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Georgia Power
the southern electric system

D. O. Foster
Vice President and Project
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Vogtle Project

January 30, 1985

Director of Nuclear Reactor Regulation
Attention: Ms. Elinor G. Adensam, Chief
Licensing Branch #4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

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NRC DOCKET NUMBERS 50-424 AND 50-425
CONSTRUCTION PERMIT NUMBERS CPPR-108 AND CPPR-109
VOGTLE ELECTRIC GENERATING PLANT - UNITS 1 AND 2
RESPONSE TO COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT

Dear Mr. Denton:

Attachment I is Georgia Power Company's response to the comments of Federal and State agencies and other interested parties on the Draft Environmental Impact Statement related to the operation of Vogtle Electric Generating Plant, Units 1 and 2 forwarded by Elinor G. Adensams letter of January 16, 1985. The attached responses are organized according to the individual comments received.

Attachment II provides additional information of the Vogtle to South Carolina transmission line. This information is submitted in response to one of the comments included with Elinor G. Adensam's letter of January 16, 1985 and in accordance with our comments on the DEIS of January 4, 1985.

If you have any questions concerning the attached comments please contact us.

Yours very truly,

D. O. Foster

DOF/WLB/sro
Attachments
cc: M. A. Miller
R. A. Thomas
J. A. Bailey
L. T. Gucwa
G. F. Trowbridge, Esquire
G. Bockhold, Jr.
J. E. Joiner
L. Fowler
C. A. Stangler

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ATTACHMENT I

Responses to comments on the Vogtle Draft Environmental Impact Statement

Corps of Engineers

p.5-7 - Detectable limits for chlorine are addressed on p.5-8, paragraph 2 of the DES. Equipment at VEGP to determine chlorine levels are capable of detecting levels of chlorine below EPA effluent standards.

p.5-8 - In the referenced paragraph, the staff's assumption of complete mixing is appropriate to demonstrate that chlorine could be present in the blowdown. The reference to chlorine not completely mixing at levels below .05 mg/l is confusing. If this were the case, then the levels mentioned in EPA's Water Quality Criteria (.01 mg/l) could not be obtained. We were unable to locate the citation (Zillich et al, 1969) in this comment, but we understand from other publications that it is upublished ("Chlorine Effects on Fish", Michigan Water Resourse Committee, Lansing, Michigan). Later work ("Reveiw on the Mattice and Zittle Paper Site Specific Evaluation of Power Plant Chorination," EEI Report prepared by WAPORA, October 1978, page 42) demonstrated that Zillich's 0.05 mg/l of chlorine is a "no effect" level and not a mortality threshold level.

p.5-11 - A review of available literature on animal salt poisoning was conducted. The findings are summarized below.

Excessive salt (NaCl) intake has been reported to cause fetal dehydration on domestic animals (e.g., swine). Symptoms of nervous derangement (e.g., loss of fear, depression and tremor) have also been observed in wildlife (e.g., rabbit and fowls)[2]. Controlled experiments confirmed the naturally occuring causes that salt poisoning, among animals would occur only when the following conditions exist: [1, 2]

1. The susceptible animals were under "salt hunger," meaning that they had not had access to salt for a period of time. For examples, the winter heavy snow might cover the ground and thus subject the wildlife to salt hunger, and a salt deficient diet might create salt hunger in domestic animals.

2. The salt-hungry animals were suddenly exposed to large quantity of salt defined in the referenced materials as:

   a. 3 gram saturated salt solution to pheasants of 1200-1400 gram body weight;

b. 3 gram saturated salt solution to rabbits of 1100-1200 gram body weight;

c. 1.5 to 2.0% by weight of the customery swill to pigs averaging 65 lb body weight.

The sources of salt in those reported poisoning cases were discarded brine accidentally fed to the domestic animals, or salt spread on highways to control slippery road conditions due to snow and taken up by the wildlife.

3. Fresh drinking water was unavailable or restricted to the animals.

None of the above mentioned conditions would occur at VEGP, because:

1. Savannah River, which forms the NE site boundary, and other smaller streams surrounding the plant would be a readily available drinking water source for the wildlife.

2. Even under the conditions of "salt hunger" and drinking water restriction, it would require a pheasant or rabbit (1200 gm) to consume more than one acre of salt contaminated vegetation in a day to reach toxic levels based on a salt deposition rate of 17 lb/ac/yr, of which 12% is NaCl.

References:

1. Bohstedt, G. and R. H. Grammer, "Salt Poisoning of Pigs," J. Anim. Sci., 13:933-939, 1954

2. Trainer, D. O. and L. Karstad, "Salt Poisoning in Wisconsin Wildlife," J. Amer, Veg. Med. Assoc., 136:14-17, 1960.

p.5-15 - Sublethal effects were addressed by EPA in establishing exposure levels in their Water Quality Criteria.

p.5-18 - The staff's review of the VEGP and it's associated transmission lines identified no impact on the Woodstork's rookery or foraging sites. Since there is no impact, a formal enhancement and management scheme, as implied in the comment, is inappropriate. As noted in Section 4.2.2 of the DES, the 657 to 882 acres of cleared land at the VEGP site not necessary to support plant operations and the original 1677 acres of uncleared land at the 3169 acre site will be allowed to return to a state supportive of wildlife. To the extent that such a succession creates habitat suitable for wooodstork foraging, the enhancement would occur. However, the creation of foraging habitat through modification of normal succession is not planned.

Judith E. Gordon

(1) The level of chloride listed in Table 4.5 in the plant effluent discharge includes chloride already in the river from upstream sources. The standards referred to in Section 5.5.2.1 are for chlorine as opposed to chloride. The commenter has confused the applicability of EPA's effluent standards for chlorine and has applied them to chlorides. EPA's "chlorine" limits are being strictly enforced and monitored pursuant to the NPDES permit. The level of chlorides in the effluent will be below EPA's secondary drinking water standards of 250 mg/l.

(2) Determinations relative to Sections 316(a) and 316(b) of the Clean Water Act are made by the Georgia EPD in conjunction with the issuance of the NPDES permit. These determinations are based on studies which include both the impact of the proposed facility and the condition of the aquatic community existing in the river. Analysis of the condition of the aquatic community detects the combined effects of all sources of stress on the community including water withdrawal. Data on aquatic life subject to entrainment and impingement was collected by GPC and compared to results of studies conducted by the Savannah River Plant on these effects. These results were provided to both the State of Georgia and the NRC as part of their reviews.

(3) According to EPA's 40 CFR 122.2, the following is the definition of a pollutant:

> "Pollutant means ... radioactive materials (except those regulated under the Atomic Energy Act of 1954, as amended (42 USC 2011 et seq)) ...

Train v. Colorado Public Interest Research Group, Inc., 46 U.S. (1976) eliminated from EPA's jurisdiction under the Clean Water Act radioactive materials regulated by the Atomic Energy Act. Therefore, discharge of radioactive materials regulated by the NRC under that Act need not be covered by the NPDES permit. Specifics of the radiological effluent limits and monitoring program will be incorporated into the operating license Technical Specifications.

(7) Shipments of spent fuel are not expected to occur before the late 1990's. The operating production costs of Plant Vogtle cited in ER-OL section 8.2.1.2 include the cost of transporting of and disposal of spent fuel.

Doug Teper

(1) The main purpose of interconnecting transmission systems between South Carolina and Georgia is to improve the electric reliability within the power network between these two states, not for the purpose of out-of-state sales.

Applicant's comments on the DES (Foster letter to Denton dated January 4, 1985) provided supplemental information relative to the South Carolina line. In addition, since that submission, additional information has been developed and is included as Attachment II with this submission. As noted in our January 4, 1985 comments, copies of the Environmental Compatibility and Public Convenience and Necessity Permit application filed with the State of South Carolina will be provided to the NRC staff for information.

(2) The "new maintenance requirements" for the Vogtle diesel generators are not expected to affect the duration of normal monthly testing. New maintenance requirements involve technical specifications to be issued for the plant. The State of Georgia exempted the diesel generators from air permitting requirements on the basis that, except during emergency situations, the generators will be operated for testing purposes in order to ensure their operational status in the event of an emergency; and that each generator will be operated for less than ten hours per month in the testing mode. Since there is no change in the mode of operation (e.g. less than 10 hr/mo in testing mode), then no review by the State of Georgia EPD is required.

(3) DEIS subsection 5.5.1.2 addresses the environmental impacts of operation and maintenance of the Vogtle transmission system on the flora, fauna and people within and near the rights-of-way and were found not to cause harm and to be within acceptable environmental limits.

(4) Various water quality criteria and effluent standards issued by regulatory agencies have been established based on minimizing acute and chronic effects for aquatic biota. In addition to the water quality criteria established for the Savannah River (ER-OL Section 5.1.1), VEGP must meet EPA effluent limitation guidelines for chlorine. Strict monitoring and operational procedures will ensure that Vogtle's discharges meet EPA effluent limitation guidelines.

(5) (a) The cumulative effects of Vogtle and the nuclear facilities at SRP (including the L-Reactor) are addressed in Section 5.2 of the L-Reactor, Final Environmental Impact Statement, DOE/EIS-0108.

(b) The presence of limestone was not a "surprise" found during excavation. Early site drilling had identified its presence several years before excavation began. Sections 2.5.1.4 and 2.5.1.5, Site Geology and Site Condition in the PSAR were written prior to excavation, they both identify the shell zone limestone overlying the clay marl bearing stratum. Plans to excavate to the marl layer were made from the start of design of Plant Vogtle.

(6) Georgia Power Company has had enough experience with the equipment and hardware at its fossil fueled plants (older than 40 years) to confidently assert that, via planned operation and maintenance proceedures at the Vogtle Plant, it can ensure a 40 year operating life.

Carol A. Stangler

(1) Regarding concerns that two endangered species, the bald eagle and the red-cockaded woodpecker occur in the Ebenezer Creek Swamp National Natural Landmark, the Applicant has previously discussed (D. O. Foster's letter to H. R. Denton dated September 14,1984) the proximity of these two species to the transmission system. The nearest known eagle's nest is no closer than 10-15 miles from the Vogtle-Thalmann transmission line and all known nests are associated with the coastal esturine ecosystem in southeastern Georgia. The red-cockaded woodpecker requires a very specialized habitat which is comprised of mature to over-mature pine stands usually infected with red-heart fungus for roosting and nesting. There is no known habitat of this type found in the Ebenezer Creek Swamp in the vicinity of the transmission line.

ATTACHMENT II

Vogtle to South Carolina Line

The line to South Carolina will occupy 3.8 miles in Georgia and 18.5 miles in South Carolina. Table 1 shows the land classifications occupied by habitat type. The right-of-way will be 125 feet wide in Georgia and 100 feet wide in South Carolina. Figures 1 and 2 show the proposed route of the line. Table 2 and Figure 3 show the powerline design parameters and tower structures for the South Carolina side of the line. The Georgia Power portion of the line will have the same parameters and structural characteristics as provided in the DES for the 230 kV lines.

Table 1

Classification of right-of-way land
Vogtle to South Carolina Line

Pines	168 acres
Hardwoods	64 acres
Fields	5 acres
Wetlands	36 acres
Urban	-
TOTAL	273 acres

Table 2

Power Line Design Features

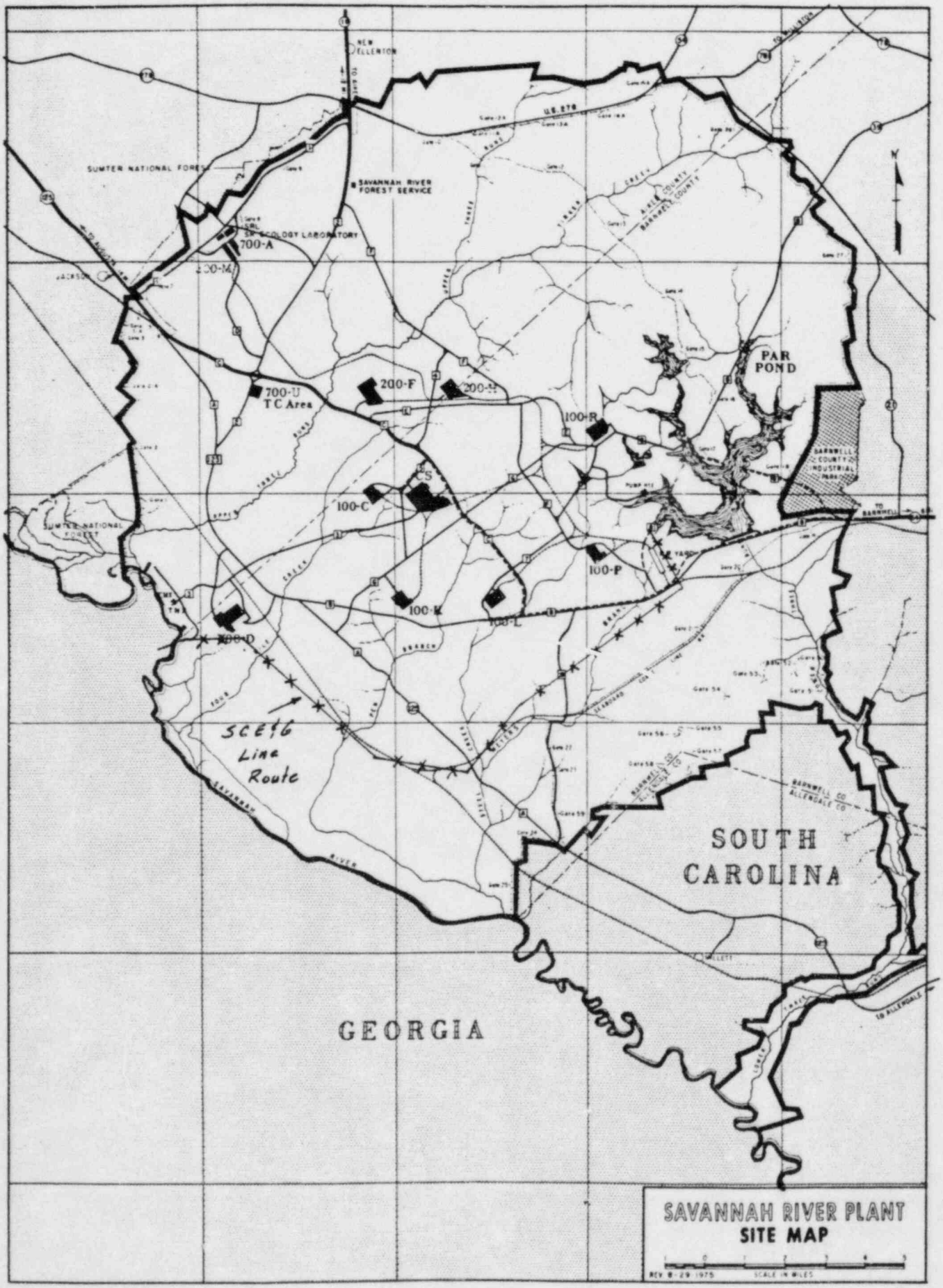
Line Parameters

Voltage	230kV
Structure Type	H-Frame
Structure Mat	Wood & Galvanized Steel
Nominal Height	80 to 100 ft.
Nominal Span	800 ft.
Conductor Type and Size	Two - bundled 1272 KCMIL ACSR*
Phase-to-Phase Clearance	18 ft.
Minimum Ground Clearance	30 ft.

* Aluminum cable steel reinforced.

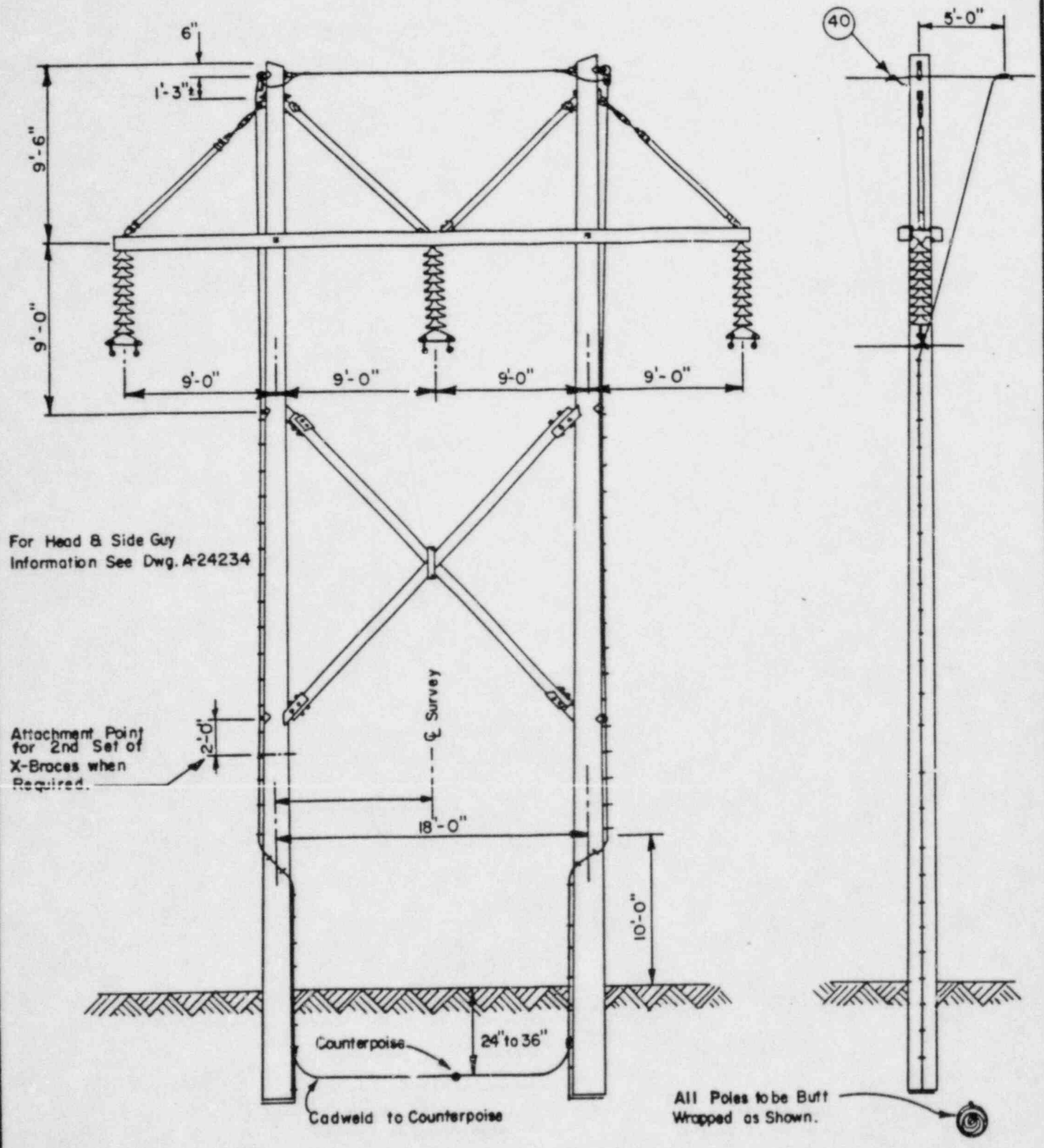

FIGURE 1
Flowery Gap Landing
BURKE CO
AIKEN CO
BARNWELL CO
Black Lake
Cox Point
Red Lake
RIVER
U S
RESERVATION
BOUNDARY
BARNWELL CO
BURKE CO
Hancock Landing
JEEP TRAIL
ROAD
JEEP TRAIL
RIVER
BM 305
(GIRARD NW)
4650 II NW
3673
3671
3670
3669
480 000 FE
(S. C.)
PLANT VOGTLE

FIGURE 2


SUMTER NATIONAL FOREST
SAVANNAH RIVER FOREST SERVICE
700-A
700-M
700-U
TC Area
200-F
200-H
100-R
PAR POND
100-C
100-P
100-K
100-L
100-D
SCE&G Line Route
SOUTH CAROLINA
GEORGIA
SAVANNAH RIVER PLANT
SITE MAP
SCALE IN MILES

AF 28012A-B

FIGURE 3



REF. F-24416 (HARDWARE DETAIL) STR. CODE DA-B-IX-BC

NO.	DATE	REVISION

DR./TR. MEH 6-28-84 DATE
CK. GJR 7.3.84 DATE
APP. DATE
APP. DATE
APP. DATE
APP. DATE
SCALE NTS

SOUTH CAROLINA ELECTRIC & GAS CO.

FOR 230 KV TRANSMISSION LINE STANDARD

DETAIL DA-B-IX BUNDLE CONDUCTOR STR.

M. F. INDEX 10000 / CODE CARD NO. SH. 1 OF 4 SHTS.

A-25431 REV.

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