



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

December 15, 2022

Tom Simril
Site Vice President
Duke Energy Carolinas, LLC
Catawba Nuclear Station
4800 Concord Road
York, SC 29745

SUBJECT: CATAWBA NUCLEAR STATION – BIENNIAL PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000413/2022011 AND
05000414/2022011

Dear Tom Simril:

On November 17, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Catawba Nuclear Station and 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.

The NRC inspection team reviewed the station's problem identification and resolution program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for problem identification and resolution programs. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

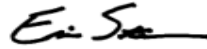
The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

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 "Eric Stamm".

Signed by Stamm, Eric
on 12/15/22

Eric J. Stamm, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: CATAWBA NUCLEAR STATION – BIENNIAL PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000413/2022011 AND
05000414/2022011 DATED December 15, 2022

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DATE	12/09/2022	12/15/2022			

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers: 05000413 and 05000414

License Numbers: NPF-35 and NPF-52

Report Numbers: 05000413/2022011 and 05000414/2022011

Enterprise Identifier: I-2022-011-0028

Licensee: Duke Energy Carolinas, LLC

Facility: Catawba Nuclear Station

Location: York, South Carolina

Inspection Dates: October 31, 2022, to November 17, 2022

Inspectors: M. Checkle, Senior Allegations Coordinator
D. Jackson, Senior Project Engineer
N. Lacy, Operations Engineer
D. Rivard, Resident Inspector
E. Robinson, Project Engineer

Approved By: Eric J. Stamm, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a biennial problem identification and resolution 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.

List of Findings and Violations

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

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
LER	05000414/2022-001-00	LER 2022-001-00 for Catawba Nuclear Station, Unit 2, Manual Reactor Trip and Auxiliary Feedwater Start due to Misaligned Control Rods	71153	Closed

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.

OTHER ACTIVITIES – BASELINE

71152B - Problem Identification and Resolution

Biennial Team Inspection (IP Section 03.04) (1 Sample)

- (1) The inspectors performed a biennial assessment of the effectiveness of the licensee's Problem Identification and Resolution program, use of operating experience, self-assessments and audits, and safety conscious work environment.
 - Problem Identification and Resolution Effectiveness: The inspectors assessed the effectiveness of the licensee's Problem Identification and Resolution (PI&R) program in identifying, prioritizing, evaluating, and correcting problems. The inspectors conducted an in-depth corrective action program review of the following systems/components or portions thereof: auxiliary feedwater, emergency diesel generators, nuclear service water, standby shutdown facility. The inspectors also conducted a five-year review of equipment aging issues.
 - Operating Experience: The inspectors assessed the effectiveness of the licensee's processes for use of operating experience.
 - Self-Assessments and Audits: The inspectors assessed the effectiveness of the licensee's identification and correction of problems identified through audits and self-assessments.
 - Safety Conscious Work Environment: The inspectors assessed the effectiveness of the station's programs to establish and maintain a safety-conscious work environment.

71153 - Follow Up of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event report (LER):

- (1) LER 05000414/2022-001-00, Catawba Nuclear Station, Unit 2, Manual Reactor Trip and Auxiliary Feedwater Start due to Misaligned Control Rods (ADAMS Accession No. ML22173A172). The inspectors determined that it was not reasonable to foresee or correct the cause discussed in the LER therefore no performance deficiency was identified. The inspectors did not identify a violation of NRC requirements.

INSPECTION RESULTS

Assessment	71152B
<p>1) Corrective Action Program Effectiveness</p> <p><u>Problem Identification:</u> The inspectors determined that the licensee was effective in identifying problems and entering them into the corrective action program (which includes the work management system), and there was a low threshold for entering issues into the corrective action program. This conclusion was based on a review of the requirements for initiating condition reports as described in licensee procedure AD-PI-ALL-0100, "Corrective Action Program." Additionally, site management was actively involved in the corrective action program and focused appropriate attention on significant plant issues.</p> <p><u>Problem Prioritization and Evaluation:</u> Based on the review of condition reports, work orders, and work requests, the inspectors concluded that problems were prioritized and evaluated in accordance with licensee guidance. The inspectors determined that adequate consideration was given to system or component operability and associated plant risk. The inspectors determined that, in general, plant personnel had conducted cause evaluations in compliance with the licensee's corrective action program procedures and cause determinations were appropriate, and considered the significance of the issues being evaluated.</p> <p><u>Corrective Actions:</u> Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that, generally, corrective actions were timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected. The team determined that the licensee was generally effective in developing corrective actions that were appropriately focused.</p> <p>Based on the samples reviewed, the team determined that the licensee's corrective action program complied with regulatory requirements and self-imposed standards. The licensee's implementation of the corrective action program adequately supported nuclear safety.</p>	
<p>2) Operating Experience</p> <p>The team determined that the station's processes for the use of industry and NRC operating experience information were effective and complied with regulatory requirements and licensee standards. The implementation of these programs adequately supported nuclear safety. The team concluded that operating experience was adequately evaluated for applicability and that appropriate actions were implemented in accordance with applicable procedures.</p>	
<p>3) Self-Assessments and Audits</p> <p>The inspectors determined that the licensee was effective at performing self-assessments and audits to identify issues at a low level, properly evaluated those issues, and resolved</p>	

them commensurate with their safety significance. The self-assessments and audits were adequately self-critical and performance-related issues were being appropriately identified. The inspectors verified that action requests were created to document areas for improvement and findings, and verified that actions generally had been completed consistent with those recommendations.

However, the inspectors noted that during the licensee's 2020 PI&R readiness self-assessment, the licensee identified that both the work order backlog biennial assessment, and the annual work order and work request backlog review, had not been completed for 2019 and 2020, respectively, as required by AD-WC-ALL-0200, "On-line Work Management." Along with other corrective actions, the licensee completed the assessment in November 2020. During the 2022 PI&R readiness self-assessment, the licensee identified that the 2022 work order backlog biennial assessment had not been scheduled for 2022 (although it was required to be scheduled by December 31, 2021, and was due November 2022). Additionally, the licensee identified that the annual work order and work request backlog review had not been performed for 2021. This led the licensee to deem the corrective actions from the 2020 PI&R readiness self-assessment, ineffective. The licensee initiated additional corrective actions to further address the concerns (nuclear condition report 2431519).

4) Safety-Conscious Work Environment

Employees interviewed appeared willing to raise nuclear safety concerns through at least one of the several means available. Based on interviews with plant staff and reviews of the latest safety culture survey results, the team found no evidence of challenges to a safety conscious work environment.

EXIT MEETINGS AND DEBRIEFS

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

- On November 17, 2022, the inspectors presented the biennial problem identification and resolution inspection results to Tom Simril and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title				Revision or Date
71152B	Corrective Action Documents		2143837	2176144	2181760	2266064	
			2300974	2302626	2302634	2302706	
			2302707	2303887	2305356	2342017	
			2344352	2347098	2347364	2350950	
			2351187	2351615	2354956	2356199	
			2356298	2356772	2356974	2357189	
			2358529	2359785	2359991	2359993	
			2362709	2363667	2363831	2364311	
			2364647	2367070	2367367	2367381	
			2367457	2367459	2367784	2368553	
			2371723	2373019	2373374	2375740	
			2375813	2375996	2376022	2379984	
			2383078	2383228	2385280	2388798	
			2389432	2390261	2393718	2393733	
			2396503	2397351	2397949	2398462	
			2398745	2398921	2399490	2401326	
			2401560	2401927	2402459	2402479	
			2402590	2402710	2405297	2406502	
			2407902	2408205	2409314	2409746	
			2410295	2412065	2414079	2414669	
			2415834	2415837	2415847	2416012	
			2416660	2418051	2418833	2419020	
			2419447	2419894	2419921	2420233	
			2421239	2421877	2422817	2423905	
			2423924	2424201	2424572	2425057	
			2425058	2425552	2425952	2426694	
			2426696	2426981	2427097	2427164	
			2427166	2427202	2427313	2427521	
			2427709	2428747	2428876	2429628	
			2429958	2430385	2430551	2431369	
			2431604	2431876	2432589	2433334	
			2434704	2435040	2436428	2437364	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2438983 2439872 2440019 2441971 2442864 2446617 2446695 2446709 2449795	
	Procedures	AD-EG-PWR-1611	Boric Acid Corrosion Control Program - Implementation	5
		AD-MN-ALL-0005	Nuclear Planning	27
		AD-MN-ALL-0006	Fluid Leak Management	3
		AD-PI-ALL-0100	Corrective Action Program	27
		AD-PI-ALL-0106	Cause Investigation Checklists	7
		AD-PI-ALL-0300	Self Assessment and Benchmark Programs	5
		AD-PI-ALL-0400	Operating Experience Program	
		AD-RP-ALL-5004	Vendor Cask Manuals	3
		AD-SY-ALL-0150	Reporting Safeguards, Security, and Fitness for Duty Events	6
		AD-WC-ALL-0200	On-line Work Management	20
		AD-WC-ALL-0210	Work Request Initiation, Screening, Prioritization, and Classification	15
		PD-EG-PWR-1611	Boric Acid Corrosion Control Program	2
		PY-NO-ALL-0200	Safety Conscious Work Environment	3
	Work Orders		20185290 20185319 20200107 20205433 20207878 20209822 20217938 20218885 20218957 20221948 20224290 20224292 20224775 20224800 20227008 20232203 20235665 20235730 20235752 20235764 20433802 20437028 20454103 20454285 20454439 20455267 20458094 20462695 20468790 20469906 20475234 20475243 20475246 20484562 20499660 20503389 20503499 20519244 20526623 20531056 20534464 20559079 20431816 20434005 20454439 20459965 20485842 20495382 20499660 20503389 20531056 20534464	
71152	Corrective Action Documents Resulting from Inspection	2449795		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71153	Corrective Action Documents	2424761		