



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

July 29, 2020

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

SUBJECT: COLUMBIA GENERATING STATION – INTEGRATED INSPECTION
REPORT 05000397/2020002

Dear Mr. Sawatzke:

On June 30, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Columbia Generating Station. On July 9, 2020, the NRC inspectors discussed the results of this inspection with Mr. W. Hettel, Chief Nuclear Officer/Vice President Nuclear Generation, and other members of your staff. The results of this inspection are documented in the enclosed report.

One finding of very low safety significance (Green) is documented in this report. This finding did not involve a violation of NRC requirements.

If you disagree with a finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; and the NRC Resident Inspector at Columbia Generating Station.

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,

Jeffrey E. Josey, 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 05000397/2020002 - July 29, 2020

DISTRIBUTION:

SMorris, RA
AVegel, DRA
MHay, DRP
JKozal, DRP
RLantz, DRS
GMiller, DRS
DCylkowski, RC
EBurket, RIV/OEDO
VDricks, ORA
LWilkins, OCA
MChawla, NRR
AMoreno, RIV/OCA
BMaier, RSLO
AAgrawal, IPAT
JJosey, DRP
HFreeman, DRP
GKolcum, DRP
CRoettgen, DRP
NCuevos, DRS
LMerker, DRP
MBennett, DRP
PJayroe, IPAT
BCorrell, IPAT
MHerrera, DRMA
R4Enforcement

ADAMS ACCESSION NUMBER: ML20210M406

<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	SRI:DRP/A	SRI:DRP/A	DRS/IPAT	DRS/EB1
NAME	GKolcum	LMerker	CRoettgen	AAgrawal RVA for	VGaddy
DATE	7/21/2020	7/23/2020	07/23/2020	07/23/2020	7/20/2020
OFFICE	DRS/EB2	DRS/RCB	DRS/OB	DNMS/RxIB	SPE:DRP/A
NAME	NTaylor NHT	MHaire	GWerner	GWarnick	HFreeman
DATE	7/20/2020	7/20/2020	07/21/2020	7/20/2020	07/20/2020
OFFICE	DRP/A				
NAME	JJosey				
DATE	07/29/2020				

OFFICIAL RECORD COPY

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

Docket Number: 05000397

License Number: NPF-21

Report Number: 05000397/2020002

Enterprise Identifier: I-2020-002-0011

Licensee: Energy Northwest

Facility: Columbia Generating Station

Location: Richland, WA

Inspection Dates: April 1, 2020 to June 30, 2020

Inspectors: G. Kolcum, Senior Resident Inspector
L. Merker, Acting Senior Resident Inspector
C. Roettgen, Senior Resident Inspector
J. Mateychick, Senior Reactor Inspector
W. Cullum, Reactor Inspector
N. Okonkwo, Reactor Inspector

Approved By: Jeffrey E. Josey, 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

Failure to Follow Corrective Action Procedure in 2008 Leads to Recirculation Pump Trip			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Initiating Events	Green FIN 05000397/2020002-01 Open/Closed	None (NPP)	71152
The inspectors reviewed a self-revealed, Green, finding for the licensee's failure to follow plant Procedure SWP-CAP-01, "Corrective Action Program," Revision 16, that describes the corrective action process beginning with the identification of an issue or condition through implementing actions to correct the condition and/or preclude its recurrence. Specifically, in 2008, the licensee had a corrective action to perform a causal evaluation to understand the obsolescence of the adjustable speed drive (ASD) system gate turn-off thyristors (GTOs), but did not have a follow-on corrective action to address the noted increase in failure rates of the ASD system GTOs. This resulted in several ASD channel failures since 2008, and a recirculation pump trip and reactor transient on February 14, 2020.			

Additional Tracking Items

None.

PLANT STATUS

The reactor unit began the inspection period at rated thermal power. On May 19, 2020, the reactor unit was down powered to 65 percent for economic dispatch from Bonneville Power Administration. On May 21, 2020, the reactor unit was down powered to 60 percent to recover an adjustable speed drive channel following maintenance and returned to 65 percent. The unit returned to rated thermal power on May 25, 2020. On May 30, 2020, the reactor unit was down powered to 65 percent for economic dispatch from Bonneville Power Administration. On June 1, 2020, the reactor unit returned to 85 percent and then down powered to 65 percent for economic dispatch from Bonneville Power Administration. On June 5, 2020, the reactor unit was down powered to 60 percent for control rod scram time testing and sequence exchange, and maintenance on circulating water valve 2C, and returned to 65 percent. On June 6, 2020, the reactor unit was down powered to 25 percent for economic dispatch from Bonneville Power Administration. On June 9, 2020, the reactor unit was down powered to 15 percent for the licensee to remove the main turbine generator from the grid and balance the turbine. On June 10, 2020, the main turbine generator was synchronized to the grid. On June 11, 2020, the reactor unit returned to 40 percent. On June 12, 2020, the reactor unit was down powered to 25 percent due to high vibrations on the turbine. On June 13, 2020, the reactor unit was down powered to 15 percent to remove the main turbine generator from the grid and to rebalance the turbine. On June 14, 2020, the main turbine generator was synchronized to the grid and the reactor unit returned to 40 percent. On June 15, 2020, the reactor unit down powered to 25 percent to close an open bleed steam valve and returned to 65 percent. On June 21, 2020, the reactor unit returned to 85 percent. The unit returned to rated thermal power on June 22, 2020. On June 26, 2020, the reactor unit was down powered to 40 percent for economic dispatch from Bonneville Power Administration, where it remained 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 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.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time the resident inspectors performed periodic site visits each week and during that time conducted plant status activities as described in IMC 2515, Appendix D; observed risk significant activities; and completed on site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

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 high temperatures for the following systems on June 26, 2020:
 - standby service water system A
 - standby service water system B

External Flooding Sample (IP Section 03.03) (1 Sample)

- (1) The inspectors evaluated readiness to cope with external flooding for the standby service water systems A and B pump rooms on May 28, 2020.

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (3 Samples)

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

- (1) low pressure core spray system following annual maintenance on May 7, 2020
- (2) standby gas treatment system A following annual maintenance on May 21, 2020
- (3) residual heat removal system C on June 19, 2020

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (5 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 RC-19/2, vital island corridor, on April 17, 2020
- (2) Fire Area RC-2/1, cable spreading room, on April 23, 2020
- (3) Fire Area R-8/1, low pressure core spray system pump room, on May 5, 2020
- (4) Fire Areas RC-14/1 and RC-8/2, division 1 and 2 switchgear rooms, on June 5, 2020
- (5) Fire Areas RC-5/1 and RC-6/2, division 1 battery and security equipment room and division 2 battery room, on June 5, 2020

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 division 1 and 2 electrical switchgear rooms on June 16, 2020.

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 a reactor downpower for economic dispatch, May 19–20, 2020.

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

- (1) The inspectors observed and evaluated a licensed operator regualification training drill (Crew C) on June 1, 2020.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated the effectiveness of low pressure core spray system maintenance to ensure the structures, systems, and components (SSCs) remained capable of performing their intended function on May 5, 2020.

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (5 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 for reactor core isolation cooling planned maintenance on April 13, 2020
- (2) high risk for recirculation pump A relay maintenance on breaker S5 on April 15, 2020
- (3) high risk for adjustable speed drive system maintenance on May 21, 2020
- (4) yellow risk for diesel generator 3 pre-start checks (bar over) and load testing on May 29, 2020
- (5) emergent, high risk work on circulating water valve 2C during economic dispatch and station yellow risk on June 5, 2020

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated the licensee's justifications and actions associated with operability determinations and functionality assessments of degraded bolting on electrical manholes E-MH-E10, E-MH-E11, and E-MH-E15 on May 14, 2020.

71111.17T - Evaluations of Changes, Tests, and Experiments

Sample Selection (IP Section 02.01) (27 Samples)

The inspectors reviewed the following evaluations, screenings, and/or applicability determinations for 10 CFR 50.59 from April 13–17, 2020:

- (1) 5059EVAL-17-0003, "Approve Use of GOTHIC for Analysis of Certain High Energy Line Breaks," Revision 0
- (2) 5059EVAL-18-0001, "Changing Methodology to GOTHIC 8.1 for RWCU HELB Analysis," Revision 0
- (3) 5059SCREEN-16-0012, "Main Steam Line Flow Restrictor Chocked Flow," Revision 0
- (4) 5059SCREEN-17-0034, "RWCU-MO-1 & 4 Modifications (Actuator Replacements)," Revision 0
- (5) 5059SCREEN-19-0106, "RHR-MO-4A Gear Change for RHR-V-4A," Revision 0
- (6) 5059SCREEN-19-0110, "Major Leak from Turbine Building Oil System," Revision 0
- (7) 5059SCREEN-19-0118, "ABN-FLOODING," Revision 0
- (8) 5059SCREEN-19-0130, "EC 16816, Replace the Valve Wedge and Change the Gear Ratio in RHR-V-8," Revision 0
- (9) 5059SCREEN-19-0135, "LDCN-19-045," Revision 0
- (10) 5059SCREEN-17-0145, "Backseat HV-V-31B by its Electrical Motor," Revision 0
- (11) 5059SCREEN-17-0146, "Installation of Protective Plate on Reactor Building ECCS Room Water Tight Doors," Revision 0
- (12) 5059SCREEN-17-0150, "PPM ABN-FAZ Procedure Revision to Make the Procedure More Efficient," Revision 0
- (13) 5059SCREEN-17-0167, "Temporary Modification EC 16899 Will Use Nitrogen to Maintain BS-RV-26A in the closed position," Revision 0
- (14) 5059SCREEN-18-0030, "Keep Mechanical Gag on AR-AO-1 to Permanently Keep AR-V-1 Open," Revision 0
- (15) 5059SCREEN-19-0017, "Add Sentence to FSAR Section 11.4.2.4 for the Radwaste Disposal System for Fuel Pool, Floor Drain, and Waste Collector Filter Resin," Revision 0
- (16) 5059SCREEN-16-0076, "Replaces Existing GE NGV 125 VDC Battery Ground Detection Relays E-RLY-4PG/B5, and -64PG/B6 With an ABB 27B Model. EC 15414," Revision 0
- (17) 5059SCREEN-16-0148, "Replace Existing E-EF-IN4/ACIN With a New AC Filter," Revision 0
- (18) 5059SCREEN-17-0161, "Level 8 Setpoint Setdown Software Changes," Revision 0
- (19) 5059SCREEN-18-0003, "FSAR Revision For Use of GOTHIC in Safety Analysis (LDCN-18-002)," Revision 0
- (20) 5059SCREEN-18-0014, Replace ITE Safety Related E-CB-8A4A MCCB With Fused Disconnect E-DISC-8A4A," Revision 0
- (21) 5059SCREEN-18-0015, "Replace ITE Augmented Quality E-CB-8C1C MCCB With Fused Disconnect E-DISC-8C1C," Revision 0
- (22) 5059SCREEN-18-0015, "Replace ITE Augmented Quality E-CB-8C4A MCCB With Fused Disconnect E-DISC-8C4A," Revision 0
- (23) 5059SCREEN-18-0016, "Replace ITE Augmented Quality E-CB-8C4A MCCB With Fused Disconnect E-DISC-8C4A," Revision 0
- (24) 5059SCREEN-19-0064, "Install CCTV for the Main Transformers," Revision 0
- (25) 5059SCREEN-19-0120, "Replace Existing ITE Molded Case Circuit Breakers E-CB-8B2D, E-CB-2C1D, and WCH-CB-8E1E With Fused Disconnects," Revision 0
- (26) Applicability Determination LS-19-0233, "Procedure 5.6.1, SBO/ELAP, Revision 030," Revision 0
- (27) Applicability Determination LS-20-0074, "Procedure 5.6.2, Station Blackout (SBO) and Extended Loss of AC Power ELAP Attachments, Revision 015," Revision 0

71111.18 - Plant Modifications

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

- (1) The inspectors evaluated the temporary modification of concrete block placement on manhole covers E-MH-E11 and E-MH-E15 on April 30, 2020.

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (6 Samples)

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

- (1) eight-hour report 54466, loss of seismic assessment instrumentation, on April 2, 2020
- (2) replacement of fire pump 110 batteries, week of April 16, 2020
- (3) reactor water cleanup system pump 3A maintenance on April 20, 2020
- (4) low pressure core spray system annual maintenance on May 6, 2020
- (5) standby gas treatment system A on May 20, 2020
- (6) fire protection pump 2B on June 24, 2020

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (3 Samples)

- (1) OSP-CRD-W101, control rod SCRAM accumulator verification, on April 15, 2020
- (2) OSP-CRD-M101, SCRAM discharge volume vent and drain valve monthly operability, on April 16, 2020
- (3) ESP-BAT-W101, weekly battery test, on April 14, 2020

Inservice Testing (IP Section 03.01) (1 Sample)

- (1) OSP-CCH/IST-M702, control room emergency chiller system B operability, on April 29, 2020

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS05: Safety System Functional Failures (SSFFs) Sample (IP Section 02.04) (1 Sample)

- (1) (April 1, 2019–April 30, 2020)

71152 - Problem Identification and Resolution

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

- (1) The inspectors reviewed the licensee’s corrective action program for potential adverse trends that might be indicative of a more significant safety issue. The inspectors performed an in-depth review of the licensee's ability to identify when prohibited items are brought onsite, evaluate each occurrence, and implement corrective actions; and documented one observation on June 30, 2020.

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) evaluation of the February 14, 2020, trip of recirculation pump 1A on June 3, 2020
- (2) evaluation of the January 15, 2020, loss of adjustable speed drive channel 1A/2 on June 15, 2020

71153 – Follow-up of Events and Notices of Enforcement Discretion

Reporting (IP Section 03.05) (1 Sample)

- (1) The inspectors evaluated a June 2, 2020, inadvertent emergency response organization callout and the licensee’s response on June 4, 2020.

INSPECTION RESULTS

Failure to Follow Corrective Action Procedure in 2008 Leads to Recirculation Pump Trip			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Initiating Events	Green FIN 05000397/2020002-01 Open/Closed	None (NPP)	71152
The inspectors reviewed a self-revealed, Green, finding for the licensee’s failure to follow plant Procedure SWP-CAP-01, “Corrective Action Program,” Revision 16, that describes the corrective action process beginning with the identification of an issue or condition through implementing actions to correct the condition and/or preclude its recurrence. Specifically, in 2008, the licensee had a corrective action to perform a causal evaluation to understand the obsolescence of the adjustable speed drive (ASD) system gate turn-off thyristors (GTOs), but did not have a follow-on corrective action to address the noted increase in failure rates of the ASD system GTOs. This resulted in several ASD channel failures since 2008 and a recirculation pump trip and reactor transient on February 14, 2020.			
<u>Description:</u> On February 14, 2020, recirculation pump 1A tripped off when both ASD channels 1A/1 and 1A/2 tripped due to internal faults. The reactor recirculation system is designed to provide forced coolant flow through the reactor core and consists of two loops, each with a recirculation pump. The ASD system controls recirculation pump flow by varying the frequency of the electrical power supplied to the pump motor. Each recirculation pump is controlled by two ASD channels. Both channels are required for the recirculation pump to			

operate at full speed. A recirculation pump can be operated with only one ASD channel in service at a reduced speed.

In 2008, the licensee initiated action request (AR) 186054 that identified the ASD system GTOs failure rate was increasing. The AR also stated the cards were greater than 12 years old and may be nearing end of life. The licensee performed a causal evaluation that restated the GTO failure rate was increasing after 10–12 years of service. However, no corrective action assignment was initiated to address the increased failure rate of the GTO cards. This AR was cross referenced to engineering technical evaluation (AR-EVAL) 178017 that documented the obsolescence of the ASD system.

Engineering technical evaluation AR-EVAL 178017 had three assignments. The first assignment was to find a replacement part for the obsolete GTO; this assignment was closed out stating a replacement did not exist and that the ASD system would need to be replaced. The second assignment was to evaluate a new ASD system since the GTOs were obsolete with no repair or replacement available; this assignment was closed out with no action recommended as the licensee had enough spare GTOs available to last approximately 10 years. The third assignment was to review the evaluation and either take appropriate action or recommend AR closure; this assignment recommended the AR to be closed since the licensee had spare parts available for 10 years. Again, no corrective action assignment was initiated to address the increased failure rate of the GTO cards. The ASD obsolescence issue was then put on the licensee's 2009 long-range plan. In 2014, the ASD obsolescence issue was removed from the long-range plan and AR-EVAL 316044 was initiated to track resolution of the obsolescence of the ASD system.

The inspectors noted the purpose of Procedure SWP-CAP-01, "Corrective Action Program," Revision 16, is to describe the corrective action process beginning with the identification of an issue or condition through implementing actions to correct the condition and/or preclude its recurrence. Step 4.11.1j states, in part, that corrective actions that require preliminary evaluation... to understand the problem should have a separate corrective action for the preliminary activity and a follow on corrective action for implementation. In 2008, the licensee performed a causal evaluation that stated the GTO failure rate was increasing after 10-12 years of service. However, no corrective action assignment was initiated to address the increased failure rate of the GTO cards. This resulted in the GTO cards being replaced with spare parts after experiencing failure. The most recent GTO card failure resulted in the February 14, 2020, recirculation pump trip and reactor transient.

Corrective Actions: The licensee's corrective actions included replacing one GTO card in the 1A/1 channel and six GTO cards and a power supply in the 1A/2 channel, restoring both channels to service, and restarting the recirculation pump. The licensee also entered the issue into the corrective action program and completed an event investigation.

Corrective Action References: Action Request 404225

Performance Assessment:

Performance Deficiency: The failure to follow plant Procedure SWP-CAP-01, "Corrective Action Program," Revision 16, that describes the corrective action process beginning with the identification of an issue or condition through implementing actions to correct the condition and/or preclude its recurrence was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor

because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, in 2008, the licensee had a corrective action to perform a causal evaluation to understand the obsolescence of the ASD system GTOs, but did not have a follow on corrective action to address the noted increase in failure rates. This resulted in several ASD channel failures since 2008 and a recirculation pump trip and reactor transient on February 14, 2020.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using the questions in Exhibit 1, "initiating Events Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because the finding did not cause a reactor trip and loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition.

Cross-Cutting Aspect: Not Present Performance. No cross-cutting aspect was assigned to this finding because the inspectors determined the finding did not reflect present licensee performance.

Enforcement: Inspectors did not identify a violation of regulatory requirements associated with this finding.

Observation: Increase in Prohibited Items Identified	71152
---	-------

The inspectors performed an in-depth review of the licensee's evaluation and corrective actions related to a potential trend increase of prohibited items identified at the security checkpoint. From January 1, 2020, to June 30, 2020, the licensee initiated 12 action requests (ARs) related to prohibited items declared at the security checkpoint. The inspectors noted that 8 of the ARs were initiated in the second quarter, between April 1, 2020, to June 30, 2020, during the coronavirus (COVID-19) pandemic when less individuals than normal accessed the site. Conversely, from January 1, 2019, to June 30, 2019, the licensee initiated 9 similar ARs with 6 initiated in the second quarter, between April 1, 2019, to June 30, 2019, during a quarter that included Refueling Outage R24 when more individuals than normal accessed the site. The inspectors noted that the overwhelming majority of individuals with prohibited items in their possession were either contractors or delivery personnel and not licensee employees. The inspectors verified no prohibited items entered the protected area.

The inspectors assessed the licensee's problem identification threshold, evaluations, and corrective actions related to these ARs. In each instance, the licensee adequately followed site procedures to identify, evaluate, and correct the issue. The inspectors identified that the licensee was aware of the increasing trend of prohibited items identified at the security checkpoint and took corrective actions, but had not initiated an AR to document the trend. The inspectors also noted that the licensee's use of trend codes was inconsistently applied to ARs documenting prohibited items brought onsite. The licensee initiated AR 408442 to document the concern.

EXIT MEETINGS AND DEBRIEFS

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

- On April 16, 2020, the inspectors presented the Evaluation of Changes, Tests, and Experiments Inspection exit meeting inspection results to Mr. W. Hettel, Chief Nuclear Officer/Vice President Nuclear Generation, and other members of the licensee staff.
- On July 9, 2020, the inspectors presented the integrated inspection results to Mr. W. Hettel, Chief Nuclear Officer/Vice President Nuclear Generation, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Calculations	CE-02-13-18	Probable Maximum Flood (PMF) Analysis for Columbia Generating Station	000
		CE-02-13-22	Effects of Local Intense Probable Maximum Precipitation Analysis for Columbia Generating Station	000
		ME-02-92-41	Calculation for Ultimate Heat Sink Analysis	007
		ME-02-92-43	Room Temperature Calculation for DG Building, Reactor Building, Radwaste Building and Service Water	013
	Corrective Action Documents	Action Requests (ARs)	396990, 407275, 393438, 393813, 398976, 400018, 402976, 403992, 406096, 406680, 406733, 406737, 406949, 407290	
	Engineering Changes	18010	Provide Power to E-TR-M2 Cooler Group 2 Cooler 2 Oil Pump	001
	Miscellaneous	GO2-16-143	Columbia Generating Station, Docket No. 50-397 Flooding Hazard Reevaluation Report, Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 of the Near-term Task Force Review of Insights from the Fukushima Dai-ichi Accident	10/06/2016
	Procedures	4.840.A5; 840.A5	Annunciator Panel Alarms	028
		ABN-FLOODING	Flooding	022
		SOP-COLDWEATHER-OPS	Cold Weather Operations	034
		SOP-HOTWEATHER-OPS	Hot Weather Operations	006
		SOP-WARMWEATHER-OPS	Warm Weather Operations	016
	Work Orders		02126293, 02126294, 02129776, 29154662, 29154977	
	71111.04	Corrective Action Documents	Action Requests (ARs)	402800, 396502, 407980, 407981
Drawings		M520	Flow Diagram HPCS and LPCS Systems	105
		M521-3	Flow Diagram Residual Heat Removal Loop "C"	012

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
		M544	Flow Diagram HVAC-Standby Gas Treatment	076	
	Miscellaneous		Instrument Master Data Sheet for SGT-FR-2A2	009	
				Instrument Master Data Sheet for SGT-FT-1A2	009
	Procedures	1.3.29		Locked Valve Checklist	085
		ABN-SGT-TEMP/RAD		Standby Gas Treatment Charcoal High Temperature/Radiation	006
		SOP-LPCS-LU		LPCS Valve and Breaker Lineup	003
		SOP-LPCS-STBY		Placing LPCS in Standby Status	002
		SOP-RHR-LU		RHR System Valve and Breaker Lineup	008
		SOP-RHR-STBY		Placing RHR in Standby Status	005
		SOP-SGT-LU		Standby Gas Treatment System Lineup	000
SOP-SGT-STBY			Placing Standby Gas Treatment In Standby Status	002	
Work Orders		29153347			
71111.05	Calculations	FP-02-85-03	Combustible Loading Calculation	010	
	Corrective Action Documents	Action Requests (ARs)	406072, 406195		
	Miscellaneous	BIP 20-0062		Transient Combustible Permit for Vital Island – General Area	04/08/2020
		BIP 20-0160		Barrier Impairment Permit: Electrical Access Area, Door C218	04/29/2020
		BIP 20-0161		Barrier Impairment Permit: Electrical Access Area, Door C218	06/01/2020
		BIP 20-0178		Barrier Impairment Permit: Vital Island Door C216	04/27/2020
		BIP 20-0244		Barrier Impairment Permit: Battery Room #1, Door C219	04/29/2020
		BIP 20-0245		Barrier Impairment Permit: Battery Room #1, Door C219	06/01/2020
		TCP 20-0014		Transient Combustible Permit: Cable Path TG501, TG471, RW467, RW487	05/04/2020
		TCP 20-0046		Transient Combustible Permit for Vital Island Div 1 Battery Room C210, Inside Door	04/07/2020, 06/04/2020
		TCP 20-0048		Transient Combustible Permit: Vital Island - General Area	05/26/2020
		TCP 20-0053		Transient Combustible Permit for Vital Island – General Area	04/06/2020
	TCP 20-0085		Transient Combustible Permit: RW 467 - In Front of Tool Crib General Area	05/18/2020	
	Procedures	1.3.10C		Control of Combustibles	021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		1.3.57	Barrier Impairment	038
		ABN-FIRE	Fire	041
		PFP-RB-422	Reactor 422	006
		PFP-RW-467	Radwaste 467	005
		PFP-RW-484-487	Radwaste 484-487	005
	Work Orders		02115649, 02128947	
71111.06	Calculations	ME-02-02-23	PFSS Flooding Analysis - Radwaste Building	001
		ME-02-03-04	Radwaste Building Flooding Analysis	001
		ME-02-11-12	Concrete Floor Flood Barrier Analysis	000
	Corrective Action Documents	Action Requests (ARs)	398295, 400176, 400183, 403999, 404242, 407275	
	Miscellaneous	BIP 20-0124	Barrier Impairment Permit: R548 L7/8.3 at FPC Pump/HX Room	03/18/2020
		FPF 1.1-40	Fire Rated Penetration Seals	002
		PSA-1-SM-0001	CGS PSA Internal Event Summary	008
		PSA-2-FL-0002	Probabilistic Safety Assessment Model Notebook: Internal Flooding Propagation, Screening, and Accident Scenario Development Report	003
		PSA-2-FL-0003	Probabilistic Safety Assessment Model Notebook: Internal Flooding Initiating Events Frequency Development Report	002
	Procedures	1.3.57	Barrier Impairment	038
		15.4.6	Essential Fire Rated Penetration Seal and Essential Fire and Flood Barrier Operability Inspection	011
		4.FCP.3	FCP.3 Annunciator Panel Alarms	024
		ABN-FLOODING	Flooding	022
		SOP-DOOR/HATCH-OPS	Reactor Building, Turbine Building, Radwaste Building and Containment, Personnel, Equipment Access Area Doors, and Hatches	017
	Work Orders		02138317, 02138318, 02138319, 02138320, 02138321	
71111.11Q	Corrective Action Documents	Action Requests (ARs)	389186, 402277, 406797, 407009, 407012, 407013, 404679, 407204	
	Miscellaneous		Reactivity Control Plan Economic Dispatch to 65% CTP May 2020	05/19/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		LR002488	Columbia Generating Station Simulator Scenario 20-3 Evaluated Scenario	000
	Procedures	3.3.1	REACTOR Scram	066
		5.1.1	RPV Control	022
		5.2.1	Primary Containment Control	028
		ABN-CORE	Unplanned Core Operating Conditions	017
		ABN-POWER	Unplanned Reactor Power Change	016
		OI-07	Training Expectations	015
		OI-09	Operations Standards and Expectations	077
		SOP-CR-MOVEMENT	Control Rod Movement	003
		SOP-FWH-SHUTDOWN	Extraction Steam and Heater Vents/Drains System Shutdown	004
		SOP-RRC-FLOW-QC	Reactor Power Change with RRC Flow Controllers - Quick Card	005
		TDI-06	Simulator Management	021
71111.12	Corrective Action Documents	Action Requests (ARs)	390944, 404026, 406546	
	Procedures	1.5.11	Maintenance Rule Program	016
		OSP-LPCS/IST-Q702	LPCS System Operability Test	044
		SYS-4-22	Maintenance Rule Program	014
Work Orders		02117856, 02118311, 02118312, 02118313, 02117856, 02123922, 02131741, 02131742, 02131745, 02153301, 02153302		
71111.13	Corrective Action Documents	Action Requests (ARs)	406705, 406799, 407060, 393083, 398408, 407136, 407139, 407333, 407430, 407463, 407479, 407510, 407481	
	Drawings	M507-1	Flow Diagram Circulating Water System Turbine Generator BLDG & Yard	178
	Miscellaneous		High Risk Work Plan to Install Gag Device on CW-V-2C	000
			High Risk Work Plan for Work Orders 02112977, 02158041, and 02161630	05/19/2020
	Procedures	1.3.76	Integrated Risk Management	060
	1.3.76	Integrated Risk Management	059	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		1.3.83	Protected Equipment Program	031
		1.3.86	Online Fire Risk Management	005
		ESP-RLYS5-B401		
		ISP-RCIC-Q907	RCIC Isolation on Low Steam Supply Pressure - Channels B & D - CFT/CC	005
		TSP-DG3-B502	HPCS Diesel Generator DG3 Load Testing	025
	Work Orders		02126770, 02121810, 02112977, 02158041, 02161630, 02085269, 02120123, 02163244	
71111.15	Calculations	6.08.01-SII-6	Calculation for Transformer Yard Electrical Manholes	001
	Corrective Action Documents	Action Requests (ARs)	304266, 304289, 381023, 405330, 406119	
	Miscellaneous	5059SCREEN-14-0063	Screening for Temporary Concrete Deadmen Will be Placed on Top of Class 1 Electrical Manholes E10, E11, and E15	03/12/2014
		AD-14-0339	Applicability Determination for Missing Bolts on Outer Covers for Class 1 Electrical Manholes E10, E11, and E15	000
		GO2-14-077	Columbia Generating Station, docket No. 50-397 Licensee Event Report No. 2014003-0	05/12/2014
	Procedures	SWP-CAP-01	Corrective Action Program	041
	Work Orders		02124766	
71111.17T	Calculations	ME-02-08-10	Flow Restrictor Chocked Flow Calculation	002
	Engineering Changes	EC0000016355	RWCU-MO-1 & 4 Modifications (Actuator Replacements)	002
		EC0000016816	Perform Repairs to RHR-V-8 Based on EN inspections and Results of EPRI MOV PPM Calculations Which Predicted a TYPE 1 Error	000
		EC0000017929	RHR-MO-4A Gear Change for RHR-V-4A	000
		LDCN-19045	Safety Relief Valve (SRV) Overpressure Analysis Basis at 25 %RTP	000
	Miscellaneous	10.25.187A	Motor Control Center Starter Maintenance - NLI Starters	002
		10.25.48	Testing Molded Case Circuit Breakers	016
		50.59EVAL-18-0001	Changing Methodology to GOTHIC 8.1 for RWCU HELB Analysis	000
		5029SCREEN-19-0106	RHR-MO-4A Gear Change for RHR-V-4A	000
		5059EVAL-17-	Approve Use of GOTHIC for Analysis of Certain High Energy	000

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
		0003	Line Breaks		
		5059SCREEN-16-0012	Main Steam Line Flow Restrictor Chocked Flow	000	
		5059SCREEN-17-0034	RWCU-MO-1 & 4 Modifications (Actuator Replacements)	000	
		5059SCREEN-19-0110	Major Leak from Turbine Building Oil System	000	
		5059SCREEN-19-0118	ABN-FLOODING	000	
		5059SCREEN-19-0130	EC 16816, Replace the valve wedge and change the gear ratio in RHR-V-8	000	
		5059SCREEN-19-0135	LDCN-19-045	000	
		999-00,214	5600 Series Motor Control Center Cubicles Instruction Manual	002	
		LS-19-0233	Procedure 5.6.1, SBO/ELAP, Revision 030	000	
		LS-20-0074	Procedure 5.6.2, Station Blackout (SBO) and Extended Loss of AC Power ELAP Attachments, Revision 015	000	
		TAC NO. MB5096 (ML041410566)	River Bend Station, Unit 1 - Issuance of Amendment RE: High Energy Line Break Analysis	04/20/2004	
		Procedures	5.6.1	SBO/ELAP	030
			5.6.2	Station Blackout (SBO) and Extended Loss of AC Power ELAP Attachments	015
	ABN-FLOODING		Flooding	022	
	ENG-DES-50		Interface Procedure for IP-ENG-001	002	
	IP-ENG-001		Standard Engineering Process	001	
	Major Leak from Turbine Building Oil Systems		000		
	PPM 1.3.76		Integrated Risk Management	049	
	PPM 3.2.1	Normal Plant Shutdown	088		
	SWP-LIC-02	Licensing Basis Impact Determinations	015		
SWP-PRO-02	Preparation, Review, Approval and Distribution of Procedures	050			
71111.18	Engineering	13266	Alternate Hold Down Detail for Manholes E-MH-E10, E-MH-	001	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Changes		E11, and E-MH-E15	
		13650	Calc 6.08.01-SII-6 Rev 0 – Modification to Tornado Holddown Bolting for E-MH-E10, E-MH-E11, and E-MH-E15 Manhole Covers	000
		18212	TMOD for Placing Concrete Blocks on Manhole Covers E-MH-E11/E-MH-E15	000
	Procedures	SWP-CM-02	Temporary Configuration Changes	003
	Work Orders		02124766, 02153631	
71111.19	Corrective Action Documents	Action Requests (ARs)	406566, 406584, 406795, 406900, 406969, 407121, 407133, 407258, 407544, 407555, 407962	
	Engineering Changes	17870	FP-P-2B Replacement	000
	Procedures	15.1.3	FP-P-110 Operability Test	009
		15.1.6	FP-P-2B Operability Test	014
		15.4.8	Fire Protection System Functional Test	024
		ISP-SEIS-M202	Seismic System Channel Check	002
		ISP-SEIS-S404	Seismic System Channel Functional Test	001
		ISP-SEIS-X308	Seismic System Channel Calibration	002
		OSP-LPCS-M101	LPCS Fill Verification	015
		OSP-LPCS/IST-Q702	LPCS System Operability Test	044
		OSP-SGT-M701	Standby Gas Treatment System A Operability	018
		OSP-SGT/IST-Q701	SGT Valve Operability (System A)	010
		SOP-OG-LU	Offgas System Lineup	001
	SOP-RWCU-OPS	Reactor Water Cleanup System Operations	013	
Work Orders		02159994, 02128013, 02128194, 02131742, 02131745, 02151690, 02153301, 02153302, 02131510, 02131511, 02131513, 02124025, 02146082, 02138843, 02107662, 02122123, 02046143, 02146952, 02160512		
71111.22	Corrective Action Documents	Action Requests (ARs)	403221, 405472, 406406	
	Miscellaneous	IST-4	Inservice Testing Program Plan Fourth Ten-year Inspection Interval	003

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
	Procedures	1.5.1	Surveillance Testing Program	041	
		1.5.19	Surveillance Frequency Control Program	001	
		OSP-CCH/IST-M702	Control Room Emergency Chiller System B Operability	044	
		OSP-CRD-W101	Control Rod SCRAM Accumulator Verification	008	
		SWP-IST-01	ASME Inservice Testing	003	
	Work Orders		02150623, 02131655, 02150840		
71151	Corrective Action Documents	Action Requests (ARs)	399463, 399557		
	Miscellaneous		Operations Logs April 1, 2019 - April 30, 2020	05/19/2020	
		GO2-19-158	Columbia Generating Station, Docket No. 50-397 Licensee Event Report No. 2019-001-00	11/25/2019	
71152	Corrective Action Documents	Action Requests (ARs)	178017, 186054, 316044, 391432, 391991, 404225, 405176, 405183, 316044, 353763, 355428, 357897, 359747, 359748, 361492, 363946, 378928, 389577, 404225, 403173, 390327, 391189, 391430, 392724, 392965, 394214, 394942, 395529, 395904, 398063, 398301, 398350, 402101, 402572, 402886, 403574, 405059, 405297, 405723, 406670, 407030, 407276, 407805		
		Procedures	10.25.68	RRC-IMD-ASD1A/1 and RRC-IMD-ASD1A/2 Induction Motor Drive Software Settings and Self-Test	000
			DES-2-9	Technical Evaluations	039
			GBP-CAP-03	Trending Program	001
			SOP-RRC-START	Reactor Recirculation, System Start	021
			SWP-CAP-01	Corrective Action Program	016, 041
			SWP-SEC-03	Security Responsibilities of Site Personnel	030
			SYS-2-18	Life Cycle Management	001, 005
			TM-01	Trending Manual	003
		Work Orders		02158380, 02158041, 02158042, 02161630, 29153498	
71153	Corrective Action Documents	Action Requests (ARs)	407465		
	Procedures	OI-34	Notifications	039	
		OI-36	NRC Notifications	009	