October 15, 1991

Docket Nos. 50-424
and 50-425

Posted correction to Amdts. (43) + 44 to NPF-68

Mr. W. G. Hairston, III
Senior Vice President -
Nuclear Operations
Georgia Power Company
P. O. Box 1295
Birmingham, Alabama 35201

Dear Mr. Hairston:

SUBJECT: CORRECTION TO AMENDMENTS 43 AND 44 (UNIT 1) AND AMENDMENTS 23 AND 24 (UNIT 2) TO THE VOGTLE ELECTRIC GENERATING PLANT

The Nuclear Regulatory Commission issued Amendment Nos. 43 and 23 to Units 1 and 2, respectively (Phase 1), and Amendment Nos. 44 and 24 to Units 1 and 2, respectively (Phase 2) to the Vogtle Electric Generating Plant, to change the Technical Specifications (TS) to provide for use of VANTAGE-5 fuel and increased operational flexibility. The amendments were issued on September 19, 1991.

In a closer review of the revised TS for both Phases 1 and 2, typographical errors were found on the Index pages and TS pages.

Please replace the following TS pages with the enclosed revised pages.

Sincerely,

/s/

Darl S. Hood, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
Corrected TS pages

cc w/enclosure:
See next page

OFC	:LA:PDII-3	:PM:PDII-3	:D:PDII-3	:	:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Darl Hood

Darl S. Hood, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosure:
Corrected TS pages

cc w/enclosure:
See next page

cc:
Mr. J. A. Bailey
Manager - Licensing
Georgia Power Company
P. O. Box 1295
Birmingham, Alabama 35201

Mr. W. B. Shipman
General Manager, Vogtle Electric
Generating Plant
P. O. Box 1600
Waynesboro, Georgia 30830

Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
101 Marietta Street, NW., Suite 2900
Atlanta, Georgia 30323

Office of the County Commissioner
Burke County Commission
Waynesboro, Georgia 30830

Office of Planning and Budget
Room 615B
270 Washington Street, SW.
Atlanta, Georgia 30334

Mr. C. K. McCoy
Vice President - Nuclear, Vogtle Project
Georgia Power Company
P. O. Box 1295
Birmingham, Alabama 35201

Resident Inspector
U. S. Nuclear Regulatory Commission
P. O. Box 572
Waynesboro, Georgia 30830

Mr. R. P. McDonald
Executive Vice President -
Nuclear Operations
Georgia Power Company
P. O. Box 1295
Birmingham, Alabama 35201

Mr. J. Leonard Ledbetter, Director
Environmental Protection Division
Department of Natural Resources
205 Butler Street, SE., Suite 1252
Atlanta, Georgia 30334

Attorney General
Law Department
132 Judicial Building
Atlanta, Georgia 30334

Mr. Alan R. Herdt
Project Branch #3
U. S. Nuclear Regulatory Commission
101 Marietta Street, NW., Suite 2900
Atlanta, Georgia 30323

Mr. Dan Smith
Program Director of
Power Production
Oglethorpe Power Corporation
2100 East Exchange Place
P. O. Box 1349
Tucker, Georgia 30085-1349

Charles A. Patrizia, Esq.
Paul, Hastings, Janofsky & Walker
12th Floor
1050 Connecticut Avenue, NW.
Washington, DC 20036

Art Domby, Esquire
Troutman, Sanders, Lockerman
& Ashmore
127 Peachtree Street
Atlanta, Georgia 30303-1810

Correction to Technical Specification Pages

	Remove Pages	Insert Pages
Phase 1	XV/XVI*	XV/XVI*
	XXIII	XXIII
Phase 2	XV/XVI*	XV/XVI*
	2-4 thru 2-10	2-4 thru 2-10

* Overleaf pages containing no changes

PHASE 1

Corrective letter of 10-15-91

INDEX

BASES

BASES

SECTION

PHASE 2

Correction letter of 10-15-91

BASES

INDEX

BASES

TABLE 2.2-1

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
1. Manual Reactor Trip	N.A.	N.A.	N.A.	N.A.	N.A.
2. Power Range, Neutron Flux (NI-0041B&C, NI-0042B&C, NI-0043B&C, NI-0044B&C)					
a. High Setpoint	7.5	4.56	0	$\leq$109% of RTP#	$\leq$111.3% of RTP#
b. Low Setpoint	8.3	4.56	0	$\geq$25% of RTP#	$\geq$27.3% of RTP#
3. Power Range, Neutron Flux, High Positive Rate (NI-0041B&C, NI-0042B&C, NI-0043B&C, NI-0044B&C)	1.6	0.50	0	$\leq$5% of RTP# with a time constant $\geq$2 seconds	$\leq$6.3% of RTP# with a time constant $\geq$2 seconds
4. Power Range, Neutron Flux, High Negative Rate (NI-0041B&C, NI-0042B&C, NI-0043B&C, NI-0044B&C)	1.6	0.50	0	$\leq$5% of RTP# with a time constant $\geq$2 seconds	$\leq$6.3% of RTP# with a time constant $\geq$2 seconds
5. Intermediate Range, Neutron Flux (NI-0035B, NI-0036B)	17.0	8.41	0	$\leq$25% of RTP#	$\leq$31.1% of RTP#
6. Source Range, Neutron Flux (NI-0031B, NI-0032B)	17.0	10.01	0	$\leq 10^5$ cps	$\leq 1.4 \times 10^5$ cps
7. Overtemperature ΔT (TDI-411C, TDI-421C, TDI-431C, TDI-441C)	10.7	7.04	1.96 + 1.17	See Note 1	See Note 2
8. Overpower ΔT (TDI-411B, TDI-421B, TDI-431B, TDI-441B)	4.3	1.54	1.96	See Note 3	See Note 4

#RTP = RATED THERMAL POWER

Amendment No. 44 (Unit 1)
Amendment No. 24 (Unit 2)

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
9. Pressurizer Pressure-Low (PI-0455A,B&C, PI-0456 & PI-0456A, PI-0457 & PI-0457A, PI-0458 & PI-0458A)	3.1	0.71	1.67	≥1960 psig**	≥1950 psig
10. Pressurizer Pressure-High (PI-0455A,B&C, PI-0456 & PI-0456A, PI-0457 & PI-0457A, PI-0458 & PI-0458A)	3.1	0.71	1.67	≤2385 psig	≤2395 psig
11. Pressurizer Water Level-High (LI-0459A, LI-0460A, LI-0461)	8.0	2.18	1.67	≤92% of instrument span	≤93.9% of instrument span
12. Reactor Coolant Flow-Low (LOOP1 FI-0414 FI-0415 FI-0416; LOOP2 FI-0424 FI-0425 FI-0426; LOOP3 FI-0434 FI-0435 FI-0436; LOOP4 FI-0444 FI-0445 FI-0446)	2.5	1.87	0.60	>90% of loop design flow*	>89.4% of loop design flow*
13. Steam Generator Water Level Low-Low (LOOP1 LI-0517 LI-0518 LI-0519 LI-0551; LOOP2 LI-0527 LI-0528 LI-0529 LI-0552; LOOP3 LI-0537 LI-0538 LI-0539 LI-0553; LOOP4 LI-0547 LI-0548 LI-0549 LI-0554)	18.5 (21.8)***	17.18 (18.21)***	1.67	≥18.5% (37.8)*** of narrow range instrument span	≥17.8% (35.9)*** of narrow range instrument span
14. Undervoltage - Reactor Coolant Pumps	6.0	0.58	0	>9600 volts (70% bus voltage)	>9481 volts (69% bus voltage)
15. Underfrequency - Reactor Coolant Pumps	3.3	0.50	0	≥57.3 Hz	≥57.1 Hz

*Loop design flow = 95,700 gpm

**Time constants utilized in the lead-lag controller for Pressurizer Pressure-Low are 10 seconds for lead and 1 second for lag. CHANNEL CALIBRATION shall ensure that these time constants are adjusted to these values.

***The value stated inside the parenthesis is for instrument that has the lower tap at elevation 333"; the value stated outside the parenthesis is for instrumentation that has the lower tap at elevation 438".

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
16. Turbine Trip					
a. Low Fluid Oil Pressure (PT-6161, PT-6162, PT-6163)	N.A.	N.A.	N.A.	≥580 psig	≥500 psig
b. Turbine Stop Valve Closure	N.A.	N.A.	N.A.	≥96.7% open	≥96.7% open
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	N.A.	N.A.
18. Reactor Trip System Interlocks					
a. Intermediate Range Neutron Flux, P-6 (NI-0035B, NI-0036B)	N.A.	N.A.	N.A.	≥1 x 10^{-10} amp	≥6 x 10^{-11} amp
b. Low Power Reactor Trips Block, P-7					
1) P-10 input (NI-0041B&C, NI-0042B&C, NI-0043B&C, NI-0044B&C)	N.A.	N.A.	N.A.	≤10% of RTP#	≤12.3% of RTP#
2) P-13 input (PI-0505, PI-0506)	N.A.	N.A.	N.A.	<10% RTP# Turbine Impulse Pressure Equivalent	<12.3% RTP# Turbine Impulse Pressure Equivalent
c. Power Range Neutron Flux, P-8 (NI-0041B&C, NI-0042B&C, NI-0043B&C, NI-0044B&C)	N.A.	N.A.	N.A.	≤48% of RTP#	≤50.3% of RTP#

#RTP = RATED THERMAL POWER

Amendment No. 44 (Unit 1)
Amendment No. 24 (Unit 2)

TABLE 2.2-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
d. Power Range Neutron Flux, P-9 (NI-0041B&C, NI-0042B&C, NI-0043B&C, NI-0044B&C)	N.A.	N.A.	N.A.	≤50% of RTP#	≤52.3% of RTP#
e. Power Range Neutron Flux, P-10 (NI-0041B&C, NI-0042B&C, NI-0043B&C, NI-0044B&C)	N.A.	N.A.	N.A	≥10% of RTP#	≥7.7% of RTP#
f. Turbine Impulse Chamber Pressure, P-13 (PI-0505, PI-0506)	N.A.	N.A.	N.A.	<10% RTP# Turbine Impulse Pressure Equivalent	<12.3% RTP# Turbine Impulse Pressure Equivalent
19. Reactor Trip Breakers	N.A.	N.A.	N.A	N.A.	N.A.
20. Automatic Trip and Interlock Logic	N.A.	N.A.	N.A.	N.A.	N.A.

#RTP = RATED THERMAL POWER

TABLE 2.2-1 (Continued)

TABLE NOTATIONS

NOTE 1: OVERTEMPERATURE ΔT

$$\Delta T \left(\frac{1 + \tau_1 S}{1 + \tau_2 S}\right)\left(\frac{1}{1 + \tau_3 S}\right) \leq \Delta T_0 \{K_1 - K_2 \left(\frac{1 + \tau_4 S}{1 + \tau_5 S}\right)[T \left(\frac{1}{1 + \tau_6 S}\right) - T'] + K_3(P - P') - f_1(\Delta I)\}$$

Where:

- ΔT = Measured ΔT by RTD Manifold Instrumentation
- $\frac{1 + \tau_1 S}{1 + \tau_2 S}$ = Lead-lag compensator on measured ΔT;
- τ_1, τ_2 = Time constants utilized in lead-lag compensator for ΔT, $\tau_1 \geq 8$ s, $\tau_2 \leq 3$ s;
- $\frac{1}{1 + \tau_3 S}$ = Lag compensator on measured ΔT;
- τ_3 = Time constants utilized in the lag compensator for ΔT, $\tau_3 = 0$ s;
- ΔT_0 = Indicated ΔT at RATED THERMAL POWER;
- K_1 $\leq$ 1.12;
- K_2 = 0.0224/°F;
- $\frac{1 + \tau_4 S}{1 + \tau_5 S}$ = The function generated by the lead-lag compensator for T_{avg} dynamic compensation;
- τ_4, τ_5 = Time constants utilized in the lead-lag compensator for T_{avg}, $\tau_4 \geq 28$ s, $\tau_5 \leq 4$ s;
- T = Average temperature, °F;
- $\frac{1}{1 + \tau_6 S}$ = Lag compensator on measured T_{avg};
- τ_6 = Time constant utilized in the measured T_{avg} lag compensator, $\tau_6 = 0$ s;

TABLE 2.2-1 (Continued)

TABLE NOTATIONS (Continued)

NOTE 1: (Continued)

T' $\leq$ 588.4°F Nominal T_{avg} operating temperature;

K_3 = 0.00115/psig;

P = Pressurizer pressure, psig;

P' = 2235 psig (Nominal RCS operating pressure);

S = Laplace transform variable, s^{-1};

and $f_1(\Delta I)$ is a function of the indicated difference between top and bottom detectors of the power-range neutron ion chambers; with gains to be selected based on measured instrument response during plant startup tests such that:

(1) For $q_t - q_b$ between -32.0% and + 11.0%, $f_1(\Delta I) = 0$, where q_t and q_b are percent RATED THERMAL POWER in the top and bottom halves of the core respectively, and $q_t + q_b$ is total THERMAL POWER in percent of RATED THERMAL POWER;

(2) For each percent that the magnitude of $q_t - q_b$ exceeds -32.0%, the ΔT Trip Setpoint shall be automatically reduced by 3.25% of its value at RATED THERMAL POWER; and

(3) For each percent that the magnitude of $q_t - q_b$ exceeds + 11.0%, the ΔT Trip Setpoint shall be automatically reduced by 1.97% of its value at RATED THERMAL POWER.

NOTE 2: The channel's maximum Trip Setpoint shall not exceed its computed Trip Setpoint by more than 3.1% of ΔT span.

Amendment No. 44 (Unit 1)
Amendment No. 24 (Unit 2)

TABLE 2.2-1 (Continued)

TABLE NOTATIONS (Continued)

NOTE 3: OVERPOWER ΔT

$$\Delta T \frac{(1 + \tau_1 S)}{(1 + \tau_2 S)} \frac{(1)}{(1 + \tau_3 S)} \leq \Delta T_o \{K_4 - K_5 \frac{(\tau_7 S)}{(1 + \tau_7 S)} \frac{(1)}{(1 + \tau_6 S)} T - K_6 [T \frac{(1)}{(1 + \tau_6 S)} - T''] - f_2(\Delta I)\}$$

Where:

ΔT = Measured ΔT by RTD manifold instrumentation;

$\frac{1 + \tau_1 S}{1 + \tau_2 S}$ = Lead-lag compensator on measured ΔT;

τ_1, τ_2 = Time constants utilized in lead-lag compensator for ΔT, $\tau_1 \geq 8$ S, $\tau_2 \leq 3$ s;

$\frac{1}{1 + \tau_3 S}$ = Lag compensator on measured ΔT;

τ_3 = Time constants utilized in the lag compensator for ΔT, $\tau_3 = 0$s;

ΔT_o = Indicated ΔT at RATED THERMAL POWER;

K_4 $\leq$ 1.08,

K_5 $\geq$ 0.02/°F for increasing average temperature and $\geq$ 0 for decreasing average temperature,

$\frac{\tau_7 S}{1 + \tau_7 S}$ = The function generated by the rate-lag compensator for T_{avg} dynamic compensation,

τ_7 = Time constants utilized in the rate-lag compensator for T_{avg}, $\tau_7 \geq 10$ s,

$\frac{1}{1 + \tau_6 S}$ = Lag compensator on measured T_{avg};