UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-8064

March 6, 2000

Mr. J. V. Parrish (Mail Drop 1023)
Chief Executive Officer
Energy Northwest
P.O. Box 968
Richland, Washington 99352-0968

SUBJECT: NRC CORRECTIVE ACTION PROGRAM INSPECTION REPORT NO. 50-397/00-01

Dear Mr. Parrish:

This refers to the inspection conducted on January 10 to 28, 2000, at the WNP-2 facility. In-office inspection of certain records requested by the inspectors was also performed in the week preceding the onsite inspection period and during the interim week of January 17, 2000. The purpose of the inspection was to evaluate the effectiveness of your corrective action program. The enclosed report presents the results of this inspection.

On the basis of the sample reviewed, your corrective action program was found acceptable and improving with an appropriate threshold for identifying, classifying, and prioritizing adverse conditions. Your staff was considered aggressive in identifying adverse conditions.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/s/

John L. Pellet, Chief
Operations Branch
Division of Reactor Safety

Docket No.: 50-397
License No.: NPF-21

Enclosure:
NRC Inspection Report No.
50-397/00-01

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E-Mail report to D. Lange (DJL)
E-Mail report to NRR Event Tracking System (IPAS)
E-Mail report to Document Control Desk (DOCDESK)

E-Mail notification of report issuance to the WNP SRI and Site Secretary (GDR, HIB).

E-Mail notification of issuance of all documents to Nancy Holbrook (NBH).

bcc to DCD (IE01)

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.:	50-397
License No.:	NPF-21
Report No.:	50-397/00-01
Licensee:	Energy Northwest
Facility:	WNP-2
Location:	Richland, Washington
Dates:	January 10 to 28, 2000
Inspectors:	T. O. McKernon, Lead Inspector, Operations Branch P. C. Gage, Senior Reactor Engineer, Operations Branch G. A. Pick, Senior Project Engineer, Project Branch E R. E. Lantz, Reactor Engineer, Operations Branch
Accompanying Personnel:	T. L. Tinkel, Contractor
Approved By:	John L. Pellet, Chief, Operations Branch Division of Reactor Safety

Attachment: Supplemental Information

EXECUTIVE SUMMARY

WNP-2
NRC Inspection Report No. 50-397/00-01

Four NRC Region IV inspectors and one contractor performed a routine core inspection of the corrective action program implementation at the Energy Northwest WNP-2 facility from January 10 to 28, 2000. The inspectors used NRC Inspection Procedure 40500 to evaluate the licensee's effectiveness in identifying, evaluating, resolving, and preventing problems that could affect safe plant operations.

Operations

- The team concluded that the licensee had an acceptable and improving corrective action program. The licensee's corrective action processes provided adequate guidance for identifying, classifying, and prioritizing adverse conditions. Licensee personnel initiated problem evaluation requests for adverse or questionable conditions (Section O7.1).

- The team identified some instances (e.g., a prior noncited violation) in which the corrective action tracking system showed the item complete, but the action had not been completed or had been cancelled. The licensee's procedure allowed the tracking system items to be closed based on the assignment of action, rather than the completion of the specific corrective actions. Also, the team identified a few cases where licensee prioritization of the problem evaluation requests differed from the licensee's expectations, but none of the cases were significant. The team also identified that the tracking of corrective action timeliness was an incomplete measurement because some items were closed prior to completion of the corrective actions, as described above (Section O7.1).

Report Details

Summary of Plant Status

The WNP-2 unit operated at approximately full power during the entire inspection period.

I. Operations

O7 Quality Assurance in Operations

O7.1 Condition Reporting Process and Corrective Actions

a. Inspection Scope (40500)

The inspection consisted of a review of the licensee's programs intended to identify and correct problems discovered at the facility. The review focused on the following seven specific areas: (1) the identification and reporting threshold for adverse conditions, (2) the setting of problem resolution priorities that were commensurate with operability and safety determinations, (3) program monitoring used by the licensee to assure continued program effectiveness, (4) program measurement or trending of adverse conditions, (5) the understanding of the program by all levels of station personnel, (6) the ability to identify and resolve repetitive problems, and (7) resolution of noncited violations.

The inspectors reviewed plant documents, interviewed management and working level personnel, and attended licensee meetings. The inspectors reviewed, in varying detail, condition reports (known as plant evaluation requests (PERs)), listed in the attachment to this inspection report, to ascertain the effectiveness of the licensee actions in resolving and preventing issues that degrade the quality of safe plant operations. The inspectors selected the specific system and program areas, in part, on the basis of the risk significance of the system or components. The specific areas included: the emergency diesel generator systems, reactor core isolation cooling system, standby service water system, maintenance rule implementation, and human performance issues. The discussion of these areas are incorporated into the seven focus areas of this report in lieu of discussed separately since some of the issues crosscut more than one focus area. The team reviewed the condition reports (PERs) for disposition and evaluation of operability issues, as well as, the adequacy of the root cause analysis.

The inspectors also reviewed the corrective action program interface with other lower-tier programs, such as procedure revisions and maintenance action items, that could result in corrective action. The inspectors monitored the performance of the licensee's condition review group by attending incident review boards and corrective action review

boards. The inspectors reviewed quality assurance audits, self assessments, and licensee responses to NRC and industry generic communications. Further, the inspectors reviewed a sample of licensee event reports, listed in the Attachment of this report, for compliance with 10 CFR 50.73 and for the effectiveness of licensee personnel in identifying, resolving, and preventing the occurrence of problems that affect safe plant operations.

b. Observations and Findings

b.1 Threshold of Reporting

Site-Wide Procedure SWP-CAP-01, “Problem Evaluation Requests (PERs),” Revision 1 documented the primary method the licensee used for the identification, evaluation, and resolution of problems. The procedure stated that the PER process assures: 1) conditions adverse to quality are promptly identified and corrected; 2) that for significant conditions adverse to quality, the cause is determined, corrective actions are taken and verified to preclude recurrence; and 3) appropriate documentation, reporting and independent reviews are conducted, as appropriate.

The inspectors found that there was a clear and consistent understanding of the requirements for initiating a PER among all levels of plant staff utilizing the electronic PER process. Procedure SWP-CAP-01 stated that a PER should be initiated for conditions that require resolution, . . . trending, a cause determination, or . . . tracking of corrective actions, and . . . for conditions adverse to quality. The licensee typically entered events or equipment problems of low significance into the PER process as well, and the PER program lead assigned a classification of “trend only." A “trend only” PER required only immediate corrective actions to be completed and assignment of appropriate tracking and trending codes. The inspectors reviewed a dozen “trend only” PERs and, in each case, the classification was consistent with procedural guidelines.

Corrective actions that required actions beyond immediate resolutions were classified as “resolve” PERs. The licensee then further classified “resolve” PERs according to the depth of corrective actions and safety significance as evaluate only, apparent cause, or root cause. The inspectors reviewed over twenty “resolve” PERs and agreed with their classifications and the corrective actions assigned.

The Operating Experience Review (OER) Program lead also reviewed externally originated documents, such as NRC Bulletins, INPO Significant Event Reports, and Vendor and Service Information Letters, for significance and applicability to the facility, and entered them as applicable into the PER process. The inspectors reviewed a listing in the plant tracking log that contained 74 external source documents, of which 21 did not result in a PER being written. The inspectors reviewed 6 of these documents in

detail and agreed that they did not meet the applicability requirements for a PER. For example, the following two event reports from other boiling water reactors were considered not applicable to WNP-2 because procedures currently in place would prevent their occurrence:

OER OE10324, Standby SLC Relief Valve Leaks at Gag Bolt
OER OE10341, Improper setup of RCIC Trip and Throttle Valve trip linkage

The inspectors found the licensee's corrective action process guidance to be effectively designed and implemented, with an appropriate threshold for identifying adverse conditions. There was a willingness on the part of licensee personnel to write PERs for any nonconforming or questionable issue or event.

b.2 Priority of Resolution

The licensee delineated the prioritization of problem evaluation requests in Site-Wide Procedure SWP-CAP-01, "Problem Evaluation Requests," Revision 1, which included three classifications: significant, trend, and evaluation (or resolve). Significant classifications were associated with the more important issues and required a root-cause analysis to be documented for each problem evaluation request. An evaluation classification could be assigned a subclassification of evaluation only, apparent cause determination, or root-cause analysis. The licensee assigned initial classification of condition reports and organizational responsibility at the daily problem evaluation request review meetings.

Information contained within the problem evaluation request data base revealed 24 problem evaluation requests associated with the diesel generator systems over the previous 2 years. Three of the initiated problem evaluation requests had received a significant classification rating by the review group, which required a root-cause analysis to be completed. In addition, three problem evaluation requests required a less formal apparent cause determination only.

During the review of the problem evaluation requests, the team noted that 25 percent (6 of 24) of the diesel generator requests were beyond the 30-day administrative goal for dispositioning assigned actions associated with the respective problem evaluation request. Only one of the delayed problem evaluation requests (298-1024) associated with the diesel generators assigned a significant classification. The team verified that the delayed problem evaluation request actions were associated with conditions addressing minor repairs or enhancements and received appropriate classification categories of "evaluate" or "resolve."

The team noted, with one exception, that all the problem evaluation requests with delayed dispositions were closed with all associated actions completed. Problem Evaluation Request 298-0486 addressed an instability area on the speed governor motor operated potentiometer of Diesel Generator 1. Upon initial discovery, licensee personnel performed the monthly operability test for Diesel Generator 2 with satisfactory results, and concluded no immediate generic concern existed. The team noted Diesel Generator 3 (high pressure core spray) also used a motor operated potentiometer

speed control device, which was replaced 3 years previously. While the diesels had the same type speed control device, the licensee's evaluation concluded no immediate concern with the other diesels existed. The long-term actions delineated within problem evaluation request 298-0486, included the replacement of the speed control motor operated potentiometer with a digital reference unit during the next refueling outage.

The team concurred with the licensee's activity assignment and prioritization methodology but noted that a significant percentage of problem evaluation request actions were delayed, thus, negating assigned actions to be performed in a timely manner.

Procedure SWP-CAP-01also contained Attachment 7.2 that provided a screening guide to aid licensee personnel in determining the significance of a PER. During the course of the inspection, the team checked selected PER significance classifications against the guidelines provided in Procedure SWP-CAP-01, Attachment 7.2. The team found, in some cases, that lack of clarity in the screening guide led to different conclusions with respect to PER significance classifications, particularly for PERs initiated for adverse trends. For example, the team questioned the licensee's nonsignificant classification for PER 299-1828. This PER involved an adverse trend related to fidelity of the technical specifications. The team expressed concern about the under-classification of this PER because classification as nonsignificant eliminated the required additional reviews and management attention afforded significant PERs (e.g., CARB review and followup 6-month assessment of completed corrective actions). Additionally, a nonsignificant classification of this PER raised a question about the level of importance placed on the matter of technical specification fidelity by licensee management. This concern was discussed with licensee personnel in the corrective actions group. As a result of these discussions, the licensee agreed to review the classification of this PER. The licensee stated it would also review the applicability of using Attachment 7.2 of Procedure SWP-CAP-01 for significance classifications of adverse trend PERs.

A similar example involved PER 299-0757, which identified a mispositioned valve in Train B containment atmosphere control system. The licensee classified this PER as nonsignificant because it did not meet the regulatory criteria in Attachment 7.2 guidance. However, the condition did meet the design control criteria in that the condition rendered the system inoperable and should have been classified as significant. While the same actions were performed as part of the licensee's disposition and no adverse condition to safety existed, the PER was not accounted and tracked as a significant PER. The inspectors considered this example as minor in regulatory significance since no adverse condition to safety existed and the licensee corrected the condition upon discovery. The licensee's investigative efforts were the same as would have been performed under a significant PER classification.

Also, as part of the program effectiveness review, the inspectors attended a Corrective Action Review Board (CARB) meeting. The team observed the CARB meeting convened on January 26, 2000, to discuss PER 299-2404; "EDR-FRS-623 failed to indicate drywell identified leakage (EDR-FT-37)." The CARB members included two persons from the corrective action program group, who were intimately familiar with the

issue, a supervisor from quality assurance, and the responsible manager/supervisor. Additional attending members could also include cognizant individuals and/or the individuals who would ultimately have responsibility for resolving the issues. The CARB assessed the root cause to ensure that the corrective actions addressed the root cause; whether generic implications were addressed; and if the analysis was factual, objective, demonstrated a connection between the problem and the cause, and identified missed opportunities. The CARB utilized a grading sheet with a standard set of questions to assess each root cause consistently. The team noted that root cause quality was also a corrective action program metric and was green for December 1999; (green was the highest metric status ranking while red was the lowest ranking). The team concluded that the CARB members conducted detailed discussions of the incident, were critical of the written evaluation, and ensured that action assignments were clearly delineated. The CARB ensured that the corrective actions addressed the root cause and any contributing causes. The team found the corrective actions appropriate and concluded that the root cause analysis was thorough.

The inspectors considered the corrective action program to generally provide adequate guidance for prioritizing problem evaluation requests commensurate with their safety significance.

b.3 Effectiveness of the Corrective Action Program

Various sections in Procedure SWP-CAP-01 provided instruction related to effectiveness of program implementation for PERs. The corrective action program provided for two categories for addressing a PER: Trend or Resolve. The program further contained three cause determination categories for PERs: Evaluate Only, Apparent Cause, and Root Cause. The team observed that the descriptions of these categories were awkward and potentially confusing. Through further review of the current PER form and additional discussions with the licensee corrective action group, the team determined that:

- Trend PERs required no additional corrective action beyond the immediate corrective action taken during discovery.

- The resolve category required corrective action commensurate with the assigned cause determination for the PER (i.e., Evaluate Only, Apparent Cause, Root Cause)

- Evaluate Only cause determinations required corrective actions to address the condition, but a determination of cause or extent of condition was not required.

Procedure SWP-CAP-01 also provided instructions related to PER timeliness, such as: (1) OER-related PERs should be dispositioned within 60 days, and (2) Non-OER-related PERs should be dispositioned within 30 days. The team determined that disposition meant completion of the PER evaluation and identification of required corrective action, but not necessarily completion of required corrective actions. The team also noted that in many instances the licensee did not meet its own timeliness goals. For example, the

licensee initiated an adverse trend PER (299-1828) on September 10, 1999, and closed it on January 13, 2000, with no corrective actions identified and without completion of the root-cause analysis. The licensee agreed that the PER should not have been closed and reopened it. The corrective action group scheduled completion of the reopened PER for March 26, 2000. This scheduled date for completing the resolution of this PER was over 6 months after the PER initiation date. This date also did not reflect the additional time that may be required to implement any corrective actions identified through the root-cause investigation. Because this item was also tracked by the licensee commitment tracking process in the licensing group, the team concluded that the final disposition of the item was lost. As such, the team did not consider the item of regulatory significance. The licensee's corrective action group also independently identified corrective action timeliness as an area for improvement as did recent quality department audits. The licensee acknowledged that corrective action timeliness was an identified issue and believed that implemented measures, such as reorganization of the corrective action group and dedicated root-cause evaluators, would help to improve the condition.

Maintenance Rule Implementation

The team also reviewed the licensee's maintenance rule implementation and maintenance preventable functional failure determinations. The corrective action program satisfied the requirements of the maintenance rule program, in that, system, structure, and component status or classification was appropriately determined. With only a few exceptions, noted in the control rod drive system, the determination of maintenance preventable functional failures were performed within the guidance of the maintenance rule program's Technical Instruction TI 4.22, "Maintenance Rule Program," Revision 3.

The team noted that as of December 31, 1999, a backlog of 12 problem evaluation requests were awaiting a functional failure determination. The team noted a concerted effort was in place to maintain this backlog at a relatively low value, since the average number of open functional failure determinations was greater than 50 over the past 12 months. Additional licensee data indicated the average number of days which functional failure determinations were open was about half of the established goal of performing the functional failure determination within 30 days of the initial documentation of a plant condition. The team acknowledged that a low backlog was maintained and provided opportunities to respond to maintenance related problems. The team observed that recent trended data showed that the 30-day administrative goal was exceeded, in that, there were five functional failures over 2 months in age, and were still opened with no functional failure determination results. Four of the open functional failure determinations were associated with the control rod drive system.

The team determined that the control rod drive system was classified as a risk significant system with an established reliability performance measure of less than three functional failures, and no repetitive failures within a 2-year rolling average (updated on a quarterly basis). The team confirmed that the control rod drive system had no failures identified, however, the failures which still needed an evaluation could lead to additional maintenance rule actions, since the reliability performance measure could be exceeded.

The team observed no examples of systems, structures, or components which exceeded the performance criteria.

The team noted that the initial screening process for maintenance rule functional failures was performed by the maintenance rule coordinator during daily electronic queries of the control room operation log, the maintenance rule event log, and the problem evaluation request database. A review of these logs and databases provided information for unavailability and potential functional failure evaluations regarding plant equipment. Subsequent reviews included comparing identified systems, structures, and components against the maintenance rule in-scope matrix and the master equipment list. The maintenance rule coordinator identified those problem evaluation requests, which needed a functional failure evaluation to be performed, and forwarded the request to the responsible system engineer. Plant problem evaluation requests were reviewed for functional failure, maintenance rule functional failure, and repetitive failures, with subsequent results annotated in the appropriate fields within the maintenance rule data base, and forwarded back to the maintenance rule coordinator.

The team interviewed three system engineers regarding the review process of the problem evaluation requests for common cause, generic impact, and repetitive failure issues. The team noted that although each system engineer had performed the aforementioned reviews, the method employed was on an individual basis regarding what was considered as part of the review, and the mechanism of how the review was accomplished. The team found that none of the interviewed system engineers were aware of any specific guidance provided in a procedure, technical instruction, or desktop guide, on how to accomplish the functional failure reviews for repetitive failures or cross cutting issues. During the inspection, the licensee provided the team a copy of a desktop guide for conducting reviews pertaining to maintenance preventable functional failures, but did not specifically address common cause or generic impact reviews. The team considered the ad-hoc individual approach of performing common cause and generic impact reviews without using specific guidance as an informal approach to capture higher level plant issues which crossed system boundaries.

The team reviewed the process for balancing structure, system, or component reliability and unavailability. An unavailability criteria based on an administrative limit of 80 percent of allowable out-of-service time for the structures, systems, and components was established at the system or train level. The balancing consisted of monitoring structure, system, or component performance against the established structure, system, or component performance criteria. The process considered a function balanced if the performance criteria were met. Typical values for risk-significant systems, structures, and components varied from about 1.0 to 10.0 percent unavailability and reliability of less than three random failures and no repetitive maintenance preventable functional failures per two consecutive operating cycles, or 14,000 hours of critical operation. In the case of nonrisk-significant structures, systems, and components, the performance criteria for reliability was less than five random failures and no repetitive maintenance preventable functional failure per two consecutive operating cycles, or 14,000 hours of critical operation.

Human Performance Issues

The team also reviewed operator workaround issues and human performance issues. The licensee initiated 28 operator workaround PERs over the past 4 years with varying degrees of significance. The team noted that four of the PERs were 2 to 4 years old. For example, the corrective action program group issued PER 299-2493 in November 1999, to determine the root cause for the failure to resolve placing Valves RCIC-V-22, RCIC test flow control, and RCIC-V-59, RCIC test shutoff, into the motor-operated valve (MOV) program. PER 298-0217, Corrective Action 2 (issued April 1998), established a completion date in July 1999, to include Valves RCIC-V-22 and -59 within the MOV program. The licensee did not complete differential pressure testing to assess corrective actions for the valves until August 1999. The team determined that operators considered this important because the current capability of the valves required operations to declare the RCIC system inoperable during any operation that had operators open Valves RCIC-V-22 and -59.

As of November 1999, actions necessary to resolve PER 298-0217 were not completed. The actions included placing the Valves RCIC-V-22 and -59 in the MOV program, modifying procedures and/or providing training, and assessing applicability of the inservice test program. The licensee established a revised completion date of May 2001 (Refueling Outage 15) to complete these corrective actions. The licensee found poor communications among technical services, operations, and work team managers related to the need for and scheduling of the MOVs for differential pressure testing. Further, the licensee identified problems with the scheduling and work planning processes in that the materials, qualified personnel, or available time to perform the differential pressure testing were not effectively coordinated on several occasions. Another contributing cause identified by the licensee was the failure to initiate a specific technical evaluation request to resolve the actions needed to place the valve in the MOV program. The team considered the root-cause analysis for PER 299-2493 detailed and thorough.

The team confirmed that the licensee had completed some of the designated corrective actions, such as defining the requirements for the "person-in-charge." Other corrective actions to resolve PER 299-2493 were in progress.

The licensee reviewed human performance issue PERs through an investigation and by convening an incident review board. The team attended an incident review board convened on January 11, 2000, that addressed equipment operators pulling line (power) fuses instead of control fuses for Valve RCIC-V-59 in order to allow MOV testing for electricians. The licensee documented this event, including the incident review board results in PER 200-0059. The incident review investigators identified several barriers that failed, which included: (1) the prejob brief was poor in that both operators were not present at the same time, (2) the individuals had tunnel vision and did not have an effective questioning attitude (inattention to detail), and (3) the first equipment operator failed to stop and ask for additional guidance when he was unsure of the correct actions. The team found that the discussions between the investigators and incident review board members were open and critical. The investigation was thorough in that the material available for the task was reviewed, the individuals were promptly interviewed,

and several peers were interviewed to validate the actions that should have been taken. Corrective actions for this PER included: a discussion with the operators involved, issuing a night order to reinforce management expectations on prejob briefs, and shift managers for each crew discussed lessons learned from this event with their crew. The team determined that the licensee conducted incident review boards routinely to evaluate errors that result from poor human performance and that the licensee was critical in its reviews.

The team also reviewed PER 299-1903 to get additional data related to the level of detail documented in a PER that had an incident review board review conducted. The team noted that the PER did not include a discussion of the incident review board findings and that a corrective action had been recommended in the text of the PER, but not as part of the resolution. Through further review, the team determined that the corrective actions had been completed. The team determined that the program had not required any specific level of documentation of incident review board results other than to brief the dispositioning manager. The team learned the details of this incident review board from the lead investigator. Further, the team noted that the PER did not provide the detail to serve as a stand alone document and additional detail was provided by the lead investigator. The licensee acknowledged this concern and stated that this area could be improved.

In addition to the above, the inspectors reviewed corrective actions associated with prior human performance issues of control room operators control board attentiveness and critical parameter tracking. The licensee had implemented a structured and critical observation process both through management oversight in the control room in accordance with Procedure OI-9 and through observation of crews' performances during licensed operator requalification training. The licensee also monitored human performance through the PER process to ascertain whether adverse trends occurred in the day-to-day plant operation. Issues were entered into the plant tracking log system and tracked to resolution.

For example, the facility issued Plant Tracking Log Item A163499 to document an adverse trend in human performance where peer checking, questioning attitude, self-checking, and three-way communications had failed to prevent the errors. None of the PERs in the adverse trend resulted in adverse consequences to the plant. One of the PERs (299-2237) included in the adverse trend involved a failure to close Valve CN-V-65A during a surveillance test as a result of a communications error. The licensee reviewed the associated PERs and initiated a 4-point corrective action plan, which included revising requirements for prejob briefs, reinforcement of "human error prevention tools" during training, establishing a management expectation that the "person in charge" and the plant support reactor operator did not hold the same job concurrently during an outage, and discussions with each operating crew on the proper use of human error prevention tools. The licensee also discovered through data base searches that during the 6-month period from May 1999 to November 1999, over

50 plant-wide human performance errors occurred; five of the 50 were in the operations area. The licensee resolved to identify and study causes of the human performance issues as part the next common cause analysis study. The team determined that the licensee was self-critical in identifying human performance issues and had an effective system for identifying adverse trends. The licensee was resolute in reducing the overall number of plant wide human performance errors.

The team considered the corrective action program effective in correcting problems adverse to quality.

b.4 Corrective Action Program Measurement

The licensee delineated the trending processes in Department Instruction CAPI 1.1, "Program Description," Revision 2. The program provided site managers with objective statistical data and information to identify adverse trends (lagging), as well as, emerging trends. Daily, corrective action group personnel reviewed the database to determine if a negative trend was emerging related to PERs identified the previous day. Weekly, corrective action group personnel used statistical methods to evaluate data for the past 6 months to determine if any of the assigned cause codes crossed preestablished thresholds. The team noted that the licensee assigned additional codes to PERs being resolved as Evaluate, Apparent Cause and Root Cause in order to perform statistical data sampling and common cause analysis.

For example, the licensee tracked and reported on a monthly basis PER resolution timeliness and completion of problem evaluation resolution actions. However, because the licensee closed many problem evaluation resolution actions based upon disposition to other organizations with corrective actions planned for some future date, the graphs used for monitoring were incomplete because final corrective actions had not been completed. The licensee realized that the measurement was not a complete tracking instrument and relied upon the other organizations (e.g., design engineering) to track and trend the items under the separate programs. However, the inspectors noted some instances in which the intended corrective action had been canceled. For example, the licensee wrote Plant Tracking Log Item 133304 as a result of a commitment to the NRC to color band certain control board panel meters in the control room. The licensee closed the plant tracking log item when Work Request 96004316 was initiated to perform the work. However, the licensee subsequently canceled this work item because the corrective action item tracking system was closed and other personnel reviewing the item did not clearly understand the full scope of the initial corrective actions. To preclude similar event occurrences the licensee required referencing the PER or plant tracking log item on the work requests or work orders. The inspectors noted that this issue had been identified as an NRC noncited violation in NRC Inspection Report 50-397/9904-02. The inspectors noted that other items, such as technical evaluation requests and self-tracking plant log items, which were not formally tracked, could become susceptible to the same circumstances. The same possibilities existed at the time of the inspection exit.

Another example involved the closure of PER 298-0899 prior to implementation of a technical specification change. The licensee initiated this PER as a result of NRC Violation 50-397/9815-01, because the design basis minimum reserve volume of 135,000 gallons in the condensate storage tank was not correctly translated into the plant design. The PER resolution stated that the licensee would pursue a change to the technical specifications to resolve the concern of maintaining the minimum inventory of 135,000 gallons in the condensate storage tank (PER Corrective Action 6). The licensee submitted the change request to the NRC for Surveillance Requirement 3.5.2.2 in a letter dated July 29, 1999. The licensee approved the corrective action item for closure on September 16, 1999 and the corrective action group closed the overall PER on September 24, 1999. The inspection team's review of this PER closure documentation determined that the NRC had not acted upon the technical specification request, yet the PER was closed and the condition still existed. The team discussed this matter with the licensee's corrective action group, and the licensee agreed to review this matter and determine whether any additional action was required.

The licensee implemented the use of corrective action program performance indicator annunciators in May 1999. The team determined that the performance indicator program continued to be refined. The team determined that confusion existed related to the information provided by the root cause analysis threshold and the problem reporting threshold performance indicators. The licensee defined the significant event rate as a four quarter rolling total of licensee event reports. Specifically, managers believed that the root cause analysis threshold and the problem reporting threshold tracked significant PERs but not just event reports . Following the team observation, the licensee initiated a self corrective action plant tracking item to further evaluate this condition. Preliminarily, the licensee considered including NRC violations and significant PERs, which also captured licensee event reports.

The licensee initiated PERs 299-2563 and 299-2685 to document that the corrective action program effectiveness indicators for significant and nonsignificant corrective action timeliness were red in October 1999 (the lowest status ranking) and that the corrective action program effectiveness indicators "resolution timeliness" and nonsignificant corrective action timeliness were red in November 1999. In each instance, the corrective action program manager further analyzed the data, evaluated potential causes, and then proposed solutions that included discussing the topics with department heads.

Semiannually, the licensee performed a common cause analysis looking at data from the previous 6 months. Additionally, the licensee intended to perform a common cause analysis as a result of repeat events or declining performance indicators. At the time of this inspection, the licensee had performed only two studies since the implementation of common cause analysis program was newly implemented in January 1999. The licensee performed the common cause analysis using the methods and information developed by a leading industry consultant. The staff performed the common cause analysis to assess organizational and management issues. The licensee performed a common cause analysis for the period January to March 1999 as part of its newly implemented corrective action program. The licensee indicated that this first effort was

less effective than desired in that the amount of data was limited and that the initial set of coding had to be revised as a result of learning the new process. The licensee initiated actions to implement many of the recommendations of this first common cause analysis. The licensee intended to evaluate the effectiveness of the initial corrective action recommendations from the first study as part of the second common cause analysis.

The team concluded that, as the experience in performing common cause analyses grows, the analyses results should assist in addressing solutions to organizational and management challenges.

b.5 Corrective Action Program Understanding

The team interviewed a dozen licensee personnel (i.e., craft personnel, first line supervisors and upper management) and reviewed recent audit results. The team concluded that station personnel had an appropriate level of understanding of the corrective action program and that personnel were willing to initiate PERs for adverse conditions. The team determined that craft personnel and other working level personnel had access to the electronic database so that they could initiate a PER as desired. The team observed that, typically, craft personnel would discuss the issue with the first line supervisor who would initiate the PER under the craft person's name. From discussions with craft personnel, the team determined that management encouraged the initiation of PERs. In addition, the team determined that in January 1998, the licensee initiated a change to the corrective action program to have a zero threshold for initiating PERs. The team concluded that the individuals would not hesitate to initiate a PER and understood the function of and their roles in implementing the corrective action program.

The inspectors also reviewed data and five issues associated with the nuclear safety issues program (NSIP) and interviewed five staff personnel relative to their willingness to bring issues forward. The NSIP provided a venue for personnel to raise safety issues or allegations without writing a PER. The inspectors noted that NSIP trend data varied significantly between 1998 and 1999. Discussions with the program lead indicated that the number of received issues had dropped significantly. The licensee attributed the decrease to the implementation of the zero threshold PER policy and believed that plant personnel felt the PER process was working well. Discussions with licensee personnel (managers and craft personnel) indicated a willingness to submit issues to the NSIP if they felt the PER process would not address the concern.

b.6 Repetitive Problems

Various sections in Procedure SWP-CAP-01 provided instructions related to prevention of repetitive problems. The licensee required a root cause determination for significant PERs and these root cause analyses were reviewed by the CARB. A primary result of root cause analysis was the identification of causal factors and actions required to prevent recurrence. For significant PERs, the licensee required the performance of a post 6-month assessment of the effectiveness of the corrective actions. Discussions with the licensee indicated that this was a relatively new requirement and, as such, no

valid sample basis was available to evaluate the implementation of this requirement. Additionally, CAPI 1.1, a department instruction for the corrective action program description, provided for a periodic (stated by the licensee to be about every 6 months) trend and common cause analysis aimed at cost effective ways to enhance program performance.

The licensee identified repetitive problems through use of causal codes applied to review results of PERs by the corrective action group and entered them into the PER/PTL computer data base. The corrective action group compared event occurrences with historical data to ascertain if an adverse trend existed. The licensee defined adverse trends as similar occurrences which exceeded a predefined goal (typically 2 standard deviations) from the prior month. The licensee assigned either root cause or apparent cause determinations to the adverse trend PERs. Adverse trend PER 299-1828 with the various other PERs listed within PER 299-1828 was an example of conditions with various causes creating similar results (i.e., errors in the technical specifications). This PER was discussed above in Section b.3.

Another example of an adverse trend PER involved PER 299-2449, which documented an adverse trend for mispositioned valves and included six PERs written in October 1999. The corrective action group assigned this PER an apparent cause determination and classified it as nonsignificant. Similar to PER 299-1828, the inspectors questioned whether this PER should have been classified as significant in lieu of nonsignificant. The licensee stated that beyond the guidance in Attachment 7.2 of Procedure SWP-CAP-01, classifications of adverse trend PERs were left to management discretion during the morning leadership team review meetings. The licensee reviewed this PER and stated that because none of the included PERs resulted in conditions adverse to safety, the PER was classified as nonsignificant. The licensee also stated that the use of Attachment 7.2 of Procedure SWP-CAP-01 for significance classification determination of adverse trend PERs would be reviewed.

b.7 Notice Of Violation/Noncited Violation Followup

NRC inspections identified 70 noncited violations and cited violations with no response required over the last 2 years. The inspectors reviewed the violations listed in the Attachment to determine if the violations were entered into the corrective action program and if they were resolved or being resolved in a timely manner commensurate with their significance.

The results of this inspection suggested that the earlier reporting threshold (i.e., the one in place prior to mid-1999) was probably too high, at least for some conditions, such as those found during prior NRC inspections. Generally, these conditions were not self-discovered by the licensee and became the subject of various NRC notice of violations or noncited violations. The existence of a higher reporting threshold during these prior periods is one plausible explanation why these conditions were not discovered by the licensee.

Generally, PERs associated with issues identified in notice of violations or noncited violations took longer to resolve and correct. For example, the team identified a breakdown in the licensee's prior design control process while reviewing the circumstances associated with PER 299-0655. This PER involved limits in Technical Specification Limiting Condition of Operation 3.3.6.1 (primary containment instrumentation), which were not branched to Limiting Condition of Operation 3.3.5.1 (emergency core cooling system loss-of-coolant accident time delay relays). In 1988, an engineering review of Basic Design Change 84-0190-1B-848 failed to identify that implementation of the design change required changes to the technical specifications. A review of the design verification record in the Basic Design Change 84-0190-1B-848 design change package revealed that both the preparer and reviewer evaluated this design change in December 1988 and neither person recognized that the design change required changes to the technical specifications. This failure to perform a more thorough design verification record review in 1988 resulted in two missed opportunities (preparer and reviewer) under the design control program to have prevented the currently identified technical specification problem. When the licensee implemented the Improved Technical Specifications, another subsequent opportunity to discover the problem was missed . These circumstances were reviewed and briefly discussed in the licensee's resolution for PER 299-0655. The team determined that the root cause of the current technical specification problem was a failure in the licensee's earlier design control process. However, since concerns with this section of the technical specifications were previously identified by the NRC (e.g., Noncited Violation 99-09-03) and because Corrective Action 10 of PER 98-0655 already required another review of the design verification record for Basic Design Change 84-0190-1B-148, the team did not consider this item for additional NRC enforcement action under 10 CFR Part 50, Appendix B, Criterion III, Design Control. Corrective Action 10 for PER 298-0655 was scheduled for completion by February 28, 2000.

The inspectors determined that the noncited violations were entered into the corrective action program and that the identified corrective actions adequately addressed the violations.

c. Conclusions

c.1 Threshold Reporting:

The corrective action program provided acceptable thresholds to assure appropriate events are identified and lower level events are screened. There was a willingness on the part of licensee personnel to initiate PERs for adverse or questionable conditions.

c.2 Priority of Resolution:

In general, the corrective action program provided acceptable guidance for appropriately prioritizing PER resolutions commensurate with safety. The team observed some inconsistencies in PER classifications.

c.3 Effectiveness of the Corrective Action Program:

The corrective action program used different methods to measure the effectiveness of the program and is effective in correcting conditions adverse to quality. However, the team observed some examples in which corrective actions had been closed out based upon intended actions by other departments that were incomplete or cancelled. None of the issues produced safety issues in the plant. However, the corrective action process in use at the end of the inspection retained a possibility of similar occurrences exists.

c.4 Corrective Action Program Measurement:

The licensee's program used varied measures and metrics to trend corrective actions and monitor the program. However, some measures such as corrective action timeliness were incomplete because of the nature in which actions are closed out.

c.5 Program Understanding:

Based upon the number of changes made to the corrective actions program within the past year, the staff was knowledgeable about the program. However, the team did observe some lack of familiarity with the new program at different staff levels.

c.6 Repetitive Problems:

The corrective action program provided for the identification of repeat problems and assured that such problems receive the appropriate reviews to prevent recurrence.

c.7 Notice of Violation Followup and Closure:

The corrective action program placed appropriate priority on nonescalated resolution to prevent recurrences. The inspectors did however observe some examples of long-term issues.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors discussed the progress of the inspection on a daily basis and presented the inspection results to members of licensee management at the conclusion of the onsite inspection on January 28, 2000. The licensee's representatives acknowledged the findings presented.

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

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Atkinson, Engineering Manager
S. Boynton, Quality Manager
R. Brownlee, Licensing Engineer
D. Coleman, Regulatory Affairs Manager
J. Hanson, Chemistry Manager
P. Inserra, Licensing Manager
T. Meade, Assistant Plant General Manager
S. Oxenford, Operations Manager
V. Parrish, Chief Executive Officer, Energy Northwest
D. Poirier, Maintenance Manager
G. Smith, Vice President/ Plant General Manager
R. Webring, Vice President, Operations Support

NRC

G. Replogle, Senior Resident Inspector
J. Rodriguez, Resident Inspector

INSPECTION PROCEDURES USED

IP 40500 Effectiveness of Licensee Controls in Identifying, Resolving, and Preventing Problems

ITEMS OPENED, CLOSED, AND DISCUSSED

None

DOCUMENTS REVIEWED

Plant Evaluation Requests reviewed in-depth/discussed in this report:

(NOTE: PERs with prefixes of 298, 299 were initiated in 1998 and 1999 respectively)

298-1317, OER, NRC INFO NOT 98-36, Inadequate non-safety related maintenance activities unnecessarily challenged safety systems, Evaluation

298-1717, OER, INPO OE9389- EDG Failed to start from local shutdown panel during surveillance, Evaluation

298-1868, Adv Trend, Clearance Orders, root cause

298-1900, OER, NRC INFO NOT 98-14, Spruious Shutdown of EDGs due to design oversight, trend

298-2000, OER, NRC INFO NOT 98-43, Leaks in EDG Lube oil and jacket cooling water piping, Apparent Cause

298-2030, OER, Trend

298-2046, OER, CCW Waterhammer, Trend

298-2047, OER, Trend

299-0295, ABB Information Bulletins not incorporated or evaluated, Evaluation

299-0355, OER, INPO Network entry OE9672- EDG lube oil gear tooth cracking at St. Lucie, Evaluation

299-0427, OER, INPO Network entry OE9686- Non=conserv dose calcs, Evaluation

298-0220, High pressure core spray restart

298-0372, High pressure core spray failed to shutdown

298-0486, Diesel generator trip

298-0529, Diesel fuel oil check valves

298-0537, Diesel lube oil level switch

298-0602, High pressure core spray load run test

298-0628, Diesel generator building heating and ventilation breaker

298-0661, Diesel generator fuel oil leak

298-0695, Inadvertent scram and division 1 injection

298-0730, Diesel generator maintenance key lock switch

298-0753, Diesel generator output breaker

298-0981, Diesel generator preconditioning

298-0991, Diesel generator reactive load swings

298-1000, Diesel generator overcurrent lockout

298-1009, Diesel generator voltage regulator

298-1024, Diesel generator operability testing

298-1217, High pressure core spray field flash

298-1423, Diesel lube oil soakback switches

298-1900, Diesel generator spurious shutdown (information notice 98-41)

299-1164, Diesel generator emergency stop pushbutton

299-1166, Residual heat removal pump start/stop

299-1339, Diesel generator output breaker

299-2217, Diesel generator shaft driven fuel oil pump

299-2475, Diesel generator breaker logic

299-0543, OER, INPO Network entry, Both loops of RHR INOP due to ISLN VLV stem failure at Susquehanna Unit 1, Eval

299-1224, PER resolutions that meet the procedure criteria for apparent cause were resolved as evaluate only

299-2158, RHR-V-739 found open during RHR A system fill and vent

299-0757, CAC-V-59B found mis-positioned shut during system engineering walkdown

299-1555, PPM 3.3.1, Implemented with inadequate review of training impact

299-2563, Corrective action program effectiveness indicators for significant and nonsignificant corrective action timeliness are both red for Oct 99

299-2197, Weekly trend data indicates an emerging adverse trend in the area of tagging and barriers

299-2502, An excessive number of PERs have been written where qualifications were not verified prior to assigning a job task

299-2449, A potential adverse trend has been identified with mispositioned valves

299-2585, Local breaker supplying power to DG #2 immersion heater found in off normal open position

299-2436, Configuration control lost on CSP-V-90 when valve found in the open position

299-0745, Improper Closure of corrective actions

299-0672, Drywell leakage is untypically high and trending up, Eval

299-0676, OER, INPO Network entry OE9692, Insuff QA audit scope, Eval

299-6018, OER, NRC INFO NOT 99-14, Unanticipated Reactor Water Draindowns, Eval

299-1021, RPV lvl inadvertently letdown below designated band, root cause

299-1037, Adverse Trend, Human Performance Key Parameter monitoring, root cause

299-1230, OER, evaluation, open

299-1313, OER, INPO Network entry OE9992, High CRD Temp effect on Scram time, Eval

299-2158, RHR valve out of position, Apparent Cause

299-2194, OER, GE SIL NO. 173 S1- Control Rod Drive High Operating Temperature, Eval

299-2197, Adverse trend, "Tagging and Barriers,", Evaluation

299-2342, OER, INPO SEN 204- Water Chem induced fuel leaks at River Bend, open...

299-2449, Adverse Trend, "mispositioned valves", Apparent Cause

299-2464, Adverse Trend, Human performance errors, root cause

299-2502, Adverse trend, Qualifications not verified for job assignment, root cause

299-0431, RCIC-V-2 Did Not Provide Full Open Indication During IST

299-0446, RCIC-P-3 Oil Bubbler Found Empty

299-2404, EDR-FRS-623 failed to indicate drywell identified leakage

299-1557, Failure to log entry TS LCO for HPCS-V-12 maintenance

299-0592, Oil Level in Keepfill Pump Higher Than Vendor Recommendations

299-0821, RCIC-42-8BA6B Line Fuses A and B Blown

299-1519, RCIC-FI-600/1 Indicating ~60 gpm With No Flow in System

299-1533, Procedure ISP-MS-Q902 Performed Incorrectly Because of Inattention to Detail

299-1676, Procedure ESP-RCIC-X301 Performed Without Required Tagout

299-1718 During MOV Differential Pressure Testing RCIC Exhibited Unexpected System Response

299-1748, RCIC-V-22 Close Time Exceeded Action High During dP Testing

299-2256, RCIC-V-1 Did Not Trip on First Overspeed of Turbine

299-2359, Channel Check for CST Lvl Switches for RCIC Swapover Does Not Satisfy Surveillance Requirement

299-2363, RCIC-DPIS-13B Failed Channel Check

299-1021, RPV Level inadvertently let down below designated level band

299-2409, Seal Runoff on Keepfill Pumps is Clouded With Milky White Substance

299-2493, Plans to Include RCIC Valves 22 & 59 in GL 89-10 Program Not Completed Timely

299-0279, General emergency classification during drill untimely

299-0961, Channel nut not crimped for fuel assembly by trainee

299-0853, Failure to comply with instructions to verify valve positions in overhead

298-2126, Automatic depressurization system declared inoperable because of excessive relief valve leakage

299-2493, Inclusion of RCIC-V-22 and -59 valves in MOVATS program not completed in timely manner

299-0586, Calculations for MSLC low pressure permissive setpoints not revised for power uprate

299-0857, Adverse Trend - At start of Fuel Savings Dispatch three C/O errors in short time period

299-2404, EDR-FRS-623 Failed to indicate drywell identified leakage (EDR-FT-37)

299-2493, Plans to Include RCIC Valves 22 & 59 in GL 89-10 Program Not Completed Timely

299-0279, General emergency classification during drill untimely

299-0961, Channel nut not crimped for fuel assembly by trainee

299-0853, Failure to comply with instructions to verify valve positions in overhead

298-2126, Automatic depressurization system declared inoperable because of excessive relief valve leakage

299-0586, Calculations for MSLC low pressure permissive setpoints not revised for power uprate, 3/23/99

299-0857, Adverse Trend - At start of Fuel Savings Dispatch three C/O errors in short time period,4/22/99

299-2404, EDR-FRS-623 Failed to indicate drywell identified leakage (EDR-FT-37),10/27/99

PERs involving NOVs/NCVs Reviewed:

298-1024, Diesel Operability Test Implemented in a Mode not Allowed by Technical Specifications, 8/8/98

298-0898, Potential Nonconformance With RG 1.97 Instrument Marking Requirements

298-0003, 25 Percent Extension in TS 4.0.2 Improperly Applied to TS 6.8.4.a.2

299-0278,Epoxy Based Floor Coatings Have Flame Spread Rates That Exceed FSAR

298-2002, LPCS Out-of-Service Does Not Alarm When Diesel, Service Water, and Battery Support Systems are Out-of-Service

298-0305, Failure to Log Entry Into TS for Work Performed

298-1082, Performance of Procedures Impact Primary Containment But Fail to Comply With TSs

299-1166, During Performance of Load Shed Test, RHR-P-2C Failed to Start as Required

299-1207, Initial Setpoint Calculations for Hi and Hi-Hi Radiation Alarms Could Not Be Located

299-0632, (SPER) RHR Valve Position When in Standby Does Not Meet FSAR

298-0402, (SPER) Fully Open Test Valves in RHR and HPCS Can Render Systems Inoperable

Other Plant Evaluation Requests sampled:

NUMBER	**DATE**
299-0080	1/14/99
299-0146	1/25/99
299-0248	2/4/99
299-0589	3/23/99
299-0774	4/15/99
299-0822	4/20/99

299-1119	5/19/99
299-1459	7/8/99
298-0986	8/3/98
298-1231	9/12/98
299-1151	5/26/99
299-1160	5/26/99
299-0694	4/7/99
299-2345	10/20/99
298-0147	2/18/98
298-0959	7/29/98
298-0978	8/2/98
298-1609	10/26/98
298-1644	10/29/98
298-1437	10/9/98
299-0548	3/16/99
299-0691	4/6/99
299-1193	5/31/99
299-1828	9/10/99
298-0655	5/2/98
298-0899	7/17/98
298-0900	7/17/98
298-1784	11/12/98
299-0574	3/22/99
299-0584	3/23/99
299-0662	4/21/99
299-1238	6/4/99

Procedures Reviewed:

SWP-CAP-01, Site Wide Procedure "Problem Evaluation Requests" Revision1

CAPI 1.1, Department Instruction "CAP Program Description" Revision2

PPM 1.3.48, "Root Cause Analysis" Revision 6

PPM 1.1.8, "Incident Review Board (IRB)" Revision 6

PPM 1.4.1, "PMR Field Implementation" Revision 24

OSP-SW-M103, "HPCS Service Water Valve Position Verification" Revision 3

MSP-SGT-B103, "Standby Gas Treatment Filtration System-Unit A Carbon Adsorber Test" Revision 3

MSP-SGT-B104, "Standby Gas Treatment Filtration System-Unit B Carbon Adsorber Test" Revision 3

TI 4.22, "Maintenance Rule Program" Revision 3

OSP-ELEC-S701, "Diesel Generator 1, Semi-Annual Operability Test" Revision 9

OSP-ELEC-S702, "Diesel Generator 2, Semi-Annual Operability Test" Revision 9

OSP-ELEC-S703, "HPCS Diesel Generator 3, Semi-Annual Operability Test" Revision 10

OSP-ELEC-M701, "Diesel Generator 1, Monthly Operability Test" Revision 9

OSP-ELEC-M702, "Diesel Generator 2, Monthly Operability Test" Revision 9

OSP-ELEC-MS703, "HPCS Diesel Generator 3, Monthly Operability Test" Revision 10

OSP-DO/IST-Q701, "DO-P-1A Operability Test" Revision 3

OSP-DO/IST-Q702, "DO-P-1B Operability Test" Revision 2

OSP-DO/IST-Q703, "DO-P-2 Operability Test" Revision 5

Site Wide Procedure SWP-CAP-03, “Operating Experience Review Program,” Revision 0

OI-14, "Operator Work Arounds" Revision J

OI-9, "Expectations for Supervisory and Peer Oversight" Revision N

OI-23, "Human Performance Improvement Program" Revision C

Operational Experience Reports Reviewed:

OER OE 10324, “Standby SLC Relief Valve Leaks at Gag Bolt.”

OER OE 10341, “Improper setup of RCIC Trip and Throttle Valve trip linkage.”

OER OE-10340, “Failure of Fire Protection System Preaction Valve.”

OER OE-10248, “System Configuration and Inadequate Flushing lead to ECCS Void Formation.”

OER OE-10350, “ABB K-Line Breakers fail to Trip.”

OER VI990806, “ABB K-Line Breaker Defect.

Calculations Reviewed:

ME-02-92-243	DCW Cooler Flow	1; 11/12/98

Miscellaneous Documents Reviewed:

WNP2 Performance Indicator Report; 12/99

CAP Slide Presentation; 1/10/00

PER Summary Report; 1/12/00

PER/PERA Definitions; None

MI 1.9, "Maintenance Fix-It-Now Team", Revision 1, 8/1/98

Training System Description, Vol. 3, Chap. 14; 6/30/98

EDP 2.5, Engineering Directorate Manual, “Design Verification”; 4/5/96

BDC 84-0190-1B, Design Modification Package for PMR 2-84-0190-1; 12/21/88

Surveillance Report 299-030, Quality Department Surveillance Report; 6/18/99

Surveillance Report 299-019, Radiation Protection Corrective Action Surveillance; 5/18/99

Audit 299-002, Quality Department Corrective Action Audit, 2/17/99

Audit 299-020, Quality Department Corrective Action Audit, 7/15/99

Surveillance Report 299-053, Quality Department Surveillance Report; 1/6/00

Surveillance Report 299-031, Quality Department Surveillance Report; 6/11/99

WNP2 Performance Self-Assessment; 11/19/99

Corporate Nuclear Safety Review Board Meeting Minutes; 1/15/99; 4/26/99; 10/26/99; 5/3/99

WNP2 Self-Assessment of Maintenance Rule; 10/29/98

PTL A159668, SSE A&B Vallvees not throtteable using control switch

PTL A159671, Test return to CSTS removed from MOVATS program

PTL A159672, During power maneuver RFW marine oil separators overflow

PTL A159666, DG Room HVAC systems not capable of maintaining temperatures during adverse weather conditions

PTL A159667, RFW-DT-1A/B valves not throttleable using control switches