



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION V

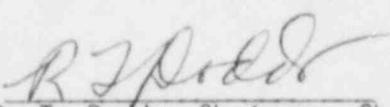
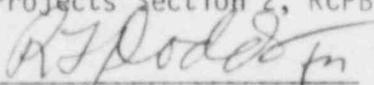
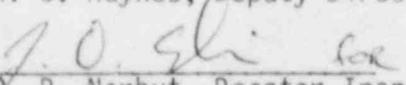
1450 MARIA LANE, SUITE 210
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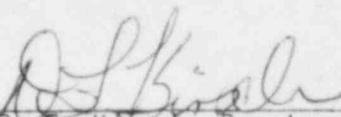
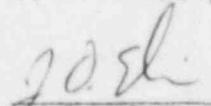
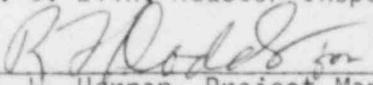
AUG 28 1981

MEMORANDUM FOR: B. H. Faulkenberry, Chief, Reactor Construction Projects Branch
FROM: SALP Regional Evaluation Review Board - WNP 1/4
SUBJECT: NRC REGIONAL EVALUATION OF WASHINGTON NUCLEAR PROJECT NOS. 1 AND 4 (WNP-1/4)

The Regional Evaluation Review Board for WNP-1/4 met on July 21, 1981, to perform an evaluation of project activities for the period of July 18, 1980 through June 1981. The review was conducted in accordance with NRC Draft Manual Chapter 0516. Enclosed is a copy of the assessment report. Section II is an overall evaluation of site management. Section V is the action plan recommended by the Board for the Regional Director's concurrence.

It is the opinion of the Board, based on the results of the review, that the licensee's performance at this site during the appraisal period was weaker during the first half of the appraisal period. However, new management took substantive actions to improve project and construction management controls of site construction activities and this performance steadily improved. Because of previous problems experienced with contractors at this site and the deficiencies identified during the first half of this appraisal period, the region plans to continue its surveillance to assess the continued effectiveness of the licensee's new organization. The region was unable to follow through in these areas the second half of the review period due to a reallocation of resources for the performance of Headquarter's ordered team inspections.


R. T. Dodds, Chairman, Chief,
Projects Section 2, RCPB

R. C. Haynes, Deputy Director

P. P. Narbut, Reactor Inspector


D. F. Kirsch, Reactor Inspector

J. O. Elin, Reactor Inspector

R. W. Hernan, Project Manager, NRR

Enclosure:
SALP Evaluation Report for
Appraisal Period 7/80-6/81

REGIONAL PERFORMANCE EVALUATION REPORT

I. UTILITY PERFORMANCE EVALUATION - REGION V

Utility: Washington Public Power Supply System

Facilities: WNP-2 (Construction)
WNP-1/4 (Construction)
WNP-3/5 (Construction)

Appraisal Period: WNP-2 - May 1, 1980 - June 30, 1981
WNP-1/4 - July 18, 1980 - June 30, 1981
WNP-3/5 - September 1, 1980 - June 30, 1981

Review Board Members:	<u>WNP-2</u>	<u>WNP-1/4</u>	<u>WNP-3/5</u>
R.T. Dodds, Chairman, IE:V	X	X	X
R.C. Haynes, IE:V	X	X	X
D.P. Haist, IE:V	X		X
A.D. Toth, IE:Resident Inspector	X		
J.O. Elin, IE:V	X	X	
J.D. Carlson, IE:V	X		
P.P. Narbut, IE:V		X	X
D.F. Kirsch, IE:V		X	
T.W. Bishop, IE:Resident Inspector			X
R. Auluck, NRR	X		
R.W. Hernan, NRR		X	
L.L. Wheeler, NRR			X

Areas of Good Performance

Following the appointment of Mr. R. L. Ferguson as Managing Director in June 1980, substantial Supply System and reactor project organizational changes were made. The changes included the establishment of site-based Program Directors responsible for construction, startup, and initial power generation of the facilities. Other changes included deintegration of the WPPSS site organization from day to day engineering and construction management decisions and placing them in the true role of oversight project management. Experienced management has been brought in to key positions to implement these changes. The utility has also had a team of industry management experts evaluate all projects. This has lead to substantial contract changes to strengthen construction management. It is too early to assess the net effect of all of these changes, but the results to date appear promising.

Utilization by the Utility of independent investigators from the home office to examine allegations and significant problems appear to add an additional degree of independence and lends credibility to findings.

A "hotline" program has recently been established for concerned site personnel to use when their own "in-house" management is not responsive to their problems. The "hotline" provides a mechanism for quality problems to be brought before top Supply System management to be resolved.

There has been strong emphasis from top management of the need for attention to a quality product. This has been particularly noticeable during the last five months of the review period. This has been reinforced by several memorandums and by the involvement of corporate level personnel.

Areas Where Improved Performance is Warranted

While the deintegration of project management from construction management and quality assurance is believed to be a strength, the changes were implemented prior to the necessary changes being made to the program plan. Also, the associated implementing procedures have lagged these changes unduly.

In the Supply Systems response to the 10 CFR 50.54(f) request for information, the utility committed to a lessons learned program. Implementation of this program has been delayed and only recently has it begun to function effectively.

A special team audit (nine auditors for two weeks) was conducted by the utility at the WNP-1/4 site in January 1981. This was conceived to be preparatory to a proposed NRC team inspection. The audit appeared to be very thorough and uncovered many significant deficiencies requiring corrective action by the Project and its contractors. Based on the results of this one major audit, it appears that all sites could benefit from periodic audits of this type directed by utility management.

The Supply System was very responsive to supplying team members for task force assignments at WNP-2; however, there was a constant change of personnel and management for this effort. This made it difficult to provide continuity to the review effort and has resulted in delays and the loss of identification of some weak areas that should be examined during the reverification effort.

While NRR only gave the Utility a rating of "below average" at one facility, all of the NRR Project Managers expressed concern with the timeliness of licensee responses to requests for technical information, believing that it took longer than necessary to clear material through licensee management.

Comparison Between Reactor Sites

All three sites deintegrated their organizations a little differently depending upon the particular needs of the facility and upon the strength

of the architect-engineer and construction contractors. Bechtel has assumed construction management and system turnover (completion in some instances) at WNP-2 and only construction management at WNP-1/4; while at WNP-3/5, Ebasco now has complete responsibility for construction management as well as engineering. On the surface, the changes appear to have been for the better.

The utility needs to evaluate the quality of 50.55(e) reports (construction deficiency reports). The reports from WNP-3/5 are quite comprehensive and seldom require contact with the licensees to obtain pertinent data needed to assess the deficiency and its generic implications. The reports from the other two sites tend to be quite sketchy and generally require immediate followup by the NRC for additional information.

With the placement of a Project Director at each site, onsite Quality Assurance no longer reports directly to the General Office. We have not had sufficient time to assess the full impact of this change, but as yet, we have not seen any loss of objectivity or freedom to identify quality problems of site quality assurance personnel.

Overall Evaluation

There are indications that the management reorganization initiated in the past year and the subsequent contractual changes, such as involving the Bechtel Power Corporation in construction management, will result in overall betterment in licensee performance. This has had a partial detrimental effect on morale, resulting in lost production; however, it is not evident that this has adversely effected the quality of construction. Total effectiveness of the utilities management QA program continues to be suspect. The NRC's inspection experience, as well as the utility's findings, continue to show that the failure to adhere to procedures and failure to include code and industry standard requirements in the procedures are the predominant causes of items of noncompliance. The utility has initiated a lessons learned program that should assist the early identification of common problems.

II. LICENSEE PERFORMANCE EVALUATION

Facility: Washington Nuclear Project Unit 1 and Unit 4

Licensee: Washington Public Power Supply System

Unit Identification:

<u>Docket No.</u>	<u>CP No./Date of Issuance</u>	<u>Unit No.</u>
50-460	CPPR-134 Dec. 23, 1975	1
50-513	CPPR-174 Feb. 21, 1978	4

Reactor Information:	<u>Unit 1</u>	<u>Unit 4</u>
NSSS	B&W	B&W
MWt	3600	3600

Appraisal Period: July 19, 1980 through June 30, 1981

Appraisal Completion Date: July 21, 1980

Review Board Members:

- R. T. Dodds, Chairman, Chief, Reactor Construction Project Section 2
- D. F. Kirsch, Reactor Inspector
- P. P. Narbut, Reactor Inspector
- J. O. Elin, Reactor Inspector
- R. C. Haynes, Deputy Director
- R. W. Hernan, NRR Project Manager for WNP 1/4

Overall Licensee Management Evaluation

During the latter half of this appraisal period the licensee made major changes in the organizational structure and employed several new top management personnel with the goal to improve the performance and control of site construction activities. These changes included establishing a project organization within the Supply System to focus responsibility and authority for the successful completion of the WNP 1/4 project, appointing experienced construction management personnel to key positions in the project organization, employing the Bechtel Corporation as site construction manager, and redefining certain responsibilities of site contractors, the architect-engineering firm and the Supply System engineering, quality assurance and construction management organizations. Positive effects noted during the last six months include improved attention by site personnel to quality program requirements and improved responsiveness to NRC regulations and inspection findings.

During the first half of this appraisal period several items of noncompliance with NRC regulations on quality assurance requirements for safety related equipment were identified by NRC inspectors. These findings showed weaknesses in management by some site contractors for performing work according to approved procedures and the licensee's commitments to the NRC. A labor strike was in effect during the first four months of this appraisal period which limited the amount of construction work accomplished. Subsequently, the Bechtel Corporation was hired to manage and provide surveillance of the quality of work performed by site contractors.

The Bechtel program was fully implemented June 1, 1981. The Region's initial experience indicates that this change will have a positive effect on the project and should substantially improve the quality and management controls at the site. The new Supply System Project Director is responsive to NRC findings and has exhibited strong leadership in taking actions to resolve quality problems.

The utility previously initiated a training program for contractor craft foremen which should filter down to and be helpful to the craftsmen. The program has not been as effective as hoped since adherence to construction procedures by personnel for some contractors continue to be a chronic problem. As noted earlier, the recent changes in site management and responsibilities indicate that craft performance in this area is improving.

There was a significant increase in items of noncompliance during the first half of this appraisal period. These items were confined mostly to the mechanical and HVAC contractors. Corrective action taken in response to NRC findings was, in some cases, weak. The licensee's efforts to correct and identify root causes of problems were not always satisfactory. Often the licensee was slow to respond to identified weaknesses and some items worsened until they become items of noncompliance for which citations were issued. Examples of the latter include (1) lack of instructions by the mechanical contractor for installation of piping system weldolets and sockolets, (2) missed hold points for quality checks by mechanical contractor, (3) failures to note applicable WPPSS quality classification on governing contractor drawings. Closeout of items such as these was delayed because of the lack of central control and assignment of responsibility for this resolution.

Also, an investigation of the HVAC contractor revealed six items of noncompliance which demonstrated that the previous site management and QA organizations were not fully effective in identifying quality problems and providing adequate surveillance of "weak" contractors. Furthermore, the mechanical (piping and hanger) contractor continues to have administrative problems in controlling work as identified by the results of NRC inspections and the Supply System's audit of January 1981.

NRR's experience with the licensee has been satisfactory. NRR considers the utility's strength to be its aggressiveness in proposing and developing programs to resolve technical issues in advance of FSAR submittal. The objective here is to reduce staff review time required to render a favorable licensing decision.

The Region's overall evaluation is that the licensee's performance at this site during this appraisal period was weaker during the first half of this appraisal period. However, new management took substantive actions to improve project and construction management controls of site construction activities and this performance steadily improved. Because of previous problems experienced with contractors at this site and the deficiencies identified during the first half of this appraisal period, the region plans to continue its examination of the effectiveness of the licensee's new organization. The Region was unable to follow through in these areas the second half of the review period due to a reallocation of resources for the performance of Headquarter's ordered team inspections.

Evaluation Criteria

The various functional areas and the licensee's overall performance were assigned a Category 1, 2, or 3 rating based upon the following evaluation criteria:

- 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 such 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 appear to be strained or not effectively used such that minimally satisfactory performance with respect to operational safety or construction is being achieved.

III. PERFORMANCE ANALYSIS

A. Quality Assurance

1. Analysis

No items of noncompliance were identified by the Reactor Construction Branch in this area. Generally, the quality assurance organization and their functions, staffing levels and personnel qualifications met regulatory requirements. Also, the quality programs were structured according to regulatory requirements.

Difficulties encountered in this area were mostly related to the ability of some contractors to resolve identified quality problems in a timely manner, including improving compliance of construction craftsmen with procedure requirements. Factors contributing to these problems included:

- a) Each of the several site contractors is responsible for promulgating their quality assurance program, including the procedures required for controlling the work, inspection, documentation of results, and record keeping (this results in a large variation between procedures for like work performed by different contractors).
- b) Each contractor is responsible for implementing the quality inspection and quality assurance audit program for their scope of construction work, irrespective of the size of their organization and their experience in implementing quality assurance programs.
- c) A difficult labor management climate exists with quality assurance inspectors included in a strong building trades union (pipefitters local).
- d) Lack of effectiveness of the construction management organization.

Corrective action take by the licensee (Supply System) during this performance appraisal period included restructuring of their organization and employment of a new project management team experienced in large scale nuclear construction projects; employment of a separate organization (Bechtel Corporation, San Francisco Office) as the construction manager; a unified quality surveillance program implemented by the construction management organizations; and the addition of incentives to encourage better contractor performance.

The effect of these corrective actions to date is encouraging and improved leadership and attention to quality problems by all contractors appears to be occurring. More time is needed, however, to fully assess the effect of these corrective actions.

2. Conclusion

Performance is rated as Category 2.

3. Board Comments

The board recommends that a team type inspection be conducted to assess the overall implementation and effectiveness of the corrective actions recently taken by the licensee. Special attention is warranted in this area because of the many construction contractors, each with their own QA/QC program.

B. Substructures and Foundations, Concrete and Containment Liner

1. Analysis

No items of noncompliance were identified in these areas. The contractors performing this work are experienced and have been successfully implementing their quality programs.

2. Conclusion

Performance is rated as Category 2.

3. Board Comments

Continue with the routine inspection program in this area.

C. Safety Related Structures

1. Analysis

Limited inspection effort was devoted to this area during this appraisal period. No items of noncompliance or open items were identified that related to this functional area.

2. Conclusion

The performance in this area is rated as Category 2.

3. Board Comments

Continue with the routine inspection program in this area.

D. Piping and Hangers

1. Analysis

There were four Severity Level V items of noncompliance related to this functional area. These problems included failure of the Architect Engineer source inspection program to identify nonconforming configurations and undersized fillet welds on hangers and supports. Since this was "owner" supplied material, the mechanical contractor did not have source inspection responsibility and was specifically prohibited from performing a source type inspection. The contractor now has this authority. The contractor was initially classified as a marginal performer, but the trend appears to be improving in this functional area.

2. Conclusion

The overall performance in this area is rated as Category 2.

3. Board Comments

Include the Supply System's role during inspection in this area. Add emphasis to the routine program to assure that the contractor's performance continues to improve.

E. Safety Related Components

1. Analysis

There were eight items of noncompliance in this functional area and two open items. One open item dealt with controls for limiting the amount of zinc in the containment building and the second related to controlling the use of temporary welds.

The eight items of noncompliance indicated that the contractor inspectors pay insufficient attention to detail or lack training as evidenced by improper installation of the component cooling water heat exchangers (mechanical contractor) and improper welding identified on HVAC duct work and supports and for weldolet/socketlet branch line connections. The investigation of the HVAC contractor appears to indicate that the licensee has been ineffective in identifying and providing the necessary support to "weak" contractors.

2. Conclusion

Performance in this area is rated as Category 3 during this appraisal period. Performance is expected to improve due to the management and contractual changes initiated by the licensee, including the utilization of Bechtel Corporation as the construction manager with QA/QC surveillance responsibility.

3. Board Comments

Additional inspection effort should be devoted to this important area to assess the effectiveness of the licensee's corrective actions.

F. Electrical Equipment, Trays and Wire

1. Analysis

There were no items of noncompliance identified in this area; but one open item was identified which related to the failure to include appropriate inspection criteria in the cable installation procedures. The cable installation procedures did not provide instructions to ensure that the cable pull limits committed to in the PSAR were not exceeded. Otherwise, the installation of cable trays and supports (only work in progress during SALP review period) was found to be satisfactory.

2. Conclusion

Performance in this area is rated as Category 2.

3. Board Comment

The board recommends that routine inspection program be continued.

G. Instrumentation

Only limited inspection activity in this area.

H. Fire Protection

No inspection activity in this area.

I. Preservice Inspection

No inspection activity in this area.

J. Corrective Actions and Reporting

1. Analysis

The licensee's identification and reporting of construction deficiencies in accordance with 10 CFR 50.55(e) have been satisfactory.

The system to assure corrective actions, documented in response to Notices of Violation, 50.55(e) reports, etc., were accomplished as stated in the responses has been weak as evidenced by following two examples.

- a. WPPSS letter No. G01-80-79, dated February 19, 1980, provided response to a Notice of Violation issued in IE Inspection Report No. 50-460/79-13 (item no. 79-13-02 regarding excessive weld weave width). The actual corrective actions taken differed significantly from those specified by the letter in that the two nonconformance reports referenced did not pertain to the identified specific noncompliance and the stated reinspection of all stainless steel welds welded by the SMAW process had not been accomplished, as indicated. This item was discussed in IE Inspection Report No. 50-460/80-16.
- b. WPPSS letter No. G02-79-154, dated March 9, 1979, provided the final 50.55(e) report on the WKM Valve Overpressurization deficiency. The Appendix A indicated a number of valves which were to be modified to correct the deficiency. Two valves listed (RCV-10 and RCV-11) had not been modified as stated. (IE Inspection Report 50-460/81-01)

2. Conclusion

The utilities performance in this area, while somewhat weak, is rated as Category 2.

3. Board Comments

The Board recommends continued attention to assure that corrective actions are being effectively implemented.

K. Procurement

1. Analysis

No specific inspections were made in this functional area during the evaluation period. However, one item of noncompliance was identified regarding procurement controls for paint as discussed in inspection report 80-13.

2. Conclusion

Performance in this area is rated as Category 2.

L. Design Changes

No specific inspection activity in this area.

M. Training

No specific inspection activity in this area.

IV. SUPPORTING DATA AND SUMMARIES

A. Noncompliance Data

<u>Noncompliance Category or Severity Level</u>	<u>Applicable to:</u>		
	<u>Unit 1 only</u>	<u>Unit 4 only</u>	<u>Both Units</u>
Violation	0	0	0
Infraction	2	0	0
Deficiency	0	0	0
Level I	0	0	0
II	0	0	0
III	0	0	0
IV	3	0	0
V	4	1	2
VI	<u>0</u>	<u>0</u>	<u>1</u>
TOTAL	9	1	3

See Attachment IV-3 for additional noncompliances data. See Enclosure (1) for a list of noncompliances.

B. Construction Deficiency Reports

During the evaluation period the licensee has notified the NRC of seven potentially reportable construction deficiencies as they are defined in NRC guidance on 10 CFR 50.55(e) construction deficiency reporting dated April 1, 1980. Of these seven potentially reportable items, three have been determined to be reportable, one has been determined to be not reportable, and three are still under evaluation. During the reporting period six potentially reportable items from the 1976 to 1979 timeframe were examined and closed. The potential 50.55(e) reports for this evaluation period are listed in enclosure (3).

The written reports submitted by the licensee have generally been timely and complete, as required by 10 CFR 50.55(e).

C. Licensee Activities

During this evaluation period the licensee has made major organizational and managerial responsibility modifications which have significant potential for enhancement of regulatory compliance, construction quality and project completion schedules. As these changes were only recently established, evaluation of effectiveness will be performed during the conduct of future inspections.

1. Contract Realignment

Major construction contracts have been modified to provide for increased licensee management control of work activities. As such, management has significantly increased the sanctions available for use when a particular contractor is found to be dilatory in the discharge of contractual requirements.

2. Organizational Changes

The licensee abolished the integrated organizational structure and has contracted with Bechtel Power Corporation to provide project construction management. United Engineers and Constructors remains the Architect/Engineer responsible for project design engineering along with the attendant engineering quality assurance function. Bechtel has assumed construction management with project quality assurance and quality control surveillance responsibility as defined by the Bechtel QA Topical Report. The licensee has redefined their quality assurance role as an overview function as opposed to a first line responsibility.

Upper level project management was recently elevated in the corporate hierarchy and reports directly to the Supply System Managing Director. The Program Director now has increased project management responsibilities and authorities. Project Quality Assurance now reports directly to the Program Director rather than "Corporate" Quality Assurance.

D. NRC Inspection Activities

A total of 682 inspector hours were charged to WNP 1/4 during the evaluation period. Of this total, 348 hours were routine inspection, 204 hours were in response to allegations, 26 hours were allotted to a management meeting, and 104 hours were for a special inspection of electrical equipment environmental qualification. Routine inspections were not carried out as planned during February - May 1981 due to the Region's involvement in carrying out Headquarter's ordered team inspections. Enclosure (2) provides cumulative inspector hours and noncompliances for the past 2 periods of SALP review.

E. Investigations and Allegations Review

The only major investigative activity was an investigation of allegations in the HVAC contractor area.

Thirteen allegations were made, five of which were substantiated. Six items of noncompliance were issued as a result of the investigation of the allegations and corollary areas. The noncompliances were in the general areas of welding control, inspection control, nonconformance control and repair control.

Subsequent to January 31, 1981, only one additional inspection was conducted at WNP 1/4, primarily in the electrical area. Another inspection and an investigation were started but not completed the week of June 22, 1981. The results of the June 22 inspection will be included in next years report. Consequently very little new information is available for the 1981 appraisal period beyond that discussed in the February 1981 meeting with the licensee.

F. Escalated Enforcement Actions

1. Civil Penalties - none
2. Orders - none
3. Confirmation of action letters - none

G. Management Conferences Held During Appraisal Period

Two management conferences were held during the appraisal period. The first was a meeting in the Supply System Offices in Seattle, Washington on October 9, 1980 to discuss the regional evaluation for 1980.

The second management meeting was held on February 25, 1981 at the NRC regional offices. The meeting was held at the request of the licensee and was to describe the actions taken by the licensee with regard to the concerns expressed by the NRC at the October, 1980 appraisal meeting. The presentation by the licensee indicated a strong commitment to take proper corrective actions on the problems identified at the October meeting.

The Region V staff expressed concern that the number of items of noncompliance had increased in the six-month period following the 1980 appraisal. The staff pointed out that the basic causes for those violations remain the same, i.e., apparent failure to provide adequate procedures and failure to follow approved procedures.

H. Other

1. The presentation by the regional staff to the licensee at the October 1980 SALP meeting indicated improvements were warranted in three areas.

- a. Assuring that PSAR commitments are fully and properly translated into specifications and that requirements of specifications, and referenced codes and standards, are adequately translated into work and inspection procedures.
 - b. Assuring that corrective actions for adverse findings are effective and timely.
 - c. Assuring that contractor training activities are effective and craft and inspection personnel are sufficiently knowledgeable and disciplined in the execution of work and inspection procedures.
2. Since the October 1980 SALP, the regional followup on the SALP conclusions have shown the following:

SALP ITEM NO. 1--Assuring that PSAR commitments are fully translated into specifications and specification requirements, including specification referenced codes and standards, are adequately translated into work and inspection procedures.

Findings

a. Architect/Engineer

Appropriate and adequate installation and inspection criteria were not supplied for piping branch line connections to craft and inspection personnel. (50-460/80-15)

b. J. A. Jones (Piping and Hanger Contractor)

- (1) Procedures for controlling hold points did not adequately define hold point types or method of indicating hold points on process control sheets. (50-460/80-15)
- (2) Procedures controlling weld and base metal repairs did not adequately specify appropriate inspection techniques, or acceptance criteria to assure piping wall thickness meets ASME code requirements. (50-460/80-11)
- (3) Procedure for control of measuring and test equipment did not implement the traceability of calibrations to National Bureau of Standards. (50-460/80-16)

(4) Procedural inconsistencies on implementation mechanism definition problems were observed in procedures specifying preheat requirements and temporary hanger installation controls.

c. UNSI (HVAC Contractor)

(1) Measures were not provided defining the control and administration of QCPR system. (50-460/81-02)

(2) Adequate measures were not provided for implementing AWS D1.1 welding electrode controls. (50-460/81-02)

(3) Procedures controlling weld repairs did not adequately specify methods to implement specification requirements. (50-460/81-02)

d. Root causes

The above examples appear indicative of (1) weakness in procedural reviews by WPPSS/UE&C and (2) weakness in the WPPSS/UE&C surveillance system.

SALP ITEM NO. 2-Assuring that corrective actions for adverse findings are effective and timely.

Findings

a. Failure to apprise craft and inspection personnel of appropriate installation criteria (threadolet, weldolet, sockelets)

An unresolved item of inspection report 50-460/79-14 was followed up in reports 80-06 and 80-08 and was identified as an example of this concern during the SALP review. This was eventually determined to be an item of noncompliance as stated in report 50-460/80-15.

b. Failure to affect adequate corrective actions with regard to missed hold points

This concern had been identified by WPPSS and J. A. Jones; was followed up by NRC in reports 79-10, 80-05, 80-06, 80-08, and 80-11; was identified in SALP as a concern; and eventually identified as an item of noncompliance as stated in report 80-15.

c. Failure to post contractor drawings with WPPSS quality class

This was an item of noncompliance in report 79-02; documented as an example of failure to effect adequate corrective action in report 80-06; was identified in SALP as a concern; was addressed in 80-08 with the

observation that additional supplier drawings would be examined in the future; and was eventually identified again as a repeat item of noncompliance as stated in report 80-16.

SALP ITEM NO. 3 -Assuring that contractor training activities are effective and craft and inspection personnel are sufficiently disciplined and knowledgeable in the execution of work and inspection procedures.

Findings

- a. Field Engineers were not sufficiently knowledgeable of code requirements regarding piping branch line connections as stated in report 80-15.
- b. As evidenced by the number of violations issued this past year for failure to follow procedures, it appears that craft and inspection personnel are either insufficiently knowledgeable of procedural requirements or are not sufficiently motivated and disciplined to assure procedure compliance.

ATTACHMENT IV-3

II. NUMBER AND NATURE OF NONCOMPLIANCE ITEMS - CONSTRUCTION REACTORS - WNP-1

Functional Area	Inspection Manhours	Noncompliances												
		Severity Level						Classification						
		I	II	III	IV	V	VI	Vio.	Inf.	Def.	Dev			
1. Quality assurance	42													
2. Substructure & foundations, concrete & liner (containment & others)	10													
3. Safety-related structures (incl. welding)	13													
4. Piping & hangers--reactor coolant & others--(incl. welding)	58					2					2			
5. Safety-related components (vessel, internals, & HVAC)	118					2								
6. Electrical equipment, tray & wire	67					2								
7. Instrumentation	5													
8. Fire Protection	0													
9. Preservice inspection	0													
10. Corrective actions & reporting	93													
11. Procurement	10					1								
12. Design changes	0													
13. Training	0													
	418	0	0	0	3	4	(1)				2			
						(2)								

NOTE: () means the item of noncompliance is applicable to both units.

ATTACHMENT IV-3

II. NUMBER AND NATURE OF NONCOMPLIANCE ITEMS - CONSTRUCTION REACTORS - WNP-4

Functional Area	Inspection Manhours	Noncompliances						Classification			
		Severity Level						Vio.	Inf.	Def.	Dev.
		I	II	III	IV	V	VI				
1. Quality assurance	31										
2. Substructure & foundations, concrete & liner (containment & others)	7										
3. Safety-related structures (incl. welding)	10										
4. Piping & hangers-- reactor coolant & others--(incl. welding)	18										
5. Safety-related components (vessel, internals, & HVAC)	106					1+ (2)	(1)				
6. Electrical equipment, tray & wire	56										
7. Instrumentation	5										
8. Fire Protection	0										
9. Preservice Inspection	0										
10. Corrective actions & reporting	31										
11. Procurement	0										
12. Design changes	0										
13. Training	0										
	264	0	0	0	0	1 (2)	(1)	0	0	0	0

NOTE: () means the item of noncompliance is applicable to both units.

NONCOMPLIANCES

-18-

OIL#	Type or Sev Lev	Applicability		Functional Area IV-3	Description	Contractor	Criterion
		1	4				
08-11-01	INF	1	-	4	Pipe fillet welds undersize on pipe stop attachment	B.F. Shaw	V
80-11-02	INF	1	-	4	Arc strikes removed from pipe w/o using a Work Request	JAJ	V
80-13-01	IV	1	-	11	Failure to provide adequate procurement controls for paint to be used in containment (Decontamination factor 6.3 vs. 10)	JAJ	IV
80-15-01/02	V	1	-	5	Failure to install NSW Heat Exchangers as required by drawing (Washers not installed under anchor bolt nuts) and failure to comply with procedure requirements for QV hold points (NSW Heat Exch No. 2B)	JAJ	V
80-15-03	V	1	-	4	Failure to provide weld dimensions or inspection criteria for weldolet on Containment Spray	UE&C	V
80-16-02	V*	1	-	5	Failure to post contractor dwgs with WPPSS Quality Class Repeat Violation	Vendors	V
80-16-04	V*	1	-	4	Pipe support installation does not conform to drawing (beam to wall attachment plate joint rotated 180°)	Huico	V
81-02-01	V	1	4	5	Failure to provide procedure for use of UNSI QC PR System	UNSI	V

*Originally cited as Level IV but subsequent information indicates that the categorization should have been to a lower Severity Level.

NONCOMPLIANCES

OIL#	Type or Sev Lev	Applicability		Functional Area IV-3	Description	Contractor	Criterion
		1	4				
81-02-02	V	-	4	5	Failure to comply with NCR reporting procedure. NCR not written - welding done with wrong polarity	UNSI	V
81-02-04	V*	1	4	5	Failure to control welding electrodes per AWS D.1.1. Low Hydrogen electrodes reissued w/o redrying	UNSI	IX
81-02-05	IV	1	-	5	Failure to install/inspect HVAC Supports as req'd by procedure	UNSI	V
81-02-06	IV	1	-	5	Failure to install/inspect HVAC Plenum as req'd by procedure	UNSI	V
81-02-08	VI	1	4	5	Failure to implement procedure requirements for repair weld documentation	UNSI	V

*Originally cited as Level IV but subsequent information indicates that the categorization should have been to a lower severity level.

Enforcement History WNP 1/4

<u>SALP PERIOD</u>	<u>Inspection Hours</u>	<u>Number of Items of Noncompliance</u>	<u>Inspection Hours Per Item of Noncompliance</u>
5/79 - 7/80	1257	11	114
8/80 - 6/81	682	16	43

1981 SALP - 50.55(e) Summary

<u>Item Description</u>	<u>Notification Date</u>	<u>Correspondence</u>	<u>Licensee Evaluation</u>
1. Induced Flux Error in excess of PSAR specification	11-03-80	G01-80-379 12-12-80 Interim	Reportable
2. Incomplete Analysis of piping attached to RCS under LOCA conditions	11-13-80	G01-80-380 12-12-80 Interim	Potential
3. Bostrom Bergen Metal Products Embedment Weld Problems	12-08-80	G01-81-03 1-7-81 Interim G01-81-167 Interim	Potential
4. GSB Air Intake Design Def.	12-08-80	G01-81-02 1-6-81 Interim G01-81-164 6-1-81 Interim	Reportable
5. Lack of Fusion in DHR HX tubes	1-07-81	G01-81-25 1-30-81 Interim	Potential
6. Spent Fuel Cask Handling does not meet design criteria	1-07-81	G01-81-279 2-2-81, Interim G01-81-163 6-1-81, Interim	Reportable
7. Skid Maintained Equipment - Anchor Bolts not properly torqued	5-18-81	---	Not Reportable

ENCLOSURE (3)

VI. NRR PERFORMANCE EVALUATION

Facility: WNP UNITS 1 AND 4 Project Manager: R. W. HERNAN

Appraisal Period: July 1, 1980 to June 30, 1981

A. Performance Elements

1. Quality of Responses and Submittals

WPPSS is in the process of preparing a Final Safety Analysis Report on WNP-1/4 for submittal to the NRC in December 1981. Most of the activity requiring responses has therefore been related to post-TMI generic problems dealing with problems specific to Babcock and Wilcox design. One major task requested of WPPSS in early 1980 was performance of a loss of main feedwater risk analysis which was scheduled to be, and in fact was, submitted to the staff by July 22, 1980. In addition to meeting the committed date, WPPSS recognized the need to change the normal and fail position of some valves in the auxiliary feedwater system to further improve system reliability as the result of this analysis. During this report period WPPSS also submitted: 1) an upgraded emergency preparedness plan which includes provisions for WNP-1/4 during their construction phase; and 2) the environmental/seismic qualification for WNP-1/4 Class IE instrumentation and electrical equipment. No instances of poor quality and/or timing of WPPSS responses have been identified during this period.

2. Efforts in Obtaining Acceptable Responses or Submittals

Generally the WPPSS response to NRC staff requests during this period have been both timely and substantial. The amount of time and effort dedicated to the limited number of responses during the period appear to have been commensurate with the importance of the request. NRR considers that WPPSS makes a concerted effort as a matter of course to take the initiative in pursuing all aspects of issues. There are presently a number of areas (including an independent design review program, resolution of the small break LOCA model problem and proposal of a method to provide instrumentation for detecting inadequate core cooling) in which WPPSS is establishing meaningful programs.

In preparation for submitting an FSAR, WPPSS has been sensitive to anticipating technical or administrative problems which could delay the staff's acceptance review and subsequent docketing of the FSAR.

3. Working Knowledge of Regulations, Guides, Standards and Generic Issues

NRR considers the knowledge of the utility in these areas is Category 2 with no significant weaknesses or strengths noted.

4. Technical Competence

The technical competence within the WPPSS organization is Category 2 for a utility with no nuclear plants yet operational. The utility appears to make effective use of consultants in areas requiring specialized technical expertise.

5. Conduct of Meetings with NRR

Generally, WPPSS has been very cooperative in meeting with NRR when an issue could most efficiently be resolved by a meeting and has dedicated the necessary effort to adequately prepare for these meetings.

6. Long-Standing Open Items - None

7. Organization and Management Capabilities

Changes in top utility management, internal organizational changes and changes in the roles of the major contractors involved indicate an aggressive attempt on the part of the utility to correct some of the management-related problems which may have existed in the past. These changes were initiated for the most part in late 1980.

8. Results of Operator Licensing Exams - none this period

9. Performance on Specific Issues

WPPSS has requested to meet with NRR to discuss two programs which are of mutual interest. On July 29, 1981 a meeting is scheduled to allow the utility and Babcock and Wilcox to present their approach to meeting the requirements of item II.F.2 of NUREG-0737 "Instrumentation for Detection of Inadequate Core Cooling". On August 20, 1981, the utility will present a plan for implementing the Independent Design Review (IDR) concept in the licensing of WNP 1, 3, 4 and 5. NRR considers that the aggressiveness demonstrated by WPPSS in these cases will enhance timely completion of the licensing process for WNP-1/4.

B. Observed Trends in Performance, if any

On the basis of the relatively good responses to staff requests, initiative towards resolving issues in advance and management/organizational changes during the past year, NRR considers the performance trend of WPPSS in licensing matters to be improved.

C. Notable Strength and Weaknesses

1. Strengths

NRR considers the utility's strength to be its aggressiveness in proposing and developing programs to resolve technical issues in advance of FSAR submittal with the objective of reducing staff review time required to render a favorable licensing decision.

2. Weaknesses

WPPSS needs to develop more confidence in their ability to make technical and administrative decisions relative to licensing matters. There have been a few occasions wherein staff written approval of certain licensing matters has been requested even though application for an operating license has not yet been tendered. Diversion of NRR staff reviewer manpower to these items could have a detrimental affect on reviews required for near term operating licenses. NRR believes that the utility has the resources to make these decisions in-house without guidance from the staff.

D. Overall Summary

On the basis of the limited activity which has transpired in the licensing area during this evaluation period, NRR considers WPPSS performance is Category 2 overall. The utility has taken measures to improve completion of plant construction and licensing during the past year. Frequent contact with NRR on matters which will affect licensing exists and is considered to be a key factor in timely completion of the licensing process. Submittal of the license application on time in December 1981 will provide a more meaningful basis for evaluation during the July 1981 - June 1982 period.