



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

January 29, 2024

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

SUBJECT: COLUMBIA GENERATING STATION – INTEGRATED INSPECTION AND  
INDEPENDENT SPENT FUEL STORAGE INSTALLATION REPORT  
05000397/2023004 and 07200035/2023001

Dear Robert Schuetz:

On December 31, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Columbia Generating Station. On January 11, 2024, the NRC inspectors discussed the results of this inspection with Dave Brown, Site Vice President, 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 black ink, appearing to read "Russell Bywater".

Bywater, Russell signing on behalf  
of Vossmar, Patricia  
on 01/29/24

Patricia J. Vossmar, Chief  
Reactor Projects Branch A  
Division of Operating Reactor Safety

Docket Nos. 05000397,07200035  
License No. NPF-21

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV

COLUMBIA GENERATING STATION – INTEGRATED INSPECTION AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION REPORT 05000397/2023004 and 7200035/2023001 DATED JANUARY 29, 2024.

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DOCUMENT NAME: COLUMBIA GENERATING STATION – INTEGRATED INSPECTION AND INDEPENDENT SPENT FUEL STORAGE INSTALLATION REPORT 05000397/2023004 and 7200035/2023001

**Non-Public Designation Category: MD 3.4 Non-Public \_\_\_\_\_ (A.3 - A.7 or B.1)**

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**U.S. NUCLEAR REGULATORY COMMISSION  
Inspection Report**

Docket Number: 05000397 and 07200035

License Number: NPF-21

Report Number: 05000397/2023004 and 07200035/2023001

Enterprise Identifier: I-2023-004-0005 and I-2023-001-0017

Licensee: Energy Northwest

Facility: Columbia Generating Station

Location: Richland, Washington

Inspection Dates: October 01, 2023, to December 31, 2023

Inspectors: C. Kline, Senior Resident Inspector  
J. Brodlowicz, Resident Inspector  
L. Brookhart, Senior Spent Fuel Storage Inspector  
K. Clayton, Senior Operations Engineer  
J. Copeland, Reactor Inspector  
A. Donley, Senior Resident Inspector  
J. Freeman, Spent Fuel Storage Inspector  
N. Greene, Senior Health Physicist  
N. Hernandez, Operations Engineer  
J. Melfi, Project Engineer  
J. O'Donnell, Senior Health Physicist  
D. You, Operations Engineer

Approved By: Patricia J. Vossmar, Chief  
Reactor Projects Branch A  
Division of Operating Reactor Safety

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 Generating Station (CGS) began the inspection period at rated thermal power (RTP). On October 9, 2023, the unit was reduced to 65 percent RTP for planned adjustable speed drive (ASD) maintenance and returned to 100 percent RTP on October 10, 2023. At approximately 0400 on October 24, 2023, the plant experienced a transient resulting in the trip of multiple feedwater heaters and the unit was reduced to 76 percent RTP. Restoration activities reduced power to 65 percent RTP that night and continued until October 26, 2023, when the unit was returned to 100 percent RTP. On November 25, 2023, the unit was reduced to 86 percent RTP in response to ASD faults. On November 27, 2023, the unit reduced power to 78 percent RTP to recover one ASD drive and returned to 100 percent RTP on November 28, 2023. On December 9, 2023, the unit was reduced to 63 percent RTP for planned ASD and reactor feedwater pump maintenance and returned to 100 percent RTP on December 14, 2023. The unit remained at or near RTP for the remainder of the inspection 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," 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

### 71111.01 - Adverse Weather Protection

#### Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal cold temperatures for the following systems: reactor building ventilation, turbine building ventilation, diesel generator ventilation, and radwaste building ventilation on December 28, 2023.

#### Impending Severe Weather Sample (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the adequacy of the overall preparations to protect risk -significant systems from impending severe cold weather on October 29, 2023.

#### 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 when emergency diesel generator 1 was in an extended maintenance window, on October 6, 2023
- (2) service water train B while control room chilled water train A was inoperable following a failed surveillance, on November 15, 2023
- (3) reactor core isolation cooling (RCIC) following surveillance testing on December 8, 2023
- (4) residual heat removal (RHR) train C following surveillance testing on December 21, 2023

#### 71111.05 - Fire Protection

##### Fire Area Walkdown and Inspection Sample (IP Section 03.01) (6 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 area SW-2, standby service water pumphouse 1B, on October 2, 2023
- (2) fire area 5010, zone 4, building 30, fire pumps in circulating water pump house and water filtrating building, on October 17, 2023
- (3) fire area RC-9/2, remote shutdown room, on November 14, 2023
- (4) fire area DG-1/1, high-pressure core spray diesel generator room, on November 21, 2023
- (5) fire area RC-7, division 2 electrical equipment and reactor protection system rooms, on December 12, 2023
- (6) fire area R-6, RCIC pump room, on December 15, 2023

#### 71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

##### Requalification Examination Results (IP Section 03.03) (1 Sample)

- (1) The inspectors reviewed and evaluated the licensed operator examination failure rates for the requalification annual operating exam administered October 30, 2023 - December 7, 2023, and the biennial written examinations completed on December 7, 2023.

#### 71111.11B - Licensed Operator Requalification Program and Licensed Operator Performance

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

- (1) Biennial Requalification Written Examinations

The inspectors evaluated the quality of the licensed operator biennial requalification written examination administered on October 30, 2023 - December 7, 2023.

### Annual Requalification Operating Tests

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

### Administration of an Annual Requalification Operating Test

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

### Requalification 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 requalification 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.

## 71111.11Q - Licensed Operator Requalification 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 feedwater heater restoration following an unplanned transient to 75 percent rated thermal power on October 25, 2023.

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

- (1) The inspectors observed and evaluated simulator-based testing of loss of bus SM-4 followed by an electric anticipated transient without a scram and a small break loss of coolant accident on November 9, 2023.

## 71111.12 - Maintenance Effectiveness

### Maintenance Effectiveness (IP Section 03.01) (2 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) radwaste mixed air fan 53B, division 2 HVAC for critical switchgear, electrical, and battery rooms
- (2) digital electrohydraulic quadvoter valves

### Quality Control (IP Section 03.02) (1 Sample)

The inspectors evaluated the effectiveness of maintenance and quality control activities to ensure the following SSC remains capable of performing its intended function:

- (1) oil filter replacement on RCIC-DT-1 on November 21, 2023

## 71111.13 - Maintenance Risk Assessments and Emergent Work Control

### Risk Assessment and Management Sample (IP Section 03.01) (6 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, due to extended maintenance outage of emergency diesel generator system A, on October 4, 2023
- (2) Yellow risk, due to troubleshooting and repair to emergency diesel generator system A in response to unsatisfactory voltage regulator response, on October 18, 2023
- (3) implementation of risk informed completion time for maintenance on division 2 of critical switchgear and battery room HVAC, on October 26, 2023
- (4) Yellow risk, due to planned maintenance on the backup transformer, on November 13, 2023
- (5) Green risk, due to planned maintenance on control room emergency filtration, on November 29, 2023
- (6) Green risk, due to planned maintenance on reactor turbine driven feedwater pump A, on December 12, 2023

## 71111.15 - Operability Determinations and Functionality Assessments

### Operability Determination or Functionality Assessment (IP Section 03.01) (3 Samples)

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

- (1) condition report 452528, control room HVAC chill water valve CCH-V-14A failed to seat during surveillance testing, on November 14, 2023
- (2) condition report 451422, diesel generator 1 cooling water leak, on October 9, 2023



- (3) condition report 452302, diesel generator 3 air handling unit motor not operating, on December 13, 2023

#### 71111.18 - Plant Modifications

##### Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

- (1) turbine service water pinhole leak on October 23, 2023
- (2) permanent and long-term scaffolding modifications on November 9, 2023

#### 71111.24 - Testing and Maintenance of Equipment Important to Risk

The inspectors evaluated the following testing and maintenance activities to verify system operability and/or functionality:

##### Post-Maintenance Testing (PMT) (IP Section 03.01) (12 Samples)

- (1) WO 02203841, following maintenance on standby gas treatment system B, on October 3, 2023
- (2) WO 02113947, primary containment integrated leak rate testing, on October 5, 2023
- (3) WO 02213807, diesel generator 1 voltage regulator relay replacement, on October 11, 2023
- (4) WO 02178456, diesel generator 1 load testing following diesel cooling water leak repair, on October 11, 2023
- (5) WO 02077516, diesel generator 1 voltage regulator replacement, on October 13, 2023
- (6) WO 02188835, following maintenance on residual heat removal system B, on October 17, 2023
- (7) WO 02191021, following reactor feedwater valve 65A replacement, on November 3, 2023
- (8) WO 02205063, following control room emergency chiller flushes, on November 15, 2023
- (9) WO 02205491, diesel generator 2 monthly operability test following diesel fuel oil leak repair, on November 23, 2023
- (10) WO 02202832, standby gas treatment operability test following filter change, on December 6, 2023
- (11) WO 02215165, adjustable speed drive 1B/1 borescope testing/troubleshooting, on December 14, 2023
- (12) WO 02211310, reactor feedwater turbine oil leak, on December 13, 2023

##### Surveillance Testing (IP Section 03.01) (4 Samples)

- (1) TSP-APRM-C302, LPRM Gain Calibration Test, on November 14, 2023
- (2) ESP-RHR-Q901, RHR Pump "A" Time Delay (LPCI) - CFT/CC, on November 6, 2023
- (3) ICP-HPCS-M901, HPCS - Keepfill Pump Monitor - CFT/CC, on November 30, 2023
- (4) TSP-RCIC-B801, RCIC Leakage Surveillance, on December 5, 2023

## **RADIATION SAFETY**

### 71124.05 - Radiation Monitoring Instrumentation

#### Walkdowns and Observations (IP Section 03.01) (10 Samples)

The inspectors evaluated the following radiation detection instrumentation during plant walkdowns:

- (1) portable survey instruments "ready for use" at the exit to the radiologically controlled area (RCA)
- (2) portable survey instruments in storage, but "available for use" in the instrument lab on radwaste (RW) 467' elevation
- (3) area radiation monitors in reactor, RW, and turbine buildings
- (4) process radiation monitors in the reactor, RW, and turbine buildings
- (5) effluent radiation monitors in the RW building
- (6) chemistry count room instruments (gamma spectroscopy and liquid scintillation)
- (7) personnel contamination monitors, portal monitors, and friskers at the exit to the RCA
- (8) portal monitors at the exit to the protected area
- (9) continuous air sampling instruments in the RW building
- (10) tool and equipment monitors in the RW building

#### Calibration and Testing Program (IP Section 03.02) (13 Samples)

The inspectors evaluated the calibration and testing of the following radiation detection instruments:

- (1) Automess Model 6112M teletector, T070
- (2) Canberra ARGOS-5 A/B whole body contamination monitor, HP-EQ-42782
- (3) Canberra FastScan, WBC#2
- (4) Canberra GEM-5 gamma exit monitor, HP-EQ-68907
- (5) Eberline AMS-4 continuous air sampler, HP-EQ-42867
- (6) Eberline RO-2 ion chamber, RO170
- (7) Fluke/Victoreen 451B ion chamber, RV24
- (8) General Atomics RM2300, turbine building vent high range, TEA-RE-13A
- (9) General Atomics RM2300, radwaste building vent high range, WEA-RE-14A
- (10) General Electric mechanical vacuum pump radiation monitor, AR-RE-21
- (11) General Electric area radiation monitor, ARM-RIS-1
- (12) Ludlum Model 19 Micro-R meter, L036
- (13) Ludlum Model 177 frisker, F124

#### Effluent Monitoring Calibration and Testing Program Sample (IP Section 03.03) (3 Samples)

The inspectors evaluated the calibration and maintenance of the following radioactive effluent monitoring and measurement instrumentation:

- (1) liquid radioactive waste radiation monitor, FDR-RIS-606
- (2) reactor building elevated stack monitor, PRM-RE-11, -12, and -13
- (3) turbine building vent monitor, TEA-RE-13A

71124.08 - Radioactive Solid Waste Processing & Radioactive Material Handling, Storage, & Transportation

Radioactive Material Storage (IP Section 03.01) (3 Samples)

The inspectors evaluated the licensee's performance in controlling, labeling, and securing the following radioactive materials:

- (1) sealed sources in the radwaste building
- (2) boxes in the low specific activity storage pad
- (3) Intermodal shipping containers in the spraypond storage area

Radioactive Waste System Walkdown (IP Section 03.02) (3 Samples)

The inspectors walked down the following accessible portions of the solid radioactive waste systems and evaluated system configuration and functionality:

- (1) radwaste equipment and floor drain processing systems
- (2) reactor water clean up (RWCU) filter system
- (3) self engaging rapid dewatering system (SERDS)

Waste Characterization and Classification (IP Section 03.03) (2 Samples)

The inspectors evaluated the following characterization and classification of radioactive waste:

- (1) 2020 Columbia Generating Station Part 61 Waste Stream Data, dated April 28, 2022
- (2) 2022 Columbia Generating Station Part 61 Waste Stream Data, dated September 7, 2023

Shipment Preparation (IP Section 03.04) (1 Sample)

- (1) The inspectors observed the preparation and release of radioactive shipment # 23-114 of spent resin on November 15, 2023.

Shipping Records (IP Section 03.05) (5 Samples)

The inspectors evaluated the following non-excepted radioactive material shipments through a record review:

- (1) # 21-039, UN2916, radioactive material, type B(U) package, fissile-excepted, 7, RQ - radionuclides, dated June 15, 2021
- (2) # 22-034, UN3321, radioactive material, low specific activity (LSA-II), 7, RQ - radionuclides, dated October 6, 2022
- (3) # 22-045, UN2916, radioactive material, type B(U) package, 7, RQ - radionuclides, dated December 14, 2022
- (4) # 23-023, UN3321, radioactive material, low specific activity (LSA-II), 7, RQ - radionuclides, dated April 27, 2023
- (5) # 23-033, UN3321, radioactive material, low specific activity (LSA-II), 7, RQ - radionuclides, dated April 13, 2023

## **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, 2022, through September 30, 2023

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

- (1) October 1, 2022, through September 30, 2023

### 71152S - Semiannual Trend Problem Identification and Resolution

#### Semiannual Trend Review (Section 03.02) (1 Sample)

- (1) The inspectors reviewed the licensee's corrective action program for trends associated with licensee personnel and contractors' adherence to clearance procedures during a six-month period ending December 31, 2023. Condition report (CR) 446560 documented a trend in clearance order errors. In response to the trend, the licensee conducted a gaps, drivers, actions, and results (GDAR) analysis of clearance order practices. CR 446560 identified four clearance order events during a 10-day period of outage activity and the subsequent GDAR analyzed nine clearance order events which spanned the 45-day outage period. The licensee implemented corrective actions, including reviewing training guidance material, implementing additional supervisory oversight, taking personnel accountability actions, clarifying clearance procedures, reviewing operating experience communications practices, and benchmarking outage clearance order practices. Corrective actions specific to benchmarking developing guidance to supervision remain in progress and are not due to be completed until the first quarter of 2024. In the subsequent period following return to rated thermal power on June 23, 2023, the licensee documented 10 clearance order events, including 1 clearance order event which resulted in losing technical specification action statement control for approximately 23 hours (CR 452865). The licensee conducted a prompt investigation in response to CR 452865 and completed corrective actions including employee coaching, training on operating experience, and modification to clearance order instructions. All prompt investigation corrective actions are complete.

## **OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL**

### 60855 - Operation Of An ISFSI

The inspectors performed a review of the licensee's independent spent fuel storage installation (ISFSI) activities to verify compliance with requirements of the Holtec HI-STORM system's Certificate of Compliance 72-1014, License Amendment 9, Revision 1, and the Final Safety Analysis Report (FSAR), Revision 13.1. The inspectors reviewed selected procedures, corrective action reports, and records to verify ISFSI operations were compliant with the certificate's technical specifications, requirements in the FSAR, and NRC regulations.

## Operation Of An ISFSI (1 Sample)

- (1) The inspectors evaluated the licensee's dry cask storage program from October 23-25, 2023, during an on-site inspection. The Columbia Generating Station's original ISFSI pad was designed to store 54 Holtec International HI-STORM 100 spent fuel storage casks using the MPC-68 or MPC-68M multi-purpose canister (containing 68 boiling-water reactor spent fuel assemblies). At the time of the on-site inspection, the licensee had filled the original ISFSI pads with 54 casks and was performing aging management inspections in accordance with license requirements. Inspectors also performed a walkdown of the ISFSI. No loading activities were observed due to none being scheduled during the FY 2023-2025 triennial inspection cycle.

The inspectors observed and/or reviewed the following activities during the inspection:

- aging management inspections on Cask #1, specifically non-destructive examinations using the robotic crawler on the multi-purpose canister
- fuel selection evaluations for the canisters loaded since the last NRC ISFSI inspection (canisters 48 - 54)
- radiation surveys for radiological dose at the owner-controlled area boundary to verify compliance with the requirements of 10 CFR 72.104 for 2022 and 2023
- selected ISFSI-related condition reports issued since the last NRC ISFSI inspection
- quality assurance program implementation, including recent audits, surveillances, receipt inspection, and quality control activities related to ISFSI operations
- compliance to technical specifications for operational surveillance activities and FSAR required maintenance activities
- documentation of annual maintenance activities for the cask handling crane
- selected licensee design changes and program changes for the ISFSI performed under the 10 CFR 72.48 program
- changes made in the 10 CFR Part 72.212 Evaluation report from revision 13 to revision 16

## **INSPECTION RESULTS**

No findings were identified.

## **EXIT MEETINGS AND DEBRIEFS**

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

- On October 25, 2023, the inspectors presented the triennial ISFSI inspection results to Gregory Higgs, Nuclear Projects General Manager, and other members of the licensee

staff.

- On November 16, 2023, the inspectors presented the radiation safety inspection results to Grover Hettel, Executive Vice President/Chief Nuclear Officer, and other members of the licensee staff.
- On December 18, 2023, the inspectors presented the licensed operator requalification program inspection results to Grover Hettel, Executive Vice President/Chief Nuclear Officer, and other members of the licensee staff.
- On January 11, 2024, the inspectors presented the integrated inspection results to Dave Brown, Site Vice President, and other members of the licensee staff.

## DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
60855	Miscellaneous	2022-U03 CLP	Cask Loading Plan	000
		AU-DC-22	QUALITY SERVICES AUDIT REPORT Independent Spent Fuel Storage Installation (ISFSI) Program	04/21/2022
		Certificate of Compliance 72-1014 Amendment 9	CERTIFICATE OF COMPLIANCE FOR SPENT FUEL STORAGE CASKS	001
		ENERGY NORTHWEST INDEPENDENT SPENT FUEL STORAGE INSTALLATION 10 CFR 72.212 EVALUATION	Docket number 72-35	016
	Procedures	Final Safety Analysis Report	HI-STORM 100 FINAL SAFETY ANALYSIS REPORT	013.1
		OSP-SFS-D101	SPENT FUEL STORAGE CASK HEAT REMOVAL SYSTEM DAILY CHECKS	05/23/2022
		SWP-CAP-01	Corrective Action Program	047
	Radiation Surveys	SWP-LIC-02	Licensing Basis Impact Determinations	017.1
		Area DLR 2023-1	ISFSI and site perimeter DLR readings.	000
	Work Orders	WO Package 02166926 01	MT-CRA-2 Inspection, maintain, and test RX Building Main Crane (125TON/15TON)	01/17/2023
71111.01	Corrective Action Documents	Action Requests	452302, 452769, 452905, 427427	
	Procedures	SOP-COLDWEATHER-OPS	Cold Weather Operations	044
	Work Orders	Work request	29163408	
71111.04	Corrective Action	Action Requests	450785, 444597, 451324, 451325	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Documents			
	Corrective Action Documents Resulting from Inspection	Action Requests	451232	
	Procedures	ISP-RHR-X304	ECCS-LPCI (B and C) Pump discharge low (minimum flow)-CC	009
		OSP-RHR-M106	Residual heat removal system C valve position verification	003
		OSP-SW-M102	Standby Service Water Loop B Valve Position Verification	056
		SOP-DG2-LU	Emergency Diesel Generator (DIV 2) Valve and Power Supply Lineup	010
		SOP-DG2-STBY	Emergency Diesel Generator (DIV 2) Standby Lineup	026
		SOP-RCIC-LU	RCIC Valve and Breaker Lineup	004
	Work Orders	Work Requests	29170885	
	71111.05	Calculations	FP-02-85-03	Combustible Loading Calculation
Drawings		FM892-5	Fire Area Boundary Plan - Miscellaneous Floors and Buildings	008
		GM892-11	Fire Suppression System Plan - Miscellaneous Floors and Buildings	004
		M932-1	Fire Main Ring Header	001
Fire Plans		NPPF-01	Non-power Block Pre-Fire Plan	008
		PFP-DG-BUILDING	Diesel Generator Building	006
		PFP-MN-XFMR-YD-MISC	Main Transformer Yard Miscellaneous Buildings	009
		PFP-RB-422	RCIC Pump Room	009
		PFP-RW-467	Radwaste 467	004
		PFP-RW-467	Radwaste 467	008
Miscellaneous	FPSI 23-0345	Fire Protection System Impairment Door C240	000	
Work Orders	02185720			
71111.11A	Miscellaneous		2023 Operating Test Results	006
71111.11B	Corrective Action Documents	Action Requests	433204, 434875, 438584, 438848, 440282, 438897, 448038, 448156, 451465	



Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Miscellaneous		High Power Results	07/13/2023

71111.11B	Miscellaneous		Lower Power Results	07/05/2023	
			Mid Power Results	07/06/2023	
			C27 Core Testing EOC	07/11/2023	
			Simulator Review Board Minutes	12/13/2021	
			Simulator Review Board Minutes	06/12/2022	
			Simulator Review Board Minutes	02/15/2023	
			Simulator Review Board Minutes	10/26/2023	
			LORQ Week 1 Written Examination	000	
			2023 Written Exam Sample Plan and Overlap Tracker	004	
			2023 Written Exam Results	006	
			LORQ Week 2 Operating Test	001	
			2023 Operating Test Sample Plan and Overlap Tracker	001	
			Operations Training: Performance Deficiency Analysis and Remediation	003	
			Total Simulator Differences Report	11/04/2023	
			License Reactivation Record Sheet	135	
			TT03	Simultaneous Closure of all MSIVs	06/15/2023
			TT04	Loss of All RRC	06/15/2023
			TT06	Turbine Trip from Low Power	06/27/2023
			TT09	Maximum Unisolable Steam Leak	06/15/2023
			TT10	Simultaneous MSIV Closure with Stuck Open SRV	06/15/2023
		Procedures	1.3.1	Operating Policies, Programs, and Practices	140
			1.8.10	Administration of Medical Qualifications	012
			1.8.11	Medical Examination Program for Licensed Operators	012
			GBP-TQS-01	Training Attendance	002
			SWP-TQS-01	Training, Qualification and Simulators	021
			TDI-02	Systematic Approach to Training	051
			TDI-06	Simulator Management	022
			TDI-08	Licensed Operator Requalification Program	022
			TDI-08	Licensed Operator Requalification Program	022
			TDI-23	LORQ Annual Exam Development and Administration	018
			TDI-24	Exam Security	021
			TRG-TQS-02	Application for and Maintenance of Reactor Operator and Senior Reactor Operator License	009

71111.11Q	Corrective Action Documents	Action Requests	452045, 451927, 451858		
	Miscellaneous	LORQ LE000033	LORQ Annual NRC Operating Test Week 2	000	
	Procedures	ABN-FWH-HILEVEL/TRIP	Feedwater Heater High Level Trip	013	
		TDI-23	LORQ Annual Exam Development and Administration	016	
71111.12	Corrective Action Documents	Action Requests	352835, 416308, 448855, 445408, 451605, 443986, 442438, 442648, 443480, 448426, 443986, 443480, 442648, 442438, 432784, 425907		
	Miscellaneous		Expert Panel Meeting Minutes	10/04/2023	
				Performance Criteria Form DEH-Quadvoter	10/04/2023
		58400622		CID	
		CVI 28-00,103		Operator and Maintenance Instructions and Parts Catalog for Centrifugal Fans	002
		ME-02-17-03		WMA-AH-53B Air Flow Requirements During February Re-Balance	002
		ME-02-92-43		Calculation for Room Temperature for DG Building, Reactor Building, Radwaste Building, and Service Water	014
	Procedures	1.5.11		Maintenance Rule Program	016
		1.5.15		Equipment Reliability Process Description	007
	Work Orders			02144078, 02112870, 02179291, 02207885, 02213989, 02205241, 02205059, 02196382	
		Work Requests	29129758, 29171522, 29174206		
71111.13	Corrective Action Documents	Action Requests	451711, 451747		
	Miscellaneous		Fire Tour Log	10/26/2023	
		P-DG-SYS-A-EXT-001		Protected Equipment List	10/02/2023
		P-E-TR-B-01		eSOMS protection scheme	001
		P-RFW-P-1A		eSOMS Protection Scheme	001
	Procedures	1.3.76		Integrated Risk Management	066
		1.3.83		Protected Equipment Program	038
		1.3.83		Protected Equipment Program	038
1.5.14			Risk Assessment and Management for Maintenance/Surveillance Activities	044	

71111.13	Procedures	1.5.24	Risk Informed Completion Time Program	000
		SOP-HVAC/CR-SHUTDOWN	Control, Cable and Critical Switchgear Rooms, HVAC Shutdown	007
	Work Orders		02213989, 02213807, 02213032, 02175691	
71111.15	Calculations	ME-02-14-01	Main Control Room Cooling Analysis	001
	Corrective Action Documents	Action Requests	452528, 451422, 452905	
	Procedures	1.3.66	Operability Determination	038
		OI-41	Work Control Expectations	077
Work Orders		020178549		
71111.18	Calculations	CE-02-87-29	Evaluate ALARA Shielding Frames Constructed from Tube Lock Scaffolding Members per Procedure GEN-RPP-14	001
		CE-02-87-29	Excel Scaffolding Evaluation	07/23/2004
	Corrective Action Documents	Action Requests	449860, 425377	
	Miscellaneous	02212420- 02	NDE Results per Work Order Package 02212420- 02	
	Procedures	10.2.53	Scaffolding	054
		SWP-LIC-02	Licensing Basis Impact Determinations	017
	Work Orders		02212420	
	Work Request	29173558		
71111.24	Corrective Action Documents	Action Requests	450861, 450887, 447231, 447381, 451364, 451347, 452532, 452528, 452870	
	Corrective Action Documents Resulting from Inspection	Action Requests	451422	
	Miscellaneous	2023-28	Integrated Leakage Rate Test Report, Columbia Generating Station Energy Northwest	08/14/2023
		Clearance	D-RHR-CB-P.2B-001	
		E543-3VA-1	DG1 Exciter Cubicle 1E Control Panel DG/RE	
		TM-2096	Design Valve Factor Criteria used in GL 89-10 Motor Operated Valve Calculations	004
	Procedures	10.20.1	Diesel Engine Refuel Cycle (2 Year) Preventative Maintenance Division 1 and Division 2	033
DG-RLY-DG1/LR		Functionality Test Relay	000	

71111.24	Procedures	ESP-RHR-Q901	RHR Pump "A" Time Delay (LPCI Mode) - CFT/CC	016
		ICP-HPCS-M901	HPCS - Keepfill Pump Monitor - CFT/CC	001
		MES-10	Motor Operated Valve Sizing and Switch Setting	011
		OSP-CCH/IST-M701	Control Room Emergency Chiller System A Operability	065
		OSP-ELEC-M702	Diesel Generator 2- Monthly Operability Test	071
		OSP-ELEC-S701	Diesel Generator 1 Semi-annual Operability Test	063
		OSP-RHR/IST-073	RHR Loop B Operability Test	064
		OSP-SGT-M701	Standby Gas Treatment System A Operability	019
		SOP-DG1-START	Emergency Diesel Generator (DIV 1) Start	039
		SOP-RFT-START	Reactor Feedwater Turbine System Start	023
		SOP-TIP-OPS	TIP System Operations	013
		TSP-APRM-C302	LPRM Gain Calibration Test	010
		TSP-CONT-C801	Primary Containment Integrated Leak Rate Test	006
		TSP-DG1-B502	Standby Diesel Generator DG1 Load Testing	029
	TSP-RCIC-B801	RCIC Leakage Surveillance	004	
	Work Orders		02202859, 02187697, 02179754, 02188195, 02178456, 02187941, 02187942, 02187944, 02187258, 02185133, 02213807, 02178456, 02179357, 02205394, 02205063, 02205095, 02205491, 02205700, 02202832, 02215165, 02211310	
71124.05	Calibration Records	100 cc Gas Vial	Efficiency Verification	02/22/2023
		47 mm Filter	Efficiency Verification	02/22/2023
		Charcoal Cartridge	Efficiency Verification	02/21/2023
		F124	Instrument Calibration Data Sheet: Ludlum Model 177	02/07/2023
		HP-EQ-42782	Instrument Calibration Data Sheet: Canberra ARGOS-5 A/B	07/27/2023
		HP-EQ-68907	Instrument Calibration Data Sheet: Canberra GEM-5	03/02/2023

71124.05	Calibration Records	L036	Instrument Calibration Data Sheet: Ludlum Model 19 Micro-R Meter	06/21/2023
		Report # 1-0105-03735	Calibration Report: Hopewell BX3 Box Calibrator, SN# 0707-1238	09/11/2023
		Report #s: 233989, 234060-234064	Condenser R Chamber Calibration Report - Victoreen Model 570, SN# 3891 Test # 231961	09/21/2023
		RO170	Instrument Calibration Data Sheet: Eberline RO-2	03/31/2023
		RV24	Instrument Calibration Data Sheet: Fluke/Victoreen 451B Ion Chamber	04/07/2023
		T070	Instrument Calibration Data Sheet: Automess Model 6112M Teletector	03/02/2023
		W/O 02143592 01	PPM 16.4.12, Mechanical Vacuum Pump Discharge Radiation Monitor - CC/RC (AR-RIS-21)	06/05/2021
		W/O 02143622 01	ISP-CMS/PRM-B303 Accident Monitor Primary Containment Gross Radiation Monitor, CMS-RIS-27E - CC	05/22/2021
		W/O 02169379 01	16.1.11 Reactor Building Elevated Discharge Radiation Activity Monitor - CC/RC	01/19/2023
		W/O 02177091 01	Calibrate / Repair Outage HP Portable Air Samplers (17)	04/07/2023
		W/O 02180813 01	PPM 16.4.12, Mechanical Vacuum Pump Discharge Radiation Monitor - CC/RC (AR-RIS-21)	06/05/2023
		W/O 02183701 01	Quench Curve Calibration for Hidex	08/02/2023
		W/O 02186644 01	Calibrate / Repair AMS-4 Continuous Air Monitors (3)	10/07/2023
		W/O 02189302 05	Radiation Calibration of ARM-RIS-1 (ARM-E/S-603A) (11.2.10.19)	07/06/2022
	W/O 02190564 01	16.7.1 Liquid Radwaste Effluent Radiation Monitor - CC	12/14/2022	
W/O 02199439 01	Perform Efficiency Calibration on iSolo Alpha Counting System	04/12/2023		
WBC#2	Canberra FastScan Calibration	09/07/2023		
Corrective Action Documents	Action Requests	418254, 422662, 422664, 423619, 426115, 427551, 428303, 429691, 430896, 432362, 432702, 435488, 435798, 437742, 439135, 439162, 440870, 441352, 441676, 449399, 449789		

	Corrective Action Documents Resulting from Inspection	Action Requests	452642, 452689	
	Miscellaneous	LDCN-20-020 / AR 408804	Remove 18-month calibration frequency requirement from FSAR Section 12.3.4.3	12/29/2020
	Procedures	1.5.13	Preventive Maintenance Optimization Living Program	048
		10.24.18	Area Radiation Monitor Maintenance	014
		11.2.24.1	Radiation Protection Work Routines	041
		11.2.24.2	Surveillance and Response for Changing Plant Conditions	015
		12.1.1	Laboratory Quality Assurance	023
		16.1.11	Rx Bldg. Elevated Discharge Radiation Activity Monitoring & Sampling System - CC/RC	005
		16.7.2	FDR-RIS-606, Liquid Radwaste Effluent Radiation Monitor - RC	008
		CSP-INST-M201	Chemistry Monthly Source and Channel Checks	030
		GEN-RPP-17	Health Physics Instrument Program Description	004
		HPI-0.16	Radiation Protection Portable Instrumentation Use and Calibration Guidelines	008
		HPI-7.33	Eberline Model RO-7 Calibration	008
		HPI-7.60	Operation and Calibration of Hopewell BX3 Box Calibrator	001
		ISP-TEA/PRM-X301	TEA High Range Noble Gas Monitor Channel 2 - CC/RC	016
		ODCM	Offsite Dose Calculation Manual, Amendment 61	05/30/2022
	Self-Assessments	AR-SA: 439162	Snapshot Self-Assessment Report: NRC IP 71124.05 Radiation Monitoring Instrumentation	08/17/2023
		AU-CH-22	Quality Services Audit Report: Chemistry and Environmental Monitoring Programs	08/10/2022
		AU-RP/RW -22	Quality Services Audit Report: Radiation Protection and Process Control Programs	12/14/2022
71124.08	Corrective Action Documents	Action Requests	422720, 428208, 439251, 439457, 439458, 439461, 439463, 439465, 439706, 439737, 446956, 447212, 447719	
	Corrective Action Documents Resulting from Inspection	Action Requests	452638, 452639, 452641, 452680, 452687, 452697, 452698, 452753	

	Miscellaneous		Radioactive Source Inventory	12/15/2022
			Columbia Generating Station 2022 Part 61 Waste Stream Data	09/07/2023



71124.08	Miscellaneous	DIC 1554.5	Columbia Generating Station Scaling Factors 2020 – Revision 1	04/28/2021
		RW000169	Packaging Radioactive Material for Shipment Training	10/18/2023
	Procedures	PPM 11.2.14.4	Procurement, Receipt, Control, and Leak Test of Radioactive Sources and Devices	027
		PPM 11.2.23.1	Shipping Radioactive Materials and Waste	023
		PPM 11.2.23.14	Sampling of Radioactive Waste Streams	014
		PPM 11.2.23.2	Computerized Radioactive Waste and Material Characterization	024
		PPM 11.2.23.29	Radioactive Material, Low-Specific Activity Contaminated Laundry	012
		PPM 11.2.23.4	Packaging Radioactive Material and Waste	028
		PPM 11.2.23.44	Operation of the Self Engaging Rapid Dewatering System (SERDS)	011
		PPM 11.2.23.46	Shipment of Category 1 and 2 Material	000
		SWP-RMP-01	Radioactive Waste Management Program	006
		SWP-RMP-02	Radioactive Waste Process Control Program	008
		SWP-RMP-03	Hazardous Materials Transportation Security Plan	002
		SWP-RMP-04	Radioactive Shipping Program	001
	Radiation Surveys	M-20221213-3	Source Leak Testing Survey	12/02/2022
		M-20230614-8	Source Leak Testing Survey	06/14/2023
		M-20230719-3	Outside ISFSI Pad and Building 105 Quarterly	07/19/2023
		M-20230822-3	Building 167 and Storage Area Quarterly	08/22/2023
		M-20231003-3	Warehouse 5 Quarterly	10/03/2023
		M-20231006-1	Outside Storage Area LSA/Spray Pond	10/06/2023
		M-20231008-4	GSB Yakima Building Monthly	10/08/2023
		M-20231010-5	PSF Standards Lab and NDE Monthly Survey	10/10/2023
	M-20231101-3	Radwaste 437-foot NUPAC Survey 23-015-HP	11/02/2023	
Self-Assessments	AR 448021-01	Annual Radioactive Material Shipping Security Plan Review (49 CFR 172.800 Review)	08/14/2023	
	AR-SA 435882	Annual Review of CGS Implementation of 10 CFR 37, Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material (RAM) as required by 10 CFR 37.55	12/01/2022	

71124.08	Self-Assessments	AR-SA 439233	Assess Columbia's Radiation Protection Organization readiness for NRC Inspection 71124.08, "Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation"	08/10/2023
		AU-RP/RW-22	Quality Services Audit Report: Radiation Protection and Process Control Programs	12/14/2022
	Shipping Records	21-039	UN2916, Radioactive Material, Type B(U) package, fissile-excepted, 7, RQ - Radionuclides	06/15/2021
		21-102	UN2916, Radioactive Material, Type B(U) package, 7, RQ - Radionuclides	11/11/2021
		22-034	UN3321, Radioactive Material, Low Specific Activity (LSA-II), 7, RQ - Radionuclides	10/06/2022
		22-045	UN2916, Radioactive Material, Type B(U) package, 7, RQ - Radionuclides	12/14/2022
		23-023	UN3321, Radioactive Material, Low Specific Activity (LSA-II), 7, RQ - Radionuclides	04/27/2023
		23-033	UN3321, Radioactive Material, Low Specific Activity (LSA-II), 7, RQ - Radionuclides	04/13/2023
		23-114	UN3321, Radioactive Material, Low Specific Activity (LSA-II), 7, RQ - Radionuclides	11/15/2023
Work Orders	02209044-01	HSP-SSC-O801 Sealed Source Check	06/24/2023	
71151	Procedures	CI-10.17	Iodine	015
		CSP-I131-W101	Reactor Coolant Isotopic Analysis for I-131 Dose Equivalent	009
		NEI 99-02	Regulatory Assessment Performance Indicator Guideline	007
71152S	Corrective Action Documents	Action Requests	446560, 452865, 446127, 448665, 445051, 445813, 446065, 446131, 446169, 447693, 448001, 448918, 449669, 449921, 449942, 449948, 449958, 450029, 450253, 451680, 451754, 452086	