

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



LCV-1359-A

December 29, 1999

Docket No. 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 3.3.2.5**

By letter LCV-1359, dated August 24, 1999, Southern Nuclear Operating Company (SNC) submitted a request to extend the slave relay test frequency for Vogtle Electric Generating Plant. This proposed change in slave relay test frequency was based on information contained in Westinghouse Electric Corporation (Westinghouse) report WCAP-13878 (proprietary) Revision 1, "Reliability Assessment of Potter & Brumfield MDR Series Relays," June 1994. By letter dated May 31, 1996 from Bruce A. Boger (NRC) to Tom Greene, Westinghouse Owners Group (WOG), the NRC approved WCAP-13878, WCAP-14117, and WCAP-13900.

By letter NSBU-NRC-99-5955, dated November 5, 1999, Westinghouse submitted WCAP-13878 Revision 2, which incorporated the following changes:

- The correct form of the Arrhenius equation is used to calculate the total service lives of relays energized 20% of the time and
- The aging reference temperature of Nylon Zytel 101 is changed from 160°F to 175°F and the activation energy (eV) is changed from 1.37 eV to 0.8787 eV.

In general, the above corrections result in changes in calculated service lives of Nylon Zytel 101 and other materials as identified in the WCAP. However, these changes do not change the conclusions, safety evaluation, Technical Specification mark-ups or scope of applicability of the WCAP.

A001

PDR A001. 05000424

SNC would like to revise the August 24, 1999 submittal to reference Revision 2 of WCAP-13878. Enclosure 1 contains a revised mark-up of the affected pages from the VEGP Unit 1 and Unit 2 TS and the affected Bases pages. Enclosure 2 contains the clean typed pages reflecting the proposed changes. The only change updates the revision of WCAP-13878 located in Reference 12 on page B 3.3.2-52. This change does not require a revision to either the Basis for the Proposed Change or the Significant Hazards Evaluation contained in the original submittal.

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 29th day of December, 1999.


Notary Public

NOTARY PUBLIC STATE OF ALABAMA AT LARGE.
MY COMMISSION EXPIRES: Dec. 12, 2001.
BONDED THRU NOTARY PUBLIC UNDERWRITERS.

JBB/JPC

Enclosure 1: Mark-Up TS and Bases Pages
Enclosure 2: Clean Typed TS and Bases Pages

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. Ramin R. Assa, Vogtle Project Manager, NRR
Mr. J. Zeiler, Senior Resident Inspector, VEGP



ENCLOSURE 1

**VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
SLAVE RELAY TEST FREQUENCY
SURVEILLANCE REQUIREMENT 3.3.2.5**

MARKED-UP TS AND BASES PAGES

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.	92 days 18 months
SR 3.3.2.6	<p style="text-align: center;">NOTE</p> <p>Verification of setpoint not required for manual initiation functions.</p> <hr/> <p>Perform TADOT.</p>	18 months

(continued)

BASES

SURVEILLANCE
REQUIREMENTSSR 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. ~~This test is performed every 92 days. The Frequency is adequate. It is based on industry operating experience, considering instrument reliability and operating history data.~~

> Insert

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.

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)

INSERT

For slave relays and associated auxiliary relays in the ESFAS 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
(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 Relay," 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.

ENCLOSURE 2

**VOGTLE ELECTRIC GENERATING PLANT
REQUEST TO REVISE TECHNICAL SPECIFICATIONS
SLAVE RELAY TEST FREQUENCY
SURVEILLANCE REQUIREMENT 3.3.2.5**

CLEAN-TYPED TS AND BASES PAGES

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)

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

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.
-