

**NUCLEAR REGULATORY COMMISSION**

**[Docket Nos. 50-438 and 50-439; NRC-2020-0273]**

**Tennessee Valley Authority Bellefonte, Units 1 and 2**

**Environmental Assessment and Finding of No Significant Impact**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Environmental assessment and finding of no significant impact; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is considering extending the completion dates for Construction Permit Nos. CPPR-122 and CPPR-123, issued to the Tennessee Valley Authority (TVA) for Bellefonte Nuclear Plant, Units 1 and 2 (BLN), located on the west shore of the Guntersville Reservoir at Tennessee River Mile (RM) 392 in Jackson County, Alabama. The NRC prepared this environmental assessment (EA) documenting the environmental review and finding of no significant impact (FONSI) for this proposed action.

**DATES:** The EA and FONSI are available January 13, 2021.

**ADDRESSES:** Please refer to Docket ID **NRC-2020-0273** 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 Web Site:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2020-0273**. Address questions about Docket IDs in Regulations.gov to Jennifer Borges; telephone: 301-287-9127; e-mail: Jennifer.Borges@nrc.gov. For technical questions, contact the individuals 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 Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209 or 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov). For the convenience of the reader, the ADAMS accession numbers are provided in a table in the "Availability of Documents" section of this document.

- **Attention:** The PDR, where you may examine and order copies of public documents, is currently closed. You may submit your request to the PDR via e-mail at [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov) or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Omid Tabatabai, Office of Nuclear Reactor Regulation, telephone: 301-415-6616; e-mail: [Omid.Tabatabai@nrc.gov](mailto:Omid.Tabatabai@nrc.gov), and Jeffrey Rikhoff, Office of Nuclear Materials Safety and Safeguards, telephone: 301-415-1090, e-mail: [Jeffrey.Rikhoff@nrc.gov](mailto:Jeffrey.Rikhoff@nrc.gov). Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

## **SUPPLEMENTARY INFORMATION:**

### **I. Introduction**

The NRC is considering extending the completion dates specified in Construction Permit Nos. CPPR-122 and CPPR-123, issued to TVA for BLN, Units 1 and 2. The Bellefonte site is located on the west shore of the Guntersville Reservoir at Tennessee RM 392, near Hollywood, Alabama, in Jackson County, about 6 miles east-northeast of Scottsboro, Alabama.

As required by section 51.21 of the *Code of Federal Regulations* (10 CFR), "Criteria for and identification of licensing and regulatory actions requiring environmental assessments," the NRC has conducted an environmental review and

prepared an EA that evaluates the environmental effects of extending the construction permit completion dates (proposed action). Based on the results of the environmental review conducted for this EA, and in accordance with 10 CFR 51.31(a), the NRC has determined not to prepare an environmental impact statement and is issuing a FONSI.

### *Facility Site and Environs*

The unfinished two-unit pressurized-water reactor nuclear power plant is situated on a peninsula between Town Creek and the Tennessee River at RM 392 on the west shore of Guntersville Reservoir in Jackson County near Hollywood, Alabama. Most of the 1,600-acre Bellefonte site has been impacted by the construction of BLN Unit 1 and 2.

The affected environment at the Bellefonte site is described in the June 1974 final environmental statement (FES) for the construction of BLN Units 1 and 2 (FES-CP) prepared by the U.S. Atomic Energy Commission's (AEC; now the NRC); the NRC's January 2003 BLN Units 1 and 2 construction permit extension EA; and the NRC's September 2011 BLN Unit 1 construction permit extension EA. Also, TVA has issued several EAs that describe the environment at the Bellefonte site, including a January 2006 final EA and a May 2010 final supplemental Environmental Impact Statement. Environmental conditions at the Bellefonte site have not changed appreciably from the descriptions portrayed in these documents.

## **II. Environmental Assessment**

### *Description of the Proposed Action*

The proposed action would extend the construction completion date of the BLN Unit 1 construction permit (CPPR-122) from October 1, 2020, to October 1, 2021, and the BLN Unit 2 construction permit (CPPR-123) from October 1, 2014, to

October 1, 2021. TVA submitted the extension request for Unit 1 CPPR-122 on August 28, 2020, and the extension request for Unit 2 CPPR-123 on June 10, 2014, as supplemented on March 31, 2017. With respect to both construction permits, TVA submitted its requests at least 30 days before the expiration of the existing permits. Therefore, in accordance with 10 CFR 2.109(a), "Effect of timely renewal application," the existing construction permits remain in effect until the NRC completes its review of the requests. The proposed extensions would not allow any work to be performed that is not already authorized under the existing construction permits; the extensions would merely grant the permittee additional time to complete the construction of both units.

#### *Need for the Proposed Action*

The proposed action is needed to provide time for the continued construction of BLN Units 1 and 2. The construction permits, both issued December 24, 1974, were originally set to expire on December 1, 1979 (Unit 1) and September 1, 1980 (Unit 2). At the request of TVA, the NRC has subsequently extended the completion dates of both BLN Units 1 and 2 several times. The BLN Unit 2 construction permit completion date was last extended to October 1, 2014. Most recently, the NRC extended the BLN Unit 1 construction completion date to October 1, 2020. In its March 31, 2017 and August 28, 2020 letters, TVA noted that it sold the Bellefonte property at auction, the sale of BLN Units 1 and 2 did not close, and the purchaser filed a lawsuit against TVA. TVA stated that an extension is needed to allow the parties additional time to obtain a decision in the lawsuit.

#### *Environmental Impacts of the Proposed Action*

The AEC evaluated the environmental impacts from constructing BLN Units 1 and 2 in the 1974 FES-CP. Subsequently, the NRC reevaluated the environmental

impacts of completing the construction of BLN Units 1 and 2 in several EAs. These include the January 2003 and September 2011 construction permit extension EAs, both of which addressed environmental impact issues identified after the publication of the FES-CP. New issues included groundwater quality, public services, noise, socioeconomics, severe accident mitigation alternatives, cultural and historical resources, environmental justice, greenhouse gas emissions, and cumulative impacts. Additionally, these EAs evaluated changes to regional demography, natural resource use, meteorology, ecology, impacts to humans and the environment, severe accident mitigation design alternatives, and socioeconomic impacts, including environmental justice. Based on these reviews, NRC staff concluded that there were no significant differences in the environmental impacts previously addressed in the FES-CP. Further, the staff also did not identify any significant environmental impacts that have not already been addressed in the construction permit extension EAs. The NRC staff determined that the environmental impacts associated with completing the construction of BLN would be generally consistent with the impacts disclosed in the FES-CP and subsequent construction permit extension EAs. Specifically, in the 2011 EA, the NRC staff concluded that the environmental impacts of extending the BLN Unit 1 construction permit would not be significant, and the completion of BLN Unit 1 would not result in any disproportionately high and adverse human health and environmental effects on minority and low-income populations and communities residing near the Bellefonte site. The staff also determined that the environmental impacts from completing BLN Unit 1 would not be significant since the most environmentally disruptive construction activities have already been completed and any remaining construction activities would take place within completed structures at the Bellefonte site.

Because of the conclusions reached in the January 2003 and September 2011 EAs, the NRC staff issued FONSIs extending the construction permit completion dates for both units.

In addition, extending the BLN Units 1 and 2 construction permit completion dates would have no effect on federally listed species or critical habitats protected under the Endangered Species Act of 1973, as amended, because all ground and river disturbances associated with construction have long since been completed. Federal agencies are not required to consult with the U.S. Fish and Wildlife Service or National Marine Fisheries Service if they determine that an action will not affect listed species or critical habitats. Thus, the Endangered Species Act does not require consultation for the proposed action, and the staff considers NRC's Section 7 obligations to be fulfilled.

Since the proposed action would only extend the period of construction activities described in the FES-CP and subsequent construction permit extension EAs, it would not create any new or different impacts or significantly change the impacts from those previously evaluated in these environmental documents. The NRC concludes that, based on this information, extending the construction completion date of the BLN Unit 1 construction permit (CPPR-122) from October 1, 2020, to October 1, 2021, and the BLN Unit 2 construction permit (CPPR-123) from October 1, 2014, to October 1, 2021, would have no significant environmental impacts.

#### *Environmental Impacts of the Alternatives to the Proposed Action*

As an alternative, the NRC considered denying the proposed action (i.e., the "no-action" alternative). This alternative would result in expiration of the BLN Units 1 and 2 construction permits and, thus, would require the submittal of a new construction permit application in order to complete the nuclear facility with no

significant environmental benefit. Therefore, the environmental impacts of the proposed action and the no-action alternative are similar.

Several alternatives to constructing and operating BLN Units 1 and 2 were considered in the FES-CP, including various sources of base load generation and alternative plant locations. Alternatives considered include not requiring new generating capacity and combinations of power generation.

Alternatives that could potentially replace new generating capacity include power purchases, repowering electrical generating plants, and energy conservation. Non-nuclear power generating alternatives include fossil fuel, wind, solar, biomass, and hydropower. Combining energy-generating alternatives could achieve an energy profile similar to base load operation from BLN Units 1 and 2. Storage technology with wind or solar technology could augment the variability of wind and solar power with the dispatchability of fossil generation (coal and gas) or biomass generation.

#### *Alternative Use of Resources*

The proposed action does not involve any different environmental resources beyond those previously considered in the construction permit final environmental statement.

#### *Agencies and Persons Consulted*

The NRC staff did not consult with any other Federal agencies or with the State of Alabama regarding the environmental impacts of the proposed action. However, on December 1, 2020, the NRC notified the Alabama State official, Mr. David A. Turberville, Director, Office of Radiation Control of Alabama Department of Public Health, of the proposed action. Mr. Turberville had no comments.

### **III. Finding of No Significant Impact**

The TVA has requested the NRC to extend the dates for completing the construction of BLN Units 1 and 2. The NRC is therefore considering extending the completion dates of Construction Permit Nos. CPPR-122 and CPPR-123, issued to TVA for BLN from October 1, 2020, to October 1, 2021 (Unit 1), and CPPR-123 from October 1, 2014, to October 1, 2021 (Unit 2). Based on the review of available information, the NRC determined that the proposed action would not affect safety, would not have a significant adverse effect on the probability of an accident, and would not have any significant radiological and non-radiological environmental impacts beyond what has been described in the FES-CP and subsequent construction permit extension EAs. The NRC also considered information provided in the licensee's application and related TVA environmental documents.

Consistent with 10 CFR 51.21, the NRC conducted an environmental review of the proposed action, and this FONSI incorporates Section II of the EA by reference in this notice. Therefore, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined there is no need to prepare an environmental impact statement for the proposed action.

This FONSI and other related environmental documents are accessible online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC's PDR reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).



#### IV. Availability of Documents

The documents identified in the following table are available to interested persons through one or more of the following methods, as indicated.

| <b>Document</b>                                                                                                                                        | <b>ADAMS Accession No.</b> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| AEC Final Environmental Statement Related to Construction of Bellefonte Nuclear Plant Units 1 and 2, June 1974                                         | ML100570049                |
| Letter from NRC to TVA, Regarding Issuance of Construction Permit Nos. CPPR-122 and CPPR-123, December 24, 1974                                        | ML111110111                |
| NRC Generic Letter 87-15, Commission Policy Statement on Deferred Plants, October 7, 1987                                                              | ML20236L426                |
| NRC Environmental Assessment for Extension of Construction Permits, January 16, 2003                                                                   | ML030170463                |
| Letter from NRC to TVA, BLN Units 1 and 2 - Extension of Construction Permit Expiration Dates, March 4, 2003                                           | ML012290092                |
| TVA Final Environmental Assessment for Bellefonte Nuclear Plant Redress, January 2006                                                                  | ML061810465                |
| Letter from NRC to TVA, BLN Units 1 and 2 - Order Granting Reinstatement of Construction Permits Nos. CPPR-122 and CPPR-123, March 9, 2009             | ML090610237                |
| TVA Final Supplemental Environmental Impact Statement for Single Nuclear Unit at the Bellefonte Plant Site, May 2010                                   | ML102870235                |
| Letter from NRC to TVA, BLN Units 1 and 2 – Regarding Key Assumptions for Reactivation, August 4, 2010                                                 | ML101880337                |
| Letter from TVA to NRC, BLN Unit 1 Request for Extension of Construction Permit CPPR-122, October 8, 2010                                              | ML102870233                |
| NRC Environmental Assessment and Finding of No Significant Impact Related to the Request to Extend Construction Permit No. CPPR-122, September 9, 2011 | ML103630202                |
| Letter from NRC to TVA, BLN Unit 1 – Extension of Construction Permit Expiration Date, September 30, 2011                                              | ML11245A128                |
| Letter from TVA to NRC, BLN Unit 2 – Request for Extension of Construction Permit CPPR-123, June 10, 2014                                              | ML14168A489                |
| Letter from TVA to NRC, BLN Unit 2 – Status Update Regarding Construction Permit CPPR-123, March 31, 2017                                              | ML17090A388                |

| <b>Document</b>                                                                                                                                                      | <b>ADAMS Accession No.</b> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| Letter from ND to NRC, Application for Order Approving Construction Permit Transfers and Conforming Administrative Construction Permit Amendments, November 13, 2018 | ML18318A428                |
| Letter from NRC to TVA, BLN Units 1 and 2 – Status Update and Request for Extension of Unit 1 Construction Permit CPPR-122, August 28, 2020                          | ML20244A305                |

Dated: January 13, 2021.

For the Nuclear Regulatory Commission.

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