February 23, 1983

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Docket No. 50-321

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Mr. J. T. Beckham, Jr.
Vice President - Engineering
Georgia Power Company
P. O. Box 4545
Atlanta, Georgia 30302

Dear Mr. Beckham:

This letter confirms the oral authorization issued by the NRC staff on February 22, 1983, to L. Gucwa, Georgia Power Company, for a one-time change in Technical Specification 3.7.A.5b, "Oxygen Concentration." The change permitted an extension in time interval, from 24 hours to 72 hours, before the oxygen concentration in the drywell shall be reduced to 4%, after the reactor is placed in the Run Mode. The extension is required because the 2-inch bypass lines to the 18-inch purge valve are now being used to purge the containment. During previous startups, the 18-inch purge valves were used for this purpose. The extension in time now runs out at 9:00 a.m. EST, on Friday, February 25, 1983. We concluded the change was acceptable based on the enclosed evaluation. As an extension in drywell inerting necessitates an extension of time in the interval needed to implement differential pressure between the drywell and suppression chamber as required by Section 3.7.A.7(1) of the Technical Specifications, we likewise extended the time interval to establish the differential pressure to 9:00 a.m. EST, February 25, 1983. The differential pressure cannot be established until inerting is completed as the containment vents are open during inerting. The change was initiated by a telephone call from L. Gucwa of Georgia Power Company, on February 22, 1983, to G. W. Rivenbark, followed by a telecopied letter request, the same day.

An official amendment and appropriate Federal Register Notice will be forwarded in the near future.

Sincerely,
"ORIGINAL SIGNED BY:"

Gus C. Lainas, Assistant Director
for Operating Reactors
Division of Licensing

Enclosure:
Safety Evaluation

cc w/enclosure: See next page

*See previous white for concurrence.

OFFICE			ORB#4:DL	C-ORB#4:DL	AD:OR:DL	ORB#4:DL	
SURNAME			GRivenbark;cf	VStolz	GLainas	RIngram	
			2/23/83	2/23/83	2/23/83	2/24/83	

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Docket No. 50-321

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SURNAME			GRivenbark	JStolz	GLainas	RIngram	
DATE			2/24/83:cb	2/24/83	2/24/83	2/24/83	

cc w/enclosure(s):

G. F. Trowbridge, Esq.
Shaw, Pittman, Potts and Trowbridge
1800 M Street, N.W.
Washington, D. C. 20036

Ruble A. Thomas
Vice President
P. O. Box 2625
Southern Company Services, Inc.
Birmingham, Alabama 35202

Ozen Batum
Southern Company Services, Inc.
Post Office Box 2625
Birmingham, Alabama 35202

Chairman
Appling County Commissioners
County Courthouse
Baxley, Georgia 31513

Mr. L. T. Gucwa
Georgia Power Company
Engineering Department
P. O. Box 4545
Atlanta, Georgia 30302

Mr. Max Manry
Georgia Power Company
Edwin I. Hatch Plant
P. O. Box 442
Baxley, Georgia 31513

Regional Radiation Representative
EPA Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30308

Resident Inspector
U. S. Nuclear Regulatory Commission
Route 1, P. O. Box 279
Baxley, Georgia 31513

Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Charles H. Badger
Office of Planning and Budget
Room 610
270 Washington Street, S.W.
Atlanta, Georgia 30334

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

February 23, 1983

Docket No. 50-321

Mr. J. T. Beckham, Jr.
Vice President - Engineering
Georgia Power Company
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Atlanta, Georgia 30302

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Enclosure:
Safety Evaluation

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See next page

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FACILITY OPERATING LICENSE NO. DPR-57

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-321

Introduction

Technical Specification 3.7.A.5.b requires "within the 24-hour period subsequent to placing the reactor in the RUN mode following a shutdown, the containment atmosphere oxygen concentration shall be reduced to less than 4% by volume and maintained in this condition". However, during the return to operation of February 22, 1983, it has become apparent that this Limiting Condition for Operation (LCO) cannot be met. Inability to meet the 24-hour LCO is due to time limits imposed on the use of the 18-inch containment purge and vent valves. This necessitates the use of 2-inch lines (bypass lines for the 18-inch valves) for containment purge and vent functions. These 2-inch lines do not permit timely inerting of the containment. No other lines are available for containment purge and vent functions. Inerting commenced at about 7:00 p.m. (CST) on February 20, 1983, following last personnel entry into primary containment. The licensee, therefore, has requested a one-time extension of the 24-hour LCO to 72 hours. The 24-hour LCO interval began at about 9:00 a.m. (CST) on February 22, 1983.

Evaluation

The basis for the present 24-hour requirement on attaining a 4% oxygen concentration following entry into the RUN mode is to minimize the possibility of hydrogen combustion following a loss-of-coolant accident (LOCA). The 24-hour period was established, as stated in the bases for Specification 3.7.A.5, as being sufficient to perform necessary drywell inspections and establish the required oxygen concentration. The control is administrative and supplements the Containment Atmosphere Dilution (CAD) system, which can be used to control oxygen concentrations.

The CAD system provides the basis for assuring containment integrity post LOCA. At the time Unit 1 was licensed, the CAD system was installed to meet the applicable regulations addressing hydrogen evolution.

Because the 24-hour limit is an administrative control, as opposed to providing a safety function, margins of safety, as defined in the Technical Specifications, are not reduced by allowing a longer period of time to complete drywell inerting. The safety margin is provided by the CAD system.

Additionally, due to plant factors, maximum thermal power will not exceed fifty percent (50%) while oxygen concentrations exceed 4%.

Extension of the drywell inerting LCO also necessitates an extension of the LCO for Technical Specification 3.7.A.7.(1), Drywell-Suppression Chamber Differential Pressure, for a like time period. Required differential pressure cannot be established until inerting is completed as the containment vents are open during inerting.

Hatch Unit 1 has previously used the 18" purge and vent lines for inerting purposes while starting up. Due to the NRC's requirements to limit operation of large purge systems with unqualified purge valves to 90 hours a year, Hatch Unit 1 is now attempting to inert by using the qualified 2" purge bypass valve, which does not have a time restriction. This is the first plant startup using only the smaller purge line. Currently containment atmospheric monitors measure the oxygen concentration at approximately 6%.

The licensee has determined that permanent Technical Specification changes are necessary because 24 hours do not allow sufficient time for inerting. This is because the licensee has decided not to use the 18" purge system for the purpose of inerting, thus preserving the 90 hours of use for other situations. We will pursue permanent Technical Specification changes with the licensee in the future. However, for the present plant startup situation, we will address the licensee's proposed one-time only change.

We believe that a basis exists to permit acceptance of the proposed changes. They are as follows:

1. The containment atmosphere is presently at 6% oxygen concentration. This in itself greatly reduces the probability of hydrogen combustion in the event of a postulated LOCA and subsequent hydrogen generation.

2. The maximum thermal power will not exceed 50% during the 72-hour interval. This will limit fission product and decay heat buildup. Thus, the worst case scenario will be less than the design basis event.

3. There is a very low likelihood of an accident involving large amounts of hydrogen generation in the 72-hour interval.

Conclusion

We conclude, based on the reasons given above, that an extension of 72 hours in the LCO of Technical Specification 3.7.A.5.b and 3.7.A.7(1) does not pose an unacceptable risk to the health and safety of the public.

Dated: February 22, 1983

The following NRC personnel have contributed to this SER:
D. Pickett and G. Rivenbark.