



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 E. LAMAR BLVD
ARLINGTON, TX 76011-4511

May 10, 2017

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 05000397/2017001

Dear Mr. Reddemann:

On March 31, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Columbia Generating Station. On March 30, 2017, the NRC inspectors discussed the results of this inspection with Mr. G. Hettel, Vice President, Operations, and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any findings or violations of more than minor significance.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Mark Haire, Branch Chief
Project Branch A
Division of Reactor Projects

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

Enclosure:
Inspection Report 05000397/2017001
w/ Attachment: Supplemental Information

COLUMBIA GENERATING STATION – NRC INTEGRATED INSPECTION REPORT
05000397/2017001 DATED MAY 10, 2017

DISTRIBUTION:

KKennedy, RA
SMorris, DRA
TPruett, DRP
AVegel, DRS
JClark, DRS
RLantz, DRP
THipschman, IPAT
MHerrerra, DRMA
KFuller, RC
VDricks, ORA
EUribe, IPAT
JWeil, OCA
AMoreno, RIV/OCA
JBowen, RIV/OEDO
BMaier, RSLO
JKlos, NRR
RIV ACES
JGroom, DRP
MHaire, DRP
RAlexander, DRP
MKirk, DRP
TSullivan, DRP
GKolcum, DRP
DBradley, DRP
AElam, DRP
ROP Reports

ML17130B006

ADAMS ACCESSION NUMBER:

× SUNSI Review: ADAMS: Non-Publicly Available × Non-Sensitive
By: MHaire/dll × Yes No × Publicly Available Sensitive

OFFICE	SRI:DRP/A	SRI:DRP/B	C:DRS/EB1	C:DRS/EB2	C:DRS/OB	C:DRS/PSB2
NAME	GKolcum	DBradley	TFarnholtz	GWerner	VGaddy	HGepford
SIGNATURE	/RA/	/RA/	/RA/	/RA/	/RA/	/RA/
DATE	05/02/17	05/02/17	05/02/17	05/04/17	5/2/17	05/04/17
OFFICE	TL:DRS/IPAT	SPE:DRP/A	BC:DRP/A			
NAME	THipschman	RAlexander	MHaire			
SIGNATURE	/RA/	/RA/	/RA/			
DATE	05/04/17	05/02/17	5/10/17			

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 05000397
License: NPF-21
Report: 05000397/2017001
Licensee: Energy Northwest
Facility: Columbia Generating Station
Location: North Power Plant Loop
Richland, WA 99354
Dates: January 1 through March 31, 2017
Inspectors: G. Kolcum, Senior Resident Inspector
D. Bradley, Acting Senior Resident Inspector
P. Elkmann, Senior Emergency Preparedness Inspector
J. Drake, Senior Reactor Inspector
Approved By: Mark Haire
Chief, Project Branch A
Division of Reactor Projects

Enclosure

SUMMARY

IR 05000397/2017001; 01/01/2017 – 03/31/2017; Columbia Generating Station; Integrated Inspection Report.

The inspection activities described in this report were performed between January 1 and March 31, 2017, by the resident inspectors at Columbia Generating Station and inspectors from the NRC's Region IV office. The significance of inspection findings is indicated by their color (i.e., Green, greater than Green, White, Yellow, or Red), determined using Inspection Manual Chapter 0609, "Significance Determination Process," dated April 29, 2015. Their cross-cutting aspects are determined using Inspection Manual Chapter 0310, "Aspects within the Cross-Cutting Areas," dated December 4, 2014. Violations of NRC requirements are dispositioned in accordance with the NRC Enforcement Policy. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," dated July 2016.

No findings were identified.

PLANT STATUS

The plant began the inspection period at 100 percent power. On January 1, 2017, the plant reduced power to approximately 75 percent for a control rod pattern change. The plant returned to 100 percent power on January 2, 2017.

On January 3, 2017, the plant reduced power to approximately 94 percent to troubleshoot a non-safety power supply channel to a recirculation pump. On January 9, 2017, the plant further reduced power to 70 percent to restore the nonsafety power supply channel to a recirculation pump. The plant returned to 100 percent power on January 10, 2017.

On January 28, 2017, the plant reduced power to approximately 75 percent for control rod testing. The plant returned to 100 percent power on January 29, 2017.

On February 4, 2017, the plant reduced power to approximately 89 percent for shifting feedwater heater alignment. The plant returned to 100 percent power on February 4, 2017.

On February 25, 2017, the plant reduced power to approximately 75 percent for steam valve testing and shifting feedwater heater alignment. The plant returned to 100 percent power on February 26, 2017.

On March 10, 2017, the plant began power coast-down to the next refueling outage.

On March, 25, 2017, the plant reduced power to approximately 88 percent for control rod and steam valve testing. The plant returned to 95 percent power on March 25, 2017.

The plant ended the inspection period at approximately 94 percent power.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

On January 18, 2017, the inspectors completed an inspection of the station's readiness for impending adverse weather conditions. The inspectors reviewed plant design features, the licensee's procedures to respond to cold weather and ice, and the licensee's planned implementation of these procedures. The inspectors evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant.

These activities constituted one sample of readiness for impending adverse weather conditions, as defined in Inspection Procedure 71111.01.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Partial Walk-Down

a. Inspection Scope

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

- January 24, 2017, 125 VDC and 250 VDC systems
- February 15, 2017, Division 2 emergency diesel generator ventilation system
- March 7, 2017, primary containment venting system
- March 10, 2017, Division 2 and 3 emergency diesel generator starting air systems

The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the systems. They visually verified that critical portions of the systems were correctly aligned for the existing plant configuration.

These activities constituted four partial system walk-down samples, as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

.2 Complete Walk-Down

a. Inspection Scope

On March 10, 2017, the inspectors performed a complete system walk-down inspection of the reactor building ventilation system. The inspectors reviewed the licensee's procedures and system design information to determine the correct lineup for the existing plant configuration. The inspectors also reviewed outstanding work orders, open condition reports, in-process design changes, temporary modifications, and other open items relative to the system tracked by the licensee's operations and engineering departments. The inspectors then visually verified that the system was correctly aligned for the existing plant configuration.

These activities constituted one complete system walk-down sample, as defined in Inspection Procedure 71111.04.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

Quarterly Inspection

a. Inspection Scope

The inspectors evaluated the licensee's fire protection program for operational status and material condition. The inspectors focused their inspection on four plant areas important to safety:

- January 31, 2017, main control room
- January 31, 2017, Division 1, 2, and 3 emergency diesel generators
- March 1, 2017, emergency core cooling system pump rooms on 422 foot elevation
- March 10, 2017, Division 2 and 3 emergency diesel generators

For each area, the inspectors evaluated the fire plan against defined hazards and defense-in-depth features in the licensee's fire protection program. The inspectors evaluated control of transient combustibles and ignition sources, fire detection and suppression systems, manual firefighting equipment and capability, passive fire protection features, and compensatory measures for degraded conditions.

These activities constituted four quarterly inspection samples, as defined in Inspection Procedure 71111.05.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On March 8, 2017, the inspectors completed an inspection of the station's ability to mitigate flooding due to internal causes. After reviewing the licensee's flooding analysis, the inspectors chose four plant areas containing risk-significant structures, systems, and components that were susceptible to flooding:

- Residual heat removal 'C' room
- Low-pressure core spray room
- Reactor core isolation cooling room
- Control rod drive pump room

The inspectors reviewed plant design features and licensee procedures for coping with internal flooding. The inspectors walked down the selected areas to inspect the design features, including the material condition of seals, drains, and flood barriers. The inspectors evaluated whether operator actions credited for flood mitigation could be successfully accomplished.

In addition, on February 15, 2017, the inspectors completed an inspection of underground bunkers susceptible to flooding. The inspectors selected three underground vaults that contained risk-significant or multiple-train cables whose failure could disable risk-significant equipment:

- Manholes E-MH-E11, E-MH-E13, and E-MH-E15, each containing standby service water cables

The inspectors observed the material condition of the cables and splices contained in the vaults and looked for evidence of cable degradation due to water intrusion. The inspectors verified that the cables and vaults met design requirements.

These activities constituted completion of one flood protection measures sample and one bunker/manhole sample, as defined in Inspection Procedure 71111.06.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

.1 Review of Licensed Operator Requalification

a. Inspection Scope

On January 9, 2017, the inspectors observed an evaluated simulator scenario performed by an operating crew. The inspectors assessed the performance of the operators and the evaluators' critique of their performance. The inspectors also assessed the modeling and performance of the simulator during the evaluated simulator scenario.

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

b. Findings

No findings were identified.

.2 Review of Licensed Operator Performance

a. Inspection Scope

On the following dates, the inspectors observed the performance of on-shift licensed operators in the plant's main control room. At the time of the observations, the plant was in a period of heightened activity or risk. The inspectors observed the operators' performance of the following activities:

- January 9, 2017, during a down-power for adjustable speed drive 1A2 work
- February 9, 2017, for a low-pressure core spray surveillance run
- March 10, 2017, during a Division 1 emergency diesel generator, 24 hour surveillance run

In addition, the inspectors assessed the operators' adherence to plant procedures, including the conduct of operations procedure and other operations department policies.

These activities constituted completion of one quarterly licensed operator performance sample, as defined in Inspection Procedure 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed four instances of degraded performance or condition of safety-significant structures, systems, and components (SSCs):

- January 23, 2017, mechanism operated cell (MOC) switch failures, resulting in the loss of the non-vital SM-3 electrical bus
- January 28, 2017, Division 3 emergency diesel generator, fan 32 coil failure
- January 31, 2017, Division 1 control room emergency chiller, tripped on overcurrent
- January 31, 2017, reactor water cleanup 1B pump piping flange leak

The inspectors reviewed the extent of condition of possible common cause SSC failures and evaluated the adequacy of the licensee's corrective actions. The inspectors reviewed the licensee's work practices to evaluate whether these may have played a role in the degradation of the SSCs. The inspectors assessed the licensee's characterization of the degradation in accordance with 10 CFR 50.65 (the Maintenance Rule), and verified that the licensee was appropriately tracking degraded performance and conditions, in accordance with the Maintenance Rule.

These activities constituted completion of four maintenance effectiveness samples, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

.2 Quality Control

a. Inspection Scope

On March 12, 2017, the inspectors reviewed the licensee's quality control activities through: (1) a review of the licensee's control of quality parts during maintenance associated with coils for 480 V AC breakers; and (2) a review of whether quality control verifications were properly specified, in accordance with the licensee's Quality Assurance Program, and were implemented as specified, during work associated with replacement of these coils.

These activities constituted completion of one quality control sample, as defined in Inspection Procedure 71111.12.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed four risk assessments performed by the licensee prior to changes in plant configuration and the risk management actions taken by the licensee in response to elevated risk:

- January 3, 2017, Yellow risk for maintenance on Division 1 standby service water and control room emergency chiller systems
- January 12, 2017, high radiological risk for radioactive waste cask movement and surveys
- March 6, 2017, Yellow risk during fuel pool cooling pump maintenance
- March 19, 2017, Yellow risk during a Division 1 emergency diesel generator, 24 hour surveillance run

The inspectors verified that these risk assessments were performed timely and in accordance with the requirements of 10 CFR 50.65 (the Maintenance Rule) and plant procedures. The inspectors reviewed the accuracy and completeness of the licensee's risk assessments and verified that the licensee implemented appropriate risk management actions based on the result of the assessments.

The inspectors also observed portions of two emergent work activities that had the potential to cause an initiating event or to affect the functional capability of mitigating systems:

- January 18, 2017, Yellow risk for adverse weather and an ice storm
- January 25, 2017, Orange risk for a Division 3 emergency diesel generator fan failure

The inspectors verified that the licensee appropriately developed and followed a work plan for these activities. The inspectors verified that the licensee took precautions to minimize the impact of the work activities on unaffected SSCs.

These activities constituted completion of six maintenance risk assessments and emergent work control inspection samples, as defined in Inspection Procedure 71111.13

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed six operability determinations that the licensee performed for degraded or nonconforming SSCs:

- January 13, 2017, operability determination for Division 1 emergency diesel generator cable tray heating during welding under Action Request 360052
- January 19, 2017, operability determination for Division 2 emergency diesel generator lubrication oil level under Action Request 360362
- January 25, 2017, operability determination for control rod hydraulic accumulator pressure under Action Request 359340
- January 31, 2017, operability determination for Division 2 emergency diesel generator room temperature under Action Request 359890
- January 31, 2017, operability determination for secondary containment during crane activities under Action Request 359905
- February 28, 2017, operability determination for reactor core isolation cooling room cooler maintenance under Work Order 02073920

The inspectors reviewed the timeliness and technical adequacy of the licensee's evaluations. Where the licensee determined the degraded SSC to be operable, the inspectors verified that the licensee's compensatory measures were appropriate to provide reasonable assurance of operability. The inspectors verified that the licensee had considered the effect of other degraded conditions on the operability of the degraded SSC.

The inspectors also reviewed operator actions taken or planned to compensate for degraded or nonconforming conditions. The inspectors verified that the licensee effectively managed these operator workarounds to prevent adverse effects on the function of mitigating systems and to minimize their impact on the operators' ability to implement abnormal and emergency operating procedures.

These activities constituted completion of seven operability and functionality review samples, which included one operator work-around sample, as defined in Inspection Procedure 71111.15.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

Temporary Modifications

a. Inspection Scope

The inspectors reviewed two temporary plant modifications that affected risk-significant SSCs:

- February 2, 2017, suppression pool temperature monitoring element under Engineering Change 16285

- February 16, 2017, reactor core isolation cooling key switch under Engineering Change 16135

The inspectors verified that the licensee had installed these temporary modifications in accordance with technically adequate design documents. The inspectors verified that these modifications did not adversely impact the operability or availability of affected SSCs. The inspectors reviewed design documentation and plant procedures affected by the modifications to verify the licensee maintained configuration control.

These activities constituted completion of two samples of temporary modifications, as defined in Inspection Procedure 71111.18.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed seven post-maintenance testing activities that affected risk-significant SSCs:

- January 26, 2017, Division 3 emergency diesel generator ventilation fan DMA-FN-32 under Work Order 02107019
- January 27, 2017, high-pressure core spray maintenance under Work Order 02094658
- January 27, 2017, Division 2 control room emergency chiller under Work Order 02093156
- February 8, 2017, low-pressure core spray under Work Order 02092635
- February 9, 2017, fuel pool cooling maintenance under Work Order 029132719
- March 8, 2017, fuel pool cooling maintenance under Work Order 02050556
- March 22, 2017, Division 2 emergency diesel generator circuit breaker E-CB-DG2/8 under Work Order 02109179

The inspectors reviewed licensing- and design-basis documents for the SSCs and the maintenance and post-maintenance test procedures. The inspectors observed the performance of the post-maintenance tests to verify that the licensee performed the tests in accordance with approved procedures, satisfied the established acceptance criteria, and restored the operability of the affected SSCs.

These activities constituted completion of seven post-maintenance testing inspection samples, as defined in Inspection Procedure 71111.19

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors observed risk-significant surveillance tests and reviewed test results to verify that these tests adequately demonstrated that the SSCs were capable of performing their safety functions:

In-service tests:

- January 10, 2017, Division 2 standby liquid control pump operability test

Other surveillance tests:

- January 4, 2017, Division 1 emergency diesel generator monthly surveillance test
- January 11, 2017, reactor core isolation cooling suction transfer test
- January 18, 2017, Division 2 emergency diesel generator monthly surveillance test
- February 9, 2017, low-pressure core spray keep fill pump surveillance test
- March 9, 2017, Division 1 emergency diesel generator, 24 hour load test

The inspectors verified that these tests met technical specification requirements, that the licensee performed the tests in accordance with their procedures, and that the results of the tests satisfied appropriate acceptance criteria. The inspectors verified that the licensee restored the operability of the affected SSCs following testing.

These activities constituted completion of six surveillance testing inspection samples, as defined in Inspection Procedure 71111.22.

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert and Notification System Testing (71114.02)

a. Inspection Scope

The inspector verified the adequacy of the licensee's methods for testing the primary and backup alert and notification system. The inspector also reviewed the licensee's program for identifying emergency planning zone locations requiring tone alert radios and for distributing the radios, and reviewed audits of distribution records. The inspector interviewed licensee personnel responsible for the maintenance of the primary and

backup alert and notification system and reviewed a sample of corrective action program reports written for alert and notification system problems. The inspector compared the licensee's alert and notification system testing program with criteria in NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1; FEMA Report REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants;" and the licensee's current FEMA-approved alert and notification system design report, "Columbia Generating Station Alert and Notification System Design Report," Revision 2, dated November 15, 2016.

These activities constituted completion of one alert and notification system evaluation sample, as defined in Inspection Procedure 71114.02.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization Staffing and Augmentation System (71114.03)

a. Inspection Scope

The inspector verified the licensee's emergency response organization on-shift and augmentation staffing levels were in accordance with the licensee's emergency plan commitments. The inspector reviewed documentation and discussed with licensee staff the operability of primary and backup systems for augmenting the on-shift emergency response staff to verify the adequacy of the licensee's methods for staffing emergency response facilities, including the licensee's ability to staff pre-planned alternate facilities. The inspector also reviewed records of emergency response organization augmentation tests and events to determine whether the licensee had maintained a capability to staff emergency response facilities within emergency plan timeliness commitments.

These activities constituted completion of one emergency response organization staffing and augmentation testing sample, as defined in Inspection Procedure 71114.03.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspector performed an on-site review of the Emergency Plan, Revision 64, implemented January 4, 2017. Specifically, this revision:

- Revised the description of the alert and notification system
- Clarified protective measures for the public by adding the term, "shelter in place"
- Added "monitor and prepare" as an instruction to members of the public for whom immediate protective measures are not being recommended

- Changed the frequency of full-cycle tests of the alert and notification system from twice per year to once per year, as described in the revised “FEMA Design Report”
- Added additional alert and notification warning sirens in the emergency planning zone
- Revised the requirement for an annual test of the alert and notification with regards to the annual test of the tone alert radio system

This revision was compared to its previous revision, to the criteria of NUREG-0654, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” Revision 1, and to the standards in 10 CFR 50.47(b) to determine if the revision adequately implemented the requirements of 10 CFR 50.54(q)(3) and 50.54(q)(4). The inspector verified that the revision did not decrease the effectiveness of the emergency plan. This review was not documented in a safety evaluation report and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection.

These activities constituted completion of one emergency action level and emergency plan changes sample, as defined in Inspection Procedure 71114.04.

b. Findings

No findings were identified.

1EP5 Maintenance of Emergency Preparedness (71114.05)

a. Inspection Scope

The inspector reviewed the following for the period April 2015 to December 2016:

- After-action reports for emergency classifications and events
- After-action evaluation reports for licensee drills and exercises
- Independent audits and surveillances of the licensee’s emergency preparedness program
- Self-assessments of the emergency preparedness program conducted by the licensee
- Licensee evaluations of changes made to the emergency plan and emergency plan implementing procedures
- Drill and exercise performance issues entered into the licensee’s corrective action program
- Emergency preparedness program issues entered into the licensee’s corrective action program
- Emergency response organization and emergency planner training records

The inspector reviewed summaries of 139 corrective action program reports associated with emergency preparedness, and selected 27 to review against program requirements to determine the licensee's ability to identify, evaluate, and correct problems in accordance with planning standard 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E, IV.F. The inspector verified that the licensee accurately and appropriately identified and corrected emergency preparedness weaknesses during critiques and assessments.

The inspector reviewed summaries of 103 licensee evaluations of the impact of changes to the emergency plan and implementing procedures, and selected eight to review against program requirements to determine the licensee's ability to identify reductions in the effectiveness of the emergency plan in accordance with the requirements of 10 CFR 50.54(q)(3) and 50.54(q)(4). The inspector verified that evaluations of proposed changes to the licensee emergency plan appropriately identified the impact of the changes prior to being implemented.

These activities constituted completion of one sample of the maintenance of the licensee's emergency preparedness program, as defined in Inspection Procedure 71114.05.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors observed an emergency preparedness drill on January 10, 2017, to verify the adequacy and capability of the licensee's assessment of drill performance. The inspectors reviewed the drill scenario; observed the drill from the emergency operations facility, technical support center, and simulator; and attended the post-drill critique. The inspectors verified that the licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the licensee in the post-drill critique and entered into the corrective action program for resolution.

These activities constituted completion of one emergency preparedness drill observation sample, as defined in Inspection Procedure 71114.06.

b. Findings

No findings were identified.

.2 Training Evolution Observation

a. Inspection Scope

On March 13, 2017, the inspectors observed simulator-based licensed operator requalification training that included implementation of the licensee's emergency plan. The inspectors verified that the licensee's emergency classifications, off-site notifications, and protective action recommendations were appropriate and timely. The inspectors verified that any emergency preparedness weaknesses were appropriately identified by the evaluators and entered into the corrective action program for resolution.

These activities constituted completion of one training observation sample, as defined in Inspection Procedure 71114.06.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

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

40A1 Performance Indicator Verification (71151)

.1 Unplanned Scrams per 7000 Critical Hours (IE01)

a. Inspection Scope

The inspectors reviewed licensee event reports (LERs) for the period of January 1, 2016, through December 31, 2016, to determine the number of scrams that occurred. The inspectors compared the number of scrams reported in these LERs to the number reported for the performance indicator. Additionally, the inspectors sampled monthly operating logs to verify the number of critical hours during the period. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted verification of the unplanned scrams per 7000 critical hours performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed operating logs, corrective action program records, and monthly operating reports for the period of January 1, 2016, through December 31, 2016, to

determine the number of unplanned power changes that occurred. The inspectors compared the number of unplanned power changes documented to the number reported for the performance indicator. Additionally, the inspectors sampled monthly operating logs to verify the number of critical hours during the period. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted verification of the unplanned power outages per 7000 critical hours performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.3 Unplanned Scrams with Complications (IE04)

a. Inspection Scope

The inspectors reviewed the licensee's basis for including or excluding in this performance indicator each scram that occurred between January 1, 2016, and December 31, 2016. The inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the data reported.

These activities constituted verification of the unplanned scrams with complications performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.4 Drill/Exercise Performance (EP01)

a. Inspection Scope

The inspector reviewed the licensee's evaluated exercises, emergency plan implementations, and selected drill and training evolutions that occurred between January 2016 and December 2016 to verify the accuracy of the licensee's data for classification, notification, and protective action recommendation (PAR) opportunities. The inspector reviewed a sample of the licensee's completed classifications, notifications, and PARs to verify their timeliness and accuracy. The inspector used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the drill/exercise performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.5 Emergency Response Organization Drill Participation (EP02)

a. Inspection Scope

The inspector reviewed the licensee's records for participation in drill and training evolutions between January 2016 and December 2016 to verify the accuracy of the licensee's data for drill participation opportunities. The inspector verified that all members of the licensee's emergency response organization (ERO) in the identified key positions had been counted in the reported performance indicator data. The inspector reviewed the licensee's basis for reporting the percentage of ERO members who participated in a drill. The inspector reviewed drill attendance records and verified a sample of those reported as participating. The inspector used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the emergency response organization drill participation performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

.6 Alert and Notification System Reliability (EP03)

a. Inspection Scope

The inspector reviewed the licensee's records of alert and notification system tests conducted between January 2016 and December 2016 to verify the accuracy of the licensee's data for siren system testing opportunities. The inspector reviewed procedural guidance on assessing alert and notification system opportunities and the results of periodic alert and notification system operability tests. The inspector used Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, to determine the accuracy of the reported data. The specific documents reviewed are described in the attachment to this report.

These activities constituted verification of the alert and notification system reliability performance indicator, as defined in Inspection Procedure 71151.

b. Findings

No findings were identified.

40A2 Problem Identification and Resolution (71152)

.1 Routine Review

a. Inspection Scope

Throughout the inspection period, the inspectors performed daily reviews of items entered into the licensee's corrective action program and periodically attended the

licensee's condition report screening meetings. The inspectors verified that licensee personnel were identifying problems at an appropriate threshold and entering these problems into the corrective action program for resolution. The inspectors verified that the licensee developed and implemented corrective actions commensurate with the significance of the problems identified. The inspectors also reviewed the licensee's problem identification and resolution activities during the performance of the other inspection activities documented in this report.

b. Findings

No findings were identified.

.2 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors selected two issues for an in-depth follow-up:

- On January 11, 2017, the main control room reported a fire in the emergency diesel generator corridor due to welding activities in the overhead, as described in Action Request 360052.
- On July 28, 2016, the Division 2 vital switchgear supply fan, WMA-FN-53B, air flow was found low as described in Action Request 352835.

For both issues, the inspectors assessed the licensee's problem identification threshold, cause analyses, extent of condition reviews, and compensatory actions. The inspectors verified that the licensee appropriately prioritized the planned corrective actions and that these actions were adequate to correct the conditions.

These activities constituted completion of two annual follow-up samples, as defined in Inspection Procedure 71152.

b. Findings

No findings were identified.

40A5 Other Activities

Temporary Instruction 2515/192, "Inspection of the Licensee's Interim Compensatory Measures Associated with the Open Phase Condition Design Vulnerabilities in Electric Power Systems."

a. Inspection Scope

The objective of this performance based temporary instruction was to verify implementation of interim compensatory measures associated with an open phase condition design vulnerability in electric power systems for operating reactors. The inspectors conducted an inspection to determine if the licensee implemented the following interim compensatory measures. These compensatory measures are to remain in place until permanent automatic detection and protection schemes are

installed and declared operable for the open phase condition design vulnerability. The inspectors verified the following:

- The licensee identified and discussed with plant staff the lessons-learned from the open phase condition events at the United States operating plants including the Byron Station open phase condition and its consequences. This included conducting operator training for promptly diagnosing, recognizing consequences, and responding to an open phase condition.
- The licensee updated plant operating procedures to help operators promptly diagnose and respond to open phase conditions on off-site power sources credited for safe shutdown of the plant.
- The licensee established and implemented periodic walk-down activities to inspect switchyard equipment such as insulators, disconnect switches, and transmission line and transformer connections associated with the offsite power circuits to detect a visible open phase condition.
- The licensee ensured that routine maintenance and testing activities on switchyard components have been implemented and maintained. As part of the maintenance and testing activities, the licensee assessed and managed plant risk in accordance with 10 CFR 50.65(a)(4) requirements.

b. Findings

No findings were identified.

40A6 Meetings, Including Exit

Exit Meeting Summary

On February 2, 2017, the inspector presented the results of the onsite inspection of the licensee's emergency preparedness program to Mr. G. Hettel, Vice President, Operations, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

On March 21, 2017, the inspector presented the Temporary Instruction 2515/192 inspection results to Ms. D. Wolfgramm, Compliance Supervisor, Regulatory Affairs, 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.

On March 30, 2017, the resident inspectors presented the final inspection results to Mr. G. Hettel, Vice President, Operations, and other members of the licensee staff. The licensee acknowledged the issues presented. The licensee confirmed that any proprietary information reviewed by the inspectors had been returned or destroyed.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

- A. Black, Manager, Emergency Services
- D. Brandon, Design Engineering Manager
- C. Forrester, Acting Manager, Emergency Preparedness
- D. Gregoire, Manager, Regulatory Affairs
- G. Hettel, Vice President, Operations
- G. Higgs, Manager, Maintenance
- M. Hummer, Licensing Engineer
- M. Khaudiser, Manager, Chemistry and Radiation Safety
- D. Kovacs, Manager, Information Services
- C. Moon, Manager, Quality
- G. Pierce, Manager, Training
- J. Pierce, Manager, Continuous Improvement
- R. Prewett, Operations Manager
- M. Rice, Design Authority
- B. Schuetz, Plant General Manager
- D. Suarez, Regulatory Compliance Engineer
- M. Sullivan, Manager, Security Operations
- D. Wolfgramm, Compliance Supervisor, Regulatory Affairs

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

2515/192	TI	Inspection of the Licensee's Interim Compensatory Measures Associated with the Open Phase Condition Design Vulnerabilities in Electric Power Systems (Section 4OA5)
----------	----	---

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
1.3.76	Integrated Risk Management	48
SOP- COLDWEATHER- OPS	Cold Weather Operations	29

Action Requests (ARs)

360032	360112	360165	360166	360169
360205	360324	360380		

Section 1R04: Equipment Alignment

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
15.1.2	Fire Door Operability Surveillance	27
ESP-B11-A101	12 Month Battery Inspection of 125 VDC E-B1-1	12
OMM 51A-008	Lead Acid Batteries	7
SOP-CN-CONT-VENT-LU	Containment Vent, Deinert, Purge, and Ventilating Valve and Breaker Lineup	1
SOP-DG2-LU	Emergency Diesel Generator (DIV 2) Valve and Power Supply Lineup	5
SOP-HVAC/DG-LU	Diesel Generator and Cable Cooling HVAC System Breaker Lineup	0
SOP-HVAC/DG-SHUTDOWN	Diesel Generator and Cable Cooling HVAC System Shutdown	0
SOP-HVAC/DG-START	Diesel Generator and Cable Cooling HVAC System Start	1

Action Requests (ARs)

324622	325893	341250	342151	345814
346126	346758	349193	349813	351571
354531	358073	360191	360258	361454

Section 1R05: Fire Protection

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
SOP-FP-DRAIN	Fire Protection System Drain	0
SOP-FP-FILL	Fire Protection System Fill	3
SOP-FP-LU	Fire Protection System Valve and Breaker Lineup	7
SOP-FP-OPS	Fire Protection System Operations	10
SOP-FP-SHUTDOWN	Fire Protection System Shutdown	6
SOP-FP-START	Fire Protection System Startup	6
SOP-FP-STBY	Placing Fire Protection System In Standby	5

Action Requests (ARs)

357537 357556 362656

Section 1R06: Flood Protection Measures

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ME-02-02-02	Calculation for Reactor Building Flooding Analysis	2

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
1.3.57	Barrier Impairment	36

Action Requests (ARs)

344460 344765 357921 361219 361520
361766

Work Orders

02094580

Section 1R11: Licensed Operator Requalification Program and Licensed Operator Performance

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Date</u>
LR002357	Evaluated Simulator Scenario	January 9, 2017
WO 3900-4000	Burns and Roe, Flooding Analysis of the Pipe Break and Missile Study	October 15, 1982

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
1.3.1	Operating Policies, Programs, and Practices	121
5.1.1	RPV Control	21
5.2.1	Primary Containment Control	23
5.3.1	Secondary Containment Control	20
13.1.1	Classifying the Emergency	47
13.1.1A	Classifying the Emergency – Technical Bases	31

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Date</u>
OI-9	Operations Standards and Expectation	66

Action Requests (ARs)

360003	360147	360230	360377	360788
--------	--------	--------	--------	--------

Section 1R12: Maintenance Effectiveness

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
1.5.11	Maintenance Rule Program	15
10.25.13A	4.16KV Vacuum Breaker Maintenance with Stored Energy Mechanism	17
ABN-BKR-FAULT	Failure of MOC Switch Activation for Safety Related Breakers	1

Action Requests (ARs)

352504	294219	333584	284521	352567
351923	348362	360595	360597	360121
360121	360244	360168	359912	

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Miscellaneous Documents

<u>Title</u>	<u>Revision</u>
Protected Equipment Tracking Sheets	Various

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
1.3.76	Integrated Risk Management	48
1.3.83	Protected Equipment Program	23
1.5.14	Risk Assessment and Management for Maintenance / Surveillance Activities	39
WCI-4	Online Work Control Process	48

Action Requests (ARs)

359919	360254	360351	360380	360498
360595	360597	361164		

Section 1R15: Operability Determinations and Functionality Assessments

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EC 15111	Implementation of GE-Hitachi Safety Communication	0
FPF 1.2.3-2	Fire Protection Engineering Evaluation for Qualification of Darmatt KM-1 Raceway Fire Barriers	1
Manual 82301	Woodward MPU High Signal Selector 8272-132/-164/-310/-311 Installation and Operation Manual	C

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
1.3.66	Operability and Functionality Evaluation	33
10.25.177	Darmatt Fire Wrap Installation and Inspection	4
OI-9	Operations Standards and Expectation	66
OSP-CRD-C702	Control Rod Full Stroke Insertion Testing	5
OSP-ELEC-M702	Diesel Generator 2 – Monthly Operability Test	61
SWP-OPX-01	Operating Experience Program	0
SWP-PRO-01	Procedure and Work Instruction Use and Adherence	30
SWP-PRO-02	Preparation, Review, Approval and Distribution of Procedures	045

Action Requests (ARs)

356356	359340	359392	359894	360052
360362				

Work Orders (WOs)

02082831	02106509	29132963	29133097
----------	----------	----------	----------

Section 1R18: Plant Modifications

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Date</u>
EC 16135	Place RCIC Low Disch Press Override Switch To Override	December 29, 2016
EC 16285	Substitute Input of Failed SPTM-TE-1A	February 28, 2017

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
4.601.A4	601.A4 Annunciator Panel Alarms	39
5.6.2	Station Blackout (SBO) and Extended Loss of AC Power ELAP Attachments	6
SOP-RCIC-STBY	Placing RCIC in Standby Status	10

Action Requests (ARs)

352594	353597	353607
--------	--------	--------

Work Orders

02106227

Section 1R19: Post-Maintenance Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
10.25.13A	4.16KV Vacuum Breaker Maintenance with Stored Energy Mechanism	15
10.25.187	Motor Control Center Starter (Bucket) Maintenance	24
OSP-ELEC-M703	HPCS Diesel Generator Monthly Operability Test	64
OSP-CCH/IST-M702	Control Room Emergency Chiller System B Operability	5
OSP-FPC/IST-Q701	Fuel Pool Cooling System Operability Surveillance	37
OSP-HPCS/IST-Q701	HPCS System Operability Test	50

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
10.25.13A	4.16KV Vacuum Breaker Maintenance with Stored Energy Mechanism	15
OSP-LPCS/IST-Q701	LPCS System Operability Test	42
SWP-TST-01	Post Maintenance Testing Program	16

Action Requests (ARs)

360595 360597

Work Orders

02107019 02062362

Section 1R22: Surveillance Testing

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ISP-RCIC-Q902	RCIC Suction Transfer on CST Low Level – CFT/CC	9
OSP-ELEC-M701	Diesel Generator 1 – Monthly Operability Test	56
OSP-ELEC-M702	Diesel Generator 2 – Monthly Operability Test	61
OSP-LPCS-A702	Low Pressure Core Spray Keep Fill Integrity Test	5
OSP-SLC/IST-Q701	Standby Liquid Control Pumps Operability Test	26
TSP-DG1-B502	Standby Diesel Generator DG1 Load Testing	20

Action Requests (ARs)

356328 356844 359298 360016 360021
361543 361861

Work Orders

02095267

Section 1EP2: Alert and Notification System Testing

Miscellaneous Documents

<u>Title</u>	<u>Date</u>
Columbia Generating Station Report of the Alert and Notification System Test Results	July 28, 2015
Columbia Generating Station Report of the Alert and Notification System Test Results	January 21, 2016
Columbia Generating Station Report of the Alert and Notification System Test Results	June 14, 2016
First Quarter SFY 2015 EFSEC Quarterly Reports for Benton County WA and Franklin County WA	October 29, 2014
Second Quarter SFY2015 EFSEC Quarterly Reports for Benton County WA and Franklin County WA	January 22, 2015
Third Quarter SFY 2015 EFSEC Quarterly Reports for Benton County WA and Franklin County WA	April 24, 2015
Fourth Quarter SFY2015 EFSEC Quarterly Reports for Benton County WA and Franklin County WA	July 29, 2015
Washington State Annual Letter of Certification, January through December 2015	January 27, 2016

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EPI-26	Tone Alert Radio Test and Survey	2
TSI-6.3.3	EP Siren Batteries Preventative Maintenance	2

Action Requests (ARs)

00360339 00360547

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Miscellaneous Documents

<u>Title</u>	<u>Date</u>
After Action Report/Improvement Plan for the November 10, 2015, ERO Call-Out Drill	December 10, 2015
After Action Report/Improvement Plan for the October 17, 2016, ERO Call-Out Drill	November 11, 2016
Quarterly Autodialer and Page Notification Drill Results	March 24, 2015

Miscellaneous Documents

<u>Title</u>	<u>Date</u>
Quarterly Autodialer and Page Notification Drill Results	May 2, 2015
Quarterly Autodialer and Page Notification Drill Results	September 23, 2015
Quarterly Autodialer and Page Notification Drill Results	December 16, 2015
Quarterly Autodialer and Page Notification Drill Results	March 9, 2016
Quarterly Autodialer and Page Notification Drill Results	June 9, 2016
Quarterly Autodialer and Page Notification Drill Results	September 24, 2016
Quarterly Autodialer and Page Notification Drill Results	November 29, 2016

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
EPI-14	Actions in the Event of an Automated Notification System Failure	7

Section 1EP5: Maintenance of Emergency Preparedness

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	After Action Report/Improvement Plan for the 2015 ERO Team B Exercise conducted February 24, 2015	March 24, 2015
	After Action Report/Improvement Plan for the 2015 ERO Team A Exercise conducted July 7, 2015	July 30, 2015
	After Action Report/Improvement Plan for the 2015 ERO Team D Exercise conducted September 1, 2015	October 1, 2015
	After Action Report/Improvement Plan for the 2015 ERO Team C Exercise conducted October 27, 2015	November 28, 2015
	After Action Report/Improvement Plan for the 2016 ERO Team B Exercise conducted January 12, 2016	February 11, 2016
	After Action Report/Improvement Plan for the ERO Team B Exercise conducted February 23, 2016	March 23, 2016
	After Action Report/Improvement Plan for the ERO Team B Biennial Exercise conducted March 29, 2016	April 29, 2016

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	After Action Report/Improvement Plan for the ERO Team D Exercise conducted May 3, 2016	June 3, 2016
	After Action Report/Improvement Plan for the ERO Team A Exercise conducted August 30, 2016	September 22, 2016
	After Action Report/Improvement Plan for the ERO Team C Exercise conducted October 25, 2016	November 22, 2016
	After Action Report/Improvement Plan for the Fire Brigade First Responder Drill conducted March 15, 2015	
	After Action Report/Improvement Plan for the Fire Brigade First Responder Drill conducted November 3, 2016	
	Columbia Generating Station Emergency Plan	62, 63, 64
	Columbia Generating Station Performance Summary, Second Quarter 2016	
	Columbia Generating Station Performance Summary, Third Quarter 2016	
	Continuous Monitoring Report SR-15-02, September 2014 through January 2015	April 9, 2015
	Continuous Monitoring Report SR-15-04, February 2015 through September 2015	November 17, 2015
	Continuous Monitoring Report SR-16-02, October 2015 through January 2016	March 18, 2016
	Continuous Monitoring Report SR-16-03, February 1 through May 15, 2016	July 27, 2016
	Continuous Monitoring Report SR-16-04, May 15 through September 15, 2016	October 31, 2016
	ERO Team Metrics, January 1, 2014, through December 27, 2016	
	Just in Time Training, Indication of RCS Leakage	December 8, 2016
	Licensing Basis Evaluation 2015-05, PPM 13.7.5, Offsite Assembly Area Operations	January 21, 2015
	Licensing Basis Evaluation 2015-07, PPM 13.4.1, Revision 43	February 17, 2015
	Licensing Basis Evaluation 2015-19, PPM 13.11.3	May 29, 2015
	Licensing Basis Evaluation 2015-33, LE-15-031	November 5, 2015

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
	Licensing Basis Evaluation 2015-34, EPIP 13.2.2, Protective Action Recommendations	December 15, 2015
	Licensing Basis Evaluation 2016-16, EPI 20, Revision 3	February 9, 2016
	Licensing Basis Evaluation 2016-49, EPIP 13.2.2 and EP-01	November 29, 2016
	Licensing Basis Evaluation 2016-54, EPC 26526	December 5, 2016
	May 2016 Regulatory Required Audit Frequency Eight Month Evaluation for Emergency Preparedness	
AR329860	CAS/SAS/Building 88 Security Monthly Walkdown	June 14, 2015
AR349205-01	CAS/SAS/Building 88 Security Monthly Walkdown	June 23, 2016
AR325524	Condition Evaluation	
AR338624	Condition Evaluation	
AR338676	Condition Evaluation	
AR335647	Focused Self-Assessment Report, Emergency Preparedness, Exercise Year	November 11, 2015
AR329846	Monthly EOF and Alternate EOF Walkdowns	June 9, 2015
AR338966	Monthly EOF and Alternate EOF Walkdowns	November 13, 2015
AR350286-01	Monthly EOF and Alternate EOF Walkdowns	June 14, 2016
AR367160	Monthly EOF and Alternate EOF Walkdowns	November 9, 2016
AR334085-03	Monthly Joint Information Center Walkdown	August 4, 2015
AR352975-03	Monthly Joint Information Center Walkdown	August 24, 2016
AR326769	OSC Monthly Walkdown	May 27, 2015
AR348775	OSC Monthly Walkdown	May 2016
AR00337204	Snapshot Self-Assessment, Emergency Preparedness Drill and Exercise Program	
AR332547	TSC Monthly Walkdown	July 14, 2015
AR350511	TSC Monthly Walkdown	July 2016
AU-EP-15	Quality Services Audit Report, Emergency Preparedness	March 5, 2015

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
KLD TR-781	Columbia Generating Station 2015 Population Update	September 29, 2015
KLD TR-863	Columbia Generating Station 2016 Population Update Analysis	September 26, 2016
QAR-A-11843	Emergency Preparedness Eight-Month Evaluation, February 1 through August 31, 2015	
SA340189	Emergency Preparedness Non-Exercise Year Self-Assessment	November 15, 2016
WO02069668-01	Perform Field Team Portable Radio Functional Test	August 18, 2015
WO02086582-01	Perform EOF and Alt-EOF Field Team Portable Radio Functional Test	April 4, 2016
WO02102189-01	Perform EOF and Alt-EOF Field Team Portable Radio Functional Test	December 15, 2016
WO02068876-01	Replace Rubber Goods in the OSC Emergency Kits	October 27, 2015
WO02074982-01	OSC Emergency Protective Equipment Kit Inventory	December 24, 2015
WO02078615-01	OSC Emergency Protective Equipment Kit Inventory	January 22, 2016
WO02079995-01	OSC Emergency Protective Equipment Kit Inventory	February 18, 2016

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
13.13.4	After Action Reporting	10-2, 10-3
13.13.8	Drill and Exercise Program	18, 18-1
13.14.4	Emergency Equipment Maintenance and Testing	52, 53
13.14.9	Emergency Program Maintenance	29-3
13.14.11	EP Equipment	10, 11
EPI-01	Emergency Planner Responsibilities	8
EPI-11	ERO Administration Program	8-1
EPI-12	Evacuation Time Estimates Review and Revision	3, 4
EPI-16	50.54(Q) Change Evaluation	14, 15
EPI-19	Communications Tests	10

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
EPI-21	Drill and Exercise Development and Implementation	16, 17
EPI-27	Emergency Planner Staff Training/Qualification	1
EPI-30	Emergency Preparedness Condition Report Processing	2
SWP-CAP-1	Corrective Action Program	36-1, 36-2
SWP-LIC-02	Licensing Basis Impact Determinations	14

Action Requests (ARs)

00322766	00324901	00325524	00326719	00327095
00331017	00331244	00332511	00333961	00334070
00334401	00334905	00335752	00335851	00337709
00338624	00338676	00339359	00342936	00343857
00345601	00347032	00348490	00349314	00354438
00354754	00357471	00360588	00361008	00361134
00361135	00361174			

Section 1EP6: Drill Evaluation

Miscellaneous Documents

<u>Title</u>	<u>Date</u>
Drill Scenario	January 10, 2017
Drill Scenario	March 14, 2017

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
5.1.1	RPV Control	21
5.2.1	Primary Containment Control	23
5.3.1	Secondary Containment Control	20
13.1.1	Classifying the Emergency	47
13.1.1A	Classifying the Emergency – Technical Bases	31

Action Requests (ARs)

360003	360195	360639	360747
--------	--------	--------	--------

Section 4OA1: Performance Indicator Verification

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
1.5.11	Maintenance Rule Program	15
13.1.1	Classifying the Emergency	47-1
13.1.1A	Classifying the Emergency – Technical Basis	31-1
13.2.1	Emergency Exposure Levels / Protective Action Guides	22
13.2.2	Determining Protective Action Recommendations	18, 19, 20
13.4.1	Emergency Notifications	42, 43-3
13.10.1	Control Room Operations and Shift Manager Duties	35-3
13.11.1	EOF Manager Duties	44-1
EPI-18	Emergency Preparedness Performance Indicators	24
TSI-6.2.22	EP Biannual Emergency Response Siren System Activation Test	3, 3-1, 3-2
TSI-6.2.23	EP River Siren Polling Test	0

Action Requests (ARs)

343395	346068	355989	359928	362108
--------	--------	--------	--------	--------

Section 4OA2: Problem Identification and Resolution

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ABN-FIRE	Fire	39
SWP-CAP-01	Corrective Action Program	36
SWP-CAP-05	Corrective Action Review Board (CARB)	20
SWP-CAP-06	Condition Report Review	23
SWP-CAP-07	Trending Program	10
SWP-LIC-02	Licensing Basis Impact Determinations	13

Action Requests (ARs)

349141	352207	352668	353671	361785
--------	--------	--------	--------	--------

Section 4OA5: Other Activities

Miscellaneous Documents

<u>Number</u>	<u>Title</u>	<u>Revision</u>
	INPO Event Report (IER) L2-12-14, Automatic Reactor Scram Resulting from a Design Vulnerability in the 4.16-kV Bus Undervoltage Protection Scheme	March 13, 2012
	NRC Inspection of Open Phase Design Vulnerability Compensatory Measures [CGS White Paper Evaluating Compensatory Measures]	February 1, 2017
	Self-Assessment Report: NRC Inspection of Open Phase Design Vulnerability Compensatory Measures	February 1, 2017
0000011851	Calculation # E/I-02-12-01 Basler Relay Setpoint	April 15, 2013
APC 13-35	Guidance Document for Open Phase Condition (OPC) Initiative	December 23, 2013
E-502-1	Main One Line Wiring Diagram	53
E-502-1	Main One Line Wiring Diagram	53
E-507-3	Main Three Line Wiring Diagram	26
E514-17	Backup & Start-Up Auxiliary Transformer Relay Settings & Description List TR-B & TR-S	17

Procedures

<u>Number</u>	<u>Title</u>	<u>Revision</u>
ABN-ELEC-GRID	Degraded Off-Site Power Grid	7
MOT-XFRMR-1-2	PM Templet	14
OSP-ELEC-W101	Weekly Offsite Station Power surveillance	29
PPM 1.5.14	Risk Assessment & Management for Maint./Surv. Activities	39
PPM 3.1.10	Operating Data and Logs	106
PPM 4.800.C4 4-3	Oscillography Started annunciator response	34

Action Requests (ARs)

259724	261654
--------	--------