

# U.S. NUCLEAR REGULATORY COMMISSION

## RECORD OF DECISION

### WESTINGHOUSE ELECTRIC COMPANY, LLC'S APPLICATION FOR RENEWAL OF SPECIAL NUCLEAR MATERIAL LICENSE SNM-1107 TO CONTINUE TO OPERATE COLUMBIA FUEL FABRICATION FACILITY, RICHLAND COUNTY, SOUTH CAROLINA

#### Introduction

The U.S. Nuclear Regulatory Commission (NRC) staff prepared this record of decision (ROD) for the proposed renewal of the Westinghouse Electric Company, LLC's (WEC) special nuclear material (SNM) license SNM-1107 to continue to operate its Columbia Fuel Fabrication Facility (CFFF) in Richland County, South Carolina.

In July 2022, the NRC staff issued a final Environmental Impact Statement (FEIS) (NRC, 2022a) for the WEC's license renewal application (LRA) to renew its special nuclear material (SNM) license SNM-1107 to continue licensed operations and activities at its CFFF for an additional 40 years (WEC 2014; WEC 2019a; WEC 2019b; WEC 2020a; WEC 2021b). In the FEIS, the NRC staff, in accordance with 10 CFR 51.91(d), sets forth its recommendation on the action to be taken. The NRC staff recommended that the WEC's license SNM-1107 for the operation of the CFFF be renewed for an additional 40 years from the date the NRC approves the renewal (NRC, 2022a).

This ROD satisfies section 51.102(a) of title 10 of the *Code of Federal Regulations* (10 CFR), which states that "[a] Commission decision on any action for which a final environmental impact statement has been prepared shall be accompanied by or include a concise public record of decision." The NRC staff has prepared this ROD in accordance with NRC regulations at 10 CFR sections 51.102(b) and 51.103(a)(1)-(4). In addition, in accordance with 10 CFR section 51.103(c), this ROD incorporates by reference the materials contained in the FEIS (NRC, 2022a).

#### Background

The CFFF manufactures nuclear fuel assemblies containing natural and low-enriched uranium oxide fuel for use in light-water commercial nuclear power reactors. The CFFF also produces other fuel-related products, such as control rods and mechanical components. Current operations at CFFF include receiving natural and low-enriched uranium hexafluoride in cylinders, converting it to uranium dioxide (UO<sub>2</sub>) powder through the ammonium diuranate conversion process, and processing the UO<sub>2</sub> powder into fuel assemblies (pellet pressing, sintering, fuel rod loading and sealing, assembly fabrication). The CFFF has a production capacity of 1,500 MTU/yr with a maximum capacity of 1,600 MTU/yr. In its LRA, the WEC did not request changes to its NRC special nuclear materials license or propose construction of new buildings or structures at the CFFF (WEC, 2019a).

The CFFF site occupies 469 hectares (ha) (1,151 acres [ac]) in Hopkins, South Carolina, in Richland County. The site is approximately 13 kilometers (km) (8 miles [mi]) southeast of the city limits of Columbia, South Carolina. Approximately 28 ha (68 ac) of the property area are used for facility operations and support activities. The CFFF site lies within the flood basin of the Congaree River, which flows approximately 6.4 km (4 mi) southwest of the main plant (WEC 2019a).

In accordance with the NRC's National Environmental Policy Act-implementing regulations in 10 CFR part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," the NRC staff prepared a site-specific EIS for the proposed license renewal. The NRC had previously published a draft environmental assessment (EA) (83 FR 28014) for the proposed action in June 2018. However, shortly thereafter, in July 2018, the WEC identified a leak that released uranium and hydrofluoric acid into the subsurface environment. Additionally, under the purview of the South Carolina Department of Health and Environmental Control (SCDHEC), the WEC initiated an investigation into a leak from a buried pipe that occurred in 2011, which allowed uranium to enter the subsurface under the main building. On February 26, 2019, SCDHEC executed a Consent Agreement (CA) with the WEC (SCDHEC/WEC 2019) to conduct remedial investigations and address historical contamination at the CFFF site. Because of the new information and public concern about the releases, the NRC staff reopened its environmental review. As a result, the NRC staff withdrew the June 2018 EA and finding of no significant impact and announced, in a Federal Register notice (84 FR 57777), the publication of an updated draft EA for public review and comment. Subsequently, on June 5, 2020, the NRC staff decided to prepare an EIS (NRC, 2020) because new sampling and monitoring data from the remedial investigations conducted by the WEC (WEC, 2020c) under a CA with SCDHEC were available (SCDHEC/WEC 2019). The new data revealed uncertainty related to the source and extent of contamination onsite and the potential future migration pathways offsite (SCDHEC/WEC 2019) and precluded the NRC staff from making a finding of no significant impact through the EA.

### The Decision

This ROD documents the NRC staff's decision to renew license SNM-1107 for a 40-year term for the WEC CFFF in Richland County, South Carolina (NRC, 2022b). The renewed license authorizes the WEC to continue operations as proposed in its license application and under the conditions in its NRC-issued license. The NRC staff concluded that the proposed action would result in SMALL impacts on all resource areas except for groundwater resources and waste generation during decommissioning for which the impacts would be SMALL to MODERATE (NRC, 2022a). The NRC staff also completed consultation under section 106 of the National Historic Preservation Act and received concurrence from the South Carolina State Historic Preservation Office on its findings that the proposed action will not affect historic properties as defined in the section 106 National Historic Preservation Act regulations (SCSHPO, 2022).

After analyzing the impacts of the proposed action and comparing them to the No-Action and 20-year alternatives, the NRC staff, in accordance with 10 CFR 51.91(d), sets forth its recommendation regarding the proposed action. The NRC staff recommends that the WEC's license to possess and use special nuclear material at the CFFF be renewed for a term of 40 years.

In its safety and security review, the NRC staff determined that the application met the applicable NRC regulations in 10 CFR part 70, “Domestic Licensing of Special Nuclear Material” and 10 CFR part 73, “Physical Protection of Plants and Materials.” In renewing the WEC materials license for the CFFF, the NRC determined that there is reasonable assurance that: (i) the activities authorized by the license can be conducted without endangering the health and safety of the public; and (ii) these activities will be conducted in compliance with the applicable regulations of 10 CFR part 20, 10 CFR part 70, and 10 CFR part 73. The NRC further determined that issuance of the license will not be inimical to the common defense and security (NRC, 2022c).

### Mitigation Measures

The NRC has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the proposed action (license renewal). The WEC has committed to three new procedures related to site remediation, data management, and maintaining a conceptual site model to address contamination observed or measured in the site’s environment as described in chapters 2 and 3 of the FEIS (NRC, 2022a). In addition, the NRC is adding three new safety license conditions that would require the WEC to submit its environmental sampling and monitoring program to NRC for review and approval upon SCDHEC’s approval of the Remedial Investigation Report, or within five years of the license renewal (whichever comes first); and submit its environmental sampling and monitoring program to NRC for review and approval again within 90 days of the submittal of the CA final written report to SCDHEC; and enter into its Corrective Action Program exceedances of Federal and State standards for the maximum contaminant levels under the U.S. Environmental Protection Agency’s National Primary Drinking Water Regulations.

The WEC’s monitoring programs for the proposed project are described in chapter 2 of the FEIS (NRC, 2022a).

### Alternatives Considered

In its environmental review, the NRC staff evaluated the environmental consequences of the proposed action (i.e., renew WEC’s SNM license for an additional 40 years), a 20-year license renewal alternative (i.e., renew WEC’s SNM license for an additional 20 years), and the No-Action alternative (i.e., denial of the WEC’s request to renew the SNM license for an additional 40 years). FEIS chapter 2, “Proposed Action and Alternatives,” and chapter 3, “Affected Environment, Environmental Impacts, and Mitigation Measures” present the NRC staff’s evaluation and analysis of the environmental impacts of the proposed action and alternatives that were considered (NRC, 2022a).

### Preferences Among Alternatives Based on Relevant Factors

The FEIS describes the alternatives to the proposed action, including the No-Action alternative and the 20-year license renewal alternative (NRC, 2022a). The staff assessed the impacts of these alternatives in the following areas: land use, transportation, geology and soils, water resources, ecological resources, air quality, noise, historic and cultural resources, visual and scenic resources, socioeconomic, environmental justice, public and occupational health, and waste generation and management. The staff compared the potential environmental impacts of

the proposed action, 20-year license renewal alternative, and no action alternative in table 2-6 and section 3.17 of the FEIS. In section 3.19 of the FEIS, the NRC staff evaluated the potential cumulative impacts from the proposed action when added to the potential impacts of other past, present, and reasonably foreseeable future actions. Additionally, in section 3.18 of the FEIS, the staff summarized the costs and benefits associated with the proposed action and alternatives. In preparing the FEIS, the NRC staff also considered, evaluated, and addressed the public comments received on the draft EIS.

Based on the staff's analysis, the staff concludes that the nature/type of potential environmental impacts from continued licensed operations for an additional 20 years would be similar to those from the proposed action (i.e., proposed 40 years of continued operation). The No-Action alternative has slightly greater impacts in the area of socioeconomics than the proposed action and 20-year license renewal alternative.

After analyzing the impacts of the proposed action, comparing them to the 20-year license renewal alternative and the No-Action alternative, and conducting a safety and security review of the proposed action, the NRC staff determined that the WEC's license to possess and use special nuclear material at the CFFF should be renewed for a term of 40 years. The NRC staff based its decision on: (i) review of the WEC license application, which includes the Environmental Report and supplemental documents (WEC 2014; WEC 2019a; WEC 2019b; WEC 2020a; WEC 2021b), and the WEC's responses to the NRC staff's requests for additional information (RAIs) (WEC 2020b, WEC 2021c, WEC 2021d, WEC 2022a, WEC 2022b, WEC 2022c); (ii) consultation with Federal, State, tribal, and local agencies and input from other stakeholders, including public comment on the draft EIS (see appendix D in the FEIS); (iii) the NRC staff's independent review; (iv) the NRC staff's assessments provided in the FEIS (NRC, 2022a); and (v) the NRC staff's assessments in the final Safety Evaluation Report (NRC, 2022c) for the WEC CFFF.

### Public Comments

On July 31, 2020 (85 FR 46193), the NRC staff published in the Federal Register (FR) a notice of intent to prepare an EIS and to conduct an environmental scoping process. The NRC staff invited potentially affected Federal, State, tribal, and local governments; organizations; and members of the public to provide comments in the environmental scoping process and review. The scoping period closed on August 31, 2020. In February 2021, the NRC staff issued a scoping summary report (NRC 2021c), and, on February 4, 2021, the NRC staff held a public meeting to discuss the status of its review of the WEC CFFF LRA (WEC 2021a, NRC 2021a, NRC 2021b, NRC 2021d). On August 6, 2021, the NRC staff issued the draft EIS, "Environmental Impact Statement for the License Renewal of the Columbia Fuel Fabrication Facility in Richland County, South Carolina" (86 FR 43276), for a 45-day public comment period. The NRC extended the initial 45-day public comment period by an additional 60 days to conclude on November 19, 2021, based on participant requests. Additionally, the NRC staff held a public meeting on August 26, 2021, to discuss the preliminary findings in the draft EIS. Recorded presentations and transcripts were posted on the NRC public project website: <https://www.nrc.gov/info-finder/fc/westinghouse-fuel-fab-fac-sc-lc.html>. During the comment period on the draft EIS, the NRC staff received many comments, including many in opposition to

the proposed action. Responses to all public comments received during the draft EIS comment period are included in appendix D to the FEIS.

On September 6, 2022, the U.S. Environmental Protection Agency submitted a letter (EPA, 2022) to the NRC staff stating that the NRC had addressed its concerns on the draft EIS in the final EIS (NRC, 2022a), and acknowledged that the EPA's remaining comments would be addressed in the NRC staff's upcoming safety evaluation report (SER). These comments (EPA, 2021) concerned severe weather and flood hazards, and were addressed by the staff in SER Chapter 3, "Integrated Safety Analysis" (NRC, 2022c).

In this Record of Decision, the NRC staff has determined that the WEC's license to possess and use special nuclear material at the CFFF should be renewed for a term of 40 years.

Dated at Rockville, MD, this 12<sup>th</sup> day of September 2022,

APPROVED BY:



Signed by Regan, Christopher  
on 09/12/22

Christopher M. Regan, Director  
Division of Rulemaking, Environmental,  
and Financial Support  
Office of Nuclear Material Safety  
and Safeguards

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