



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

June 1, 2021

Mr. Daniel G. Stoddard
Senior Vice President and Chief Nuclear Officer
Dominion Energy
Innsbrook Technical Center
5000 Dominion Blvd., Floor: IN-2SW
Glen Allen, VA 23060

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION – BIENNIAL PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000395/2021011

Dear Mr. Stoddard:

On May 14, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Virgil C. Summer Nuclear Station and discussed the results of this inspection with Mr. George Lippard, Site Vice President, 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

D. Stoddard

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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/

David E. Dumbacher, Chief
Reactor Projects Branch 3
Division of Reactor Projects

Docket No. 05000395
License No. NPF-12

Enclosure:
As stated

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IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000395/2021011 DATED June 1, 2021

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

Docket Number: 05000395

License Number: NPF-12

Report Number: 05000395/2021011

Enterprise Identifier: I-2021-011-0021

Licensee: Dominion Energy

Facility: Virgil C. Summer Nuclear Station

Location: Jenkinsville, SC

Inspection Dates: April 26, 2021 to May 14, 2021

Inspectors: E. Hilton, Resident Inspector
K. Kolaczyk, Reactor Operations Engineer
D. Merzke, Technical Support Team Leader
A. Wilson, Project Engineer

Approved By: David E. Dumbacher, Chief
Reactor Projects Branch 3
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 Virgil C. Summer 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, 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.
 - **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
<p><u>Corrective Action Program Assessment:</u> Based on the samples reviewed, the team determined that the licensee's corrective action program (CAP) complied with regulatory requirements and self-imposed standards. The licensee's implementation of the CAP adequately supported nuclear safety.</p> <p><u>Effectiveness of Problem Identification:</u> The inspectors determined that the licensee was generally effective in identifying problems and entering them into the CAP at the appropriate threshold. This conclusion was based on a review of the requirements for initiating condition reports (CRs) as described in licensee procedure SAP-0999, "Corrective Action Program," and the site's management 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. The inspectors reviewed CRs and system health trending for the residual heat removal system, reactor protection system, emergency diesel generators, and emergency feedwater system. The inspectors performed</p>	

walkdowns of accessible portions of the selected systems. Based on the inspectors' reviews and walkdowns, the inspectors determined that deficiencies were being identified and placed in the CAP.

Effectiveness of Problem Prioritization and Evaluation: Based on the review of CRs sampled by the inspection team during the onsite period, the inspectors concluded that problems were generally prioritized and evaluated in accordance with the CR significance determination guidance in CAP procedures. The inspectors determined that adequate consideration was given to system or component operability and associated plant risk. The inspectors determined that plant personnel had generally conducted cause evaluations in compliance with the licensee's CAP procedures, including appropriate cause determinations, and performed adequate levels of analysis based on the significance of the issues being evaluated.

Effectiveness of 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 effective, timely, and commensurate with the safety significance of the issues. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence. The inspectors reviewed performance indicators, CRs, and effectiveness reviews, as applicable, 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.

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.

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 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.

Safety Conscious Work Environment: Based on a sample of at least 20 individuals interviewed from a cross-section of plant employees, the inspectors found no evidence of challenges to the safety conscious work environment. Employees interviewed appeared knowledgeable of avenues to raise safety concerns and appeared willing to raise nuclear safety concerns through at least one of the several means available.

Minor Violation	71152B
Minor Violation: During the inspectors review of the Structures Monitoring Program, specifically the documentation of roof walkdown reports as required by CMP-700-005, "Roof Inspection," the inspectors identified examples of reports that listed rejectable items, but did not list the way the rejectable items were to be repaired and did not list the work order	

generated. The inspectors determined this to be a violation of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," which requires that activities affecting quality shall be prescribed by and accomplished in accordance with documented instructions, procedures, or drawings. Specifically, Step 7.1.5 of CMP-700.005, Rev. 5, requires the site to: "Initiate the required actions for the repair of all rejectable items in accordance with SAP-300 and record work order number on Attachment I." Contrary to the above, a repair document was not generated and work order numbers were not listed on Attachment I for items listed as rejectable for the Control Building, Intermediate Building, Auxiliary Building, Fuel Handling Building, Turbine Building, Service Building, and Service Water Building roofs in the September 2020 roof walkdown report.

Screening: The inspectors determined the performance deficiency was minor. This performance deficiency was screened in accordance with Inspection Manual Chapter (IMC) 0612 Appendix B, "Additional Screening Guidance," dated December 10, 2020, and was determined to be of minor significance because the failure to generate repairs for rejectable items associated with the September 2020 roof walkdown report could not be reasonably viewed as a precursor to a significant event, would not have the potential to lead to a more significant safety concern if left uncorrected, and did not adversely affect a cornerstone objective. No immediate concerns to roof integrity were identified in the list of rejectable items.

Enforcement: This failure to comply with 10 CFR 50, Appendix B, Criterion V, constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

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

- On May 14, 2021, the inspectors presented the biennial problem identification and resolution inspection results to Mr. George Lippard, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Calculations	DC 03490-003	Intermediate and Diesel Generator Buildings Flooding Evaluation	Rev. 2
		DC 05220-091	Emergency Feedwater Hydraulic Analysis	Rev. 3
	Corrective Action Documents	CR-13-03950, CR-15-05594, CR-16-05696, CR-17-02130, CR-17-02573, CR-17-06131, CR-17-06450, CR-19-00015, CR-19-00015, CR-19-00207, CR-19-00821, CR-19-00885, CR-19-00927, CR-19-00929, CR-19-01023, CR-19-01031, CR-19-01035, CR-19-01035, CR-19-01042, CR-19-01083, CR-19-01136, CR-19-01219, CR-19-01328, CR-19-01368, CR-19-01396, CR-19-01412, CR-19-01436, CR-19-01439, CR-19-01629,		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CR-19-01631, CR-19-01676, CR-19-01690, CR-19-01693, CR-19-01771, CR-19-01817, CR-19-01822, CR-19-01829, CR-19-01838, CR-19-01840, CR-19-01899, CR-19-01907, CR-19-01910, CR-19-01929, CR-19-01951, CR-19-01967, CR-19-02195, CR-19-02366, CR-19-02443, CR-19-02445, CR-19-02521, CR-19-02766, CR-19-02846, CR-19-02865, CR-19-02907, CR-19-03026, CR-19-03166, CR-19-03417, CR-19-03437, CR-19-03444, CR-19-03444, CR-19-03481, CR-19-03528, CR-19-03732,		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CR-19-03760, CR-19-03849, CR-19-03882, CR-19-03892, CR-19-03945, CR-19-03977, CR-19-03979, CR-19-04154, CR-19-04191, CR-19-04201, CR-19-04222, CR-19-04309, CR-19-04321, CR-19-04499, CR-19-04528, CR-19-04529, CR-19-04530, CR-20-00075, CR-20-00075, CR-20-00118, CR-20-00265, CR-20-00380, CR-20-00470, CR-20-00679, CR-20-00764, CR-20-00802, CR-20-00830, CR-20-01120, CR-20-01146, CR-20-01146, CR-20-01152, CR-20-01187, CR-20-01190, CR-20-01266,		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CR-20-01268, CR-20-01284, CR-20-01317, CR-20-01443, CR-20-01494, CR-20-01495, CR-20-01559, CR-20-01562, CR-20-01583, CR-20-01603, CR-20-01621, CR-20-01623, CR-20-01658, CR-20-01681, CR-20-01734, CR-20-01757, CR-20-02016, CR-20-02210, CR-20-02283, CR-20-02444, CR-20-02513, CR-20-02531, CR-20-02626, CR-20-02673, CR-20-02714, CR-20-02733, CR-20-02827, CR-20-03023, CR-20-03027, CR-20-03062, CR-20-03108, CR-20-03238, CR-20-03251, CR-20-03347,		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		CR-20-03498, CR-20-03622, CR-20-03647, CR-20-03803, CR-20-03935, CR-20-04004, CR-20-04191, CR-21-00010, CR-21-00137, CR-21-00162, CR-21-00190, CR-21-00229, CR-21-00285, CR-21-00500, CR-21-00750, CR-21-00778, CR-21-01214, CR-21-01286		
	Drawings	D-302-085		
	Engineering Changes	ECR 50695E	EFW Flow Margin Improvement	
		ECR 50938	RBCU Condensate Leak Detection Switches	
	Miscellaneous		VCS Excellence Plan – Nuclear Operations	03/08/2021
		DBD-RP	Reactor Protection System (RPS) Engineered Safety Features Loading Sequencer (ESFLS)	Rev. 4
		EIR 82390		
		VC-20-00006	EF Check Valve Replacement	
	Procedures		Maintenance Support For Refueling	Rev. 21, Change B
			Maintenance Support For Refueling	Rev. 21, Change A
		CM-AA-PGM-1001	Program Health Report	Rev. 9

Inspection Procedure	Type	Designation	Description or Title	Revision or Date	
		CMP-700.005	Roof Inspection	Rev. 5	
		EC-AA-110	Identifying and Addressing Nuclear Safety and Quality Concerns	Rev. 1	
		ER-AA-101	System Engineering Walkdowns	Rev. 4	
		ES-0437	Inspections For Maintenance Rule – Structures	Rev. 3	
		LI-AA-1002	Safety Culture Review	Rev. 7	
		OAP-100.6	Control Room Conduct and Control of Shift Activities	Rev. 6	
		PSEG-46	Service Water Piping Degradation Guidance	Rev. 0	
		RP-AA-5001	RP Department Survey and Surveillance Verification	Rev. 1	
		SAG-01	Self-Assessment Guidelines	Rev. 4	
		SAP-0999	Corrective Action Program	Rev. 19	
		SAP-0999B	CR Review Team (CRRT)	Rev. 1	
		SAP-0999C	Management Review Team (MRT)	Rev. 1	
		SAP-1350	Self-Assessment and Benchmarking	Rev. 11	
		SAP-1356	Cause Determination Guidelines CDG-01	Rev. 20	
		SOP-211	Emergency Feedwater System	Rev. 14	
		STP-130.003C	Pressurizer PORV Operability Testing	Rev. 2	
		TR00010-010	Maintenance Rule Inspections – 2020 Assessment Of In-Service Conditions Of Important To Maintenance Rule (ITMR) Structures	Rev. 0	
		Self-Assessments			2019 QC Inspection Program
				2020 Chemistry Human Performance and Fundamentals	
				2020 Operations Training Accreditation Visit Follow Up Self-Assessment	
				2020 Pre-PI&R Self-Assessment	
				2021 Mid-Cycle and Nuclear Safety Culture Report	
				QA-AUD-201912; Corrective Action Program	
				QA-AUD-202006; Station Radiation Protection	
				QA-AUD-202007; Design Control & Engineering Programs	
				QA-AUD-202010; Station Operations	
			QA-AUD-202012; Station Maintenance		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			2019 Mid-Cycle and Nuclear Safety Culture Report	
	Work Orders	1917892		
		2005542		
		2006371		
		2012459		
2100006				