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

March 10, 2026

Christopher H. Mudrick
Senior Vice President and
Chief Nuclear Officer
Constellation Energy Generation, LLC
President
Constellation Nuclear
200 Energy Way, KSA-3N
Kennett Square, PA 19348

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 – AGE-RELATED DEGRADATION INSPECTION REPORT 05000277/2026010 AND 05000278/2026010

Dear Christopher Mudrick:

On February 12, 2026, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Peach Bottom Atomic Power Station, Units 2 and 3, and discussed the results of this inspection with Ryan Stiltner, 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* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

ERIN CARFANG

Digitally signed by ERIN CARFANG
Date: 2026.03.10 09:37:16 -04'00'

Erin E. Carfang, Chief
Engineering Branch 1
Division of Operating Reactor Safety

Docket Nos. 05000277 and 05000278
License Nos. DPR-44 and DPR-56

Enclosure:
As stated

cc w/ encl: Distribution via GovDelivery

SUBJECT: PEACH BOTTOM ATOMIC POWER STATION, UNITS 2 AND 3 – AGE-RELATED DEGRADATION INSPECTION REPORT 05000277/2026010 AND 05000278/2026010 DATED MARCH 10, 2026

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DOCUMENT NAME: https://usnrc.sharepoint.com/teams/Region-I-EB1/Documents/Inspections/FEI/ARD (2023-2026)/Peach Bottom ARD/Peach Bottom ARD IR 2026010.docx
ADAMS Accession Numbers: ML26068A044, PKG: ML26068A042

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000277 and 05000278
License Numbers:	DPR-44 and DPR-56
Report Numbers:	05000277/2026010 and 05000278/2026010
Enterprise Identifier:	I-2026-010-0019
Licensee:	Constellation Energy Generation, LLC
Facility:	Peach Bottom Atomic Power Station, Units 2 and 3
Location:	Delta, PA
Inspection Dates:	January 26, 2026 to February 12, 2026
Inspectors:	K. Mangan, Team Leader D. McHugh, Reactor Inspector N. Mentzer, Senior Project Engineer
Approved By:	Erin E. Carfang, Chief Engineering Branch 1 Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an Age-Related Degradation inspection at Peach Bottom Atomic Power Station, Units 2 and 3, 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.

REACTOR SAFETY

71111.21N.04 - Age-Related Degradation

Age-Related Degradation (8 Samples)

The inspectors selected a sample of components and structures to verify that engineering performance and maintenance activities addressed age-related degradation and that problems were appropriately identified, addressed, and corrected. Samples were selected considering risk insights and the potential for degradation. Specifically, the inspectors selected samples that were risk-significant and either had indications of age-related degradation or were exposed to environments that could cause age-related degradation. The inspectors considered site-specific and industry-wide operating experience to identify samples and included both active and passive subcomponents within each component or structure.

For each selected sample listed below, the inspectors reviewed the licensee's engineering and maintenance activities credited to address age-related degradation to assess whether they were being performed using applicable standards and procedures, evaluated against appropriate acceptance criteria, and that maintenance and condition monitoring was completed at an appropriate interval. The inspectors also assessed whether issues identified during licensee activities were being entered into and addressed by the applicable station processes including the corrective action program, and whether periodic assessments of maintenance effectiveness and operating experience were being completed, including feedback and process adjustments.

(1) Emergency Diesel Generators
(2) Standby Liquid Control System
(3) 4KV Pump Motors
(4) High Voltage Cables
(5) Motor Operated Valves Magnesium Rotors
(6) Emergency Service Waterand High Pressure Service Water Piping
(7) Offgas System associated with Condenser Vacuum
(8) High Pressure Coolant Injection System

INSPECTION RESULTS

No findings were identified.

EXIT MEETINGS AND DEBRIEFS

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

- On February 12, 2026, the inspectors presented the age-related degradation inspection results to Ryan Stiltner, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.21N.04	Corrective Action Documents	AR 04497232 AR 04500050 AR 04500584 AR 04509974 AR 04540996 AR 04670167 AR 04701411 AR 04780849 AR 04785973 AR 04816837 AR 04846802 AR 04901324 AR 04904516 AR 04907339 AR 04920662 CAPE 04424065-02		
	Corrective Action Documents Resulting from Inspection	04931267 04931339 04931509 04933398 04934078		
	Engineering Evaluations	EC 627497	Replacement of 2A/B/C/DP042 For HPSW Pressure Reduction	Rev 5
	Procedures	ER-AA-302-1006	Motor-Operated Valve Maintenance and Testing Guidelines	Revision 23
		PB-PBD-AMP-XI.E3A	Peach Bottom Atomic Power Station Second License Renewal Project Electrical Insulation for Inaccessible Medium Voltage Power Cables Not Subject to 10 CFR 50.49 Environmental Qualification Requirements	Revision 1
	Work Orders	WO 05575902 WO 05575904		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		WO 05318975		