

J. Bernie Beasley, Jr., P.E.
Vice President
Vogtle Project

**Southern Nuclear
Operating Company, Inc.**
40 Inverness Center Parkway
P.O. Box 1295
Birmingham, Alabama 35201

Tel 205.992.7110
Fax 205.992.0403



Energy to Serve Your WorldSM

LCV-1523

April 27, 2001

Docket Nos.: 50-424
50-425

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Ladies and Gentlemen:

**VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
SLAVE RELAY TEST FREQUENCY
SURVEILLANCE REQUIREMENT 3.3.6.5**

In accordance with the provisions of 10 CFR 50.90, Southern Nuclear Operating Company (SNC) proposes to revise the Vogtle Electric Generating Plant (VEGP) Unit 1 and Unit 2 Technical Specifications (TS) 3.3.6, "Containment Ventilation Isolation Instrumentation," to relax the slave relay test frequency from quarterly to a refueling frequency.

The associated Bases to Surveillance Requirement (SR) 3.3.6.5 clarifies that slave relay test frequency is adequate based on industry operating history, considering relay reliability and operating history data.

Enclosure 1 provides the basis for the proposed change. Pursuant to 10 CFR 50.92, Enclosure 2 demonstrates that the proposed change does not involve a significant hazard consideration. Enclosure 3 is a mark-up of the affected pages from the VEGP Unit 1 and Unit 2 TS and the affected Bases pages. Enclosure 4 contains the clean-typed pages reflecting the proposed changes. Enclosure 5 contains Amendments 114 and 92 to Facility Operating License NPF-81 for Vogtle Units 1 and 2. These amendments revise Technical Specification 3.3.2, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," to relax the slave relay test frequency from quarterly to every 18 months.

SNC requests that this amendment be approved by October 26, 2001.

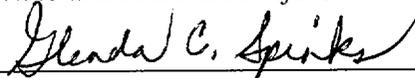
A001

Mr. J. B. Beasley, Jr. states that he is Vice President of Southern Nuclear Operating Company and is authorized to execute this oath on behalf of Southern Nuclear Operating Company and that, to the best of his knowledge and belief, the facts set forth in this letter are true.

SOUTHERN NUCLEAR OPERATING COMPANY

By: 
J. B. Beasley, Jr.

Sworn to and subscribed before me this 27th day of April, 2001.

 My commission expires: 11/10/02
Notary Public

JBB/JPC

- Enclosure 1: Basis for Proposed Change
- Enclosure 2: Significant Hazards Evaluation
- Enclosure 3: Marked-Up TS and Bases Pages
- Enclosure 4: Clean-Typed TS and Bases Pages
- Enclosure 5: Letter from NRC Issuing Amendments 114 and 92

cc: Southern Nuclear Operating Company
Mr. J. T. Gasser
Mr. M. Sheibani
SNC Document Management

U. S. Nuclear Regulatory Commission
Mr. L. A. Reyes, Regional Administrator
Mr. R. R. Assa, Senior Project Manager, NRR
Mr. John Zeiler, Senior Resident Inspector, Vogtle

State of Georgia
L. C. Barrett, Commissioner, Department of Natural Resources

ENCLOSURE 1

VOGTLE ELECTRIC GENERATING PLANT REQUEST TO REVISE TECHNICAL SPECIFICATIONS SLAVE RELAY TEST FREQUENCY SURVEILLANCE REQUIREMENT 3.3.6.5

BASIS FOR PROPOSED CHANGE

Proposed Change

The current VEGP Technical Specifications (TS) specifically require quarterly testing of slave relays in the Containment Ventilation Isolation (CVI) Instrumentation. This requirement involves testing the relays at power, with the attendant risk of inadvertent actuation of the CVI equipment. In addition, the on-line testing of slave relays requires significant plant manipulation, abnormal configurations, and removes from service various equipment, making it unavailable to perform its intended safety function. A subgroup of the Westinghouse Owners Group (WOG) sponsored a reliability assessment of specific Potter & Brumfield (P&B) relay types to establish a slave relay surveillance test interval based on relay reliability. The study is documented in WCAP-13878, "Reliability Assessment of P&B MDR Relays." The proposed change allows relaxing the CVI Slave Relay Test from every 92 days to every 18 months for circuits containing P&B MDR series relays. The TS requirement for CVI Slave Relay Testing will continue to be implemented by SR 3.3.6.5.

The associated Bases for Surveillance Requirement 3.3.6.5 will be revised to clarify that circuits containing P&B MDR series relays may be tested on an 18-month frequency. WCAP-13878, Revision 2, provides both the methodology and technical basis that justifies extending the surveillance frequency for ESFAS P&B MDR relays. The reliability assessment is relay-specific and applies only to P&B MDR series relays.

Basis for Proposed Change in Surveillance Frequency

By letter dated August 22, 2000, the NRC issued Amendment Number 114 to Facility Operating License NPF-68 and Amendment Number 92 to Facility Operating License NPF-81 for Vogtle Electric Generating Plants, Units 1 and 2. These amendments revise Technical Specification 3.3.2, "Engineered Safety Features Actuation System (ESFAS) Instrumentation," to relax the slave relay test frequency from quarterly to every 18 months.

The slave relays that initiate CVI were included in all the reviews and analyses that were performed for relaxing the ESFAS slave relay surveillance frequency in TS 3.3.2, but unfortunately SNC failed to identify that 3.3.6.5 also contains a requirement to test these relays quarterly.

WCAP-13878 contains the technical basis and methodology for extending slave relay test requirements for ESFAS P&B MDR series relays. The technical basis and methodology were approved by letter dated May 31, 1996 from Bruce A. Boger (NRC) to Tom Greene (WOG). The NRC safety evaluation report (SER) for WCAP-13878 requires confirmation of the following:

1. Verify that the generic analysis in WCAP-13878 is applicable to their plant.

ENCLOSURE 1

VOGTLE ELECTRIC GENERATING PLANT REQUEST TO REVISE TECHNICAL SPECIFICATIONS SLAVE RELAY TEST FREQUENCY SURVEILLANCE REQUIREMENT 3.3.6.5

BASIS FOR PROPOSED CHANGE

2. Re-evaluate the adequacy of the extended surveillance interval if two or more P&B MDR ESFAS subgroup relays fail in a 12-month period.
3. Ensure that the procurement program for P&B MDR relays is adequate for detecting the types of failures that are discussed in References 9, 10, 11, and 12 of the SER.
4. Ensure that all pre-1992 P&B MDR relays which are used in either a normally energized or a 20 % duty cycle have been removed from ESFAS applications.
5. Perform a contact loading analysis for P&B MDR relays to determine the acceptability of the relays.

To comply with the required actions of WCAP-13878, SNC has performed the following:

Response to Item 1

WCAP-13878 analyzed the reliability of the following Potter & Brumfield (P&B) MDR relays:

- Model 4103-1 non-latching 118 VAC MDR relay
- Model 4121-1 latching 118 VAC MDR relay
- Model 5076-1 non-latching 125 VDC MDR relay
- Model 5134-1 non-latching 48 VDC MDR relay

The VEGP Solid State Protection System (SSPS) utilizes Model 4103-1 non-latching and 4121-1 latching MDR relays as slave relays.

The VEGP SSPS consists of two redundant trains of four bay Westinghouse SSPS (input bay, logic bay, and two output bays). The input, logic, and first output bays are virtually identical to Farley's SSPS, where temperature data was collected for WCAP-13878. VEGP has an additional output bay. The VEGP P&B MDR relays dissipate about 6.5 watts when energized, substantially less than the Farley AR relays. The temperature rise in the VEGP SSPS cabinets has been verified to be within the assumptions of WCAP-13878.

The VEGP SSPS is located in the Main Control Room (MCR). Technical Specifications require that the VEGP MCR be maintained less than 85° F. In reviewing MCR temperature data, it was determined that the typical MCR temperature ranged from 70° F to 78° F. This is within the temperature assumptions in WCAP-13878.

In summary, the VEGP SSPS utilizes P&B MDR relays identical to those analyzed in

ENCLOSURE 1

VOGTLE ELECTRIC GENERATING PLANT REQUEST TO REVISE TECHNICAL SPECIFICATIONS SLAVE RELAY TEST FREQUENCY SURVEILLANCE REQUIREMENT 3.3.6.5

BASIS FOR PROPOSED CHANGE

WCAP-13878. The environmental conditions in which these relays are located are bounded by the assumptions in WCAP-13878; thus, the analysis and conclusions in WCAP-13878 are applicable to VEGP.

Response to Item 2

Plant procedures have been revised to specifically require monitoring for P&B MDR ESFAS and CVI subgroup relay failures. If two or more relays fail in a 12-month period, VEGP will re-evaluate the adequacy of the extended surveillance frequency.

Response to Item 3

VEGP purchases P&B MDR relays as new, safety-related components. No VEGP P&B MDR relays are sent out for rework. Although VEGP does not utilize refurbished or reworked P&B MDR relays, each new P&B MDR relay is inspected for conditions that could indicate sub-standard refurbishment. The specific conditions that are required to be evaluated are identified in Table 11 of procedure 70522-C, "Material Receipt Inspection."

During receipt inspection, new P&B MDR relays are verified to have been manufactured after 1992. All P&B MDR relays in the warehouse were inspected and any that were manufactured before 1993 were removed from inventory.

Response to Item 4

VEGP performed a review of the SSPS system and determined that all slave relays that perform Technical Specification required functions are normally de-energized while the plant is at power. SSPS is normally removed from service during refueling outages and cold shutdowns; thus, VEGP does not have any CVI slave relays that are either normally energized or energized for a 20% duty cycle.

Response to Item 5

VEGP has completed a contact loading study covering each contact on every SSPS slave relay for Unit 1 and found that they are well within the design basis of the slave relays. Unit 2 SSPS design and loads are similar to Unit 1 and were not reviewed. However, a cursory review of the Unit 2 SSPS slave relay contact loading has been done and found the same as unit 1.

The contact loading study recorded the manufacturer, model, and device ratings of each actuation device (solenoid or relay) operated by each slave relay contact. In the contact loading study, all slave relay single contacts were evaluated for overload, continuous current, and switching capabilities for both ac

ENCLOSURE 1

VOGTLE ELECTRIC GENERATING PLANT REQUEST TO REVISE TECHNICAL SPECIFICATIONS SLAVE RELAY TEST FREQUENCY SURVEILLANCE REQUIREMENT 3.3.6.5

BASIS FOR PROPOSED CHANGE

and dc contact applications of the slave relay contacts. Contact de-rating required for inductive loads was considered in determining the acceptability of the loading. All slave relay contact loadings were found to be acceptable. Additionally, a review of slave relay surveillance history found no intermittent contact failures indicative of contact erosion. VEGP reviewed plant modifications and also considered low-level current (10-20 mA such as multiplexing circuits) loading. The design modification electrical review process includes direction to review the effect of changes in control circuit loadings on the ratings of contacts in the circuit. Since all single contact loads are acceptable and adequate guidance is provided in the design modification process, single contact overloading is not a concern for VEGP slave relay circuitry.

VEGP does not use parallel contacts on slave relays to increase the contact continuous current and break ratings. However, in several cases, two contacts in series are used to increase the dc contact current make and break capability. The two contacts in series act to increase contact separation, which increases both the maximum dc voltage and current that can be controlled. Series contacts are subject to some of the same concerns as parallel contacts, since independent contacts may not operate at exactly the same time. If one contact opens or closes earlier than the other, most of the arcing will still occur on one contact. The series contact application is used in a small number of relays to actuate equipment that has design loading above the contact ratings for single contacts.

During the pre-operational testing of VEGP Unit 1 of CVI SSPS slave relays, it was determined that certain relay contacts may overheat. A resistor/capacitor (RC) network was developed to improve the interrupting capability of these MDR relay contacts. During the contact opening, the RC network provides a low impedance path for the initial load current to flow, allowing the MDR contacts to open while breaking a very small current. Moreover, a full wave rectifier suppression device was also used in parallel with the relay coil to suppress the inductive spikes during interruption. This modification alleviated solenoid stress by dissipating the coil energy after de-energization. The result is that these MDR contacts are operating within their design bases.

Auxiliary Relay Reliability

Since auxiliary relays can affect the ultimate function of the slave relay to start the required equipment, auxiliary relay reliability must be comparable to that of the associated slave relay. All slave relays and their actuated devices were evaluated for the presence of auxiliary relays. The majority of VEGP slave relays directly actuate equipment, although some slave relays actuate a combination of equipment both directly and via auxiliary relays. The functions with auxiliary relays in their actuation paths may be divided into two groups.

The first group consists of functions where the auxiliary relays are tested during the performance of other at power TS-required surveillances. The reliability of these auxiliary relays will continue to be confirmed

ENCLOSURE 1

VOGTLE ELECTRIC GENERATING PLANT REQUEST TO REVISE TECHNICAL SPECIFICATIONS SLAVE RELAY TEST FREQUENCY SURVEILLANCE REQUIREMENT 3.3.6.5

BASIS FOR PROPOSED CHANGE

every quarter during the performance of these surveillances even though the associated slave relays are being tested on an 18-month frequency.

The second group consists of functions where the auxiliary relays are not tested at power during other equipment testing. The auxiliary relays used in these circuits have been very reliable, but do not always meet the criteria presented in WCAP-13878 for relaxation of the test frequency since some are not Potter & Brumfield MDR relays. Although relaxation of the surveillance interval for the associated slave relays is justified by WCAP-13878, the auxiliary relays cannot be tested without testing the slave relays. Therefore, quarterly testing of the associated slave relays will be administratively controlled until an alternate method of testing the auxiliary relays is developed or until they are replaced with Potter & Brumfield MDR series relays.

ENCLOSURE 2

VOGTLE ELECTRIC GENERATING PLANT REQUEST TO REVISE TECHNICAL SPECIFICATIONS SLAVE RELAY TEST FREQUENCY SURVEILLANCE REQUIREMENT 3.3.6.5

SIGNIFICANT HAZARDS EVALUATION

Evaluation

VEGP has evaluated the no significant hazards considerations involved with the proposed amendment, focusing on the three standards set forth in 10 CFR 50.92(c) as quoted below:

The Commission may make a final determination, pursuant to the procedures in paragraph 50.91, that a proposed amendment to an operating license for a facility licensed under paragraph 50.21(b) or paragraph 50.22 or a testing facility involves no significant hazards considerations, if operation of the facility in accordance with the proposed amendment would not:

- (1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or*
- (2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or*
- (3) Involve a significant reduction in a margin of safety.*

The following evaluation is provided for the no significant hazards consideration standards.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

The results of WCAP-13878 demonstrate that slave relays are highly reliable. WCAP-13878 also provides guidance to assure that slave relays remain highly reliable. The aging assessment concludes that the age/temperature-related degradation of all ND relays, and NE relays produced after 1992, is sufficiently slow such that a refueling frequency surveillance interval will not significantly increase the probability of slave relay failures. Finally, the evaluation of the auxiliary relays actuated during slave relay testing has concluded that based on the tests of the auxiliary relays performed during other equipment testing, reasonable assurance is provided that failures will be identified if the associated slave relays are tested on a refueling frequency.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

ENCLOSURE 2

VOGTLE ELECTRIC GENERATING PLANT REQUEST TO REVISE TECHNICAL SPECIFICATIONS SLAVE RELAY TEST FREQUENCY SURVEILLANCE REQUIREMENT 3.3.6.5

SIGNIFICANT HAZARDS EVALUATION

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed changes do not alter the performance of the CVI systems assumed in the plant safety analysis. Changing the interval for periodically verifying CVI slave relays (assuring equipment operability) will not create any new accident initiators or scenarios.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated for VEGP.

3. Does the change involve a significant reduction in a margin of safety?

The proposed changes do not affect the total CVI response assumed in the safety analysis since the reliability of the slave relays will not be significantly affected by the decreased surveillance frequency.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

Conclusion

Based on the above safety evaluation, VEGP concludes that the changes proposed by this submittal satisfy the no significant hazards consideration standards of 10 CFR 50.92(c) and, accordingly, a no significant hazards finding is justified.

Environmental Evaluation

VEGP has evaluated the proposed changes and determined that the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed changes meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), an environmental assessment of the proposed changes is not required.

ENCLOSURE 3

**VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
SLAVE RELAY TEST FREQUENCY
SURVEILLANCE REQUIREMENT 3.3.6.5**

MARKED-UP TS AND BASES PAGES

SURVEILLANCE REQUIREMENTS

~~NOTE~~

Refer to Table 3.3.6-1 to determine which SRs apply for each Containment Purge and Exhaust Isolation Function.

SURVEILLANCE		FREQUENCY
SR 3.3.6.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.6.2	Perform ACTUATION LOGIC TEST.	31 days on a STAGGERED TEST BASIS
SR 3.3.6.3	Perform MASTER RELAY TEST.	31 days on a STAGGERED TEST BASIS
SR 3.3.6.4	Perform COT.	92 days
SR 3.3.6.5	Perform SLAVE RELAY TEST.	92 days <i>18 months</i>
SR 3.3.6.6	NOTE Verification of setpoint not required.	
	Perform TADOT.	18 months
SR 3.3.6.7	Perform CHANNEL CALIBRATION.	18 months
SR 3.3.6.8	Verify RESPONSE TIMES are within limits.	18 months on a STAGGERED TEST BASIS

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.6.4

A COT is performed every 92 days on each required channel to ensure the entire channel will perform the intended Function. The Frequency is based on the staff recommendation for increasing the availability of radiation monitors according to NUREG-1366 (Ref. 2). For MODES 1, 2, 3, and 4, this test verifies the capability of the instrumentation to provide the containment purge and exhaust system isolation. During CORE ALTERATIONS and movement of irradiated fuel in containment, this test verifies the capability of the required channels to generate the signals required for input to the control room alarm. The setpoint shall be left consistent with the current unit specific calibration procedure tolerance.

SR 3.3.6.5

SR 3.3.6.5 is the performance of a SLAVE RELAY TEST. The SLAVE RELAY TEST is the energizing of the slave relays. Contact operation is verified in one of two ways. Actuation equipment that may be operated in the design mitigation mode is either allowed to function or is placed in a condition where the relay contact operation can be verified without operation of the equipment. Actuation equipment that may not be operated in the design mitigation mode is prevented from operation by the SLAVE RELAY TEST circuit. For this latter case, contact operation is verified by a continuity check of the circuit containing the slave relay. ~~This test is performed every 92 days. The Frequency is acceptable based on instrument reliability and industry operating experience.~~

Insert →

SR 3.3.6.6

SR 3.3.6.6 is the performance of a TADOT. This test is a check of the Manual Actuation Functions and is performed every 18 months. Each Manual Actuation Function is tested up to, and including, the master relay coils. In some instances, the test includes actuation of the end device (i.e., pump starts, valve cycles, etc.).

The test also includes trip devices that provide actuation signals directly to the SSPS, bypassing the analog process control equipment. The SR is modified by a Note that excludes verification of setpoints during the TADOT. The

(continued)

INSERT

For slave relays and associated auxiliary relays in the CVI actuation system circuit that are Potter and Brumfield (P&B) type Motor Driven Relays (MDR), the SLAVE RELAY TEST is performed on an 18-month frequency. This test frequency is based on relay reliability assessments presented in WCAP-13878, "Reliability Assessment of Potter and Brumfield MDR Series Relays." The reliability assessments are relay specific and apply only to Potter and Brumfield MDR series relays. Quarterly testing of the slave relays associated with non-P&B MDR auxiliary relays will be administratively controlled until an alternate method of testing the auxiliary relays is developed or until they are replaced by P&B MDR series relays.

BASES

REFERENCES

1. 10 CFR 100.11.
2. NUREG-1366.

3. WCAP-13878-P-A, Rev. 2, August 2000

4. WCAP-13900, Rev. 0, April 1994

5. WCAP-14129, Rev. 1, January 1999

ENCLOSURE 4

**VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
SLAVE RELAY TEST FREQUENCY
SURVEILLANCE REQUIREMENT 3.3.6.5**

CLEAN-TYPED TS AND BASES PAGES

SURVEILLANCE REQUIREMENTS

-----NOTE-----
Refer to Table 3.3.6-1 to determine which SRs apply for each Containment Purge and Exhaust Isolation Function.

SURVEILLANCE	FREQUENCY
SR 3.3.6.1 Perform CHANNEL CHECK.	12 hours
SR 3.3.6.2 Perform ACTUATION LOGIC TEST.	31 days on a STAGGERED TEST BASIS
SR 3.3.6.3 Perform MASTER RELAY TEST.	31 days on a STAGGERED TEST BASIS
SR 3.3.6.4 Perform COT.	92 days
SR 3.3.6.5 Perform SLAVE RELAY TEST.	18 months
SR 3.3.6.6 -----NOTE----- Verification of setpoint not required. ----- Perform TADOT.	18 months
SR 3.3.6.7 Perform CHANNEL CALIBRATION.	18 months
SR 3.3.6.8 Verify RESPONSE TIMES are within limits.	18 months on a STAGGERED TEST BASIS

BASES

SURVEILLANCE
REQUIREMENTS
(continued)

SR 3.3.6.4

A COT is performed every 92 days on each required channel to ensure the entire channel will perform the intended Function. The Frequency is based on the staff recommendation for increasing the availability of radiation monitors according to NUREG-1366 (Ref. 2). For MODES 1, 2, 3, and 4, this test verifies the capability of the instrumentation to provide the containment purge and exhaust system isolation. During CORE ALTERATIONS and movement of irradiated fuel in containment, this test verifies the capability of the required channels to generate the signals required for input to the control room alarm. The setpoint shall be left consistent with the current unit specific calibration procedure tolerance.

SR 3.3.6.5

SR 3.3.6.5 is the performance of a SLAVE RELAY TEST. The SLAVE RELAY TEST is the energizing of the slave relays. Contact operation is verified in one of two ways. Actuation equipment that may be operated in the design mitigation mode is either allowed to function or is placed in a condition where the relay contact operation can be verified without operation of the equipment. Actuation equipment that may not be operated in the design mitigation mode is prevented from operation by the SLAVE RELAY TEST circuit. For this latter case, contact operation is verified by a continuity check of the circuit containing the slave relay.

For slave relays and associated auxiliary relays in the CVI actuation system circuit that are Potter and Brumfield (P&B) type Motor Driven Relays (MDR), the SLAVE RELAY TEST is performed on an 18-month frequency. This test frequency is based on relay reliability assessments presented in WCAP-13878, "Reliability Assessment of Potter and Brumfield MDR Series Relays." The reliability assessments are relay specific and apply only to Potter and Brumfield MDR series relays. Quarterly testing of the slave relays associated with non-P&B MDR auxiliary relays will be administratively controlled until an alternate method of testing the auxiliary relays is developed or until they are replaced by P&B MDR series relays.

SR 3.3.6.6

SR 3.3.6.6 is the performance of a TADOT. This test is a check of the Manual Actuation Functions and is performed every 18 months. Each Manual Actuation Function is tested up to, and including, the master relay coils. In some instances, the test includes actuation of the end device (i.e., pump starts, valve cycles, etc.).

(continued)

BASES

SURVEILLANCE
REQUIREMENTS

SR 3.3.6.6 (continued)

The test also includes trip devices that provide actuation signals directly to the SSPS, bypassing the analog process control equipment. The SR is modified by a Note that excludes verification of setpoints during the TADOT. The Functions tested have no setpoints associated with them. The Frequency is based on the known reliability of the Function and the redundancy available, and has been shown to be acceptable through operating experience.

SR 3.3.6.7

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency is based on operating experience and is consistent with the typical industry refueling cycle.

SR 3.3.6.8

This SR ensures the individual channel RESPONSE TIMES are less than or equal to the maximum values assumed in the accident analysis. Response time testing acceptance criteria are included in the FSAR. Individual component response times are not modeled in the analyses. The analyses model the overall or elapsed time, from the point at which the parameter exceeds the Trip Setpoint Valve at the sensor, to the point at which the equipment in both trains reaches the required functional state.

RESPONSE TIME tests are conducted on an 18 month STAGGERED TEST BASIS. Testing of the final actuation devices, which make up the bulk of the response time, is included in the testing of each channel. The final actuation device in one train is tested with each channel. Therefore, staggered testing results in response time verification of these devices every 18 months. The 18 month frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

(continued)

BASES

REFERENCES

1. 10 CFR 100.11.
 2. NUREG-1366.
 3. WCAP-13878-P-A, Rev. 2, August 2000.
 4. WCAP-13900, Rev. 0, April 1994.
 5. WCAP-14129, Rev. 1, January 1999.
-
-

ENCLOSURE 5

**VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
SLAVE RELAY TEST FREQUENCY
SURVEILLANCE REQUIREMENT 3.3.6.5**

NRC LETTER APPROVING RELAXING SURVEILLANCE REQUIREMENT 3.3.2.5



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 22, 2000

Mr. J. B. Beasley, Jr.
Vice President
Southern Nuclear Operating
Company, Inc.
Post Office Box 1295
Birmingham, Alabama 35201-1295

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2 RE: ISSUANCE
OF AMENDMENTS (TAC NOS. MA6331 AND MA6332)

Dear Mr. Beasley:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 114 to Facility Operating License NPF-68 and Amendment No. 92 to Facility Operating License NPF-81 for the Vogtle Electric Generating Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application dated August 24, 1999, as supplemented on December 29, 1999, and June 16, 2000.

The amendments revise Technical Specification 3.3.2 "Engineered Safety Features Actuation System (ESFAS) Instrumentation" to relax the slave relay test frequency from quarterly to every refueling not to exceed 18 months.

A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Ramin Assa, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosures:

1. Amendment No. 114 to NPF-68
2. Amendment No. 92 to NPF-81
3. Safety Evaluation

cc w/encs: See next page

Vogtle Electric Generating Plant

cc:

Mr. J. A. Bailey
Manager, Licensing
Southern Nuclear Operating
Company, Inc.
P. O. Box 1295
Birmingham, Alabama 35201-1295

Mr. J. Gasser
General Manager, Vogtle Electric
Generating Plant
Southern Nuclear Operating
Company, Inc.
P. O. Box 1600
Waynesboro, Georgia 30830

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

Mr. J. D. Woodard
Executive Vice President
Southern Nuclear Operating
Company, Inc.
P. O. Box 1295
Birmingham, Alabama 35201-1295

Steven M. Jackson
Senior Engineer - Power Supply
Municipal Electric Authority
of Georgia
1470 Riveredge Parkway, NW.
Atlanta, Georgia 30328-4684

Harold Reheis, Director
Department of Natural Resources
205 Butler Street, SE. Suite 1252
Atlanta, Georgia 30334

Attorney General
Law Department
132 Judicial Building
Atlanta, Georgia 30334

Mr. J. D. Sharpe
Resident Manager
Oglethorpe Power Corporation
Alvin W. Vogtle Nuclear Plant
P. O. Box 1600
Waynesboro, Georgia 30830

Charles A. Patrizia, Esquire
Paul, Hastings, Janofsky & Walker
10th Floor
1299 Pennsylvania Avenue
Washington, DC 20004-9500

Arthur H. Dombey, Esquire
Troutman Sanders
NationsBank Plaza
600 Peachtree Street, NE.
Suite 5200
Atlanta, Georgia 30308-2216

Resident Inspector
Vogtle Plant
8805 River Road
Waynesboro, Georgia 30830

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



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

VOGTLE ELECTRIC GENERATING PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 114
License No. NPF-68

1. The Nuclear Regulatory Commission (the Commission) has found that:

- A. The application for amendment to the Vogtle Electric Generating Plant, Unit 1 (the facility) Facility Operating License No. NPF-68 filed by the Southern Nuclear Operating Company, Inc. (Southern Nuclear), acting for itself, Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the licensees), dated August 24, 1999, as supplemented on December 29, 1999, and June 16, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
- B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
- C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
- D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
- E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-68 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 114 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard L. Emch, Jr. Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 22, 2000



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

GEORGIA POWER COMPANY

OGLETHORPE POWER CORPORATION

MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA

CITY OF DALTON, GEORGIA

VOGTLE ELECTRIC GENERATING PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 92
License No. NPF-81

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Vogtle Electric Generating Plant, Unit 2 (the facility) Facility Operating License No. NPF-81 filed by the Southern Nuclear Operating Company, Inc. (Southern Nuclear), acting for itself, Georgia Power Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and City of Dalton, Georgia (the licensees), dated August 24, 1999, as supplemented on December 29, 1999, and June 16, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-81 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 92 , and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. Southern Nuclear shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard L. Emch, Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: August 22, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 114

FACILITY OPERATING LICENSE NO. NPF-68

DOCKET NO. 50-424

AND

TO LICENSE AMENDMENT NO. 92

FACILITY OPERATING LICENSE NO. NPF-81

DOCKET NO. 50-425

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change. *Overleaf pages are provided.

Remove

3.3.2-7
*3.3.2-8
*B 3.3.2-47
B 3.3.2-48

*B 3.3.2-51
B 3.3.2-52

Insert

3.3.2-7
3.3.2-8
B 3.3.2-47
B 3.3.2-48
B 3.3.2-48a
B 3.3.2-48b
B 3.3.2-51
B 3.3.2-52

SURVEILLANCE REQUIREMENTS

-----~~NOTE~~-----
 Refer to Table 3.3.2-1 to determine which SRs apply for each ESFAS Function.

SURVEILLANCE		FREQUENCY
SR 3.3.2.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.2.2	Perform ACTUATION LOGIC TEST.	31 days on a STAGGERED TEST BASIS
SR 3.3.2.3	Perform MASTER RELAY TEST.	31 days on a STAGGERED TEST BASIS
SR 3.3.2.4	Perform COT.	92 days
SR 3.3.2.5	Perform SLAVE RELAY TEST.	18 months
SR 3.3.2.6	----- NOTE ----- Verification of setpoint not required for manual initiation functions. ----- Perform TADOT.	18 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.3.2.7. <u>NOTE</u> This Surveillance shall include verification that the time constants used for the Steam Line Pressure instrument functions are adjusted to the prescribed values.</p> <hr/> <p>Perform CHANNEL CALIBRATION.</p>	<p>18 months</p>
<p>SR 3.3.2.8 <u>NOTE</u> Not required to be performed for the turbine driven AFW pump until 24 hours after SG pressure is ≥ 900 psig.</p> <hr/> <p>Verify ESFAS RESPONSE TIMES are within limit.</p>	<p>18 months on a STAGGERED TEST BASIS</p>
<p>SR 3.3.2.9 <u>NOTE</u> Verification of setpoint not required.</p> <hr/> <p>Perform TADOT.</p>	<p>18 months</p>

BASES

**SURVEILLANCE
REQUIREMENTS
(continued)**

SR 3.3.2.3

SR 3.3.2.3 is the performance of a MASTER RELAY TEST. The MASTER RELAY TEST is the energizing of the master relay, verifying contact operation and a low voltage continuity check of the slave relay coil. Upon master relay contact operation, a low voltage is injected to the slave relay coil. This voltage is insufficient to pick up the slave relay, but large enough to demonstrate signal path continuity. This test is performed every 31 days on a STAGGERED TEST BASIS. The time allowed for the testing (4 hours) and the surveillance interval are justified in Reference 7.

SR 3.3.2.4

SR 3.3.2.4 is the performance of a COT.

A COT is performed on each required channel to ensure the entire channel will perform the intended Function. Setpoints must be found within the Allowable Values specified in Table 3.3.1-1.

The difference between the current "as found" values and the previous test "as left" values must be consistent with the drift allowance used in the setpoint methodology. The setpoint shall be left set consistent with the assumptions of the current unit specific setpoint methodology.

The "as found" and "as left" values must also be recorded and reviewed for consistency with the assumptions of the surveillance interval extension analysis (Ref. 7) when applicable.

The Frequency of 92 days is justified in Reference 7.

SR 3.3.2.5

SR 3.3.2.5 is the performance of a SLAVE RELAY TEST. The SLAVE RELAY TEST is the energizing of the slave relays. Contact operation is verified in one of two ways. Actuation equipment that may be operated in the design mitigation MODE is either allowed to function, or is placed in a condition

(continued)

BASES

**SURVEILLANCE
REQUIREMENTS**

SR 3.3.2.5 (continued)

where the relay contact operation can be verified without operation of the equipment. Actuation equipment that may not be operated in the design mitigation MODE is prevented from operation by the SLAVE RELAY TEST circuit. For this latter case, contact operation is verified by a continuity check of the circuit containing the slave relay.

For slave relays and associated auxiliary relays in the ESFAS actuation system circuit that are Potter and Brumfield (P&B) type MOTOR-DRIVEN RELAYS (MDRs), the SLAVE RELAY TEST is performed on an 18-month frequency. This test frequency is based on relay reliability assessments presented in WCAP-13878, "Reliability Assessment of Potter and Brumfield MDR Series Relays." The reliability assessments are relay specific and apply only to Potter and Brumfield MDR series relays. Quarterly testing of the slave relays associated with non-P&B MDR auxiliary relays will be administratively controlled until an alternate method of testing the auxiliary relays is developed or until they are replaced by P&B MDR series relays.

SR 3.3.2.6

SR 3.3.2.6 is the performance of a TADOT. This test is a check of the Manual Actuation Functions and AFW pump start on trip of all MFW pumps. It is performed every 18 months. Each Manual Actuation Function is tested up to, and including, the master relay coils. In some instances, the test includes actuation of the end device (i.e., pump starts, valve cycles, etc.). The Frequency is based on industry operating experience and is consistent with the typical refueling cycle. The SR is modified by a Note that excludes verification of setpoints for manual initiation Functions. The manual initiation Functions have no assumed setpoints.

SR 3.3.2.7

SR 3.3.2.7 is the performance of a CHANNEL CALIBRATION.

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to measured parameter within the necessary range and accuracy.

(continued)

BASES

**SURVEILLANCE
REQUIREMENTS**

SR 3.3.2.7 (continued)

CHANNEL CALIBRATIONS must be performed consistent with the assumptions of the unit specific setpoint methodology. The difference between the current "as found" values and the previous test "as left" values must be consistent with the drift allowance used in the setpoint methodology.

(continued)

BASES

THIS PAGE INTENTIONALLY LEFT BLANK

BASES

**SURVEILLANCE
REQUIREMENTS**

SR 3.3.2.8 (continued)

verification of these devices every 18 months. The 18 month Frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

This SR is modified by a Note that clarifies that the turbine driven AFW pump is tested within 24 hours after reaching 900 psig in the SGs.

SR 3.3.2.9

SR 3.3.2.9 is the performance of a TADOT as described in SR 3.3.2.6 for the P-4 Reactor Trip Interlock, and the Frequency is once per 18 months. This Frequency is based on operating experience. The SR is modified by a note that excludes verification of setpoints during the TADOT. The function tested has no associated setpoint.

REFERENCES

1. FSAR, Chapter 6.
2. FSAR, Chapter 7.
3. FSAR, Chapter 15.
4. IEEE-279-1971.
5. 10 CFR 50.49.
6. WCAP-11269, Westinghouse Setpoint Methodology for Protection Systems; as supplemented by:
 - Amendments 38 (Unit 1) and 18 (Unit 2), ESFAS Safety Injection Pressurizer — Low allowable value revision.
 - Amendments 34 (Unit 1) and 14 (Unit 2), RTS Steam Generator Water Level — Low Low, ESFAS Turbine Trip and Feedwater Isolation SG Water Level — High High, and ESFAS AFW SG Water Level — Low Low.

(continued)

BASES

REFERENCES
(continued)

- Amendments 43 and 44 (Unit 1) and 23 and 24 (Unit 2), revised ESFAS Interlocks Pressurizer P-11 trip setpoint and allowable value.
 - 7. WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.
 - 8. FSAR, Chapter 16.
 - 9. Westinghouse Letter GP-16696, November 5, 1997.
 - 10. WCAP-13632-P-A Revision 2, "Elimination of Pressure Sensor Response Time Testing Requirements," January 1996.
 - 11. WCAP-14036-P-A Revision 1, "Elimination of Periodic Protection Channel Response Time Tests," October 1998.
 - 12. WCAP-13878-P-A Revision 2, "Reliability Assessment of Potter & Brumfield MDR Series Relays," April 1996.
 - 13. WCAP-13900 Revision 0, "Extension of Slave Relay Surveillance Test Intervals," April 1994.
 - 14. WCAP-14129 Revision 1, "Reliability Assessment of Westinghouse Type AR Relays Used as SSPS Slave Relays," January 1999.
-



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 114 TO FACILITY OPERATING LICENSE NPF-68
AND AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NPF-81

SOUTHERN NUCLEAR OPERATING COMPANY, INC., ET AL.

VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

DOCKET NOS. 50-424 AND 50-425

1.0 INTRODUCTION

By letter dated August 24, 1999, as supplemented on December 29, 1999, and June 16, 2000, Southern Nuclear Operating Company, Inc., et al. (the licensee) proposed license amendments to change the Technical Specifications (TS) for the Vogtle Electric Generating Plant (VEGP or Vogtle), Units 1 and 2. The proposed changes would revise TS 3.3.2 "Engineered Safety Features Actuation System (ESFAS) Instrumentation" to relax the slave relay test frequency from quarterly to every refueling not to exceed 18 months.

The supplemental letters dated December 29, 1999, and June 16, 2000, provided clarifying information that did not change the scope of the August 24, 1999, application nor the initial proposed no significant hazards consideration determination.

2.0 BACKGROUND

The Vogtle TS requires quarterly testing of slave relays in the ESFAS. This requirement involves testing the relays at power, with the risk of inadvertent actuation of the engineered safety feature (ESF) equipment. In addition, the on-line testing of slave relays may require significant plant manipulation or removal from service of various equipment. Westinghouse Owners Group (WOG) sponsored a reliability assessment of Potter & Brumfield (P&B) relay types to establish a slave relay surveillance test interval based on relay reliability. The WOG study is documented in WCAP-13878, "Reliability Assessment of Motor-driven Rotary Relay Manufactured by Potter & Brumfield (P&B MDR) Relays." The proposed change allows relaxing the slave relay test interval from every 92 days to every 18 months for circuits containing P&B MDR series relays. The TS requirement for slave relay testing will continue to be implemented by TS Surveillance Requirement (SR) 3.3.2.5.

The associated Bases to SR 3.3.2.5 clarify that the circuits containing P&B MDR series relays may be tested on an 18-month frequency and that the 18-month test frequency for the slave relay is based on industry operating history and relay reliability. The proposed change in slave relay test frequency is based on information contained in Westinghouse Electric Corporation (WEC) topical report WCAP-13878, Revision 1, "Reliability Assessment of Potter & Brumfield MDR Series Relays," June 1994. By letter dated May 31, 1996, from Bruce Boger (NRC) to Tom Greene (WOG), the NRC-approved WCAP-13878; WCAP-14117, "Reliability Assessment

of Potter & Brumfield MDR Service Relays," June 1994; and WCAP-13900, "Extension of Slave Relay Surveillance Test Intervals," April 1994. On November 2, 1999, Westinghouse informed the NRC that WCAP-13878-P, Revision 1, contains some errors and by letter dated November 5, 1999, Westinghouse submitted WCAP-13878, Revision 2. WEC has further determined that the changes do not affect the conclusions of the WCAP and the NRC safety evaluation. By letter dated July 12, 2000, from Stuart A. Richard (NRC) to H. A. Sapp (WEC), the NRC approved WCAP-13878, Revision 2.

3.0 EVALUATION

Generic Letter 93-05, "Line Item Technical Specification Improvements To Reduce Surveillance Requirements for Testing During Power Operation," was approved in September 1993. This Generic Letter resulted from the recommendations of a 1983 NRC task group formed to investigate problems with surveillance testing required by TS. The studies found that while some testing at power is essential to verify equipment and system operability, safety can be improved, equipment degradation decreased, and unnecessary personnel burden relaxed by reducing the amount of testing at power. Slave relay testing frequency relaxation is consistent with the NRC task group recommendations.

WCAP-13878 contains the technical basis and methodology for extending the ESFAS slave relay test interval for P&B MDR series relays. The NRC safety evaluation report for WP-13878 requires the licensee to submit the following information:

1. Verify that the generic analysis in WCAP-13878 is applicable to their plant.

The VEGP solid-state protection system (SSPS) utilizes P&B MDR relay Models 4103-1 and 4121-1 as slave relays. The VEGP SSPS consists of two redundant trains of four-bay Westinghouse SSPS. The input, logic, and first output bays are virtually identical to Farley's SSPS, in which temperature data were collected for WCAP-13878. VEGP has an additional output bay. The VEGP P&B MDR relays dissipate about 6.5 watts when energized, substantially less than the AR relays in Farley plant. The temperature rise in the VEGP SSPS cabinets has been verified to be within the assumptions of WCAP-13878. The VEGP SSPS is located in the Main Control Room (MCR). TS require that the VEGP MCR be kept at less than 85°F. In reviewing MCR temperature data, it was determined that the typical MCR temperature ranged from 70°F to 78°F. This figure is within the temperature assumptions in WCAP-13878.

In summary, the VEGP SSPS utilizes P&B MDR relays identical to those analyzed in WCAP-13878. The environmental conditions in which these relays are located are bounded by the assumptions in WCAP-13878; thus the analysis and conclusions in WCAP-13878 are applicable to VEGP.

2. Ensure that their procurement program for P&B relays is adequate for detecting the types of failures that are discussed in References 9, 10, 11, and 12.

VEGP purchases P&B MDR relays as new safety-related components. Although VEGP does not utilize refurbished or reworked P&B MDR relays, each new P&B MDR relay is inspected for conditions that could indicate sub-standard refurbishment. The specific conditions that must be evaluated are identified in licensee procedure 70522-C, "Material Receipt Inspection." During receipt inspection, new P&B MDR relays are verified to have been manufactured after 1992. All

P&B MDR relays in the warehouse were inspected, and any that were manufactured before 1993 were removed from inventory.

3. Ensure that all pre-1992 P&B MDR relays which are used in either normally energized or a 20% duty cycle have been removed from ESFAS application.

VEGP performed a review of the SSPS and determined that all slave relays that perform TS required functions are normally de-energized while the plant is at power. During refueling outages and cold shutdowns, the SSPS is normally removed from service, thus VEGP does not have any ESFAS slave relays that are either normally energized or energized for a 20-percent duty cycle.

4. Ensure that the contact loading analysis for P&B MDR relays has been performed to determine the acceptability of these relays

VEGP has completed a contact loading study covering each contact on every SSPS slave relay for Unit 1 and found that they are well within the design basis of the slave relays. Unit 2 SSPS design and loads are similar to those of Unit 1 and were not reviewed. However, a cursory review of Unit 2 SSPS slave relay contact loading has been performed and found to be the same as that of Unit 1. The contact loading study recorded the manufacturer, the model, and the device ratings of each actuation device (solenoid or relay) operated by each slave relay contact. In the contact loading study, all slave relay single contacts were evaluated for overload, continuous current, and switching capabilities for both ac and dc contact applications of the slave relay contacts. Contact derating required for inductive loads was considered in determining the acceptability of the loading. All slave relays contact loading were found to be acceptable. Additionally, a review of slave relay surveillance history found no intermittent contact failures indicative of contact erosion.

The staff has reviewed the plant-specific analysis and concludes that the generic analysis contained in WCAP-13878-P-A is applicable to Vogtle Units 1 and 2; therefore, the proposed change to TS 3.3.2, "Engineered Safety Feature Actuation System Instrumentation," to relax the slave relay test frequency from quarterly to every refueling not to exceed 18 months is acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Georgia State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no

public comment on such finding (65 FR 15386). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S. Rhow

Date: August 22, 2000