



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

January 16, 2025

Robert Schuetz, Chief Executive Officer  
Energy Northwest  
MD 1023  
76 North Power Plant Loop  
P.O. Box 968  
Richland, WA 99352

SUBJECT: COLUMBIA GENERATING STATION – INTEGRATED INSPECTION  
REPORT 05000397/2024004

Dear Robert Schuetz:

On December 31, 2024, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Columbia Generating Station. On January 13, 2025, the NRC inspectors discussed the results of this inspection with Grover Hettel, Chief Nuclear Officer, 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 "Patricia Vossmar".

Signed by Vossmar, Patricia  
on 01/16/25

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

Docket No. 05000397  
License No. NPF-21

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV

COLUMBIA GENERATING STATION – INTEGRATED INSPECTION REPORT  
 05000397/2024004 – DATED JANUARY 16, 2025

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 05000397/2024004

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

Docket Number: 05000397

License Number: NPF-21

Report Number: 05000397/2024004

Enterprise Identifier: I-2024-004-0007

Licensee: Energy Northwest

Facility: Columbia Generating Station

Location: Richland, WA

Inspection Dates: October 1, 2024, to December 31, 2024

Inspectors: J. Brodlowicz, Resident Inspector  
N. Hernandez, Senior Operations Engineer  
C. Highley, Senior Resident Inspector

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

Unit 1 began the inspection period at rated thermal power. On November 18, 2024, the unit was down powered to 82 percent for a control rod sequence exchange. The unit was returned to rated thermal power on November 19, 2024. On November 25, 2024, the unit was down powered to 72 percent for a loss of a reactor recirculation pump variable frequency drive. The unit was returned to rated thermal power on November 26, 2024. On December 9, 2024, the unit was down powered to 45 percent for reactor recirculation pump variable frequency drive preventive maintenance. The unit was returned to rated thermal power on December 10, 2024. On December 28, 2024, the unit was down powered to 82 percent for a control rod pattern adjustment. The unit was returned to rated thermal power on December 28, 2024, and remained at or near rated thermal power 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 winter for turbine building heating, ventilation, and air conditioning (HVAC), reactor building HVAC, radwaste building HVAC, and service water in accordance with SOP-COLDWEATHER-OPS on December 10, 2024.

### 71111.04 - Equipment Alignment

#### Partial Walkdown Sample (IP Section 03.01) (2 Samples)

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

- (1) diesel generator 1 restoration following outage window on October 9, 2024
- (2) standby liquid control following system restoration on October 17, 2024

## 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) electrical equipment room No. 2 fire protection walkdown on October 8, 2024
- (2) switchgear vital bus No. 2 room, RC-8, fire protection walkdown on October 16, 2024
- (3) reactor building general area floor, 606-foot and 572-foot elevations, R-1, fire protection walkdown on October 24, 2024
- (4) fire protection system readiness following fire protection valves FP-V-17J and K and V-18 being returned to service after maintenance, on October 29, 2024

## 71111.06 - Flood Protection Measures

### Flooding Sample (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated internal flooding mitigation protections for the emergency core cooling systems contained in the reactor building on the 422-foot elevation, which included the high-pressure core spray pump, residual heat removal (RHR) A, B, and C pumps, and low-pressure core spray pump rooms.

## 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 on December 20, 2024.

## 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 a diesel generator operability run and down power to 82 percent in support of a rod sequence exchange on November 21, 2024.

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

- (1) The inspectors observed and evaluated simulator requalification training given on November 18, 2024.

## 71111.12 - Maintenance Effectiveness

### Maintenance Effectiveness (IP Section 03.01) (3 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) evaluated effectiveness at correctly identifying and correcting the cause of erratic in-service testing timing of the solenoid operated scram discharge volume valves, CRD-V-10 and 11, on October 16, 2024
- (2) evaluated effectiveness of identifying and repairing issues in the condensate filter demineralizer system on November 5, 2024
- (3) evaluated the effectiveness of the area radiation monitors (ARM) 32, reactor building 471-foot, high range ARM on October 9, 2024

### Aging Management (IP Section 03.03) (1 Sample)

The inspectors evaluated the effectiveness of the aging management program for the following SSCs that did not meet their inspection or test acceptance criteria:

- (1) HVAC ducting, damper, louvers, and structural support failures (dated January 22, 2024, March 14, 2024, June 13, 2024, and September 29, 2024), on December 23, 2024

## 71111.13 - Maintenance Risk Assessments and Emergent Work Control

### Risk Assessment and Management Sample (IP Section 03.01) (1 Sample)

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) the risk-informed completion time for backup transformer, work order 02224315, on December 20, 2024

## 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) ESP-SW/IST-Q703, SW-PCV-15A, primary containment valve for the A service water, operability determination on October 9, 2024
- (2) TSP-CRD-C101, CRD scram timing with auto scram timer system, on CRD-HCU-3419 for operability test following repair on November 7, 2024
- (3) diesel generator 3 operability determination following loss of local annunciator panel on November 13, 2024
- (4) OSP-RCIC/IST-Q701, reactor core isolation cooling (RCIC) operability test, during work order 02216919 on November 26, 2024
- (5) operability following work order 2227165, replacement of the capacitors of E-TR-4AA/1 on December 19, 2024

### 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) engineering change 17958 for installing removable flood barrier in diesel generator 3 room D114 on October 23, 2024

### 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) (5 Samples)

- (1) CRD-HCU-3419 scram, leak, and operability test following repair on November 7, 2024
- (2) OSP-ELEC-W102, electrical distribution subsystem breaker alignment and power availability verification, for post maintenance testing following repair to transformer E-TR-4AA/1 on December 19, 2024
- (3) replacement of undervoltage relay 27/5, work order 02215886-01, on December 26, 2024
- (4) rebuild of radioactive waste pump P-25, work order 02190990, on December 26, 2024
- (5) SOP-FPC-OPS, fuel pool cooling and cleanup operations, for placing FPC-P-1A in service following maintenance to replace FPC-RLY-P/1A per work order 02177125 on December 30, 2024

### 71114.06 - Drill Evaluation

#### Additional Drill and/or Training Evolution (1 Sample)

The inspectors evaluated:

- (1) The inspectors observed the emergency response organization ability to determine emergency action level classifications and personnel action recommendations on October 22, 2024.

## **OTHER ACTIVITIES – BASELINE**

### 71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

#### MS08: Heat Removal Systems (IP Section 02.07) (1 Sample)

- (1) Unit 1 (July 1, 2023, through June 30, 2024)

MS09: Residual Heat Removal Systems (IP Section 02.08) (1 Sample)

- (1) Unit 1 (July 1, 2023, through June 30, 2024)

MS10: Cooling Water Support Systems (IP Section 02.09) (1 Sample)

- (1) Unit 1 (July 1, 2023, through June 30, 2024)

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

- (1) Unit 1 (October 1, 2023, through September 30, 2024)

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

- (1) Unit 1 (October 1, 2023, through September 30, 2024)

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (Section 03.03) (4 Samples)

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

- (1) Intermediate-range monitor (IRM) H was erratic and degraded indication from March to November 2024. The inspectors evaluated the initial operability determination and corrective actions taken. Following inspection by the fix-it-now (FIN) team and evaluation of guidance provided by General Electric, engineering concluded the noise issue was resolved and recommended returning the instrument to service. The inspectors completed additional review of a subsequent operability determination and corrective actions as the oscillations grew more erratic and the licensee declared the instrument inoperable. IRM H is a required instrument for Modes 2 and 5 and would be important in case the plant needed to perform a startup. Additionally, two of the IRM instruments are required for post-accident monitoring in case of an event. The inspectors completed their review on December 10, 2024.
- (2) The inspectors reviewed current diesel generator HVAC system vulnerabilities, the licensee's evaluation, and the improvement plan efforts regarding equipment reliability. At least nine failures of the diesel generator system and supporting systems have occurred in the past 2 years and these components result in higher core damage frequency if inoperable. Inspection efforts included a review of the 11 identified vulnerabilities, the nineteen planned or completed corrective actions, and justification for actions taken. The inspectors completed their review on December 15, 2024.
- (3) The inspectors reviewed condition reports associated with the preventive maintenance frequency changes that required a change to a more frequent interval due to increased failures of the equipment and/or observation of the equipment by craft personnel, from January to December 2024. The inspectors reviewed 10 condition reports (00454492, 00456679, 00456732, 00456740, 00458672, 00458945, 00459309, 00463060, 00464105, and 00464093). The inspectors completed their review on December 31, 2024.
- (4) The inspectors reviewed the condition reports associated with the Sola transformer capacitor failures that have occurred from January 2020 to December 2024. The bulging of the capacitors that was seen had the potential to cause a fire and loss of

safety function of the transformers. The inspectors reviewed the corrective actions of 11 condition reports (00454349, 00454351, 00464518, 00464573, 00409937, 00412142, 00426425, 00438074, 00438205, 00427696, and 00427687) associated with bulging capacitors and/or failed capacitors of safety/safety-related transformers. The inspectors completed their review on December 30, 2024.

### **INSPECTION RESULTS**

No findings were identified.

### **EXIT MEETINGS AND DEBRIEFS**

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

- On January 13, 2025, the inspectors presented the integrated inspection results to Grover Hettel, Chief Nuclear Officer, and other members of the licensee staff.

### **THIRD PARTY REVIEWS**

Inspectors reviewed World Association of Nuclear Operators (WANO) report, dated January 2023, during this inspection period.

## DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.05	Corrective Action Documents		00463066	
	Fire Plans	Pre-Fire Plan	Columbia Generating Station Pre-Fire Plan	7
	Procedures	FPP-1.7	Fire Tour Implementation	9
71111.06	Corrective Action Documents		00460830, 00460893, 00462461	
71111.11A	Miscellaneous		Licensed Operator Requalification Operating Test Results	12/19/2024
71111.12	Corrective Action Documents		00463961	
	Miscellaneous	Email between JJ. Hager and J.R. LaSalle	Examination of three removed inservice valves (CRD-SPV-9)	10/15/2024
		White paper	established the frequency A16	11/14/2024
	Work Orders		02221878, 029167167, 029176711, 02917616, 029177684, 029178323	
71111.13	Calculations	Ref AR:00462554	Result set 10/21/24 TR-B	
71111.15	Corrective Action Documents		00462940, 00463816	
	Work Orders		02211624, 02214352	
71111.18	Calculations	ME-02-03-02	Calculation for Diesel Generator Building Flooding Analysis	1
71111.24	Corrective Action Documents		AR/CR 00460848	
	Procedures	10.5.9	CRD/Hydraulic Control Unit Refurbishment	25
71152A	Corrective Action Documents		00465582, 00460994, 00463542	
	Engineering Evaluations	AR: 00455790-01	2024 DG HVAC SVE System Vulnerabilities Evaluation Report	
	Procedures	10.23.7	DMA Damper Linkage Setup	6
		OSP-INST-H101	Shift and Daily Instrument Checks (Mode 1, 2, and 3)	100
		PPM 1.3.66	Operability Determination	38
Work Orders		02217407		