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R. J. Kelly
Vice President and General Manager
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Georgia Power
the southern electric system

September 13, 1979

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

NRC DOCKETS 50-321, 50-366
OPERATING LICENSES DPR-57, NPF-5
EDWIN I. HATCH NUCLEAR PLANT UNITS 1, 2
ADEQUACY OF STATION SYSTEMS VOLTAGE

Gentlemen:

Georgia Power Company is working toward completion of a study on the "Adequacy of Station Electric Distribution Systems Voltage" for Plant Hatch as requested by your letter of August 8, 1979. Your letter also requested our response by October 8, 1979.

A very large amount of work is required to prepare an accurate and complete response to the requirements addressed in your letter. Attached is an outline which presents the approach which is necessary to provide a complete response. This attachment should give you a basic idea of the scope of work which is required.

Therefore, Georgia Power Company requests an extension of 60 days in order to complete our review and provide an accurate response. We believe that a new submittal date of December 8, 1979, is justified from information provided in the attachment.

Please let us know of your concurrence in this regard.

Very truly yours,

R. J. Kelly

MRD/mb

Attachment

xc: Ruble A. Thomas
George F. Trowbridge, Esquire

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Georgia Power

Attachment to Letter Dated September 13, 1979,
on Adequacy of Station Systems Voltage

OUTLINE OF PROGRAM ON STABILITY OF SYSTEMS VOLTAGE

Georgia Power Company received your letter dated August 8, 1979, on August 20, 1979, and immediately scheduled an in-house meeting for August 24, 1979, to discuss the items addressed by your staff. The meeting consisted of considerable discussion on possible transmission system conditions and contingencies at Plant Hatch which might cause a degraded condition similar to what occurred at the Arkansas plant. From this overview we could not identify any serious deficiencies in our system design and remain confident that our system is more than adequate. However, regardless of our engineering judgement in that meeting, we decided to provide a detailed analysis answering the several items addressed in your August 8 letter. We developed a task force consisting of Georgia Power Company engineers together with assistance from Southern Services, Inc., our engineering service organization. The following identify some of the information required and the way we intend to proceed:

1. Georgia Power's System Planning Department did a system voltage study to determine worst case conditions depending on different contingencies on the grid. This computer based analysis will take 3 weeks and should be finished within the next few days. The System Planning Department will assure that for worst case situations, the voltage will not drop below 95% of nominal or rise above 105% of nominal.

   In the meantime, plant personnel are obtaining transformer tap settings on all emergency station service transformers (230/4.16-KV, 4160/600-V, 600/208-V). Also, nameplate data are being recorded from each of these transformers.

   Voltage relay settings must be obtained as they presently exist and then must be verified to documented values. If they are different, we will re-evaluate these settings and change if necessary.

   Test or manufacturers' reports should be provided and reviewed for all motors on all emergency buses down to 25 hp. Nameplate data should be included if not available from other reports.

   A list of all available loads fed from Station Service System (SSS) buses accounting for all cable sizes and lengths including impedance data.

   Finally, a list of the sequence of events (load restoration priorities) at emergency buses under transfer will be supplied by plant personnel.

2. Once the Planning Department establishes its conditions at various contingencies, the high side positive sequence impedance data should be determined for these conditions.

Attachment to Letter Dated September 13, 1979,
on Adequacy of Station Systems Voltage

3. Once the information is obtained it will be supplied to Southern Company Services, Inc. to be analyzed as addressed by the NRC in their guidelines for voltage drop calculations. Voltage profiles at critical buses will be analyzed for all possible conditions with respect to added loads which should be specified in each case. A Southern Company Services' engineer will provide Georgia Power Company with a typical test procedure for at least one case to verify the analytical results. The proposed test procedure will be reviewed for approval by Georgia Power Company operating and plant personnel.

   Once these calculations have been completed, they will be sent to Georgia Power Company for review and then a package of all calculations and supporting data will be assembled and presented to the NRC.