



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

December 18, 2020

Mr. Tom Simril
Site Vice-President
Duke Energy Carolinas, LLC
4800 Concord Rd.
York, SC 29745-9635

**SUBJECT: CATAWBA NUCLEAR STATION – BIENNIAL PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000413/2020011 AND
05000414/2020011**

Dear Mr. Simril:

On November 20, 2020, 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 corrective action 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 corrective action 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

T. Simril

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Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Margaret C. Tobin, Acting Chief
Reactor Projects Br #1
Div of Reactor Projects

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

Enclosure:
As stated

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SUBJECT: CATAWBA NUCLEAR STATION – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000413/2020011 AND 05000414/2020011 Dated December 18, 2020

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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: 05000413/2020011 and 05000414/2020011

Enterprise Identifier: I-2020-011-0023

Licensee: Duke Energy Carolinas, LLC

Facility: Catawba Nuclear Station

Location: York, SC

Inspection Dates: November 02, 2020 to November 20, 2020

Inspectors: R. Cureton, Resident Inspector
D. Mas-Penaranda, Project Engineer
C. Scott, Resident Inspector, Team Lead
J. Worosilo, Senior Project Engineer

Approved By: Margaret C. Tobin, Acting Chief
Reactor Projects Br #1
Div 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

None.

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 02.04) (1 Sample)

- (1) The inspectors performed a biennial assessment of the licensee's corrective action program (CAP), use of operating experience, self-assessments and audits, and safety conscious work environment.
 - **Corrective Action Program Effectiveness:** The inspectors assessed the corrective action program's effectiveness in identifying, prioritizing, evaluating, and correcting problems. The inspectors also conducted an in-depth CAP review of the residual heat removal system, chemical volume and control, emergency supplemental power system, and the safety injection system.
 - **Operating Experience, Self-Assessments and Audits:** The inspectors assessed the effectiveness of the station's processes for use of operating experience, 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.

INSPECTION RESULTS

Assessment	71152B
1. Corrective Action Program Effectiveness	
Problem Identification: The inspectors determined that the licensee was effective in identifying problems and entering them into the corrective action program 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," and management's expectation that employees were encouraged to initiate condition reports. Additionally, site management was actively involved in the corrective action program and focused appropriate attention on significant plant issues.	

Problem Prioritization and Evaluation: Based on the review of condition reports, the inspectors concluded that problems were prioritized and evaluated in accordance with the condition report significance determination guidance in procedure AD-PI-ALL-0100. The inspectors determined that adequate consideration was given to system or component operability and associated plant risk. The inspectors determined that 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.

Corrective Actions: Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that corrective actions were timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence. The inspectors reviewed condition reports and effectiveness reviews to verify that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to preclude repetition (CAPRs) were sufficient to ensure corrective actions were properly implemented and were effective.

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.

2. Operating Experience

The inspectors determined that the station's processes for the use of industry and NRC operating experience information and for the performance of audits and self-assessments were effective and complied with all regulatory requirements and licensee standards. The implementation of these programs adequately supported nuclear safety. The inspectors concluded that operating experience was adequately evaluated for applicability and that appropriate actions were implemented to address lessons learned as needed.

3. Self-Assessments and Audits

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 them commensurate with their safety significance.

Self-assessments were generally detailed and critical. The inspectors verified that condition reports (CRs) were created to document areas for improvement and findings resulting from self-assessments, and verified that actions had been completed consistent with those recommendations. Audits of the quality assurance program appropriately assessed performance and identified areas for improvement. Generally, the licensee performed evaluations that were technically accurate.

4. Safety Conscious Work Environment

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

Observation: Self-Assessments and Audits	71152B
<p>During the inspection, the team reviewed licensee procedure AD-EG- ALL-1002, Conduct of Design Engineering. AD-EG- ALL-1002, Section 5.6 “Management of Corrective Action EC Backlog,” requires that a review of open engineering changes to correct conditions adverse to quality be performed between the months of June and August each year. The purpose of the review is to confirm that the age and implementation date for the engineering change (EC) is timely and acceptable for addressing the adverse condition at the plant. This review is required to be documented in a self-assessment report and presented to the plant health committee. When the team requested copies of the self-assessments, the licensee discovered that the 2020 self-assessment had not been performed as required by procedure. Catawba entered this issue in the CAP as CR 2358656 and initiated actions to perform a self-assessment of the EC backlog in 2020. The licensee performed a cursory review of the open EC’s and verified that the EC’s for risk significant equipment were tracked by either a condition adverse to quality (CAQ) work order in the work management system or a CAPR in the CAP program. The team concluded that even though the self-assessment was not performed, the licensee demonstrated that the schedule dates for the open ECs were appropriate for addressing the conditions adverse to quality.</p>	

EXIT MEETINGS AND DEBRIEFS

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

- On November 20, 2020, 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	NCRs	1897267 2161152 2205072 2223943 2224847 2226880 2229344 2229571 2230620 2233672 2235304 2236600 2239553 2244942 2245845 2246958 2247876 2249561 2256331 2256868 2257769 2264322 2265962 2270638 2271394 2275149 2278168 2279736 2280631 2280660 2288734 2288755	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2290100 2290319 2290522 2293014 2293228 2293620 2293759 2294307 2294574 2294614 2295296 2297177 2299143 2299984 2300383 2300922 2302424 2302472 2303441 2305450 2308405 2314730 2319066 2319620 2320233 2329426 2331304 2331792 2337921 2338939 2340429 2348493 2349025 2349344	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2349784 2351604 2227287 2275467 2224404 2330654 2292867 2283390 2311992 2279376 2290855 2288606 2280118 2309023 2252082 2316312 2308530 2291848 2259146 2292063 2282910 2319975 2310713 2242969 2297129 2290339 2229632 2243702 2241973 2299936 2311354 2334670 2335989 2348355	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2319532 2290528 2295170 1496462 2061998 2315936 2287546 2270638 2290522 2221754 2221302 2222033 2222346 2222499 2222579 2212222 2260624 2257482 2303601 2303697 2303851 2226580 2216962 2247837 2338327 2296571 2247832 2284178 2351299 2355996 2350661 2214326 2277988 2184291	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2222339 2229433 2292605 2229335 2278487 2292371 2292736 2244992 2249421 2326633 2346486 2352344 2342017 2314994 2341330 2227594 2222339 1945732 2229433 2237293 2184291 2342917 2315936 2275149 2192509 2222346 2247779 2331304 2346908 2295850 2247749 2231525 2250289 2228507	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2326532 2230608 2247603 2296571 2335856	
	Corrective Action Documents Resulting from Inspection	NCRs	2358656	
	Procedures	AD-PI-ALL-0400	Operating Experience Program	Revision 8
		AD-EG-ALL-1202	Preventive Maintenance and Surveillance Testing Administration	Revision 9
		AD-EG-ALL-1209	System Health and Notebooks	Revision 8
		AD-EG-ALL-1210	Maintenance Rule Program	Revision 2
		AD-NO-ALL-0202	Employee Concerns Program	Revision 3
		AD-OP-ALL-0105	Operability Determinations	Revision 3
		AD-PI-ALL-0100	Corrective Action Program	Revision 24
		AD-PI-ALL-0106	Cause Investigation Checklists	Rev.4
		AD-PI-ALL-0300	Self-Assessment and Benchmark Programs	Revision 4
		AD-PI-ALL-0401	Significant Operating Experience Program	Revision 8
		AD-PI-ALL-101	Root Cause Evaluation	Revision 7
		AD-QC-ALL-1000	CONDUCT OF NUCLEAR OVERSIGHT QUALITY CONTROL	Revision 9
		IP/0/B/4974/059	Main Generator and Exciter PM Inspection	02,03
		MP/0/A/7150/097	Standby Makeup Pump Suction Pulsation Damper Preventative Maintenance Inspection	19,20,21
	TE-MN-ALL-0202	Transformer and Apparatus Testing		
	Work Orders		20297426 20297432 20297528 20298165 20299678 20313089 20313638	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			20325390 20345446 20356110 20162010	