



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**

REGION IV  
611 RYAN PLAZA DRIVE, SUITE 400  
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January 28, 2000

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

SUBJECT: NRC INSPECTION REPORT NO. 50-397/99-14

Dear Mr. Parrish:

This refers to the inspection conducted on November 28, 1999, through January 8, 2000, at the WNP-2 facility. The enclosed report presents the results of this inspection.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. The violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. The noncited violation is described in the subject inspection report. If you contest the violation or severity level of the noncited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the WNP-2 facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if requested, 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,

/RA/

Linda Joy Smith, Chief  
Project Branch E  
Division of Reactor Projects

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

Enclosure:  
NRC Inspection Report No. 50-397/99-14

cc w/enclosure:

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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 report to J. D. Wilcox (JDW)  
 E-Mail report to Frank Talbot (FXT)

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)

bcc distrib. by RIV:

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DRP Director

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Resident Inspector

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Senior Project Inspector (DRP/E)

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**ENCLOSURE**

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No.: 50-397  
License No.: NPF-21  
Report No.: 50-397/99-14  
Licensee: Energy Northwest  
Facility: WNP-2  
Location: Richland, Washington  
Dates: November 28, 1999, through January 8, 2000  
Inspector: G. D. Replogle, Senior Resident Inspector  
Approved By: Linda Joy Smith, Chief  
Project Branch E  
Division of Reactor Projects

ATTACHMENT: Supplemental Information

## EXECUTIVE SUMMARY

### WNP-2 NRC Inspection Report No. 50-397/99-14

This information covers a 6-week period of resident inspection.

#### Operations

- The conduct of operations was professional and safety conscious. Operators were consistently knowledgeable of important plant issues and properly anticipated plant operations. Equipment was properly aligned (Sections O1.1 and O2.1).

#### Maintenance

- Maintenance activities were generally conducted in a thorough and professional manner (Section M1.1).
- Instrument and Controls technicians mistakenly initiated work on the Division II diesel generator nonsafety-related bearing temperature switch when the maintenance was specified for the Division I unit. The work package specified the correct diesel but the job planner had inadvertently included a determination sheet for the Division II unit in the work package. The craftsmen missed several opportunities to identify the problem and other barriers were not effective at precluding the event. The operators' response to the ensuing alarm was prompt and effective. The management response was immediate and several additional work controls were implemented. Since the switch was nonsafety-related, no violation of NRC requirements occurred (Section M1.2).
- Operations personnel identified that drywell identified leakage instrumentation was inoperable between October 22 and 27, 1999, which resulted in a Technical Specification Surveillance Requirement 3.4.5.1 violation. This Technical Specification requires, in part, that identified leakage be monitored every 12 hours. Power was secured to the leak rate instrument during the last refueling outage and the equipment was not properly reset, following the power loss, because of inadequate restoration procedures. This Severity level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. The problem is in the licensee's corrective action program as Problem Evaluation Request 299-2404 (Section M8.1).

#### Engineering

- The inspector identified that the licensee failed to meet commitments made to support a December 8, 1995, amendment request for Improved Technical Specification 3.6.1.3, "Primary Containment Isolation Valves." Specifically, the licensee had committed to include all containment isolation valves identified in the Final Safety Analysis Report within a listing of valves subject to the Technical Specification controls. Contrary to the commitment, however, the subject list was not updated to include all of the necessary valves. In addition, one of the omitted containment isolation valves was stuck partially open during this inspection period, but the penetration was subsequently isolated in

response to the inspector's finding. Pending further review of problem significance and the adequacy of the amendment request, this is an unresolved item (Section E2.1).

- Planning and preparation for the year 2000 transition were thorough. No problems were observed during the transition period (Section E8.1).
- Administrative Thermolag corrective measures were completed consistent with the commitments to the NRC (Section E8.2).

#### Plant Support

- Emergency preparedness facilities were properly maintained and on-shift staffing was consistent with the Emergency Plan (Section P2.1).
- Protected area illumination levels, maintenance of the isolation zones around protective area barriers, and security power supply equipment were properly maintained (Section S2.1).
- The feedwater heater bay nonessential fire protection system failed and resulted in spraying water on components in the area. No safety-related equipment was affected. The operators' response was prompt and consistent with the requirements of the Fire Protection Program (Section F8.1).

## Report Details

### Summary of Plant Status

At the beginning of the inspection period, the plant operated at 100 percent power, where it remained for most of the inspection interval. On December 31, 1999, power was reduced to 80 percent, in anticipation of the year 2000 transition period. Power was returned to 100 percent early on January 1, 2000.

## I. OPERATIONS

### **O1 Conduct of Operations**

#### O1.1 General Comments (71707)

Operators were knowledgeable of important plant parameters and problems and were appropriately focused on safety.

### **O2 Operational Status of Facilities and Equipment**

#### O2.1 Engineered Safety Feature System Walkdowns

##### a. Inspection Scope (71707)

The inspector walked down accessible portions of the following safety-related systems:

- High pressure core spray
- Low pressure core spray
- Residual heat removal, Trains A, B, and C
- Reactor core isolation cooling
- Divisions I, II, and III emergency diesel generators
- Standby liquid control system

##### b. Observations and Findings

The inspector found the systems properly aligned for the plant conditions and generally in good material condition.

## II. MAINTENANCE

### **M1 Conduct of Maintenance**

#### M1.1 General Comments - Maintenance

##### a. Inspection Scope (61726, 62707)

The inspector inspected the following maintenance activities:

- Work Order Task 1006363, Reactor Vessel Level 8 Switch Replacement
- Work Order Task SCR8, Division I Diesel Generator Bearing Temperature Switch Replacement (event-related review)

b. Observations and Findings

Maintenance was generally conducted in a thorough and professional manner. Problems associated with craftsmen working on the wrong diesel generator bearing temperature switch are discussed in Section M1.2.

M1.2 Technicians Work on the Wrong Diesel Generator Bearing Temperature Switch

a. Inspection Scope (62707)

On January 4, 2000, operators received an unexpected high bearing temperature alarm for the Division II diesel generator and found that craftsmen were removing a switch on the wrong diesel. The inspector reviewed the circumstances that led to the unexpected alarm.

b. Observations and Findings

The Instrument and Controls technicians were supposed to remove the bearing temperature switch on the Division I diesel generator as part of planned maintenance. However, they mistakenly worked on the Division II unit instead. The work caused an unexpected control room alarm when one of the switch wires was cut. Several barriers broke down leading to the event, including:

- The work package indicated that the work applied to the Division I diesel generator, but the job planner had inadvertently included a determination sheet for the Division II switch in the work package. The independent reviewer did not catch the problem.
- The craft supervisor did not emphasize the location of the work during the prejob briefing.
- The craftsmen did not notice the discrepancy during review of the job package.
- Operations personnel briefed the craft on the job location at two different times before the job, but the craft apparently did not remember the job location when the work started.

The operators' response to the event was prompt and effective. Work was stopped and the switch was restored to service. The management response was prompt and effective as well. New work briefing rules were immediately implemented, for all work, to ensure that plant workers properly understand the scope and locations of their respective job tasks. Since the circuit was nonsafety related, no violation of NRC requirements occurred.



c. Conclusions

Instrument and Controls technicians mistakenly initiated work on the Division II diesel generator bearing temperature switch when the maintenance was specified for the Division I unit. The work package specified the correct diesel but the job planner had inadvertently included a determination sheet for the Division II unit in the work package. The craftsmen missed several opportunities to identify the problem, and other barriers were not effective at precluding the event. The operators' response to the ensuing alarm was prompt and effective. The management response was immediate and several additional work controls were implemented. Since the switch was nonsafety related, no violation of NRC requirements occurred.

**M8 Miscellaneous Maintenance Issues (92902)**

M8.1 (Closed) Licensee Event Report 50-397/99-002: Inadequate drywell identified leakage surveillance because of inoperable equipment.

On October 27, Operations personnel questioned a discrepancy between the indicated identified drywell leakage rate and results from an alternate method (bucket test) and, in the process, identified that drywell identified leakage rate instrumentation was inoperable October 22-27, 1999. Following the discovery, the licensee verified, through alternate means, that total leakage did not exceed the Technical Specification (TS) limit of 25 gpm. Total leakage was believed to be less than 2 gpm during the subject period.

The licensee identified the cause of the instrument failure. Power was lost to the signal converter of the leak rate instrument during planned Refueling Outage R14 maintenance, at which time the converter automatically secured. It was necessary to manually switch converter power back on following the maintenance, but this requirement was not included in the restoration procedures. Planned corrective measures included revising restoration procedures and improving communications between project engineers and procedure authors. The planned measures were acceptable.

The failure to adequately complete the drywell identified leakage between October 22 and 27 was a violation of TS Surveillance Requirement 3.4.5.1. This TS requires that identified leakage be monitored every 12 hours. The surveillance was inadequate because equipment, relied on for the surveillance data, was inoperable at the time. This Severity Level IV violation is being treated as a noncited violation, consistent with Section VII.B.1.a of the NRC Enforcement Policy. The problem is in the licensee's corrective action program as Problem Evaluation Request 299-2404 (50-397/99014-01).

### III. ENGINEERING

#### E2 Engineering Support of Facilities and Equipment

##### E2.1 Primary Containment Isolation Valves

###### a. Inspection Scope (37551)

During a routine tour, the inspector noticed that containment isolation Valve PI-VX-269 was tagged as stuck partially open, but the licensee did not have the penetration isolated. The inspector reviewed the licensee's justification for the condition.

###### b. Observations and Findings

The licensee stated that the affected penetration was not required to be isolated because TS 3.6.1.3, "Primary Containment Isolation Valves," did not apply to containment isolation Valve PI-VX-269. The valve was not identified in Licensee Controlled Specification (LCS) Table 1.6.1.3-1, which contained a listing of containment isolation valves for which TS 3.6.1.3 applied. This valve was in a containment hydrogen/oxygen monitoring instrument line and was normally open during accident conditions. The valve was not credited to close during any design basis accident.

The inspector identified that LCS Table 1.6.1.3-1 was not complete in that it did not contain all containment isolation valves. This condition was contrary to statements made in the licensee's Improved TS submittal for TS 3.6.1.3. Specifically, the licensee's December 8, 1995, letter to the NRC stated, in part,

The list of primary containment isolation valves are proposed to be relocated to the Licensee Controlled Specifications Manual consistent with Generic Letter 91-08 ["Removal of Component Lists From Technical Specifications"].

Generic Letter 91-08, specifies, in part:

The list of containment isolation valves in the TS may not include all valves that are classified as containment isolation valves by the plant licensing basis. Generally, the FSAR [Final Safety Analysis Report] identifies those valves that are classified as containment isolation valves. With this TS change, the LCO [Limiting Conditions for Operation], remedial actions, and surveillance requirements will apply to all valves that are classified as containment isolation valves by the plant licensing basis . . .

This can be accomplished by incorporating in such a procedure the list that identifies all the components for which the TS requirements apply . . . If a specification is revised such that the scope of those components to which it applies is increased, the additional components shall be added to

the TS list when it is incorporated in a plant procedure. Likewise, any list of TS components in existing procedures shall also be updated . . .

NOTE: The removal of the valve list from the TS to the LCS is equivalent to moving the list to a plant procedure.

When the licensee relocated the listing of containment isolation valves from the TS to the LCS, the listing was not updated to include all containment isolation valves. Therefore the licensee's actions were not consistent with the recommendations of Generic Letter 91-08.

In addition to the above, the NRC had apparently based the TS 3.6.1.3 approval, in part, on the inclusion of all containment isolation valves within the LCS table. The NRC Safety Evaluation Report for Amendment 149, dated March 4, 1997, stated:

Table 3.6.3-1 identified in CTS [current Technical Specification] 3.6.1.2.b lists all primary containment . . . isolation valves . . . Thus, it is removed from the TS consistent with Generic Letter 91-08 and placed in the Licensee Controlled Specifications . . .

In response to the inspector's finding, the licensee isolated the penetration associated with Valve PI-VX-269 and initiated plans to update LCS Table 1.6.1.3-1 to include all containment isolation valves. This issue is considered an unresolved item pending further evaluation of the problem scope and the adequacy of the licensee's TS amendment request (50-397/99014-02).

c. Conclusions

The inspector identified that the licensee failed to meet commitments made to support a December 8, 1995, amendment request for Improved TS 3.6.1.3, "Primary Containment Isolation Valves." Specifically, the licensee had committed to include all containment isolation valves identified in the FSAR within a listing of valves subject to the TS controls. Contrary to the commitment, however, the subject list was not updated to include all of the necessary valves. In addition, one of the omitted containment isolation valves was stuck partially open during this inspection period, but the penetration was subsequently isolated in response to the inspector's finding. Pending further review of problem significance and the adequacy of the amendment request, this is an unresolved item.

**E8 Miscellaneous Engineering Issues (37551)**

**E8.1 Year 2000 Transition**

The inspector observed the year 2000 transition from the WNP-2 control room. Based on the plant response, the inspector concluded that planning and preparation for the year 2000 transition were thorough. No problems were observed during the transition period.

## E8.2 Thermolag

During this inspection period, the licensee informed the inspector that all remaining Thermolag administrative commitments were completed. The licensee had completed all physical Thermolag work prior to exiting from Refueling Outage R14 and had committed to complete all remaining administrative tasks prior to January 1, 2000.

## IV. PLANT SUPPORT

### P2 **Status of Emergency Preparedness Facilities, Equipment, and Resources**

#### P2.1 General Comments (71750)

During routine plant tours, the inspector verified that the emergency preparedness facilities were properly maintained and that the licensee maintained at least the minimum staffing required by their Emergency Plan. The inspector also verified that the licensee maintained adequate personnel in the area, throughout the holiday period, to respond to an event. No problems were found.

### S2 **Status of Security Facilities and Equipment**

#### S2.1 General Comments (71750)

During routine tours, the inspector observed protected area illumination levels, maintenance of the isolation zones around protective area barriers, and the status of security power supply equipment. No problems were observed.

### F8 **Miscellaneous Fire Protection Issues**

#### F8.1 Inadvertent Initiation of Fire Sprinkler System (71750)

On December 14, 1999, operators received indication of a fire sprinkler system initiation on the 471' elevation of the turbine building (the feedwater heater bay). An equipment operator subsequently reported that no fire was in the area but water was spraying from one location on the sprinkler header and was falling on some equipment. The sprinkler system was isolated.

The licensee verified that no safety-related equipment was in the area. The fire protection system was left in a nonfunctional condition, but plans were established to repair the fitting at the first reasonable opportunity (the repair requires a downpower to limit worker dose). The inspector verified that, since the system was nonessential, the Fire Protection Program did not limit the out-of-service time and did not require compensatory measures. The licensee's actions and plans were acceptable.

## **V. MANAGEMENT MEETINGS**

### **X1 Exit Meeting Summary**

The inspector presented the inspection results to members of licensee management on January 6, 2000. The licensee acknowledged the findings presented. The inspector asked the licensee 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

J. V. Parrish, Chief Executive Officer  
D. K. Atkinson, Engineering Manager  
I. M. Borland, Radiation Protection Manager  
S. A. Boynton, Quality Assurance Manager  
J. W. Dabney, Outage Manager  
P. J. Inserra, Licensing Manager  
D. W. Martin, Security Manager  
W. S. Oxenford, Operations Manager  
D. J. Poirier, Maintenance Manager  
G. O. Smith, Vice President - Generation/Nuclear Plant General Manager  
R. L. Webring, Vice President - Operations Support

INSPECTION PROCEDURES USED

IP 37551: Onsite Engineering  
IP 61726: Surveillance Observations  
IP 62707: Maintenance Observations  
IP 71707: Plant Operations  
IP 71750: Plant Support  
IP 92902: Maintenance Followup

ITEMS OPENED AND CLOSED

Opened

50-397/99014-02	URI	Failure to meet commitment associated with containment isolation valve TS (Section E2.1)
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Opened and Closed

50-397/99014-01	NCV	Inadequate identified leak rate surveillance because of inoperable equipment (Section M8.1)
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Closed

50-397/99-002	LER	Inadequate identified leak rate surveillance because of inoperable equipment (Section M8.1)
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LIST OF ACRONYMS USED

CFR	Code of Federal Regulations
CTS	current Technical Specification
FSAR	Final Safety Analysis Report
gpm	gallons per minute
LCO	limiting conditions for operation
LCS	Licensee Controlled Specifications
LER	licensee event report
NCV	noncited violation
NRC	U.S. Nuclear Regulatory Commission
TS	Technical Specification
URI	unresolved item