



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
475 ALLENDALE RD, STE 102
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

May 10, 2023

David P. Rhoades
Senior Vice President
Constellation Energy Generation, LLC
President & Chief Nuclear Officer (CNO)
Constellation Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 – TITLE 10 OF THE CODE OF FEDERAL REGULATIONS 50.69 RISK-INFORMED CATEGORIZATION AND TREATMENT OF STRUCTURES, SYSTEMS, AND COMPONENTS INSPECTION REPORT 05000317/2023011 AND 05000318/2023011

Dear David Rhoades:

On April 27, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Calvert Cliffs Nuclear Power Plant, Units 1 and 2 and discussed the results of this inspection with Patrick Navin, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

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* (CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Glenn T. Dentel, Chief
Engineering Branch 2
Division of Operating Reactor Safety

Docket Nos. 05000317 and 05000318
License Nos. DPR-53 and DPR-69

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

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DOCUMENT NAME: <https://usnrc.sharepoint.com/teams/EngineeringBranch2/Shared Documents/50.69/Inspections/Calvert Cliffs/CC 50.69 IR 2023-011.docx>

ADAMS ACCESSION NUMBER: ML23130A003

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

Docket Numbers: 05000317 and 05000318

License Numbers: DPR-53 and DPR-69

Report Numbers: 05000317/2023011 and 05000318/2023011

Enterprise Identifier: I-2023-011-0017

Licensee: Constellation Energy Generation, LLC

Facility: Calvert Cliffs Nuclear Power Plant

Location: Lusby, MD

Inspection Dates: April 10, 2023 to April 27, 2023

Inspectors: J. Bozga, Senior Reactor Inspector
C. Hobbs, Reactor Inspector
M. Patel, Senior Reactor Inspector
D. Werkheiser, Senior Reactor Analyst

Approved By: Glenn T. Dentel, Chief
Engineering Branch 2
Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a special inspection at Calvert Cliffs Nuclear Power Plant, Units 1 and 2, 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 – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

37060 - 10 CFR 50.69 Risk-Informed Categorization and Treatment of Structures, Systems, and Components Inspection

The inspectors reviewed the licensee's program and implementation of 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems and Components for Nuclear Power Reactors," in accordance with the following procedure sections. Section 02.04 was not completed during this inspection because the feedback and process adjustment required by 10 CFR 50.69(e) was not implemented by the licensee. As of the date of this inspection, two refueling outages have not occurred since system categorization was completed on at least three systems.

Review of the Licensee's Programs and Procedures (IP Section 02.01) (1 Partial)

- (1) (Partial)
The inspectors reviewed the licensee's program and procedures associated with 10 CFR 50.69, "Risk-Informed Categorization and Treatment of Structures, Systems and Components (SSCs) for Nuclear Power Reactors," license amendment described in the plant safety evaluation and Updated Final Safety Analysis Report and documented in the staff's Safety Evaluation Report (ADAMS Accession Nos. ML19330D909).

Review of the Licensee's 10 CFR 50.69 Program Implementation (IP Section 02.02) (1 Partial)

- (1) (Partial)
The inspectors reviewed the licensee's 10 CFR 50.69 categorization process and alternate treatment requirements completed on the following systems.
- Saltwater
 - Component Cooling Water
 - Emergency Diesel Generator
 - Emergency Core Cooling
 - Chemical and Volume Control

Problem Identification and Resolution (IP Section 02.03) (1 Partial)

(1) (Partial)

For the systems listed above, the inspectors reviewed the licensee's corrective action program to verify that conditions that would prevent RISC-3 SSCs from performing their safety-related function have been corrected. Additionally, the inspector verified that, as appropriate, the licensee performed common cause reviews for RISC-3 SSC deficiencies to ensure that the licensee's SSC categorization process remains valid.

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

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

- On April 27, 2023, the inspectors presented the special inspection results to Patrick Navin, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
37060	Corrective Action Documents	04354107		
		04382129		
		04382133		
		04382136		
		04415947		
		04421707		
		04440416		
		04501647		
		04503419		
		04505413		
		04517507		
		04529372		
		04529524		
	04546790			
04548940				
Corrective Action Documents Resulting from Inspection	04669728			
	04670772			
04671594				
Engineering Changes	ECP-22-000095	Technical Evaluation for Alternative Treatment for EQ components categorized RISC-3 per 10CFR50.69	Revision 0	
Engineering Evaluations	AT-21-0050	ECCS Relief Valves Alternative Treatment Plan		
	AT-21-0066	ECCS AOV IST Position Indication Testing Alternative Treatment Plan		
	AT-21-0067	ECCS Manual Valves IST Alternative Treatment Plan		
	AT-21-0068	ECCS AOVs Inservice Test Alternative Treatment Plan		
	AT-21-0070	Shutdown Cooling Heat Exchanger CC Inlet Thermal Relief Valves AT Plan		
	AT-21-0071	Emergency Diesel Generator Relief Valves AT Plan		
	AT-21-0073	Component Cooling Relief Valves AT Plan		
	AT-22-0082	CVCS Relief Valve Alternative Treatment		
AT-22-0085	CVCS AOVs Alternative Treatment			

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		AT-22-0088	50.69 White Paper for Alternative Treatment Plan	
		AT-22-0089	Alternative Treatment for RISC-3 components of system 15 (Component Cooling)	
		AT-22-0091	Alternative Treatment for system 52 (ECCS) RISC-3 components	
		AT-22-0094	CVCS Pumps & Check Valves IST Alternative Treatment	
		CA-5069-007	Estimates of Surveillance Limits for 10 CFR 50.69 Categorized Systems of ECCS, EDG, and EDG Oil	Revision 0
		CA-5069-012-003	10 CFR 50.69 SCD – Saltwater System	Revision 0
		CA-5069-015-003	10 CFR 50.69 SCD – Component Cooling System	Revision 0
		CA-5069-024-003	10 CFR 50.69 SCD – Emergency Diesel Generator System	Revision 2
		CA-5069-041-002	CVCS Passive Consequence Development in Support of 50.69 Passive Support Categorization	Revision 0
		CA-5069-041-003	10 CFR 50.69 SCD – Chemical and Volume Control System	Revision 0
		CA-5069-052-061-002	ECCS Passive Consequence Development in Support of 50.69 Passive Categorization	Revision 0
		CA-5069-052-061-003	10 CFR 50.69 SCD – Emergency Core Cooling System	Revision 1
	Miscellaneous	CA-PRA-005.012	Saltwater Cooling System Notebook	Revision 1
		CA-PRA-005.015	Component Cooling System Notebook	Revision 3
		CA-PRA-005.023-024	DO and EDG System Notebook	Revision 3
		CA-PRA-005.041	Chemical and Volume Control System Notebook	Revision 3
		CA-PRA-005.052	Safety Injection System Notebook	Revision 3
		CA-PRA-005.061	Containment Spray System Notebook	Revision 2
		CA-PRA-012	Internal Flood Notebook	Revision 8
		ER-CA-330-1004	Calvert Cliffs Nuclear Power Plant Fifth Interval Risk Informed Inservice Inspection Report	Revision 0
		LOI-024A	Operations Training - Fairbanks Morse Diesel Engine and Generator Controls	Revision 8
LOI-024C	Operations Training - SACM Emergency Diesel Generators	Revision 9		
LOI-041-1	Operations Training - CVCS: Letdown	Revision 8		
LOI-041-2	Operations Training - CVCS: Charging	Revision 7		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
	Procedures	ER-AA-569	10 CFR 50.69 Program	Revision 6
		ER-AA-569-1001	10 CFR 50.69 Active Component Risk Significance Insights	Revision 6
		ER-AA-569-1002	10 CFR 50.69 Passive Component Categorization	Revision 4
		ER-AA-569-1003	10 CFR 50.69 Risk Informed Categorization for Structures, Systems, and Components	Revision 8
		ER-AA-569-1004	10 CFR 50.69 Alternative Treatment Implementation Process	Revision 8
		ER-AA-569-1005	Integrated Decision-Making Panel for Risk Informed SSC Categorization Duties and Responsibilities	Revision 8
		ER-AA-569-1006	Requirements for Immediate and Periodic Performance Monitoring Reviews	Revision 5
		ER-AA-569-1007	Job Familiarization of 50.69 Project Team and Site Personnel	Revision 6
		STP O-8A-2	Test of 2A DG and 4 kV Bus 21 UV	02/13/2023
		STP O-8B-2	Test of 2B DG and 4 kV Bus 24 UV	02/14/2023