



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
**REGION IV**  
**612 EAST LAMAR BLVD, SUITE 400**  
**ARLINGTON, TEXAS 76011-4125**

May 10, 2011

Mr. M.E. Reddemann  
Chief Executive Officer  
Energy Northwest  
P.O. Box 968, Mail Drop 1023  
Richland, WA 99352-0968

Subject: COLUMBIA GENERATING STATION - NRC INTEGRATED INSPECTION REPORT  
NUMBER 05000397/2011002

Dear Mr. Reddemann:

On March 26, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Columbia Generating Station. The enclosed integrated inspection report documents the inspection findings, which were discussed on March 31, 2011, with yourself, 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 determined that one Severity Level IV violation of NRC requirements occurred. The NRC has also identified one NRC identified 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 the very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as noncited violations, consistent with Section 2.3.2.a of the NRC Enforcement Policy.

If you contest the violation or the significance of the noncited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 612 E. Lamar Blvd, Suite 400, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the facility. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region IV, and the NRC Resident Inspector at the facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one for cases where a response is not required, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal, privacy or proprietary information so that it can be made available to the Public without redaction.

Sincerely,

**/RA/**

Wayne C. Walker, Chief  
Project Branch A  
Division of Reactor Projects

Docket: 50-397  
License: NPF-21

Enclosure:  
NRC Inspection Report 05000397/2011002  
w/Attachment: Supplemental Information

cc: Distribution via ListServ for Columbia Generating Station

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Docket: 05000397

License: NPF-21

Report: 05000397/2011002

Licensee: Energy Northwest

Facility: Columbia Generating Station

Location: Richland, WA

Dates: January 1, 2011 through March 26, 2011

Inspectors: R. Cohen, Senior Resident Inspector  
M. Hayes, Resident Inspector  
B. Larson, Senior Operations Engineer  
D. Strickland, Operations Engineer

Approved By: W. Walker, Chief, Project Branch A  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000397/2011002; 01/01/2011 – 03/26/2011; Columbia Generating Station, Integrated Resident and Regional Report; Postmaintenance Testing, Identification and Resolution of Problems

The report covered a 3-month period of inspection by resident inspectors and announced baseline inspections by region-based inspectors. One Green noncited violation of significance and one Severity Level IV violation were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." The cross-cutting aspect is determined using Inspection Manual Chapter 0310, "Components Within the Cross-Cutting Areas." 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 4, dated December 2006.

### A. NRC-Identified Findings and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a noncited violation of 10 CFR Part 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to consider the impact of preconditioning on the emergency core cooling systems during maintenance. Specifically, licensee personnel failed to consider the impact of scheduling keep fill pump maintenance prior to technical specification required surveillance testing. Licensee personnel reviewed three years worth of data on the emergency core cooling systems to ensure there was no degrading performance trend. This issue was placed in the licensee's corrective action program as Action Request/Condition Report 236880.

The performance deficiency was more than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone objective of ensuring the reliability of systems that respond to initiating events. Using Inspection Manual Chapter 0609.04, Phase 1 – "Initial Screening and Characterization of Findings," the inspectors determined that this performance deficiency was of very low safety significance because this finding was confirmed to not result in a loss of operability for the emergency core cooling systems. The inspectors identified a cross-cutting issue in the area of human performance, work practices, because the licensee failed to effectively communicate expectations regarding procedural compliance [H.4.b] (Section 1R19).

Cornerstone: Miscellaneous

- Severity Level IV. The inspectors identified a Severity Level IV violation of 10 CFR 50.72(b)(3)(v)(D) for the failure of the licensee to make a non-emergency

event notification to the NRC. Specifically, on December 20, 2010, the licensee failed to report the low pressure core spray minimum flow valve failing to open on pump start, rendering the low pressure core spray system incapable of performing its specified safety function during testing. The licensee made Event Notification 46604 on February 8, 2011, to report the identified condition. As a corrective action the licensee has informed all current shift managers, and plans to train future senior reactor operators, of the expectation to evaluate low pressure core spray system failures as a failure of a single train system to complete a safety function. This violation has been placed in the licensee's corrective action program as Action Request/Condition Report 236879.

The performance deficiency was more than minor because the NRC relies on licensees to identify and report conditions or events meeting the criteria specified in the regulations in order to perform its regulatory function. The inspectors determined that this finding was not appropriate to evaluate using the Significance Determination Process due to the finding only affecting the NRC's ability to perform its regulatory oversight function. As a result, this finding was evaluated for traditional enforcement in accordance with the NRC Enforcement Policy. This finding was determined to be a Severity Level IV violation in accordance with Section 6.9.d.9 of the NRC Enforcement Policy, dated September 30, 2010. The inspectors determined that assigning a cross-cutting aspect was not applicable to this finding due to the finding being screened exclusively using the traditional enforcement process (Section 4OA2).

**B. Licensee-Identified Violations**

None

## REPORT DETAILS

### Summary of Plant Status

The plant began the inspection period at 100 percent power. The plant remained at 100 percent power for the remainder of the inspection period except for planned power reductions to support maintenance and testing.

#### 1. REACTOR SAFETY

##### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness**

#### 1R01 Adverse Weather Protection (71111.01)

##### Readiness for Seasonal Extreme Weather Conditions

##### a. Inspection Scope

The inspectors performed a review of the adverse weather procedures for seasonal extremes (e.g., extreme high temperatures, extreme low temperatures, or hurricane season preparations). The inspectors verified that weather-related equipment deficiencies identified during the previous year were corrected prior to the onset of seasonal extremes, and evaluated the implementation of the adverse weather preparation procedures and compensatory measures for the affected conditions before the onset of, and during, the adverse weather conditions.

During the inspection, the inspectors focused on plant-specific design features and the procedures used by plant personnel to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the FSAR and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant-specific procedures. Specific documents reviewed during this inspection are listed in the attachment. The inspectors also reviewed corrective action program items to verify that plant personnel were identifying adverse weather issues at an appropriate threshold and entering them into their corrective action program in accordance with station corrective action procedures. The inspectors' reviews focused specifically on the following plant systems:

- February 25, 2011, diesel generator rooms, service water pump houses and circulating water pump houses due to extreme low temperatures being forecasted for the day

These activities constitute completion of one readiness for seasonal adverse weather sample as defined in Inspection Procedure 71111.01-05.

##### b. Findings

No findings were identified.

## **1R04 Equipment Alignments (71111.04)**

### Partial Walkdown

#### a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk-significant systems:

- January 5, 2011, residual heat removal system C
- February 14, 2011, diesel generator 1

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could affect the function of the system, and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, FSAR, technical specification requirements, administrative technical specifications, outstanding work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also inspected accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of two partial system walkdown samples as defined in Inspection Procedure 71111.04-05.

#### b. Findings

No findings were identified.

## **1R05 Fire Protection (71111.05)**

### Quarterly Fire Inspection Tours

#### a. Inspection Scope

The inspectors conducted fire protection walkdowns that were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- January 6, 2011, fire area RC-4, division 1 switch gear room
- January 10, 2011, fire area R-8/1, low pressure core spray pump room
- January 12, 2011, fire area R-1/1, reactor building 522' elevation northwest quadrant
- February 14, 2011, fire area DG-2, division 1 diesel generator room
- February 16, 2011, fire area R-5, residual heat removal pump 2A room

The inspectors reviewed areas to assess if licensee personnel had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant; effectively maintained fire detection and suppression capability; maintained passive fire protection features in good material condition; and had implemented adequate compensatory measures for out of service, degraded or inoperable fire protection equipment, systems, or features, in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to affect equipment that could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed in the attachment, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's corrective action program. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five quarterly fire-protection inspection samples as defined in Inspection Procedure 71111.05-05.

b. Findings

No findings were identified.

**1R11 Licensed Operator Requalification Program (71111.11)**

.1 Quarterly Review

a. Inspection Scope

On February 14, 2011, the inspectors observed a crew of licensed operators in the plant's simulator to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:



- Licensed operator performance
- Crew's clarity and formality of communications
- Crew's ability to take timely actions in the conservative direction
- Crew's prioritization, interpretation, and verification of annunciator alarms
- Crew's correct use and implementation of abnormal and emergency procedures
- Control board manipulations
- Oversight and direction from supervisors
- Crew's ability to identify and implement appropriate technical specification actions and emergency plan actions and notifications

The inspectors compared the crew's performance in these areas to preestablished operator action expectations and successful critical task completion requirements. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of one quarterly licensed-operator requalification program sample as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

.2 Biennial Inspection (71111.11B)

The licensed operator requalification program involves two training cycles that are conducted over a 2-year period. In the first cycle, the annual cycle, the operators are administered an operating test consisting of job performance measures and simulator scenarios. In the second part of the training cycle, the biennial cycle, operators are administered an operating test and a comprehensive written examination.

a. Inspection Scope

To assess the performance effectiveness of the licensed operator requalification program, the inspectors conducted personnel interviews, reviewed both the operating tests and written examinations, and observed ongoing operating test activities.

The inspectors interviewed four licensee personnel, consisting of instructors and training management, to determine their understanding of the policies and practices for administering requalification examinations. The inspectors also reviewed operator performance on the written exams and operating tests. These reviews included observations of portions of the operating tests by the inspectors. The operating tests

observed included six job performance measures and three scenarios that were used in the current biennial requalification cycle. These observations allowed the inspectors to assess the licensee's effectiveness in conducting the operating test to ensure operator mastery of the training program content. The inspectors also reviewed medical records of six licensed operators for conformance to license conditions and the licensee's system for tracking qualifications and records of license reactivation for two operators.

The results of these examinations were reviewed to determine the effectiveness of the licensee's appraisal of operator performance and to determine if feedback of performance analyses into the requalification training program was being accomplished. The inspectors interviewed members of the training department and reviewed six Licensee Event Reports to assess the responsiveness of the licensed operator requalification program to incorporate the lessons learned from plant events. In addition, the inspectors reviewed examination security measures, a sample of simulator performance test records (transient and steady-state tests, malfunction tests, and scenario-based tests), simulator fidelity and existing logs of simulator deficiencies.

Examination results were assessed to determine if they were consistent with the guidance contained in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1, and NRC Manual Chapter 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process."

The inspectors completed one inspection sample of the biennial licensed operator requalification program.

b. Findings

No findings were identified.

**1R12 Maintenance Effectiveness (71111.12)**

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- February 22, 2011, TSP-TURB-G001, "Turbine Overspeed Protection Valve Disassembly and Inspection"
- March 2, 2011, Action Request/Condition Report 234859, "CRD-HCU-1843 scram outlet valve leaks by"
- March 2, 2011, Review of 10 CFR 50.65(a)(3) evaluation

The inspectors reviewed events such as where ineffective equipment maintenance has resulted in valid or invalid automatic actuations of engineered safeguards systems and

independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- Implementing appropriate work practices
- Identifying and addressing common cause failures
- Scoping of systems in accordance with 10 CFR 50.65(b)
- Characterizing system reliability issues for performance
- Charging unavailability for performance
- Trending key parameters for condition monitoring
- Ensuring proper classification in accordance with 10 CFR 50.65(a)(1) or -(a)(2)
- Verifying appropriate performance criteria for structures, systems, and components classified as having an adequate demonstration of performance through preventive maintenance, as described in 10 CFR 50.65(a)(2), or as requiring the establishment of appropriate and adequate goals and corrective actions for systems classified as not having adequate performance, as described in 10 CFR 50.65(a)(1)

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of three quarterly maintenance effectiveness samples as defined in Inspection Procedure 71111.12-05.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed licensee personnel's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- February 3, 2011, Action Request 233580, "500 KV Relay Set 1 Spurious Trip Tone Signals"
- March 1, 2011, Yellow risk due to I&C testing and removal of the 500 KV north bus from service
- March 7, 2011, Yellow risk due to stator cooling water pump maintenance

The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that licensee personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When licensee personnel performed emergent work, the inspectors verified that the licensee personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed the technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of three maintenance risk assessments and emergent work control inspection samples as defined in Inspection Procedure 71111.13-05.

b. Findings

No findings were identified.

**1R15 Operability Evaluations (71111.15)**

a. Inspection Scope

The inspectors reviewed the following issues:

- January 5, 2011, Action Request/Condition Report 231738, "Diesel Generator 2 Breaker Closing Spring will not Discharge"
- January 25, 2011, Action Request/Condition Report 232917, "Post Seal Cracks discovered on HPCS-B1-DG3"
- February 1, 2011, Action Request/Condition Report 233290, "Emergency Siren D-2 is Not Communicating"
- February 24, 2011, Action Request/Condition Report 234537, "Circuit Breaker Case is Cracked"

- February 28, 2011, Action Request/Condition Report 234766, "DMA-FN-31 Electrical Phase Imbalance Noted at Motor Starter

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that technical specification operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the technical specifications and FSAR to the licensee personnel's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of five operability evaluations inspection samples as defined in Inspection Procedure 71111.15-04

b. Findings

No findings were identified.

**1R18 Plant Modifications (71111.18)**

Temporary Modifications

a. Inspection Scope

To verify that the safety functions of important safety systems were not degraded, the inspectors reviewed the temporary modification identified as Temporary Modification TMR-11-008, "Crack in Weld Down Stream of BS-V-52A"

The inspectors reviewed the temporary modification and the associated safety-evaluation screening against the system design bases documentation, including the FSAR and the technical specifications, and verified that the modification did not adversely affect the system operability/availability. The inspectors also verified that the installation and restoration were consistent with the modification documents and that configuration control was adequate. Additionally, the inspectors verified that the temporary modification was identified on control room drawings, appropriate tags were placed on the affected equipment, and licensee personnel evaluated the combined effects on mitigating systems and the integrity of radiological barriers.

These activities constitute completion of one sample for temporary plant modifications as defined in Inspection Procedure 71111.18-05.

b. Findings

No findings were identified.

**1R19 Postmaintenance Testing (71111.19)**

a. Inspection Scope

The inspectors reviewed the following postmaintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- January 3, 2011, WO 01126278, E-CB-8/3, "Detailed Inspection of MOC Switch"
- February 3, 2011, Work Order 01192825, "LPCS-P-2 - Replace Pump Power Frame"
- February 28, 2011, Work Order 01195224, " DG3 DMA-Fan-31 Post Maintenance Testing"
- March 3, 2011, Work Order 01169668, "Replace FPC-M-P/1A"
- March 10, 2011, Work Request 02000086, "SCW-P-2 Postmaintenance Testing"
- March 21, 2011, Work Request 29086232, "SEIS-RSA-1 Amber and Red Lights Will Not Reset"

The inspectors selected these activities based upon the structure, system, or component's ability to affect risk. The inspectors evaluated these activities for the following:

- The effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed
- Acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate

The inspectors evaluated the activities against the technical specifications, the FSAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with postmaintenance tests to determine whether the licensee was identifying problems and entering them in the corrective action program and that the problems were being corrected commensurate with their importance to safety. Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of six postmaintenance testing inspection samples as defined in Inspection Procedure 71111.19-05.

b. Findings

Introduction: The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to consider the impact of preconditioning on the emergency core cooling systems during keep fill pump maintenance in the work management process.

Description: On February 3, 2011, the inspectors identified that the work schedule for the keep fill pump maintenance performed on December 20, 2010, could have resulted in the unacceptable preconditioning of the low pressure core spray system. The licensee was scheduled to start the low pressure core spray pump to perform Surveillance Procedure SOP-LPCS-SP, "LPCS Suppression Pool Mixing," to support keep fill pump maintenance on the low pressure core spray system. During low pressure core spray pump start, the minimum flow valve strokes open to protect the pump from damage. The low pressure core spray minimum flow valve is scoped into the licensee's inservice testing program; which requires the licensee to test the valve in an as-found condition without preconditioning of the valve prior to inservice testing. Preconditioning, as defined in the licensee's inservice testing program, "is the manipulation of the physical condition of a component before technical specification surveillance testing." Unacceptable preconditioning is further defined to be preconditioning that alters one or more attributes of components which results in acceptable test results. The licensee's definition of unacceptable preconditioning goes on to further state that "any activity performed prior to an inservice test which results in acceptable test results, but may have adversely affected the ability to monitor the component for degradation." Once the keep fill pump maintenance was completed, the licensee was scheduled to complete the required technical specification surveillance test on the low pressure core spray system. This technical specification surveillance test is used to test the time the low pressure core spray minimum flow valve takes to stroke from fully closed to fully open, among other attributes of the low pressure core spray system. This test is performed to ensure the low pressure core spray system can meet its specified design function, and to detect a degrading performance trend before operability is challenged.

The inspectors reviewed the licensee's technical position on preconditioning within its inservice testing program plan to determine what the licensee had defined to be unacceptable preconditioning. The inspectors identified that one of the examples of unacceptable preconditioning listed in the licensee's inservice testing program was the exercising of a motor-operated valve other than for test configurations or normal system operation prior to a surveillance test on the valve. The inspectors also reviewed NRC Inspection Manual Chapter 9900, "Maintenance-Preconditioning of Structures, Systems, and Components Before Determining Operability." The inspectors noted that preconditioning could mask the actual as-found condition of components and possibly result in an inability to verify the operability of components. The inspectors also noted in the NRC technical guidance, that the scheduling of apparently unrelated activities could

result in unacceptable preconditioning. The inspectors determined that the scheduling of the keep fill pump maintenance, which requires the starting of the low pressure core spray system and the cycling of the minimum flow valve, prior to technical specification surveillance testing constituted unacceptable preconditioning by the licensee.

The inspectors reviewed keep fill pump maintenance scheduling records for the previous three years and noted the following additional occurrences of unacceptable preconditioning on emergency core cooling systems:

- 4/22/2008 high pressure core spray system started for keep fill pump maintenance.  
4/25/2008 high pressure core spray system started for technical specification surveillance testing.
- 7/14/2008 high pressure core spray system started for keep fill pump maintenance.  
7/18/2008 high pressure core spray system started for technical specification surveillance testing.
- 10/7/2008 high pressure core spray system started for keep fill pump maintenance.  
10/8/2008 high pressure core spray system started for technical specification surveillance testing.
- 11/23/2009 low pressure core spray system started for keep fill pump maintenance.  
11/27/2009 low pressure core spray system started for technical specification surveillance testing.
- 5/17/2010 high pressure core spray system started for keep fill pump maintenance.  
5/19/2010 high pressure core spray system started for technical specification surveillance testing.
- 8/11/2010 high pressure core spray system started for keep fill pump maintenance.  
8/14/2010 high pressure core spray system started for technical specification surveillance testing.
- 9/8/2010 high pressure core spray system started for keep fill pump maintenance.  
9/8/2010 high pressure core spray system started for technical specification surveillance testing.
- 2/2/2011 residual heat removal system, train C, started for keep fill pump maintenance.  
2/3/2011 residual heat removal system, train C, started for technical specification surveillance testing.

The inspectors determined, through interviews with the licensee's staff, the licensee did not have clear guidance on how to avoid preconditioning of components during the scheduling of work or how to resolve issues of preconditioning when identified.

Analysis: The failure to consider preconditioning during the work scheduling process is a performance deficiency. This performance deficiency is more than minor because it



affects the equipment performance attribute of the Mitigating Systems Cornerstone objective of ensuring the reliability of systems that respond to initiating events. Specifically, the improper scheduling of maintenance and surveillance activities could mask a degraded condition such that systems would be unable to perform their intended safety function when called upon. Using Inspection Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," the inspectors determined this performance deficiency was of very low safety significance because the finding was confirmed to not result in a loss of operability for the emergency core cooling systems. During interviews with plant personnel the inspectors identified a cross-cutting issue in the area of human performance, work practices, because the licensee failed to effectively communicate expectations regarding procedural compliance. In that, the licensee failed to give clear guidance to work week managers in preparing work schedules [H.4.b].

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstance and shall be accomplished in accordance with those procedures. Contrary to this, from 2008 through 2010, the licensee failed to ensure aspects of preconditioning are considered during scheduling of work as specified in Procedure 1.3.68, "Work Management Process". This caused the licensee to fail to realize the scheduling of emergency core cooling systems keep fill pump maintenance prior to quarterly scheduled surveillance testing constituted unacceptable preconditioning. This violation was identified on February 3, 2011. Because this finding was determined to be of very low safety significance and was entered into the licensee's corrective action program as Action Request/Condition Report 236880, this violation is being treated as a noncited violation consistent with Section 2.3.2.a of the NRC Enforcement Policy: NCV 05000397/2011002-01, "Failure to Ensure Unacceptable Preconditioning is Considered During the Work Management Process."

## **1R22 Surveillance Testing (71111.22)**

### **a. Inspection Scope**

The inspectors reviewed the FSAR, procedure requirements, and technical specifications to ensure that the surveillance activities listed below demonstrated that the systems, structures, and/or components tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the significant surveillance test attributes were adequate to address the following:

- Preconditioning
- Evaluation of testing impact on the plant
- Acceptance criteria

- Test equipment
- Procedures
- Jumper/lifted lead controls
- Test data
- Testing frequency and method demonstrated technical specification operability
- Test equipment removal
- Restoration of plant systems
- Fulfillment of ASME Code requirements
- Updating of performance indicator data
- Engineering evaluations, root causes, and bases for returning tested systems, structures, and components not meeting the test acceptance criteria were correct
- Reference setting data
- Annunciators and alarms setpoints

The inspectors also verified that licensee personnel identified and implemented any needed corrective actions associated with the surveillance testing.

- January 5, 2011, Work Order 01194716, OSP-RHR/IST-Q704, "RHR Loop C Operability Test"
- January 5, 2011, OSP-RHR-M103, "Fill Verification RHR-C System"
- January 24, 2011, Work Order 01194381, ISP-RFW-Q401, "Feedwater/Turbine Trip Reactor Level 8 Channel Functional Test"
- February 2, 2011, ISP-MS-Q935, "Division 2 Channel D Isolation Actuation on Reactor Level 2 - CFT/CC"
- February 7, 2011, Work Order 01194835, ISP-RCIC-Q903, "RCIC Isolation on RCIC Steam Supply Flow High DIV 2 - CFT/CC"
- February 8, 2011, Work Order 01194837, "RCIC Isolation on RCIC Steam Supply Flow High Division 1 – Channel Functional Tests and Channel Calibration"
- February 22, 2011, Work Order 01193731, "Control Rod Settle Time Test"

Specific documents reviewed during this inspection are listed in the attachment.

These activities constitute completion of seven surveillance testing inspection samples as defined in Inspection Procedure 71111.22-05.

b. Findings

No findings were identified.

**Cornerstone: Emergency Preparedness**

**1EP6 Drill Evaluation (71114.06)**

Training Observations

a. Inspection Scope

The inspectors observed a simulator training evolution for licensed operators on January 11, 2011, which required emergency plan implementation by a licensee operations crew. This evolution was planned to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the postevolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that the licensee evaluators noted the same issues and entered them into the corrective action program. As part of the inspection, the inspectors reviewed the scenario package and other documents listed in the attachment.

These activities constitute completion of one sample as defined in Inspection Procedure 71114.06-05.

b. Findings

No findings were identified.

**4. OTHER ACTIVITIES**

**4OA1 Performance Indicator Verification (71151)**

.1 Data Submission Issue

a. Inspection Scope

The inspectors performed a review of the performance indicator data submitted by the licensee for the fourth Quarter 2010 performance indicators for any obvious inconsistencies prior to its public release in accordance with Inspection Manual Chapter 0608, "Performance Indicator Program."

This review was performed as part of the inspectors' normal plant status activities and, as such, did not constitute a separate inspection sample.

b. Findings

No findings were identified.

.2 Unplanned Scrams per 7000 Critical Hours (IE01)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams per 7000 critical hours performance indicator for the period from the first quarter 2010 through the fourth quarter 2010. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 2010 through December 2010, to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one unplanned scrams per 7000 critical hours sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.3 Unplanned Scrams with Complications (IE02)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned scrams with complications performance indicator for the period from the first quarter 2010 through the fourth quarter 2010. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports for the period of January 2010 through December 2010, to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one unplanned scrams with complications sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

.4 Unplanned Power Changes per 7000 Critical Hours (IE03)

a. Inspection Scope

The inspectors sampled licensee submittals for the unplanned power changes per 7000 critical hours performance indicator for the period from the first quarter 2010 through the fourth quarter 2010. To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports, and NRC integrated inspection reports for the period of January 2010 through December 2010, to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified. Specific documents reviewed are described in the attachment to this report.

These activities constitute completion of one unplanned transients per 7000 critical hours sample as defined in Inspection Procedure 71151-05.

b. Findings

No findings were identified.

**40A2 Identification and Resolution of Problems (71152)**

**Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection**

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. The inspectors reviewed attributes that included the complete and accurate identification of the problem; the timely correction, commensurate with the safety

significance; the evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews; and the classification, prioritization, focus, and timeliness of corrective actions. Minor issues entered into the licensee's corrective action program because of the inspectors' observations are included in the attached list of documents reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure, they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. The inspectors accomplished this through review of the station's daily corrective action documents.

The inspectors performed these daily reviews as part of their daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings were identified.

.3 Selected Issue Follow-up Inspection

a. Inspection Scope

During a review of items entered in the licensee's corrective action program, the inspectors recognized a corrective action item documenting the low pressure core spray system's minimum flow valve losing position indication during surveillance testing. The inspectors were concerned that the issue was reportable to the NRC and that the licensee had failed to do so.

These activities constitute completion of one in-depth selected issue follow-up inspection sample as defined in Inspection Procedure 71152-05.

b. Findings

Introduction: The inspectors identified a Severity Level IV violation of Title 10 CFR 50.72(b)(3)(v)(D) for the failure of the licensee to make a non-emergency event notification to the NRC. Specifically, the licensee failed to report the low pressure core spray minimum flow valve failing to open on December 20, 2010, rendering the low pressure core spray system incapable of performing its specified safety function, during testing.

Description: On December 20, 2010, while performing Surveillance Procedure SOP-LPCS-SP, "LPCS Suppression Pool Mixing," in support of scheduled maintenance, the low pressure core spray minimum flow valve failed to open as expected. The low pressure core spray minimum flow valve is a motor-operated valve which is required to open when the low pressure core spray system is started. This is done to establish a flow path from the suppression pool, back to the suppression pool until a flow path can be established to the reactor vessel to prevent overheating and damage to the low pressure core spray pump and motor. The low pressure core spray system was subsequently declared inoperable and an investigation team was assembled to determine the cause of the failure. The investigation team determined that two of the three fuses associated with the low pressure core spray motor starter showed internal melting and discoloration while the third fuse did not. The licensee replaced all three fuses and performed testing on the low pressure core spray motor starter and returned the low pressure core spray system to an operable status.

The inspectors questioned the licensee on whether the low pressure core spray system was capable of performing its specified safety function, at the time of discovery, when the minimum flow valve failed to open. The inspectors referred to NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 73," Revision 2, and noted the following under Section 3.2.7, "Event or Condition That Could Have Prevented Fulfillment of a Safety Function":

- The intent of these criteria is to capture those events when there would have been a failure of a safety system to properly complete a safety function.
- These criteria cover an event or condition where structures, components, or trains of a safety system could have failed to perform their intended function because of: [...] equipment failures.
- The event must be reported regardless of whether or not an alternate safety system could have been used to perform the safety function.
- There are a limited number of single train systems that perform safety functions. For such systems, loss of the single train would prevent the fulfillment of the safety function of that system and, therefore, is reportable.

The inspectors presented their questions to the licensee on December 29, 2010. The licensee prepared a position paper that summarized the low pressure core spray system was not a single train system for reporting purposes, but that it was a redundant system

to both the residual heat removal system and the high pressure core spray system. Therefore, the reporting requirement would not be met due to the previously mentioned systems being able to provide the appropriate safety function. The licensee position paper was presented to the inspectors on January 6, 2011. The inspectors reviewed the FSAR and consulted with NRC regional, headquarters, and training staff to determine the treatment of the low pressure core spray system for reporting purposes. After review, the inspectors determined the low pressure core spray system was a single train system and the failure of the minimum flow valve to open was a reportable condition. The licensee submitted Event Notification 46604 to the Headquarters Operations Officer on February 8, 2011.

Analysis: The failure to report a condition that could have prevented the fulfillment of a system's safety function is a performance deficiency. This finding is more than minor because the NRC relies on licensees to identify and report conditions or events meeting the criteria specified in the regulations in order to perform its regulatory function. Using Inspection Manual Chapter 0612, the inspectors determined that this performance deficiency was not appropriate to evaluate using the NRC's Significance Determination Process due to the finding only affecting the NRC's ability to perform its regulatory oversight function. As a result, this performance deficiency was evaluated for traditional enforcement in accordance with the NRC Enforcement Policy. This performance deficiency was determined to be a Severity Level IV violation in accordance with Section 6.9.d.9 of the NRC Enforcement Policy, dated September 30, 2010. The inspectors determined that assigning a cross-cutting aspect was not applicable to this performance deficiency due to the performance deficiency being screened exclusively using the traditional enforcement process.

Enforcement: Title 10 CFR 50.72(b)(3)(v)(D) requires, in part, that licensees shall notify the NRC within eight hours of the occurrence of an event or condition that at the time of discovery could have prevented the fulfillment of the safety function of systems that are needed to mitigate the consequences of an accident. Contrary to this requirement, on December 20, 2010, the licensee failed to report to the NRC a condition that could have, at the time of discovery, prevented the low pressure core spray system from fulfilling its safety function. This violation was identified on December 28, 2010. The licensee made Event Notification 46604 on February 8, 2011. As a corrective action the licensee has informed all current shift managers, and plans to train future senior reactor operators, of the expectation to evaluate low pressure core spray system failures as a failure of a single train system to complete a safety function. There was no actual or potential safety consequences associated with this violation. Because this violation was placed into the licensee's corrective action program as Action Request/Condition Report 236879, compliance was restored within a reasonable amount of time, the violation was not repetitive, or willful, this Severity Level IV violation is being treated as a noncited violation, consistent with Section 2.3.2.a of the Enforcement Policy: NCV 05000397/2011002, "Failure to Make Required Event Notification".



.4 Assessment of Licensee Improvement Efforts

a. Inspection Scope

The inspectors reviewed the following issue:

- March 2, 2011, Action Request/Condition Report 222076, Pride and Performance Completion Sample - Equipment Reliability, items 12 and 30

The inspectors determined that the licensee has effectively identified systems and components necessary to control reactor power, reactor pressure and reactor level and have accurately assessed the reliability of such systems and components. These activities constitute completion of one in-depth problem identification and resolution sample as defined in Inspection Procedure 71152-05.

b. Findings

No findings were identified.

**4OA3 Event Follow-up (71153)**

.1 (Closed) Licensee Event Report (LER) 05000397/2010-002-00: LPCS Minimum Flow Valve Failed to Open Due to Premature Fuse Failure at the Solder Joint

This LER documented a failure of the low pressure core spray minimum flow valve to open during surveillance testing, rendering the low pressure core spray system inoperable and unable to perform its specified safety function. See Section 4OA5 of NRC Inspection Report 05000397/2011002 for a discussion of an NRC identified violation associated with this event. The inspectors completed a review of this LER and did not identify any other violations of regulatory requirements or findings associated with this event. This LER is closed.

**4OA5 Other Activities**

.1 NRC TI 2515/177, "Managing Gas Accumulation in Emergency Core Cooling Decay Heat Removal and Containment Spray Systems (NRC Generic Letter 2008-01)"

As documented in Section 1R22 of Inspection Report 05000397/2010005 and 1R22 of Inspection Report 05000397/2011002, the inspectors confirmed the acceptability of the described actions for the residual heat removal system and the high pressure core spray system. This inspection effort counts towards the completion of TI 2515/177 which will be closed in a later inspection report.

## **4OA6 Meetings**

### Exit Meeting Summary

The inspectors debriefed Messrs. John Bekhazi, Plant General Manager, James Moon, Training Manager, and other members of the staff on December 2, 2010. A telephonic exit of the results of the licensed operator requalification program inspection was conducted on March 1, 2011, between Messrs. Brian Larson, Lead Inspector, and Kevin Smart, Operations Training Supervisor. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

On March 31, 2011, the inspectors presented the inspection results to Mr. Mark Reddemann, Chief Executive Officer, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

**SUPPLEMENTAL INFORMATION**  
**KEY POINTS OF CONTACT**

Licensee Personnel

B. Sawatzke, Chief Nuclear Officer  
B. MacKissock, Plant General Manager  
C. King, Assistant, Plant General Manager  
D. Brown, Operations Manager  
S. Wood, Organizational Effectiveness Manager  
D. Swank, Engineering General Manager  
D. Mand, Design Engineering Manager  
J. Bekhazi, Maintenance Manager  
D. Gregoire, Acting Regulatory Affairs Manager  
K. Christianson, Acting Licensing Supervisor  
R. Garcia, Licensing Engineer  
L. Williams, Licensing Engineer  
P. Taylor, Operations Training Manager  
K. Smart, Operations Training Supervisor  
R. Hayden, Operations Training Specialist

NRC Personnel

R. Cohen, Resident Inspector  
M. Hayes, Resident Inspector

**LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened

None.

Opened and Closed

05000397/2011002-01	NCV	Failure to Ensure Unacceptable Preconditioning is Considered During the Work Management Process (Section 1R19)
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05000397/2011002-02	NCV	Failure to Make Required Event Notification (Section 4OA2)
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Closed

05000397/2010-002-00	LER	LPCS Minimum Flow Valve Failed to Open Due to Premature Fuse Failure at the Solder Joint (Section 4OA3)
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Discussed

None.

## LIST OF DOCUMENTS REVIEWED

### Section 1RO1: Adverse Weather Protection

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
SOP-COLDWEATHER-OPS	Cold Weather Operations	16

### Section 1RO4: Equipment Alignment

#### PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
SOP-DG1-STBY	Emergency Diesel Generator (Div 1) Standby Lineup	14

### Section 1RO5: Fire Protection

#### MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
FSAR	Columbia Generating Station Final Safety Analysis Report, Appendix F	60

### Section 1R11: Licensed Operator Requalification Program

#### MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
	Licensed Operator Requalifications Training LR002021	0
TDI-08	Licensed Operator Requalification Program	7
TDI-12	Shift Technical Advisor/Incident Advisor Program	2
AR/CR 00230147	Licensee Medical Status Not Consistent with RIV Database	

#### LICENSEE EVENT REPORTS

397-10001	Failure of a Secondary Containment Isolation Valve to Fully Close
397-09005	Manual Reactor Scram due to Main Turbine DEH Control System Fluid Leak
397-09004	6.9 kV Non-Segregated Electrical Bus Failure
397-09003-1	Manual Reactor Scram due to a Fire Stemming from a Turbine Lube Oil leak

397-09002-1	Manual Reactor Scram due to Loss of Hydrogen Pressure in the Main Generator
397-09001-1	Reactor Scram due to Turbine Control System Trip Header Depressurization

**Section 1R12: Maintenance Effectiveness**

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
TSP-TURB-G001	Turbine Overspeed Protection Valve Disassembly and Inspection	April 19, 2007
Drawing M502	Flow Diagram Main & Exhaust Steam System	35
Drawing M959	Flow Diagram Electro-Hydraulic Fluid System	15
ABN-DEH-LEAK	DEH-System-Leak	2

**Section 1R13: Maintenance Risk Assessment and Emergent Work Controls**

MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
AR 233580	500 KV Relay Set 1 Spurious Trip Tone Signals	February 3, 2011
	Energy Northwest Impact Statement, BPA Communication Equipment	February 3, 2011
WO 2000583	Investigate Spurious Tone 1 and Tone 2 Signals on 500 KV Relay Set 1	0
ABN- GENERATOR	Main Generator Trouble	9
02000086-01	SCW-P-2 Replace power frame with rebuilt one	February 28, 2011

**Section 1R15: Operability Evaluations**

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
ESP-B1DG3-A101	12 Month Battery Inspection of 125 VDC HPCS-B1-DG3	6

AR/CR 234537	Circuit breaker Case is Cracked	February 24, 2011
AR/CR 234766	DMA-FN-31 Electrical Phase Imbalance Noted at Motor Starter	February 28, 2011

**ACTION REQUEST/CONDITION REPORTS**

232917	218082	228525	218980
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**Section 1R18: Plant Modifications**

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
TMR-11-008	Crack in Weld Down Stream of BS-V-52A	March 1, 2011

**Section 1R19: Postmaintenance Testing**

**MISCELLANEOUS DOCUMENTS**

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
Action Request 234765	DMA-FN-31 Electrical Phase Imbalance Noted at Motor Starter	February 25, 2011
Action Request 234766	DMA-FN-31 Phase Imbalance	February 25, 2011
Work Order 01195224	DG3 Monthly Operability Testing	February 25, 2011
OSP-FPC/IST- Q701	Fuel Pool Cooling System Operability Surveillance	24
18.1.22	FPC-P-1A IST Preservice Test	1
Work Request 02000086	SCW-P-2 Postmaintenance Testing	March 10, 2011
Work Request 29086232	SEIS-RSA-1 Amber and Red Lights Will Not Reset	March 21, 2011
Work Order 0119282503	SP HP Support Replace Power Frame LPCS-P-2	December 20, 2010
Work Order 0119266501	OSP-LPCS/IST-Q702 Operability Testing	December 20, 2010
SWP-PRO-01	Description and Use of procedures and Instructions	16

**Section 1R18: Plant Modifications**

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
	Inservice Testing Program Plan Third Ten-Year Inspection Interval	2011
Action Request 234072	Energy Northwest Condition Evaluation	
1.3.68	Work Management Process	22

**Section 1R22: Surveillance Testing**PROCEDURES

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION</u>
ISP-RFW-Q401	Feedwater/Turbine Trip reactor level 8 Channel Functional Test	11
ISP-MS-Q935	Division 2 Channel D Isolation Actuation on Reactor Level 2-CFT/CC	8
ISP-RCIC-Q903	RCIC Isolation on RCIC Steam Supply Flow High DIV 2 – CFT/CC	15
	RCIC Isolation on RCIC Steam Supply Flow High Division 1 – Channel Functional Test and Channel Calibration	17
PPM 8.2.449	Control Rod Settle Time Test	3

ACTION REQUEST/CONDITION REPORTS

01194620      01193731

**Section 1EP6: Drill Evaluation**MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>DATE</u>
	Columbia Generating Station 2011 ERO Team D Training Drill	January 11, 2011

**Section 4OA1: Performance Indicator Verification****MISCELLANEOUS DOCUMENTS**

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
NEI 99-02	Regulatory Assessment Performance Indicator Guideline Operator Logs Energy Northwest and NRC Performance Indicator Data	6

**Section 4OA2: Identification and Resolution of Problems****ACTION REQUEST/CONDITION REPORTS**

00233155	00233160	00233181	00233182	00233184
00233209	00233210	00233227	00233228	00233260
00232626	00233275	00233276	00233278	00233266
00233267	00233290	00233452	00233457	00233456
00233462	00233463	00233368	00233580	00233588
00233642	00233644	00233646	00233647	00233648
00233668	00233670	00233679	00233682	00233691
00233692	00233913	00233915	00233883	00233887
00233913	00233915	00233580	00233588	00233589
00233592	00233594	00233609	00233614	00233634
00233637	00233642	00233644	00233646	00233647
00233648	00233649	00233650	00233652	00233653
00231848	00231907	00231905	00231908	00231661
00231662	00231665	00231677	00231680	00231684
00231738	00231778	00231798	00231805	00231810
00231813	00231848	00231852	00234219	00234221
00234265	00234268	00234269	00234271	00233986
00233989	00234167	00234169	00234187	00234190
00234191	00234051	00234052	00234072	00234077
00234081	00234082	00234101	00234102	00234103
00234119	00234120	00234122	00234123	00234134
00234135	00234136	00234137	00234140	00234141
00234146	00234765	00234535	00234537	00234538
00234580	00234380	00234381	00234383	00234384
00234407	00234409	00234443	00234444	00234445



00234446	00235404	00235405	00235522	00235523
00235525	00235526	00236261	00236264	00236265
00236306	00236307	00236311	00235994	00235996
00235997	00236022	00236023	00236024	00235660
00235661	00235640	00235654	00236339	00236340
00236343	00236453	00236454	00236455	00236473
00236474	00236488	00236489	00236500	00236501
00236502				

#### MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
AR/CR 222076	Pride and Performance Completion Sample - Equipment Reliability, items 12, 30	March 2, 2011

#### **Section 4OA3: Event Follow-Up**

#### MISCELLANEOUS DOCUMENTS

<u>NUMBER</u>	<u>TITLE</u>	<u>REVISION / DATE</u>
LER 2010-002-00	LPCS Minimum Flow Valve Failed to Open Due to Premature Fuse Failure at the Solder Joint	February 18, 2011