

**Environmental Impact Statement for the
Westinghouse Electric Company Columbia
Fuel Fabrication Facility License Renewal
Application**

Scoping Process Summary Report

February 2021



**U.S. Nuclear Regulatory Commission
Rockville, Maryland**

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A. The Westinghouse Electric Company Columbia Fuel Fabrication Facility License Renewal Application Scoping Process

A.1 Introduction

In December 2014, Westinghouse Electric Company, LLC (WEC, the licensee) submitted a license renewal application (LRA), including an environmental report (ER), to renew Special Nuclear Materials (SNM) License SNM-1107 (WEC 2014-TN6421) to continue to operate its Columbia Fuel Fabrication Facility (CFFF) in Hopkins, South Carolina, for additional 40 years. On June 15, 2018, the U.S. Nuclear Regulatory Commission (NRC) published a final environmental assessment (EA) (NRC 2018-TN6416) and a finding of no significant impact (FONSI) in the *Federal Register* (83 *FR* 28014-TN6415). Shortly thereafter, in July 2018, 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), WEC initiated an investigation into a leak that occurred in 2011 from a buried pipe that allowed uranium to enter the subsurface under the main facility building. Based on this new information and public concern about the releases, the NRC staff decided to re-open its environmental review. Also, in response to NRC staff's request (NRC 2019-TN6557), WEC submitted an updated LRA (including an updated ER) in March 2019 (WEC 2019-TN6510). On October 28, 2019, the NRC staff concurrently withdrew its June 2018 EA and FONSI and published a new draft EA (October 2019 draft EA, NRC 2019-TN6472) for public review and comment (84 *FR* 57777-TN6422).

On June 5, 2020 (NRC 2020-TN6519), the NRC staff decided to prepare an environmental impact statement (EIS) because new information (WEC 2020-TN6751), provided by WEC to SCDHEC under the Consent Agreement (SCDHEC/WEC 2019-TN6554), revealed uncertainty related to the source and extent of contamination onsite and the potential future migration pathways off-site, and precluded the NRC staff from making a FONSI, through the EA.

On July 31, 2020, the NRC staff issued a *Federal Register* notice (FRN) informing the public of its intent to prepare an EIS and the beginning of the scoping process related to the licensing review of WEC's request to renew the operating license for its CFFF for a 40-year period. If granted, the renewed license would allow WEC to continue NRC-licensed operations and activities at the CFFF site for a period of 40 years from the date the NRC approves the renewal.

The NRC staff conducted the EIS scoping process between July 31 and August 31, 2020, in accordance with Section 51.29 of Title 10 of the *Code of Federal Regulations* (10 CFR), Part 51 (TN250), *Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions*, which implements the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. § 4321 *et seq.*; TN661). During the scoping process, the NRC staff invited Federal, State, local, and Tribal government agencies, members of the public, and the licensee to identify issues and provide information to the NRC about the scope of the EIS. The NRC staff's goal for conducting the scoping process was to define the scope of issues to be addressed in the EIS, including, but not limited to, identifying significant issues to be analyzed in depth; eliminating from detailed

study issues that are peripheral, not significant, or that have been covered by prior environmental reviews; identifying alternatives; and identifying other environmental review and consultation requirements related to the proposed action.

This scoping summary report summarizes written comments and information gathered during the EIS scoping process, and from the written and oral comments provided during the previous public comment period for the October 2019 draft EA, which preceded the development of the EIS.

Section A of this report provides a concise summary of the NRC's environmental review, an overview of the issues that were raised during the draft EA public comment period (Section A.2) and during the EIS scoping period (Section A.3), and a summary of the NRC staff's determinations regarding the scope and content of the EIS (Section A.4). Section B contains a summary of comments received during the draft EA public comment period, and Section C contains a summary of the comments received during the EIS public scoping period and the NRC staff's responses.

Commenters are listed in alphabetical order in tables that identify the individuals who provided comments, their affiliations (if provided), and the Agencywide Documents Access and Management System (ADAMS) accession numbers that can be used to locate the correspondence. Section D provides references cited throughout the report. ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html>.

A.2 October 2019 Draft Environmental Assessment Public Comment Period Comments

The NRC provided a 30-day public comment period for the October 2019 draft EA beginning with the publication of a FRN on October 28, 2019. In addition to the FRN, the NRC staff sent notification e-mails to the WEC e-mail distribution lists (which included public stakeholders) regarding the availability of the draft EA for public comment, sent e-mails and/or letters to concerned State and other Federal agencies inviting them to comment, posted on social media (e.g., Facebook, Twitter) about the draft EA public meeting, issued a press release, and made announcements via advertisements in *The State* and *The Columbia Star* newspapers.

Additionally, during the draft EA public comment period, the NRC staff held a public meeting on November 14, 2019 in Columbia, South Carolina. The meeting summary, including the transcript, slides, and attendees, is available in [ADAMS under Accession No. ML19330E021](#).

Electronic versions of the draft EA, draft FONSI, and supporting information were made accessible through the NRC's ADAMS. The draft EA was also available on the NRC's web page at <https://www.nrc.gov/info-finder/fc/westinghouse-fuel-fab-fac-sc-lc.html>. Finally, copies of the draft EA and FONSI were also made available at the Richland Library – Eastover and Southeast branches.

The NRC received more than 60 comments from the public and local, State, and Tribal agencies during the public comment period on the October 2019 draft EA (NRC 2019-TN6472). The NRC staff reviewed correspondence and comments received during the November 2019 public

meeting in Columbia, South Carolina, comments submitted online at www.regulations.gov, comments sent by e-mail to WEC-CFFF-EA@nrc.gov, and comments received by regular mail. The NRC staff identified individual comments made by each commenter, giving commenters and each of their comments a unique alphanumeric designation, used for tracking and sorting.

The NRC staff first sorted the identified comments according to subject matter or according to the general topic. Then, comments with similar specific issues or concerns were further grouped to capture the common issues.

The primary matters raised during the draft EA comment period included:

- potential for contamination of the deep aquifer and mobility of contaminants between aquifers
- concerns regarding the history of spills, recent leaks, and events at the CFFF
- the unknown source of technetium-99 (Tc-99) contamination
- uranium plume characterization
- potential pathway for contaminant migration off-site
- volatile organic compound plume characterization and mitigation
- groundwater contamination into the floodplain
- concerns about the uncertain scope of remediation of the East Lagoon
- cost and benefit assessment of economic and environmental impacts
- requests that a full EIS be prepared
- potential impacts of the CFFF's operation on the Congaree River
- consideration of the new environmental data being generated at the site under SCDHEC's Consent Agreement with WEC
- concerns about the timeline and effectiveness of remediation activities to be carried out by WEC
- environmental justice concerns (health and safety, and outreach)
- potential impacts on historic and cultural resources
- scope, frequency, and effectiveness of monitoring and sampling (e.g., water, vegetation, sediment, fish) to be carried out by WEC
- consideration of a license term less than WEC's proposed 40 years (e.g., 10 years), if the NRC moves forward with the approval of the renewal of the license
- comments concerning the NRC safety review process, such as comments regarding inspections, the safety culture at the site, emergency preparedness activities, and requests that the safety review be made public

The NRC staff's summaries of comments are presented in Section B of this report, which contains tables that identify all commenters and the ADAMS accession numbers that identify

where their comments can be found. As previously discussed, the NRC staff determined it was not able to conclude with a FONSI and, therefore, began preparing an EIS. Based on this decision, the comments received about the draft EA are addressed with responses, to the extent possible, in this scoping summary report in light of the ongoing preparation of the EIS.

A.3 EIS Scoping Process

On July 31, 2020, the NRC issued a notice of intent to prepare an EIS and initiated the scoping comment period, which solicited comments from the public and any other organization regarding scope of the EIS (85 *FR* 46193-TN6417). In addition to the FRN, the NRC staff sent notification e-mails to the WEC e-mail distribution lists inviting comments from the public regarding the proposed scope of the environmental review, sent e-mails to State and other Federal agencies inviting them to comment, and posted on social media (e.g., Facebook, Twitter). After a 30-day comment period, the NRC received more than 60 comments. The NRC staff reviewed correspondence and comments received online at www.regulations.gov, comments sent by e-mail to WEC_CFFF_EIS.resource@nrc.gov, and comments received by regular mail. The NRC staff identified individual comments made by each commenter and gave commenters and each of their comments a unique alphanumeric designation, used for tracking and sorting.

The NRC staff first sorted the identified scoping comments according to subject matter or the general topic. Then, comments whose specific issues or concerns were similar were grouped to capture the common issues that had been raised. With the comments grouped, the NRC staff determined the appropriate responses for those comment groups. Additionally, the NRC staff's responses explain how the comments relate to the EIS scope and indicate if similar comments were received during the draft EA public comment period. Accordingly, comments on the draft EA are being considered in the development of the EIS.

The primary issues raised during the scoping period included the following:

- requests to extend the public scoping comment period to at least 90 days due to the Coronavirus 2019 (COVID-19) public health emergency; particularly concerning the lack of accessibility and the need to conduct a virtual public scoping meeting
- consideration of a shorter than 40-year license renewal period (e.g., 10 years), or having WEC establish a record of safety with no events for a year prior to license renewal
- numerous comments requested more information and transparency concerning the contamination sources and onsite and offsite characterization, and some of those comments requested that the EIS include descriptions of potential adverse effects
- environmental justice concerns (public health and safety)
- potential impacts on historic and cultural resources
- concerns about surface water and groundwater contamination and off-site migration
- consideration of WEC's history of spills and leaks

- requests to revise the schedule for the EIS so that the publication is completed after WEC's work under the Consent Agreement with SCDHEC is completed.

The NRC staff's summaries of comments and responses are presented in Section C of this report. Also provided are tables identifying the commenter by name and the ADAMS accession numbers for their specific comment letter or e-mail.

A.4 Scope of the EIS

The EIS evaluates the environmental impacts of the proposed action—the relicensing of the CFFF for a 40-year period. It considers the operations and activities occurring at CFFF, the affected environment, and the interaction between the two. The EIS will be prepared in accordance with NRC's NEPA-implementing regulations in 10 CFR Part 51 and associated NRC guidance in NUREG-1748 (NRC 2003-TN1983). The EIS incorporates by reference information from EAs prepared for previous license renewals, where noted and as appropriate. In developing the EIS, the NRC staff is considering various documents and sources of information, including the following:

- WEC's LRA (WEC 2019-TN6546, WEC 2019-TN6423)
- WEC's ER (WEC 2019-TN6510)
- previous NRC EAs for CFFF operations (NRC 1977-TN6547, NRC 1985-TN5602, NRC 1995-TN5600, NRC 2007-TN5598, NRC 2018-TN6416, NRC 2019-TN6472)
- information gathered during NRC site visits (NRC 2018-TN6549, NRC 2019-TN6474)
- NRC inspection reports (e.g., NRC 2018-TN6548)
- effluent monitoring reports (e.g., WEC 2019-TN6550)
- the Consent Agreement between WEC and SCDHEC, and resulting Remedial Investigation Work Plans and Reports (SDHEC/WEC 2019-TN6554; WEC 2020-TN6707, WEC 2020-TN6521, WEC 2020-TN6538, WEC 2019-TN6553, WEC 2019-TN6552, WEC 2019-TN6555)
- geology plates provided by the U.S. National Park Service
- the National Pollutant Discharge Elimination System permit, renewal permit documents, and related groundwater reports
- the State Operating Air Permit and renewal permit documents (SCDHEC 2012-TN6778; WEC 2019-TN6777)
- comments received during the October 2019 draft EA public comment period
- comments received during the EIS scoping comment period.

Environmental resource areas considered in the EIS include land use, transportation, geology and soils, water resources, ecology, protected species, air quality, meteorology, noise, visual and scenic resources, historic and cultural resources, socioeconomics, environmental justice, public and occupational health and safety, waste management, and costs and benefits of the proposed action.

A.5 Issues Outside the Scope of the EIS

The EIS will evaluate the environmental impacts of continued licensed operations for the proposed 40-year renewal period. Certain topics will not be addressed in the EIS because they are not within that scope. Therefore, responses to comments about these topics discuss why these topics are outside the scope of the EIS. These topics include (but are not limited to) requests to discuss the ownership change for the CFFF, emergency planning, security and terrorist attack prevention, general disagreement with nuclear power and the need for nuclear fuel.

A.6 Consultation Requirements and Cooperating Agencies

Under Section 106 of the National Historic Preservation Act (NHPA), the NRC must evaluate the impact of the proposed license renewal on historic and cultural resources. In accordance with 36 CFR 800.8 (TN513), “Coordination with the National Environmental Policy Act,” the NRC staff is coordinating its obligations under NHPA Section 106 with the NEPA review. The NRC recognizes there are specific government-to-government consultation responsibilities regarding interactions with Federally recognized Tribal governments because of their status as sovereign nations. To date, the NRC staff has conducted outreach and consultation to all Federally recognized Indian Tribes located in the vicinity of the CFFF site in South Carolina that may possess potential religious, spiritual, and cultural interest and ties to the area. In July 2020, the NRC staff notified the South Carolina State Historic Preservation Officer (SC SHPO) and Catawba Indian Nation of the intent to prepare an EIS for the proposed action and invited them to provide comments. The NRC staff plans to continue outreach and consultation during the development of the EIS.

The NRC staff continues to consult with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (FWS) pursuant to Section 7 of the Endangered Species Act (50 CFR 402.02 [TN4312]). The NRC staff initiated consultation in 2015 with FWS for six protected species that may occur near the CFFF, and in 2017 with NMFS for one protected species that may occur near the CFFF. With the preparation of the draft EA in 2019 (NRC 2019-TN6472), FWS confirmed that there were no new species to include in consultation, and there were no objections to the NRC’s finding of *may affect, not likely to adversely affect* (FWS 2019-TN6429). The NRC staff notified the FWS in July 2020 (NRC 2020-TN6556) of its intent to prepare an EIS for the proposed action and invited them to provide comments.

The NRC staff also consulted with NMFS regarding the changes to the affected environment in the 2019 draft EA, and NMFS concluded that NRC’s effect determination of *may affect, not likely to adversely affect* was still valid, and re-initiation of consultation was not required (NRC 2019-TN6472). The NRC staff notified NMFS in July 2020 (NRC 2020-TN6520) of its intent to prepare an EIS for the proposed action and invited them to provide comments.

A.7 Future Opportunities for Public Participation

In the upcoming year, the NRC staff expects to issue a draft EIS for public comment. The comment period on the draft EIS will be the next opportunity for interested Federal, State, and local government agencies, Tribal governments, and the public to comment on the NRC’s

environmental review of the license renewal for the CFFF. The NRC staff will consider comments received on the draft EIS in the preparation of the final EIS. Comments received on the draft EIS, and the NRC staff's responses to those comments (noting any edits and changes to the EIS as a result of comments), will be published in the final EIS.

B. Public Comments and NRC Responses Related to the October 2019 Draft EA

B.1 Lists of Individuals Who Commented on the Draft EA

The following tables present the names of the commenters who provided comments on the 2019 draft EA (NRC 2019-TN6472). Table B-1 provides a list of commenters who provided unique comment submissions (i.e., non-form letter submissions). Unique commenter authors are identified by name, affiliation (if stated), the comment correspondence identification (ID) number, and the ADAMS accession number assigned to their comment correspondence. The form letter submissions are included in Table B-1, and the author is noted as "Multiple Commenters" in the Commenter column. Table B-2 lists the names of commenters who provided a form letter and the ADAMS accession number for their correspondence. The comments are presented by subject area following Tables B-1 and B-2. Each subject area includes a comment summary and a response. Each comment summary also lists associated comments by correspondence ID and the comment number identified within the correspondence.

Table B-1. Individuals Providing Comments during the Draft EA Comment Period

Commenter	Affiliation (if stated)	Correspondence ID	ADAMS Accession Number
Allen, Robert		11	ML19331A087
Beard, Katherine		20	ML19331A212
Blair Parr, Nancy	WEC	13	ML19331A105
Clements, Tom	Savannah River Site Watch	01	ML19331A154
Commenters, Multiple		02	ML19331A168
Commenters, Multiple		23	ML19331A090
Cooper, Elaine		03	ML19331A390
Desportes, Mary		14	ML19331A117
Edgar, Michelle		12	ML19331A088
Generette, Lloyd		17	ML19344C143
Greenlaw, Pamela	Sierra Club of South Carolina - John Bachman Group	08	ML19343B214
Grego, John	Friends of Congaree Swamp	16	ML19344C135
Haire, Wenonah	Catawba Indian Nation	05	ML19331A585
Hudson, Andrew	198 Methods	18	ML19344C151

Lewis-Schroer, Keely	South Carolina SHPO	06	ML19331A601
Lilly, Cecily		10	ML19331A081
Peacock, Candee		21	ML19331A411
Preston, Priscilla		04	ML19331A457
Stangler, Bill	Congaree Riverkeeper	15	ML19331A181
Taylor, G. Kendall	SCDHEC	19	ML19344C158
Taylor, G. Kendall	SCDHEC	09	ML20119B091
Williams, Carol		22	ML19331A109
Woods, Felicia		07	ML19336A029

Table B-2. Individuals Who Submitted Form E-Mail with Correspondence ID 02 or Correspondence ID 23

Commenter	ADAMS Accession Number	ID
Alford, Duncan	ML19331A139	23
Anonymous	ML19331A079	23
Anonymous	ML19331A090	23
Anonymous	ML19331A095	23
Anonymous	ML19331A103	23
Anonymous	ML19331A125	23
Anonymous	ML19331A129	23
Anonymous	ML19331A156	23
Basso, Karen	ML19331A205	02
Beard, Katherine	ML19331A212	02
Bradley, Jonathan	ML19331A111	23
Compton, Brooke	ML19331A123	23
Cothran, Mary	ML19331A174	23
Cumbee, Michael	ML19331A243	02
Dalbec, Elizabeth	ML19331A435	02
Emanuel, Ivy	ML19331A441	02
Falck-Madsen, Judith	ML19331A175	02
Fralix, Cassandra	ML19331A570	02
Giordano, Lori	ML19331A098	23
Greeter, Stuart	ML19331A167	23
Grey, Nina	ML19331A246	02
Gunst, Ellen	ML19331A426	02
Hagman, Matthew	ML19331A092	23
Hendley, Viola	ML19331A143	23
Hudson, Andrew	ML19331A219	02
Jobsis, Gerrit	ML19331A153	23
Lancaster, Ashleigh	ML19331A401	02
Magargee, Dolores	ML19331A226	02

Marrtin, Joy	ML19331A552	02
Martin, C	ML19331A430	02
Martley, Heather	ML19331A453	02
McKenney, Lin	ML19331A574	02
Moye, Lisa	ML19331A149	23
Papaletsos, Carol	ML19331A418	02
Peacock, Candee	ML19331A411	02
Roland, Margaret	ML19331A561	02
Ross, Carolyn	ML19331A171	23
Rothenberg, Sarah	ML19331A094	23
Shroyer, Pamela	ML19331A163	23
Sumter, Karyn	ML19331A447	02
Swigler, Janet	ML19331A189	23
Tate, John	ML19331A147	23
Waters, Lynn	ML19331A237	02
Wilber, Charles	ML19331A193	02
Williams, Carol	ML19331A109	23

B.2 Alternatives

Comment Summary: A number of comments requested that the NRC consider the alternative to renew the CFFF license for a period less than the requested 40 years. Some commenters requested that the NRC not renew WEC's license for more than 10 years or consider a shorter license with WEC demonstrating safe operations before renewing the license for a longer period.

Comments: (2-1) (7-1) (15-4) (16-1) (16-5) (17-3)

Response: *The October 2019 draft EA assessed the impacts of the no-action alternative and Alternative 1 – License Renewal for Less than 40 Years (NRC 2019-TN6472). The EIS is the next step in the NRC staff's environmental review. In the EIS, the NRC staff will also evaluate the no-action alternative and the alternative of renewing the license for less than 40 years.*

B.3 Ecology – Aquatic

Comment Summary: One commenter expressed concern about the potential for contamination from the CFFF site impacting fish and wildlife, which they worried could impact their ability to safely eat fish from the Congaree River.

Comments: (11-1)

Response: *The October 2019 draft EA discussed potential impacts on ecological aquatic resources (NRC 2019-TN6472). In correspondence dated October 29, 2019, the FWS concurred with the NRC staff's finding that the proposed action is not likely to adversely affect the seven federally listed endangered or threatened species identified in the draft EA (ADAMS*

Accession No. ML19302F656; FWS 2019-TN6426). The EIS will build from the draft EA and consider the comments received regarding ecological aquatic resources.

B.4 Ecology – Terrestrial

Comment Summary: Commenters requested that additional discussion be included to better describe the biodiversity of species of concern in the area, conservation efforts, and the importance of the ecosystems when considering impacts from the proposed action. One commenter requested that impacts on the Wood Stork and the Rafinesque Big-eared Bat be discussed, due to their status as species of concern. The same commenter noted that the CFFF is located on the ecotone between the Congaree River floodplain and bluff ecosystems, which is a migration and transit corridor for wildlife. One commenter explained that WEC installed nesting boxes for the Prothonotary Warbler on its property and checks them biweekly during nesting months.

Comments: (13-4-11) (16-7) (16-8)

Response: *The October 2019 draft EA discussed potential impacts on ecological resources (NRC 2019-TN6472). In correspondence dated October 29, 2019, the FWS concurred with the NRC staff's finding that the proposed action is not likely to adversely affect the Wood Stork and the six other federally listed endangered or threatened species identified in the draft EA (ADAMS Accession No. ML19302F656; FWS 2019-TN6426). The EIS will build from the draft EA and consider the comments received regarding ecological resources.*

B.5 General Editorial

Comment Summary: One commenter suggested a spelling correction, and another commenter provided numerous suggestions for clarifying text throughout the draft EA, corrections to use of present tense for actions that were described in future tense, and suggestions for updated references.

Comment: (6-4) (13-1-1) (13-1-2) (13-1-3) (13-1-4) (13-1-5) (13-1-6) (13-1-7) (13-1-9) (13-1-11) (13-1-12) (13-1-13) (13-1-14) (13-1-15) (13-1-16) (13-1-18) (13-1-19) (13-1-20) (13-1-21) (13-2-1) (13-2-2) (13-2-3) (13-2-4) (13-2-5) (13-2-6) (13-2-7) (13-2-8) (13-2-9) (13-2-10) (13-2-11) (13-2-12) (13-2-13) (13-2-14) (13-2-15) (13-2-16) (13-2-17) (13-2-18) (13-2-19) (13-2-20) (13-3-2) (13-3-4) (13-3-8) (13-3-9) (13-3-10) (13-3-11) (13-3-13) (13-3-14) (13-3-17) (13-3-18) (13-3-19) (13-3-20) (13-3-21) (13-4-1) (13-4-2) (13-4-3) (13-4-4) (13-4-5) (13-4-6) (13-4-7) (13-4-8) (13-4-9) (13-4-10) (13-4-14) (13-4-17) (13-4-19) (13-4-21)

Response: *Suggested editorial changes or suggestions for clarification will be incorporated, as appropriate, in the EIS.*

B.6 Environmental Justice

Comment Summary: One commenter expressed concern for environmental justice communities near the CFFF with regard to the lack of effective communication and inclusion in the NEPA process, noting that the NRC must go above and beyond to communicate with environmental justice communities, particularly because some communities may not have

computers or internet connections. Commenters also noted that for environmental justice communities, consideration of a 40-year license renewal for a facility handling radioactive waste was unjust. Another commenter noted the potential danger from past violations at the plant, commenting that environmental justice communities are often the first to experience consequences of any violations at the site and often possess the least financial resources to protect themselves. One comment requested that best practices regarding inclusion of environmental justice communities during the NEPA process be used.

Comments: (4-3) (8-1) (8-7) (8-13)

Response: *The EIS will include an environmental justice analysis encompassing the vicinity of the CFFF, both in terms of community characteristics and potential impacts. The environmental justice analysis will be conducted in accordance with NRC's Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (69 FR 52040-TN1009).*

B.7 Geology

Comment Summary: Most of the comments requested that additional detail be added to the geological resource description to address seismic hazards, provide updated information about geological formations associated with the CFFF site, and suggested clarifications to the descriptions of soil and soil sample analyses. One commenter noted that the EA should include the CFFF's susceptibility to earthquakes of any magnitude, address infrastructure longevity, and discuss the operational and structural support systems in the buildings and exterior areas. Another commenter requested clarification of the discussion of the Black Creek Aquifer System and the Middendorf Aquifer, clarification regarding discussion of naturally occurring uranium, and clarification regarding discussion of any increased uranium levels that may arise due to advances in technology and instrumentation.

Comments: (9-7) (13-3-3) (13-3-5) (13-3-6) (13-4-15) (13-4-16)

Response: *The EIS will assess the potential impacts on geology and soils from the proposed license renewal, including consideration of local geologic structure, site stratigraphy, characteristics of the soils, and any other significant geological and soil conditions. The potential for earthquakes or any other major ground motion considerations resulting from natural geologic phenomena will be described in the EIS. The EIS will address the characteristics of potentially impacted aquifers and existing uranium contamination at the site. Separately and as part of the safety and integrated safety analysis or ISA reviews, the NRC staff evaluates the licensee's assessment of credible external events (including natural phenomena such as earthquakes) that could result in facility-induced consequences to workers, the public, or the environment, that could exceed the performance requirements of 10 CFR 70.61.*

B.8 Health – Radiological

Comment Summary: Commenters expressed concern that the analysis of radiological risk to the public beyond a 5-mile radius from CFFF was not sufficient and must extend to at least a 20-mile radius, and that occupational exposures were not adequately described. One commenter

noted that the annual radiation dose of workers at CFFF was higher than at other NRC-licensed facilities and that a more thorough investigation of chemical and radiological exposure levels should be included in the EA. Additional suggestions were made for clarifications to the occupational radiological and chemical exposures discussions.

Comments: (8-5) (8-19) (13-4-13) (13-4-20)

Response: *The EIS will address potential public and occupational radiation doses and associated health effects for the proposed license renewal. The estimated radiological doses for the public will be compared to the regulatory limits in 10 CFR 20.1301, and the occupational annual total effective doses for CFFF will be compared to the occupational dose limits in 10 CFR 20.1201 (NRC 2019-TN6472). The NRC is also conducting a safety review of the LRA that will evaluate compliance with applicable NRC safety regulations and document the results of that review in a Safety Evaluation Report.*

B.9 Historic and Cultural Resources

Comment Summary: The SC SHPO indicated that the CFFF site has a very high probability of significant archaeological properties and asked that any future proposed expansion or ground disturbance in previously undisturbed areas be submitted to the SHPO's office for review and comment. Additionally, the SHPO explained that the Federal agency (NRC) or applicant (WEC), as appropriate, should contact their office immediately if archaeological materials are encountered during construction; for example, installation of monitoring wells or future ground-disturbing activities. The SHPO also recommended consulting South Carolina ArchSite for up-to-date information, and requested Figure 2-8a in the draft EA be updated to reflect the Denley Cemetery.

The Catawba Indian Nation noted that they had no immediate concerns regarding traditional cultural properties, sacred sites, or archaeological sites but requested that they be notified if artifacts and/or human remains are located.

Comments: (5-1) (6-1) (6-2) (6-3) (6-5) (6-6) (6-7) (6-8)

Response: *The NRC staff initiated discussions with the SC SHPO and Federally recognized Tribes that possess potential religious, spiritual, and cultural interests and ties to the CFFF site as part of the development of the draft EA. The NRC staff will continue to consult during the development of the EIS and as part of its NHPA Section 106 review.*

Comment Summary: Comments focused on requests for a more robust description of other attributes associated with cultural and historic resources related to the history of the land, and a request to correct a historical reference related to Hernando de Soto. One commenter requested that the environmental review must also include a discussion of the culture of deep land ethic and land ownership in the community, in addition to discussing historic buildings, grave sites, and memorials.

Comments: (8-9) (8-14) (16-9)

Response: *The information and comments provided will inform the evaluation of the impacts on historic and cultural resources.*

B.10 Hydrology – Groundwater

Comment Summary: Many comments expressed concern about the unknowns related to extent of Tc-99, uranium, and other chemical contamination in the shallow and deep aquifers. Commenters requested that additional testing or monitoring be done to detect contamination or better understand the extent of contamination, and additional analysis be done to determine the extent of contamination. One comment requested that the source of Tc-99 contamination must be identified before a final EA is issued, while another comment noted the unresolved issues related to contamination, contamination pathways, and unknown sources of Tc-99 and groundwater plumes supported the need for an EIS. One comment requested that water in the deep aquifer be tested from an angle other than punching through the top confining layer near the contamination of the upper, shallow aquifer. Another comment expressed concern regarding the limited information in the EA pertaining to a 2011 uranium leak. One comment stated that while the EA noted the history of incidents at the CFFF, it did not adequately discuss the handling of those incidents.

Comments: (1-2) (8-15) (8-16) (8-17) (9-9) (13-3-12) (13-3-15) (13-3-16) (16-2) (16-10) (19-2)

Response: *The NRC staff has obtained and is considering the results and activities from the remedial investigation currently being carried out by WEC under their Consent Agreement with SCDHEC. These results and activities include new data about groundwater and sediment contamination, including isotopic analyses of uranium and technetium; the addition of new boreholes and wells for characterizing the subsurface; a conceptual site model illustrating CFFF site hydrogeology and the current extent of groundwater contamination; and an investigation of the Tc-99 source. The NRC staff is using this new information to evaluate the impacts on groundwater and will be described in the EIS. The NRC staff will continue to reach out to SCDHEC to obtain the most recent data from the remedial investigation and has requested additional information from WEC. The EIS will be informed by the results provided in these reports, as appropriate.*

B.11 Hydrology – Surface Water

Comment Summary: Many comments expressed concern about the unknowns related to extent of Tc-99, uranium, and other chemical contamination. Commenters requested additional analyses, including results from Consent Agreement sampling and monitoring and better analyses of volatile organic contamination and their movement beyond Upper Sunset Lake. Multiple comments requested that a description of a 1971 wastewater lagoon rupture be included in the EA, as well as additional sediment sampling and analysis of contamination in Upper and Lower Sunset Lakes. Commenters also requested more detailed descriptions of wastewater lagoon operations, discharge of effluents, potential for impacts, and the extent of sediment contamination, as well as better oversight of wastewater discharge at CFFF. Some comments provided suggestions for clarification or updates to draft EA text.

Comments: (7-4) (9-2) (9-3) (9-5) (9-8) (13-3-7) (19-3)

Response: *The NRC staff has obtained and evaluated results from the remedial investigation currently being carried out by WEC under their Consent Agreement with SCDHEC. The NRC staff continues to reach out to SCDHEC and to obtain the most recent data from the remedial investigation and has requested additional information from WEC. The EIS will be informed by the results provided in these reports.*

B.12 Land Use – Site and Vicinity

Comment Summary: One commenter noted that additional recognitions for the Congaree National Park should be included in the EA text, such as noting that the Park includes Ramsar Wetlands of International Importance and is a Federally designated wilderness. The commenter also noted that the waters within the 1988 Congaree National Park boundary expansion include Outstanding Resource Waters, that the Cedar Creek is the only Outstanding National Resource Water in South Carolina, and that the American Rivers recognizes the Congaree River as a Blue Trail and National Recreation Trail.

Comment: (16-6)

Response: *Information regarding special land designations will be incorporated, as appropriate, in the EIS.*

B.13 Meteorology and Air Quality

Comment Summary: Commenters noted recent incidents at the CFFF, such as a drum fire, spiking station issues, and a scrubber incident, and requested better oversight of air quality monitoring for release of contaminants. Those commenters further noted that they would like SCDHEC to continue to test for uranium levels in the atmosphere and to test soil samples around sealand containers. Two comments clarified that while the EA stated that WEC was regulated under 40 CFR Part 61, this regulation was no longer applicable due to a U.S. Environmental Protection Agency revision in 1996.

Comments: (7-2) (9-10) (13-8) (13-4-12) (19-6)

Response: *The potential impacts on air quality from the proposed license renewal will be compared to previous air quality metrics used as National Ambient Air Quality Standards (40 CFR Part 50-TN1089) in the EIS. Additionally, the NRC staff understands that WEC's air operating permit renewal is under consideration by SCDHEC, which includes monitoring requirements.*

B.14 Opposition

Comment Summary: Comments described general distrust of WEC operations of the CFFF and its safety record, and WEC's lack of transparency. Comments also shared general disagreement with the operation of the plant.

Comments: (10-1) (21-1) (22-1)

Response: *In accordance with its statutory authority, the NRC issues and renews licenses to applicants who meet NRC's regulatory requirements. The NRC staff has been carefully reviewing WEC's LRA and supporting materials to determine whether the application meets all regulatory requirements related to operational safety to be documented in a Safety Evaluation Report, and will disclose the potential environmental impacts in the draft EIS, which will be published for public comment.*

B.15 Outside of Scope

Comment Summary: Some comments requested that the financial status of WEC be included in the EA, including a discussion of how WEC's bankruptcy and the takeover by Brookfield Business partners may affect ownership and management of CFFF. One comment requested clarification regarding the contract structure (and any financial implications) that exists between WEC and its subsidiary, WesDyne International (WesDyne), and whether the NRC or U.S. Department of Energy regulate WesDyne. A couple comments requested that WEC establish a compensation plan for nearby landowners in the event of a plant disaster. Additionally, some comments questioned why safety analyses and evacuation plans were not included in the scope of the draft EA or available for public review and comment. One commenter requested that inspections by the NRC not be reduced. Several comments generally voiced disagreement with the NRC and the future of nuclear power and emphasized the need for alternative energy.

Comments: (1-4) (1-7) (1-9) (7-7) (8-10) (8-18) (18-3) (20-1)

Response: *Comments regarding issues of financial assets and ownership, liability for accidents, and emergency planning are outside the scope of the EIS. Comments discussing the use of nuclear power versus other energy for commercial power production are also outside the scope of the EIS. The NRC staff will also conduct a separate safety review that will evaluate compliance with all applicable NRC safety regulations and document the results of that review in a Safety Evaluation Report. The NRC performs inspections at fuel cycle facilities covering areas such as security, material control and accounting, nuclear criticality control, chemical processes, emergency preparedness, fire safety, radiation safety, environmental protection, and waste management in accordance with NRC inspection procedures, which are not the subject of the NRC's licensing review.*

B.16 Process – Licensing

Comment Summary: Commenters requested that the license application for renewal be delayed because WEC's current license's expiration date is in 2027. Additional comments requested that WEC demonstrate a history of compliance with Consent Agreement conditions and safety regulations for at least one year prior to its filing an application for a license renewal. Other comments requested that the WEC's license renewal request be denied and the site remediated through decommissioning. Another comment requested that SCDHEC and NRC be notified as soon as possible regarding any malfunction of equipment/systems that releases hazardous gases or volatile compounds.

Comments: (2-3) (2-5) (3-3) (3-6) (4-2) (7-3) (8-13) (12-2) (16-11) (17-2)

Response: *The NRC license review was initiated after determining that the application was properly filed and complete in accordance with NRC regulations. In the EIS, the NRC staff will also evaluate the no-action alternative and the alternative of renewing the license for less than 40 years. Additionally, the NRC staff's environmental review has and continues to be informed by the investigations that WEC is conducting under the Consent Agreement.*

The NRC staff is also conducting a safety review of the LRA. The NRC's decision on WEC's license application to renew the CFFF license will be informed by the safety review (to be documented in a Safety Evaluation Report) and the EIS. During operation under a NRC license, WEC must comply with the reporting requirements in 10 CFR 70.50, "Reporting Requirements," which require licensees, in part, to promptly notify the NRC of events that could cause releases of licensed materials that exceed regulatory limits, including fires and explosions.

B.17 Process – NEPA

Comment Summary: Many comments requested that the draft EA comment period be extended, or additional time be allowed to consider elevating the draft EA to an EIS. The expanded analysis under an EIS was suggested to include more event history for CFFF (particularly uranium leakage events), safety analyses, additional sampling and monitoring data, and provide better transparency with the public. One comment requested that the NRC safety review be released to the public before the close of the public comment period. Another comment requested that the EA be abandoned and replaced with a new EA that includes the NRC safety review, an aggressive inspection schedule, details regarding quantities of toxins, solvents, and nuclear materials released into the environment, the list of incidents and events, details regarding mitigation procedures, and an analysis of potential loss of property values for real property within a 20-mile radius. Multiple comments requested that the final EA must reject a FONSI.

Comments: (1-1) (1-5) (1-6) (1-10) (2-4) (2-6) (3-5) (7-6) (8-6) (8-8) (8-11) (8-12) (8-20) (9-1) (10-2) (12-1) (14-1) (15-2) (15-3) (18-2) (18-4) (18-5) (19-1) (19-4) (19-5) (22-2) (23-1)

Response: *On June 5, 2020 (NRC 2020-TN6519), the NRC staff decided to prepare an EIS because new information (WEC 2020-TN6751), provided by WEC to SCDHEC under the Consent Agreement (SCDHEC/WEC 2019-TN6554), revealed uncertainty related to the source and extent of contamination onsite and the potential future migration pathways offsite. As with the draft EA, the EIS will be prepared in accordance with NRC's applicable NEPA-implementing regulations in 10 CFR Part 51(TN250). The EIS will describe releases to the environment, including incidents and events when releases occurred. In preparing the EIS, the NRC staff will make use of the best available information to inform its evaluation of potential environmental impacts, and pursuant to 10 CFR 51.41, the staff will independently evaluate available and reliable information. The NRC staff has provided and will continue to provide meaningful public participation opportunities throughout the environmental review process for WEC's LRA. Additionally, the NRC staff is conducting a safety review of the LRA. The NRC's decision about whether to renew the WEC's license to continue operation of the CFFF will be informed after completion of both the safety review (to be documented in a Safety Evaluation Report) and the EIS.*

B.18 Site Layout and Design

Comment Summary: Commenters expressed general concern about the history of accidents and events at the CFFF, and requested that details regarding facility layout and aging infrastructure be included in the draft EA.

Comments: (2-2) (3-1) (3-2) (8-3) (8-4) (9-4) (9-6) (13-1-10) (13-1-17)

Response: *The NRC staff is conducting a detailed safety review that will evaluate compliance with all applicable NRC safety regulations, and the results of that review will be documented in a Safety Evaluation Report. The description of the CFFF included in the October 2019 draft EA will be also be included in the EIS with additional details, as appropriate.*

B.19 Waste Management

Comment Summary: Commenters requested better descriptions of how waste is managed and remediated. One commenter requested a discussion of the incineration process and its aerial discharge, as well as a discussion of the types and quantities of byproduct waste that are incinerated or shipped off-site (including listing off-site disposal sites). Another commenter requested a description of any further treatment, recovery, or disposal options for noncombustible or combustible wastes that are packaged and placed in storage to await shipment for further treatment. One other comment noted a 2019 incident involving leaking intermodal containers and commented that WEC's failure to properly manage these containers and report contamination reveals WEC's lack of attention to proper site management and disclosure. This commenter also noted that the EA must include discussion of this incident and specifically acknowledge the accidental nature of discovery of the problem. A commenter requested WEC's plans for remediation involving wastewater lines and storage tanks. One comment requested that remediation for a 2008 and 2011 wastewater line leak be a precondition for granting of a renewed operating license.

Comments: (1-3) (16-3) (16-4)

Response: *The EIS will include an analysis of the potential impacts of waste management related to the proposed license renewal request. This analysis will include descriptions of the waste streams produced by continued operation of the CFFF, WEC's proposed waste management activities, and how WEC will comply with federal and state applicable regulations that address handling, storage, and disposal of these wastes.*

C. Public Comments and NRC Responses Related to EIS Scoping

C.1 Lists of Individuals Who Provided Comments during the Scoping Period

The following tables present the names of commenters who provided comments during the EIS scoping comment period. Table C-1 provides a list of commenters who provided unique comment submissions (i.e., non-form letter submissions). Unique comment authors are identified by name, affiliation (if stated), the comment correspondence ID number, and the

ADAMS accession number of their comment correspondence. The form letter submissions are included in Table C-1 and the author is noted as “Multiple Commenters” under the Commenter column. Table C-2 lists the names of commenters who provided a form letter and the ADAMS accession number for their correspondence. The comments and responses are presented by subject area following these tables. Each section includes a comment summary of the responses received for that particular subject area, and lists corresponding comments by correspondence ID and the comment number within the correspondence associated with that comment summary.

Table C-1. Individuals Who Provided Comments during the Scoping Comment Period

Commenter	Affiliation (if stated)	Correspondence ID	ADAMS Accession Number
Anonymous		29	ML20245E573
Austin, Stan	National Park Service	13	ML20244A372
Chandler, A		30	ML20247J369
Clements, Tom	Savannah River Site Watch	07	ML20234A731
Clements, Tom	Savannah River Site Watch	09	ML20241A265
Clements, Tom	Savannah River Site Watch	14	ML20244A375
Clements, Tom	Savannah River Site Watch	23	ML20330A261
Commenters, Multiple		12	ML20244A370
Commenters, Multiple		34	ML20244A386
DeLorme, Peter		22	ML20246G498
Galler, Jean	Blue Ridge Environmental Defense League	32	ML20245E577
Goldman, Charles		04	ML20234A724
Greenlaw, Pamela	Midlands Group of South Carolina Sierra Club	02	ML20234A720
Greenlaw, Pamela	Midlands Group of South Carolina Sierra Club	21	ML20246G495
Grego, John	Friends of Congaree Swamp	16	ML20244A380
Haire, Wenonah	Catawba Indian Nation	24	ML20247J535
Hatcher, Harold (Buster)	Waccamaw Indian People	10	ML20241A266
Issod, Andrea	Sierra Club of South Carolina – Midlands Group	31	ML20245E575
Judge, Christopher		08	ML20244A239
Judge, Christopher		15	ML20244A377
Martin, Tracy	Council of South Carolina Professional Archaeologists	11	ML20244A152
Matherly, Deborah		18	ML20244A383
McCord, Coral		03	ML20234A722
Minerd, Leslie		19	ML20246G489
Mitchum, Michelle	Pine Hill Indian Tribe	05	ML20234A727

Mitchum, Michelle	Pine Hill Indian Tribe	17	ML20244A381
Murphy, Brenda	South Carolina State Conference National Association for the Advancement of Colored People	25	ML20247J537
Norris, James Michael	U.S. Geological Survey	01	ML20232C790
Parr, Pete	Pee Dee Indian Tribe	33	ML20253A070
Preston, Priscilla		35	ML20259A462
Riggin, Lorianne	SCDHEC	28	ML20245E572
Sanders, Virginia		20	ML20246G491
Stangler, Bill	Congaree Riverkeeper	06	ML20234A728
Stangler, Bill	Congaree Riverkeeper	26	ML20247J533
Taylor, G. Kendall	SCDHEC	27	ML20274A306

Table C-2. Individuals Who Submitted Form E-Mail with Correspondence IDs 02, 12, and 34

Commenter	ADAMS Accession Number	ID
Bickford, Kim	ML20244A378	12
Cooper, Elaine	ML20247J534	34
Frick, Elaine	ML20234A725	02
Gee, Oh	ML20244A414	34
Greenlaw, Pamela and multiple commenters from Midlands Group of the Sierra Club	ML20234A720	34
Hendley, Viola	ML20244A379	12
Johnson, Eric	ML20244A384	34
Moore, Lawrence	ML20244A386	34
Palmer, Paul	ML20246G487	34
Palmer, Paul	ML20246G488	34
Sanders, Virginia	ML20246G491	02
Schurlock, Warren	ML20244A370	12

C.2 Accidents

Comment Summary: Commenters requested that the EIS consider including information regarding accident response, such as evacuation plans for nearby communities and accident notification to affected residents. Commenters requested WEC commit to providing public communications regarding these plans and consider installation of evacuation route signs.

Comments: (12-11) (31-1)

Response: WEC's emergency plan addresses response to the radiological and chemical hazards that would result from a potential release of radioactive or chemically hazardous materials. The adequacy of WEC's emergency management is part of the NRC's safety review and will be assessed in the Safety Evaluation Report.

C.3 Alternatives

Comment Summary: A number of comments requested that the NRC consider an alternative to relicense the CFFF for a period less than WEC's requested 40 years, between 1 and 20 years, while other commenters suggested a demonstration of no events as a condition prior to relicensing, or allowing public review of facility operations and incidents every 10 years. Numerous comments requested that the NRC deny WEC a license renewal of 40 years, citing WEC's record of poor notification and regulatory compliance, contamination concerns, safety concerns, and the site's location in an environmentally sensitive area near Congaree National Park. Similar comments were received during the public comment period for the draft EA (see Section B.2).

Comments: (7-20) (7-21) (7-22) (12-1) (12-3) (16-1) (18-5) (19-1) (19-2) (19-3) (20-1) (21-3) (21-4) (21-7) (22-1) (25-4) (26-6) (30-1) (34-1)

Response: A licensee that is required to submit an integrated safety analysis or ISA in accordance with Subpart H of 10 CFR Part 70 can submit an application to renew its license for a 40-year term (see ADAMS Accession No. ML062700110). Like the alternatives considered in the October 2019 draft EA, the NRC staff will also evaluate the no-action alternative (i.e., denial of the license renewal request) and the alternative of renewing the license for less than 40 years.

C.4 Benefit-Cost Balance

Comment Summary: Some commenters requested an evaluation of the economic value of decommissioning and remediation measures today versus 40 years from now when the license renewal term may end.

Comments: (17-8) (26-7)

Response: The NRC staff will conduct a cost benefits analysis for the proposed action and alternatives and discuss the results in the EIS.

C.5 Cumulative Impacts

Comment Summary: One commenter requested that the EIS include consideration of cumulative impacts. Another commenter felt that the potential for other fuel sources other than low-enriched uranium should be described in the EIS with consideration of plant changes, environmental impacts, and the possible need for an amended license.

Comment: (26-5) (9-1)

Response: *The NRC staff will describe the potential for cumulative effects on the different environmental resource areas from nearby industrial facilities, and past, present, and reasonably foreseeable future actions.*

C.6 Ecology – Aquatic

Comment Summary: Commenters requested inclusion of data showing concentrations and toxicity impacts on fish from contaminants in the Congaree River and other nearby affected surface water bodies such as Sunset Lake and Mill Creek, and commenters requested that all radiological and nonradiological contaminants be included in the exposure analyses. One commenter suggested that the frequency of fish sampling for contaminants needed to be increased to more than once a year, while other commenters suggested other freshwater species, such as mussels, be included in the sampling plan, or more information about the tested fish, such as size and weight, be reported in the EIS. Several concerns were raised regarding the importance of Federally protected species and State species of concern or those under conservation priorities that may be in the vicinity. One commenter requested that an update to all Federal and State-listed species in the area of the facility be provided in the EIS. A few additional comments expressed concern about the presence of contaminants in species caught for consumption.

Comments: (12-9) (16-8) (21-14) (26-3) (28-2) (28-9) (28-10) (34-5)

Response: *The EIS will assess the impacts from the proposed renewal of WEC's license to continue operation of the CFFF on freshwater resources including habitats, species, and species that have Federal or State status and will build from the information in the October 2019 draft EA (NRC 2019-TN6472). The NRC staff appreciates the information provided by the commenters with regard to species in the area and the history of population studies in the region and will consider this information and similar information received during the draft EA comment period in the preparation of ecology sections in the EIS (see Section B.3).*

C.7 Ecology – Terrestrial

Comment Summary: Commenters requested that additional discussion be included to better describe the ecotone of the region that covers the biodiversity of species of concern in the area, conservation efforts, and the importance of the ecosystems and wildlife migration corridors through the area when considering the impacts of the proposed action. One comment requested bird and bat surveys be included and discussed more specifically for potential impacts in the EIS. One commenter provided information concerning the specific ecoregion in which the CFFF site is located.

Comments: (16-5) (28-8)

Response: *Similar to the evaluation in the October 2019 draft EA (NRC 2019-TN6472), the EIS will assess impacts from the proposed renewal of WEC's license to continue operation of the CFFF on terrestrial resources including habitats, species, and species that have Federal or State status. The NRC staff appreciates the information provided by the commenters with regard to species in the area and ecoregion of the site and will consider this information and*

similar information received during the draft EA comment period in the preparation of ecology sections in the EIS (see Section B.4).

C.8 Environmental Justice

Comment Summary: Commenters expressed concern about environmental justice communities near the CFFF and requested that those communities be included in the NEPA process. Multiple commenters requested that assessments be conducted to analyze impacts on environmental justice communities. Commenters expressed concern with regard to air emissions and the impact on respiratory health and potable well water contamination from accidents for the African-American communities in Lower Richland.

Comments: (2-2) (4-2) (7-15)

Response: *The NRC staff will assess impacts on environmental justice communities from the proposed action and alternatives. The environmental justice analysis will be conducted in accordance with NRC's Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (69 FR 52040-TN1009). Similar comments were received during the draft EA comment period (see Section B.6).*

Comment Summary: Multiple commenters requested that the EIS include consideration of cumulative impacts on environmental justice communities such as the Lower Richland communities due to the presence of multiple industries in the area. Commenters noted the higher rates of illness in environmental justice communities due to the presence of landfills, coal-fired power plants, and a paper mill in the region. Commenters requested that cumulative assessments should include health effects from air, water, and soil pollution for the regional environmental justice communities, and should address the disproportionate risk to communities like Lower Richland from cumulative adverse health conditions.

Comments: (12-12) (31-5) (34-2)

Response: *The NRC staff will consider cumulative effects when assessing impacts on environmental justice communities from the proposed action and alternatives in the preparation of the EIS.*

C.9 Geology

Comment Summary: Multiple commenters requested that additional information be added to the geological resource description in the environmental review. One commenter requested that seismic information, including a discussion of the regional seismic zone, be included in the EIS and provided updated references for such a discussion. Additional comments included providing updated hydrostratigraphy and lithostratigraphy information, discussing river terraces and marine formations, and updating site-specific geology information. Comments also provided revised references for updating the geological information in the EIS.

Comments: (28-4) (28-5) (28-6)

Response: *The EIS will assess the potential impacts on geology and soils from the proposed license renewal, including consideration of local geologic structure, site stratigraphy, characteristics of the soils, and any other significant geological and soil conditions. In preparing the EIS, the NRC staff will consider these comments and suggested references as well as the information provided in similar comments received during the draft EA comment period, as appropriate (see Section B.7).*

C.10 Health – Radiological

Comment Summary: Multiple commenters expressed general concern about the radiological risk to workers at CFFF site and to the public from the continued production of nuclear fuel and potential accidents. One commenter expressed concern regarding potential community exposure and resulting impacts on communities. Some commenters requested that all potential pathways of radiological exposure be evaluated, including those related to Tc-99. One commenter requested that short- and long-term effects of exposure on humans and animals be evaluated, particularly in fish and game. Commenters provided specific suggestions for topics to be included in the EIS. One commenter suggested discussing a robust human health and ecological risk assessment in the EIS, while other commenters felt the EIS should address training, safety education, and evaluations of effectiveness and enforcement of public health safety measures.

Comments: (12-4) (12-8) (13-8) (17-2) (17-7) (32-2) (35-3)

Response: *The EIS will address potential public and occupational radiation doses and associated health effects for the proposed license renewal. The draft EA discussed the public health impacts based on the radioactive materials transport pathways for stack releases and Congaree River discharges from CFFF. The estimated radiological doses for the public were compared to the regulatory limits in 10 CFR 20.1301. The occupational annual total effective doses for the CFFF were compared to the occupational dose limits in 10 CFR 20.1201 (NRC 2019-TN6472). The NRC staff is also conducting a detailed safety review that will evaluate compliance with all applicable NRC safety regulations and document the results of that review in a Safety Evaluation Report.*

C.11 Historic and Cultural Resources

Comment Summary: Commenters requested that the National Park Service, the South Carolina Department of Archives, and any culturally affiliated, Federally recognized Tribes be included as consulting parties in the NHPA Section 106 process. Other commenters requested that Tribes be notified prior to any ground-disturbing activities.

Comments: (13-11) (24-2)

Response: *As part of the development of the draft EA, the NRC staff initiated discussions with the SC SHPO and Federally recognized Tribes that possess potential religious, spiritual, and cultural interest and ties to the CFFF site. The NRC staff will continue to consult during the development of the EIS and as part of its Section 106 review. The NRC staff appreciates the interest of other groups regarding the protection of historic and cultural resources and will*

consider information submitted by these groups as part of its evaluation of impacts on historic and cultural resources.

Comment Summary: Commenters focused on elements to include in historic and cultural resource descriptions in the EIS. Most comments focused on the need to consider off-site cultural resources in the vicinity of the CFFF in its impacts assessment and an expansion of the area of potential effect (APE) to include Congaree National Park. Commenters expressed concern that there were significant cultural resources in the vicinity of the CFFF that had not yet been identified and requested that the EIS consider potential contamination of unidentified resources or offsite cultural resources when developing the EIS, and the impacts of the installation of monitoring wells on these resources.

Several commenters requested that relicensing not be completed until full inventories and evaluations of the APE are completed. One commenter suggested specific stakeholders who should be involved in such surveys while another commenter expressed concern about the use of ground-penetrating radar to avoid impacts on cultural resources because the results must be interpreted by specialists and the technology does not necessarily detect all cultural resources or artifacts. One commenter requested that the impacts of decommissioning be addressed in relation to impacts on cultural resources.

Comments: (8-1) (8-2) (10-1) (11-1) (11-2) (11-3) (11-4) (11-5) (13-4) (15-1) (15-2) (15-3) (16-6) (17-1) (17-3) (17-4) (17-5) (17-6) (24-1)

Response: *The NRC staff will describe historic and cultural resources that may be affected by the proposed action and alternatives in the EIS. The NRC staff's ongoing NHPA Section 106 consultation with consulting parties is described in the draft EA and will be included and updated in the EIS. The NRC staff will consider these comments and similar comments received during the draft EA comment period (see Section B.9) when assessing the potential impacts on historic and cultural resources from the proposed action and alternatives in the EIS.*

C.12 Hydrology – Groundwater

Comment Summary: Numerous commenters offered suggestions about including certain groundwater information in the EIS. Commenters requested that the WEC and SCDHEC Consent Agreement, Tc-99 Source Investigation Work Plan, updated aquifer and monitoring well information, and updated maps and figures conveying the site geography be included in the EIS, as well as any relevant analyses. Multiple commenters suggested that the potential for impacts on groundwater wells also be included in the EIS. Additionally, commenters requested that the EIS include a characterization of Tc-99, uranium, tetrachloroethene (PCE), and trichloroethene (TCE) plumes, as well as any additional plumes. Multiple commenters requested robust sampling be included in the EIS, including sampling and/or monitoring data from radiological and nonradiological contamination plumes, tracking and reporting groundwater quality, using WEC's Conceptual Site Model when determining groundwater contaminant transport and impacts, and using predictive assessments to analyze contaminant movement throughout the duration of the license renewal period.

Comments: (7-7) (12-7) (13-6) (13-7) (16-10) (21-11) (21-8) (21-9) (22-3) (26-8) (28-1) (28-7) (34-4) (34-6)

Response: *In preparation of the EIS, the NRC staff has obtained and is using the results from the remedial investigation currently being carried out by WEC under their Consent Agreement with SCDHEC. The NRC staff will consider these comments and similar comments made for the draft EA (see Section B.10) when assessing impacts on groundwater resources from the proposed action, alternatives, and cumulative impacts in the EIS.*

C.13 Hydrology – Surface Water

Comment Summary: Commenters requested that additional information be included in the EIS, such as a thorough description and assessment of East Lagoon soil contamination, an assessment of all lagoons in relation to flooding and contamination risks, and a description and assessment of past, current, or future lagoon remediation activities and monitoring. One commenter requested a discussion of any impacts on offsite wells, while another suggested the tracking and tracing analysis of contamination in surface waters be described in the EIS. One commenter requested that the 1971 spill of wastewater into Sunset Lakes be investigated as a potential source of uranium in that water body, or another source study to determine the source of this contamination. Multiple commenters also requested that any impacts on the Congaree River and its sediments be analyzed, and commenters supported including special designations for the Congaree National Park, including its international, national, State, and local designations, in the EIS.

Commenters: (7-9) (7-14) (13-2) (13-5) (13-9) (13-10) (14-3) (16-7) (22-4) (26-2) (26-4)

Response: *The NRC staff has obtained and is evaluating the results from the remedial investigation being carried out by WEC to date under their Consent Agreement with SCDHEC. The EIS will be informed by the results provided in these reports. The NRC staff will consider these comments and similar comments made during the draft EA comment period (see Section B.11) when assessing impacts on surface water and sediment resources from the proposed action, alternatives, and cumulative impacts in the EIS.*

C.14 Land Use

Comment Summary: Commenters provided additional information about local area land use. A commenter provided information about the Congaree National Park and its designations and importance to the region and another commenter requested that impacts on the Congaree National Park be included in the EIS. One commenter requested that the Mill Creek Mitigation Bank be considered when describing and considering impacts on the site and vicinity.

Comments: (13-3) (26-9) (28-3)

Response: *The NRC staff appreciate the information from commenters regarding land use in the region and designations of the Congaree National Park. The NRC staff will consider these comments and similar comments made during the draft EA comment period (see Section B.12) when assessing impacts on land use for the proposed action, alternatives, and cumulative impacts in the EIS.*

C.15 Meteorology and Air Quality

Comment Summary: Commenters requested that a variety of information be included in the EIS regarding air quality and climate change. Requests were made to include air emission data, including indoor and outdoor air quality, quantities of all on-site and off-site monitored radiological materials, toxins and gases, and operations and maintenance information concerning ventilation and incineration activities. Multiple commenters requested that this information be included and analyzed in relation to potential human health impacts. One commenter requested that the status of WEC's air permit renewal application for the CFFF site, including information regarding any history of violations, be included in the EIS. Another commenter requested that the EIS consider short- and long-term climate change impacts with regard to flooding.

Comments: (7-17) (12-5) (12-6) (21-12) (31-4)

Response: *The October 2019 draft EA described air quality monitoring for CFFF and assessed the impacts of continued operation on air quality (NRC 2019-TN6472). WEC submitted an air permit renewal application to SCDHEC, which the NRC staff will consider when preparing the EIS. Suggested text clarifications from commenters on the draft EA and relevant air quality monitoring history will also be addressed in the EIS, as appropriate. The NRC staff will consider impacts on air quality for the proposed action, alternatives, and cumulative impacts in the EIS. As appropriate, the EIS will analyze the contribution of the proposed action to climate change. Separately, the NRC staff conducts a safety review which, in part, looks at the licensee's evaluation of credible external events (including natural phenomena such as floods) that could result in facility-induced consequences to workers, the public, or the environment, that could exceed the performance requirements of 10 CFR 70.61.*

C.16 Opposition

Comment Summary: One commenter requested a denial of the license application due to a general concern about the safety of the nuclear industry and the decline of the nuclear industry. Multiple commenters opposed nuclear power and the nuclear industry more broadly regarding safety, waste, and economic feasibility, while others expressed concern that nuclear power was strongly linked to weapons production and political risk for potential nuclear attacks.

Comments: (9-3) (25-1) (29-1) (31-2) (32-1) (32-3) (32-4) (32-5) (32-6) (34-7)

Response: *In accordance with its statutory authority, the NRC issues and renews licenses to applicants who meet NRC's regulatory requirements. The NRC staff has been carefully reviewing WEC's LRA and supporting materials to determine whether the application meets all regulatory requirements related to safety and security. The NRC will disclose the potential environmental impacts of the CFFF license renewal in its draft EIS, which will be published for public comment.*

C.17 Outside Scope

Comment Summary: Multiple commenters expressed concern about WEC's bankruptcy declaration and change in ownership. Numerous commenters also requested further information about the legal and contractual agreements, compliance obligations, disclosure and communication of incidents and safety plans, and contract structure that exists between WEC and its subsidiary, WesDyne. Multiple commenters requested information about how NRC regulates dual-use facilities, including which agencies regulate industrial activities and how the relationship with the U.S. Department of Energy's National Nuclear Security Administration impacts operations and NRC regulation.

Comments: (7-16) (7-18) (7-19) (9-2) (9-4) (9-5) (12-13) (16-4) (21-17) (34-9) (34-10)

Response: *Comments regarding issues of financial assets and ownership are outside the scope of the EIS. In June 2018, the NRC approved WEC's indirect transfer of control of materials and export licenses and documented the basis of the findings in a Safety Evaluation Report (ADAMS Accession No. ML18162A027), including WEC's financial qualifications.*

The NRC staff will describe the potential for cumulative effects on the different environmental resource areas from nearby industrial facilities, and past, present, and reasonably foreseeable future actions.

C.18 Process – NEPA

Comment Summary: Many commenters requested that the public scoping comment period be extended. Commenters criticized the lack of communication regarding the public scoping deadline or requested increased community engagement through a robust communication plan and events, such as an in-person public scoping meeting with local communities, virtual public meetings to discuss and provide comments on the EIS and Safety Evaluation Report, and increased involvement with local stakeholders or the creation of a stakeholder working group as part of the NEPA process.

Comments: (1-1) (2-1) (2-4) (2-5) (3-1) (4-1) (4-3) (4-5) (4-6) (5-2) (6-1) (6-2) (7-1) (7-11) (10-2) (12-2) (15-4) (18-1) (18-3) (21-1) (21-18) (25-2) (25-3) (27-2) (27-3) (31-6) (35-1)

Response: *Public participation in the NEPA process is a vital component of NRC's environmental review process. The NRC staff appreciate the concerns regarding the public scoping process and requests for communication. The NRC staff has and will continue to provide meaningful public participation opportunities throughout the environmental review process for WEC's LRA. Members of the public had the opportunity to provide written and verbal comments to the NRC staff during the draft EA comment period and the associated public meeting held on November 14, 2019, in Columbia, South Carolina. Members of the public will have another opportunity to provide written comments during the draft EIS public comment period.*

Comment Summary: Multiple commenters expressed concern about the EIS schedule and requested a delay in the EIS schedule until ongoing studies required by the Consent Agreement

are concluded, or issues at the site are resolved. Commenters questioned whether new information that may arise between WEC and the SCDHEC would impact the EIS schedule and decision-making process for license renewal and requested that such information be considered regarding the length of the requested license renewal.

Comments: (7-2) (7-6) (7-23) (12-10) (18-2) (18-4) (21-5) (21-6) (34-8) (35-5)

Response: *The NRC staff considered the schedule information provided by WEC on July 20, 2020, regarding the anticipated schedule of the Phase II Remedial Investigation (WEC 2020-TN6707) in the development of a reliable EIS schedule. The EIS schedule was developed to appropriately balance the goals of NEPA (informing the decision-maker and the public) and timely completion of a high-quality EIS. Additionally, the NRC staff has obtained and is evaluating the results from the remedial investigation being carried out by WEC under their Consent Agreement with SCDHEC. The NRC staff has reviewed and considered the WEC reports submitted to SCDHEC including the Phase I Remedial Investigation Report (AECOM 2013-TN5508), the Hydrofluoric Acid Spiking Station Report (WEC 2020-TN6521), and the Tc-99 Source Investigation Report (WEC 2020-TN6538). The information in these reports has informed the NRC staff throughout the NEPA review process leading to the NRC staff's decision to prepare an EIS, and has been used throughout the development of the requests for additional information issued on November 3, 2020 (NRC 2020-TN6788). Accordingly, the NRC staff will review and evaluate the content, scope, and results of the future remedial investigation reports (e.g., Phase II) to continue the development of the EIS.*

Comment Summary: Multiple commenters requested that additional information be included in the EIS and/or shared with the public as stakeholders prepare to provide comments on the EIS, including: sharing information from previous environmental reviews; any information tied to violations at the site; an explanation of NRC criteria used to determine unavoidable adverse effects; irreversible and irretrievable resource commitments, and short-term resource use; updated citations and references; and comments and information about the draft EA in the EIS.

Comments: (5-1) (7-3) (21-2) (21-19) (23-1) (35-2)

Response: *As described in Section A.4 of this scoping summary report, the NRC staff is considering various documents and sources of information when preparing the EIS, including (but not limited to) the following: previous NRC EAs for CFFF operations (NRC 1977-TN6547, NRC 1985-TN5602, NRC 1995-TN5600, NRC 2007-TN5598, NRC 2018-TN6416, NRC 2019-TN6472); information gathered during NRC site visits (NRC 2018-TN6549, NRC 2019-TN6474); WEC reports submitted to SCDHEC under the Consent Agreement; and effluent monitoring reports (e.g., WEC 2019-TN6550) submitted to the NRC.*

With respect to the criteria used for assessing impacts, the NRC staff follows NUREG-1748, "Environmental Review Guidance for Licensing Actions Associated with NMSS Programs" (NRC 2003-TN1983), which discusses the standard of significance established by the NRC.

C.19 Site Layout and Design

Comment Summary: Commenters expressed general concern about the history of accidents, events, and contamination at the CFFF. Commenters also were concerned about the aging infrastructure, general plant operations, the safety culture at the site, and the intermodal containers used at the CFFF. Some specific comments requested consideration of event reports for the plant and discussion of how plant operation risks and mitigations have changed.

Comments: (2-3) (4-4) (7-4) (7-5) (7-10) (7-12) (13-1) (14-1) (14-2) (16-2) (16-3) (16-9) (21-10) (21-13) (21-15) (21-16) (22-2) (26-1) (27-1) (31-3) (34-3)

Response: *The October 2019 draft EA describes the facility and infrastructure of the CFFF and a history of events of concern (NRC 2019-TN6472). As described in Section A.4 of this scoping summary report, the NRC staff is considering various documents and sources of information when preparing the EIS, including (but not limited to) the following: previous NRC EAs for CFFF operations (NRC 1977-TN6547, NRC 1985-TN5602, NRC 1995-TN5600, NRC 2007-TN5598, NRC 2018-TN6416, NRC 2019-TN6472); information gathered during NRC site visits (NRC 2018-TN6549, NRC 2019-TN6474); WEC reports submitted to SCDHEC under the Consent Agreement; and effluent monitoring reports (e.g., WEC 2019-TN6550) submitted to the NRC. Operational risks and mitigation will be addressed in the NRCs safety review and addressed in the Safety Evaluation Report.*

C.20 Waste Management

Comment Summary: Several commenters requested that the EIS provide a description of waste processes and long-term waste impacts from contamination. One commenter requested more details regarding the incineration process to include quantities of byproduct waste and the final disposition of the waste to offsite disposal facilities, and what options are used for noncombustible waste with regard to treatment, recovery, or disposal. Another commenter requested that the EIS discuss the impact of materials left behind that have significant half-life periods.

Comments: (7-8) (7-13)

Response: *The EIS will include an analysis of the potential impacts on waste management from continued operation of the CFFF for the proposed relicensing period. This analysis will include descriptions of the waste streams produced by the proposed action, WEC's proposed waste management activities, and the applicable regulations that address handling, storage, and disposal of these wastes.*

D. References

10 CFR Part 51. *Code of Federal Regulations*, Title 10, *Energy*, Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." TN250.

36 CFR Part 800. *Code of Federal Regulations*, Title 36, *Parks, Forests, and Public Property*, Part 800, "Protection of Historic Properties." TN513.

40 CFR Part 50. *Code of Federal Regulations*, Title 40, *Protection of Environment*, Part 50, "National Primary and Secondary Ambient Air Quality Standards." TN1089.

50 CFR Part 402. *Code of Federal Regulations*, Title 50, *Wildlife and Fisheries*, Part 402, "Interagency Cooperation—Endangered Species Act of 1973, as Amended." TN4312.

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