U. S. NUCLEAR REGULATORY COMMISSION

REGION V

Report No. 50-397/86-11

Docket No. 50-397

License No. NPF-21

Licensee: Washington Public Power Supply System
P. O. Box 968
3000 George Washington Way
Richland, Washington 99352

Facility Name: Washington Nuclear Project No. 2 (WNP-2)

Inspection at: WNP-2 Site, Benton County, Washington

Inspected by:

R. Dodds, Team Leader — Date Signed: 7/25/86

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Approved By:

T. Young, Chief, Engineering Section — Date Signed: 7-25-86

Summary:

Inspection on June 16-27, 1986 (Report No. 50-397/86-11)

Areas Inspected: Annual announced team inspection of the WNP-2 Plant, focused on management controls (procedures, policies, administrative orders, etc.) and the involvement of management in the implementation of these controls as they applied to the operation and maintenance of WNP-2.

The following activities of the licensee were examined:

1) Operator Recovery Actions
2) Quality Assurance Program
3) Measuring and Test Equipment
4) Technical Specification Surveillances and Tests
5) Corrective and Preventive Maintenance Programs
6) Plant Procedures
7) Plant Modifications
8) Quality Assurance Surveillance
9) System Walkdown

To the maximum extent feasible the effectiveness of these activities were assessed as they apply to the following plant physical systems:

1) Residual Heat Removal System (RHR)
2) Standby Service Water (SSW)
3) Emergency Power

Results:

In the areas inspected, several violations of NRC requirements were identified, some with multiple examples. Enforcement action as a result of this inspection will be the subject of separate correspondence.

DETAILS

1. Persons Contacted

*C. Powers - Plant Manager
*J. Shannon - Deputy Managing Director
*J. Baker - Assistant Plant Manager
*K. Cowan - Plant Tech. Manager
*D. Feldman - Plant QA Manager
*R. Graybell - HP/Chemistry Manager
*B. Olson - IM&C Supervisor
*D. Walker - Outage Manager
*J. Little - Planning and Scheduling Supervisor
*S. Davison - Compliance Engineer
*D. Anderson - Mechanical Supervisor
*J. Massey - Electrical Supervisor
*R. Barbee - I&C Supervisor
*G. Sorensen - Manager Regulatory Programs
*R. Corcoran - Manager Plant Operations
*J. Peters - Plant Administration Manager

In addition to the individuals identified above, the inspectors met and held discussions with various engineering, quality assurance, maintenance, and operations personnel and other members of the licensee's staff.

*Denotes those individuals attending the final exit meeting on June 27, 1986.

2. QA Surveillance Review

The Quality Assurance/Quality Control philosophy of the WPPSS organization, as evidenced by the WNP-2 Program, is to have QA/QC implemented by all personnel by adhering to the Plant Procedures Manual (PPM). The formal QA organization serves an auditing role by checking adherence to the procedures through surveillances and reviewing most Volume 1 (Administrative Procedures) PPM modifications and a sample of Volume 7 (Surveillance Procedures), Volume 10 (Operating and Engineering Test Procedures), and Volume 14 (Maintenance Program and Procedures) PPM modifications. Heavier involvement of the QA organization than by this auditing appears limited due to the relatively small staff size (5 QA Engineers, plus the supervisor). On occasion, senior QA staff may perform "assessments," usually in response to NRC questions, allegations, or Plant management direction, which examine not only compliance with procedures but the adequacy of the proceduralized activity. These assessments were not always formalized in reports, so it was not clear whether the undocumented assessments constitute formal QA activities, or just off the record analyses for Plant management information.

The QC organization (8 QC Engineers, plus the supervisor) likewise serves in a surveillance capacity, with some exceptions (welding, for example, is one of the few 100% QC inspection activities). QC personnel review

all MWR's (maintenance work requests, which also are used to implement approved modifications) to determine whether QC hold points should be required. With the exception of a few 100% inspection activities, the MWR's are selectively sampled for surveillance inspection. A WPPSS Corporate QA audit determined that "Plant QA/QC procedures need clarification concerning the application of inspection to Q1 modifications." Whereas ANSI N 18.7 requires that inspection be provided for modifications in a manner similar to that applied during the construction phase, PQC-01 appears to consider this only a guideline ("should" vs. "shall") and leaves the determination up to the judgment of the individual QC person reviewing the MWR. The QC procedures also do not appear to take into account or evaluate the inspections of the performing organization which are interspersed in the Plant Procedures. Although this was listed as a "concern" only and not a deficiency in the audit report, modification of the affected PQC's was in process.

Although dedication and responsibility for quality by all personnel is a highly desirable goal, this inspection evaluation raised concern over whether such heavy dependence on this mechanism, at the expense of a rigorous QA/QC program, has resulted in an acceptable level of quality in operations at WNP-2. QA management confirmed that the size of their staff makes them very dependent on the willingness of other Plant personnel to correct identified deficiencies. It was not apparent that QA has sufficient resources to make a substantive contribution to identifying and assessing quality problems. It was evident that plant management had not adequately provided any significant mechanisms for assessing the validity of the philosophy that a well-trained and knowledgeable craft work force will accomplish quality work without an extensive QA/QC inspection overview.

While the current level of effort by the QA/QC staff may be sufficient to uncover gross deficiencies in procedural adherence, it appears that it has not been effective in identifying the failure of plant staff to establish and follow plant procedures. Sampling of maintenance, surveillance, and modification activities by other inspection team members uncovered several instances of failure to establish and follow procedures including an item previously identified by the NRC. (See paragraphs 4, 5, 6 and 7 below). These results indicate that the existing quality control sampling program may not be adequate to ensure that significant quality problems are identified.

a. Specific Findings

(1) The QA organization itself needs to exercise some "quality control" over its own documentation process. The review sample contained several substandard surveillance reports (i.e., 2-85-117, 2-85-041 and 2-85-107), from which it was impossible to tell if the surveillance had been conducted appropriately and with sufficient depth, without reconstruction and dependence on conversations with QA management. More management emphasis appears necessary to assure that the reports accurately reflect the surveillance work being performed and that the audit findings have been correctly and thoroughly documented.

(2) Surveillance 2-85-165, "Plant Records Control," identified a violation of Reg. Guide 1.88 and 10 CFR 50, Appendix B, Section XVII, in relation to the safeguarding and storage of plant records. This surveillance was performed on December 19, 1985. A commitment was made by plant management to correct this deficiency by May 1, 1986. However, on April 30, 1986, QA was notified that Plant Engineering had postponed the corrective action and that they would not make a firm commitment on a later date. While the deficiency involved (potential for unrelieved flooding in a records storage area) was not directly safety related, this action appears to indicate a lack of interest in meeting commitments. QA still shows this surveillance as "open," but did not add evidence that they pursued a firm commitment to the file until after this finding was brought to their attention.

(3) Surveillance 2-86-005, "In-depth Review of Plant Modification Request," identified a recurring deficiency in the control of modifications to spare parts. This surveillance has resulted in the forming of a Plant Technical Staff group to oversee the control of spare parts, including modifications. However, no action had been taken or plans formulated to review existing warehouse spares or to examine whether the past lack of control over spares has resulted in the actual installation of non-modified parts in plant systems.

3. Operator Recovery Actions

The area of operator recovery actions was examined to determine the operating crews depth of knowledge and understanding of procedures governing the use and operation of the residual heat removal (RHR) system during normal, off normal, and emergency conditions. This system was selected based upon its importance to safety and the several purposes for which the system was designed.

During the inspectors' examination of this area, nine licensed reactor operators (5 SRO and 4 RO) including one STA and one nonlicensed STA from four separate crews were interviewed. The interviews included discussions pertaining to the system drawings, procedures and control panels with the individuals explaining the system and its uses. The following areas were the focus of the interviews.

a. The differences between the A, B, and C RHR loops.

b. The interlocks associated with the RHR pumps and heat exchangers.

c. Use of RHR to control suppression pool and reactor vessel water levels during shutdown.

d. Supply of service water to the RHR system.

e. Suppression spray to drywell and suppression pool.

f. System line ups for the various modes of operation.

g. Reactor parameters associated with automatic actions and routine operation.

The particular procedures involved in the areas the inspectors examined with the individuals were the following.

- Emergency procedure general precautions
- Emergency operating procedure flow chart
- Reactor pressure control
- Reactor pressure vessel level control
- Suppression pool temperature control
- Suppression pool level control
- Alternate shutdown cooling
- Operating procedure for residual heat removal system
- Flow diagram, residual heat removal system

The inspectors found that the overall knowledge of the operators was extensive in the areas of the procedures examined. The individual responses to the actions called for in the procedures can be expected to be prompt, correct and thorough.

The specific observations relating to the adequacy and control of emergency operating procedures follow.

The WNP-2 Emergency Operating Procedures (EOP) are contained in Volume 5 of the Plant Procedures Manual. The EOP's were consistent with the concept of symptoms oriented procedures, and were prepared following the Boiling Water Reactor Owner's Group EOP Guidelines (Owner Group Guidelines).

The licensee's staff has recently completed a re-evaluation of the WNP-2 EOP's and determined through their task analysis changes to the EOP's necessary to conform to the most recent revision (Rev. 3) of the Owner's Group Guidelines. These changes have been scheduled to be implemented within six months of the first refueling outage.

In the discussions with plant operators, the NRC inspectors utilized the technique of having the operators "walkthrough" the EOP's starting with postulated operating conditions (or symptoms) which would be typical of those conditions which would lead to entry into sections of the EOP's. This technique provided the opportunity for the NRC inspectors to judge not only the operator's knowledge of the EOP's, but to also assess the adequacy of selected portions of the EOP's themselves. No significant concerns were identified with regard to the operators knowledge of the EOP's or the adequacy of the procedures in terms of guidance and directions to the operators.

A document used by the plant operators in selecting the appropriate EOP(s) to be utilized for postulated abnormal plant conditions is that entitled "Emergency Operating Procedure Flow Chart" (EOPFC). This chart is a graphical aid to the operator and provides a rapid means of determining the applicable EOP to be utilized when predetermined plant conditions are experienced.

EOP procedure 5.0.1 states that controlled copies of the EOPFC are to be located in the WNP-2 control room technical support center and the training simulator. The NRC inspectors questioned licensee representatives regarding the mechanism by which changes to the EOPFC are formally controlled. This questioning was prompted by the inspectors observation of an apparent change to the chart covering Secondary Containment Control, and the fact that there was no provision on the document itself to indicate when official revisions were made. Licensee representatives stated that a provision, similar to that used for other plant procedures, would be added to the flow chart to clearly indicate the current revision status. Licensee representatives further stated that such a change would be implemented within a week.

The NRC inspectors also observed an apparent discrepancy between a figure on the EOPFC entitled "Drywell Spray Initiation Pressure Unit" and a similar figure in EOP procedure 3.2.3, "Primary Containment Pressure Control." This discrepancy had been previously identified by the licensee, and a necessary revision to the chart had been initiated.

No violations or deviations were identified.

4. Surveillance Program

The Technical Department Reactor Engineering Supervisor is responsible for the overall coordination of the surveillances required by the Technical Specifications, (7.5), as well as, the maintenance of the documentation throughout the plant life. The Scheduled Maintenance System (SMS) is the master schedule for the surveillance program. A work schedule is generated weekly listing the surveillances that need to be accomplished by the various disciplines. The schedule includes the frequency of the surveillance along with the last date completed, due date and late date. The later is the frequency of the surveillance times 125%. Should a test exceed the due date, it will appear on a backlog report, which is distributed to the various discipline managers twice a week. If the test exceeds the late date it will appear on a violation report. Any test exceeding the late date must have a Non Conformance Report (NCR) issued against it.

The inspector reviewed the violation report list to ascertain whether any required surveillances/tests had actually exceeded their specified frequency. In every case, the test was completed prior to the late date, however, due to the time lag in documentation processing by the SMS, the test would appear on the violation list. When the documentation was added to the SMS computer program, the test was double checked, then cleared from the violation list.

The inspector reviewed the changes made to the Technical Specification (T.S.) associated with the RHR, SSW and Emergency Power to verify that these changes were incorporated in the procedures and reflected in the surveillance frequency. In every case, the procedures and frequencies had been correctly modified.

Overall, the program appeared to be well organized and implemented. The SMS program has the capacity to provide an array of useful information to supervisors and managers. The checks and double checks performed by the personnel in charge of the data coming into the SMS program make it virtually impossible to inadvertently miss or exceed a required surveillance. With continued support from management, the system should prove effective throughout the life of the plant.

The inspector observed I&C technicians perform monthly channel functional testing of RHR pressure switch PS-16B, in accordance with surveillance procedure 7.4.3.3.1.48 "ADS Trip System...." Communications were established between the control room and technicians at the pressure switch and panel H13-P631. Appropriate administrative approvals were obtained prior to performing the test, and the correct, approved procedure was utilized. The inspector verified test equipment was calibrated, and the technicians were knowledgeable about the test being performed. Test results met acceptance criteria and conformed to plant Technical Specification Table 4.3.3-1 "ECCS Actuation Instruments". Removal of the pressure switch from service was not required in order to perform the test.

As stated above, the program for conducting the T.S. related surveillances appears adequate; however, during a review of the implementation of the various programs and procedures associated with the surveillance program, the inspector identified a number of concerns, as outlined below:

a. Administrative procedure 1.2.3, "Use of Plant Procedures," Rev. 10, Oct. 4, 1985, describes the use of and the adherence to approved procedures contained in the Plant Procedures Manual. The "NOTE" in Section 1.2.3.2.c of this procedure reads, "The incorporated deviation shall be identified for cancellation verification on the new Procedure Deviation Form." This is done to assure that not more than one permanent deviation exists against a procedure at one time. The inspector found that there were three permanent deviations against procedure 7.4.6.1.2.4, "Containment Isolation Valve and Penetration Leak Test Program," Rev. 0, April 25, 1985. This was brought to the attention of the licensee, who immediately initiated a review of the plants other Procedure Manuals to evaluate the extent of this occurrence. From the review it appears that this was an isolated case, involving a personnel error in not pulling the cancelled permanent deviations as directed which was subsequently accomplished. No other actions were required.

b. In reviewing the completed surveillances of 7.4.0.5.16, "Standby Service Water Loop A Operability Demonstration," Rev. 4, July 19, 1985, the inspector found that the surveillance conducted on May 25, 1986 had the "Permission to Perform Test" signature block signed after the test had been performed. This was contrary to the procedure governing tests and surveillances. In reviewing the Shift Manager's Log, the time indicated on the test was the same as in the log. When questioned, the Shift Manager involved conceded that this was improper, but provided the following explanation: When touring the Control Room floor he does not carry the Shift Manager's Log, he records events on small pieces of paper for transfer into the log at a later time. An error in marking time on the surveillance signature block would likely carry over into his record notes. When transferring his notes into the log, he would not realize that the wrong time was being recorded.

The inspector reviewed a large number of surveillances and found this error to be an isolated case. The Shift Manager concerned stated that he would take greater care in recording surveillance times in the future.

c. The licensee has established a performance trending program with the intent of providing accurate data and curves to System Engineers and Management so that they may detect generic failure modes, incipient failures, and unsatisfactory or marginal component or system performance. However, the inspector noted the following short comings within the mechanical performance trending program, which appear to decrease the effectiveness of the program:

- Data was not routinely routed to the trending coordinator.
- The computer program was not flexible enough to handle variations in the data.
- There was no mechanism to add newly issued surveillance procedures to the program.
- Foremost, there was a lack of people dedicated to oversee the program.

The intent of the program appears good, and the licensee was making some progress with the program; however, more emphasis appears needed from management to assure its full implementation. (Follow-up Item 50-397/86-11-10)

d. On May 2, 1986 Procedure 7.4.8.2.10, "60 Month Battery Testing of E-B1-HPCS (HPCS-B1-DG-3)," Rev. 0, May 2, 1986, was initiated. This was to be the Pre-op test of the High Pressure Cooling System Battery. The test was prematurely terminated when there was confusion as to the required test duration. On May 25, 1986 the test was run again using the partially completed surveillance procedure used on May 2, 1986. In doing so the following occurred:

- The prerequisites, precautions and limitations of the procedure were omitted.
- Step-by-step sign-offs were not completed.
- Proper battery load hook-up could not be verified.
- Calibrated test equipment was not recorded

Certain of the above appear to be examples of failure to follow procedures and, therefore are considered potential violations of 10 CFR 50, Appendix Criterion V (50-397/86-11-01).

5. Measuring and Test Equipment (M&TE)

The inspection objective was to determine the effectiveness of the licensee's program for the control of Measuring and Test Equipment (M&TE). To this end, the inspector verified the licensee's FSAR commitment to 10 CFR 50 Appendix B, Article XII "Control of Measuring and Test Equipment" in Section 12 of the licensee's procedure WPPSS-QA-004, "Operational QA Program Description".

The inspector examined the licensee's Administrative Procedure 1.5.4, "Control of Measuring and Test Equipment" to determine whether procedures were established to assure that tools, gauges, instruments, and other measuring and testing equipment used to calibrate and repair safety-related components and systems were properly controlled, calibrated and adjusted to maintain precision and accuracy within specified limits. This procedure appears to describe an adequate program for the control of measuring and test equipment.

In order to determine the effectiveness of the implementation of the program for control of M&TE, the inspector performed inspections at the standards and calibration laboratory and at the tool issuing crib.

At the standards and calibration laboratory the inspector examined the master list of measuring and test equipment in the "north-star" computer program. A sample of ten pieces of measuring and test equipment was selected from the master list by assigned calibration code numbers. The records for the ten pieces of equipment for the sample along with the master list were examined to determine that following items identified in procedure 1.5.4 were implemented:

a. Identification of each device with master list.
b. Method for adding new equipment to master list.
c. Method for deleting equipment from master list.
d. The calibration status.
e. Logging equipment to be calibrated in and out of the laboratory.
f. Traceability to the calibration source.
g. As-found and as-calibrated data.
h. Identification of standards used.
i. Identification of calibration procedures used.

j. Limitations on use (limited calibration labels).
k. Date of calibration.
l. Date of next required calibration.
m. Name of person performing calibration.
n. Calibration deficiency reports.
o. Lost, stolen, or missing equipment process.
p. Transportation requirement to preserve equipment accuracy.
q. Controlled storage environment to preserve sensitivity and tolerances.

Those portions of administrative procedure 1.5.4 that were applicable to the standards and calibration laboratory appeared to be adequately implemented to ensure proper calibration of M&TE.

At the tool crib the inspector examined applicable portions of the licensee's program for maintaining control of M&TE by taking a sample of fifteen pieces of equipment. This sample included five items for the sample used at the standards and calibration laboratory.

The records of the sample items were examined for:

a. Test Equipment Log (Check In/Out)
b. Calibration Data Sheets
c. Calibration Due Dates
d. Equipment Usage Cards
e. Use of "Limited Use" Cards
f. Equipment Recall System

The inspector identified the following problems with the implementation of the requirements of the M&TE program (procedure 1.5.4).

a. An inventory in the tool crib of the fifteen sample items revealed that the following three items which records indicated were in the tool crib, could not be located:

    1) No. 40377, O. D. Micrometers
    2) No. 42477, Oxygen Analyzer
    3) No. 39366, Pyrometer

b. An examination of records revealed that, contrary to section 5.E.8, of procedure 1.5.4, i.e. tool crib check out and seven day check in requirement, the following was found:

    1) Torque wrench EQ 262 was checked out of the tool crib on April 30, 1986 and checked in on June 2, 1986 without any interim test equipment log history to demonstrate that the seven day rule had been satisfied.

    2) Torque wrench EQ 265 was checked out of the tool crib on May 3, 1986 and checked in on June 6, 1986 without any interim test equipment log history to demonstrate that the seven day requirement had been satisfied.

c. In conversation with standards and calibration laboratory personnel it was found that approximately sixty two crimping tools had been found in the plant since the first of the calendar year which had never been identified with calibration code numbers nor had they been entered into the master control list as required by section 7.B.1 of Procedure 1.5.4 and Standards Laboratory Instruction (SLI) 2-2.

The inspector concluded that the control of measuring and testing equipment has not been implemented in accordance with procedures. This is an apparent violation of regulatory requirements. (50-397/86-11-02)

The aspect of the licensee QA/QC program which relates to auditing the control of measuring and test equipment was inspected to determine if it adequately monitors the licensee program for the control of M&TE.

From a review of QA/QC procedures and audit reports, it appears that the QA audit program is adequate to ensure the proper calibration and control of measuring and test equipment. However, it was found from a review of records in the tool crib and at the calibration laboratory that control of this program has not been fully implemented. This violation is a repeat of a 1985 team finding.

6. Maintenance

The licensee's maintenance program was examined by reviewing the following maintenance procedures which describe both the corrective and preventive maintenance programs.

1.3.7	Maintenance Work Requests (MWR)
10.1.5	Scheduled Maintenance System
10.1.6	Corrective Maintenance Program

a. Corrective Maintenance

Seventeen completed MWR's of work performed on RHR system components were reviewed. Nine MWR's completed from January 1, 1985 to the start of the spring 1986 outage, and eight MWR's complete during the spring outage were examined during the inspector's review. Plant Procedure Manual (PPM) procedure 1.3.7 "Maintenance Work Request" was used to compare the completed work packages to verify that the requirements of the procedures were met.

Of the following MWR's, six different MWR's were noted to contain various omissions in the data required by the MWR procedure.

AU 1430	AU 5528	AU 5305	AU 5065
AU 2128	AU 3181	AU 1529	AU 5578
AV 0634	AW 2162	AX 2258	AW 1891
AW 1899	AY 5908	AW 1833	AU 5315
AU 5380			

These omissions were found to be similar to omissions identified by quality assurance deficiency report 2-85-86. Management response to the deficiency report was documented in a letter, Baker to Feldman dated December 26, 1985, that a corrective action plan would provide:

(1) A copy of the memo and surveillance will be required reading for all Maintenance Supervisors and Shift Managers.

(2) The daily scheduling group (DSG) will review for completeness the top two sections of all MWR's.

(3) The Maintenance Supervisors will review the entire MWR for completeness prior to their "reviewed by" signature.

The required reading was to be accomplished by January 10, 1986 and that the review would be started by January 10, 1986.

The inspector determined that the maintenance supervisors had not been given the surveillance report prior to January 10, and issued the report as required reading only after the inspector identified this oversight to maintenance management on June 23, 1986.

The surveillance report was issued to the maintenance supervisors as required reading on June 24, 1986. The inspector believes that the number of omissions identified on the completed MWR's could have been reduced if the maintenance supervisors performing the final reviews had been aware of the QA deficiency report. This failure to take prompt and effective corrective action is a violation of 10 CFR 50 Appendix B criteria XVI (Enforcement Item 50-397/86-11-03).

During a review of MWR AU 3181, the inspector determined that the MWR had been completed and reviewed by the maintenance group supervisor per procedure 1.3.7, and during the operability check the Shift Manager "continued" the MWR for additional troubleshooting of the valve operator. The MWR had been approved by the maintenance supervisor on January 22, 1986 and the work initially authorized by the Shift Manager on February 7, 1986. The continuation of work was authorized on May 29, 1986. The system engineer listed additional work to be performed on the motor operator for the valve listed in the equipment piece number block of the MWR (RHR-MO-6B). In addition, work was also listed to be performed on another valve (RHR-V-27B) on May 31, 1986, which was not allowed by procedure. After the work was completed, the MWR was closed out without the maintenance group supervisor re-reviewing the additional completed work as required by procedure 1.3.7. This failure to follow procedures is considered a violation of Technical Specification 6.8.1 (Enforcement Item 50-397/86-11-04).

During a review of MWR's that used material or spare parts, one MWR was selected, as a sample, in which the spare parts or materials that were used could be inspected for proper compliance with procedural requirements. An RHR system valve, RHR-V-41C, a safety

related air operated check valve was worked on for a steam leak per MWR AU 5380. The steam packing was replaced using procedure 10.2.7 "Valve Troubleshooting Handling and Repair". The procedure gave four examples of different brands of packing material that could be used to repair the valve. The MWR listed a different brand of packing from those listed in the procedure. The inspector determined from interviews with maintenance management personnel that the brand listed in the procedure were not used because they were found to contain "Teflon" type materials. The licensee's representative committed to perform a procedure deviation to modify procedure 10.2.7 to delete the references to the non desirable brands containing teflon.

b. Jumpers and Lifted Leads

A review of jumper and lifted lead practices in the plant was compared to the requirements of procedure 1.3.9 "Control of Electrical and Mechanical Jumpers and Lifted Leads". The "Jumper and Lifted Lead" log in the control room was reviewed, and the inventory of jumpers and lifted lead tags was audited. The inspector also selected a sample of jumpers and lifted leads from the log and compared them with actual conditions in the field.

The inspector determined that the "Jumper and Lifted Lead" log was maintained in accordance with the requirements of the procedure. The inventory of electrical and mechanical jumpers and lifted lead tags was found to be consistent with the requirements of the procedure. During the walkdown, four jumpers and three lifted lead tags were checked against the "Jumper and Lifted Lead" log. The four jumpers and two of three lifted leads were found to be installed as recorded. One lifted lead, in panel P603 in the control room, was not found in the condition listed in the log. The lead in panel P603 was listed as lifted and upon close inspection the lead was found to be landed.

A followup by the licensee revealed that a plant design modification had been installed which relanded the lead in question; however, the final engineering review had not been completed and the lifted lead tag had not been removed.

No violations or deviations were identified.

c. Maintenance Work Observations

The Team Leader and Resident Inspector visited the cubical containing RHR-V-53B to observe working conditions during maintenance activities. The general observation was that the area lacked a proper environment for safety-related work, for example:

- Tool control and accountability for working on an open emergency core cooling system did not comply with plant procedures;

- There was an accumulation of debris laying around inside the cubical that included broken glass, spent dye spray cans, rags, emery cloth, plastic bag that had been inside the contaminated RHR piping, etc.;

- Personnel working on the valve were not wearing face shields as required by the Radiation Work Permit;

- Bags for anti-contamination clothing and waste were not convenient to the step-off pad and the reusable clothing bag was overflowing.

During the inspection, the room was visited by a health physicist and a management representative. The Resident Inspector had previously observed that several other members of management had visited the cubical to observe the work in progress first hand. It was not apparent that any of these persons questioned the existing inadequate working conditions.

The apparent violations associated with this work will be included in the Resident Inspector's report (86-21).

7. Preventative Maintenance

a. Program Observations

The licensee's maintenance program was examined by reviewing the following maintenance procedures, which describe the preventative maintenance program and certain detailed inspection procedures.

10.1.1	Maintenance Program Description - Rev. 2
10.1.3	Shop Practices
10.1.5	Scheduled Maintenance System - Rev. 8
10.1.11	Maintenance Procedures - Rev. 4
10.2.2	Pump Rotating Assembly Removal and Replacement - Rev. 3
10.2.7	Valve Troubleshooting, Handling and Repair - Rev. 6
10.2.8	Testing and Repair of Safety and Relief Valves - Rev. 5
10.25.20	Testing & Setting Time Overcurrent Relays - Rev. 3

The inspector examined the Scheduled Maintenance System (SMS) which is the computerized scheduling program for preventative maintenance (PM). This was accomplished through interviews with the individuals responsible for running the program and by inspecting how the program was carried out by the mechanical, electrical, and the I&C maintenance shops. The inspector attended the licensee's Daily Scheduling Meeting to determine how the preventative maintenance work was integrated with the corrective maintenance work that was being done on a daily basis. Each major maintenance shop had a different method for tracking their PM tasks; however, each of the methods appeared to accomplish the goal of the SMS.

The inspector surveyed a large portion of the preventative maintenance backlog listing. Although this list contained many items, the work was being completed within time tolerances. Interviews with maintenance supervisors confirmed that the number of items on the backlog list was being reduced.

Vendor manuals for several motor operated valves were inspected to assure that changes in vendor's recommendations concerning preventative maintenance were being made. No areas of concern were identified.

Several hundred preventative maintenance task cards were surveyed for discrepancies, deferments, and the use of quality control (QC) inspections. The review of the task cards indicated that more QC actions or surveys were being made in the I&C area than the QC department was taking credit for. The QC department manager stated that 44 preventative maintenance actions had been surveilled in the previous 10 months. Initials appearing on the QC/TEST line of the PM task cards indicated many more QC inspections had been made. Further investigation uncovered that an I&C scheduler/planner was signing the QC sign off line with his initials to indicate that he had reviewed the card. On June 25, 1986, a copy of Quality Assurance (QA) Surveillance Report 2-86-045 was released and distributed showing that the QA department had also discovered the non-QC initials on the QC line of the PM task card and had called it a procedure deviation.

WNP 2 Procedure 10.1.5, "Scheduled Maintenance System," states that the QC line on the preventative maintenance task card is "A signature blank used by QC during plant operation to signify QC has witnessed the task." The initials "JKL" appeared on many of the I&C groups' PM task cards; however, "JKL" was not a QC inspector. This item will be monitored during a future inspection to assure that adequate measures were taken to correct the situation subsequent to the QA surveillance report number 2-86-045.

The inspector accompanied an electrical technician on his PM routine of over-current relays on several RHR pumps. The technician was following WNP-2 Procedure 10.25.20 to conduct the PM. As the technician conducted his work, the inspector noted two points of concern. One concern was that the procedures had no checkoff lists. As a result, when the technician was interrupted in his work by the phone or other higher priority maintenance projects, he could lose track of where he left off in the procedural steps. The second concern was that this work was on safety-related items, but there was no independent verification of the work being done properly, except for an occasional surveillance inspection by QC (approximately twice a year) and a sign off by a supervisor that the work had been completed. This supervisor is located in a different part of the plant. These two points are inspector concerns, not a deviation from the procedure.

The inspector noted that the technician maintained his own trending file of the characteristics of the overcurrent relays to assist him in anticipating possible problems with the relays.

b. Quality Assurance Applied to WNP-2 Maintenance Activities

During examination of records associated with performance of the WNP-2 maintenance program the inspectors observed deficiencies related to the control of quality as follows:

The WNP-2 document governing the performance of maintenance activities on the emergency diesel generators (EDG) air start motors was: Plant Procedure Manual 10.20.10, Revision 1, entitled "Diesel Air Start Motor Maintenance." This procedure had been prepared by the WNP-2 systems engineer responsible for EDGs. During the WNP-2 staff review of the proposed procedure, independent verification signature blocks required by the procedure were deleted from the data sheet by the WNP-2 QC department. The deletion of the verification signatures was agreed to by the WNP-2 on-site multi-discipline review committee, the Plant Operating Committee (POC), at its meeting number 85-50.

The procedure was subsequently approved for use without the independent verification (hold-points) signatures. However, the QC department had prepared an Inspection Planning Report (IPR) 85-721 which did include verification hold-points for work performed under procedure 10.20.10. But, it was noted that not all of the critical steps identified by the cognizant systems engineer were included in the QC prepared IPR. Instead, some of the engineering hold-points, plus some other hold-points designated by QC were included in the IPR. The inspectors found no documentation to explain the deletion of the hold-points designated in the procedure nor the addition of the other hold-points. When queried, concerning QC inspections of maintenance activities, the QA and QC supervisors both indicated that the QC group established the inspections to be performed and that the inspections were solely within the QC groups discretion. Regarding a written procedure establishing a minimally acceptable QC program and set of criteria for conducting QC inspections on maintenance activities, the licensee representatives stated that no such procedure had been established. Failure to have established a written procedure for controlling QC inspections of safety related maintenance activities appears to be in violation of 10 CFR 50, Appendix B Criterion X. (50-397/86-11-05)

WNP-2 Maintenance Work Request (MWR) AU 3423 cited procedure 10.20.10 to be used in the rebuild of 24 air starters. The MWR was routed to the QC department for review. The QC department annotated the MWR form to indicate that only the first five units rebuilt required QC inspection hold-points. The inspectors found no criteria to explain how a sampling inspection was selected or why it was appropriate. The sampling inspection was contrary to the WNP-2 procedure section 10.20.10.2.B which requires that each starter maintained under that procedure must have several steps

independently checked. To wit: 10.20.10.2.B - Data Sheet 1 must be filled out for rebuilt air motors. Several steps require an independent check and signature. However, the maintenance records show that 20 of the 24 starters rebuilt under the MWR did receive independent verification of the hold-points identified on the IPR.

The inspectors noted that two of the four uninspected starters were later installed on EDG 1A2 under MWR AU 3987.

Further examination of the 20 completed IPRs revealed that the maintenance mechanic performing the work had deviated from the procedure on one of the steps identified as a QC hold-point. The procedure step, 10.20.10.7.C.16, requires a cylinder bore to be measured for acceptability. The maintenance mechanic did not perform this activity. A note on the data sheet reads "new starter did not measure". The QC inspector also did not measure the bore and marked "NA new cylinder" on the IPR for this starter, serial number RHB 07334. Consequently, no cylinder bore measurement was recorded for this starter and appears not to have been made. Subsequently, the QC IPR for this starter was subjected to a review and the results evaluation by a second QC inspector. No documentation was found to show that any question of non-compliance was identified from this second evaluation.

The installation procedure for the air start motors required the three fastening bolts be torqued to 154 ± 7 ft-lbs. No record was made of the torquing of these bolts nor were there any records maintained to substantiate that a torque wrench had even been used during the installation of the airstart motors. The MWR procedure does not require a record be maintained of the utilization of such measuring equipment, nor does the procedure (PPM 10.2) which controls the torquing process require such documentation. However the tool crib procedure for issuance of torque wrenches does require that they be checked out against a particular MWR. This was not done in the case of the aforementioned MWRs. It can only be presumed that the torque wrenches used for the overhaul of the diesel-generators (separate action) were used in this case. This appears to be a program deficiency and an apparent violation of Administration Procedure 1.5.4 (i.e., see paragraph 5.b.).

Failure to perform bore measurement on the air start motors, and perform inspections as prescribed in the maintenance procedure appears to be in violation of 10 CFR 50, Appendix B Criterion V. (50-397/86-11-06)

8. Emergency Procedures

Emergency Procedures have been provided to guide operations during plant emergencies. The procedures provide guidance to avoid further degradation of abnormal conditions or to reduce the consequences of an accident when an entry symptom has been identified. These procedures have been written in accordance with the BWR Owner's Group Emergency Procedure Guidelines.

The BWR Owner's Group Guidelines, along with Regulatory Guide 1.97, Facility Administrative Procedure 1.2.1 (Plant Procedure Manual Description) Facility Technical Specifications, and ANSI 18.7 were utilized by the inspector as the basis for the review. The inspector concluded the following:

- That emergency procedure changes were made to reflect technical specifications.
- That overall procedure content was consistent with technical specification requirements.
- That selected emergency procedures were adequate to control safety-related operations within applicable regulatory requirements.
- That the emergency procedures, including applicable flow charts, and checklists were current with respect to temporary changes.

The inspector interviewed the Reactor Engineering Supervisor and expressed concern over the Environmental Qualification of suppression pool wide range level instrumentation, CMS-LR-3 and CMS-LR-5, pursuant to the requirements of Regulatory Guide 1.97. It was determined that the licensee has committed to upgrading these instruments prior to startup following the second refueling outage pursuant Amendment No. 25 to Facility License No. NPF-21. The inspector found that the procedural implementation of temporary instrument temperature error correction satisfies the intent of Regulatory Guide 1.97. However, the commitment of the utility to physically upgrade these instruments will be monitored as part of the routine inspection program.

No violations or deviations were identified.

9. Plant Modifications

The review of the design modification process included examination of the following procedures which form the basis for the WNP-2 design modification program.

PPM 1.3.7 Maintenance Work Requests
PPM 1.4.1 Plant Modifications
PPM 1.4.2 Plant Design Control Program
PPM 1.6.2 Control of Drawings and Support Data
PPM 1.6.3 Vendors' Operating and Maintenance Manuals
TDP E2.1 WNP-2 Design Change Control Program
TDP E2.5 WNP-2 Design Verification
EI 2.1 Preparation of WNP-2 Design Change Packages

Design changes are initiated by a Plant Modification Record (PMR) which identifies a condition that requires an engineered solution. Any Supply System employee can prepare a PMR. PMR's are then reviewed by the plant manager who forwards approved changes to the Generation Engineering for development of design changes.

Generation Engineering chooses a design approach to correct the identified problem and produces a package of engineering drawings that implement the selected design change. The plant manager reviews and approves all design change packages (DCPs), and the Plant Operating Committee (POC) reviews and approves all safety related DCPs. Approved DCPs are forwarded to the Plant Technical Group for the preparation of work instructions, identification of post modification testing requirements, and supervision of the DCP implementation by plant maintenance or construction forces.

Six PMRs that had been closed out since January 1, 1985 were selected for review. These were:

PMR 84-1143-0	Replacement of RHR flow transmitters
PMR 85-137-0	Modification of Diesel Generator Excitation Circuit
PMR 84-1729-0	Modification to Diesel Generator Stop Circuit
PMR 85-380-0	Addition of a Containment Isolation Valve on a Test Line
PMR-83-0016-A	Addition of Diesel Starting Air System Air Dryers
PMR-86-0035-0	Addition of Pressure Gauges in the Diesel Starting Air System

The Design Change Packages were reviewed to verify that:

- The design selected could be expected to resolve the problem identified by the PMR.
- The designs conformed with industry codes and standards, and Regulatory Guides to which WNP-2 has been committed.
- Appropriate independent verification of the designs was conducted.
- The designs were appropriately reviewed to determine if they would result in an unreviewed safety question.

The Maintenance Work Requests that implemented these DCPs were reviewed to verify that:

- Adequate work instructions were provided.
- Appropriate inspections and QC hold points were selected.
- Appropriate installation records were maintained.
- Adequate post modification testing was specified, conducted, documented and test results evaluated.

Four of the six packages selected were walked down in the field to compare the asbuilt configuration with the approved design.

Two of the DCPs implemented changes that affected training of plant personnel. Training records for these DCPs were reviewed to verify that training needs were factored into the plant training program.

The plant design change procedures generally provide adequate control of critical elements such as required reviews and approvals, safety evaluations, work package preparation and closeout, surveillance, maintenance and operating procedure changes, drawing changes, and training. Two weakness in the process were noted, however. These involved independent verification of work instructions and testing requirements documented on the MWRs, and the process for establishing post modification test requirements.

Maintenance Work Requests are prepared to provide the detailed work instructions used by maintenance and construction forces to implement approved DCPs. Since Design Change Packages normally address all design issues, WNP-2 procedures do not require independent verification of MWR work instructions for DCPs. It is not clear, however, that the design change process eliminates the possibility that design issues (the sizing of shrink sleeves for environmentally qualified terminations for example) might be addressed in the MWR work instructions. Although no examples of this were found during the inspection, it was not apparent that the Supply System has implemented a process for independent technical verification of MWR work instructions and post modification testing requirements to protect against this eventuality. This is a potential weakness in the licensee's program that will be reviewed within the routine inspection program.

It was not apparent that the Supply System has implemented procedures that establish criteria for post modification test requirements. Consequently post modification test requirements were being established ad hoc for each MWR by the Plant Technical system engineer responsible for the modification. A similar weakness was identified by the 1985 team inspection. Although last year's finding has not been completely addressed, WPPSS has prepared a detailed draft procedure describing the method of performing post maintenance/modification component installation tests and system performance tests.

The review of Maintenance Work Requests verified that DCP implementation has generally been conducted in accordance with established plant procedures, that appropriate QC inspections were conducted, appropriate post modification testing was performed, and adequate records of modification activities were maintained. A few exceptions to this general statement were noted.

PMR-84-1143 Torqueing of the attachment bolts for the flow transmitters installed by this change was required to establish the transmitter's seismic qualification. MWR AX6200 which implemented this modification did not require documentation of attachment bolt torqueing and no records were maintained to document that the attachment bolts were torqued, who performed the torqueing, the torque values obtained, or the serial number or calibration date of the torque wrench used. Furthermore, Plant Procedure Manual

section 10.2.10 which controls the torqueing process does not require preparation and maintenance of bolt torqueing records. Failure to maintain sufficient records to furnish evidence of activities affecting quality appears to be in violation of 10 CFR 50, Appendix B, criterion XVII. (50-397/86-11-09)

The DCP that implemented this PMR did not address installation of cable entry seals needed to maintain the environmental qualification of the transmitters in question. Investigation of this issue determined that at the time of the installation, WPPSS believed cable entry seals to be unnecessary because of the worst case post accident environmental conditions at the transmitters' location involved a relatively low pressure that was thought to provide insufficient driving head to force water vapor into the transmitters. When subsequent testing identified the need for seals a Nonconformance Report was prepared and corrective action was expeditiously implemented. The inspector's review of the Nonconformance Report (NCR-286-069) showed that several of the transmitters affected are required to be operable by the station technical specifications. Therefore, the nonconformance may be a reportable event under the provisions of 10 CFR 50.73, however, WPPSS did not report this occurrence to the NRC. It was determined that a recent NRC equipment qualification (EQ) audit had a similar finding, therefore, the inspectors discussed this item with the team leader for the EQ audit. It was agreed that any NRC action on the failure to report NCR-286-069 would be addressed as part of action on the related EQ audit findings.

PMR-85-0137 Maintenance Work Request AW6886, which implemented this modification, did not include cable termination sheets as required by WNP-2 Plant Procedure Manual section 10.25.19. These termination sheets are used to provide detailed instructions for the completion of the cable terminations, and to document the successful completion of the construction tests performed on the terminations. Further investigation determined that although no records of construction testing were maintained, the responsible system engineer witnessed and accepted the terminations. Additionally, functional testing of the modification was successfully completed and documented. Therefore, there was evidence that the terminations in question were properly installed even though no formal records of the required construction tests were maintained.

The inspector believes that independent technical review of MWRs, as suggested above, probably would have resulted in inclusion of the required termination sheets for PMR-55-0137 and addition of a step to the work instructions requiring documentation of bolt torqueing for PMR-84-1143.

Review of DCPs and MWRs indicated that WPPSS has frequently used the Field Change Request (FCR) process to initiate and implement plant modifications. Two of the six PMRs selected for review were initiated to cover plant changes that had been previously made via FCRs. WNP-2 procedures require that all FCRs receive a 10 CFR 50.59 review and that safety related FCRs receive an independent verification review. Nevertheless, FCRs may not be the most desirable vehicle for initiating new plant modifications since FCRs are used when a change is to be implemented rapidly, thus creating conditions under which a rigorous design review is difficult. The WPPSS corporate Quality Assurance department identified this problem during a QA audit of WNP-2. As a result of this internal finding, the site FCR procedure was revised to minimize the use of FCRs to initiate new work on safety related systems.

The field walkdowns of portions of DCPs 84-1729-OB, 86-0035-OB, 84-1143-OF and 83-0016-OA&F identified no differences between the plant installation and the drawings provided in the DCPs. Two instances of unlabeled or mislabeled equipment were noted, however.

- Labels for valves DSA-V-61A&B were reversed.

- DSA-DP1-1A was not labeled.

Additionally, a construction light was found in electrical panel E-CP-FRTP. These items were corrected immediately by the plant staff.

Review of training logs for PMR-85-137 and 84-1729 showed that, with one exception, the training program was modified consistent with the training checklists included in these PMRs. The one exception was that PMR-84-1729 was not incorporated into the equipment operator's training as required by the PMR. Discussion of this item with the plant training coordinator indicated that the PMR involved equipment that is not normally operated by equipment operators, so revision of their training was not required. The training coordinator was not aware that equipment operator training was specified by the PMR because the training department only receives the first page of the PMR and does not receive the training checklist.

Additionally, if training had received the checklist, and had taken exception to the need for equipment operator training, there was no formal mechanism to notify the Plant Operating Committee which approved the training checklist.

Conclusions

The WNP-2 program for identifying and developing facility modifications appears to provide for safety evaluations, independent reviews and control of design changes. Two weaknesses in the program were identified:

- The requirements for specifying and documenting post modification testing were not being clearly and formally expressed.

- Independent technical review was not provided for MWRs that implement facility modifications, even though the MWR was the controlling document for post modification testing and the possibility that design issues might be addressed by the MWR work instructions has not been totally precluded by WNP-2 procedures.

Implementation of design modifications was found to conform with facility procedures with one exception. The failure to complete termination sheets documenting the construction testing for terminations made under MWR 6886, on the Emergency Diesel Generators excitation circuit motor operated potentiometer, was not in conformance with WNP-2 procedures and appears to be a violation of 10 CFR 50, Appendix B, Section V which requires that activities affecting quality be performed in accordance with procedures. (50-397/86-11-07)

10. Plant Procedure Review

The inspector reviewed RHR System Operating Procedures 2.4.2 "Residual Heat Removal System" and 2.4.8 "ECCS Manual Valve Position Verification" against the Final Safety Analysis Report (FSAR) description and the RHR System Flow Diagram (drawings MS21, Sheets 1&2). This review verified that the procedures were 1) adequate to control operations of the RHR system, 2) consistent with the requirements of applicable plant Technical Specifications, and 3) revised, as necessary, when changes were made to Technical Specifications related to the RHR system.

Administrative Procedures 1.3.2.9 "Locked Valve Checklist" and 1.3.8 "Equipment Clearance and Tagging" were also reviewed against 1) FSAR Table 6.2-16 "Primary Containment Isolation", 2) FSAR RHR P&IDs (Figures 5.14-13a&b), and 3) the RHR system flow diagram. As a result of this review, the licensee committed to remove valve numbers RHR-V-170 and RHR-V-171 from the Locked Valve Checklist, and will add the following nine valve numbers to the checklist.

PI-VX-229
PI-VX-228
PI-VX-227
PI-VX-226
PI-VX-224
RHR-V-124A
RHR-V-124B
RHR-V-125A
RHR-V-125B

Additionally, the licensee agreed to indicate on the checklist that the handwheels that are locked and the electrical breakers that are tagged open for valves RHR-V-52A, 52B, 87A, 87B, 124A, 124B, 125A and 125B. This will be accomplished by including the designation "LC+" in the "REQ. COND." (required condition) column of the Locked Valve Checklist. These items are considered to be an open item for followup by the Region (Open Item 59-397/86-11-08).

No violations or deviations were identified.

11. System Walkdown

The inspectors conducted walkdowns of the RHR system outside primary containment to assess equipment condition, radiological controls, security, and adherence to regulatory requirements. Control of ignition sources and flammable materials was also examined. During the walkdowns, the following items were identified:

- handwheels and handwheel nuts missing on about half a dozen valves
- twenty to thirty overhead lights out
- debris on floor
- uncontrolled (abandoned) tools (wrenches and hand saw)
- rubber glove in RHR pump 2A sump
- debris in pit under RHR pump 2B
- paper blocking metal bar screen on drain under RHR pump 2C
- cap screw on service water valve V-24B drive housing loose
- cigarette butts and package in RHR pump 2C room
- Bisco foam on floor near open drain in RHR pump 2C room
- grafitti

Additionally, the inspectors requested the licensee's operator to open the back panel doors of control room boards A, B and C, and control room panels 601, 602 and 603. Panel side bolting and bolting to the floor was satisfactory, and all equipment was properly mounted inside the cabinets except for a "Yew" thirty channel temperature recorder in Bay 3 - Board B, which was unfastened and supported by other turbine-generator vibration monitors. The following uncontrolled items were also found inside the panels:

- electrical crimping lugs
- one replacement electronic module
- jumper cabling (unused)
- approximately one dozen metal plates (covers for electrical equipment)
- plastic cable tray covers
- approximately thirty loose screws
- three metal annunciator back guards
- electrical solder
- fuse identifiers
- two electronic isolators
- phone jack
- electrical lamps (replacement bulbs)
- fuses
- two foot copper ground wire in Bay 5 - Board B fastened at one end and loosely swinging at the other end

As most of these items could cause shorts in safety related systems, the licensee immediately removed all items with the exception of the thirty channel temperature recorder and the ground wire. The licensee is expected to resolve these two remaining items. In addition, due to the

large number of items found in the control room panels inspected, the licensee was requested to open all safety related panels in the plant and remove all uncontrolled items which could cause shorts to safety related circuits. The failure of personnel to remove foreign material after the completion of work appears to be a violation of Housekeeping procedure, PPM 1.3.1.9. (50-397/86-11-11)

12. Personnel Interviews

During the course of the inspection 21 engineers, operators, and craft persons were specifically interviewed to obtain their perception on the licensee's systems used to identify problems and control technical work. The results of the interviews are hereby provided for the licensee's consideration.

All but one of those interviewed understood that anyone who identifies a nonconforming condition can initiate a Non-Conformance Report (NCR). Several thought that nuclear safety concerns were to be resolved by the NRC rather than through the evaluation and review systems established by plant management. All persons indicated that plant problems should be reported through their foreman to plant management. Several indicated that they did not always get good feedback on action taken if the corrective action did not involve QC. Five of those interviewed did not understand the conditions under which one could deviate from a procedure. They were maintenance mechanics and an I&C technician. In general, most had a good understanding of QA/QC's role in the resolution of NCRs. It appeared that all had training of one form or another within the past year on NCRs, QA/QC, and the use of procedures. However, the comment was received from plant personnel that there was too much required reading; it was felt that there could be better utilization of briefings.

One worker expressed a concern with excessive temperatures inside containment and the need to establish duration time limits to prevent fainting and that there was a need for a mechanism for personnel removal should a problem develop. Another believed that mechanical maintenance did not faithfully follow their own procedures in that equipment was let go until a failure occurred (no specifics provided).

With respect to these interviews, the team believes the licensee should, as a minimum, consider the following:

- Need for employee orientation on how safety issues are resolved and the conditions under which one may deviate from an existing procedure;
- Practices for personnel safety for containment entry following power operations;
- Preventative maintenance practices for the timely repair of equipment;
- Balance required reading against briefings for training purposes.

13. Exit Meeting

On June 27, 1986 an exit interview was conducted with the licensee's personnel represented in paragraph 1, as well as, other cognizant personnel. The inspectors summarized the scope of the inspection and findings as described in this report. The licensee representatives stated that the team's findings would be evaluated and corrective measures initiated as appropriate.