



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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December 21, 2001

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

**SUBJECT: COLUMBIA GENERATING STATION - NRC INSPECTION REPORT
NO. 50-397/01-07**

Dear Mr. Parrish:

On November 8, 2001, the NRC completed a team inspection at Columbia Generating Station. The enclosed report presents the results of this inspection. On November 8, 2001, we discussed the preliminary results of the onsite inspection with Mr. Charles Townsend, Corrective Action Program Manager and other members of your staff.

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

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. The inspectors concluded that problems were properly identified, evaluated and resolved within the problem identification and resolution programs. However, during the inspection, several examples of minor problems were identified that included issues related to corrective action item timeliness of disposition.

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

Sincerely,

/RA/

Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

Energy Northwest

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Docket: 50-397

License: NPF-21

Enclosure:

NRC Inspection Report

50-397/01-07

cc w/enclosure:

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket: 50-397
License: NPF-21
Report No.: 50-397/01-07
Licensee: Energy Northwest
Facility: Columbia Generating Station
Location: Richland, Washington
Dates: November 8, 2001
Inspector: T. O. McKernon, Senior Operations Engineer, Operations Branch
P. C. Gage, Senior Operations Engineer, Operations Branch
M. S. Peck, Resident Inspector, Columbia Generating Station
Approved By: Anthony T. Gody, Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000397-01-07, on 10/29-11/8/2001, Energy Northwest, Columbia Generating Station baseline inspection of the identification and resolution of problems.

The inspection was conducted by two regional senior operations engineers, and one resident inspector. The significance of issues was indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process in Inspection Manual Chapter 0609.

Identification and Resolution of Problems

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

Report Details

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed items selected across six of the seven cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The Emergency Preparedness cornerstone will be evaluated at a later date. Specifically, the inspectors selected 75 risk-significant problem evaluation requests from approximately 2000, which had been issued between October 2000 and October 2001. The inspectors also reviewed one licensee audit and one self-assessment of the corrective action program. The effectiveness of the audits and assessments was evaluated by comparing the audit and assessment results against self-revealing, external audits and NRC-identified issues.

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

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

(2) Issues and Findings

The inspectors determined that the licensee was effective at identifying problems and entering them into the corrective action system. This was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee during the review period. Licensee audits and assessments were of good depth and identified issues similar to those that were self-revealing or raised during previous NRC inspections. However, while no significant problems resulted, the inspectors noted two minor issues with corrective action timeliness and inconsistencies between the problem evaluation request and the plant tracking log computerized database systems.

For example, nine of ten significant problem evaluation requests sampled were dispositioned in greater than the 30-day licensee goal, and a number of significant and nonsignificant problem evaluation requests did not meet the 180-day corrective action completion time goal. In other examples, Significant Problem Evaluation Request 200-1577 was classified as on hold in the problem evaluation request status summary report, but indicated closed in the plant tracking log database.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed approximately 75 problem evaluation requests, and supporting documentation, including an appropriate analysis of the cause of the problem, to ascertain whether the licensee's evaluation of the problems identified and considered the full extent of conditions, generic implications, common causes, and previous occurrences. In addition, the inspectors also reviewed several deferred work items to ascertain if the provisions of NRC Generic Letter 91-18, "Resolution of Degraded and Non-Conforming Conditions," and 10 CFR Part 50, Appendix B, were satisfied regarding timeliness of corrective action. Specific items reviewed are listed in the attachment.

(2) Issues and Findings

Based on a review of the licensee's records, the inspectors concluded that the licensee effectively prioritized and evaluated issues. The inspectors identified no findings related to prioritization and evaluation of issues. In general, issues were appropriately characterized and evaluated for significant conditions adverse to quality. However, the inspectors also observed that the licensee made no distinctions between significant and nonsignificant problem evaluation requests with regard to corrective action timeliness. All problem evaluation reports had a corrective action completion goal of 180 days.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

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

(2) Issues and Findings

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

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

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

(2) Issues and Findings

The inspectors concluded, based on information collected from interviews with the licensee personnel listed, that these employees were willing to identify issues and accepted the responsibility to proactively identify and enter safety issues into the corrective action program.

40A6 Meetings

Exit Meeting

The inspectors debriefed Mr. Chuck Townsend, Corrective Action Manager, and members of the licensee's staff on the preliminary inspection findings at the conclusion of the onsite inspection on November 8, 2001. The licensee's management acknowledged the findings presented.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Licensee

S. Ackley, Senior Auditor
T. Alton, Technical Services
P. Bagan, Nuclear Training
R. Barbee, Maintenance Team Manager
P. Campbell, Licensing
D. Coleman, Manager, Regulatory Affairs
Y. Derrer, OE Coordinator
W. Estes, Acting Manager, Maintenance
D. Feldman, Manager, Operations
J. Hanson, Manager, Training
G. Hendrick, Manager, Operations Support
T. Hoyle, Supervisor, Corrective Action Program
C. King, Manager, Design Engineering
W. LaFramboise, Acting Manager, Design Engineering
J. Peters, Manager, Radiological Services
D. Richey, Reactor Engineering Supervisor
R. Scherman, Manager, Licensing
B. Shaeffer, for G. Smith, Vice President Generation
F. Schill, Licensing, Regulatory Affairs
G. Smith, Vice President, Generation/Plant General Manager
R. Torres, Manager, Technical Services
C. Townsend, Corrective Action Program
R. Weibring, Vice President, Operations Support
S. Wood, Manager, Chemistry

NRC

George Replogle, Senior Resident Inspector

PARTIAL LIST OF DOCUMENTS REVIEWED

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

Procedures

SWP-CAP-O1, Problem Evaluation Requests, Revision 3

SWP-CAP-02, Root Cause Analysis, Revision 0

PPM 1.1.8, Incident Review Board, Revision 7

ABN-FAZ, Abnormal Condition Procedures, Revision 2

CAP-1-1.2, Corrective Action Program, Operating Experience Program, Coordinator Duties, Revision 2

CAP 1.1, Corrective Action Program, Department Instructions, Revision 4

Site Wide Procedure, SWP-AIT-01, Action Request - Initiation, Evaluation and Assignment Activities, Revision 1

Plant Procedure Manual, ASME Section XI, RRC Valve Operability, Revision 4

System Operating Procedure, Radioactive Waste Disposal, Equipment Drain System 2.11.3, Revision 19

Corrective Action Program, CAP 1-1.2, Operating Experience Program, Revision 1

Annunciator Response Procedure 4.800.C4, 3-3 Oscillograph Trouble, Revision 11

<u>SPERs</u>	<u>TITLE</u>	<u>DATE</u>
200-0191	RCIC keepfill pump	2/01/00
200-1051	Unplanned MSIV closure during surveillance	6/27/00
200-1073	Surveillance completed past technical specification interval	6/29/00
200-1078	MSIV closure due to inadequate bypass switch operation	6/28/00
200-1432	Div 2 DG governor control failed to control load	8/30/00
200-1570	Control room envelope unfiltered inleakage	9/13/00
200-1577	Single control rod scrambled upon half-scrum signal	9/13/00
201-0226	Administrative control for TIP system	2/13/01
201-0732	CRD valve found out of position	5/4/01
201-1171	Inadvertent RHR isolation	6/10/01

Problem Evaluation Requests, Plant Tacking Logs and associated Corrective Action Plans

PER 298-0023, Establish a Process for Operations to Assist in the On-Line Validation of the PPCRS Heat Balance Calculation, 2/12/98

PER 298-0887, 125 Volt Division 2 Battery E-B1-2 Surveillance Not Adequately Performed, 7/15/98

PER 299-2404, EDR-FRS-623 Failed to Indicate Drywell Identified Leakage, 10/27/00

PER 200-0022, OER PER INPO SOER 99-01 - Events Involving Grid Degradation Loss, 4/27/00

PER 200-0183, MS-PS-56B & MS-PS-56D Found to be Out of Tolerance, 1/31/00

PER 200-0292, NRC Information Notice 2000-01: Operational Issues Identified in Boiling Water Reactor Trip and Transient (GI2-00-32), 2/16/00

PER 200-0320, E-TR-S Voltage Momentarily Dropped Below 235 KV, 2/18/00

PER, 200-0562, NRC Information Notice 2000-06: Offsite Power Voltage Inadequacies (GL2-00-058), 3/29/00

PER 200-1043, Reactor SCRAM Due to Main Tribune Trip, 6/26/00

PER 200-1611, Reactor Scram Due to Loss of Condenser vacuum, 9/19/00

PER 200-1703, NRC Information Notice 2000-13: Review of Refueling Outage Risk (GL2-00-175), 10/02/00

PER 200-1946, bi-stable flow, 11/6/00

PER 200-1981, Loss of Cooling to the Main Transformer and Start Up Transformer, 11/11/00

PER 201-0998, Loss of Contamination Control on 422' Reactor CRD Pump Room and 441' Hallway Between Reactor and TG Buildings, 6/27/01

PER 201-1084, R-5 Sump Overflow Causing Radioactive Contamination Spread, 6/05/01

PER 201-1171, Inadvertent RHR Isolation Caused by Work on Relay MS-RLY-K85, 6/08/10

PER 201-1344, Model WO Directed the Replacement of the Wrong Reed Switches, 6/15/01

PER 201-1482, RRC-P-1B Tripped On Over Frequency Relay, 7/10/01

PER 201-1606, Troubleshooting Plan Implementation Caused Reactor Recirculation Loop Delta Temperature Cavitation Alarm, 7/29/01

PER 201-1769, Actions to Address the INPO Plant Evaluations, 8/20/01

PER 201-1867, NRC Information Notice 2001-12: Hydrogen Fire at Nuclear Power Station (GL2-01-093), 9/04/01

Other PERs

299-0871	201-0248	298-0949	201-1292
200-0410	201-0662	298-2083	201-1345
200-0481	201-0793	299-0039	201-1385
200-0489	201-1050	299-2641	201-1343
200-0498	201-1360	200-0320	201-1513
200-1740	201-1573	200-1051	201-1686
200-2016	201-1672	200-1078	201-1733
200-2037	201-1861	201-0776	201-1823
201-0065	201-1862	201-0893	201-1900
201-0122	201-2050	201-1193	

Maintenance Orders

WOT Package 01025670, RCIC-V-63 Packing Leak, 3/24/01
WOT Package 01025932, RCIC-PCV-15 Does Not Regulate Pressure, 3/30/01
WOT Package 01025933, RCIC-P-1 Outboard Mechanical Seal Failure, 4/05/01
WOT Package 01024275 E-TR-M3 Check Condulets For Water, 3/20/01
WOT Package 01024276 E-TR-M1 Check Condulets For Water, 3/20/01
WOT Package 01022580 E-TR-M4 Check Condulets For Water, 3/20/01
W/R 29018916, E-TR-M1, Replace Motor Starters (PER 200-1981-04), open
W/R 2901568, RCIC-P-1, Outboard seal failure during startup, 4/29/01
W/R 29015969, RCIC-PCV-15, does not regulate, 4/09/01
W/R 29015874, RCIC-V-63 Packing leak, 3/25/01
W/R 29017643, RFW-V-401 Packing leak, 6/17/01
W/R 0102301, Jet pump vibration analysis (Open)
W/R 29014266, E-TR-M4, Check Conduits for Water (PER 200-1981), 3/20/01.

Plant Tracking Logs

A 172217, A 173744, A 178497 , A 178617, A 178779, A 180029, A 179549, H 145793,
H 150684, H 163220, H 165699, H 170239

Action Requests

A/R 00002059 for Engineering to evaluate changes in the folow path to E-5 (Action 02)

Action Request Summary, 00001992-02, Sep 28, 01, RRC-V-19, Open position indication repair.

Action Request Summary, 00001742-01, Apr 6, 01, RCIC Mechanical Seal Bushing Clearance Change.

Action Request Summary, 00001652-01, Sep 26, 01, Delete PASS System

Change Control Form P00286, Jet Pump Fatigue Calculation,

NRC Inspection Reports

50-397/01003, 50-397/0014, 50-397/01001

Miscellaneous

Columbia Generating Station, Corrective Action Program Monthly Performance Indicator Report, 08/01

Quality Services Audit Report, 9/27/01

Technical Evaluation Request 99-0106-0, PTL 160099, 6/29/99

Selected Control Room Logs

Plant Operations Committee Minutes 01-37, 09/13/01

Plant Operations Committee Minutes 01-39, 10/01/01

Engineering Support Personnel Program, Training Advisory Group (TAG) Meeting Minutes, 10/02/00

NRC OE Action Tracking Log, 11/02/01

INITIAL MATERIAL REQUESTED

Summary list of all currently open/active items for:

- PER request of significant conditions adverse to quality
- Operator work-arounds
- engineering review requests
- Maintenance requests
- temporary modifications
- Procedure change requests
- Training needs request/evaluation
- control room and safety system deficiencies

2. Summary list of all items completed/resolved/closed since September 1, 2000 for:

- PERs of significant conditions adverse to quality
- operator work-arounds
- engineering review requests
- maintenance requests
- temporary modifications
- procedure change requests
- training needs requests/evaluations
- control room and safety system deficiencies

3. Summary list of all action requests generated during the specified period and sorted by:

- chronology
- initiating organization
- responsible organization

4. All quality assurance audits and surveillances of corrective action activities since October 01, 2000.

5. All corrective action activity and functional area self-assessments and Non-NRC third party assessments since October 01, 2000.

6. Corrective action performance trending/tracking information generated since October 1, 2000 and broken down by functional organization.

7. Current revision of the following procedures:

SWP-CAP-01 Site Wide Procedure; Problem Evaluation Requests
CAPI-1.1 Dept. Instruction; CAP Program Description
PPM 1.3.48 Root Cause Analysis
PPM 1.1.8 Incident Review Board (IRB)
PPM 1.4.1 PMR Field Implementation

8. Any additional governing procedures/policies/guidelines for:

PER Reporting
Corrective Action Program
Root Cause Evaluation/Determination
Operator Work-Arounds
Work Requests
Engineering Requests
Temporary Modifications
Procedure Change Requests
Deficiency Reporting and Resolution
Training Needs Request/Evaluations

9. For each of the items (applicable to CGS) listed below please provide the following:

- Full text of the PER (please indicate any findings that did not result in a PER or corrective actions)
- Any "Rollup" or "Aggregating" PERs related to the generic communication or PER
- Root Cause analysis report (if applicable)
- Risk significance assessments
- Probable Cause evaluation (if applicable)
- Approved corrective actions
- Basis for extending originally approved due dates
- Evidence of corrective action completion (work packages, design change documentation, temporary modifications, training lesson plans/materials, training attendance records, procedure revision, etc.)

- Part 21 Reports Oct 2000 through Oct 2001
- NRC Information Notices Jan 2000 - Oct 2001
- All LERs issued since July 2000
- All NCVs and Violations since July 2000.