

U.S. NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 52-018 AND NO. 52-019

COMBINED LICENSE APPLICATION FOR

WILLIAM STATES LEE III NUCLEAR STATION

UNITS 1 AND 2

DRAFT SUMMARY RECORD OF DECISION

BACKGROUND

In a December 12, 2007, letter (ADAMS Accession No. ML082260277), Duke Energy Carolinas, LLC (DEC or the applicant), which is a wholly owned subsidiary of Duke Energy Corporation, submitted an application to the U.S. Nuclear Regulatory Commission (NRC or the Commission) for combined licenses (COL) for two Westinghouse Electric Company (WEC) AP1000 advanced passive pressurized water reactors (PWR), located on the William States Lee III Nuclear Station (WLS) site in the eastern portion of Cherokee County in north central South Carolina. DEC will be the licensed owner and operator of WLS Units 1 and 2. The new units will be capable of providing an additional net output of 2000 megawatts of electricity (MW(e)) as a baseload source.

Section 102 of the National Environmental Policy Act of 1969, as amended (NEPA), directs that an environmental impact statement (EIS) be prepared for major Federal actions significantly affecting the quality of the human environment. The NRC's regulations in Title 10 of the *Code of Federal Regulations* (CFR) Part 51, were developed to implement the agency's responsibilities under Section 102 of NEPA. Pursuant to 10 CFR 51.20(b)(2), the NRC defines issuance of a COL as an action for which the agency will prepare an EIS.

By letter dated February 25, 2008 (NRC 2008a), the NRC notified DEC that its application was accepted for docketing. Docket numbers 52-018 and 52-019 were established for the proposed Units 1 and 2, respectively. After acceptance of DEC's COL application, the NRC began the environmental review process by publishing in the *Federal Register* (FR) on March 20, 2008, a Notice of Intent to prepare an EIS and conduct scoping activities (73 FR 15009), in compliance with requirements set forth in 10 CFR Part 51.

The DEC also needed to obtain permits from the U.S. Army Corps of Engineers (USACE) in order to perform certain site preparation activities associated with building the proposed facility.¹ To enable each agency to most efficiently meet its NEPA responsibilities for its license or permit decision, the NRC agreed to serve as the lead agency for preparing the EIS, with the USACE as a cooperating agency.

The NRC staff held two scoping meetings on May 1, 2008, in Gaffney, South Carolina, to discuss the environmental scoping process and to give members of the public an opportunity to

¹ These site preparation activities fall within the USACE's jurisdiction under [Section 10](#) of the Rivers and Harbors Appropriations Act (RHA) of 1899 and [Section 404](#) of the Clean Water Act (CWA) of 1977, as amended.

provide comments on environmental issues that the NRC should consider during its review of the application (ADAMS Accession No. ML081410109). The staff reviewed the oral and written comments received during the scoping process and contacted Federal, State, Tribal, regional and local agencies to solicit comments. A Scoping Summary Report was issued on September 11, 2008 (ADAMS Accession No. ML082390635).

On June 17, 2010, the NRC staff held an additional public scoping meeting in Gaffney, South Carolina, to solicit public input regarding the scope of the environmental review regarding the addition of Make-Up Pond C, a proposed off-site reservoir that would serve as a source of supplemental cooling water for WLS. The staff reviewed the oral and written comments received during the scoping process and contacted Federal, State, Tribal, regional and local agencies to solicit comments. A Scoping Summary Report was issued on December 22, 2010 (ADAMS Accession No. ML103220015).

The NRC and USACE prepared and published a draft EIS, and on December 23, 2011, a 75-day comment period began to allow members of the public and agencies to comment on the results of the environmental review (76 FR 80367). On January 19, 2012, the NRC conducted two public meetings in Gaffney, South Carolina, to describe the results of the environmental review, respond to questions, and accept public comments. In December 2013, the NRC issued the "Final Environmental Impact Statement for Combined Licenses (COLs) for William States Lee III Nuclear Station Units 1 and 2" (NUREG-2111), Volumes 1, 2 and 3 (final EIS), (ADAMS Accession Nos. ML13340A005, ML13340A006 and ML13340A007, respectively). All comments related to the environmental review during the comment period are included in Appendix E of the final EIS.

Pursuant to 10 CFR 51.102, "Requirement to provide a record of decision; preparation," and 51.103, "Record of decision—general," subpart (a)(1)-(4), the NRC staff has prepared this Summary Record of Decision (ROD) to accompany its action on the combined license application. This Summary ROD incorporates by reference materials contained in the final EIS. See 10 CFR 51.103(c).

DECISION

[If the Commission's mandatory hearing decision authorizes the NRC staff to issue the license, this Decision section will state:]

The NRC makes the decision to [grant or deny] the COL application(s) based on whether the applicant has met all applicable requirements, including the NRC's safety and environmental regulations. The NRC's safety review of the application is documented in the final safety evaluation report (FSER) issued on August 1, 2016 (ADAMS Accession No. ML16160A414).

The final EIS presents the staff's environmental review of the application. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering reasonable available alternatives, the NRC concluded that issuance of the COLs subject to the conditions for protection of the environment set forth in the licenses is in accordance with NEPA and the NRC's implementing regulations in Subpart A of 10 CFR Part 51, and that all applicable requirements have been satisfied. The final EIS as well as the Commission's Order dated [date] document these conclusions.

Accordingly, the NRC issued COLs NPF-[###] on [date], authorizing the construction and operation of WLS Units 1 and 2 at the WLS site in Cherokee County, South Carolina. The

licenses are effective as of [date], and extend for 40 years from the date that the Commission finds that the acceptance criteria in the combined license are met in accordance with 10 CFR 52.103(g). These combined licenses also include the authorizations required for the licensee to receive, possess, and use source, byproduct, and special nuclear material in connection with the construction and operation of WLS Units 1 and 2, in accordance with Commission regulations in 10 CFR Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material"; Part 40, "Domestic Licensing of Source Material"; and Part 70, "Domestic Licensing of Special Nuclear Material," and the general license authorized under 10 CFR Part 72, Subpart K, "General License for Storage of Spent Fuel at Power Reactor Sites."

AGENCIES' ROLES AND RESPONSIBILITIES:

The final EIS includes information on a broad range of issues that may be regulated by other Federal, State, or local authorities. As documented in the final EIS, the COL applicant must obtain and maintain permits from other Federal, State, and local authorities in order to construct and operate WLS Units 1 and 2.

Role of the NRC

The NRC was the lead agency for the environmental review of the WLS Units 1 and 2 COL application, including the development of a final EIS. In the final EIS, the NRC evaluated the impacts of building and operating two AP1000s at the WLS site. The NRC contacted Federal, State, Tribal, regional, and local agencies to solicit comments on the draft EIS. In addition to considering the environmental effects of the proposed action, NRC considered alternatives to the proposed action, including the no-action alternative, alternative energy sources, the building and operation of new reactors at alternative sites, and alternative technologies. The NRC also documented applicable requirements and necessary permits of other Federal, State, Tribal, and local agencies in considering the environmental monitoring and mitigation that DEC may implement. The NRC ensured that the NEPA process was properly conducted and completed before recommending approval for this project.

Role of USACE

The USACE participated with the NRC in the preparation of the final EIS as a cooperating agency and participated collaboratively on the review team. As part of the review team, the USACE was included in all aspects of the environmental review, including scoping, public meetings, and public comment resolution.

USACE can issue permits, after notice and opportunity for public hearings, for the discharge of dredged or fill material into the navigable waters at specified disposal sites. With respect to the WLS site, the USACE's action concerned whether to issue a permit pursuant to the requirements in Section 404 of the CWA and Section 10 of the RHA. The requested permit would authorize impacts on waters of the U.S., including wetlands, for the building of WLS Units 1 and 2, and various associated, integral project components, including electrical transmission lines and associated structures, access roads, a barge slip, and a new sanitary waste treatment plant. Therefore, the USACE conducted an independent review and assessment in the preparation of the final EIS to provide the necessary environmental information required to meet its NEPA obligations, to make findings of compliance with the guidelines for Section 404(b)(1) of the Clean Water Act, and to meet the review criteria for the Department of the Army (DA) permit, including its Public Interest Review. After its review and analysis, the USACE adopted the final EIS to satisfy those independent regulatory obligations.

PURPOSE AND NEED

As identified in Section 1.3, “Purpose and Need for the Proposed Actions” of the final EIS, the purpose of this proposed action, authorization of the construction and operation of two new nuclear units to provide for additional baseload electric generating capacity in 2024 and 2026 within DEC’s service territories. In 2016, the NRC staff re-affirmed that there is an expected future shortage of baseload power in the DEC service territories region that could be at least partially addressed by the construction of Units 1 and 2 at the WLS site.

PROPOSED FEDERAL ACTION

The proposed NRC Federal action is issuance, under the provisions of 10 CFR Part 52, of two COLs authorizing the construction and operation of two AP1000 units at the WLS site. The location for the proposed WLS Units 1 and 2 is on the Lee site in Cherokee County, South Carolina.

The EIS provides the NRC staff’s analyses of the environmental impacts that could result from building and operating the proposed units at the WLS site or at one of the three alternative sites. These impacts are analyzed by NRC to determine if the proposed site is suitable for the units and whether any of the alternative sites is considered to be obviously superior to the proposed site. In addition, NRC assessed mitigation measures available for reducing or avoiding adverse environmental effects.

Environmental impacts that may arise from the building and operation of WLS Units 1 and 2 were examined for the following resource areas: land use; surface water and groundwater hydrology; terrestrial and aquatic ecology; socioeconomics; environmental justice; historic and cultural resources; meteorology and air quality; geology; public and occupational health; radiological health; noise; transportation; and transmission systems. These resource areas were also considered within a defined region of influence with other developments or activities that affect the resources cumulatively.

NRC EVALUATION OF THE PROPOSED ACTION

Section 102(2)(C)(iii) of NEPA states that EISs are to include a detailed statement analyzing alternatives to the proposed action. Accordingly, the NRC and USACE evaluated the proposed action and numerous alternatives to the proposed action in order to make independent determinations according to each agency’s regulatory authority. Evaluation criteria included land use, air quality, water use and quality, ecology, waste management, socioeconomics, human health, historic and cultural resources, and environmental justice. Alternatives were evaluated against the proposed action to determine if any of the alternatives presented were obviously superior.

To guide its assessment of the environmental impacts of the proposed action and alternatives, the NRC has established a standard of significance for impacts based on Council on Environmental Quality guidance (40 CFR 1508.27). Table B-1 of 10 CFR Part 51, Subpart A, Appendix B, provides the following definitions of the three significance levels established by the NRC:

SMALL – Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.

MODERATE – Environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE – Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

The final EIS presents the review team’s analysis, which considers and weighs the environmental impacts of the proposed action at the WLS site. Impacts from building and operating the facility were considered to be MODERATE for Land Use; Ecology; Socioeconomic Physical impacts; Socioeconomic Infrastructure and Community Services; and Historic and Cultural Resources. Impacts from building and operating the facility were considered to be SMALL for most other resource areas. Mitigation of environmental impacts is discussed in more detail below. Additionally, a range of SMALL to LARGE beneficial impacts was identified due to the increase of tax revenue in the region.

Evaluation of Alternatives

Chapter 9, “Environmental Impacts of Alternatives,” of the EIS addresses the following four categories of alternatives to the proposed action: (1) the no-action alternative, (2) energy source alternatives, (3) alternative sites, and (4) system design alternatives. As summarized below, none of the potential alternatives is environmentally preferable to the proposed action.

i. No-Action Alternative

The No-Action alternative, discussed in Section 9.1 of the final EIS, refers to a scenario in which the NRC would deny the COLs requested by DEC, which would result in the proposed units not being built. Likewise, the USACE would also take no action or deny the DA Individual Permit request. Upon such a denial by the NRC or USACE, the building and operation of Units 1 and 2 at the WLS site in accordance with 10 CFR Part 52 would not occur and the predicted environmental impacts associated with the project would not occur. If no other facility would be built or strategy implemented to take its place, the electrical capacity to be provided by the proposed project would not become available. If no additional conservation measures were enacted to decrease the amount of electrical capacity that would otherwise be required for power in the region of interest (ROI), the need for power discussed in Chapter 8 would not be met. Therefore, the purpose of and need for this project would not be satisfied if the no-action alternative was chosen and the need for power was not met by other means.

ii. Alternative Energy Sources

The purpose and need for the proposed project identified in Section 1.3 of the final EIS is to provide additional baseload electrical generation capacity for use in DEC’s service territories. Chapter 9 of the final EIS examines the potential environmental impacts associated with alternatives to building and operation of a new baseload nuclear generating facility.

To compare different types of energy plants with the proposed WLS Units 1 and 2, NRC analyzed other power-generation sources, a combination of sources, and power-generation technologies that are technically reasonable and available. The three primary energy sources for generating baseload electric power in the U.S. are coal, natural gas, and nuclear energy.

Coal-fired plants are the primary source of baseload generation in the U.S. Natural-gas combined-cycle power-generation plants are often used as intermediate generation sources, but can also be used for baseload power. These alternatives, which would be necessary in order to generate the same baseload power, are discussed in Section 9.2.2 of the final EIS.

In the coal-fired plant analysis, the EIS assumed building and operation of four pulverized coal (PC) units, each with a net electrical generation capacity of 530 MW(e), would be required to generate the same baseload power as the WLS units. Air emissions effects would be greater for the PC units than for WLS Units 1 and 2 due to the release of carbon dioxide gas and other air pollutants. Coal combustion generates waste in the form of ash. Disposal of the waste could noticeably affect land use, because of the acreage needed, and could affect groundwater quality. Other environmental effects and cumulative effects would be similar to those described for the proposed WLS nuclear plants.

The review team also considered integrated gasification combined-cycle (IGCC) coal-fired power plants as a baseload-capable technology. IGCC is an emerging technology for generating electricity with coal that combines modern coal gasification technology with combustion-turbine and steam-turbine power generation. This technology is considered to be cleaner than conventional pulverized coal plants because major pollutants can be removed from the gas stream before combustion. Although IGCC has the advantages noted above, the review team concluded that, at present, IGCC is not a reasonable alternative to a 2200-MW(e) nuclear power-generation facility for the following reasons: (1) IGCC plants are more expensive than comparable pulverized coal plants; (2) the system availability of existing IGCC plants has been lower than pulverized coal plants; and (3) refined engineering has indicated that non-carbon emissions and plant efficiency would not be significantly better than supercritical steam electric plants.

For the combined cycle natural gas-fired plant analysis, the EIS assumed the building and operation of a natural-gas fired plant at the WLS site. The plant would use combined-cycle combustion turbines with a net capacity of 600 MW(e) per unit. Air emissions are similar to those for a coal-fired plant, but in lower amounts. Building a new underground gas pipeline to the site would result in permanent loss of some ecological resources, but the distance to connect to natural-gas distribution systems would be minimal. Other environmental and cumulative effects would also be similar to those described for the WLS site.

Oil-fired generation is more expensive than nuclear, natural-gas-fired, or coal-fired generation options. In addition, future increases or broad speculation in oil prices and oil markets are expected to make oil-fired generation increasingly more expensive. The high cost of oil has resulted in a decline in its use for electricity generation. Operation of an oil-fired power plant would have environmental impacts similar to those of a comparably sized coal-fired plant.

Renewable energy sources such as wind and solar power were considered, but current technologies for these energy sources are not capable of reliably producing at least 2000 MW(e) of baseload power that will be generated by WLS Units 1 and 2. The WLS site is in a wind power Class 1 region, which has the lowest potential for generation of wind energy and is considered unsuitable for the development of wind energy. In addition, wind turbines operate at approximately a 36 percent annual capacity factor compared with a 90 percent annual capacity factor for a baseload plant such as a nuclear power station. A solar-based power plant capable of generating as much baseload power as WLS Units 1 and 2 would require an estimated 11,000 to 26,400 acres (ac) of land as opposed to approximately 2,000 ac of land, anticipated to be affected for the construction and operation of WLS Units 1 and 2. Wind and solar

alternatives, and the basis for determining they were not viable alternatives to the proposed action, are discussed in Section 9.2.3 of the final EIS.

The NRC also evaluated alternatives not requiring new generating capacity, as well as other alternative energy sources. Alternatives not requiring new generating capacity that the NRC considered, but determined not to be viable alternatives, were: purchasing power from other electricity suppliers, reactivating retired power plants, extending the life of existing power plants, and implementing conservation or demand-side management programs. Each alternative not requiring new generating capacity was determined not to be a viable alternative, and the basis for this determination, is provided in Section 9.2.1 of the final EIS. Other alternative energy sources that the NRC considered, but determined not to be viable alternatives, were: oil-fired power generation, hydroelectric power, geothermal energy, municipal solid waste, other biomass-derived fuels, fuel cells, and wood waste. Alternative energy sources that were eliminated from detailed study and the basis for removal are provided in Section 9.2.3 of the final EIS.

The NRC also considered whether a combination of alternatives might be a viable alternative to the proposed action. The review team assessed the environmental impacts of an assumed combination of three 510 MW(e) natural gas combined-cycle generating units at the WLS site, and the following contributions from within DEC's ROI: 129 MW(e) of wind power, 271 MW(e) of solar power, and 53 MW(e) of biomass sources, and 616 MW(e) of new energy efficiency programs beyond what is currently planned. This combination was anticipated to have SMALL to MODERATE instead of the SMALL air quality impacts projected with the proposed alternative. This combination of energy alternatives and the basis for determining it was not environmentally preferable to the proposed action are discussed in Section 9.2.4 of the final EIS.

Therefore, the review team concluded that none of the alternative energy options or the combination of the alternative energy options would be consistent with DEC's objective of building baseload generation units and environmentally preferable to the proposed action.

iii. Alternative Sites

The NRC independently evaluated DEC's process for screening the potential sites, which was based on guidance in the NRC's NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants: Environmental Standard Review Plan"; NRC Regulatory Guide 4.7, "General Site Suitability Criteria for Nuclear Power Stations"; and the Electric Power Research Institute's Siting Guide. NRC's site-selection process guidance calls for identification of an ROI, followed by successive screening to identify candidate areas, potential sites, candidate sites, and the proposed site. The ROI is the geographic area considered by the applicant in searching for candidate areas and potential sites for a new nuclear power plant. The ROI is typically the State in which the proposed site is located or the relevant service area for the proposed plant. DEC modified this process somewhat by adding an extra step of screening to identify primary sites after it had identified potential sites.

The staff evaluated DEC's methodology for selecting its ROI, candidate areas and evaluation of potential sites, candidate sites, and alternative sites. For its ROI, DEC chose land area included in both North and South Carolina, which is consistent with guidance in NUREG-1555. The staff also concluded that the method used to identify candidate areas, potential sites, candidate sites, and alternative sites was reasonable, logical, and adequately satisfied applicable NRC guidance.

Candidate areas for siting of WLS Units 1 and 2 were chosen after considering areas based on seismic/geology, population density, water availability, dedicated land use, regional ecological features, proximity to high-voltage transmission and load centers, and access to rail lines. Ultimately, four candidate sites were chosen for additional site suitability analyses, which resulted in the WLS site being chosen as the preferred site. The remaining three candidate sites examined are listed as alternative sites in Section 9.3 of the final EIS:

- Perkins site, located in Davie County, North Carolina;
- Keowee site, located in Oconee County, South Carolina; and
- Middleton Shoals site, located in Anderson County, South Carolina.

Although there are differences between the cumulative environmental impacts of building and operating nuclear generating units at the proposed WLS site and the alternative sites, the review team concluded that none of the alternative sites would be environmentally preferable or obviously superior to the proposed WLS site.

iv. Alternative System Designs

The NRC considered a variety of alternatives for heat-dissipation systems and circulating water systems. About two-thirds of the heat from a commercial nuclear reactor is rejected as heat to the environment. The remaining one-third of the reactor's generated heat is converted into electricity. Normal heat-dissipation systems transfer this rejected heat into the atmosphere as evaporation and/or heated discharge water to mix with nearby water bodies.

The proposed circulating-water system (CWS) for the WLS Units 1 and 2 is a closed-cycle system that uses mechanical draft cooling towers for heat dissipation. A closed-cycle cooling-tower system is preferred over the once-through cooling systems that have been used in the past. The closed-cycle, recirculating cooling-water systems require less overall intake water than the older once-through technology and, as a result, fewer aquatic organisms are affected by cooling-water system operations. Each unit also has one mechanical draft cooling tower for the service-water system.

The review team considered a variety of heat-dissipation systems and CWS alternatives. The NRC considered a range of heat dissipation systems, including a once-through cooling system, spray canals, wet mechanical draft cooling towers, cooling pond, dry cooling towers, and a combination wet/dry cooling tower system and mechanical draft with plume abatement. The NRC also considered alternative intake and discharge designs. None of these systems was considered by the staff to be environmentally preferable to the proposed system. The alternative system designs considered are discussed in Section 9.4 of the final EIS.

MITIGATION MEASURES

The NRC has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected. The final EIS describes measures to avoid and minimize environmental harm from the building and operation of the proposed plants. The building and operation of WLS Units 1 and 2 will have effects on multiple environmental and regional resources. The EIS considers the potential for impacts to each resource. Many of the SMALL impacts described above are considered minimal because monitoring and use of

environmental practices and safeguards will reduce any negative effects to an environmental resource. However, as explained in the EIS, some of the impacts greater than SMALL can be reduced or compensated, or prevented from becoming disruptive. An environmental protection plan (EPP) included in the license ensures compliance with the terms and conditions of any Biological Opinions issued pursuant to the Endangered Species Act of 1973, as amended, and ensures that the NRC is kept informed of other environmental matters. The EPP applies to the licensee's actions affecting the protected environmental resources evaluated in the final EIS and the licensee's actions that may affect any newly discovered protected environmental resources. The EPP is intended to be consistent with Federal, State, and local requirements for environmental protection. The NRC is not otherwise imposing any license conditions in connection with mitigation measures or requiring any new environmental monitoring programs. Below are mitigation measures described in the final EIS with respect to individual resource areas.

Water Use and Quality

The DEC would be required to operate the proposed WLS Units 1 and 2 within the minimum release constraints of Ninety-Nine Islands Hydroelectric Project License (Federal Energy Regulatory Commission). Makeup water would be supplied onsite from Make-Up Pond B and Make-Up Pond C when flow in the Broad River is less than 483 cfs. DEC would be required to dilute blowdown with receiving water and limit planned effluent discharges in compliance with an NPDES permit.

Regulation of water quality is implemented by a National Pollutant Discharge Elimination System (NPDES) permit issued by the EPA or the states. The application would be required to prepare and maintain a Stormwater Pollution Prevention Plan (SWPPP) and an NPDES permit to minimize releases. DEC would be required to limit planned effluent discharges in compliance with CWA regulations (40 CFR Parts 100 and 400-501), Federal Water Pollution Control Act, and NPDES permit specifications.

In accordance with its DA permit, DEC is planning to compensate for unavoidable impacts to relatively permanent waters resulting from the construction of the Make-Up Pond C by a massive stream restoration and preservation effort at two separate locations: the privately-owned Turkey Creek Tract, and the Woods Ferry Tract in the Enoree Ranger District of Sumter National Forest. The Turkey Creek Tract will have a perpetual conservation easement. The goals of this restoration effort are to reconnect streams to their respective floodplains, reduce sedimentation and stabilize stream banks, improve in-stream and adjacent habitats, and improve water quality. The current mitigation plan has evolved extensively from that discussed in the EIS because South Carolina Department of Natural Resources recommended that DEC pursue other available mitigation opportunities in lieu of utilizing bank credits.

Land Use

Land that is temporarily disturbed by the activities involved in building WLS Units 1 and 2 will be restored after those activities are finished. Combined land-use impacts of construction, and preconstruction would be MODERATE.

The DEC committed to limit ground disturbances to the smallest amount of area necessary to construct and maintain the proposed facilities and minimize work in wetlands, floodplains, and prime farmlands to the extent possible. South Carolina Department of Health and Environmental Control stormwater permit regulated ground-disturbing activities and erosion-control and

stabilization measures. DEC committed to minimize potential spills of hazardous wastes/materials through training and rigorous compliance with applicable regulations. DEC committed to restore temporarily disturbed areas to allow for other land uses.

Terrestrial Ecosystems

Building WLS Units 1 and 2, and the associated transmission lines will be completed according to Federal and State regulations, permit conditions, DEC's existing construction practices, and established best management practices (BMPs), such as minimizing disturbance of vegetation and substrate, restrictions of equipment and vehicles around and through water bodies, and avoiding as many environmentally sensitive areas as feasible (e.g., those with "important" habitats or species). DEC is required to comply with conditions of the Section 404 permit from the USACE and its Clean Water Act Section 401 water-quality certification, including any required mitigation.

Aquatic Ecosystem

For aquatic ecosystems, restoration within the vicinity of areas affected by site preparation and development activities would be required prior to notice of termination for the SWPPP. Restoration activities would most likely include the removal of erosion and sedimentation control systems (e.g., sediment transport barriers), re-grading stream beds and banks that might have been damaged, and revegetation. DEC must comply with the State 401 water quality certification and BMPs.

Socioeconomics and Environmental Justice

Unsatisfactory traffic conditions resulting from building activities at WLS Units 1 and 2 would be mitigated by scheduling deliveries to mitigate shift change or commute times, carpooling of workers, and changing shift times.

Historic and Cultural Properties

Construction impacts on historic properties and cultural resources would be negligible with implementation of the WLS site cultural resources management plan and Memorandum of Agreement between DEC, the South Carolina SHPO, USACE, and Catawba Indian Nation (ADAMS Accession No. ML13213A399). Preconstruction impacts on historic and cultural resources would be noticeable but not destabilizing within the Make-Up Pond C site with successful relocation of the Service Family Cemetery.

Mitigation of historic properties and cultural resources may be warranted in the event of an unanticipated discovery. These measures would be determined by DEC in consultation with the South Carolina State Historic Preservation Officer as well as the appropriate Native American Tribe(s) or other parties depending on the nature of the find.

Human Health

With respect to radiological health impacts, doses to construction workers, the public, and wildlife will be maintained below Federal standard public dose limits.

With respect to impacts from nonradioactive waste, solid, liquid, and gas wastes that are generated will be handled according to county, State, and Federal regulations.

Wetlands Impacts

Site preparation and development of the proposed WLS site and required ancillary features such as Make-Up Pond C, two new transmission-line corridors, and a railway spur would result in direct impacts to 5.43 acres of jurisdictional wetlands. In addition, temporary drawdown of Make-Up Ponds A and B during installation of intake/refill structures has the potential to result in temporary secondary impacts to an additional 5.46 ac of jurisdictional wetlands along the shoreline. Affected wetlands comprise approximately 0.35 percent of the total projected disturbed area. Unavoidable impacts to wetlands and streams would be mitigated through compensatory mitigation. DEC is required to comply with conditions of the DA Section 404 permit from the USACE and Clean Water Act Section 401 water-quality certification including requirements to avoid, minimize, restore, and/or compensate impacts on wetlands, including implementation of the mitigation action plan.

Protected Species

The U.S. Fish and Wildlife Service (FWS) concurred that the proposed WLS Units 1 and 2 project (all elements) is not likely to adversely affect Federally protected species or result in adverse modification of designated or proposed critical habitat. USACE's DA permit associated with WLS requires that any clearing associated with construction of transmission lines within areas that represent suitable habitat for the federally threatened Northern long-eared bat (*Myotis septentrionalis*; NLEB) must occur outside the roosting season. If clearing activities cannot be performed during the permitted time frame, the permittee is required to notify USACE so additional consultation with FWS can be initiated. NLEB was not detected within the WLS site, including within the boundaries of Make-Up Pond C.

DETERMINATION:

Based on an independent review, analysis and evaluation contained in the final EIS; careful consideration of all the identified social, economic, and environmental factors and input received from other agencies, organizations and the public; the factors and mitigation measures outlined above; and the input received during the mandatory hearing, it is determined that the standards for issuance of a combined license, as described in 10 CFR 52.97, have been met and the requirements of Section 102 of NEPA have been satisfied.

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