC Regional Inspectors and by a special "CONSTRUCTION APPRAISAL TEAM (CAT)". At the time of this assessment the only remaining item to be resolved is a review of the licensee's reinspection efforts with respect to tray to tray, tray to conduit, and conduit to conduit separation.

B. Conclusion

Category 2

C. Recommendations

Licensee should continue the effort to establish that adequate electrical independence exists between electrical divisions with particular emphasis on completing the tray to tray, tray to conduit, and conduit to conduit reinspections.

o Instrumentation and Control Systems

A. Analysis

The licensee has continued the program of equipment protection discussed in the previous two assessments showing a reasonable degree of management involvement. During this assessment period no enforcement items were identified in the area of instrumentation and control other than those relating to electrical independence discussed in the Electrical Power Supply and Distribution

section of this report. Several construction deficiencies in the area of instrumentation and control, identified and reported by the licensee to the NRC under the requirements of 10 CFR 50.55(e), remain outstanding. The Construction Appraisal Team (CAT) effort in this area did not identify any significant issues other than the electrical cable separation issues, previously discussed.

B. Conclusions

Category 2

C. Recommendations

The licensee should place additional emphasis on completing the corrective actions defined in outstanding 10 CFR 50.55(e) reports.

o Containment and Other Safety Related Structures

A. Analysis

The 1982 SALP board commented on the licensee failure to recognize a specific NRC position regarding repairs to the sacrificial shield wall surface welds. The licensee was responsive to the NRC observations and the specific issue has been resolved. There have been no related issues raised during this report period.

Senior construction, engineering, and quality assurance management personnel are intimately involved in the issue of inadequate concrete repairs and Construction Assessment Team (CAT) finding that reinforcing steel placement did not conform to design. Nevertheless, corrective measures to explore and evaluate this issue were not thorough. The exploration of potential defect areas initially was not sufficient to permit evaluation, however this was corrected. Prior planning and prioritization of these corrective actions is evident. Additional actions are in progress, including utilization of experienced consultants and third party overview by Westinghouse personnel.

Initial responses to NRC initiatives on concrete issues lacked timeliness, thoroughness, and depth, requiring repeated submittals and considerable NRC inspection effort. As a result, increased licensee attention is being applied to assure accuracy and thoroughness, including utilization of consultants and third party review to resolve and overview the resolution of the concrete issues.

Minor repetitive violations of reinforcing steel placement is indicative of a general program problem associated with work in that time period. Corrective action activities

are in progress. The concrete issue was an enforcement matter. Licensee response, prior to issuance of the CAT report was timely but not totally effective. Significant investigation effort is now being applied.

Key positions are identified and authorities and responsibilities are defined. Burns and Roe has a lead civil engineer and related organization to address any civil matters that arise under the recent PKS activities and from reverification program activities.

B. Conclusions

Category 2

C. Board Recommendations

The licensee should continue and complete resolution of CAT issues related to reinforcing steel placement.

o Piping Systems and Supports

A. Analysis

The 1982 SALP board expressed concern over apparent weakness in process control. Licensee attention has been focused in this area, with positive steps taken by Bechtel and monitored by WPPSS. The new Bechtel system team concept appears to have increased quality awareness by construction supervision and field engineering personnel. Additional controls have been established for quality control personnel activities. This matter has been improved substantially.

Management involvement in assuring quality is generally characterized by positive actions to assure quality and aggressiveness in planning interfaces with the NRC. Implementation of management policies is sometimes weak. There have been some breakdowns in design control. Bechtel has taken steps to improve process control in response to a noncompliance issue. The licensee has applied heavy resources to deal with the NRC Nondestructive Examination (NDE) van, reverification program team and CAT. Planning decision implementation was deficient for the NDE van work, the as-built program, omission of Bechtel from the skewed weld issue, and incorrect Bechtel criteria for the self-aligning bearing issue. The NRC has utilized its top and middle management during this assessment period, with several team inspections, routine program modules, special meetings, and NRR visits. Design control breakdowns were identified relative to quality classification, engineering dispositions of nonconformance reports, and the as-built program.

Indication of inadequate followup on technical issues and related corrective actions as indicated above is demonstrated by the following: failed to train Bechtel regarding the skew weld issue, failed to implement new criteria for new work on lubrite plates, incorrect criteria for self-aligning bearings, end bracket weld criteria (amended response), quality class downgrading (amended response), and minimum wall thickness issues. The licensee has now addressed these specific issues.

Licensee responsiveness to NRC Initiatives is characterized by generally timely responses with obvious management attention to schedule resolution of issues. Some delays have occurred in submitting SAR changes where needed. The licensee has continued initiatives to meet with the NRC and define outstanding issues. Special management involvement in CAT daily activities has been apparent.

The enforcement history indicates that major violations are rare and minor violations are not repetitive, but are of a nature to indicate minor program breakdown. Corrective actions have been delayed and not effective in several cases as indicated above.

Neither the NDE van nor the CAT found significant enforcement matters for piping/supports, but problems with as-builts and NCR dispositions are general and problematic.

Staffing, including management and quality assurance is considered adequate. Key positions are defined and filled. The implementation of the Bechtel team concept has assured comparative staffing of construction/engineering/quality control. Quality control staffing appears adequate. As-built staffing was augmented and the subject of management action.

Defined training programs are implemented for a large portion of engineering, construction, and quality control personnel. Training for the as-built effort appeared comprehensive although program results showed some personnel errors. Site-wide Supply System and Bechtel training exists. Craft training is provided only where codes specify, but this is compensated for by foreman/engineering/quality control interfaces and availability of work procedures.

B. Conclusions

Category 2

C. Recommendations

The licensee management should make updating of the SAR a priority issue prior to fuel load. As-built issues should be resolved promptly.

° Construction Deficiency Reporting (10 CFR 50.55(e))

A. Analysis

The licensee's reverification program and preoperational testing activities have resulted in a substantial number of reportable construction deficiencies during the assessment period (see Table 3). In some cases, the NRC examination of corrective actions associated with reportable construction deficiencies has identified a lack of sufficient information in written reports and backup documentation to permit NRC analysis and evaluation of the cause of the deficiency and the effectiveness of corrective actions. The licensee has implemented a quality assurance audit program to ensure that corrective actions proposed have in fact been taken but this program has not been totally effective. Engineering organizations have either not understood the need to determine the cause and take action to prevent recurrence of significant construction deficiencies or have not fully supported the efforts of the quality assurance organization. The licensee's management has aggressively pursued correction of this problem and recent written reports indicate that the action taken is producing favorable results.

Licensee reporting of construction deficiencies has been timely in accordance with NRC guidance on 10 CFR 50.55(e) construction deficiency reporting dated April 1, 1980. Of the twenty-one reportable deficiencies reported during the assessment period, nine have been examined and closed by the NRC. The licensee implemented a quality assurance surveillance program following the 1982 SALP to assure that all corrective actions have been completed for deficiencies initially considered closed by the licensee. This program has been somewhat successful in reducing the amount of NRC inspection effort required to examine deficiencies, but certain specific examples, such as the inadvertent installation of a nonconforming DC motor operator (NRC No. 83-01-C, Licensee No. 226) and failure to adequately consider stairwell condensate line rupture effects on deficient waterproof doors (necessitating an amended response to NRC No. 82-09-B, Licensee No. 212), indicate that continued vigilance in verifying the adequacy and implementation of corrective action is required.

One item of noncompliance was issued for failure to take effective corrective action to preclude the installation of silver plated relay contacts for the emergency diesel generator air start circuitry after the licensee had

determined gold contacts were necessary due to low current considerations.

The licensee took immediate action to respond to the above NRC concerns by: (1) requesting a corporate audit of construction deficiency reports previously considered resolved by the licensee; (2) sending instructions to principal project organizations involved in evaluation of construction deficiencies on the proper evaluation criteria and quality assurance aspects of resolving construction deficiencies; and (3) returning inadequate or incomplete reports to responsible organizations for reevaluation or completion. The quality of recent written reports has improved.

B. Conclusions

Category 2

C. Recommendations

The licensee should examine the system of reporting and examine past construction deficiencies to assure that causes of failures and deficiencies are identified and corrective actions initiated to preclude reoccurrence during facility operation of pertinent items identified during construction.

o Quality Verification Program

A. Analysis

The 1982 SALP Board expressed concerns over an apparent reluctance to increase sample size when defects were found in the initial sample. The licensee has shown several cases demonstrating that sample sizes were increased and the concern in this area has been resolved. The 1982 SALP Board expressed concern over apparent course direction changes from the commitments of the 50.54(f) letter. These concerns have been addressed and agreement reached between the licensee and Region V.

There is a demonstrated need for Supply System program management to actively probe and critically evaluate the detailed results of this program. Management was ineffective in obtaining adequate documentation of the following reverification activities: Sentry report, WBG mini-reports, JCI report. Management was not totally effective in assuring implementation of the original commitments to NRC for program scope and depth. Management was ineffective in assuring thoroughness in the consideration of findings for contract 24 document discrepancies and in the B&R disposition of NCR's for

contract 215. Generally, the reverification program has been late and untimely.

Generally, there was a conservative approach to issues and resolutions were technically sound. Some lack of thoroughness, depth or understanding of issues has prompted NRC attention to disposition of findings. Reverification program increased sampling, and handling of identified discrepancies, has appeared conservative.

The licensee has been aggressive in the resolution of NRC identified issues. Clear agreements have been reached regarding program scope and depth.

Documentation and reports of reverification program activity were not scheduled for completion until September 1983, which was the original licensee planned fuel load date. This did not allow reasonable time for NRC review and corrective measures that may be needed. The fuel load date has since been changed to November 1983.

Major violations were rare. Minor violations indicated some program breakdown with regard to the thoroughness that identified discrepancies have been probed and evaluated. Corrective actions were in some cases not effective (i.e. contract 24 document discrepancies and contract 215 NCR dispositions).

The necessary staff positions have been identified and filled. Supply System staff has been minimal while contractor staff appears adequate and has been augmented for recent program scope increases for pre-purchase/inactive contract reviews. Experienced personnel were assigned.

Specific training deficiencies were not noted for reverification program staff, but some final reports and records reviews files contained oversights which indicated a need for improved training of reviewers. The files for contracts 24, 217, and 210 reports showed some omissions. Licensee corrective action has been taken.

B. Conclusion

Category 2

C. Recommendations

The licensee needs to assure that management has time to review the results of the reverification program and that the review/approval function appropriately identifies deficiencies within the report.

2. Operations - (Organization, plant administration, quality assurance and conduct of preoperational test and operations program)

A. Analysis

The Supply System is undergoing many organization and personnel changes, at all levels, as the Supply System realigns its resources to support completion of Unit 2. As construction nears completion, the emphasis is shifting to System Completion and Testing. Plant staff and licensed operator training is being completed in a timely manner to support projected operation.

The Operations Quality Assurance/Quality Control Organization is becoming increasingly involved in monitoring test and startup activities. Recently they have assumed responsibilities to certify and direct the activities of startup personnel who perform Quality Control functions.

Administrative, Plant and Operating procedures, which incorporate NUREG 0737 TMI Requirements, are being implemented. Feedback from preoperational testing continues to improve operating and plant procedures.

B. Conclusion

Category 2

C. Recommendations

None

3. Radiological Controls

Analysis

The 1982 SALP concluded that the licensee had a well-developed organization staffed by experience personnel capable of establishing and implementing a quality radiation protection program by the September 1983 fuel load date. The area, "radiological controls" includes radiation protection, radioactive waste management, and radiological environmental monitoring. During this evaluation period, six inspections were performed involving 256 hours of direct inspection effort. The licensee has established a radiation protection program which, when implemented, should meet or exceed regulatory requirements. The environmental monitoring program has been affected by some personnel and organizational changes. Identified deficiencies are being corrected. Final inspection of this area has been delayed by Region V to allow these most recent organizational and personnel changes to stabilize. Inspections of the radioactive waste management systems have not been completed due to repeated delays in completion of system turnovers to the licensee.

Conclusion

Category 2

Board Recommendation

The licensee should apply the extra effort necessary to support timely completion of the radwaste management program.

4. Emergency PreparednessAnalysis

A preoperational inspection of the emergency preparedness program was conducted and the applicant's full-scale emergency preparedness exercise was observed during this assessment period. Extensive training drills were conducted with management enforcement prior to the full-scale drill. This inspection effort disclosed that the management supported the staff's efforts to provide an above average emergency preparedness program. Those portions of the total program that have been completed indicate the objective will be met. However, the inspection and exercise observation showed that many areas of the emergency preparedness program were incomplete because of the additional actions required to reach full implementation. A total of 61 of these incomplete or "open" items have been identified. The major causes of the numerous "open" items were traced to the status of construction at the site and the lack of operable or installed systems and hardware. The lack of installed and operable equipment, in effect, precluded some of the training of personnel and the development of related procedures.

Conclusion

Category 2

Board Recommendation

The licensee should complete the open items commensurate with the schedule for licensing the plant. There is a need to stabilize the organization to allow time for inhouse exercises to assure that new personnel will be properly trained.

5. Security and SafeguardsAnalysis

During the period August 31, 1982, through July 31, 1983, two physical security inspections were conducted.

The first inspection was conducted against the licensee's Part 70 docket concerning protection of new reactor fuel in accordance with the approved security plan for new fuel receipt and storage. No violations were identified.

The second inspection was the first part of a two-part pre-operational physical security inspection, which comprised approximated 15% of the preoperational inspection effort and focused attention on the licensee's training and qualification (T&Q) program, and the special access authorization program (SAAP). Minor deficiencies were identified in the T&Q program, which were corrected prior to the conclusion of the pre-operational inspection. No deficiencies were noted during the review of the SAAP.

Corporate management was fully involved in implementation and review of the security program. Procedures for program implementation were clear and consistent. Records supporting program completion were accurate, complete, and available for review.

The licensee's SAAP and T&Q program were staffed by qualified individuals dedicated to maintaining high standards in their areas of responsibility. The SAAP documentation was evidence of the thorough manner in which the program has been completed. The T&Q program was well defined and organized to allow full development of student abilities through meaningful training and study programs. Both the SAAP and T&Q program were acknowledged by the inspection staff as exemplary programs within licensee security organizations in Region V.

No Material Control and Accounting inspections were conducted during the review period.

Conclusion

Based on the limited scope of the inspections conducted during the review period, the findings do not support a performance assessment at this time.

Board Recommendations

No specific Board recommendations at this time.

6. Licensing Activities

Analysis

During this appraisal period, the staff was involved, along with the applicant, in resolving the open items related to the issuance of operating license for WNP-2. During this period three supplements to the WNP-2 Safety Analysis Report were issued. Advisory Committee on Reactor Safeguard's (ACRS) sub-committee meeting was held in September 1982 and the full committee met in October 1982.

Washington Public Power Supply System (WPPSS) has demonstrated a high degree of management control and involvement in achieving resolution of licensing issues. Management involvement was particularly evident in addressing the NRC concerns in the emergency planning program and the requirements for the emergency response capability.

The approach of the licensee to the resolution of technical issues from a safety standpoint is technically sound in almost all cases. This was particularly evident in the auxiliary systems area where the licensee justified the deviation in resolving the issue of "Tornado-missile protection for diesel generator exhaust."

In response to NRC initiatives, the licensee provided timely responses with acceptable resolutions. Delays were experienced in few cases. Personnel in the key positions of licensing activities are knowledgeable and professional. During the meetings with the NRC, the applicant has provided the appropriate technical and management level personnel to make the meetings productive.

Conclusions

Based on the evaluation for a number of significant licensing activities, an overall rating of Category 2 is given to Washington Public Power Supply System with regard to their project No. 2. The licensee has been characterized as being knowledgeable, cooperative, technical competent and responsive in the area of licensing activities.

Board Recommendations

None

V. Supporting Data and Summaries

1. Construction Appraisal Team (CAT) Inspection

A CAT inspection was performed at WNP-2 during the period of May 16-27 and June 6-22, 1983 for the purpose of evaluating management control of construction activities and the quality of construction. The effort consisted of detailed inspection of selected hardware subsequent to quality control inspections, a comprehensive review of selected portions of the licensee's quality assurance program, examination of procedures and records, observations of work activities, and interviews with management and other personnel. The inspection involved approximately 1900 inspector-hours by twelve NRC inspectors and consultants.

The NRC CAT noted no pervasive breakdown in meeting construction requirements in the samples of installed hardware inspected by the team. However, deficiencies in installed hardware were noted by the NRC CAT which indicate a need for increased management attention to the WNP-2 Quality Verification Program. These deficiencies include the areas of concrete reinforcement steel placement, mechanical equipment installation, the as-built inspection program, weld repairs, and other detailed deficiencies discussed in the CAT report. An indication that prompt management attention is being given to the identified deficiencies is contained in the submittals provided to the NRC dated July 15 and August 15, 1983 entitled, "Nuclear Project 2 Construction Assessment Team Issues" and

"Construction Appraisal Team Issues" respectively. The identified construction program weaknesses were as follows:

- (1) The "as-built" program for piping and supports, while identifying a number of hardware deficiencies does not appear completely effective in that the NRC CAT findings indicate additional deficiencies, some of which were considered significant. In addition, the subsequent audit conducted by the licensee of a larger sample found essentially the same types of deficiencies as those identified by the NRC CAT inspectors.
- (2) The reinforcing steel placement deficiencies identified during the inspection indicate questionable conditions which require additional destructive examination or analysis to determine the effects on the structures.
- (3) Several welds were identified that appeared to the NRC CAT inspectors to have linear type root indications that did not appear to be in conformance with code requirements. In addition, weld repairs were not controlled to ensure that the proper areas were repaired and that the repairs were adequately performed.
- (4) Mechanical equipment deficiencies identified during the inspection indicate questionable bolting installation and control of parts.

The specific findings were referred to the regional office for evaluation, supplemental inspection, and enforcement action as appropriate. These findings resulted in six items of noncompliance and eleven followup/unresolved items. Other followup items were identified that were satisfactorily dispositioned prior to the issuance of the "Notice of Violation" in August, 1983.

Prompt licensee attention is necessary and is in progress to assure resolution of the CAT issues.

2. NRC NDE Mobile Van

A site visit by the NRC Nondestructive Examination (NDE) Mobile Van was made between September 13 and October 8, 1982. The purpose of this inspection was to verify the adequacy of the licensee's Welding Quality Control Program and to verify the adequacy of the licensee's Radiographic Reverification Program. A representative sample of safety related piping systems, sizes and materials were independently re-examined in accordance with NRC procedures, and applicable codes and standards of the ASME B&PV Code, Section III and AWS requirements. No violations were identified.

3. Summary of Other Related Data

A. Part 21 Reports:

Two 10 CFR 21 reports were issued by the Architect-Engineer during the assessment period. One involves a potential containment leak path on LOCA through RHR relief valves, the other involves possible loss of secondary containment pressure control upon failure of non safety-related cables. Both have also been reported under 10 CFR 50.55(e).

B. Investigation Activities

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

C. 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.

D. Management Conferences Held:

None

4. Confirmation of Action Letters

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

TABLE 2
SUMMARY OF INSPECTION ACTIVITIES (8/1/82 - 7/31/83)

WASHINGTON NUCLEAR PROJECT UNIT 2

<u>Functional Area</u>	<u>Inspection*</u> <u>Hours</u>	<u>Percent</u> <u>of Effort</u>
1. Construction		
◦ Electrical Power Supply and Distribution	130	2%
◦ Instrumentation and Control Systems	196	3%
◦ Containment and Other Safety Related Structures	100	2%
◦ Piping Systems and Supports	248	4%
◦ Construction Deficiency Reporting (10 CFR 50.55(e))	329	5%
◦ Quality Verification Program	707	12%
◦ Construction Assessment Team	1900	32%
◦ NDE Van	692	12%
2. Plant Operations		
Resident	512	9%
Regional	209	3%
3. Radiological Controls		
Radiation Protection	130	2%
Radioactive Waste Management	62	1%
Transportation	0	0%
Effluent Control and Monitoring	64	1%
4. Emergency Preparedness	617	10%
5. Security and Safeguards	99	2%
6. Licensing Activities	N/A	N/A
Total	5995	100%

* Allocations of inspection hours vs. functional areas are approximations based upon inspection report data.

Reports 82-18 through 83-37

TABLE 3

Significant Construction Deficiencies10 CFR 50.55(e) Deficiencies Reported During the Evaluation Period (8/1/82 - 7/31/83).

<u>Item</u>	<u>Description</u>	<u>Status</u>
82-08-A (208)	Remote shutdown panel missing controls for SSW RHR "B" HX	Closed
82-08-B (209)	LPCS & RHR pump press switch could prevent ADS	Closed
82-08-C (205)	White light on D/G breaker can negate BKR reset	Closed
82-09-A (210)	Emergency Diesel Generator Airstart Circuits	Final Rpt
82-09-B (212)	Ray-proof door won't seal in both directions; common ECCS flooding	Closed
82-10-B (216)	RHR relief valve vent provides containment to atmosphere leak path	Interim Rpt
82-12-A (219)	Inadequate Quality Control in sway strut assembly	Closed
82-12-B (218)	MSIV LCS problem	Final Rpt
83-01-A (218)	Unqualified Namco limit switches	Closed
83-01-C (226)	Valves previously reported as non-conforming to service requirements were installed	Final Rpt
83-01-E (223)	Non-1E equipment connected to 1E without isolation device	Final Rpt
83-01-F (229)	HPCS QC I Hangers missing	Final Rpt
83-02-B (240)	Loss of ESF loads of UV trip	Interim Rpt
83-03-C (246)	Main control room panel G2 has non-1E supply for 1E loads	Closed
83-03-D (248)	Anaconda flex conduit not LOCA qualified	Interim Rpt

<u>Item</u>	<u>Description</u>	<u>Status</u>
83-04-A (251)	Limiterque MOV's with unqualified motors	Interim Rpt
83-04-B (254)	Improper installation of lubrite assembly	Closed
83-05-A (258)	Omission of shims on RHR Hx supports	Interim Rpt
83-06-A (264)	Undersized Class 1E fuses for DC motors	Closed
83-06-B (262)	Power Piping M146 rear brackets	Interim Rpt

TABLE 5

INSPECTION REPORT SUMMARY

<u>Inspection Report No.</u> <u>Inspection Date</u>	<u>Inspector</u> <u>Hours</u>	<u>Inspection Summary</u>
50-397/82-18 8-16 to 8-31-82	Resident construction 72 hours	Reactor vessel hydro test, contractors records, reverification program, repairs, follow-up items
50-397/82-19 9-13 to 10-8-82	Regional construction 452 onsite hours 240 offsite hours	Mobile NDE van, welding quality program, adequacy of radiograph reverification program
50-397/82-20 8-31 to 9-3-82	Regional radiation safety 22 hours	Environmental monitoring program, preoperational radiological data, audits, materials
50-397/82-21 8-9/13 and 8-30 to 9-3-82	Regional construction 106 hours	Safety piping, enforcement follow-up
50-397/82-22 8-30 to 9-3-82	Regional operations 18 hours	Organization, quality assurance, preoperational testing, housekeeping
50-397/82-23 9-1 to 9-30-82	Resident construction 46 hours	Structural steel, weld records, piping
50-397/82-24 10-1 to 10-30-82	Resident construction 167 hours	Records review, piping, as-built piping, welding reverification program
50-397/82-25 10-18 to 10-22-82	Regional construction 27 hours	Licensee action on 50.55(e) items and follow-up items
50-397/82-26 11-1 to 11-5-82	Regional operations 25 hours	Preoperational test procedure review, bulletin and circular follow-up
50-397/82-27 11-1 to 11-30-82	Resident construction 132 hours	Reverification program piping, supports, shield wall repair, audit, preoperational testing follow-up items
50-397/82-28 11-1 to 11-18-82	Regional construction 20 hours	Enforcement and follow-up items and construction deficiencies

TABLE 4B
ENFORCEMENT SUMMARY

<u>Report No.</u>	<u>Level</u>	<u>Summary</u>
50-397/82-20	IV	Received neutron source not authorized by specific license
50-397/82-21	IV	Acceptance criteria for redundant cables not specified
	IV	Design engineer was using outdated review criteria
	Dev	Cables were not identified correctly
	Dev	Physical separation was incorrect
	Dev	3 feet separation criteria was not met
	Dev	Markers for cables were missing
	Dev	Incorrect label color scheme used for some panels
	50-397/82-27	IV
V		Weld was improperly accepted by management reviewers
50-397/83-03	Dev	Management failed to act on a record discrepancy for repair work
50-397/83-05	V	Quality records were not retrievable for diesel oil storage tanks
50-397/83-14	IV	Repair measures were inadequate for concrete beam
	V	Failure to prevent damage to materials in work area
	IV	Improper downgrade of quality class pipe supports
50-397/83-22	Dev	Non-integral supports were excluded from construction inspection
50-397/83-37	IV	Failure to take action to preclude recurrence

TABLE 4B
ENFORCEMENT SUMMARY

<u>Report No.</u>	<u>Level</u>	<u>Summary</u>
50-397/83-38	IV	Weld-o-let fittings installed and accepted with less than 100% reinforcement of the attachment weld
	IV	Pipe supports did not have all welds specified by design drawings
	IV	Incorrect area of defective weld was repaired
	IV	Unspecified bolting materials used in pump complings and valve flanges
	IV	Reinforcing steel placement and/or splices not in accordance with design specifications
	IV	Welds, bolts and washers were not properly installed or were missing on raceway supports and/or motor control centers

TABLE 5 (cont.)

INSPECTION REPORT SUMMARY

<u>Inspection Report No.</u> <u>Inspection Date</u>	<u>Inspector</u> <u>Hours</u>	<u>Inspection Summary</u>
50-397/83-13 4-4 to 4-8-83	Regional operations 28 hours	Preoperational test program, open items, TMI activities, independent inspection
50-397/83-14 4-1 to 4-30-83	Resident construction 84 hours	Pipe support procedures, records and work. Construction reverification activities
50-397/83-15 5-3 to 5-5-83	Regional radiation safety 46 hours	Chemical and radiochemical analysis capability, adequacy of laboratory quality assurance program.
50-397/83-16 4-18 to 4-22-83	Regional radiation safety 32 hours	Preoperational test program, waste management system, follow-up of bulletins, circulars and information notices
50-397/83-17 4-1 to 4-30-83	Resident operations 115 hours	Preoperational test program fuel receipt, test witnessing, independent inspection
50-397/83-18 3-28 to 4-8-83	Regional construction 62 hours	Follow-up items, 10 CFR 50.55(e) items, bulletins
50-397/83-19 4/25-29 and 5/1-2/83	Regional construction 78 hours	Construction quality verification activities, allegations, follow-up on construction deficiencies
50-397/83-20 5-16 to 5-20-83	Regional operations 27 hours	Quality assurance program TMI activities, independent inspection
50-397/83-21 5-1 to 5-31-83	Resident operations 67 hours	Preoperational test review, test witnessing, fuel receipt and storage
50-397/83-22 5-1 to 5-31-83	Resident construction 108 hours	Construction quality reverification program, allegations and employee concerns

TABLE 5 (cont.)

INSPECTION REPORT SUMMARY

<u>Inspection Report No.</u> <u>Inspection Date</u>	<u>Inspector</u> <u>Hours</u>	<u>Inspection Summary</u>
50-397/82-29 12-1 to 12-30-82	Resident construction 106 hours	Reverification program, pipe supports, preoperational testing, training, follow-up items
50-397/82-30 12-20 to 12-23-82	Regional radiation safety 52 hours	Environmental monitoring program, organization, procedures, dosimetry audits, storage and control of materials
50-397/83-01 1-3 to 1-7-83	Regional operations 28 hours	Test records, staff training, safety committee activities, follow-up items
50-397/83-03 1-1 to 1-31-83	Resident construction 59 hours	Reverification program employee concerns, licensee actions
50-397/83-04 1-1 to 1-31-83	Resident operations 65 hours	Preoperational testing and independent inspection
50-397/83-05 2-2 to 2-28-83	Resident construction 94 hours	Design reverification program, construction reverification program design as-built system
50-397/83-07 2-1 to 2-28-83	Resident operations 45 hours	Preoperational test procedure review, witness testing, independent inspection
50-397/83-08 2-14 to 2-18-83	Regional construction 66 hours	Follow-up items, 50.55(e) considerations
50-397/83-09 3-7 to 3-11-83	Regional operations 28 hours	Quality assurance, document control, program records, and follow-up items
50-397/83-10 3-1 to 3-31-83	Resident construction 75 hours	Pipe supports, quality reverification activities, construction management
50-397/83-12 3-1 to 3-30-83	Resident operations 74 hours	Preoperational test procedure review, test witnessing

TABLE 5 (cont.)

INSPECTION REPORT SUMMARY

<u>Inspection Report No.</u> <u>Inspection Date</u>	<u>Inspector</u> <u>Hours</u>	<u>Inspection Summary</u>
50-397/83-23 5-3 to 7-1-83	Regional emergency preparedness	-
50-397/83-24 6-13 to 6-23-83	Regional construction 52 hours	Construction deficiencies, 10 CFR, 50.55(e)
50-397/83-26 6-3 to 6-9-83	Regional radiation safety 47 hours	Radioactive waste management systems, radiological environmental monitoring and radiation protection programs
50-397/83-27 6-1 to 6-30-83	Resident construction 116 hours	Quality reverification program allegations and employee concerns, follow-up items
50-397/83-28 6-1 to 6-30-83	Resident operations 116 hours	Preoperational test procedure review and witnessing
50-397/83-29 5-16 to 6-23-83	Special hours	Construction Appraisal Team
50-397/83-30 6-27 to 7-1-83	Regional operations 27 hours	Plant procedures, general plant procedures, system operating procedures, maintenance calibration program, quality assurance audits
50-397/83-31 7-18 to 8-10-83	Regional safeguards	Part 21 information
50-397/83-32 7-18 to 7-22-83	Regional radiation safety 30 hours	Radiation protection program, organization, training, respiratory protection
50-397/83-34 7-1 to 7-31-83	Resident operations	
50-397/83-35 7-1 to 7-31-83	Resident construction 68 hours	Quality reverification activities, allegations and employee concerns, previous findings follow-up

TABLE 5**INSPECTION REPORT SUMMARY**

<u>Inspection Report No.</u> <u>Inspection Date</u>	<u>Inspector</u> <u>Hours</u>	<u>Inspection Summary</u>
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TABLE 5 (cont.)

INSPECTION REPORT SUMMARY

<u>Inspection Report No.</u> <u>Inspection Date</u>	<u>Inspector</u> <u>Hours</u>	<u>Inspection Summary</u>
50-397/83-36 7-25 to 7-27-83	Regional construction	Outstanding items from CAT
50-397/83-37 7-18 to 7-29-83	Regional construction 58 hours	10 CFR 50.55(e) items