



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 14, 2026

Jonathan Huecker
Site Vice President
Catawba Nuclear Station
Duke Energy Carolinas, LLC
4800 Concord Road
York SC 29745-9635

SUBJECT: CATAWBA NUCLEAR STATION - INTEGRATED INSPECTION REPORT
05000413/2026003 and 05000414/2026003

Dear Jonathan Huecker:

On September 30, 2026, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Catawba Nuclear Station. On October 14, 2026, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

No NRC-identified or self-revealing findings were identified during this inspection.

A licensee-identified violation which was determined to be of very low safety significance is documented in this report. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Director of the Division of Reactor Projects, Region II; and the NRC Resident Inspector at Catawba Nuclear 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,

A handwritten signature in black ink, appearing to be 'R. Williams', written in a cursive style.

Signed by Robert Williams on 10/14/26

Robert E. Williams, Jr., Chief
Reactor Projects Branch D
Division of Reactor Projects, Region II

Docket Nos. 05000413 and 05000414
License Nos. NPF-35 and NPF-52

Enclosure:
As stated

cc: w/ encl: Granicus Communications Subscriber

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers: 05000413 and 05000414

License Numbers: NPF-35 and NPF-52

Report Numbers: 05000413/2026003 and 05000414/2026003

Enterprise Identifier: I-2026-003-0043

Licensee: Duke Energy Carolinas, LLC

Facility: Catawba Nuclear Station

Location: York, South Carolina

Inspection Dates: July 1, 2026, to September 30, 2026

Inspectors: Michael Meeks, Senior Operations Engineer
David Rivard, Senior Resident Inspector
Anny Wang, Resident Inspector

Approved By: Robert E. Williams, Jr., Chief
Reactor Projects Branch D
Division of Reactor Projects, Region II

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Catawba Nuclear 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. A licensee-identified non-cited violation is documented in report section: 71152A.

List of Findings and Violations

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

Additional Tracking Items

None.

PLANT STATUS

Units 1 and 2 operated at or near 100 percent rated thermal power for the entire 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)

The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of extreme hot weather as defined in procedure PT/O/B/4700/039, "Hot Weather Protection," for the following systems:

- (1) Nuclear service water pump house ventilation and containment mechanical equipment building supply fans, on September 4, 2026

71111.04 - Equipment Alignment

Partial Walkdown (IP Section 03.01) (1 Sample)

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

- (1) Nuclear service water system during single supply header alignment for 'A' supply header piping inspections on August 31 and September 1, 2026

71111.05 - Fire Protection

Fire Area Walkdown and Inspection (IP Section 03.01) (1 Sample)

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 40: Unit 1 turbine-driven auxiliary feedwater pump enclosure, auxiliary building elevation 543, Room 254, on July 10, 2026

71111.11B - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Requalification Program (IP Section 03.03) (1 Sample)

- (1) Biennial Requalification Written Examinations

The inspectors evaluated the quality of the licensed operator biennial requalification written examination administered on August 28, 2026.

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 Title 10 of the *Code of Federal Regulations* (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, "Simulation Facilities."

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management (IP Section 03.01) (3 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) Unit 2 risk mitigating actions associated with the A train emergency diesel generator (EDG) maintenance window, on August 14, 2026
- (2) Work Orders (WOs) 20717051 and 20728775, nuclear service water supply header piping coatings inspections, during the weeks of August 31 and September 14, 2026
- (3) Units 1 and 2 risk mitigating actions associated with emergent inoperability of 1A EDG, on September 8 to 10, 2026

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (6 Samples)

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

- (1) Nuclear Condition Report (NCR) 2605797, Unit 2 pressurizer pressure channel 3 bistable failed, August 6, 2026
- (2) NCR 2607397, blown fuses discovered during Unit 1 pressurizer heater verification on August 20, 2026
- (3) NCR 02607149, foreign material intrusion in the nuclear service water A train manway M-9-1, on August 31, 2026
- (4) NCR 02609107, Unit 1 train A EDG did not reach acceptable voltage level within the technical specifications required time, on September 8, 2026
- (5) NCR 2609965, Unit 1 train B EDG did not develop voltage due to a failure to flash the generator field, on September 15, 2026
- (6) NCR 2610874, Unit 1 train B EDG tripped on low lube oil pressure, on September 22, 2026

Temporary and Permanent Modifications (IP Section 03.02) (1 Sample)

- (1) Engineering Change (EC) 426403, evaluation of DGTUNE software use for acceptable EDG post-maintenance testing

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 and Surveillance Testing (IP Section 03.01) (16 Samples)

- (1) PT/1/A/4400/06 B, "NS HX 1B Heat Exchanger Capacity Test," on June 28, 2026
- (2) PT/2/A/4200/004 B, "Containment Spray Pump 2A Performance Test," on July 8, 2026
- (3) PT/2/A/4350/015 B, "Diesel Generator 2B Periodic Tests," on July 14, 2026
- (4) PT/1/A/4250/003 B, "1B Auxiliary Feedwater Motor Driven Pump 1B Performance Test," on July 22, 2026
- (5) PT/1/A/4200/013 E, "1B Auxiliary Feedwater Valve Inservice Test," on July 22, 2026
- (6) PT/2/A/4600/001, "RCCA (rod cluster control assembly) Movement Test," on July 28, 2026

- (7) PT/2/A/4250/003 A, "Auxiliary Feedwater Motor Driven Pump 2A Performance Test," on July 29, 2026
- (8) PT/2/A/4200/013 E, "CA (auxiliary feedwater) Valve Inservice Test," on July 29, 2026
- (9) IP/1/A/3240/014 H, "Power Range N-41 Incore-Excore Cross Calibration," on July 30, 2026
- (10) IP/1/A/3240/014 I, "Power Range N-42 Incore-Excore Cross Calibration," on July 30, 2026
- (11) IP/2/A/3222/014 Q, "Steam Generator Narrow Range Level Protection Channel 3 (LT-548), Loop D (2CFLT5590)," on August 5, 2026
- (12) PT/1/A/4200/007 C, "Standby Makeup Pump #1 Performance Test," following maintenance, on September 2, 2026
- (13) Work Order (WO) 20809839, PT/1/A/4350/015A, Enclosure 13.1, and PT/1/A/4350/002 performed as a post-maintenance test (PMT), on September 10, 2026, for Unit 1 A train EDG not reaching acceptable voltage in the required time
- (14) PT/1/A/4350/015 A, "Diesel Generator 1A Periodic Test," following relay replacement, on September 10 to 11, 2026
- (15) WO 20810927 and PT/1/A/4350/002, performed as PMT, on September 17, 2026, for Unit 1 B train EDG failure to flash the field and generate voltage
- (16) WO 20811860 and PT/1/A/4350/015B, performed as PMT, on September 24, 2026, for Unit 1 B train EDG trip on low lube oil pressure

Diverse and Flexible Coping Strategies (FLEX) Testing (IP Section 03.04) (1 Sample)

- (1) WO 20779266, annual FLEX maintenance, performed August 24 to 26, 2026

71114.06 - NRC Resident--Evaluation of Emergency Preparedness Program

Emergency Preparedness Plan Activity (IP Section 03.01) (1 Sample)

- (1) The inspectors observed a scheduled emergency response organization drill titled "9-30-26 (Turnover)" in the technical support center and plant reference simulator on September 30, 2026.

SAFEGUARDS

71130.15 - Security Operations

Security Operations (IP Section 03.01) (1 Sample)

The inspectors evaluated security operations during observations of the following activity:

- (1) Central alarm station functions on September 22, 2026, and secondary alarm station functions on September 23, 2026

OTHER ACTIVITIES - BASELINE

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 03.03) (3 Sample)

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

- (1) EDG governor performance
- (2) Fire brigade minimum staffing, on July 26, 2026
- (3) Pressurizer heaters circuitry performance and monitoring

INSPECTION RESULTS

Licensee-Identified Non-Cited Violation	71152A
This violation of very low safety significance was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.	
Violation: Catawba Facility Operating License Section 2.C(5) states, in part, that the licensee "shall implement and maintain in effect all provisions of the approved fire protection program that complies with Title 10 of the <i>Code of Federal Regulations</i> (CFR) 50.48(a) and 10 CFR 50.48(c)..." Title 10 CFR 50.48(a)(2) and 10 CFR 50.48(a)(2)(i) states, in part, that the "fire protection plan must also describe specific features necessary to implement the program described... such as (i) administrative controls and personnel requirements for fire prevention and manual fire detection and suppression systems." Licensee procedure, AD-OP-ALL-0207, "Fire Brigade Administrative Controls," Revision 8, establishes administrative controls for the fire brigade. Section 5.1 states, in part, that the Fire Brigade shall be fully staffed, with a minimum complement of five fire brigade members on duty. Contrary to the above, from 0700 to 1753 on July 26, 2026, the licensee failed to maintain the minimum required fire brigade staffing, with only four of the required five fire brigade members present onsite. Although the licensee attempted to fill the position, minimum staffing was not restored within the 2-hour remedial action period specified in station Selected Licensee Commitments (SLC) 16.13-1, "Fire Brigade," and 16.13-4, "Minimum Station Staffing Requirements," intended to accommodate unexpected absences. The condition persisted for nearly 11 hours, indicating ineffective controls to restore required staffing within the specified timeframe. Significance/Severity: Green. The inspectors assessed the significance of the finding using IMC 0609, Appendix A, Exhibit 2, Section D (Fire Brigade). Under the fire brigade screening criteria, performance deficiencies that would have prevented the brigade from responding to and extinguishing a fire in a manner consistent with the fire protection plan screen as very low safety significance (i.e., Green). Corrective Action References: This violation was entered into the licensee's corrective action program as action request (AR) 02604196.	

Observation: Unit 1 Group B Pressurizer Heaters Circuitry Performance and Monitoring	71152A
The inspectors reviewed the station's history of fuse failures associated with the Unit 1 B group (1B) of safety-related pressurizer heaters and assessed the licensee's monitoring and corrective action practices. The 1B heater group functions as a backup heating bank and is typically energized only during quarterly surveillance testing or during large pressure transients. This heater group is required to be capable of maintaining reactor coolant system pressure using emergency power.	

Since 2007, the 1B group has experienced 10 fuse failures, which is notably higher than the 3–4 fuse failures observed in other trains of safety-related pressurizer heaters during the same time period. These failures generally result in one or two of the associated heater banks in the group failing to energize; however, the remaining heater capacity has been sufficient to maintain operability.

The licensee previously identified an adverse trend on multiple groups of pressurizer heater fuses in 2018. An equipment failure analysis at that time concluded that the most likely cause was elevated resistance in circuit connections resulting in a sustained low-level overcurrent condition. Subsequent work orders identified loose electrical connections, and corrective actions were implemented. Despite these actions, three additional fuse failures associated with the 1B heaters have occurred since 2018. In 2023, cabinet inspections revealed insulation and conductor damage attributed to prolonged exposure to excessive heating. Extent-of-condition inspections determined that similar degradation was not present in the other safety-related heater circuits.

For the most recent 1B heaters fuse failure, the licensee identified a localized hot spot in the associated circuitry during troubleshooting. Corrective actions are planned for the next outage to address this condition. Additionally, based on the historical trend, the licensee revised the periodicity of thermography inspections from every five years to every year.

The inspectors also noted that plant indications were available to identify the most recent fuse failure on July 20, 2026. However, the condition was not identified by station personnel until August 20, 2026, during the quarterly surveillance test. The indications associated with fuse failure do not generate any alarms, and routine monitoring of these parameters is only performed during scheduled surveillance activities.

EXIT MEETINGS AND DEBRIEFS

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

- On October 14, 2026, the inspectors presented the integrated inspection results to Jonathan Huecker, Site Vice President (SVP), and other members of the licensee staff.
- On September 3, 2026, the inspectors presented the biennial requalification inspection (IP 71111.11) results to Jonathan Huecker, SVP, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Drawings	CSD-CNS-PFP-AB-0577-001	Auxiliary Building Elevation 577 Pre-Fire Plan (Component Cooling Walkdown)	
		CSD-CNS-PFP-AB-0594-001	Auxiliary Building Elevation 594 Pre-Fire Plan (Component Cooling Walkdown)	
	Procedures	IP/0/A/3112/017	RN Cross-Over Valve Isolations/Restorations in Support of RN Single Supply Header Operation Alignment	
		OP/0//6400/006 M	Nuclear Service Water System Unwatering Procedure	
71111.05	Corrective Action Documents		AR 2604196	
	Fire Plans	CSD-CNS-PFP-AB-0543-001	Auxiliary Building Elevation 543 Pre-Fire Plan	
71111.13	Corrective Action Documents	Nuclear Condition Reports (NCRs)	02606129	
		PRR	20607149	
	Engineering Change	Engineering Change (EC)	427136	
	Procedures		CN-PRA-ADMIN-ERAT-001	
71111.15	Procedures	PT/1/A/4600/003 B	Quarterly Surveillance Items	
	Work Orders	WO	20805155	
71111.24	Corrective Action Documents	Action Requests (ARs)	024295516, 02588180, 02588879, 2604994	
71152A	Corrective Action Documents	NCR	2408600, 2598631, 2527507, 2604196, 2599085, 2577394, 2575515, 2573523, 2550795, 2450825, 2381755, 2394669, 2471853, 2220683, 2228544, 2155101, 2136734, 1500661, 2220683, 1514614, 1479100, 2066536, 2429833, 2396062, 2607404, 2607403, 2607397	
		Work Requests (WRs)	202455354, 20245535	
	Miscellaneous	CNM 1301.00-0354.001	Preventive Maintenance Plan for Diesel Generators	

		CNM 1301.00-0432.001	EDG Electrical and Control System Evaluation	
	Procedures	IP/1/B/3121/010	Procedure for Checking Pressurizer Heaters Groups 1A, 1B, 1C, and 1D	
		MP/0/A/7400/014	Diesel Engine Governor, Governor Oil Cooler and Booster Servo Motor Removal and Replacement	
		MP/0/A/7400/077	Delaval Diesel Engine Refueling Outage Inspections (Cooper Plan)	
	Work Orders	WO	20361345,20568008, 205756152, 20362524, 20361345, 20589688, 20521925, 20362546, 20276257, 20594317, 20600987, 20614258, 20614258, 20614259, 20498141, 20234538	

Jonathan Huecker, Site Vice President

SUBJECT: CATAWBA NUCLEAR STATION - INTEGRATED INSPECTION REPORT 05000413/2026003 AND 05000414/2026003

DATED: October 14, 2026

DISTRIBUTION:

RidsNrrPMCatawba.Resource@nrc.gov

RidsNrrDro@nrc.gov

J Schussler

J Lara

A Alen Arias

R Williams

D Rivard

J Rivera Ortiz

D Parent

S Price

M Checkle

B Desai