[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-171; NRC-2025-1141]

Constellation Energy Generation, LLC; Peach Bottom Atomic Power Station, Unit 1; Exemption

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC, or Commission) has issued an exemption in response to a request from Constellation Energy Generation, LLC to allow the completion of decommissioning beyond 60 years of permanent cessation of operations for the Peach Bottom Atomic Power Station, Unit 1.

DATES: The exemption was issued on December 23, 2025.

ADDRESSES: Please refer to Docket ID **NRC-2025-1141** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to https://www.regulations.gov and search for Docket ID **NRC-2025-1141**. Address questions about Docket IDs in Regulations.gov to Bridget Curran; telephone: 301-415-10003; email: Bridget.Curran@nrc.gov. For technical questions, contact the individual(s) listed in the “For Further Information Contact” section of this document.
- **NRC’s Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at https://www.nrc.gov/reading-rm/adams.html. To begin the search, select “Begin ADAMS Public Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff at 1-800-397-4209, at 301-415-4737, or by e-mail to PDR.Resource@nrc.gov. The ADAMS accession number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

- **NRC's PDR:** The PDR, where you may examine and order copies of publicly available documents, is open by appointment. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Tanya Hood, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; telephone: 301-415-1387; email: Tanya.Hood@nrc.gov

SUPPLEMENTARY INFORMATION: The text of the exemption is attached.

Dated: December 29, 2025.

For the Nuclear Regulatory Commission.

Tanya Hood,

Project Manager,

Reactor Decommissioning Branch,

Division of Decommissioning, Uranium Recovery and Waste Programs,

Office of Nuclear Material Safety and Safeguards.

Attachment – Exemption.

NUCLEAR REGULATORY COMMISSION

Docket No. 50-171

Constellation Energy Generation, LLC

Peach Bottom Atomic Power Station, Unit 1

Exemption

I. Background.

By letter dated October 20, 2023 (Agencywide Documents Access and Management System Accession No. ML23293A305), as supplemented by letters dated May 13, 2024, and August 1, 2024 (ML24134A179 and ML24214A323, respectively), Constellation Energy Generation, LLC (the licensee), submitted a request for Peach Bottom Atomic Power Station Unit 1 (Peach Bottom Unit 1) that would allow the completion of decommissioning for Peach Bottom Unit 1 beyond 60 years of permanent cessation of operations.

The Peach Bottom Atomic Power Station is in York County, PA and is composed of three reactor licenses: Peach Bottom Unit 1 (License No. DPR-12), which is presently in a long-term storage condition for a permanently shut down nuclear power plant, referred to as SAFSTOR and is the subject of this request, along with Peach Bottom Unit 2 (DPR-44) and Peach Bottom Unit 3 (DPR-56), which are actively operating. Peach Bottom Unit 1 is licensed pursuant to Section 104(b) of the Atomic Energy Act of 1954, as amended, and Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Paragraph 50.82(a)(2) to possess but not operate the facility. Peach Bottom Unit 1 was a high-temperature gas-cooled reactor (HTGR) that permanently ceased operations on October 31, 1974. All Peach Bottom Unit 1 spent fuel containing special nuclear material was removed from the site and shipped to a U.S. Department of Energy facility in Idaho. Peach Bottom Unit 1 has been monitored and controlled in SAFSTOR in accordance

with the Facility Operating License, Technical Specifications as amended, and Decommissioning Plan.

II. Request/Action.

The regulation at 10 CFR 50.82(a)(3) requires power reactor licensees to complete decommissioning within 60 years of permanent cessation of operations. The regulation provides that completion of decommissioning beyond 60 years will be considered by the U.S. Nuclear Regulatory Commission (NRC or Commission) only when necessary to protect public health and safety, with site-specific factors considered when reviewing such requests, including the presence of other nuclear facilities at the site.

The licensee requested an alternative to the 60 year decommissioning schedule requirements in 10 CFR 50.82(a)(3) to decommission Peach Bottom Unit 1 to coincide with the eventual decommissioning of Peach Bottom Units 2 and 3. The licensee stated its alternative request "meets the evaluation factors in 10 CFR 50.82(a)(3) due to the potential impact on public health and safety with other nuclear facilities present at the site" and that "[t]his request is to allow [the licensee] to complete the decommissioning of [Peach Bottom], Unit 1, in a time frame more suitable with the decommissioning of [Peach Bottom], Units 2 and 3, in order to reduce the overall risk and increase the margin to public health and safety."

The licensee is requesting that the decommissioning schedule for Peach Bottom Unit 1 be completed no later than 20 years following the permanent shutdown of Peach Bottom Units 2 and 3, pending a decision to modify the expiration dates for Peach Bottom's subsequent renewed facility operating licenses DPR-44 and DPR-56 for Peach Bottom Units 2 and 3, per an application dated July 10, 2018 (ML18193A689). On March 5, 2020, the NRC issued subsequent renewed facility operating licenses for Peach Bottom (ML20010F285), which included the expiration dates of August 8, 2053, for

Peach Bottom Unit 2 and July 2, 2054, for Peach Bottom Unit 3. On February 2022, in CLI-22-04 (ML22055A557), the Commission determined that the environmental review associated with that licensing action was incomplete and therefore directed the NRC staff to complete this environmental review and to change the licenses' expiration dates to match the expiration dates of the previous licenses until the completion of the environmental review. Therefore, on March 25, 2022 (ML22073A193), in accordance with the Commission's direction, the NRC staff modified the expiration dates of these subsequent renewed licenses to reflect the end dates of the previous renewed licenses. On September 30, 2025 (ML25209A020), the NRC staff issued its decision to restore the end dates of the subsequent renewed licenses for Peach Bottom Atomic Power Station, Units 2 and 3 to August 8, 2053, and to July 2, 2054, respectively.

To support its review of the request for an alternative decommissioning schedule, the NRC staff conducted a regulatory audit of the application onsite at the Peach Bottom Atomic Power Station. The NRC staff issued an audit plan to the licensee on March 28, 2024 (ML24088A318), which provided the scope of the audit.

III. Discussion.

Under 10 CFR 50.82(a)(3), the Commission will approve an alternative that provides for completion of decommissioning beyond 60 years of permanent cessation of operations only when necessary to protect public health and safety. In evaluating whether an alternative is necessary, the regulations provide that the NRC will consider factors such as unavailability of waste disposal capacity; or other site-specific factors affecting the licensee's capability to carry out decommissioning, including presence of other nuclear facilities at the site. Prior to this request for an alternative decommissioning schedule, Peach Bottom, Unit 1, was required to complete decommissioning by October 31, 2034.

The NRC staff's approach in evaluating the 10 CFR 50.82(a)(3) criteria is documented, in part, in SECY-24-0073, "Site-Specific Considerations for Review of Requests to Complete Power Reactor Decommissioning Beyond 60 Years from Permanent Cessation of Operations," dated September 3, 2024 (ML24100A760). In conducting the Peach Bottom review, which was the first time the NRC staff applied the approach outlined in the SECY, the NRC staff remained mindful of the approach outlined, and also applied additional risk insights and site-specific considerations, as explained in SECY-25-0095, "Staff's Planned Approval of Peach Bottom Atomic Power Station Unit 1 Exemption Request for Alternative Decommissioning Schedule," dated December 10, 2025 (ML25150A317). The NRC has determined that the licensee has met the "only when necessary to protect public health and safety" criterion because the licensee showed that Peach Bottom Unit 1 decommissioning activities could result in site-specific impacts on public health and safety due to the increased risk to systems and structures supporting the adjacent operating Peach Bottom Units 2 and 3.

Presence of Other Nuclear Facilities

The licensee's request for an alternative decommissioning schedule was based on the potential impacts to public health and safety from decommissioning Peach Bottom Unit 1 while there are two other operating nuclear facilities at the site. In support of its exemption request, the licensee noted that many portions of the original Peach Bottom Unit 1 facilities have been refurbished to support ongoing power operations support functions at Peach Bottom Units 2 and 3. Specifically, the Peach Bottom Technical Support Center (TSC) and Control Room Simulator support regulatory required functions for the operating units at the site for Emergency Planning and Operations Training, respectively. The licensee also indicated that there are interconnectivity issues between the operational support facilities (i.e., the TSC, Control Room Simulator, and administration building) and portions of Peach Bottom Unit 1 site.

The buildings housing these functions are not within radiological areas of Peach Bottom Unit 1, and thus, are not within the scope of decommissioning for license termination. However, the licensee stated that portions of the facilities are physically attached to the Peach Bottom Unit 1 containment structure, which is within a radiologically controlled area boundary and which the licensee indicates would need to be decommissioned to terminate the Peach Bottom Unit 1 license. Therefore, the licensee states that decommissioning the attached containment structure could impact the TSC and Control Room Simulator, and their use by Peach Bottom Units 2 and 3, due to their current location on the Peach Bottom Unit 1 footprint near the Peach Bottom Unit 1 reactor.

Additionally, the licensee notes other connectivity impacts of decommissioning Peach Bottom Unit 1 while Peach Bottom Units 2 and 3 continue to operate. The Peach Bottom Unit 1 footprint that must be decommissioned does not have any systems, structures, or components (SSCs) important to safety that are shared between Peach Bottom Unit 1 and Peach Bottom Units 2 and 3. However, the licensee's audit response explains that accessing the systems for removal in the containment structure at Peach Bottom Unit 1 would pose challenges due to the proximity and location of the administration building. In its audit response and with regard to impacts, the licensee explained that, "while the adjacent administrative/ training buildings to the east and south are not radiologically controlled or within the scope of decommissioning for license termination, elimination of these interfacing interferences following [Peach Bottom Units 2 and 3] operations would improve the access and ability to perform safe decommissioning of the containment building and internal SSCs. Physical space for an adequate confinement structure and associated engineered controls, including ventilation and radiological monitoring, are critical aspects of performing decommissioning activities related to the graphite components within the reactor vessel of this HTGR."

Also, the containment building at the Peach Bottom Unit 1 facility contains the radioactive reactor vessel, reactor internals, and graphite, and consists of a 100-foot

diameter steel containment vessel reinforced by stiffening rings with a concrete floor. The steel containment vessel is on an approximately 3-foot-thick concrete foundation constructed on bedrock. The containment building is an important component because the containment building performs a safety function in confining radioactive material so that there is no exceedance of the radiation protection requirements outlined in 10 CFR Part 20. The licensee's SAFSTOR program will continue for the extended period of decommissioning and the licensee should update its program accordingly. For the period beyond 60 years, the NRC will continue its inspection of the SAFSTOR program as outlined in the Updated Final Safety Analysis Report, technical specifications, and licensee procedures, including the material condition of the Peach Bottom Unit 1 buildings, such as the Unit 1 containment.

In evaluating this information, the NRC staff determined that the licensee presented a reasonable argument that the proximity of Peach Bottom Units 2 and 3, and specifically, the support facilities associated with them in relation to the decommissioning facility, is a site-specific factor that affects the licensee's capability to safely carry out decommissioning. The NRC staff agrees that the proximity of the support facilities to Peach Bottom Unit 1 is likely to impact the manner in which the licensee would decommission Peach Bottom Unit 1 such that the overall risk to the public health and safety due to decommissioning would likely be decreased if the decommissioning of Peach Bottom Unit 1 occurred after Peach Bottom Units 2 and 3 were no longer operating. Because of this, the NRC staff concludes that the presence of these other nuclear facilities impacts the method in which the licensee could reduce risk during decommissioning. Therefore, pursuant to 10 CFR 50.82(a)(3), the NRC staff agrees that the interconnectivity of the support structures at the Peach Bottom Atomic Power Station supports an alternative decommissioning schedule.

Capacity and Capability of the Power Systems

The licensee also raised concerns with potential impacts to the electric systems if Peach Bottom Unit 1 were required to decommission on the original 60-year schedule. According to the licensee, the Peach Bottom Unit 1 electrical distribution system, as originally designed, has mostly been abandoned during initial decommissioning activities, including all generation-related and reactor-related SSCs, or has been modified to support current functions. The 220-08 Line was originally the grid connection for Peach Bottom Unit 1 commercial operation. The configuration was an assortment of electromechanical protective relays and a transfer trip system linked to the nearest switchyards on PECO's 220-08 230kV Line. When Peach Bottom Unit 1 ceased operation in 1974, the 220-08 Line remained and became an offsite source for Peach Bottom Units 2 and 3.

The licensee's letter dated October 20, 2023, stated that Peach Bottom Unit 1 houses the North American Electric Reliability Corporation (NERC) required protective relay scheme SSCs for one of the credited offsite power sources necessary for Peach Bottom Units 2 and 3. The licensee indicated that decommissioning Peach Bottom Unit 1 challenges the 220-08 Line offsite power source that is credited for an offsite power source for Peach Bottom Units 2 and 3, which potentially increases the risk to public health and safety. Additionally, the licensee further stated in its letter dated May 13, 2024, that the 220-08 Line protective scheme affects the reliability of Bulk Electric System, known as the grid. The 220-08 Line protective scheme detects faults on grid components such as lines, buses, transformers, etc., and, therefore, is within the scope of NERC Standard PRC-005-6, "Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance."

The NRC staff evaluated the applicable NERC standards that pertain to the electrical power system. The NRC staff determined that the applicable 220-08 Protection System components such as the protective relays, communication systems, sensing devices, DC supply and control circuitry are required to meet the maintenance activities required by NERC Standard PRC-005-6. Moreover, the NRC staff identified additional

support for the licensee's claim that Peach Bottom Units 2 and 3 rely upon the 220-08 Protective System components, which are located at Unit 1, for an offsite power source in the Peach Bottom Units 2 and 3 Updated Final Safety Analysis Report (UFSAR) (ML23110A266). The UFSAR states: "Each offsite source can be used to supply the unit auxiliary buses for plant startup and shutdown and the cooling tower equipment…..Every 4 kV emergency switchgear bus is energized from one of these two sources at all times during normal operation. …"

Because power to Peach Bottom Unit 1 electrical systems and components is provided by onsite standby power supplies as well, the NRC staff evaluated the onsite power systems. The licensee explained, in its letter dated May 13, 2024, that for onsite power, Peach Bottom Unit 1 is currently equipped with a 125V direct current (DC) battery, 10D465, which is the former Peach Bottom Unit 1 station battery, and the licensee performs maintenance and testing in accordance with station procedures and in compliance with NERC Standard PRC-005-6.

Based on this information, the NRC staff agrees that decommissioning of Peach Bottom Unit 1 would impact the capacity and capability of the power systems (offsite and onsite power). Therefore, pursuant to 50.82(a)(3), the capacity and capability of the power systems at the Peach Bottom Atomic Power Station is a factor that, in combination with other factors discussed above, supports an alternative decommissioning schedule.

IV. Environmental Review Under the National Environmental Policy Act

The NRC staff has determined that the proposed exemption can be categorically excluded under 10 CFR 51.22(c)(25) from NRC requirements to conduct an environmental assessment or an environmental impact statement. The categorical exclusion in 10 CFR 51.22(c)(25) states that the granting of an exemption from the

requirements of any NRC regulation may be categorically excluded as long as the conditions of 51.22(c)(25)(i)-(vi) are met.

In this instance, the NRC staff determined all the conditions of 51.22(c)(25)(i)-(v) have been satisfied. Approving this exemption would not: result in conditions that could significantly increase the probability or consequences of an accident previously evaluated or create the possibility of a new or different kind of accident; result in a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite; result in increases to public and occupational radiation exposure; result in a significant construction impact; or result in a significant increase in the potential for or consequences from radiological accidents. Approval in this instance only continues the current status and activities at the facility. During the duration of the decommissioning delay, the licensee will maintain Peach Bottom Unit 1 in SAFSTOR condition in accordance with the technical specifications for Peach Bottom Unit 1, and the licensee will continue ongoing monitoring activities, such as regular radiological surveys, use of monitoring wells, inspections for (and any needed management of) groundwater intrusion into the containment, and inspections of facility conditions.

Finally, the NRC staff has determined that the request satisfies 51.22(c)(25)(vi) because the exemption applies to the following specific activities associated with Peach Bottom Unit 1 that support the continued maintenance of Peach Bottom Unit 1 in SAFSTOR into the period approved in the alternative decommissioning schedule: (A) recordkeeping requirements; (B) reporting requirements; (C) inspection and surveillance requirements; (D) equipment servicing or maintenance scheduling requirements; (F) Safeguard plans, and materials control, and (G) scheduling requirements.

Based on the above assessment, in accordance with 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the NRC’s consideration of this exemption request.

VII. Conclusions.

For the reasons described above, the NRC concludes that, pursuant to 10 CFR 50.82(a)(3), there are site-specific factors affecting the licensee's capability to carry out decommissioning at Peach Bottom Unit 1 because of the presence of the operating units at the site such that an alternative decommissioning schedule is necessary to protect public health and safety. The NRC's determination is based on the multiple connections that exist between Peach Bottom Unit 1 and the operating Peach Bottom Units 2 and 3 at this site, including the presence of the nuclear facilities (Peach Bottom Units 2 and 3 support buildings) located on the Peach Bottom Unit 1 footprint and the need for its continued use by Peach Bottom Units 2 and 3, and the electric power connection at Peach Bottom Unit 1 that is utilized as one of the primary power sources of offsite power for Peach Bottom Units 2 and 3.

Therefore, the NRC grants Constellation Energy Generation, Inc., a one-time exemption from 10 CFR 50.82(a)(3) to allow the licensee an alternative decommissioning schedule that requires the decommissioning of Peach Bottom Unit 1, 20 years after the permanent cessation of operations of either Peach Bottom Units 2 or 3, whichever is earlier, and in no case beyond 2074. With this approval, the licensee's SAFSTOR program will continue for the extended period of decommissioning and the licensee should update its program accordingly. For the period beyond 60 years, the NRC will continue its inspection of the SAFSTOR program as outlined in the Updated Final Safety Analysis Report, technical specifications, and licensee procedures, including the material condition of the Peach Bottom Unit 1 buildings, such as the Unit 1 containment.

The exemption will be effective upon issuance.

Dated: this 23rd day of December 2025.

For the Nuclear Regulatory Commission.

/RA/

Jane Marshall, Director,
Division of Decommissioning, Uranium Recovery,
and Waste Programs,
Office of Nuclear Material Safety and Safeguards.

[FR Doc. 2025-24101 Filed: 12/30/2025 8:45 am; Publication Date: 12/31/2025]