



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

January 20, 2022

Mr. Robert Schuetz
Chief Executive Officer
Energy Northwest
MD 1023
P.O. Box 968
Richland, WA 99352

SUBJECT: COLUMBIA GENERATING STATION – INTEGRATED INSPECTION REPORT
05000397/2021004

Dear Mr. Schuetz:

On December 31, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Columbia Generating Station. On January 6, 2022, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

No findings or violations of more than minor significance were identified during this inspection.

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 Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

A handwritten signature in dark ink, appearing to read "J. Kozal".

Signed by Kozal, Jason
on 01/20/22

Jason W. Kozal, Chief
Reactor Projects Branch A
Division of Reactor Projects

Docket No. 05000397
License No. NPF-21

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV®

COLUMBIA GENERATING STATION – INTEGRATED INSPECTION
REPORT 05000397/2021004 - DATED JANUARY 20, 2022

DISTRIBUTION:

SMorris, RA
JMonninger, DRA
MHay, DRP
NTaylor, DRP
RLantz, DRS
JDixon, DRS
DCylkowski, RC
RWilliams, RIV/OEDO
VDricks, ORA
LWilkins, OCA
MChawla, NRR
AMoreno, RIV/OCA
RAlexander, RSLO
JKozal, DRP
HFreeman, DRP
SSchwind, DRP
SLichvar, DRP
PNiebaum, DRP
ADonley DRP
MBennett, DRP
BCorrell, IPAT
LFlores, IPAT
FRamirez, IPAT
R4Enforcement

ADAMS ACCESSION NUMBER: ML22019A303

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	SRI/DRP/A	RI/DRP/A	ATL/DRS/IPAT	C/DRS/EB1	AC/DRS/EB2
NAME	PNiebaum	ADonley	FRamirez	VGaddy	ASiwy
DATE	01/20/2022	01/18/2022	01/18/2022	01/18/2022	01/17/2022
OFFICE	C/DRS/RCB	C/DRS/OB	AC/DNMS/RxIB	SPE/DRP/A	C/DRP/A
NAME	MHaire MSH	HGepford	JEvans JEE	HFreeman /RA/	JKozal
DATE	01/18/2022	01/18/2022	01/18/2022	1/18/2022	01/20/2022

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number: 05000397

License Number: NPF-21

Report Number: 05000397/2021004

Enterprise Identifier: I-2021-004-0117

Licensee: Energy Northwest

Facility: Columbia Generating Station

Location: Richland, Washington

Inspection Dates: October 01, 2021 to December 31, 2021

Inspectors: P. Niebaum, Senior Resident Inspector
A. Donley, Resident Inspector
R. Alexander, Regional State Liaison Officer
B. Bergeon, Operations Engineer
M. Hayes, Operations Engineer
S. Hedger, Senior Emergency Preparedness Inspector
N. Hernandez, Operations Engineer
N. Okonkwo, Reactor Inspector

Approved By: Jason W. Kozal, Chief
Reactor Projects Branch A
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Columbia Generating Station, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

None.

PLANT STATUS

Columbia started the report period at 100 percent rated thermal power (RTP). On October 12, 2021, power was reduced to approximately 60 percent RTP as a result of a condensate transient and trip of the 'B' reactor feed pump. The licensee restarted the reactor feed pump and returned to 100 percent RTP on October 13, 2021. On December 5, 2021, the licensee reduced power from 100 percent RTP to approximately 15 percent in preparation for a maintenance outage to make plant repairs. On December 6, 2021 the licensee shut down the plant to Mode 4 and began the maintenance outage which ended when the plant synchronized the main generator with the grid on December 13, 2021. The licensee achieved 100 percent RTP on December 14, 2021, and maintained that power level until the end of the report period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed activities described in IMC 2515, Appendix D, "Plant Status," conducted routine reviews using IP 71152, "Problem Identification and Resolution," observed risk significant activities, and completed on-site portions of IPs. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) emergency diesel generator 2 during the annual maintenance window for emergency diesel generator 1 on October 5, 2021
- (2) division 2 control room emergency chilled water when the division 1 control room emergency chiller was inoperable on October 20, 2021
- (3) standby gas treatment division A when division B was inoperable on October 28, 2021
- (4) startup transformer and normal transformers when the backup transformer, E-TR-B, was out of service for maintenance on November 9, 2021

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

- (1) Fire Areas RC-4 and RC-5; division 1 electrical equipment, reactor protection system, battery, and security equipment rooms; on October 18, 2021
- (2) Fire Area M-27, division 2 instrument rack room E-IR-H22/P027 enclosure, on October 21, 2021
- (3) Fire Area 1/1, reactor building 548' elevation room 513, on November 2, 2021
- (4) Fire Area RC-9/2, remote shutdown room, on November 18, 2021

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated internal flooding mitigation protections in the 471' elevation area of the reactor building with the RHR-P-2C room floor plugs removed on November 9 and 10, 2021.

71111.07A - Heat Sink Performance

Annual Review (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness and performance of emergency diesel generator 1 heat exchangers DCW-HX-1A1 and DCW-HX-1A2 on October 12, 2021.

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

Requalification Examination Results (IP Section 03.03) (1 Partial)

- (1) (Partial)
The inspectors reviewed and evaluated the licensed operator examination failure rates for the requalification annual operating exam administered November 15-19, 2021. Due to maintenance outage MO-02, two crews will be administered the annual operating test in January 2022. Complete results of the requalification exam will be reviewed following completion of exam administration.

71111.11B - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Requalification Program (IP Section 03.04) (1 Sample)

The inspection is complete pending review of the final results of the 2021 annual operating test. Most crews were administered the exam November 15-19, 2021. However, due to the maintenance outage MO-02, two crews will be administered the annual operating test in January 2022.

- (1) Biennial Requalification Written Examinations

The inspectors evaluated the quality of the licensed operator biennial requalification written examination administered on November 11, 2021.

Annual Regualification Operating Tests

The inspectors evaluated the adequacy of the facility licensee's annual regualification operating test.

Administration of an Annual Regualification Operating Test

The inspectors evaluated the effectiveness of the facility licensee in administering regualification operating tests and evaluating their licensed operators for mastery of training objectives as required by 10 CFR 55.59(a)(2).

Regualification Examination Security

The inspectors evaluated the ability of the facility licensee to safeguard examination material, such that the examination is not compromised.

Remedial Training and Re-examinations

The inspectors evaluated the effectiveness of remedial training conducted by the licensee, and reviewed the adequacy of re-examinations for licensed operators who did not pass a required regualification examination.

Operator License Conditions

The inspectors evaluated the licensee's program for ensuring that licensed operators meet the conditions of their licenses.

Control Room Simulator

The inspectors evaluated the adequacy of the facility licensee's control room simulator in modeling the actual plant, and for meeting the requirements contained in 10 CFR 55.46.

Problem Identification and Resolution

The inspectors evaluated the licensee's ability to identify and resolve problems associated with licensed operator performance.

71111.11Q - Licensed Operator Regualification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator performance in the control room during power ascension following a reactor feed pump trip on October 13, 2021. The inspectors also observed and evaluated licensed operator performance in the control room during a power reduction, main turbine trip, and placing shutdown cooling in service and transitioning the plant to Mode 4 in preparation for maintenance outage MO-02 on December 5-6, 2021.

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

- (1) The inspectors observed and evaluated a licensed operator requalification evaluated scenario on November 3, 2021.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (4 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

- (1) diesel generator system B voltage regulator potential transformer fuse failure on August 18, 2021
- (2) FW-V-65B borescope on December 6, 2021
- (3) residual heat removal valve 50A potential internal leakage impact on December 21, 2021
- (4) standby liquid control system on December 30, 2021

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (4 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

- (1) yellow risk during planned maintenance outage for emergency diesel generator 1, week of October 4, 2021
- (2) yellow risk during planned maintenance outage for residual heat removal train B, October 18-20, 2021
- (3) yellow risk during corrective maintenance on the standby gas treatment train B on October 28, 2021
- (4) yellow risk during planned maintenance on the standby gas treatment train A on November 9, 2021

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (5 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

- (1) CR 421875, foreign material found during containment exhaust purge, valve 4A seat inspection on October 5, 2021
- (2) CR 426218, diesel generator 1A2 governor oil leak on October 14, 2021
- (3) CR 426623, diesel generator 3 voltage regulator field current lower than normal on October 28, 2021
- (4) CR 427172, increased vibration on WMA-FN-53A, division 1 electrical switchgear supply fan, on November 26, 2021

- (5) CR 425406, increased pressure in residual heat removal system A on December 14, 2021

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

- (1) EC 18472, Removable Steel Curb for Standby Liquid Control (SLC) Tank Area Reactor Building 548, Revision 001

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the following post-maintenance test activities to verify system operability and functionality:

- (1) TSP-DG1-B502, Standby Diesel Generator DG1 Load Testing, on October 13, 2021
- (2) OSP-RHR/IST-Q703, RHR Loop B Operability Test, on October 19, 2021
- (3) OSP-SGT-M702, Standby Gas Treatment System B Operability, on October 28, 2021
- (4) work order 02187303 for service water pressure control valve 15A on October 29, 2021
- (5) work order 02184040 on FW-V-65A to repair a packing leak and to replace the valve motor on December 13, 2021

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated maintenance outage MO-02 activities from December 6-13, 2021.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (2 Samples)

- (1) SOP-ELEC-W101, Offsite Station Power Alignment Check, Revision 032, on October 7, 2021
- (2) OSP-SLC/IST-Q701, Standby Liquid Control Pumps Operability Test, Revision 030, on October 21, 2021

RCS Leakage Detection Testing (IP Section 03.01) (1 Sample)

- (1) OSP-INST-H101, Shift and Daily Instrument Checks (Modes 1, 2, and 3), Revision 095, on December 17, 2021

71114.01 - Exercise Evaluation

Inspection Review (IP Section 02.01-02.11) (1 Sample)

- (1) The inspectors evaluated the biennial emergency plan exercise conducted on October 26, 2021. The exercise scenario simulated a greater than Operating Basis Earthquake seismic event resulting in a low-power anticipated transient without a reactor scram, and reduction to a single source of AC power to the vital busses. Additionally, the seismic event was simulated to result in damage to the spent fuel pool and water leaking from the pool into lower elevations of the reactor building. Ultimately, the spent fuel pool water level reduced to a very low level for an extended period of time, requiring declaration of a General Emergency and issuance of a Protective Action Recommendation to the offsite authorities. The licensee's exercise activities also included demonstration of one of the station's extensive damage mitigation guideline strategies, per the requirements of 10 CFR 50.155(b)(2), in mitigating the loss of the spent fuel pool water inventory.

71114.04 - Emergency Action Level and Emergency Plan Changes

Inspection Review (IP Section 02.01-02.03) (1 Sample)

- (1) The inspectors evaluated the following submitted Emergency Action Level and Emergency Plan changes.
 - SWP-EPP-01, Emergency Response Organization & Training, Revision 23 – effective 01/28/2021
 - PPM 13.8.1, Emergency Dose Assessment, Revision 40 – effective 06/24/2021
 - PPM 13.14.4, EP Equipment Maintenance & Testing, Revision 55 – effective 06/24/2021
 - PPM 13.1.1, Classifying the Emergency (Matrix), Revision 49/Minor Revision 2 – effective 06/24/2021
 - PPM 13.1.1A, Classifying the Emergency (Technical Bases), Revision 34/Minor Revision 2 – effective 06/24/2021

This evaluation does not constitute NRC approval.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

BI01: Reactor Coolant System (RCS) Specific Activity Sample (IP Section 02.10) (1 Sample)

- (1) October 1, 2020, through September 30, 2021

BI02: RCS Leak Rate Sample (IP Section 02.11) (1 Sample)

- (1) October 1, 2020, through September 30, 2021

EP01: Drill/Exercise Performance (DEP) Sample (IP Section 02.12) (1 Sample)

- (1) October 1, 2020, through September 30, 2021

EP02: Emergency Response Organization (ERO) Drill Participation (IP Section 02.13) (1 Sample)

- (1) October 1, 2020, through September 30, 2021

EP03: Alert And Notification System (ANS) Reliability Sample (IP Section 02.14) (1 Sample)

- (1) October 1, 2020, through September 30, 2021

71152 - Problem Identification and Resolution (PI&R)

Semiannual Trend Review (IP Section 02.02) (1 Sample)

- (1) The inspectors reviewed the licensee's corrective action program for potential adverse trends associated with transient combustible controls that might be indicative of a more significant safety issue. One observation was documented in the results section of this report.

Annual Follow-up of Selected Issues (IP Section 02.03) (2 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) CR 426130, trip of condensate booster pump 2A and reactor feed pump 1B on October 12, 2021
- (2) Effectiveness of corrective actions related to the full implementation cyber security inspection findings as discussed in NRC Inspection Report 05000397/2020401 (ML20259A191)

INSPECTION RESULTS

Observation: Increase in Transient Combustible Control Deficiencies	71152
The inspectors reviewed the station's corrective action program for trends associated with fire protection program implementation during a six-month period ending on December 31, 2021. Nine condition reports documented NRC-identified issues associated with fire protection program implementation. Of those nine issues, eight were associated with transient combustible controls within safety-related areas of the plant. The inspectors determined three issues were minor violations of licensee procedure PPM 1.3.10C, "Control of Combustibles". Specifically, CRs 426453, 426919, and 427406 document NRC-identified combustible materials in the reactor building that were found in combustible material exclusion zones. The licensee removed the materials from the exclusion zones and added additional signs/postings in the areas to reinforce the program requirements.	

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On November 8, 2021, the inspectors presented the Emergency Preparedness Exercise Inspection results to Mr. W.G. Hettel, Chief Nuclear Officer, and other members of the licensee staff.
- On November 11, 2021, the inspectors presented the Biennial Requalification Inspection results to Mr. M. Davis, Training Manager, and other members of the licensee staff.
- On November 18, 2021, the inspectors presented the Cyber Security Full Implementation Problem Identification and Resolution Inspection results to Mr. D.M. Kovacs, Information Services Manager, and other members of the licensee staff.
- On January 6, 2022, the inspectors presented the Integrated Inspection results to Mr. R. Schuetz, Chief Executive Officer, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Corrective Action Documents	Action Requests	425767	
71111.04	Drawings	M512-3	Flow Diagram Diesel Oil & Miscellaneous Systems Diesel Generator Building	042
71111.04	Drawings	M512-4	Flow Diagram Diesel Oil & Miscellaneous Systems Diesel Generator Building	015
71111.04	Drawings	M544	Flow Diagram HVAC-Standby Gas Treatment Reactor Building	076
71111.04	Drawings	M548-1	Flow Diagram HVAC for Control and Switchgear Rooms Radwaste Building	103
71111.04	Drawings	M775	Flow Diagram Emergency Chilled Water Piping System Control Room	030
71111.04	Procedures	SOP-DG2-LU	Emergency Diesel Generator (DIV 2) Valve and Power Supply Lineup	008
71111.04	Procedures	SOP-HVAC/CR-LU	Control, Cable, and Critical Switchgear Rooms HVAC Lineup	003
71111.04	Procedures	SOP-HVAC/CR-STBY	Control, Cable, and Critical Switchgear Rooms HVAC in Standby Status	002
71111.04	Procedures	SOP-SGT-LU	Standby Gas Treatment System Lineup	000
71111.04	Procedures	SOP-SGT-STBY	Placing Standby Gas Treatment in Standby Status	002
71111.04	Work Orders		29162794	
71111.05	Calculations	FP-02-85-03	Combustible Loading Calculation	011
71111.05	Corrective Action Documents	Action Requests	426330, 426386, 426453	
71111.05	Drawings	FM892-2	Fire Barrier and Fire Boundary Plan, Mezzanine Floors, EI 467' and 471' and Misc. Floors	010
71111.05	Fire Plans	PFP-RB-522	Reactor 522	006
71111.05	Fire Plans	PFP-RB-548	Reactor 548	004
71111.05	Fire Plans	PFP-RW-467	Radwaste 467	006
71111.05	Miscellaneous		Fire Impairment Permit 21-0334	
71111.05	Procedures	1.3.10	Plant Fire Protection Program Implementation	037
71111.05	Procedures	1.3.10C	Control of Combustibles	022

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.05	Procedures	15.2.2	Function and Sensitivity Check of Ionization Detectors	021
71111.06	Calculations	ME-02-02-02	Reactor Building Flooding Analysis	004
71111.06	Corrective Action Documents	AR 323449	Root Cause Evaluation Non-Conservative Flood Tour	002
71111.07A	Calculations	ME-2-17-10	Determine Tube Plugging Limits for Division 1 and 2 DCW Heat Exchangers	000
71111.07A	Calculations	ME-2-92-241	Calculation for DCW Heat Exchanger 1A1 and 1A2 Performance Monitoring Data Evaluation	001
71111.07A	Calculations	ME-2-92-244	Minimum Heat Transfer Rate Required for DCW Heat Exchangers A & B	000
71111.07A	Corrective Action Documents	Action Requests	426094, 426042, 426053, 426058, 388652	
71111.07A	Miscellaneous	MOT-HX-1-1	Maintenance Optimization Template: Heat Exchangers	000
71111.07A	Procedures	8.4.54	Thermal Performance Monitoring of DCW-HX-1A1 and DCW-HX-1A2	011
71111.07A	Work Orders		02161467, 02161468, 02106204, 02134497	
71111.11A	Miscellaneous		2020 Annual Operating Test Results	000
71111.11A	Miscellaneous		2021 Annual Operating Test Results	000
71111.11B	Corrective Action Documents	Action Requests	412616, 414418, 427173, 427069, 398299	
71111.11B	Engineering Changes		Simulator Engineering Changes Summary	10/18/2021
71111.11B	Miscellaneous		Operations Training Advisory Group Meeting Minutes	03/11/2020
71111.11B	Miscellaneous		Operations Training Advisory Group Meeting Minutes	06/17/2020
71111.11B	Miscellaneous		Operations Training Advisory Group Meeting Minutes	09/28/2020
71111.11B	Miscellaneous		Operations Training Advisory Group Meeting Minutes	07/26/2021
71111.11B	Miscellaneous		Simulator Review Board Minutes	11/06/2019
71111.11B	Miscellaneous		Simulator Review Board Minutes	09/03/2020
71111.11B	Miscellaneous		Simulator Review Board Minutes	08/25/2021
71111.11B	Miscellaneous		JPM Overlap Tracking Data	001
71111.11B	Miscellaneous		Simulator Scenario Overlap Tracking Data	001
71111.11B	Miscellaneous		2021 Operating Test Sample Plan	001
71111.11B	Miscellaneous		List of Licensed Operators	10/27/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.11B	Miscellaneous		Crew F 2019-2021 Training Records	11/10/2021
71111.11B	Miscellaneous		Crew F 2019-2021 Watchstanding Records	11/10/2021
71111.11B	Miscellaneous		LORQ 2021 Crew F Scenario Evaluation Summary	11/10/2021
71111.11B	Miscellaneous		LORQ 2021 Crew F JPM Evaluation Summary	11/10/2021
71111.11B	Miscellaneous		2021 Crew F Annual Operating Test Exam Package	
71111.11B	Miscellaneous		Simulator Differences Report	11/08/2021
71111.11B	Miscellaneous	Remedial Training LR002480	2020 Annual Operating Test - Week 7 JPM Exam (Blue)	12/16/2020
71111.11B	Miscellaneous	Remedial Training LR002488	Cycle 20-3 Crew B Remedial Training	07/06/2020
71111.11B	Miscellaneous	Remedial Training LR002492	Cycle 20-4 Crew C Remedial Training	07/13/2020
71111.11B	Miscellaneous	Remedial Training LR002492	Cycle 20-4 Crew S Remedial Training	08/24/2020
71111.11B	Miscellaneous	Remedial Training LR002510	Cycle 21-1 Crew B Remedial Training	02/01/2021
71111.11B	Miscellaneous	Remedial Training LR002518	Cycle 21-2 Crew F Remedial Training	04/12/2021
71111.11B	Miscellaneous	Simulator Discrepancy Reports	3409, 3381, 3343, 3300	
71111.11B	Miscellaneous	Test ID: LE0041	Operating Test Simulator Scenario 41	000
71111.11B	Miscellaneous	Test ID: 3731	LORQ 2021 Biennial Week 2 RO Written Exam (Blue)	11/01/2021
71111.11B	Miscellaneous	Test ID: 3732	LORQ 2021 Biennial Week 2 SRO Written Exam (Blue)	11/01/2021
71111.11B	Miscellaneous	Test ID: 3733	LORQ 2021 Biennial Week 3 RO Written Exam (Gold 2)	11/03/2021
71111.11B	Miscellaneous	Test ID: 3734	LORQ 2021 Biennial Week 3 SRO Written Exam (Gold 2)	11/03/2021
71111.11B	Miscellaneous	Test ID: LE0008	Operating Test Simulator Scenario 8	000
71111.11B	Miscellaneous	Test ID: LE0031	Operating Test Simulator Scenario 31	000

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.11B	Miscellaneous	Test ID: LE0032	Operating Test Simulator Scenario 32	000
71111.11B	Miscellaneous	Test ID: LE0035	Operating Test Simulator Scenario 35	000
71111.11B	Miscellaneous	Test ID: LE0038	Operating Test Simulator Scenario 38	000
71111.11B	Miscellaneous	Test ID: LE0046	Operating Test Simulator Scenario 46	000
71111.11B	Miscellaneous	Test ID: LEA0002	Operating Test Administrative JPM 2	000
71111.11B	Miscellaneous	Test ID: LEA0003	Operating Test Administrative JPM 3	000
71111.11B	Miscellaneous	Test ID: LEA0004	Operating Test Administrative JPM 4	000
71111.11B	Miscellaneous	Test ID: LEA0006	Operating Test Administrative JPM 6	000
71111.11B	Miscellaneous	Test ID: LEA0008	Operating Test Administrative JPM 8	000
71111.11B	Miscellaneous	Test ID: LEA0009	Operating Test Administrative JPM 9	000
71111.11B	Miscellaneous	Test ID: LEP0001	Operating Test Plant JPM 1	000
71111.11B	Miscellaneous	Test ID: LEP00011	Operating Test Plant JPM 11	000
71111.11B	Miscellaneous	Test ID: LEP00011	Operating Test Plant JPM 11	000
71111.11B	Miscellaneous	Test ID: LEP0003	Operating Test Plant JPM 3	000
71111.11B	Miscellaneous	Test ID: LEP0004	Operating Test Plant JPM 4	000
71111.11B	Miscellaneous	Test ID: LEP0006	Operating Test Plant JPM 6	000
71111.11B	Miscellaneous	Test ID: LEP0016	Operating Test Plant JPM 16	000
71111.11B	Miscellaneous	Test ID: LES0002	Operating Test Sim/CR JPM 2	000
71111.11B	Miscellaneous	Test ID: LES0003	Operating Test Sim/CR JPM 3	000
71111.11B	Miscellaneous	Test ID: LES0004	Operating Test Sim/CR JPM 4	000
71111.11B	Miscellaneous	Test ID: LES0019	Operating Test SIM/CR JPM 19	000
71111.11B	Miscellaneous	Test ID: LR002421	Operating Test Administrative JPM 2421	000
71111.11B	Procedures	1.3.1	Plant Procedures Manual Operating Policies, Programs, and Practices	131
71111.11B	Procedures	1.8.10	Plant Procedures Manual Administration of Medical Qualifications	012
71111.11B	Procedures	1.8.11	Plant Procedures Manual Medical Examination Program for Licensed Operators	012
71111.11B	Procedures	CT01	Simulator Core Performance Testing	06/07/2021
71111.11B	Procedures	SP01	Simulator Steady State Testing	08/25/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.11B	Procedures	TDI-06	Simulator Management	021
71111.11B	Procedures	TDI-08	Licensed Operator Requalification Program	044
71111.11B	Procedures	TDI-23	LORQ Annual Exam Development and Administration	016
71111.11B	Procedures	TDI-24	Exam Security	017
71111.11B	Procedures	TRG-TQS-02	Application for and Maintenance of Reactor Operator and Senior Reactor Operator License	007
71111.11B	Procedures	TT01	Simulator Manual Scram from Full Power	02/18/2021
71111.11Q	Miscellaneous	LE000036	LORQ Annual Exam Scenario LE000036	10/25/2021
71111.11Q	Procedures	3.2.1	Normal Plant Shutdown	098
71111.11Q	Procedures	OSP-RCS-C102	RPV Non-critical Cooldown Surveillance	013
71111.11Q	Procedures	SOP-FWH-START	Extraction Steam and Heater Vent/Drains Startup	014
71111.11Q	Procedures	SOP-MT-SHUTDOWN	Main Turbine Shutdown	017
71111.11Q	Procedures	SOP-RFT-START	Reactor Feedwater Turbine System Start	023
71111.11Q	Procedures	SOP-RPS-BYPASS	Bypassing RPS Interlocks in Modes 3, 4, and 5	009
71111.11Q	Procedures	SOP-RRC-FLOW-QC	Reactor Power Change with RRC Flow Controllers – Quick Card	005
71111.11Q	Procedures	SOP-RRC-SHUTDOWN	Reactor Recirculation System Shutdown	005
71111.11Q	Procedures	TDI-08	Licensed Operator Requalification Program	018
71111.12	Corrective Action Documents	Action Requests	424457, 425452, 427855, 427839, 416409, 402185, 408231, 425406, 424725, 398119, 419603, 401196, 412412, 416085, 416689, 423079, 411795, 397980, 388557, 426756, 425721, 423079, 426419, 409044, 405968	
71111.12	Drawings	EWD-47E-033	Electrical Wiring Diagram Standby AC Power System Diesel Generator 2 Excitation System	010
71111.12	Miscellaneous		Technical Assessment Supporting Reportability for AR#424457	
71111.12	Miscellaneous		Reportability Evaluation for AR 00424457	
71111.12	Miscellaneous		System Engineering Maintenance Rule Data for FW-V-65B	
71111.12	Miscellaneous	Investigation Template	DG-2 voltage regulator unresponsive	10/05/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.12	Miscellaneous	NUREG-1760	Aging Assessment of Safety-Related Fuses Used in Low- and Medium-Voltage Applications in Nuclear Power Plants	May 2002
71111.12	Procedures	1.19.3	Component Condition Monitoring Program	005
71111.12	Procedures	1.19.3D	Thermographic Monitoring And Analysis	008
71111.12	Procedures	1.3.47	Fuse Replacement Control	014
71111.12	Procedures	1.5.11	Maintenance Rule Program	016
71111.12	Procedures	1.5.13	Preventive Maintenance Optimization Living Program	044
71111.12	Procedures	OSP-SLC/IST-Q701	Standby Liquid Control Pumps Operability Test	030
71111.12	Procedures	SPS-9-6	Infrared Thermography	002
71111.12	Procedures	SYS-4-22	Maintenance Rule Program	015
71111.12	Work Orders		02113215, 02113215, 02148140, 01143000, 01170774, 02081140, 02140260, 02044229, 02144962, 02113409, 02148012, 02153416, 02163209	
71111.13	Procedures	1.3.83	Protected Equipment Program	034
71111.13	Procedures	1.5.14	Risk Assessment and Management for Maintenance/Surveillance Activities	043
71111.15	Corrective Action Documents	Action Requests	419710, 421649, 421804, 421875, 425406, 424725, 408231, 402185, 398119	
71111.15	Miscellaneous		Operator Logs from May 7, 2021, to June 17, 2021	
71111.15	Miscellaneous	5.19.5	ECCS Relief Valve Setpoints	004
71111.15	Miscellaneous	CVI 1033-00,13,1	Pressure Relief Valve	000
71111.15	Miscellaneous	CVI-OMM 53-00, 68, 1-1	Operation - Maintenance Instructions and Parts Catalog for 4400 KW Generator Set (Diesel Generator)	06/18/2017
71111.15	Procedures	10.1.13	Foreign Materials Controls for Systems and Components	029
71111.15	Procedures	IST-4	Inservice Testing Program Plan Fourth Ten-Year Inspection Interval	005
71111.15	Procedures	SOP-CN-CONT-VENT	Containment Vent, Deinert, Purge, and Ventilating	027
71111.15	Procedures	SOP-DG-GOV-OIL	Diesel Generator Governor Oil Level Control	004
71111.15	Procedures	TSP-CEP/X67-R802	LLRT of CEP-V-3A, CEP-V-3B, CEP-V-4A, CEP-V-4B	002
71111.15	Work Orders		02180846, 02144962, 02113409	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.18	Procedures	IP-ENG-001	Standard Design Process	002
71111.19	Corrective Action Documents	Action Requests	420502, 426064, 426065, 416137, 416484, 426066, 426083, 426152, 426155, 427879, 427882, 178865, 428098	
71111.19	Engineering Changes	18926		001
71111.19	Procedures	1.19.3A	Vibration Monitoring	003
71111.19	Procedures	10.24.241	Flow Makeup and Pressure Decay Leak Rate Testing	003
71111.19	Procedures	10.25.132	Thrust Adjustment and Diagnostic Analysis of Motor Operated Valves	035
71111.19	Procedures	10.25.216	Inspection of Limitorque Magnesium Rotor Actuator Motors	000
71111.19	Procedures	ESP-SW/IST-Q703	SW-PCV-15A Operability	001
71111.19	Procedures	OSP-SW-M101	Standby Service Water Loop A Valve Position Verification	047
71111.19	Procedures	TSP-RFW/X17A-R802	LLRT of RFW-V-65A, RFW-V-65B, RWCU-V-40	008
71111.19	Work Orders		02139565, 02185110, 02146053, 02169916, 02176358, 02176355, 02085978, 02186616	
71111.20	Miscellaneous		Reactivity Control Plan	December 2021
71111.20	Procedures		MO-02 Maintenance Outage Shutdown Safety Plan	000
71111.20	Procedures	3.1.2	Reactor Plant Startup	092
71111.20	Procedures	3.2.1	Normal Plant Shutdown	098
71111.20	Procedures	ABN-ROD	Control Rod Faults	033
71111.20	Procedures	OSP-RCS-C101	RPV Heatup Surveillance	015
71111.20	Procedures	SOP-ENTRY-DW	Personnel Entry into Drywell	028
71111.20	Work Orders	02106252		
71111.22	Corrective Action Documents	Action Requests	426419, 426490, 426698, 426983, 426943	
71111.22	Miscellaneous		Operator Logs from October 3 through October 7, 2021	
71111.22	Miscellaneous		Operator Rounds from 12/17/2021	
71111.22	Miscellaneous	Night Order 678	Night Order Information for DG1 Extended Maintenance Window	
71111.22	Procedures	IST-4	Inservice Testing Program Plan Fourth Ten-Year Inspection	005

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Interval	
71111.22	Work Orders		02151937, 02163213, 02119596, 02163211, 02163209, 02184382, 02175359	
71114.01	Corrective Action Documents	Action Requests	347241, 347050, 347129, 396909, 396911, 397283, 400747, 400778, 401064, 402143, 404484, 412568, 414139, 414993, 415789, 416265, 416842, 416863, 417219, 417323, 417713 420879, 420927, 423847, 424705, 425035	
71114.01	Corrective Action Documents Resulting from Inspection	Action Request	426806	
71114.01	Miscellaneous		Columbia Generating Station ERO Exercise Manual Team "D"	10/26/2021
71114.01	Miscellaneous		October 2021 Columbia Generating Station & Off-site Response Agency Evaluated Exercise: Leadership Team Debrief	11/03/2021
71114.01	Miscellaneous		Exercise Participant Records from the Simulator, TSC/OSC, EOF, and JIC	10/26/2021
71114.01	Procedures	ABN-EARTHQUAKE	Earthquake	016
71114.01	Procedures	ABN-EDMG	Extensive Damage Mitigation Guidelines	022
71114.01	Procedures	ABN-FPC-LOSS	Loss of Fuel Pool Cooling	016
71114.01	Procedures	ABN-FSG-002	Water Makeup Strategies for RPV, SFP, DW, WW During an Extended Loss of AC Power or other Beyond Design Basis Event	011
71114.01	Procedures	ABN-TSG-001	Spent Fuel Pool Makeup from Stairwell Fire Header	006
71114.01	Procedures	ABN-TSG-002	Spent Fuel Pool Make-Up from External Building Sources	007 (Minor 01)
71114.01	Procedures	ABN-TSG-003	Spent Fuel Pool Spray from External Building Sources	011
71114.01	Procedures	ABN-TSG-010	Spent Fuel Pool Makeup Through the Residual Heat Removal System Via Fire Water or Condensate Transfer	006 (Minor 02)
71114.01	Procedures	EP-01	Emergency Plan	067
71114.01	Procedures	PPM 11.2.24.2	Surveillance and Response for Changing Plant Conditions	014

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71114.01	Procedures	PPM 13.1.1	Classifying the Emergency (Matrix)	049 (Minor 02)
71114.01	Procedures	PPM 13.1.1a	Classifying the Emergency (Bases)	034 (Minor 02)
71114.01	Procedures	PPM 13.10.2	TSC Manager Duties	035 (Minor 04)
71114.01	Procedures	PPM 13.10.4	Radiation Protection Manager Duties	033 (Minor 03)
71114.01	Procedures	PPM 13.11.1	EOF Manager Duties	044 (Minor 05)
71114.01	Procedures	PPM 13.11.10	Security Manager Duties	022 (Minor 02)
71114.01	Procedures	PPM 13.12.9	JIC Management	025
71114.01	Procedures	PPM 13.14.11	EP Equipment	015 (Minor 01)
71114.01	Procedures	PPM 13.14.8	Drill and Exercise Program	018 (Minor 02)
71114.01	Procedures	PPM 13.2.1	Emergency Exposure Levels / Protective Action Guides	022 (Minor 02)
71114.01	Procedures	PPM 13.2.2	Determining Protective Action Recommendations	020 (Minor 02)
71114.01	Procedures	PPM 13.4.1	Emergency Notifications	044 (Minor 01)
71114.01	Procedures	PPM 13.5.1	Local, Protected Area or Site Evacuation	031 (Minor 01)
71114.01	Procedures	PPM 13.8.1	Emergency Dose Projection System Operations	040
71114.01	Procedures	PPM 13.9.1	Environmental Field Monitoring Operations	045 (Minor 03)
71114.01	Procedures	PPM 5.3.1	Secondary Containment Control (EOP)	021
71114.04	Corrective Action Documents Resulting from Inspection	Action Request (AR)	426618	
71114.04	Miscellaneous	50.54(q) Log	50.54(q) Effectiveness Evaluation - Revision 40 to PPM	06/07/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		2021-01 (Evaluation)	13.8.1	
71114.04	Miscellaneous	50.54(q) Log 2021-01 (Screening)	50.54(q) Screening - PPM 13.8.1 Emergency Dose Projection System Operations, Major Revision 40	06/03/2021
71114.04	Miscellaneous	50.54(q) Log 2021-02 (Screening)	50.54(q) Screening - SWP-EPP-01, Emergency Response Organization and Training, Revision 23	01/25/2021
71114.04	Miscellaneous	50.54(q) Log 2021-06 (Screening)	50.54(q) Screening - PPM 13.1.1, Classifying the Emergency, Rev 49, Minor Rev 002	06/08/2021
71114.04	Miscellaneous	50.54(q) Log 2021-07 (Screening)	50.54(q) Screening - PPM 13.1.1A, Classifying the Emergency - Technical Bases, Rev 34, Minor Rev 002	06/08/2021
71114.04	Miscellaneous	50.54(q) Log 2021-13 (Evaluation)	50.54(q) Effectiveness Evaluation - PPM 13.14.4 Rev 55	06/10/2021
71114.04	Miscellaneous	50.54(q) Log 2021-13 (Screening)	50.54(q) Screening - PPM 13.14.4 Major Rev 55, Emergency Equipment Maintenance and Testing	06/10/2021
71114.04	Procedures	EPI-16	§50.54(Q) Change Evaluation	016
71151	Corrective Action Documents	Action Requests	411978, 412134, 414414, 415437, 415617, 417833, 418096, 421896, 423346	
71151	Miscellaneous		Columbia Generating Station Alert and Notification System (ANS) Design Report	002
71151	Miscellaneous		Select DEP Performance Indicator Data Packages (2020-20, 2020-23, 2020-25, 2020-28, 2021-04, 2021-07, 2021-09, 2021-11, 2021-14, 2021-17, & 2021-19)	4Q/2020 - 3Q/2021
71151	Miscellaneous		Selection of Records - Surveillance Tests: ESSN Perform Siren System Test	4Q/2020 - 3Q/2021
71151	Miscellaneous		Control Room Operator Logs for October 1, 2020, to September 30, 2021	
71151	Miscellaneous		ERO Participation Performance Indicator (PDQ) Records	4Q/2020 - 3Q/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71151	Procedures	CI-10.17	Iodine	012
71151	Procedures	CSP-I131-W101	Reactor Coolant Isotopic Analysis for I-131 Dose Equivalent	009
71151	Procedures	EPI-18	Emergency Preparedness Performance Indicators	027
71151	Procedures	OSP-INST-H101	Shift and Daily Instrument Checks Modes 1, 2, 3	094
71151	Procedures	TSI-6.2.22	EP Annual Emergency Response Siren System Activation Test	004
71151	Procedures	TSI-6.2.32	EP Siren Polling Test	003
71151	Work Orders		02182246, 02182234, 02172201, 02169755, 02164080	
71152	Corrective Action Documents	Action Requests	428204, 421766, 420414, 423611, 423693, 424224, 422006, 425456, 424472, 423355, 424250, 425494, 426453, 426919, 426920, 426921, 426922, 426923, 427406, 407875, 408043, 408518, 408174, 408048, 408079, 408173, 408045, 408605, 408496, 408562, 408178, 408563, 362689, 376101, 400239, 407065	
71152	Drawings	E538-41A	Connection Wiring Diagram, Digital Fault Recorders E-DFR-1A and E-DFR-18 Auto Fault Recording System	NI
71152	Drawings	E538-41E	Elementary Wiring Diagram, Digital Fault Recorder E-DFR-1A and E-DFR-18 Alarm Configurations	NI
71152	Drawings	EWD-103E-001	Electrical Wiring Diagram, Plant Computer System Functional Configuration and LAN interface Sheet 1	023
71152	Engineering Changes	EC 16625	Oscillograph Fault Recorder Replacement Project	002
71152	Engineering Changes	EC 17643	Field Change request for EC 17643- Level 3 TO Level 2 Data Diode Replacement	A
71152	Engineering Changes	EC 17643	Level 3 to Level 2 Data Diode Replacement	000
71152	Engineering Changes	EC 17946	NET4 Lifecycle	000
71152	Engineering Changes	EC 18075	Modification for Replacement of DMA Air Damper Motor DMA-M-AD32/2	001
71152	Miscellaneous		Trend Codes Manual - All Codes	08/05/2021
71152	Miscellaneous	AR 400239-09	AR 400239-09, Review whitelisting justification report	N/A
71152	Miscellaneous	AR 408562-01 HUIT	AR 408562 2020 Cyber Inspection Human Performance Investigation Template (HUIT)	001

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152	Miscellaneous	AR 408563 and 408178 HUIT	AR 408563 and 408178 2020 Cyber Inspection Human Performance Investigation Template (HUIT)	001
71152	Miscellaneous	AR SA 362689	Focused Self-Assessment Report Cyber Security Milestone 8 Readiness Review	11/27/2017
71152	Miscellaneous	EOC Report	CR 00408563 2020 Cyber Inspection – Perform EOC	10/12/2020
71152	Miscellaneous	PARB Meeting Minutes	Performance Assessment Review Board (PARB) meeting minutes for R/CR: 408563 & 408562	09/08/2020
71152	Miscellaneous	RBG-48128	Reply to a Notice of Violation; EA-21-017, 030 and 050	10/29/2021
71152	Miscellaneous	SA 3761010	2018 Cyber Security Self-Assessment Objective 3	N/A
71152	Procedures	1.3.66	Operability Determination	037
71152	Procedures	2.19	Qualification Directory - Section No. 2.19	008
71152	Procedures	20005-APRM-DRE	Cyber Detection Response Elimination-APRM	7/20/2021
71152	Procedures	ALTCTL-01	Cyber Security Alternate Controls	005
71152	Procedures	DES-6-1	Design of Digital Plant Systems and Components	020
71152	Procedures	FCEI-4.1.4	Facility Modifications and Configuration Control	004
71152	Procedures	GBP-AM-11	Long Range Planning and Current Year Funding	002
71152	Procedures	GBP-CAP-03	Trending Program	002
71152	Procedures	GBP-IS-28	Information Technology System Lifecycle	001
71152	Procedures	ISDI-CYBER-06	Cyber Security Assessment Process	004
71152	Procedures	SWP-CAP-01	Corrective Action Program	044
71152	Procedures	SWP-CAP-06	Condition Report Review	028
71152	Procedures	SWP-CSW-12	Cyber Security Defensive Strategy	004
71152	Procedures	SWP-CSW-14	Tamper Device Control and Use	002
71152	Procedures	SWP-CSW-18	Cyber Security Assessments	007
71152	Procedures	SWP-CSW-31	Cyber Security Audit and Accountability	001
71152	Procedures	SWP-CSW-32	Cyber Security Related Software Maintenance	000
71152	Procedures	TM-01	Trending Manual	004
71152	Work Orders		02177187, 02167195	

COLUMBIA GENERATING STATION – INTEGRATED INSPECTION REPORT 05000397/2021004 DATE
January 20, 2022

DISTRIBUTION:

RStuart, R-IV/DRP

OFFICE	R-IV/DRP/RPB-D /WAT-3	R-IV/DRS/EB1	R-IV/DRP/RPB-D	R-IV/DRS/RCB
NAME	FRamirez <i>FR</i>	VGaddy <i>VG</i>	ADonley <i>AD</i>	MHaire <i>MH</i>
DATE	Jan 18, 2022	Jan 18, 2022	Jan 18, 2022	Jan 18, 2022
OFFICE	NRR/DRA	R-IV/DRP/RPB-A	R-IV/DNMS/MLDB	R-IV/DRP/RPB-C /CNS
NAME	JEvans <i>JE</i>	HFreeman <i>HF</i>	HGepford <i>HG</i>	ASiwy <i>AS</i>
DATE	Jan 18, 2022	Jan 18, 2022	Jan 18, 2022	Jan 17, 2022
OFFICE	R-II/DRP/RPB4	R-IV/DRP/RPB-C		
NAME	PNiebaum <i>PN</i>	JKozal <i>JK</i>		
DATE	Jan 20, 2022	Jan 20, 2022		

OFFICIAL RECORD COPY