



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064

January 4, 2001

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

SUBJECT: WNP-2 - NRC INSPECTION REPORT NO. 50-397/00-16

Dear Mr. Parrish:

On November 17, 2000, the NRC completed a team inspection at WNP-2. The enclosed report presents the results of this inspection. On November 17, 2000, we discussed the preliminary results of the onsite inspection with Mr. Paul Inserra, Acting Manager, Regulatory Affairs, and other members of your staff. On December 5, 2000, we conducted a telephonic exit meeting with Mr. Coleman and other members of your staff to inform your staff of the results of the in-office review following the inspectors' departure from the site.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, compliance with the Commission's rules and regulations, and the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. The inspectors concluded that problems were properly identified, evaluated and resolved within the problem identification and resolution programs. However, during the inspection, several examples of minor problems were identified that included identification of adverse trends and determination of significance.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

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

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

Enclosure:

NRC Inspection Report No.  
50-397/00-16

w/Attachments:

- (1) Supplemental Information
- (2) NRC's Revised Reactor Oversight Process

cc w/enclosure:

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**ENCLOSURE**

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No.: 50-397  
License No.: NPF-21  
Report No.: 50-397/00-16  
Licensee: Energy Northwest  
Facility: WNP-2  
Location: P.O. Box 968  
Richland, Washington  
Dates: November 13-17, 2000  
Inspectors: P. C. Gage, Senior Operations Engineer, Operations Branch  
G. W. Johnston, Senior Operations Engineer, Operations Branch  
J. F. Melfi, Project Engineer, Projects Branch E  
J. P. Rodriguez, Resident Inspector, Projects Branch E  
J. A. Sloan, Senior Resident Inspector, Projects Branch C  
Approved By: J. L. Pellet, Chief  
Operations Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

### WNP-2

NRC Inspection Report No. 50-397/00-16

IR 05000397-00-16, on 11/13-11/17/2000, Energy Northwest. WNP-2 annual baseline inspection of the identification and resolution of problems.

The inspection was conducted by two regional senior operations engineers, one senior resident inspector, one resident inspector, and a regional project engineer. The significance of issues was indicated by the color (no color, green, white, yellow, red) and evaluated using the significance determination process.

#### Identification and Resolution of Problems

The licensee was effective at identifying problems and putting them into the corrective action program. The licensee's effectiveness at problem identification was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee during the review period. The licensee effectively used risk information in prioritizing the extent of evaluation of individual problems and the schedule for implementation of corrective actions. Corrective actions, when specified, were generally implemented in a timely manner. Licensee audits and assessments were effective. Based on the interviews conducted during this inspection, workers at the site felt free to input safety issues into the problem identification and resolution program (Section 4OA2.1b;2b;3b;4b).

## Report Details

### 4. OTHER ACTIVITIES (OA)

#### **4OA2** Problem Identification and Resolution

##### a. Effectiveness of Problem Identification

##### (1) Inspection Scope

The inspectors reviewed items selected across the seven cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. Specifically, the inspectors selected 56 problem evaluation requests from approximately 2000, which had been issued between November 1999 and November 2000. The inspectors also reviewed two licensee audits and one self-assessment of the corrective action program. The effectiveness of the audits and assessments was evaluated by comparing the audit and assessment results against self-revealing and NRC-identified issues.

The inspectors evaluated the problem evaluation requests to determine the licensee's threshold for identifying problems and entering them into the corrective action program. Also, the licensee's efforts in establishing the scope of problems were evaluated by reviewing pertinent control room logs, work requests, engineering modification packages, self-assessment results, action plans, and results from surveillance tests and preventive maintenance tasks. The problem evaluation requests and other documents listed in Attachment 1 were used to facilitate the review.

The inspectors also conducted walkdowns and interviewed plant personnel to identify other processes that may exist where problems and issues could be identified. The inspectors reviewed work requests and attended the licensee's daily work control meeting to understand the interface between the corrective action program and the work control process.

##### (2) Issues and Findings

The inspectors determined that the licensee was effective at identifying problems and entering them into the corrective action system. This was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee during the review period. Licensee audits and assessments were of good depth and identified issues similar to those that were self-revealing or raised during previous NRC inspections. Also, during this inspection there were no instances identified where conditions adverse to quality were being handled outside the corrective action program. However, while no significant problems resulted, the inspectors noted two minor issues with problem coding in the computerized system.

First, problem evaluation request coding was inconsistent, notably in subject area codes. For example, the licensee did not code Problem Evaluation Requests 200-0059 or 200-0909, dealing with incorrect fuses being pulled, as fuse issues, but did so code Problem Evaluation Request 200-1801, also dealing with an incorrect fuse being pulled.

Similarly, Problem Evaluation Request 200-2201, dealing with work performed on the wrong valve, was not coded as a valve or configuration control issue, but Problem Evaluation Request 200-1226 dealing with work on an incorrect pressure switch, was coded as a configuration control issue. The inspectors determined that such inconsistent coding could result in misleading trending results and missed identification of adverse trends. The inspectors noted that the licensee did not have a code that captured component mispositioning or wrong train/wrong component events. However, the licensee had identified an adverse trend for valve mispositioning events (Problem Evaluation Request 299-2449), indicating that licensee personnel were sensitive to this area.

Second, the licensee's problem evaluation request coding was not fully supportive of the needs of divisional managers. For example, the licensee's root cause assessment of Problem Evaluation Request 200-1078 revealed that one operations crew had an unusually large number of human performance deficiencies, but the coding and trending system did not lend itself to trending performance by crew. Two licensee managers stated that they performed their own trending outside of the normal system.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed approximately 50 problem evaluation requests, and supporting documentation, including an appropriate analysis of the cause of the problem, to ascertain whether the licensee's evaluation of the problems identified and considered the full extent of conditions, generic implications, common causes, and previous occurrences. In addition, the inspectors also reviewed several deferred work items to ascertain if the provisions of NRC Generic Letter 91-18, "Resolution of Degraded and Non-Conforming Conditions," and 10 CFR Part 50, Appendix B, were satisfied regarding timeliness of corrective action. Specific items reviewed are listed in Attachment 1.

(2) Issues and Findings

Based on a review of the licensee's records, the inspectors concluded that the licensee effectively prioritized and evaluated issues. The inspectors identified no findings related to prioritization and evaluation of issues. In general, issues were appropriately characterized and appropriate evaluations were conducted for significant conditions adverse to quality.

However, the inspectors identified one inconsistency associated with the classification of problem evaluation requests. Problem Evaluation Request 200-0109, which involved adjusting limit switches on the wrong reactor water cleanup system valve in a high-high radiation area (greater than 1R/hr), was initially classified as significant, based on Procedure SWP-CAP-01, Attachment 7.2, "Significant Problem Evaluation Request Screen Guide." Criterion F.4 stated that problem evaluation requests for unauthorized work on a component or system were significant. However, the licensee subsequently changed the classification to nonsignificant because the work performed was covered by an existing work order task (for the valve intended to be worked on). The inspectors



confirmed that the work order task did not cover any activities on the valve actually worked on. The licensee's significance differentiation between unauthorized work on a component and authorized work on the wrong component did not appear to take into account that the potential consequences and risk were the same. A root cause would have been required for a significant problem evaluation request. However, in this case the licensee performed an apparent root cause and took appropriate corrective actions. The inspectors also identified several other problem evaluation requests for authorized work on wrong components that were classified as nonsignificant (Problem Evaluation Requests 299-2201, 200-0857, and 200-1801), but determined that corrective actions implemented were appropriate for each.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed problem evaluation requests and self-assessments to verify that corrective actions, related to the issues, were identified and implemented in a timely manner commensurate with safety, including corrective actions to address common cause or generic concerns. A listing of specific documents reviewed during the inspection is included as Attachment 1 to this report.

(2) Issues and Findings

Based on a review of the licensee's records, the inspectors concluded that the licensee effectively implemented corrective actions. The inspectors identified no findings related to the effectiveness of corrective actions.

Problem Evaluation Request 200-0364 was initiated on February 25, 2000, to review an alarm indication for high temperature for standby gas treatment Train B First Stage Heater SGT-EHC-1B-1. The initial licensee review noted an error in the work order that misidentified the component numbers, which led to several temperature switches being miscalibrated. During an "investigate and repair" activity, conducted under Work Request 29008685, the licensee determined that the erroneous calibration of temperature switches in the Train B standby gas treatment system rendered it inoperable. The licensee identified three contributors to the event in Problem Evaluation Request 200-0364. First, the work planner review of the model work order was less than adequate. Second, the subsequent reviews and walkdowns were also less than adequate. Finally, the identification tags for the temperature switches did not use a complete, unique identification number.

The licensee also noted in Problem Evaluation Request 200-0364 that three previously issued problem evaluation requests existed with work control packages where errors were present in the model work orders. The inspectors' review of the corrective action in each of the problem evaluation requests indicated that the corrective actions addressed and rectified the identified causes of the specific problems. The overall issue of inadequate attention to detail, as a generic underlying problem, was identified in the licensee's review of Problem Evaluation Request 200-0364. The licensee determined

that the work control organization was not adequately reviewing model work orders to ensure that when work orders for repetitive activities, such as routine preventative maintenance or calibrations, were generated, that information in the model work order was verified against the work task to be performed. The licensee's corrective action to address this issue had each manager conduct a training session with his maintenance inspectors to discuss the human performance issues involved. The inspectors determined that the corrective actions were commensurate with safety.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors interviewed one supervisor, three maintenance craft personnel, eight systems engineers, and four program managers, including the employee concerns program coordinator. These interviews assessed whether conditions existed that would challenge the establishment of a safety conscious work environment.

(2) Issues and Findings

Based on interviews, the inspectors identified no findings related to the safety conscious work environment. The inspectors concluded, based on information collected from interviews with the licensee personnel listed, that these employees were willing to identify issues and accepted the responsibility to proactively identify and enter safety issues into the corrective action program.

**40A6 Meetings**

Exit Meeting

The inspectors debriefed Mr. Paul Inserra, Acting Manager, Regulatory Affairs, and members of the licensee's staff on the preliminary inspection findings at the conclusion of the onsite inspection on November 17, 2000. The licensee's management acknowledged the findings presented.

A telephonic exit meeting was held on December 5, 2000, with Mr. Douglas Coleman, Manager, Regulatory Affairs, and other licensee staff members, during which the lead inspector characterized the results of the in-office review following the inspectors's departure from the site.

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

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

T. Alton, Technical Services  
D. Coleman, Manager, Regulatory Affairs  
Y. Derrer, OE Coordinator  
W. Estes, Acting Manager, Maintenance  
D. Feldman, Manager, Operations  
J. Hanson, Manager, Training  
G. Hendrick, Manager, Operations Support  
T. Hoyle, Supervisor, Corrective Action Program  
P. Inserra, Acting Manager, Regulatory Affairs  
W. LaFramboise, Acting Manager, Design Engineering  
T. Meade, Corrective Action Program  
J. Peters, Manager, Radiological Services  
R. Scherman, Acting Manager, Licensing  
G. Smith, Vice President, Generation/Plant General Manager  
R. Torres, Manager, Technical Services  
P. Walder, Assistant to Vice President Generation/Plant General Manager  
S. Wood, Manager, Chemistry

NRC

J. Pellet, Chief, Operations Branch

PARTIAL LIST OF DOCUMENTS REVIEWED

The following documents were selected and reviewed by the inspectors to accomplish the objectives and scope of the inspection and to support any findings:

Problem Evaluation Requests

200-0009	200-0438	200-0811	200-1226	298-0044	299-2289	299-2464
200-0059	200-0483	200-0857	200-1301	298-0928	299-2293	299-2495
200-0091	200-0489	200-0909	200-1439	298-1046	299-2350	299-2524
200-0105	200-0498	200-1043	200-1500	299-0533	299-2359	299-2530
200-0109	200-0517	200-1051	200-1570	299-0586	299-2367	299-2635
200-0183	200-0736	200-1053	200-1611	299-2158	299-2429	299-2696
200-0191	200-0751	200-1078	200-1625	299-2201	299-2430	299-2734
200-0364	200-0803	200-1121	200-1801	299-2233	299-2449	299-2743

Miscellaneous Documents

Radiological Work Permit Estimated/Actual Dose Summary for Radiological Work Permit 30000058, Valve RWCU-V-437A Adjust Limit Switch

Human Performance Improvement Plan, dated September 26, 2000

Problem Identification Request Listing from October 1999 to October 2000

Problem Identification Request Summary Report for "Valves, Switches, and Configuration Control"

Problem Identification Request Summary Report for "Fuses"

WNP2 Performance Self-assessment, November 1999

Quality Surveillance Report, SR299-053

Quality Audit Report, Audit 299-002

Quality Audit Report, Audit 299-020

Corrective Action Program Monthly Performance Indicator Report, October, 2000

Corrective Action Program Monthly Performance Indicator Report, September, 2000

Corrective Action Program Monthly Performance Indicator Report, July, 2000

Corrective Action Program Monthly Performance Indicator Report, June, 2000

Corrective Action Program Monthly Performance Indicator Report, May, 2000

Corrective Action Program Monthly Performance Indicator Report, April, 2000

Corrective Action Program Monthly Performance Indicator Report, March, 2000

Corrective Action Program Monthly Performance Indicator Report, February, 2000

Corrective Action Program Monthly Performance Indicator Report, January, 2000

Work Order Tasks RGV2-01

Work Order Tasks RGV2-02

Work Order Tasks RGV2-03

Model Work Order WO 00TD27

Work Request WR 29009325

Work Request WR 29009328

Preventative Maintenance Task PMT 0100356301

Preventative Maintenance Task PMT 00RCK601

Technical Memorandum TM-2125, "Licensing Basis Position on Secondary Containment Liquid Bypass Leakage," August 3, 2000

Technical Memorandum TM-2099, "Secondary Containment Liquid Bypass Leakage," December 8, 1995

Procedures

Procedure	Title	Revision
CAP11.1	Corrective Action Program - Program Description	3
SWP-CAP-01	Problem Evaluation Requests	2
SWP-CAP-02	Root Cause Analysis	0
SWP-MAI-01	Work Management - Planning, Scheduling and Work Activities	7
AP 1.2.23	Administrative Control of Plant Operating Keys	26
AP 1.4.1	Plant Modifications	21
PPM 1.3.56	Conduct of Maintenance	2
ABN-FAZ	FAZ (abnormal condition procedures)	1

INITIAL MATERIAL REQUESTED

The initial material requested for the inspection at WNP-2 was:

All procedures and desk guides governing or applying to the corrective action program, including the processing of information regarding generic communications and industry operating experiences.

Index of all corrective action documents (e.g., Problem Evaluation Requests and Root Cause Analysis) for the past 12 months. This also includes a listing of problem evaluation requests by discipline.

All "significant" problem evaluation request closure packages (including PERs which are still open).

All corrective action documents associated with non-escalated no response required or noncited violations within the past 12 months.

All audits or assessments (since January 1999) performed on the corrective action program.

All corrective action program department performance indicators.

All corrective action program reports or metrics (over the past 12 months) used for tracking or trending effectiveness of the corrective action program.

All corrective action documents associated with green findings of NRC inspection reports since June 1999.

All corrective action documents related to industry operating experience generic communications (Information Notices, Generic Letters, Part 21 reports, and Licensee Event Reports).

## ATTACHMENT 2

### **NRC's REVISED REACTOR OVERSIGHT PROCESS**

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

<b>Reactor Safety</b>	<b>Radiation Safety</b>	<b>Safeguards</b>
<ul style="list-style-type: none"><li>● Initiating Events</li><li>● Mitigating Systems</li><li>● Barrier Integrity</li><li>● Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>● Occupational</li><li>● Public</li></ul>	<ul style="list-style-type: none"><li>● Physical Protection</li></ul>

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection Findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN Findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE Findings indicate issues that are of low to moderate safety significance. YELLOW Findings are issues that are of substantial safety significance. RED Findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin, but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner, which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.