UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

August 6, 2004

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

SUBJECT: COLUMBIA GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000397/2004003

Dear Mr. Parrish:

On June 23, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Columbia Generating Station. The enclosed inspection report documents the inspection findings which were discussed on June 25, 2004, with Mr. Atkinson and other members of your staff.

The inspections examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the NRC has identified four issues that were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that violations are associated with these issues. These violations are being treated as noncited violations (NCVs), consistent with Section VI.A of the Enforcement Policy. These NCVs are described in the subject inspection report. If you contest the violations or significance of these NCVs, 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, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident inspector at the Columbia Generating Station.

In accordance with 10 CFR 2.390 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

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Sincerely,

/RA/

William B. Jones, Chief
Project Branch E
Division of Reactor Projects

Docket: 50-397
License: NPF-21

Enclosure:
NRC Inspection Report
05000397/2004003

cc w/enclosure:
Rodney Webring (Mail Drop PE04)
Vice President, Nuclear Generation
Energy Northwest
P.O. Box 968
Richland, WA 99352-0968

Albert E. Mouncer (Mail Drop PE01)
Vice President, Corporate Services/
General Counsel/CFO
Energy Northwest
P.O. Box 968
Richland, WA 99352-0968

Chairman
Energy Facility Site Evaluation Council
P.O. Box 43172
Olympia, WA 98504-3172

Douglas W. Coleman (Mail Drop PE20)
Manager, Performance Assessment
and Regulatory Programs
Energy Northwest
P.O. Box 968
Richland, WA 99352-0968

Christina L. Perino (Mail Drop PE20)
Manager, Licensing
Energy Northwest
P.O. Box 968
Richland, WA 99352-0968

Max Benitz, Chairman
Benton County Board of Commissioners
P.O. Box 190
Prosser, WA 99350-0190

Dale K. Atkinson (Mail Drop PE08)
Vice President, Technical Services
Energy Northwest
P.O. Box 968
Richland, WA 99352-0968

Thomas C. Poindexter, Esq.
Winston & Strawn
1400 L Street, N.W.
Washington, DC 20005-3502

Bob Nichols
Executive Policy Division
Office of the Governor
P.O. Box 43113
Olympia, WA 98504-3113

Lynn Albin, Radiation Physicist
Washington State Department of Health
P.O. Box 47827
Olympia, WA 98504-7827

Chief, Technological Hazards Branch
FEMA Region X
Federal Regional Center
130 228th Street, SW
Bothell, WA 98201-9796

Electronic distribution by RIV:
Regional Administrator **(BSM1)**
DRP Director **(ATH)**
DRS Director **(DDC)**
DRS STA **(DAP)**
Senior Resident Inspector **(GDR)**
Branch Chief, DRP/E **(WBJ)**
Senior Project Engineer, DRP/E **(VGG)**
Staff Chief, DRP/TSS **(PHH)**
RITS Coordinator **(KEG)**
DRS STA **(DAP)**
Jennifer Dixon-Herrity, OEDO RIV Coordinator **(JLD)**
Columbia Site Secretary **(LEF1)**
Dale Thatcher **(DFT)**
W. A. Maier, RSLO **(WAM)**

ADAMS: ✖ Yes **G** No Initials: __wbj___
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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-397
License:	NPF-21
Report:	05000397/2004003
Licensee:	Energy Northwest
Facility:	Columbia Generating Station
Location:	Richland, Washington
Dates:	March 25 through June 23, 2004
Inspectors:	G. D. Replogle, Senior Resident Inspector, Project Branch E, DRP Z. K. Dunham, Senior Resident Inspector, Project Branch E, DRP V. G. Gaddy, Senior Project Engineer, Project Branch E, DRP D. L. Stearns, Project Engineer, Project Branch E, DRP P. J. Elkmann, Emergency Preparedness Inspector B. K. Tharakan, Health Physicist, Plant Support Branch
Approved By:	W. B. Jones, Chief, Project Branch E, Division of Reactor Projects
ATTACHMENT:	Supplemental Information

CONTENTS

SUMMARY OF FINDINGS

IR05000397/2004003; 3/25/2004 - 6/23/2004; Columbia Generating Station. Personnel Performance During Nonroutine Plant Evolutions and Events, Identification and Resolution of Problems, and Access Control to Radiologically Significant Areas.

The report covered a 13-week period of inspection by the resident inspectors, an emergency preparedness inspector, and a health physicist inspector. Four Green noncited violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. A self-revealing noncited violation of Technical Specification 5.4.1.a (failure to follow procedure) was identified when Energy Northwest failed to hang a clearance tag in accordance with the prescribed clearance order. This resulted in an inadvertent rod misposition event and subsequent action by control room operators to lower reactor core flow and power. Energy Northwest appropriately recovered the mispositioned control rod and hung the clearance tag in accordance with the prescribed clearance order. The primary cause of this finding was related to the crosscutting area of Human Performance.

  This finding was greater than minor because it affected the initiating event cornerstone objectives to limit those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The failure to hang clearance tags in accordance with the Plant Clearance Order procedure was determined to be a performance deficiency which could be reasonably viewed as a precursor to a significant event. The issue was of very low risk significance because, although the finding was associated with an increase in the likelihood of an initiating event (i.e., the inadvertent rod insertion resulted in Energy Northwest reducing core flow and reactor power), the finding: (1) did not contribute to the likelihood of primary loss of coolant accident initiator; (2) did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available; and (3) did not increase the likelihood of a fire or internal/external flood (Section 1R14).

Cornerstone: Mitigating Systems

- Green. An NRC identified noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," was identified for Energy Northwest's failure to promptly address the extent of condition of numerous electrical disconnects which

Energy Northwest had noted to not fully latch closed due to overdue preventive maintenance. Energy Northwest also failed to address the impact of overdue preventive maintenance on seismic qualification of safety-related electrical disconnects. Immediate corrective actions included reviewing the maintenance history of all safety-related electrical disconnects to determine if any disconnects had not received the required preventive maintenance within the specified periodicity. Energy Northwest conducted inspections and utilized engineering judgement to verify that the affected disconnects were fully latched closed.

This finding was greater than minor because it affected the mitigating system cornerstone objectives to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The failures to address extent of condition in a prompt manner and to address seismic qualification was a performance deficiency. The finding was of very low safety significance because the issue was determined to be a qualification deficiency confirmed not to result in a loss of function per Generic Letter 91-18 (Section 4OA2.3).

- Green. A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for an inadequate work order which resulted in a safety-related breaker prematurely tripping on overcurrent. Energy Northwest appropriately adjusted the overcurrent relay and verified that the similar safety-related breaker overcurrent setpoints were appropriately set.

  Energy Northwest's failure to correctly translate design information into a work order to adjust and test the overcurrent trip setpoint for a safety-related breaker was determined to be a performance deficiency. This finding was determined to affect the mitigating systems cornerstone objective to ensure the reliability and capability of systems that respond to an initiating event and therefore was of greater than minor risk significance. The finding was of very low safety significance because the finding: (1) was not a design or qualification deficiency; (2) did not result in the loss of function of a safety system; (3) did not represent an actual loss of a safety function of a single train for greater than its Technical Specification allowed outage time; (4) did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours; and (5) was not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event (Section 4OA2.4).

Cornerstone: Occupational Radiation Safety

- Green. A self-revealing noncited violation of Technical Specification 5.7.2 was reviewed because Energy Northwest failed to control a high radiation area with dose rates greater than 1.0 rem per hour. Specifically, the radiation work permit

associated with waste resin processing did not specify that the dose rates in the immediate work area were as high as 8.0 rem per hour, which resulted in the loss of radiological control over work activities within the area. Energy Northwest initiated a stand-alone radiation work permit for this activity.

The failure to control activities in a high radiation area with dose rates greater than 1.0 rem per hour is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of program and process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation. The finding involved the potential for a worker's unplanned or unintended dose resulting from actions contrary to Technical Specifications. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding did not involve as low as is reasonably achievable issues, no individual received an overexposure or a substantial potential for overexposure, and the ability to assess dose was not compromised. The finding was entered into Energy Northwest's corrective action program as Problem Evaluation Request 203-2767 (Section 2OS1).

B. Licensee Identified Violations

Violations of very low safety significance which were identified by Energy Northwest have been reviewed by the inspectors. Corrective actions taken or planned by Energy Northwest have been entered into their corrective action program. These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status:

The inspection period began with Columbia Generating Station at 100 percent power. The plant was maintained at essentially 100 percent power for the entire inspection period with the following exceptions: May 25-26, Energy Northwest reduced power to 60 percent to address a leaking main condenser tube; May 29-31, Energy Northwest reduced power to 65 percent for load following; and June 10, Energy Northwest briefly reduced power to 78 percent in response to a control rod misposition event.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

The inspectors completed three partial system walkdowns of safety-related systems during the inspection period. The inspectors reviewed system drawings, the Final Safety Analysis Report (FSAR), Technical Specifications, and operating procedures to establish the proper equipment alignment to ensure system operability.

- Standby Gas Treatment System Train A: On April 12, 2004, the inspectors walked down the mechanical and electrical alignment of standby gas treatment Train A while Train B was inoperable for a planned maintenance outage. The inspectors reviewed the alignment of critical system components using Procedure SOP-SGT-STBY, "Placing Standby Gas Treatment in Standby Status," Revision 0, and Flow Diagram, "HVAC-Standby Gas Treatment System," Revision 67.

- Standby Gas Treatment System Train B: On May 11, 2004, the inspectors walked down the mechanical and electrical alignment of standby gas treatment Train B while Train A was inoperable for planned maintenance. The inspectors reviewed the alignment of critical system components using Procedure SOP-SGT-STBY, "Placing Standby Gas Treatment in Standby Status," Revision 0.

- Reactor Core Isolation Cooling System: On June 2, 2004, the inspectors walked down the mechanical and electrical alignment of the reactor core isolation cooling system, while the high pressure core spray (HPCS) system was out of service for troubleshooting. The inspectors reviewed the alignment of critical system components using Procedure SOP-RCIC-STBY, "Placing RCIC in Standby Status," Revision 0, and Flow Diagram M519, "Reactor Core Isolation Cooling System," Revision 86.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Walkdowns

a. Inspection Scope

The inspectors performed walkdowns of six fire protection areas to verify operational status and material condition of fire detection and mitigation systems, passive fire barriers, and fire suppression equipment. The inspectors reviewed Energy Northwest's implementation of controls for combustible materials and ignition sources in selected fire protection zones. The inspectors compared observed plant conditions against descriptions and commitments described in the FSAR, Section 9.5.1, "Fire Protection System," and Appendix F, "Fire Protection Evaluation." The fire areas inspected were:

- Fire Area DG-2; Diesel Generator 1A; May 4, 2004
- Fire Area DG-1; Diesel Generator 1B; May 5, 2004
- Fire Area RC-7, Electrical Equipment Room; May 8, 2004
- Fire Area R-3, High Pressure Core Spray (HPCS) Pump Room; June 13, 2004
- Fire Area M-9, Instrument Rack E-IR-H22/P009 Room; June 13, 2004
- Fire Area M-21, Instrument Rack E-IR-H22/P021; June 13, 2004

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

During the week of April 12, 2004, the inspectors examined one area, the 422 ft. reactor building elevation, which consisted of all the emergency core cooling system pump rooms, to validate Energy Northwest's assumptions and design analysis for internal flood mitigation. The inspector's review included walkdowns of the pump rooms to verify material condition of door seals and sealed wall penetrations, which were located below the expected maximum flood level and a verification of current inter-room sump drain line isolation valve maintenance and sump alarm calibration history. Additionally, the inspectors examined the rooms for any additional sources of internal flooding for which Energy Northwest's internal flooding calculations and analysis had not accounted.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

On June 7, 2004, the inspectors observed one licensed operator requalification training activity as operators participated in a scenario on the plant simulator. The inspectors evaluated crew performance in terms of formality of communication, prioritization of actions, annunciator response, and implementation of procedures. The inspectors compared their observations of crew performance against Energy Northwest's evaluation of the training scenario to determine if Energy Northwest was adequately evaluating operator performance. The inspectors also evaluated simulator fidelity by comparing simulator configurations with the plant control room.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors performed two in-office reviews of maintenance rule-related issues and/or safety-related systems to evaluate Energy Northwest's assessment of availability and reliability of risk-significant structures, systems, and components.

- Problem Evaluation Request (PER) 203-3684, HPCS inoperable due to low system pressure during keep fill pump maintenance (dated October 7, 2003); May 10, 2004

- PER 203-3104; HPCS room exhaust fan failed to automatically start during diesel generator-HPCS run (dated August 20, 2003); May 7, 2004

The inspectors utilized the following documents for this inspection:

- Temporary Instruction 4.22, Maintenance Rule Program, June 19, 2001

- Columbia Generating Station Maintenance Rule Scoping Matrix, October 30, 2003

- NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2

- Procedure 1.5.11; Maintenance Rule Program, Revision 6

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors selected 3 samples of planned and emergent maintenance tasks for evaluation. The evaluation consisted of reviewing Energy Northwest's assessment of plant risk for the activity, risk management and review of compensatory measures, where appropriate, and plant status to ensure that other equipment deficiencies did not adversely impact the planned risk assessment. The inspectors sample included:

- HPCS diesel generator inoperable during surveillance test concurrent with BPA Maintenance on Offsite Breaker 4888 (500kv); April 28, 2004
- Emergent work on Air Compressor CAS-C-1C, Air Dryer CAS-DY-2A, and coolant jacket water Heat Exchanger CJW-HX-1A; May 11, 2004
- Downpower and work on main condenser; May 25 and 26, 2004.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events (71111.14)

a. Inspection Scope

On June 10, 2004, the inspectors reviewed control room staff and plant response to a control rod which had been mispositioned by an equipment operator hanging clearance tags locally at the associated hydraulic control unit (HCU). The equipment operator was to hang the tags on the adjacent HCU, which was out of service for a planned maintenance activity. The inspectors reviewed control board indications and abnormal procedures and interviewed control room staff personnel to determine if Energy Northwest had responded appropriately to the mispositioned control rod.

b. Findings

Introduction. A Green self-revealing NCV was identified for Energy Northwest's failure to follow a clearance order which resulted in an inadvertent mispositioned control rod. This was identified as a violation of Technical Specification 5.4.1.a.

Description. On June 10, 2004, an equipment operator inadvertently manipulated the single rod insert test switches for the scram pilot valves associated with HCU 46-19 during the process of hanging clearance tags on HCU 50-19. HCU 50-19 was located adjacent to HCU 46-19. With the test switches in "Test," HCU 46-19's scram pilot valves de-energized, allowing the associated scram valves to open and the control rod to insert. Once the equipment operator recognized the mistake, he restored the test switches to a normal configuration, which subsequently closed the scram valves prior to Control Rod 46-19 fully inserting. This resulted in Control Rod 46-19 settling at step 14. Reactor operators subsequently inserted Control Rod 46-19 to the full in position by normal means and reduced core flow per Procedure ABN-ROD, which resulted in a final reactor power of 78 percent. The operators verified that core thermal limits had not been violated during the transient. The mispositioned rod was recovered and restored to its normal full out position and reactor power restored to full power later that same day.

Energy Northwest identified during a subsequent incident review board that the equipment operator had not self-checked his actions prior to manipulating the incorrect HCU's test switches, nor had he provided time for a second operator who was present to perform an independent simultaneous verification of the switch manipulation. Energy Northwest implemented the appropriate actions to recover the control rod and correctly hang the clearance tag. Additional corrective actions are being reviewed by the licensee for the human performance aspects of this event.

Analysis. The equipment operator's failure to verify that the correct HCU's single rod insert test switch was being manipulated in accordance with Energy Northwest's plant clearance order procedure was determined to be a performance deficiency. The inspectors also determined that the failure to hang clearance tags in accordance with the clearance order could be reasonably viewed as a precursor to a significant event. By hanging tags on incorrect equipment, safety-related components which may be needed to respond to an initiating event could be inadvertently rendered inoperable. The inspectors concluded that the issue was of very low risk significance (Green). Although the finding was associated with an increase in the likelihood of an initiating event (i.e., the inadvertent rod insertion resulted in Energy Northwest reducing core flow and reactor power) the finding: (1) did not contribute to the likelihood of a primary loss of coolant accident initiator; (2) did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available; and (3) did not increase the likelihood of a fire or internal/external flood.

Enforcement. Technical Specification 5.4.1.a required, in part, that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Appendix A, Section 1.c, required, in part, that safety-related activities including equipment control (e.g., locking and tagging) should be covered by written procedures. Contrary to this requirement, on June 10, 2004, Energy Northwest, in the process of hanging clearance

order tags, simultaneously manipulated HCU 46-19's Single Rod Insert Test Switches RPS-RMS-4619/TS/A and RPS-RMS-4619/TS/B to the "test" position contrary to Clearance Order D-CRD-5019-001, Tag Serial Numbers 28276 and 28277, which required that Single Rod Insert Test Switch RPS-RMS-5019/TS/A and RPS-RMS-5019/TS/B be positioned to "test." This resulted in an inadvertent rod insertion of Control Rod 46-19, which resulted in the control room operators reducing core flow and power per Procedure ABN-ROD. This violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 50-397/04-03-01, Failure to Follow Clearance Order Results in Mispositioned Control Rod). Energy Northwest documented this issue in their corrective action program in PER 204-0843.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed four operability evaluations to evaluate Energy Northwest's assessment of operability for degraded or nonconforming equipment performance. The inspectors reviewed the FSAR, Technical Specifications, applicable system drawings and design specifications, and associated corrective action documents to determine if Energy Northwest had appropriately evaluated operability.

- Followup Assessment of Operability (FAO) 204-0701, CRD-V-116 Has a Crack in the Downstream Threaded End Connection Causing a Small Air Leak; April 16, 2004
- Condition Report 2-04-0165, Inoperability of Whitaker Fire Cables; May 12, 2004
- PER 204-0718, The Net Effect of Errors in CMR-93-0588 Increase Calculated Surveillance Test Pressures for RHR Pumps A, B & C by 10.4 psig; May 17 through June 14, 2004
- FAO 204-0775, Various Cutler Hammer/Westinghouse Circuit Breakers in E-SM-7, and 8 and DG Switchgear Do Not Have Both Outboard Wheels Against Floor Pan When Seismically Latched; May 18, 2004

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

On April 1, 2004, the inspectors completed one permanent plant modification inspection related to Plant Design Change 2074, "HPCS-LS-3A and HPCS-LS-3B Replacement," Revision 0. The purpose of Level Switches HPCS-LS-3A and HPCS-LS-3B was to detect a loss of suction from the condensate storage tanks to the HPCS pump on a break of the suction piping and to automatically switch the suction source to the suppression pool. The purpose of the modification was to replace the level switches with pressure switches which were more appropriate for the application. The inspectors reviewed the design change package and associated 10 CFR 50.59 evaluation and evaluated whether the change could adversely affect the design and licensing basis of the facility. The inspectors also reviewed electrical and mechanical flow diagrams and instrument setpoint revisions to ensure that the plant modification would be able to perform its design function. Lastly, the inspectors walked down the modification in the field to ensure that the modification was installed in accordance with the design package.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors observed or completed an in-office review of seven postmaintenance tests. The inspectors evaluated the scope of the maintenance activity, reviewed design basis information, and reviewed Technical Specifications to verify that each test adequately demonstrated equipment operability. The inspection samples included:

- Work Order (WO) 01068388, SGT-FT-1B1 Replace Component; April 13, 2004; reviewed on April 14, 2004
- WO 01071493, LPCS-CB-P1 MOC Switch Retest; April 22, 2004; reviewed on April 26, 2004
- WO 01072762, CRD-HCU-2223 Refurbishment; April 20, 2004; reviewed May 1, 2004
- WO 01061604, DLO-F-1A1 Oil Leak on Pipe Flange; May 19, 2004; and WO 01061605, DLO-F-1A2 Oil Leak on Pipe Flange; May 19, 2004; reviewed on June 1, 2004
- WO 01056478, DLO-LS-1A1, Replace Level Switch DLO-LS-1A1; May 17, 2004; reviewed June 1, 2004

- WO 01066449, Repair Valve Cond-V-231B linkage, test performed on December 23, 2003; reviewed on June 10, 2004

- WO 01037496, Replace Valve Cond-V-231B, test performed on December 9, 2003; reviewed on June 10, 2004

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed the performance and/or reviewed the results of the six surveillance tests listed below. Of the six surveillance tests, four were in-service tests of risk significant components. The inspectors reviewed Technical Specification, FSAR, and applicable Energy Northwest procedures to determine if the surveillance tests demonstrated that the tested components were capable of performing their intended design functions. Additionally, the inspectors evaluated significant test attributes, such as potential preconditioning, clear acceptance criteria, accuracy and range of test equipment, procedure adherence, and completion and acceptability of test data.

- Procedure OSP-ELEC-S702, Diesel Generator 2 Semi-Annual Operability Test, Revision 19; April 8, 2004

- Procedure OSP-RHR/IST-Q702, RHR Loop A Operability Test, Revision 16; April 24, 2004

- Procedure OSP-SW/IST-Q702, Standby Service Water Loop B Operability, Revision 11; May 6, 2004

- Procedure OSP-ELEC-M702, Diesel Generator 2 - Monthly Operability Test, Revision 19, May 6, 2004

- Procedure OSP-LPCS/IST-Q702, LPCS System Operability Test, Revision 12; May 18, 2004

- Procedure OSP-RCIC/IST-Q701, RCIC Operability Test, Revision 28; June 8, 2004

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

On April 7, 2004, the inspectors evaluated Energy Northwest's approval of periodic use of a battery rail charger to charge individual battery cells. A procedure revision to Procedure PPM 10.25.181, "Single Cell Charging of Batteries," Revision 1, allowed for charging of a battery cell while in service in one of the station's safety-related batteries. The inspectors reviewed the FSAR, Technical Specifications, IEEE Std 450-1975, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations," and interviewed a system engineer to determine the acceptability of periodically installing a battery charger on a safety-related battery cell while it was in service and to ensure that the associated battery would not be adversely affected. The inspectors also reviewed an associated 10 CFR 50.59 applicability screening.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert Notification System Testing (71114.02)

a. Inspection Scope

The inspector interviewed Energy Northwest and Federal Emergency Management Agency staff concerning the status and reliability of Energy Northwest tone alert radios to determine success requirements for annual tests of the tone alert radio system. The inspector also reviewed:

- Results from annual tone alert radio tests and associated telephone surveys conducted between October 1999 and December 2003
- Energy Northwest tone alert radio test result reports made to the Federal Emergency Management Agency for the years 1999 through 2003
- Documentation from the bench testing of returned tone alert radios following the December 2003 test
- "Site Specific Offsite Radiological Emergency Preparedness Alert and Notification System Quality Assurance Verification," May 1994
- "EAS Radio Acceptance Test, Model 5220-FM-EAR," October 2003 Revision

- January 15, 2004, correspondence from Federal Emergency Management Agency, Region X, to Energy Northwest concerning the December 2003 tone alert radio test
- March 2004 correspondence from Energy Northwest to Federal Emergency Management Agency, Region X, requesting changes to Energy Northwest's approved tone alert radio design
- Energy Northwest public information brochures concerning tone alert radios
- Energy Northwest emergency preparedness quarterly public newsletters, published September and December 2003 and March 2004

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspector performed an in-office review of Revision 38 to the Columbia Generating Station Emergency Plan. This revision: (1) clarified the transfer of command-and-control between emergency response facilities, (2) clarified the role of the on-shift incident advisor, (3) corrected the frequency for performing medical drills, and (4) clarified references to the Department of Energy's radiological medicine contractor [this contractor is also used by Energy Northwest under a letter of agreement]. The revision was compared to its previous revision and to the requirements of 10 CFR 50.47(b) and 50.54(q) to determine if the revision decreased the effectiveness of the plan.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed one Energy Northwest simulator evaluation on June 14, 2004, in which the control room staff were required to make and report emergency classifications in response to a simulated accident. The inspectors reviewed the facility emergency plan implementing procedures and Emergency Plan to establish the criteria for the simulated emergency classifications. Additionally, the inspectors reviewed the completed emergency action level declaration and notification forms to verify the accuracy of the forms. Lastly,

the inspectors reviewed Energy Northwest's evaluation of the drill to ensure that any performance deficiencies associated with classification, notification, and PAR development were accurately characterized.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY
Cornerstone: Occupational Radiation Safety [OS]

2OS1 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope

The inspector assessed Energy Northwest performance with respect to implementing physical and administrative controls for airborne radioactivity areas, radiation areas, high radiation areas, and worker adherence to these controls. The inspector used the requirements in 10 CFR Part 20 and Energy Northwest's procedures required by Technical Specifications as criteria for determining compliance. During the inspection, the inspector interviewed the radiation protection manager, radiation protection supervisors, and radiation workers. The inspector performed independent radiation dose rate measurements and reviewed the following items:

- Performance indicator events and associated documentation packages reported by Energy Northwest in the Occupational Radiation Safety Cornerstone (PER 203-1683)
- Controls (surveys, posting, and barricades) of three radiation, high radiation, or airborne radioactivity areas
- Radiation work permit, procedure, and engineering controls and air sampler locations
- Conformity of electronic personal dosimeter alarm setpoints with survey indications and plant policy; workers' knowledge of required actions when their electronic personnel dosimeter noticeably malfunctions or alarms
- Physical and programmatic controls for highly activated or contaminated materials (nonfuel) stored within spent fuel and other storage pools
- Self-assessments, audits, Energy Northwest event reports, and special reports related to the access control program since the last inspection (no Energy Northwest event reports or special reports documented)
- Corrective action documents related to access controls

- Energy Northwest actions in cases of repetitive deficiencies or significant individual deficiencies
- Radiation work permit briefings and worker instructions
- Adequacy of radiological controls such as required surveys, radiation protection job coverage, and contamination controls during job performance
- Controls for special areas that have the potential to become very high radiation areas during certain plant operations
- Posting and locking of entrances to all accessible high dose rate - high radiation areas and very high radiation areas
- Radiation worker and radiation protection technician performance with respect to radiation protection work requirements

Either because the conditions did not exist or an event had not occurred, no opportunities were available to review the following items:

- Barrier integrity and performance of engineering controls in airborne radioactivity areas
- Adequacy of Energy Northwest's internal dose assessment for any actual internal exposure greater than 50 millirem committed effective dose equivalent
- Dosimetry placement in high radiation work areas with significant dose rate gradients
- Changes in Energy Northwest procedural controls of high dose rate - high radiation areas and very high radiation areas

Therefore, the inspector completed 21 of the required 21 samples.

b. Findings

Introduction. A Green self-revealing noncited violation of Technical Specification 5.7.2 was reviewed because Energy Northwest failed to control a high radiation area with dose rates greater than 1.0 rem per hour. Specifically, the radiation work permit associated with waste resin processing did not specify that the dose rates in the immediate work area were as high as 8.0 rem per hour, which resulted in the loss of radiological control over work activities within the area.

Description. On July 21, 2003, an individual that was performing waste resin processing activities exited the radiologically controlled area with the individual's electronic dosimeter in accumulated dose alarm. The individual was working on a waste resin liner to remove the fill head and cap the liner. The radiation work permit for this activity stated that dose

rates on liners have historically been up to 10,000 mrem per hour on contact and 1,500 mrem per hour at 30 centimeters. A survey taken prior to removing the fill head indicated that the dose rates were 15,000 millirem per hour on contact and up to 500 millirem per hour in the immediate work area. The individual was briefed about these conditions and the fill head was removed. An updated survey taken on the top of the resin liner after the fill head was removed indicated that the dose rate was 20,000 millirem per hour at the plane of the hole left by the fill head. However, no update survey was taken of the immediate work area. Therefore, the health physics technician that was providing job coverage and the worker were not aware of the dose rates in the immediate work area. This led to the loss of control of work activities in the high radiation area because shortly after arriving at the work area the worker's electronic dosimeter alarmed, the worker immediately exited the work area, and work activities were stopped to review the incident. Subsequent surveys of the work area showed that the dose rates were between 2,800 millirem per hour and 8,000 millirem per hour. Energy Northwest initiated a stand-alone radiation work permit for this activity.

Analysis. The failure to control activities in a high radiation area greater than 1,000 millirem per hour by means of a radiation work permit that specified the dose rates in the immediate work area is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of program and process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation. The finding involved the potential for a worker's unplanned or unintended dose resulting from actions contrary to Technical Specifications. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance (Green) because the finding did not involve as low as is reasonably achievable planning or work controls, no individual received an overexposure or a substantial potential for overexposure, and the ability to assess dose was not compromised.

Enforcement. Technical Specification 5.7.2 states, in part, that activities in high radiation areas with dose rates greater than 1.0 rem per hour shall be controlled by means of a radiation work permit that includes specification of radiation dose rates in the immediate work area. On July 21, 2003, Energy Northwest failed to control work activities in a high radiation area with dose rates greater than 1.0 rem per hour by means of a radiation work permit that specified the dose rates in the immediate work area of a waste resin liner during waste resin processing activities. Because the finding was of very low safety significance and has been entered into the corrective action program as PER 203-2767, this violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy: NCV 50-397/04-03-02, Failure to control a high radiation area with dose rates greater than 1.0 rem per hour.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Reactor Safety

a. Inspection Scope

The inspectors assessed the accuracy of three performance indicators this inspection period. The inspectors compared the data with operator logs, equipment out of service logs, and corrective action documents for the last four quarters. The inspectors verified that Energy Northwest calculated performance indicators in accordance with NEI (Nuclear Energy Institute) 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 2. Performance indicators included:

- Safety System Functional Failures
- Unplanned Power Changes per 7000 Critical Hours
- Scrams with Loss of Normal Heat Removal

b. Findings

No findings of significance were identified.

.2 Radiation Safety

a. Inspection Scope

The inspector sampled Energy Northwest submittals for the performance indicators listed below for the period from May 2003 through March 2004. To verify the accuracy of the performance indicator data reported during that period, performance indicator definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify the basis in reporting for each data element.

Occupational Radiation Safety Cornerstone

- Occupational Exposure Control Effectiveness Performance Indicators

Energy Northwest records reviewed included corrective action documentation that identified occurrences in high radiation areas with dose rates greater than 1,000 millirem per hour at 30 centimeters (as defined in Technical Specification 5.7.2), very high radiation areas (as defined in 10 CFR 20.1003), and unplanned personnel exposures (as defined in NEI 99-02). Additional records reviewed included as low as is reasonably achievable records and whole body counts of selected individual exposures. The inspector interviewed Energy Northwest personnel that were accountable for collecting and evaluating the performance indicator data. In addition, the inspector toured plant areas to verify that high radiation and very high radiation areas were properly controlled.

Public Radiation Safety Cornerstone

- Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences

Energy Northwest records reviewed included corrective action documentation that identified occurrences for liquid or gaseous effluent releases that exceeded performance indicator thresholds and those reported to the NRC. The inspector interviewed Energy Northwest personnel that were accountable for collecting and evaluating the performance indicator data.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Cross-References to Problem Identification and Resolution Findings Documented Elsewhere

None

.2 Semiannual Trend Review

a. Inspection Scope

During the inspection period, the inspectors reviewed Energy Northwest's corrective action program, interviewed Energy Northwest personnel, and reviewed maintenance rule program and system health reports to identify any significant adverse system or equipment trends since January 1, 2004. The following adverse equipment trends were noted by Energy Northwest:

- Wetwell to Drywell Vacuum Breakers - Indication problems; PER 204-0742
- Barton Instrument Differential Pressure Indicating Switches - Various deficiencies noted such as undersized washers, set point drift, mechanical binding, etc.; PER 204-0660
- Electrical Fused Disconnects not Latching Closed; PER 204-0012

Energy Northwest documented each of these trends in their corrective action program. The inspectors did not identify any other significant adverse equipment trends during the review. The inspectors selected one trend, Electrical Fused Disconnects Not Latching Closed, for a detailed followup inspection. Additionally, the inspectors reviewed Energy Northwest's assessment of corrective actions and extent of condition reviews for the other noted trends.

On June 9, 2004, the inspectors completed a sample of corrective actions associated with an Energy Northwest identified trend of electrical disconnects which had either failed to close following maintenance or had inadvertently opened with little or no mechanical agitation while in service. The inspectors reviewed work requests and corrective action documents and interviewed Energy Northwest personnel to determine the adequacy of

Energy Northwest's corrective actions, extent of condition review, timeliness of actions, and disposition of operability questions.

b. Findings

Introduction. A Green NCV was identified for the failure to promptly address the extent of condition for a noted trend of fused electrical disconnect maintenance issues and for failure to identify the impact of improper maintenance on electrical disconnect seismic qualification. This was considered to be a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions."

Description. Since February 2002, Energy Northwest had tracked 25 instances of electrical disconnects which had been difficult to close or had inadvertently opened, 3 of which were associated with safety-related components or supported a safety-related function. Prior to February 2002, Energy Northwest had tracked an additional (approximate) 60 examples of both nonsafety- and safety-related disconnects exhibiting similar problems dating back to 1994.

Energy Northwest identified that the cause of the failures was attributed to the disconnects not being lubricated and inspected within the required maintenance periodicity. Without proper lubrication, a disconnect, although it could make electrical contact, may not fully latch when closed. If not fully latched the disconnect may not remain closed if it were to be mechanically agitated, such as during a seismic event. Historically, Energy Northwest performed this maintenance activity as part of a general motor control center maintenance activity while the motor control center was out of service during an outage. However, some disconnects would periodically not receive the preventive maintenance because the disconnect may still be in use with temporary power installed in support of other outage-related activities.

The inspectors noted that Energy Northwest had inconsistently documented the disconnect failures in the corrective action program. Of the 25 failures which had been tracked since February 2002, only 10 were captured in Energy Northwest's corrective action program. Energy Northwest did document all failures associated with safety-related components in the corrective action program. In all cases, after a failure was identified, Energy Northwest would immediately generate a work request to inspect and lubricate the affected disconnect. During an interview with a system engineer, the inspectors determined that all the failures (safety- and nonsafety-related) had been tracked through the use of a spreadsheet. This spreadsheet was a tool that the system engineer had used to track the individual failures and to determine if any specific disconnect failures were repetitive.

Additionally, the inspectors identified that Energy Northwest had noted the trend of failed disconnects in PER 204-0012, dated January 3, 2004. As a corrective action, Energy Northwest planned to review the scheduled preventive maintenance due dates for critical motor control centers and adjust due dates as necessary to expedite the inspection and lubrication of critical electrical disconnects. At the end of the inspection period, Energy Northwest had not yet expedited and performed any preventive maintenance on critical

electrical disconnects. The inspectors also identified that Energy Northwest had not taken action to review safety-related electrical disconnect and motor control center maintenance histories to determine which safety-related disconnects, if any, had not been adequately maintained. The inspectors concluded that this information was necessary to adequately assess the extent of condition of the safety-related disconnect maintenance history and to determine if there were any safety related components which may not be operable or may be degraded. The inspectors also identified that Energy Northwest had not considered the impact of an improperly latched disconnect on it's associated seismic qualification. The inspectors were concerned that without proper maintenance the disconnects may not meet seismic qualifications and may inadvertently open during a seismic event. The inspectors communicated this concern to Energy Northwest. Energy Northwest documented the inspectors' concerns in PER 204-0842.

Energy Northwest subsequently performed a review of maintenance activities for all safety-related electrical disconnects and identified 59 disconnects which required further inspection because the required preventive maintenance had not been performed or there was inadequate documentation to demonstrate that the disconnects had been lubricated as required by the maintenance activity. Energy Northwest concluded that the identified disconnects were operable but degraded. Energy Northwest's conclusion was based on followup inspections and engineering judgement to verify that the disconnects were fully latched and therefore would remain closed during a seismic event.

Analysis. Energy Northwest's failures to address, in a prompt manner, the extent of condition of the failed electrical disconnects as it related to safety-related electrical disconnects and to address seismic qualification for electrical disconnects if not properly latched was considered a performance deficiency. Additionally, the inspectors determined that these failures affected the reliability and capability of mitigating systems that respond to initiating events and therefore were of greater than minor risk significance. However, the finding was of very low safety significance (Green) because the issue was determined to be a qualification deficiency confirmed not to result in a loss of function per Generic Letter 91-18.

Enforcement. Regulation 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," required, in part, that conditions adverse to quality, such as equipment deficiencies, are promptly identified and corrected. On January 3, 2004, Energy Northwest documented that safety-related electrical disconnects were known to not fully latch closed if not properly maintained. However, Energy Northwest failed to take prompt action to identify whether other safety-related electrical disconnects were inadequately lubricated nor that an improperly latched disconnect adversely affected seismic qualification. It was not until June 18, after being prompted by the inspectors, that Energy Northwest performed a review of the maintenance history to support operability and seismic qualification. Energy Northwest's failure to take prompt corrective action was contrary to Criterion XVI. This violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 50-397/04-03-03, Failure to Promptly Address Extent of Condition and Seismic Qualification of Safety Related Disconnects). Energy Northwest documented this issue in their corrective action program in PER 204-0842. Immediate corrective actions included reviewing the maintenance history of all safety-related

electrical disconnects to determine if any disconnects had not received the required preventive maintenance within the specified periodicity. No inoperable disconnects were identified.

.3 Selected Issue Followup Inspection - Premature Overcurrent Trip of Breaker DEA-42-4A4E

a. Inspection Scope

During the inspection period, the inspectors reviewed the corrective action history associated with inadvertent tripping on overcurrent of Breaker DEA-42-4A4E. Breaker DEA-42-4A4E provided power to HPCS Diesel Exhaust Air Fan DEA-FN-31, which assisted with cooling of the HPCS diesel room while the diesel was operating. Breaker DEA-42-4A4E had inadvertently tripped on overcurrent on April 28, 2004, and previously on August 20, 2003. The inspectors reviewed work requests and corrective action documents and interviewed Energy Northwest personnel to determine the adequacy of Energy Northwest's corrective actions, extent of condition review, timeliness of actions, and disposition of operability questions.

b. Findings

Introduction. A self-revealing Green NCV was identified for an inadequate WO which prescribed the incorrect setting and bench test acceptance criteria for Breaker DEA-42-4A4E. This was considered to be a violation of Technical Specification 5.4.1.a.

Discussion. On April 28, 2004, HPCS Diesel Exhaust Fan DEA-FN-31 failed to run when it's associated circuit breaker, DEA-42-4A4E, tripped on an overcurrent condition. Fan DEA-FN-31 was designed to automatically start on an HPCS diesel generator start to ensure that ambient temperatures in the room could support operability of the HPCS diesel generator for the duration of its design mission time. Energy Northwest determined that the instantaneous overcurrent trip setting for Breaker DEA-42-4A4E had been set incorrectly (too low) as part of a corrective action in response to a previous similar overcurrent trip condition, which had occurred on August 20, 2003. Energy Northwest also determined that the HPCS diesel generator was operable without Fan DEA-FN-31 as long as outside ambient air temperature did not exceed 105°F. Outside air temperature had been well below 105°F from the time that the breaker had been replaced until it tripped open on April 28.

The inspectors reviewed the circumstances of the April 28, 2004, and the August 20, 2003 overcurrent trips to determine the adequacy of the associated corrective actions. The inspectors noted the following:

(1) In December 2002, Energy Northwest determined that the overcurrent trip setpoints of six breakers in the HPCS system needed to be increased. This was a corrective action to a breaker trip of the HPCS Service Water Pump in October 1999. Energy Northwest determined that the breaker had tripped due to lower

than normal electrical bus voltage, which caused a high motorstart current during a pump start.

(2) In April 2003, Energy Northwest raised the trip setpoints on four of the six breakers. The other two breakers, one of which was Breaker DEA-42-4A4E, were not adjusted because Energy Northwest identified that the as-found trip setpoints were greater than the revised setpoints. Energy Northwest documented this concern in PER 203-1094.

(3) On July 26, 2003, Energy Northwest lowered the trip setpoint for Breaker DEA-42-4A4E to the desired revised setpoint.

(4) On August 20, 2003, DEA-FN-31 failed to automatically start during a run of the HPCS diesel generator due to Breaker DEA-42-4A4E tripping on overcurrent. Energy Northwest documented this event in PER 203-3104. As an immediate corrective action, Energy Northwest readjusted the trip setpoint for Breaker DEA-42-4A4E to it's previous higher setpoint.

(5) On September 18, 2003, Energy Northwest determined that the cause of the breaker overcurrent trip was not performing an adequate postmaintenance test on Breaker DEA-42-4A4E following the lowering of its trip setpoint on July 26. Energy Northwest had not performed an overcurrent trip test after the setpoint had been adjusted.

(6) On November 16, 2003, Energy Northwest bench tested a replacement breaker for DEA-42-4A4E in accordance with WO 01064035 and PPM 10.25.48, "Testing Molded Case Circuit Breakers," Revision 9. The bench test included an overcurrent trip test. However, the trip setting was inadvertently set too low during the bench test. Energy Northwest noted that WO 01064035 originally specified the correct overcurrent trip setting and that, prior to the performance of the test, the trip setting and the associated acceptance criteria were changed on the WO. The changed trip setting was commensurate with historical design information which was no longer valid. The breaker, with the incorrect trip setting, was installed on March 2, 2004. The breaker subsequently tripped on overcurrent during the HPCS diesel generator start on April 28.

The inspectors identified the following concern during the review:

Energy Northwest's apparent cause evaluation in PER 203-3104 only addressed the inadequate postmaintenance testing of the two breakers which had their trip setpoints lowered. The inspectors determined that, similar to these two breakers, the four breakers which had their trip setpoints increased had also not received an adequate postmaintenance test. The inspectors determined that Energy Northwest's extent of condition review was narrowly focused on only the breakers which had their trip setpoints lowered and did not encompass all of the breakers. Energy Northwest documented this concern in PER 204-0746. Energy Northwest performed an operability evaluation for the four breakers and concluded that the breakers were operable. This conclusion was based

on the fact that the overcurrent trip setpoints had been raised, therefore ensuring that the breakers would remain closed to provide power to their safety-related loads. However, Energy Northwest planned to test the trip setpoints of the remaining four breakers during the next available opportunity to verify the as-found trip setpoint.

Analysis. Energy Northwest's failure to correctly translate design information into WO 0164035 to correctly adjust and test the overcurrent trip setpoint for Breaker DEA-42-4A4E was determined to be a performance deficiency. The inspectors also determined that the revision to WO 01064035 to change the overcurrent trip setpoint and acceptance criteria was a procedural quality concern which affected the mitigating systems cornerstone objective to ensure the reliability and capability of systems that respond to an initiating event. The issue was of very low safety significance (Green) because the finding: (1) was not a design or qualification deficiency; (2) did not result in the loss of function of a safety system; (3) did not represent an actual loss of a safety function of a single train for greater than its Technical Specification allowed outage time; (4) did not represent an actual loss of safety function of one or more non-Technical Specification train of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours; and (5) was not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event.

Enforcement. Technical Specification 5.4.1.a required, in part, that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Appendix A, Section 9.a, required, in part, that maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures appropriate to the circumstances. Contrary to this requirement, on November 16, 2003, WO 01064035, a type of procedure, was inadequate in that it failed to prescribe the correct overcurrent trip setpoint for Breaker DEA-42-4A4E as specified in Engineering Change 2037. The incorrect setting of the overcurrent trip setpoint resulted in the breaker prematurely tripping on April 28, 2004, and rendering its associated safety-related load inoperable. This violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 50-397/04-03-04, Inadequate Work Order Results in Premature Overcurrent Trip of Breaker). Energy Northwest documented this issue in their corrective action program in Condition Report 2-04-01833.

.4 Annual Sample Review

a. Inspection Scope

The inspector performed a detailed review of Condition Report 2-04-02560 and PERs 203-0395, 203-2874, 203-3712. These corrective action reports were associated with the reliability of the tone alert radio system, which comprises the primary means of notifying the public of a station emergency. The reports were reviewed to ensure that the full extent of the issues were identified, appropriate evaluations were performed, and appropriate corrective actions were specified and prioritized. The inspector evaluated the reports against the requirements of Energy Northwest's corrective action program as

described in Site-Wide Procedure SWP-CAP-01, “Corrective Action Program,” Revisions 7 and 8, and 10 CFR Part 50, Appendix B.

b. Findings and Observations

There were no findings identified associated with the four reviewed corrective action reports. The inspector determined that between October 1999 and January 2004: (1) Energy Northwest did ensure that tone alert radios were promptly supplied to households identified during the annual telephone survey as needing radios, (2) defective radios were replaced within 2 weeks of the test, and (3) the tone alert radio registry was accurately updated, as required by the Federal Emergency Management Agency design report. The inspector also determined that current performance problems associated with the tone alert radio system were being entered into the corrective action program and that corrective actions taken for identified tone alert radio issues had been comprehensive and timely.

The inspector also determined that, prior to 2003, Energy Northwest had not routinely entered tone alert radio performance problems into the corrective action system because it was not an “in-plant” system and the annual radio test was not considered as important as a plant surveillance. Because of this, Energy Northwest failed to enter into the corrective action program a failure by one county to send correct radio activation codes during the October 2002 annual radio test, a failure by another county to send correct radio activation codes during the October 2003 radio test, and a significant drop in radio reliability as measured in the January 2003 retest (which also did not meet the Federal Emergency Management Agency acceptance criteria). In addition, the inspector identified that PER 203-0395 incorrectly stated the reason for conducting a retest of the tone alert radio system. PER 203-0395 focused on minor related problems, such as the late submission of the annual Letter of Certification to the Federal Emergency Management Agency, rather than on the failures which occurred during the annual radio test.

4OA3 Event Followup (71153)

.1 (Closed) Licensee Event Report 50-397/2004-001, “Unanticipated Inoperability of Both Control Room Emergency Filtration (CREF) Subsystems”

See Section 4OA7.1 for details on closure of this licensee event report.

4OA4 Crosscutting Aspects of Findings

Section 1R14 of the report documents an event with human performance crosscutting aspects. An operator failed to hang a clearance tag in accordance with the prescribed clearance order. This resulted in an inadvertent rod misposition event and subsequent action by control room operators to lower reactor core flow and power.

4OA5 OTHER

.1 TI 2515/156, “Offsite Power System Operational Readiness”

a. Inspection Scope

The inspectors reviewed Energy Northwest maintenance records, event reports, corrective action documents and procedures, and interviewed the station engineering, maintenance, and operations staff to collect data necessary to complete Temporary Instruction 2515/156. This review was conducted to confirm the operational readiness of the offsite power systems in accordance with NRC requirements, such as Appendix A to 10 CFR Part 50, General Design Criterion 17; Criterion XVI of Appendix B to 10 CFR Part 50, Plant Technical Specifications for offsite power systems; 10 CFR 50.63; 10 CFR 50.65 (a)(4), and Energy Northwest procedures. Specifically, the inspectors reviewed Energy Northwest's procedures and processes for ensuring that the grid reliability conditions are appropriately assessed during periods of maintenance in accordance with the maintenance rule in 10 CFR 50.65 (a)(4). The inspectors also assessed the reliability and grid performance through a review of historical and current data to verify compliance with the station blackout rule in 10 CFR 50.63, Technical Specifications, and Generic Design Criteria 17. Lastly, the inspectors assessed Energy Northwest's implementation of operating experience that was applicable to the site as well as corrective action documents to ensure issues were being identified at an appropriate threshold, assessed for significance, and then appropriately dispositioned. Documents reviewed for this temporary instruction are listed in attachment.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

Resident Inspector Routine Exit Summary

On June 25, 2004, the resident inspectors presented the inspection results to Mr. D. K. Atkinson, Vice President, Technical Services, and other members of his staff who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

Radiation Protection Inspection Exit Summaries

On April 15, 2004, the inspector presented the inspection results to Mr. R. Webring, Vice President, Nuclear Generation, and other members of his staff who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

On April 26, 2004, a telephonic re-exit was conducted with Mr. J. Parrish, Chief Executive Officer, and other members of his staff to present the recharacterization of the noncited violation.

Emergency Preparedness Inspection Exit Summary

On May 10, 2004, the inspector presented the inspection results to Mr. C. Moore, Supervisor, Emergency Preparedness, and other members of his staff who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

The inspector conducted a telephonic exit interview on July 6, 2004, to present the inspection results to Mr. R. Webring, Vice President, Nuclear Generation, and other members of his staff, who acknowledged the findings. The inspector confirmed that proprietary information was not retained during the inspection.

4OA7 Licensee Identified Violations

The following violations of very low risk significance (Green) were identified by Energy Northwest and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV.

.1 Technical Specification 3.7.3.D.1 required that Energy Northwest immediately enter Technical Specification 3.0.3 with two control room emergency filtration subsystems inoperable. Contrary to this requirement, Energy Northwest documented in Licensee Event Report 2004-001 that, during preparations for a tracer gas test of the control room envelope from October 27 through 29, 2003, and November 10-11, 2003, both trains of control room emergency filtration were inadvertently rendered inoperable. Energy Northwest did not recognize that both trains were inoperable at the time it occurred and therefore did not enter Technical Specification 3.0.3 as required. Energy Northwest identified this issue on January 23, 2004, and documented this issue in PER 204-0287. This finding is of very low risk significance because the finding only represented a degradation of the radiological barrier function provided for the control room. This violation of Technical Specification 3.7.3.D.1 is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 50-397/04-03-05, Failure to Enter Technical Specification 3.0.3 With Both Trains of Control Room Emergency Filtration Inoperable).

.2 Technical Specification 5.4.1.a required, in part, that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, “Quality Assurance Program Requirements (Operation),” Appendix A. Section 8.a required, in part, that specific tests for surveillance tests, to include emergency core cooling system tests, be written. Contrary to this requirement, prior to April 20, 2004, Energy Northwest’s surveillance tests for the low pressure core injection pumps had nonconservative acceptance criteria for the Technical Specification required pump discharge pressure limits. The acceptance criteria were nonconservative by a total

of 10.4 psia. Energy Northwest identified and documented this issue in PER 204-0718. Additionally, Energy Northwest conducted a review of historical test data for all three low pressure core injection pumps and determined that the pumps would have passed the test accounting for the identified errors. The finding was of very low safety significance (Green) because the issue: (1) was not a design or qualification deficiency; (2) did not result in the loss of function of a safety system; (3) did not represent an actual loss of a safety function of a single train for greater than its Technical Specification allowed outage time; (4) did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours; and (5) was not potentially risk significant due to a seismic, fire, flooding, or severe weather initiating event. This Severity Level IV violation of Technical Specification 5.4.1.a is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 50-397/04-03-06, Nonconservative Acceptance Criteria for Low Pressure Core Injection Pump Tests due to Calculation Errors).

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Energy Northwest

J. Parrish, Chief Executive Officer
D. Atkinson, Vice President, Technical Services
D. Coleman, Manager, Performance Assessment and Regulatory Programs
D. Feldman, Manager, Operations
W. Oxenford, Plant General Manager
C. Perino, Manager, Licensing
R. Webring, Vice President, Nuclear Generation
I. Borland, Manager, Radiological Services
P. Campbell, Technical Specialist, Licensing
M. Laudisio, Supervisor, Radiation Protection
G. Weimer, Manager, Performance Management
P. Ankrum, Licensing Engineer
C. Moore, Supervisor, Emergency Preparedness
F. Schill, Licensing Engineer

NRC Personnel

Z. Dunham, Senior Resident Inspector

ITEMS OPENED AND CLOSED

Items Opened, Closed, and Discussed During this Inspection

Opened

None

Opened and Closed

50-397/04-03-01	NCV	Failure to Follow Clearance Order Results in Mispositioned Control Rod (Section 1R14)
50-397/04-03-02	NCV	Failure to control a high radiation area with dose rates greater than 1.0 rem per hour (Section 2OS1)
50-397/04-03-03	NCV	Failure to Promptly Address Extent of Condition and Seismic Qualification of Safety-Related Disconnects (Section 4OA2.3)
50-397/04-03-04	NCV	Inadequate Work Order Results in Premature Overcurrent Trip of Breaker (Section 4OA2.4)

50-397/04-03-05	NCV	Failure to Enter Technical Specification 3.0.3 With Both Trains of Control Room Emergency Filtration Inoperable (4OA7.1)
50-397/04-03-06	NCV	Nonconservative Acceptance Criteria for Low Pressure Core Injection Pump Tests due to Calculation Errors (Section 4OA7.2)

Closed

50-397/2004-001	LER	Unanticipated Inoperability of Both Control Room Emergency Filtration (CREF) Subsystems (Section 4OA3)

Discussed

None

PARTIAL LIST OF DOCUMENTS REVIEWED

Procedures

PPM 10.25.48, Testing Molded Case Circuit Breaker, Revision 9
SOP-SGT-STB,; Placing Standby Gas Treatment in Standby Status, Revision 0
ISP-HPCS-X303, HPCS Suction Transfer on CST Pipe Break - CC, Revision 0
SOP-RCIC-STBY, "Placing RCIC in Standby Status," Revision 0
ABN-ROD, Control Rod Faults, Revision 6
PPM 10.25.105, Motor Control Center and Switch Gear Maintenance, Revision 20
ICP-CRD-X901, HCU Scram Accumulator Pressure Low/Leak Detection - CFT/CC, Revision 2
TSP-CRD-C101, CRD Scram Timing with Auto Scram Timer System, Revision 6
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M537, Flow Diagram Equipment Drain System Reactor Drain System Reactor Building, Revision 68

M539, Flow Diagram Floor Drain System Reactor Building, Revision 74

M527-1, Flow Diagram Condensate Supply System Reactor, Turbine Gen., & Radwaste Buildings, Radwaste/Reactor Building Corridor, & Yard, Revision 95
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PER 204-0718; The net effect of errors in CMR-93-0588 increase calculate surveillance test pressures for residual heat removal Pumps A, B, and C by 10.4 psig; April 20, 2004

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PER 204-0858, PM review found safety related MCC disconnect switches not “up to date,” This places their seismic qualification in question in that there may be a potential for the MCC disconnect switch to open; June 17, 2004

Section 2OS1: Access to Radiologically Significant Areas (71121.01)

Corrective Action Documents

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Audits and Self-Assessments

AU-RW-04, Quality Services Audit Report, Process Control Program
SA-2003-0015, Self Assessment, Annual Assessment of the Radiation Protection Program
SA-2003-0065, Self Assessment, Assessment of Work Area Air Sampling Program
Integrated Performance Assessment Report January 1 through June 30, 2003
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SR-04-01, Continuous Monitoring Report, Quality Oversight Activities for Continuous Monitoring
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Radiation Work Permits

30000821, Low Power Range Monitor Replacement
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30001206, 2004 Refurbish Hydraulic Control Units

Procedures

11.2.7.1, Area Posting
11.2.7.3, High, High High, and Very High Radiation Area Controls
11.2.13.1, Radiation and Contamination Surveys
GEN-RPP-04, Entry into, conduct in, and exit from radiologically controlled areas
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