UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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ARLINGTON, TEXAS 76011-4005

January 24, 2003

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

SUBJECT: COLUMBIA GENERATING STATION - NRC INTEGRATED INSPECTION REPORT NO. 50-397/02-04

Dear Mr. Parrish:

On December 28, 2002, the NRC completed an inspection at your Columbia Generating Station. The enclosed integrated inspection report documents the inspection findings, which were discussed on January 2, 2003, with Mr. Rod Webring 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. Within these areas, the inspectors examined a selection of procedures and representative records, observed activities, and conducted interviews with personnel.

Based on the results of this inspection the NRC identified an issue that was evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has determined that a violation is associated with this issue. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this finding as a noncited violation, in accordance with Section V1.A.1 of the NRC's Enforcement Policy. If you deny this noncited violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to the Regional Administrator, Region IV; 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 2.790 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).

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

Sincerely,

/RA/

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

Docket: 50-397
License: NPF-21

Enclosure:
NRC Inspection Report
50-397/02-04

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-397
License:	NPF-21
Report:	50-397/02-04
Licensee:	Energy Northwest
Facility:	Columbia Generating Station
Location:	Richland, Washington
Dates:	September 22 through December 28, 2002
Inspectors:	G. D. Replogle, Senior Resident Inspector, Project Branch E, DRP V. G. Gaddy, Senior Project Engineer, Projects Branch E, DRP P. J. Elkmann, Emergency Preparedness Inspector R. E. Lantz, Senior Emergency Preparedness Inspector T. O. McKernon, Senior Operations Engineer, Examiner T. S. Stetka, Senior Operations Engineer, Examiner D. L. Stearns, Project Engineer, Projects Branch E, DRP
Approved By:	W. B. Jones, Chief, Project Branch E, Division of Reactor Projects
Attachment:	Supplemental Information

SUMMARY OF FINDINGS

IR05000397-02-04; Energy Northwest; Columbia Generating Station on 9/22/2002-12/28/2002; Integrated Inspection Report; Fire Protection.

The report covers a 14-week period of routine resident and regional inspection activities from September 22 through December 28, 2002. The inspection identified one finding of very low safety significance (Green). The finding was a noncited violation. The significance of findings is indicated by their color (Green, White, Yellow, or Red) using Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. 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. Inspector Identified Findings

Green. The inspectors identified that the licensee failed to properly store a man-lift, located in the control room, in accordance with plant procedures. The man-lift could have tipped against control room panels containing sensitive plant system control circuits during a seismic event (or other disturbance) resulting in a reactor scram.

A violation of Technical Specification 5.4.1.a was identified that is being treated as a noncited violation in accordance with Section VI.A.1 of the NRC Enforcement Policy. The inspectors determined that the issue was greater than minor in significance because it affected the reactor safety, initiating events cornerstone objective. The inspectors utilized the NRC's significance determination process Manual Chapter 0609, Appendix A worksheet and determined that the issue was of very low safety significance (Green). The issue screened out as Green because the problem did not: 1) contribute to the likelihood of a primary or secondary system loss of coolant accident initiator; 2) contribute to both the likelihood of a rector trip and the failure of mitigation equipment; or 3) increase the likelihood of a fire or internal/external flood (Section 1R05).

B. Licensee Identified Violations

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The violation and corrective action tracking number is listed in Section 4OA7 of this report.

Report Details

Summary of Plant Status:

At the start of the period, operators maintained the plant at 100 percent power. On September 25, 2002, operators experienced a partial loss of feedwater event, as 4 of 14 in service heaters tripped off. Operators reduced power to 78 percent in response to the event. The licensee restored plant power to 100 percent on September 26. On October 7, Pump A of the reactor recirculation control system ran back from 60 Hertz to 51 Hertz, due to the failure of one of two in-service adjustable speed drive channels. Power reduced to approximately 90 percent as a result of the run-back. On October 8, operators reduced plant power to 65 percent to recover the tripped channel and then proceeded to increase power to 100 percent. Plant power remained at essentially 100 percent for the remainder of the inspection period.

1. REACTOR SAFETY

Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

Adverse Weather Protection (71111.01)

a. Inspection Scope

From November 5-8, 2002, the inspectors reviewed licensee measures to ensure adequate adverse weather (extreme cold) protection for three mitigating systems. Specifically, the inspectors reviewed design features, equipment, and licensee preparations associated with standby service water, emergency diesel generator heating ventilation and air conditioning, and reactor building ventilation systems.

The inspectors reviewed the following documents during the inspection:

- Final Safety Analysis Report
- Procedure 2.10.1, “Reactor Building Ventilation,” Revision 28
- Procedure 2.10.4, “Diesel Generator and Cable Cooling HVAC [heating ventilation and air conditioning],” Revision 23
- Procedure 3.1.9, “Cold Weather Operations,” Revision 5
- Procedure 2.4.5, “Standby Service Water System,” Revision 43
- Work Order Task Package 01046662, “Calibrate and Function Test HT-HTP-FP/7”
- Work Order Task Package 01045232, “Calibrate and Function Test HT-HTP-FP/7AG”
- Work Order Task Package 01047516, “Cold Weather Operations”

b. Findings

No findings of significance were identified.

1R04 Equipment Alignments (71111.04)

a. Inspection Scope

The inspectors completed two partial system walkdowns of safety-significant equipment during the inspection period. The inspectors reviewed the systems alignments and readiness during periods when redundant equipment was removed from service. The inspectors reviewed the following system alignments during the period:

- Division I Residual Heat Removal (RHR) System: On November 7, 2002, the inspectors walked down the mechanical and electrical alignments of the Division I residual heat removal system while the Division II system was out of service for planned maintenance. The inspectors reviewed the alignment of critical system components using Procedure SOP-RHR-STBY, "Placing RHR in Standby Status," Revision 0, and Drawing M-521, "Flow Diagram RHR," Revision 98.

- Division II Residual Heat Removal System: On December 3, 2002, the inspectors walked down the mechanical and electrical alignments of the Division II residual heat removal system while the Division I system was out of service for planned maintenance. The inspectors reviewed the alignment of critical system components using Procedure SOP-RHR-STBY, "Placing RHR in Standby Status," Revision 0, and Drawing M-521, "Flow Diagram RHR," Revision 98.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

Between October 10 and November 11, 2002, the inspectors performed walkdowns of seven 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 the licensee'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 Final Safety Analysis Report, Section 9.5.1, "Fire Protection System," and "Fire Protection Evaluation," Appendix F. During the review, the inspectors also reviewed Procedure 10.2.53, "Seismic Requirements for Scaffolding, Ladders, Man-Lifts, Tool

Gang Boxes, Hoists, and Metal Storage Cabinets," Revision 20. Specific fire areas inspected included:

- Control room, Fire Area RC-10
- Division II battery charger and reactor protection system rooms, Fire Area RC-7
- Reactor building Elevation 572, Fire Area R-1
- Remote shutdown room, Fire Area RC-9
- Reactor building Elevation 501, Fire Area R-1
- Division I, II, and III emergency diesel generator fuel oil rooms, Fire Areas DG-4, DG-5 and DG-6
- Division II motor control center, Fire Area R-18

b. Findings

Introduction:

The inspectors identified a noncited violation of Technical Specification 5.4.1.a for the failure to position a man-lift, located in the control room, in accordance with plant procedures. The man-lift could have tipped against control room panels containing sensitive plant system control circuits during a seismic event (or other disturbance), resulting in a reactor scram.

Description:

During a fire protection inspection on October 10, 2002, the inspectors identified an improperly stored man-lift in the control room behind the rod control, reactor vessel level, feedwater, and turbine control panels. Procedure 10.2.53, "Seismic Requirements for Scaffolding, Ladders, Man-Lifts, Tool Gang Boxes, Hoists, and Metal Storage Cabinets," Revision 20, Section 7.3, states, in part:

> Store man-lifts greater than or equal to their height (in the retracted position) plus 12 inches from any safety-related equipment in all lateral directions.

Contrary to the above, the man-lift was approximately seven feet tall but was only a few feet from the noted control panels. In response to the issue, the licensee promptly removed the man-lift from the control room.

Assessment:

The inspectors determined that the man-lift could have tipped against sensitive control room panels during a seismic event, or other disturbance, and battered the noted cabinets from behind. In a worst case scenario, a jolt from the man-lift could disrupt circuits within a panel and possibly cause a turbine trip and/or a reactor trip. Accordingly, the inspectors determined that the issue was greater than minor in significance because it affected the Reactor Safety, initiating events cornerstone objective. The inspectors utilized the NRC's significance determination process Manual Chapter 0609, Appendix A worksheet and determined that the issue was of very low safety significance (Green). The issue screened out as Green because the problem did not: 1) contribute to the likelihood of a primary or secondary system loss of coolant accident initiator; 2) contribute to both the likelihood of reactor trip and the failure of mitigation equipment; or 3) increase the likelihood of a fire or internal/external flood.

Enforcement:

The team identified a noncited violation of Technical Specification 5.4.1.a, which requires the licensee to properly implement procedures recommended by NRC Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Revision 2, Appendix A. Regulatory Guide 1.33 recommends procedures for the performance of maintenance that can affect safety-related equipment. Procedure 10.2.53 required plant personnel to store the man-lift greater than or equal to its height plus 12 inches from any safety-related equipment in all lateral directions, which was not accomplished. The licensee estimated that the man-lift had been stored in the improper condition for a few weeks. This violation is being treated as a noncited violation in accordance with Section V1.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Problem Evaluation Request 202-2837 (NCV 50-397/02004-01).

1R11 Licensed Operator Requalification (71111.11)

.1 Operator Requalification Activities Performed by the NRC's Operator Licensing Branch

a. Inspection Scope

This inspection evaluated licensed operator performance in mitigating the consequences of events and evaluated the training department licensed operator requalification program personnel in the administration of the biennial requalification examination. This inspection effort of the licensed operator requalification program included the following major areas: (1) facility operating history, (2) requalification written examinations and operating tests, (3) licensee training feedback system, (4) licensee remedial training program, (5) conformance with operator license conditions, and (6) conformance with simulator requirements specified in 10 CFR 55.46.

Operator performance since the last requalification program evaluation was assessed to determine if performance deficiencies have been addressed through the requalification training program.

Examination security measures and procedures were evaluated for compliance with 10 CFR 55.49. The licensee's sample plan for the written examinations was evaluated for compliance with 10 CFR 55.59 and NUREG-1021 as referenced in the facility requalification program procedures. In addition, the inspectors: (1) reviewed the number of applicants and pass/fail results of the written examinations, individual operating tests, and simulator operating tests; (2) interviewed personnel regarding the policies and practices for administering examinations; (3) observed the administration of two dynamic simulator scenarios to two requalification crews by facility evaluators; (4) observed three facility evaluators administer in-plant job performance measures; and (5) observed three facility evaluators administer three simulator job performance measures in the control room simulator in a dynamic mode.

The inspectors reviewed the licensee's process for revising and maintaining an up-to-date licensed operator continuing training program, including the use of feedback from plant events and industry experience information.

The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the last requalification examinations and the training planned for the current examination cycle to ensure that identified licensed operator or crew performance weaknesses during training and plant operations were addressed. Remedial training for examination failures was reviewed for compliance with facility procedures and responsiveness to address areas failed. The inspectors also reviewed the remediation documentation for individuals and crews, which involved job performance measures and scenario examination failures during the 2-year program cycle. Only one individual failed a portion of the biennial examination.

The inspectors assessed the adequacy of the facility licensee's simulation facility for use in operator licensing examinations. The inspectors also assessed the effectiveness of the facility licensee's process for continued assurance of simulator fidelity with regard to identifying, reporting, correcting, and resolving simulator discrepancies via a corrective action program. The facility uses the simulator for satisfying experience requirements at this time.

b. Findings

No findings of significance were identified.

.2 Operator Requalification Activities Conducted by Resident Inspectors

a. Inspection Scope

On November 19 and December 11, 2002, the inspectors observed operator training as operators participated in requalification scenarios on the plant simulator. The inspectors evaluated crew performance in terms of formality of communication, prioritizing actions, interpreting and verifying alarms, correct use and implementation of procedures, and timely control board operation and manipulation. 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 Rule Implementation (71111.12)

a. Inspection Scope

The inspectors performed an in-office review and independently evaluated the licensee's maintenance effectiveness by reviewing the availability and reliability of risk-significant structures, systems and components. The inspectors also reviewed the licensee's implementation of the Maintenance Rule for the following two plant components that exhibited performance problems:

- Division I emergency diesel generator room fan failures, Problem Evaluation Request 202-0539, dated February 20, 2002
- Division I, critical switchgear ventilation Fan WMA-FN-53A found secured, Problem Evaluation Request 202-0820, dated March 16, 2002

The inspectors utilized the following documents as criteria for this inspection:

- Columbia Generating Station Maintenance Rule Program Status Report for January through June 2002
- Procedure TI 4.22, "Maintenance Rule Program," Revision 4
- Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2
- NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2

b. Findings

No findings of significance were identified.

1R14 Nonroutine Events (71111.14)

.1 Partial Loss of Feedwater Heating

a. Inspection Scope

On September 25, 2002, operators experienced a partial loss of feedwater heating event. Operators unexpectedly lost 4 of 14 in service feedwater heaters. The licensee determined that the event was initiated when turbine building exhaust Fan TEA-FN-1C bearing seized. The bearing seizure caused the Bus MC-3A breaker to trip. Loss of the bus affected control power to several bleed steam valves to the heaters, which failed

closed. Control power to the turbine lube oil temperature control valve was also lost and that valve failed closed. In response to the event, operators reduced power in accordance with plant procedures to approximately 79 percent and manually controlled the turbine lube oil cooling system. Operators observed that power peaked, as a result of lower than normal feedwater temperature, at slightly less than 102 percent power before operators took manual action to reduce power.

The inspectors observed the event in the control room to verify that plant operators performed actions, as necessary, in accordance with procedural requirements. The inspectors utilized the following documents during this inspection:

- Procedure ABN-POWER, "Unplanned Reactor Power Change," Revision 2
- Procedure 2.2.4, "Main Condensate and Feedwater Systems," Revision 38
- Procedure 3.2.1, "Normal Shutdown to Cold Shutdown," Revision 46
- Problem Evaluation Request 202-2707, partial loss of feedwater heating, dated September 25, 2002

b. Findings

No findings of significance were identified.

.2 Partial Loss Reactor Recirculation Flow

a. Inspection Scope

On October 7, 2002, operators responded to a partial loss of reactor recirculation system flow. One of two channels that power Pump A had tripped off and pump speed ran back from 60 Hertz to about 51 Hertz. Consequently, reactor power also lowered to about 90 percent. Operators reduced flow on the B Pump to match flow. The licensee determined that the transient was caused by a failed power supply and effected corrective measures. The following day reactor operators reduced reactor power to 65 percent and recovered the tripped channel. Shortly thereafter, operators returned the plant to 100 percent power.

The inspectors reviewed Technical Specifications, operator logs, plant records and operator training manuals to verify proper operator actions.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17A)

a. Inspection Scope

On October 31, 2002, the inspectors completed a review of Design Modification 00126701. The purpose of the modification was to implement changes to the reactor core isolation cooling system to reduce the probability of water hammer. The inspectors considered whether the change could adversely affect the design and licensing basis of the facility. The inspector also considered whether the design change was implemented in accordance with applicable regulatory requirements and licensee Procedure EI 2.8, "Generating Facility Design Change Process," Revision 18.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors witnessed or completed an in-office review of three postmaintenance tests. The inspectors considered whether the licensee properly implemented procedural controls, as applicable, and that each test adequately demonstrated equipment operability. The inspectors also considered whether the licensee met Technical Specification and licensing basis requirements. The inspection sample included:

- Work Order 01037177, Division II standby gas treatment system loop calibration after maintenance, performed on November 25, in-office review
- Procedure ESP-0BAT-W101, "Weekly Battery Testing," Revision 8, postmaintenance testing of the Division II, 125 VDC battery after the unit failed initial testing and after corrective measures taken, performed on November 25, 2002 - in-office review
- Work Order 01051987, repair leaking main transformer oil piping and test, November 21, 2002 - direct observation of piping after all work and testing completed

b. Findings

No findings of significance were identified.

1EP1 Exercise Evaluation (71114.01)

a. Inspection Scope

The inspectors reviewed the objectives and scenario for the 2002 biennial emergency plan exercise to determine if the exercise would acceptably test major elements of the

emergency plan. The scenario simulated a fire in a vital area, an inability to insert reactor control rods, a pipe break within containment, fission product barrier failures, core damage and a radiological release to the environment to demonstrate the licensee's capabilities to implement the emergency plan.

The inspectors evaluated exercise performance by focusing on the risk-significant activities of classification, notification, protective action recommendations, and offsite dose consequences in the following emergency response facilities:

- Simulator control room
- Technical support center
- Operations support center
- Emergency operations facility

The inspectors also assessed personnel recognition of abnormal plant conditions, the transfer of emergency responsibilities between facilities, communications, protection of emergency workers, emergency repair capabilities, and the overall implementation of the emergency plan.

The inspectors attended the September 17, 2002, postexercise critiques in each of the above facilities to evaluate the initial licensee self-assessment of exercise performance. The inspectors also attended, by telephone conference, the October 3, 2002, presentation of the exercise evaluation results to plant management.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed Revision 33 to the Columbia Generating Station Emergency Plan, Revision 31, to Procedure 13.1.1, "Classifying the Emergency," and Procedure 13.1.1A, "Classifying the Emergency: Technical Bases," Revision 10, against their previous revisions and 10 CFR 50.54(q) to determine if the revisions 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 two emergency preparedness drills. The first drill occurred on November 5, 2002, and an entire licensee emergency preparedness team participated in

this drill. The second drill consisted of an operations drill in the simulator on November 19, 2002. The inspectors evaluated the critique process, drill conduct, and drill performance. The inspectors reviewed the drill scenarios and the Columbia Generating Station Emergency Plan, Revision 34, as part of this inspection.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator Verification (71151)

.1 Drill and Exercise Performance

a. Inspection Scope

The inspectors reviewed the following documents related to the drill and exercise performance indicator in order to verify the licensee's reported data:

- Drill schedules for calendar years 2001 and 2002
- Drill and exercise scenarios for a 100 percent sample of drills conducted during the third and fourth quarters of calendar year 2001 and the first and second quarters of calendar year 2002
- Evaluator and participant logs and offsite notification forms for a 100 percent sample of drills conducted during the third and fourth quarters of calendar year 2001 and the first and second quarters of calendar year 2002
- Drill evaluation worksheets
- Performance indicator reports

b. Findings

No findings of significance were identified.

.2 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors reviewed the following records related to emergency response organization participation in order to verify the licensee's reported data:

- List of key emergency response organization positions

- Drill participation date summaries for key emergency responders for the third and fourth quarters of calendar year 2001 and for the first and second quarters of calendar year 2002
- Emergency response organization rosters for the third and fourth quarters of calendar year 2001 and for the first and second quarters of calendar year 2002
- Drill participation records for a sample of 13 emergency responders
- Qualification records for a sample of 14 emergency responders
- Performance indicator reports

b. Findings

No findings of significance were identified.

.3 Alert and Notification System

a. Inspection Scope

The inspectors reviewed a 100 percent sample of siren testing records for the third and fourth quarters of calendar year 2001 and the first and second quarters of calendar year 2002 to verify the accuracy of data reported for this performance indicator.

b. Findings

No findings of significance were identified.

.4 Reactor Safety

a. Inspection Scope

The inspectors assessed the accuracy of two selected performance indicator data for all four calender quarters of 2001. The inspectors compared licensee submitted performance indicator data with operator logs, maintenance records, and corrective action documents. The inspectors reviewed the licensee's performance indicators in accordance with NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 1. The inspectors' sample included the following performance indicators:

- Emergency AC power system availability
- Reactor core isolation cooling system availability

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The inspectors reviewed one plant issue to verify that equipment, human performance, and programmatic issues were being identified by the licensee at an appropriate threshold and were being entered in the licensee's corrective action program. In addition, the inspectors reviewed whether the licensee's corrective actions were commensurate with the significance of the issue. The issue evaluated during this inspection period was:

- Failure of residual heat removal Valve RHR-V-48A (Division I heat exchanger bypass valve) to close, documented in Problem Evaluation Request 202-2060, dated July 16, 2002

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

.1 (Closed) Licensee Event Report 50-397/2001-001: Traversing incore probe system was operated without administrative controls as required by Technical Specification 3.6.1.3. This minor violation is captured in the licensee's corrective action program as PER 202-0226. No findings of significance were identified.

.2 (Closed) Licensee Event Report 50-397/2000-006-00 and 01: Plant outside design basis for control room emergency filtration system unfiltered in-leakage. See Section 4OA7 for closure of this licensee event report.

4OA6 Management Meetings

Exit Meetings

Regional and resident inspectors conducted three exit meetings with members of licensee management during the inspection period. The exit meetings were:

- On October 28, 2002, an emergency preparedness inspector presented the emergency preparedness inspection results to Mr. V. Parish, Chief Executive Officer, and other members of the licensee's staff at the conclusion of the inspection.

- December 12, 2002, an operator licensing examiner presented the requalification inspection results to the licensee's operator training staff.

- On January 2, 2003, the senior resident inspector presented the remaining inspection results to Mr. Rod Webring, Vice President, Nuclear Generation and other members of the licensee's staff.

The licensee acknowledged the inspection results during each meeting. Following the meetings, the inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. The licensee identified no proprietary information.

4OA7 Licensee Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a noncited violation.

The licensee identified a violation of 10 CFR 50, Appendix B, Criterion III (Design Control) and reported the problem to the NRC via Licensee Event Report 50-397/2000-006, Revisions 0 and 1. The licensee performed control room in-leakage testing in September 2000 and found that in-leakage substantially exceeded that assumed in the original specifications. The licensee determined that the resulting dose to the thyroid of plant operators, following a large break loss of coolant accident, was about 70 REM. The Criterion 19 limit, as specified in the licensee's Final Safety Analysis Report, Table 6.4-1, is 30 REM. The licensee provided potassium iodide to control room operators, as a short term compensatory measure, to mitigate the potential for over-exposure due to this problem.

The inspectors determined that the issue was more than minor because it affected the reactor safety, barriers cornerstone objective. The inspectors utilized the NRC's significance determination process Manual Chapter 0609, Appendix A worksheet and determined that the issue was of very low safety significance because the problem only affected the control room radiological barrier. The licensee captured this issue in their corrective action program as Problem Evaluation Request 200-1570.

ATTACHMENT

Supplemental Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee:

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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
J. Peters, Manager, Radiation Services
R. Webring, Vice President, Nuclear Generation
S. Scammon, Manager, Resource Protection

ITEMS OPENED AND CLOSED

Items Opened, Closed, and Discussed During this Inspection

Opened:

None

Opened and Closed:

50-397/02004-01	NCV	Failure to properly store man-lift in accordance with plant procedures (Section 1R05)

Previous Items Closed:

50-397/2000-006-00&01	LER	Plant outside design basis for control room in-leakage (Sections 4OA5 and 4OA7)
50-397/2001-001-00	LER	Traversing incore probe system operated without administrative controls (Section 4OA5)

PARTIAL LIST OF DOCUMENTS REVIEWED

Procedures:

1.10.10 “Regulatory Assessment Performance Indicator Reporting,” Revision 1
13.2.1 “Emergency Exposure Levels/Protective Action Guides,” Revision 15
13.2.2 “Determining Protective Action Recommendations,” Revision 12
13.5.3 “Evacuation of Exclusion Area and/or Nearby Facilities,” Revision 26
13.11.1 “EOF Manager Duties,” Revision 24
EPI-18 “Emergency Preparedness Performance Monitoring,” Revision August, 23, 2002
TSI 6.2.32 “Bi-Weekly Emergency Response River Siren Polling Test,” Revision 7

SI-1.0, “Simulator Software Quality Assurance,” Revision 0
SI-2.0, “Simulator Instructor/Operator Feedback,” Revision 1
SI-3.0, “Simulator Trouble Report Process,” Revision 1
SI-4.0, “Simulator Performance Testing,” Revision 1
SI-5.0, “Simulator Modification Process,” Revision 0
OTI 4.4, “Training and Exam Material Development,” Revision 12
TDI - OPS-09, “Performance Deficiency Analysis and Remediation,” Revision 0

Job Performance Measures (JPM):

LR000153, Raise suppression pool level using HPCS System, Revision 6

LR001550, Transfer SM-3 from TR-N to TR-S, Revision 0

LR001514, Complete new classification notification form due to changing meteorological data, Revision 1

LR000234, RHR/SW Crosstie lineup, Revision 7

LR000299, Initiate RCIC from the remote shutdown panel, Revision 11

LR000249, Inserting control rods by venting scram air header, Revision 7

Job Task Analyses:

RO-0680-E-CRD, Insert control rods using alternate method by venting scram header, dated August 10, 1993

RO-0117-A-RSP, Abandon control room, dated August 2, 1993

RO-0713-E-PC, Emergency makeup to suppression pool during emergency using high pressure core spray, dated August 2, 1993

SRO-0529-P-PLANT, Complete classification notification form, dated August 5, 1993

SRO-0315-P-PLANT, Make protective action recommendations and decision while acting as plant emergency director, dated September 29, 1993

SRO-0224-P-REPORTS, Notify onsite and offsite personnel of emergency events, dated September 29, 1993

RO-0670-E-SW, Inject service water into RPV with Residual Heat Removal B, dated August 2, 1993

Simulator Testing:

Simulator fidelity checks for 100 percent and 40 percent power

Transient Tests:

- 50K Steam leak in “A” Main Steam Line (March 13, 2002)
- 50K Steam leak in the wetwell (March 29, 2002)
- Loss of high pressure feedwater (March 29, 2002)
- Loss of single RFW pump turbine (March 29, 2002)
- Loss of single recirculation pump (March 29, 2002)
- Loss of forced circulation (March 29, 2002)
- Main turbine trip from 100 percent power (March 29, 2002)
- 50K Steam leak in “A” Main Steam Line (March 29, 2002)
- Manual scram (April 1, 2002)
- ATWS with MSIV closure (with SLC injection) (April 2, 2002)
- 500K Steam leak in “A” Main Steam Line with drywell sprays (July 19, 2002)
- Main turbine trip from low power (July 19, 2002)
- Maximum steam leak in “A” Main Steam Line (July 19, 2002)
- MSIV closure with stuck open safety relief (July 19, 2002)
- DBA LOCA with loss of offsite power (December 3, 2002)

NOTE: Bolded tests received an in-depth review.

Normal Plant Evolution Tests:

- Normal shutdown to cold shutdown (November 11, 2002)
- APRM and core thermal power channel calibration check (November 11, 2002)
- Reactor plant startup (November 11, 2002)
- OSP-RSCS-C401, RSCS CFT prior to reactor startup (November 12, 2002)
- OSP-RWM-C41, Rod worth minimizer startup CFT (November 11, 2002)

Malfunction Tests:

- Scenario LR000350 malfunctions involving ATWS, RCIC, SLC, power loss, reactor feedwater
- Scenario LR000320 malfunctions involving ATWS, RHR, power loss, LOCA, LPCS, fuel
- Scenario LR001435 malfunctions involving recirculation pump, condenser, feedwater heating
- Scenario LR001341 malfunctions involving service water, power lineup, radiation monitors, control rod drive, fuel, main steam, main turbine
- Scenario LR001343 malfunctions involving ATWS, main steam, control rod drive, reactor feedwater
- Scenario LR001339 malfunctions involving HPCS, controlled air system, LOCA
- Scenario LR000337 malfunctions involving ATWS, main steam, circulating water, electrical circuit breakers, reactor protection system, scram discharge volume
- Scenario LR000354 malfunctions involving ATWS, LPCS, RHR, SLC, LOCA,

- Scenario LR000351 malfunctions involving ATWS, HPCS, LOCA, electrical lineup
- Scenario LR001538 malfunctions involving stuck control rods, recirculation pump, LPCS
- Scenario LR001471 malfunctions involving turbine service water, electrical lineup, RCIC, RHR, ADS
- Scenario LR001542 malfunctions involving electrical lineup, recirculation pump, ATWS, service water, RHR, suppression pool

Note: Bolded scenarios indicate scenarios that were observed during this inspection

Core Performance Tests:

- Power profiles
- Moderator temperature coefficients and voids
- Samarium and Xenon effects
- Control rod patterns
- Manual heat balance using Procedure 9.3.1, Manual Core Heat Balance, Revision 9 (December 3, 2002)

Miscellaneous Documents:

- 2002 RO Annual Written Exam LR001546, E5
- 2002 SRO Annual Written Exam LR001542, E6
- 2002 Annual Exam Report (Cycles 01-1 through 02-5)

Remediation Packages PQD:

- LR001500, Revision 1
- LR001501, Revision 1
- LR001503, Revision 1
- LR001528, Revision 1
- LR001536, Revision 1
- LR001470, Revision 1
- LR001496, Revision 1

Problem Evaluation Requests:

201-0998	201-1171	201-1293	201-1435	201-1613	201-2230
201-2840	202-0306	202-0567	202-0783	202-0820	202-1180
202-1311					