CHAPTER 1
INTRODUCTION TO THE ENVIRONMENTAL REPORT

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
ac.	acre
AEA	Atomic Energy Act
aka	also known as
AP1000	Westinghouse Electric Company, LLC's AP1000 Reactor
CFR	Code of Federal Regulations
COL	Combined License
COLA	Combined License Application
CP&L	Carolina Power & Light Company
CWA	Clean Water Act
DCD	Westinghouse Electric Company, LLC's AP1000 Design Control Document, Revision 16
DEIS	Draft Environmental Impact Statement
EAB	exclusion area boundary
EIS	Environmental Impact Statement
EP	Emergency Plan
ER	Environmental Report
FAA	Federal Aviation Administration
ft.	foot
FSAR	Final Safety Analysis Report
HAR	proposed Shearon Harris Nuclear Power Plant Units 2 and 3
HAR 2	proposed Shearon Harris Nuclear Power Plant Unit 2

ACRONYMS AND ABBREVIATIONS (CONTINUED)

HAR 3	proposed Shearon Harris Nuclear Power Plant Unit 3
HNP	existing Shearon Harris Nuclear Power Plant Unit 1
ITAAC	inspections, tests, analyses, and acceptance criteria
km	kilometer
km^2	square kilometer
kV	kilovolt
LWA	Limited Work Authorization
m	meter
mi.	mile
$mi.^2$	square mile
msl	mean sea level
MWe	megawatt electric
MWt	megawatt thermal
NC	North Carolina
NCDENR	North Carolina Department of Environment and Natural Resources
NCDOC	North Carolina Department of Commerce
NCDOL	North Carolina Department of Labor
NCDOT	North Carolina Department of Transportation
NCWRC	North Carolina Wildlife Resources Commission
NEPA	National Environmental Policy Act
NGVD29	National Geodetic Vertical Datum of 1929
NHPA	National Historic Preservation Act

ACRONYMS AND ABBREVIATIONS (CONTINUED)

NPDES	National Pollutant Discharge Elimination System
NOI	Notice of Intent
NOT	Notice of Termination
NRC	U.S. Nuclear Regulatory Commission
NSSS	nuclear steam supply system
NWP	nationwide permit
PEC	Progress Energy Carolinas, Inc.
PSD	Prevention of Significant Deterioration
RCRA	Resource Conservation and Recovery Act
RCS	reactor coolant system
ROD	Record of Decision
S&L	Sargent & Lundy, LLC
SEPA	State Environmental Policy Act
SHPO	State Historic Preservation Office
SG	steam generator
SPCC	Spill Prevention, Control, and Countermeasures
SRP	Site Redress Plan
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
Westinghouse	Westinghouse Electric Company, LLC

1.0 INTRODUCTION TO THE ENVIRONMENTAL REPORT

Progress Energy Carolinas, Inc. (PEC) has developed this comprehensive Environmental Report (ER) to address environmental issues associated with its Combined License Application (COLA). The proposed Shearon Harris Nuclear Power Plant Units 2 and 3 (HAR) will be co-located with the existing Shearon Harris Nuclear Power Plant Unit 1 (HNP), currently owned by Carolina Power & Light Company (CP&L). CP&L is the licensee for the HNP and has merged with Florida Power Corporation to form Progress Energy, which operates in the Carolinas as PEC. The applicant and owner of the proposed units will be PEC. The two units will be referred to as the proposed Shearon Harris Nuclear Power Plant Unit 2 (HAR 2) and Unit 3 (HAR 3). The HAR site is located in the extreme southwestern corner of Wake County, North Carolina. PEC proposes to build and operate two units of the Westinghouse Electric Company, LLC's (Westinghouse) AP1000 Reactor (AP1000), a certified nuclear plant design under 10 Code of Federal Regulations (CFR) 52, Subpart B. This chapter provides an introduction to the environmental impacts of construction and operation of this design on the HAR site and surrounding areas.

This ER follows the content and organization of the U.S. Nuclear Regulatory Commission (NRC) "Standard Review Plans for Environmental Reviews for Nuclear Power Plants," also known as NUREG-1555. As part of its agency obligation, the NRC is required to perform a review of the impacts of HAR's construction and operation on the environment. This ER supports that review, which is performed by the NRC under 10 CFR 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions." The NRC will use the NUREG-1555 guidance to prepare the Environmental Impact Statement (EIS) for the COLA. NUREG-1555 is designed to meet the requirements of 10 CFR 51.

The ER has been developed in accordance with 10 CFR 52.79 and specifically includes information required by 10 CFR 51.45, 10 CFR 51.50, 10 CFR 51.52, and 10 CFR 51.53.

- 10 CFR 51.45: The ER shall contain a description of the impact of the proposed action on the environment (included in ER Chapters 4 and 5); any adverse environmental effects which cannot be avoided should the proposal be implemented (included in ER Chapter 10 – specifically Section 10.1); alternatives to the proposed action (included in ER Chapter 9); the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity (included in ER Section 10.3); and irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented (included in ER Section 10.2). The ER shall also list all federal permits, licenses, approvals, and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements (included in ER Section 1.2).

- 10 CFR 51.50: Each ER shall identify procedures for reporting and keeping records of environmental data, and any conditions and monitoring requirements for protecting the non-aquatic environment, proposed for possible inclusion in the license as environmental conditions in accordance with § 50.36b of this chapter (included in ER Chapter 6).

- 10 CFR 51.52: Every ER prepared for the construction permit stage of a light-water-cooled nuclear power reactor, and submitted after February 4, 1975, shall contain a statement concerning transportation of fuel and radioactive wastes to and from the reactor (included in ER Sections 5.7 and 7.4).

- 10 CFR 51.53: Any ER prepared under the provisions of this section may incorporate by reference any information contained in a prior ER or supplement thereto that relates to the production or utilization facility or any information contained in a final environmental document previously prepared by the NRC staff that relates to the production or utilization facility. The ER uses information from the HNP operating license stage and HNP operating license renewal stage.

The chapter is organized into the following sections:

- Section 1.1 — The Proposed Project

- Section 1.2 — Status of Reviews, Approvals, and Consultations

- Section 1.3 — References

This ER discusses the existing environment at the HAR site and in the vicinity, summarizes environmental impacts of construction and operation, considers appropriate mitigation measures, and reviews similar alternative sites. This ER assesses impacts associated with construction of the AP1000 design at the HAR site.

The following categories of information regarding interfaces of the HAR site and facilities are reviewed:

- Comparison of the functional and operational needs of the AP1000 as they relate to the HAR site's natural and environmental resources.

- Direct impact of the AP1000 on the HAR site's natural and environmental resources.

1.1 THE PROPOSED PROJECT

This section provides an outline of the PEC COLA project. It is organized into the following subsections:

- Subsection 1.1.1 — The Applicant and Owner
- Subsection 1.1.2 — Site Location
- Subsection 1.1.3 — Reactor Information
- Subsection 1.1.4 — Cooling System Information
- Subsection 1.1.5 — Transmission System Information
- Subsection 1.1.6 — The Nature of the Proposed Action and Constraints
- Subsection 1.1.7 — Construction Start Date

1.1.1 THE APPLICANT AND OWNER

Pursuant to the Atomic Energy Act of 1954 (AEA), as amended, and the NRC regulations in Title 10 of the CFR, PEC has filed a Final Safety Analysis Report (FSAR), which accompanies this ER. CP&L is the licensee for the HNP (i.e., Unit 1). CP&L has since acquired Florida Power and formed the holding company, Progress Energy, with two separate business units: PEC in the Carolinas and Progress Energy Florida, Inc. in Florida. The applicant and owner of the HAR will be PEC.

As described in the Administrative Information, the applicant has the necessary authority, control, and rights related to proposed construction and operation of the HAR.

1.1.2 SITE LOCATION

The HAR site is located in the extreme southwestern corner of Wake County, North Carolina, with portions located in southeastern Chatham County. The City of Raleigh, North Carolina, is approximately 34.9 kilometers (km) (21.7 miles [mi.]) northeast of the HAR, and the City of Sanford, North Carolina, is approximately 26.5 km (16.5 mi.) southwest of the HAR. The Cape Fear River flows south of the HAR in a northwest-to-southeast direction (Reference 1.1-001).

The HAR is located just northwest of the HNP, on a peninsula that extends into Harris Reservoir (Figure 1.1-1). The Buckhorn Creek arm of the reservoir lies to the west; the Tom Jack and Thomas Creek arms of the reservoir lie to the east. The reactor building and generating facilities lie within a nuclear exclusion area, access to which is controlled. The HAR exclusion area boundary (EAB) is

defined as two overlapping circles centered on the reactor building of each unit. The radius of each circle is 1245 meters (m) (4085 feet [ft]). The overall shape of the HAR EAB is defined by the outermost boundary of each unit's circle. The HAR EAB is within the boundary of the HNP EAB.

The HNP EAB is roughly circular, with a radius of approximately 2134 meters (m) (7000 feet [ft.]), but it is not a perfect circle; its axis ranges from 2024 m to 2195 m (6640 ft. to 7200 ft.). The distance from the center of the HNP EAB to the boundary ranges from 2024 m (6640 ft.) to the northwest (because U.S. Highway 1 truncates the circle) to 2195 m (7200 ft.) to the south. The HNP EAB, composed of both high ground and portions of the Harris Reservoir, encompasses approximately 1431 hectares (ha) (3535 acres [ac.] or 5.52 square miles [mi.^{2}]) (Reference 1.1-002).

The HAR site is located within a much larger tract of land that includes the HNP EAB, Harris Reservoir, and surrounding lands. The HAR site is defined by the boundary of the HAR EAB, the 74.1-m (243-ft.) National Geodetic Vertical Datum of 1929 (NGVD29) contour of the Main Reservoir and the 79.2-m (260-ft.) NGVD29 contour of the Auxiliary Reservoir. The HAR site totals 4348 ha (10,744 ac. or 16.79 mi.^{2}). This acreage is sometimes reported as "approximately" 4371 ha (10,800 ac. or 16.88 mi.^{2}). For consistency, the acreage will be reported at the larger number (Reference 1.1-002).

Of the 4371 ha (10,800 ac. or 16.88 mi.^{2}) that comprise the HAR site, approximately 1619 ha (4000 ac. or 6.25 mi.^{2}) were inundated over the 1980 to 1983 period with the creation of Harris Reservoir. A second, smaller impoundment, the Auxiliary Reservoir (also known as [aka] "West Auxiliary" Reservoir), was created when the Tom Jack Creek arm of the Harris Reservoir was dammed. This 136-ha (325-ac. or 0.5 mi.^{2}) reservoir, which lies immediately west of the generating facilities, was created to serve as a source of water for the emergency service water system for the HNP (Reference 1.1-002). It is anticipated that normal pool elevation of Harris Reservoir will increase from 67.1 m (220 ft.) NGVD29 above mean sea level (msl) to 73.2 m (240 ft.) NGVD29 to provide enough cooling water for the additional units. There is no anticipated change to the elevation of the Auxiliary Reservoir, which is maintained at 76.8 m (252 ft.) NGVD29 (Reference 1.1-003).

For more information on the HAR location and demographics, see ER Chapter 2.

1.1.3 REACTOR INFORMATION

PEC has selected the Westinghouse AP1000 reactor design for construction. The AP1000 was certified under 10 CFR 52, Subpart B.

The AP1000 design has a nuclear steam supply system (NSSS) power rating of 3415 megawatt thermal (MWt), with an electrical output of at least 1000 megawatt electric (MWe). The plant is designated for rated performance with up to 10 percent of the steam generator (SG) tubes plugged and with a maximum

hot-leg temperature of 321.1 degrees Celsius (°C) (610 degrees Fahrenheit [°F]). The plant is designed to accept a step-load increase or decrease of 10 percent between 25 and 100 percent power without reactor trip or steam dump system actuation, provided that the rated power level is not exceeded. The plant is designed to accept a 100-percent load rejection from full power to house loads without a reactor trip or operation of the pressurizer or SG safety valves. The goal for the overall plant availability is projected to be greater than 90 percent, considering all forced and planned outages, with a rate of less than one unplanned reactor trip per year.

Westinghouse stated that the plant has a design objective of 60 years without a planned replacement of the reactor vessel. However, the design does provide for replaceability of other major components, including the SG. Following is a general description of the AP1000 design. Subsequent sections of this report provide detailed descriptions of the individual systems that make up the AP1000 design.

This ER and the FSAR provide detailed descriptions of the individual systems that make up the AP1000. These descriptions are used to evaluate the impact of construction of the plant at the site and any operational impacts.

1.1.4 COOLING SYSTEM INFORMATION

Waste heat will be dissipated by two main cooling towers, which will draw cooling water makeup from an expanded Harris Reservoir from a location near the new units. To maintain desired water levels in the expanded Harris Reservoir, water will be drawn as permitted from the Cape Fear River via an intake structure and a pipeline. Water from the Cape Fear River will be withdrawn from the river through a new intake structure immediately upstream of the Buckhorn Dam. The new pipeline from the Cape Fear River will discharge at a point in the southern portion of Harris Reservoir.

The AP1000 reactor coolant system (RCS) is designed to effectively remove or enable removal of heat from the reactor during all modes of operation, including shutdown and accident conditions, as described in Westinghouse's AP1000 Design Control Document, Revision 16 (DCD). For more information on the cooling system, see ER Section 3.4.

1.1.5 TRANSMISSION SYSTEM INFORMATION

Currently, seven 230-kilovolt (kV) transmission lines connect the HNP to the electric system. CP&L has designed and constructed all HNP transmission lines in accordance with industry guidance that was current when the lines were built. Ongoing surveillance and maintenance of HNP-related transmission facilities ensure continued conformance to design standards (Reference 1.1-001). PEC has determined that three additional transmission lines will be necessary to accommodate additional generation from the HAR. The description of the new

transmission lines and their associated environmental impacts are described in ER Section 3.7 and ER Chapters 4 and 5.

1.1.6 THE NATURE OF THE PROPOSED ACTION AND CONSTRAINTS

The proposed action is the NRC's issuance of a Combined License (COL) to allow PEC to build and operate a new nuclear plant(s) at the HNP site. The COL is based on this ER and other parts of the application including the FSAR, Site Redress Plan (SRP), and the Emergency Plan (EP). The NRC reviews issues resolved in the prior proceedings as final and not subject to further review during the COLA process. The COL, once issued, allows the applicant to begin construction of an approved plant and ultimately operate the completed facility.

The application incorporates a design certification for the AP1000, a new generation pressurized water reactor. The NRC has already concluded that the general design and safety features of the AP1000 meet the agency's strict requirements for design. As a result, PEC does not need to obtain approval to use the AP1000 technology (the design features of the HAR are described in ER Chapter 3 of this ER and the FSAR). However, PEC must still consider whether the HAR site is within the operational parameters of the AP1000 design. This ER will provide baseline environmental information about the HAR site and surrounding area. It will also describe the potential environmental impacts of operation and construction of the AP1000 at the HAR. Based on the design documentation available, as well as PEC's knowledge of the HAR, PEC can consider the AP1000 design components and the interaction of the HAR with the environment.

This information, in turn, assists the NRC in issuing the COL and performing the requisite environmental analyses. Subsection (c) of 10 CFR Section 52.79 requires that the COLA include inspections, tests, analyses, and acceptance criteria (ITAAC) that are necessary and sufficient to demonstrate that the facility has been constructed and will operate in conformity with the COL, the AEA, as amended, and the NRC's regulations. With the COL, including the appropriate ITAAC, PEC will be able to meet its goal to build a new nuclear plant at the HNP site and meet future power needs in North Carolina. The need for power is discussed in ER Chapter 8.

1.1.7 CONSTRUCTION START DATE

It is estimated that HAR site preparation activities and plant pre-construction activities will take 18 months to complete. PEC proposes to start site preparation activities in 2011, to conduct full construction activities over the period 2013 to 2017 for HAR 2 and 2014 to 2018 for HAR 3, and to begin commercial operation in 2018 or later for HAR 2 and 2019 or later for HAR 3.

1.2 STATUS OF REVIEWS, APPROVALS, AND CONSULTATIONS

The National Environmental Policy Act (NEPA) process has several basic procedural steps that are followed. The NRC has the obligation to ensure the requirements of NEPA are satisfied for HAR 2 and HAR 3. The first step is to publish a Notice of Intent (NOI) in the Federal Register. The scoping process then starts, where the project is defined and consultation with regulatory agencies and key stakeholders usually begins. A draft Environmental Impact Statement (DEIS) is then prepared and submitted for agency and public review and comment. This stage is when formal comments are received and communications between the commenting parties and lead agency take place. The DEIS usually goes through at least one revision and possibly more to address the comments received to the satisfaction of the lead agency. Once a final EIS is prepared, a Record of Decision (ROD) is prepared, which concludes the NEPA process. The permitting process usually occurs in parallel with the NEPA process. Permits are normally issued after the ROD is issued, and permits are usually based on details developed during final design of a project. However, it is necessary to have close coordination with the permitting agencies early in the project schedule (either before or during the scoping process or while developing the DEIS) to avoid delays during the permitting process. Initial coordination has begun (agencies contacted regarding the project are listed below) and will continue through meetings and informal consultations as the EIS is developed. During the EIS development process, the regulatory agencies will be a part of the stakeholder group and therefore are likely to provide formal comments on the draft and final EIS. Several of the permit processes can be started prior to finalization of the EIS (e.g., submitting applications); however, it is likely that coordination with the regulatory agencies (during the EIS process) will influence the exact timing and submission of the permits associated with this project.

Several agencies have been contacted regarding this COLA. Letters were sent to the following departments at North Carolina Department of Environment and Natural Resources (NCDENR) in April 2007: Water Quality, Water Resources, Air Quality, Land Resources, Environmental Health-Radiation Protection, Land Quality, and the State Environmental Policy Act (SEPA) Coordinator. Meetings were held with NCDENR Water Quality and Water Resources in May 2007. Other agencies that were sent a letter regarding the project are the North Carolina State Historic Preservation Office (SHPO), the U.S. Fish and Wildlife Service (USFWS), the North Carolina Wildlife Resources Commission (NCWRC), the North Carolina Natural Heritage Program, the U.S. Army Corps of Engineers (USACE), the North Carolina Department of Commerce (NCDOC), the North Carolina Department of Transportation (NCDOT), Wake County Parks, the Department of Homeland Security, North Carolina Emergency Management, Wake County Emergency Management, Chatham County Emergency Management, Lee County Emergency Management, and Harnett County Emergency Management. Additional meetings were held with North Carolina Emergency Management, NCDOT, Wake County Parks, USACE, NCDENR

Land Quality, NCDENR SEPA Coordinator, and NCDENR Environmental Health-Radiation Protection.

Table 1.2-1 provides a list of the environmentally related authorizations, permits, and certifications required by federal, state, regional, local, and affected Native American tribal agencies. It includes, but is not limited to, permits that are required before the construction and operation of HAR. It is organized as follows:

- The particular agency with jurisdiction over the imposed requirement.
- The authority, law, or regulation that dictates the requirement.
- The name of the required permit or authorization.
- The license or permit number of any existing licenses or permits.
- The expiration date on the license or permit.
- A brief description of the activity that requires the permit or authorization.

The structure of Table 1.2-1 is based on the format provided in NUREG-1555.

A federal consistency review, as outlined in the Coastal Zone Management Act, by the Department of Coastal Management will not be required. Also, no issues with Section 10 of the Rivers and Harbors Act were found. PEC anticipates that the necessary permits will be obtained during the pre-construction and construction phase of the project and that operations will begin once the permits are in place. PEC is not anticipating construction work that requires a Limited Work Authorization (LWA).

1.3 REFERENCES

1.1-001 Carolina Power & Light Company, Amendment 54 to “Shearon Harris Nuclear Power Plant Final Safety Analysis Report,” 1983.

1.1-002 Progress Energy Carolinas, Inc., “Applicant’s Environmental Report – License Renewal Operating Stage Shearon Harris Nuclear Plant, Unit 1, Docket No. 50-400, License No. NPF-63,” November 2006.

1.1-003 Sargent & Lundy, LLC, “Evaluation of Lake Level-Normal Pool Level and Makeup Flow Requirement for Two Additional AP 1000 Units,” March 2007.

Table 1.2-1 (Sheet 1 of 6)
Federal, State, and Local Environmental Permits and Authorizations

Issuing Agency	Authority	Permit/ Authorization	License No.	Expiration Date	Activity
NRC	10 CFR 52.97	COL[c,e]	--[a]	--[a]	Construction and safety review of the site.
NRC	10 CFR 40.4	Source Material License[f]	--[a]	--[a]	Possession of source material.
NRC	10 CFR 70.3	Special Nuclear Material License[f]	--[a]	--[a]	Possession of special nuclear material.
NRC	10 CFR 30.3	By-product License[f]	--[a]	--[a]	Possession of fuel.
USACE Water	Clean Water Act (CWA) 33 CFR 320.1	Section 404 Permit[c,d,e]	--[a]	--[a]	Work in wetlands/waters that involves construction of facilities requires USACE Permit. Minor activities covered by nationwide permit (NWP).
NCDENR Water	15A North Carolina (NC) Administrative Code Title 2B.201	National Pollutant Discharge Elimination System (NPDES) Permit (Construction)[c,d]	--[a]	--[a]	General permit, deemed approved upon receipt of approval by NCDENR Land Quality.
NCDENR Water	NC General Statute 143-215.1	NPDES Permit (Operation)[f]	--[a]	--[a]	Wastewater and stormwater discharges.
NCDENR Water	15A NC Administrative Code Title 2H.500	Water Quality Certification (Section 401)[b,d]	--[a]	--[a]	State must certify that federal action (USACE Permit) will not contravene state water quality standards in the Cape Fear River and Harris Lake.

Table 1.2-1 (Sheet 2 of 6)
Federal, State, and Local Environmental Permits and Authorizations

Issuing Agency	Authority	Permit/ Authorization	License No.	Expiration Date	Activity
NCDENR Water	15A NC Administrative Code Title 2E.0301	Water Withdrawal Registration[f]	--[a]	--[a]	Withdrawal of water for plant operation.
NCDENR Water	15A NC Administrative Code 2H.1013	Notice of Termination (NOT) for Industrial Activities[d]	--[a]	--[a]	General stormwater permit.
NC Department of Administration	NC General Statute 146-12	Easement for structures in Navigable Waters[c,d,e]	--[a]	--[a]	Any structure placed in navigable water requires authorization from Department of Administration and Council of State.
NCDENR	15A NC Administrative Code 02D.0501	Prevention of Significant Deterioration (PSD) Permit[c,e]	--[a]	--[a]	Requires permit for new construction and/or modification of a facility generating air emissions.
NCDENR	15A NC Administrative Code Title 2Q.0501	Title V Operating Permit[c,f]	--[a]	--[a]	Operation of facility generating air emissions.
NCDENR	15A NC Administrative Code Title 2Q.0101	Minor Source Construction Permit[c,d,e]	--[a]	--[a]	Construction and operation of facilities generating air emissions.
NCDENR	NC General Statute Chapter 143-215.108	Air Construction and Operation Permit[c,e]	--[a]	--[a]	Air emissions for boilers and emergency generators.
U.S. Department of Transportation (USDOT)	49 U.S.C. 5108	USDOT Registration[c,d,f]	--[a]	--[a]	Hazardous materials shipments.

Table 1.2-1 (Sheet 3 of 6)
Federal, State, and Local Environmental Permits and Authorizations

Issuing Agency	Authority	Permit/ Authorization	License No.	Expiration Date	Activity
U.S. Environmental Protection Agency (USEPA)	40 CFR 112.3	Oil Terminal Facility Registration[f]	--[a]	--[a]	Requires Spill Prevention, Control, and Countermeasures (SPCC) Plan outlining containment and countermeasures for oil storage. May require Facility Response Plan.
NCDENR	40 CFR 262.10	Notification of Regulated Waste Activity USEPA Form 8700-12[f]	--[a]	--[a]	Standards applicable to generators of regulated waste.
NCDENR	40 CFR 263	Development (DE), Operating (OP), and Supplemental Permits[f]	--[a]	--[a]	Storage and transportation of hazardous materials.
Federal Aviation Administration (FAA)	49 U.S.C. 44718	Construction Notice[c,e]	--[a]	--[a]	Construction of structures affecting air navigation.
NC Department of Commerce (NCDOC) Public Utilities Commission	NC General Statute 62-110	Certificate of Public Convenience and Necessity[c]	--[a]	--[a]	Construction and operation of plant.
NCDOC	04 NC Administrative Code, Subchapter 18.0203	Construction Permit[e]	--[a]	--[a]	Construction/ modification of discharge structures on adjacent streams.

Table 1.2-1 (Sheet 4 of 6)
Federal, State, and Local Environmental Permits and Authorizations

Issuing Agency	Authority	Permit/ Authorization	License No.	Expiration Date	Activity
NC Department of Labor (NCDOL)	13 NC Administrative Code, Subchapter 07F.410	Construction Permit[e]	--[a]	--[a]	Cranes shall be constructed, installed, tested, and inspected.
NCDOL	13 NC Administrative Code Subchapter 07F.0405	Construction Permit[e]	--[a]	--[a]	Construct dome lighting mast.
NCDOC Public Utilities Commission	NC General Statute 62-100	Construction Permit[e]	--[a]	--[a]	Construction of transmission lines crossing waterways.
NCDOT	19A NC Administrative Code Subchapter 02B.0502	Construction Permit[e]	--[a]	--[a]	Construction of utilities encroaching on rights-of-way.
NCDENR	15A NC Administrative Code Subchapter 13B.0827	Sanitary Wastewater Hauling Permit[f]	--[a]	--[a]	Hauling wastewater for disposal.
NCDENR	15A NC Administrative Code Subchapter 13B.0820	Temporary Sewage Operating Permit for Construction Phase[e]	--[a]	--[a]	Detention of sewage and operation of a treatment facility.
NCDENR	15A NC Administrative Code Subchapter 13B.0820	Construction Permit[e]	--[a]	--[a]	Construction of a wastewater treatment facility.
NCDENR	15A NC Administrative Code Subchapter 13B.0820	Operating Permit[f]	--[a]	--[a]	Operation of wastewater treatment facility.
NCDENR	15A NC Administrative Code Subchapter 13B.0820	Operating Permit[f]	--[a]	--[a]	Treatment of wastewater discharge.

Table 1.2-1 (Sheet 5 of 6)
Federal, State, and Local Environmental Permits and Authorizations

Issuing Agency	Authority	Permit/ Authorization	License No.	Expiration Date	Activity
U.S. Fish and Wildlife Service (USFWS)	ESA Section 7 (16 United States Code [U.S.C] 1536)	Consultation[b]	--[a]	--[a]	Requires consultation regarding threatened and endangered species.
USFWS	16 U.S.C. 703-712	USFWS Permit, Depredation[c,e]	--[a]	--[a]	Removal and relocation of migratory bird nests.
NC Wildlife Resources Commission	15A NC Administrative Code Subchapter 10B.0105	Special Migratory Bird Permit and Consultation[b,d]	--[a]	--[a]	Removal and relocation of migratory bird nests.
NCDENR	15A NC Administrative Code Title 4B	Erosion Control Plan[c,e]	--[a]	--[a]	Erosion control plan must be filed at least 30 days prior to beginning work, and work cannot commence prior to receipt of approval.
NC Department of Cultural Resources	National Historic Preservation Act (NHPA) Section 106 (16 U.S.C. 470)	Consultation[b]	--[a]	--[a]	Requires consultation with the State Historic Preservation Office (SHPO) regarding presence of historic/prehistoric sites.
NCDENR	15A NC Administrative Code Subchapter 02C.0113	Consultation[b]	--[a]	--[a]	Test well abandonment.
Wake County	Wake County Unified Development Ordinance	Permit[c]	--[a]	--[a]	Construction permit.
North Carolina Forest Service	15A NC Administrative Code Subchapter 02D.1903	Permit, as necessary[c,e]	--[a]	--[a]	Open burn permit.

Table 1.2-1 (Sheet 6 of 6)
Federal, State, and Local Environmental Permits and Authorizations

Issuing Agency	Authority	Permit/ Authorization	License No.	Expiration Date	Activity
NCDENR	15A NC Administrative Code Subchapter 02H.1000	Stormwater Pollution Prevention Plan, as needed [c]	--[a]	--[a]	Stormwater plan may need to be updated.
Wake County	Wake County Unified Development Ordinance	Special Use Permit [c]	--[a]	--[a]	A special use permit is required for a construction and demolition landfill.
Wake County	Wake County Unified Development Ordinance	Riparian Buffer Ordinance Requirements	--[a]	--[a]	A variance will be required for clearing activities around Harris Lake
NCDENR	15A NC Administrative Code Subchapter 13B.0201	Solid Waste Landfill Permit	--[a]	--[a]	Construction and demolition landfill permit.
Wake County	Wake County Public Safety Division	Blasting/ Explosives Permit[e]	--[a]	--[a]	Blasting required to remove rock during construction.
Wake County	Wake County Department of Environmental Services	Well Installation Permit [b-f]	--[a]	--[a]	Installation of monitoring wells.

Notes:
a) Data not available. Applications for permits will be made before the beginning of construction, as required.

b) Permit part of Early Phase of project.

c) Permit part of Pre-Construction Phase of project.

d) Permit part of Redress Phase of project.

e) Permit part of Construction Phase of project.

f) Permit part of Operation.