



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
CHARLESTON DISTRICT, CORPS OF ENGINEERS
69-A HAGOOD AVENUE
CHARLESTON, SOUTH CAROLINA 29403-5107

January 21, 2011

Regulatory Division

Mr. Ken Johnson, P.E.
Supervisor, Transmission Design
Santee Cooper
One Riverwood Drive
Moncks Corner, South Carolina 29461-2901

Dear Mr. Johnson:

Attached please find an executed copy of the *Cultural Resources Management Plan For Two New Transmission Lines Serving The Proposed New Units At The VC Summer Nuclear Station*. This *Plan* will serve as a guide for managing and protecting previously identified, and as yet unidentified, cultural resources associated with the Flat Creek and Varnville transmission line routes that are proposed to serve two new nuclear units at the VC Summer Nuclear Station. The *Plan* is executed as part of the coordination between the U.S. Army Corps of Engineers and the State Historic Preservation Officer (SHPO) pursuant to Section 106 of the National Historic Preservation Act of 1966.

Please note that the proposed construction of elements of the VC Summer Nuclear Station and all associated transmission lines are subject to the issuance of a Department of the Army permit. Therefore, this *Plan* does not constitute permission to construct the project, but will be referenced in any future permit documents. Note also that additional conditions may be included in a subsequent permit depending on additional information and based on further coordination with the SHPO during the Department of the Army permit review process.

If you have any questions concerning this matter, please contact Richard Darden at 843-329-8043 or toll free at 1-866-329-8187.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason A. Kirk".

Jason A. Kirk, P.E.
Lieutenant Colonel, U.S. Army
District Commander

Tina B. Hadden
Chief, Regulatory Division

Enclosure

Copy Furnished:

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**CULTURAL RESOURCES MANAGEMENT PLAN
FOR
TWO NEW TRANSMISSION LINES SERVING THE
PROPOSED NEW UNITS AT THE VC SUMMER NUCLEAR STATION**

Prepared for:

**South Carolina Department of Archives and History,
State Historic Preservation Officer and the
South Carolina Public Service Authority (Santee Cooper)**

Lead Federal Agency:

U.S. Army Corps of Engineers, Charleston District

September 2010

**CULTURAL RESOURCES MANAGEMENT PLAN
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Prepared for:

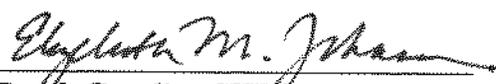
**South Carolina Department of Archives and History,
State Historic Preservation Officer and the
South Carolina Public Service Authority (Santee Cooper)**

Lead Federal Agency:

U.S. Army Corps of Engineers, Charleston District



Santee Cooper



South Carolina SHEO



US Army Corps of Engineers - USACE

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1. INTRODUCTION

The Virgil C. Summer Nuclear Station (VCSNS) is located near Jenkinsville in Fairfield County, South Carolina. The facility is a 966 megawatt plant and is operated jointly by South Carolina Electric and Gas (SCE&G) and the South Carolina Public Service Authority (Santee Cooper). The plant has been in operation since 1984. To meet the increased demand for electrical power in South Carolina, SCE&G and Santee Cooper plan to construct two additional 1,117 megawatt units at VCSNS.

Santee Cooper is responsible for transmitting a portion of the electricity generated from the proposed units. In order to provide the new power output to its customers, Santee Cooper intends to construct two new 230 kilovolt transmission lines. One line, referred to as the VCSNS-Flat Creek line, will run approximately 72 miles in a generally northeast direction from VCSNS to the existing Flat Creek substation located in Lancaster County, South Carolina. The second line, referred to as the VCSNS-Varnville line, extends approximately 167 miles in a generally southern direction to the existing Varnville substation located in Hampton County, South Carolina. These line length and termination points of the proposed project are based on current power transmission plans. Please note that the defined project on either of the two proposed lines could be modified by terminating the new line(s) at an intermediate substation. This agreement would apply to any or all of the project as defined at time of project initiation. In an effort to minimize impacts caused by new construction, Santee Cooper has routed a majority of the new lines within existing maintained transmission right-of-way (ROW). The remaining new lines will require the acquisition and development of new ROW, primarily adjacent and parallel to existing maintained ROW.

Due to the federal permitting involved with placement of fill in waters of the U.S., the proposed construction is considered to be a federal undertaking under Section 106 of the National Historic Preservation Act of 1966. Under Section 106, the effects of any federal undertaking on historical resources must be considered prior to the beginning of any construction. As part of their responsibilities under Section 106, the Corps of Engineers has entered into consultation with the South Carolina State Historic Preservation Officer (SHPO) to discuss the management of cultural resources as it relates to this project. This document provides a Management Plan that is intended to present the steps that Santee Cooper will follow concerning cultural resources within the new and existing transmission line ROW. This Management Plan applies only to the transmission line ROW associated with the expansion of VCSNS and does not apply to any other lines or facilities maintained by Santee Cooper. In addition, the Management Plan applies only to the portions of the transmission lines outside the VCSNS site boundary, while the lines/corridors inside the plant boundary (Exclusion Zone) are the responsibility of SCE&G. Santee Cooper generally holds limited operational and maintenance easements on the properties crossed by the transmission lines and is not responsible for the activities of property owners along the ROW.

Previously Recorded Cultural Resources

Santee Cooper, with a professional cultural resources management firm, determined the locations of previously-recorded cultural resources within 2 kilometers of the centerline of the proposed VCSNS-Flat Creek and VCSNS-Varnville transmission lines in compliance with NUREG 1555 (TRC Company, 2008 unpublished report, Cultural Resources Literature Review for the VC Summer Varnville and VC Summer Flat Creek Transmission Lines). This study used the state site file records maintained by the South Carolina Institute of Archaeology and Anthropology (SCIAA) at the University of South Carolina and resources available at the South Carolina Department of Archives and History (SCDAH) to determine that 512 cultural resources had been recorded within the project study area.

Of the 512 previously recorded resources, 195 are archaeological sites. One of these is listed in the National Register of Historic Places (NRHP) while 10 are eligible or potentially eligible for inclusion in the NRHP. Insufficient information was available to determine the eligibility of 43 sites and the remaining 141 are ineligible for the NRHP. Twenty-one of the archaeological sites are located within 100 feet of the existing transmission lines with 19 of these ineligible for the NRHP. The eligibility of the remaining two sites will be determined as needed following the *South Carolina Standards and Guidelines for Archaeological Investigations (Standards)* (Council of South Carolina Professional Archaeologists [COSCAPA] et al. 2009), which can be found at <http://shpo.sc.gov/revcomp/guidance/arcstanguide.htm>. The remaining resources consisted of historic structures. Surveys of 317 properties had been completed, 16 of which are listed in the NRHP, while 15 are eligible or potentially eligible for the NRHP. Another 22 contribute to the listed Orangeburg Historic District. The remaining 264 structures are not eligible for the NRHP.

2. MANAGEMENT OF CULTURAL RESOURCES IN NEW ROW

Archaeological Resources

Phase I Cultural Resources Survey

Santee Cooper will conduct a Phase I Cultural Resources survey on any newly acquired ROW prior to ground-disturbing activities. The survey will be conducted in keeping with the *Standards*. The goals of the Phase I survey are to locate any possible archaeological sites and to determine their potential eligibility for the NRHP.

The first step in a Phase I survey is a review of documents pertaining to the history of the project area and to cultural resources located within the new ROW. Although Santee Cooper has consulted the state site files and determined the locations of previously recorded archaeological sites, it will be necessary to obtain copies of any site file forms from the state prior to the field work. In addition, information on the cultural history and history of the area will be obtained from available sources, such as the collections maintained by the SCDAH, local libraries, local historical societies, or other appropriate sources. Historical documents to be reviewed may include previously-published narrative histories, primary documents and maps. The documentation consulted above and a review of current topographic maps of the areas to be surveyed will be used to determine the probability of sites to be located in those areas. Three

categories of Site Occurrence Probability are defined in the *Standards*. Active depositional environments, such as floodplains or areas that are inundated, are considered to be areas of Indeterminate Probability. Low Probability areas are those on slopes greater than 15 percent, that are poorly drained or that are disturbed. All areas not demonstrated to be either Indeterminate or Low Probability are considered to be High Probability.

The methodology used to investigate various areas within the corridor will be determined by the Site Occurrence Probability Category for that portion of the new ROW. In areas of Low Probability, the field methods will be based on the reason for this classification. In areas with over 15 percent slope, a pedestrian survey of the area will be conducted, with judgmental shovel testing at the discretion of the field director. Poorly drained and disturbed areas will be subjected to a pedestrian survey and limited systematic shovel testing to verify the disturbance. Shovel tests will be excavated at no more than a 60 meter interval in Low Probability areas.

The methodology utilized in High or Indeterminate Probability areas will be determined primarily by local soil depositional characteristics in addition to ground disturbances and ground surface visibility conditions. In areas exhibiting the potential for buried cultural components, a systematic survey will be conducted with field personnel spaced at no more than a 30 meter interval, with shovel tests dug at a 30 meter interval along each transect. In areas with 50 percent or greater surface visibility, a low probability for buried cultural deposits, and/or high degree of disturbance or erosion, a systematic pedestrian survey will be conducted, with field personnel spaced at no more than a 30 meter interval. If a site is identified, shovel tests spaced at no more than 15 meters will be excavated to examine the site's stratigraphy and to determine its boundaries. Areas with less than 50 percent visibility will be surveyed using systematic shovel tests spaced at no more than a 30 meter interval. Site boundaries will be defined using shovel tests spaced at a 15 meter interval around positive tests.

All shovel tests will measure 30 centimeters by 30 centimeters in size and will be excavated to sterile subsoil, impenetrable rock, the water table or 80 centimeters below the ground surface, whichever comes first. Soils exceeding 80 centimeters in depth will be examined through the use of a hand-turned bucket auger. All soils will be screened through ¼-inch mesh and all artifacts will be retained for analysis, with the exception of obviously modern refuse, such as plastic wrappers and aluminum cans. All recovered artifacts will be placed in paper bags marked with the appropriate provenience information and returned to the laboratory for processing and analysis.

Descriptions of the soils encountered and other pertinent information will be recorded on standardized shovel test forms while the field director will maintain a field notebook during the project. Digital photographs of the overall project area, any surface features encountered and any sites recorded will be taken. The location of positive shovel tests and the approximate boundaries of recorded sites will be recorded using a GPS receiver.

Once a site has been located, a determination as to its eligibility for the NRHP will be made. Archaeological sites listed in the NRHP are typically, but not always, considered to be eligible under Criteria D, which states:

The quality of significance in American history, architecture, archeology, engineering and culture in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that have yielded, or may be likely to yield, information important in prehistory or history.

Santee Cooper will recommend to the SHPO that sites that do not meet this criterion are ineligible for inclusion in the NRHP and no further research should be required. Sites that may meet this criterion will be recommended to the SHPO as potentially eligible for inclusion in the NRHP and will require avoidance or further research to determine whether or not the site is indeed eligible. Criterion A-C for listing in the NRHP will be considered on a resource-to-resource basis, and will be applied to those resources that qualify under those criteria. The SHPO will concur or disagree with Santee Cooper's findings in written comments.

Phase II Archaeological Testing

Archaeological sites recorded during the Phase I survey that are considered to be potentially eligible for the NRHP and cannot be avoided by the proposed construction will be subjected to Phase II archaeological testing. The goals of archaeological testing are to define the horizontal and vertical extent of the site and to determine whether or not the site is eligible for inclusion in the NRHP.

A variety of methods may be employed to accomplish these goals depending on the location, age and type of site. Examples of field methods utilized during testing include close-interval shovel testing, metal detection, test unit excavation, block excavations, and mechanical soil removal. In addition, more detailed historical research may be necessary on historic-period sites or sites with a historical component. If testing reveals that the site does not meet any criterion for listing, then no further research will be recommended. Should the site meet the criterion for listing, Santee Cooper will recommend to the SHPO that the site is eligible for inclusion in the NRHP and avoidance of the adverse effects of the proposed activity on the site will be considered. Santee Cooper will work with the SHPO to consider relocating proposed transmission line structures to mitigate impacts if possible. If avoidance is not possible, then other steps, such as Phase III archaeological data recovery to mitigate the adverse effects, may be necessary.

Phase III Archaeological Data Recovery

Archaeological sites recorded during the Phase II survey that are considered to be eligible for the NRHP and cannot be avoided by the proposed construction will be subjected to Phase III archaeological data recovery. Phase III archaeological data recovery will be conducted following a detailed research design approved by the SHPO. The research design will set forth specific questions to be answered by the archaeological investigations at a given site. It will also specify the documentary, field and laboratory methods to be employed in answering those questions. In addition, a Memorandum of Agreement or Programmatic Agreement between the lead federal agency, the SHPO and other interested parties, if any, must be in place prior to conducting archaeological data recovery.

Architectural Resources

A reconnaissance-level survey will be conducted to identify architectural resources within the 2 kilometer radius of the new transmission lines. Wherever applicable, the previously recorded cultural resources study (TRC Company, 2008 unpublished report, Cultural Resources Literature Review for the VC Summer Varnville and VC Summer Flat Creek Transmission Lines) will be used, since a majority of the new ROW is adjacent to the existing ROW. The survey will focus on structures accessible from public roads that appear to be over 50 years in age. Architectural resources are typically found to be eligible under Criteria C, which states:

The quality of significance in American history, architecture, archeology, engineering and culture in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that embody distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Historic structures may also be considered eligible under Criteria A or B, as described below:

The quality of significance in American history, architecture, archeology, engineering and culture in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and (a) that are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past.

The survey will be conducted by a qualified cultural resource investigator that meets the Secretary of the Interior's *Professional Qualification Standards* (36 CFR 61) in history or architectural history, who will photograph any structures that appear to be over 50 years in age and record their location using a GPS receiver. Structures considered potentially eligible for the NRHP will be subjected to more intensive documentation and the effects of the proposed activities will be determined.

3. MANAGEMENT OF CULTURAL RESOURCES WITHIN EXISTING ROW DURING CONSTRUCTION

It is anticipated that the addition of new lines and/or towers within the existing corridors will have minimal effects in any NRHP-listed sites or any sites considered to be eligible or potentially eligible for inclusion in the NRHP. The locations of previously-recorded sites will be determined by examination of maps obtained from the state site files and added to Santee Cooper's Geographical Information System (GIS). These sites will be located and marked in a manner approved by the SHPO, so that they can be avoided, if possible, during construction. Existing roads into and within the ROW will be utilized whenever possible. If new points of access, controlled by Santee Cooper, need to be constructed, then a Phase I survey will be

conducted. Otherwise, no additional cultural resources surveys will be implemented for the existing transmission corridor.

4. BEST MANAGEMENT PRACTICES (BMPs)

Santee Cooper intends to minimize impacts to cultural resources, both known and those that may be discovered during construction, along new and existing rights-of-way through the use of BMPs. Lists of the BMPs can be found at <http://www.state.sc.us/forest/bmpmanual.pdf> (South Carolina's Best Management Practices for Forestry) and http://www.scdhec.gov/environment/ocrm/pubs/docs/SW/BMP_Handbook/Erosion_prevention.pdf (South Carolina DHEC Stormwater Management BMP Handbook). Contractors will be monitored by Santee Cooper professional personnel or their designated representatives during construction to ensure that the BMPs are being followed.

The BMPs to be implemented during initial clearing and construction of the transmission lines focus on protecting cultural resources, both known and those that may be discovered in the future. Some of those BMPs are:

- Surface rutting,
- Scheduling,
- Preservation of existing vegetation,
- Mats,
- Wood mulching,
- Silt fence installation,
- Stream bank stabilization,
- Check dams,
- Fiber rolls,
- Straw bale barrier,
- Stabilized construction entrances and exits,
- Temporary stream crossings,
- Vehicle and equipment cleaning,
- Spill prevention and control,
- Solid waste management, and
- Sanitary/septic waste management.

The appropriate Santee Cooper personnel and their contractors will receive instruction on the BMPs as well as general cultural resource-related issues prior to work on the project.

5. INADVERTANT DISCOVERIES

If unanticipated cultural materials or human remains are discovered in either existing or newly cleared ROW during construction, work in the immediate area of the discovery within a 30-foot buffer will cease and the SHPO and other appropriate authorities will be notified.

6. EMERGENCY RESPONSE

Santee Cooper's intent is to avoid cultural resources at all times, but during times of emergency, such as electrical outages or downed lines, it is understood that it may not be possible to avoid cultural resources. Should cultural resources be impacted by the response to an emergency, Santee Cooper will visit the site to assess any impacts following the resolution of the emergency.

7. DISPUTE RESOLUTION

Should a dispute arise between Santee Cooper and the SHPO concerning the management of cultural resources within the proposed corridors, the lead federal agency will mediate to resolve the issue.

8. TERMINATION

This agreement will terminate upon submittal of written notice by Santee Cooper to the SHPO of the completion of all construction work associated with the Santee Cooper/V. C. Summer transmission lines.