

November 15, 2007

Mr. Tom E. Tynan
Vice President - Vogtle
Vogtle Electric Generating Plant
7821 River Road
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2, THIRD 10-YEAR
INTERVAL INSERVICE PROGRAM RELIEF REQUEST RR-V-1
(TAC NOS. MD5409 AND MD5410)

Dear Mr. Tynan:

By letter dated April 16, 2007, as supplemented by letter dated September 20, 2007, Southern Nuclear Operating Company, Inc. (the licensee), submitted Relief Request RR-V-1 for Vogtle Electric Generating Plant, Units 1 and 2. The relief request proposed an alternative to the requirements of Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.55a (10 CFR 50.55a), concerning a requirement in the American Society of Mechanical Engineers, *Operation and Maintenance of Nuclear Power Plants Code* (ASME OM Code). The proposed alternative involves the elimination of the ASME OM Code required 5-minute test interval between successive setpoint tests for liquid service pressure relief valves.

The Nuclear Regulatory Commission (NRC) staff has reviewed the licensee's analysis in support of its relief request. The NRC staff has concluded that the elimination of the 5-minute test interval required by the ASME OM Code would provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the NRC staff authorizes the elimination of the 5-minute test interval for liquid service pressure relief valves.

Sincerely,

/RA/

Siva P. Lingam, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-424 and 50-425

Enclosure:
Safety Evaluation

cc w/encl: See next page

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

THE THIRD 10-YEAR INTERVAL INSERVICE TESTING PROGRAM

RELIEF REQUEST NO. RR-V-1

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

VOGTLE ELECTRIC GENERATING PLANT, UNITS 1 AND 2

DOCKET NOS. 50-424 AND 50-425

INTRODUCTION

By letter dated April 16, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML071080463), as supplemented by letter dated September 20, 2007 (ADAMS Accession No. ML072640100), Southern Nuclear Operating Company, Inc. (the licensee), submitted Relief Request RR-V-1 for Vogtle Electric Generating Plant (VEGP), Units 1 and 2. The relief request proposed an alternative to the requirements of Title 10 of the *Code of Federal Regulations*, Part 50, Section 50.55a (10 CFR 50.55a), concerning a requirement in the American Society of Mechanical Engineers, *Operation and Maintenance of Nuclear Power Plants Code* (ASME OM Code). The proposed alternative involves the elimination of the ASME OM Code required 5-minute test interval between successive setpoint tests for liquid service pressure relief valves.

REGULATORY EVALUATION

Section 50.55a requires that inservice testing (IST) of certain ASME *Boiler and Pressure Vessel Code* (ASME Code) Class 1, 2, and 3 pumps and valves be performed in accordance with the ASME OM Code and applicable addenda, except where alternatives have been authorized or relief has been requested by the licensee and granted by the Nuclear Regulatory Commission (NRC) pursuant to paragraphs (a)(3)(i), (a)(3)(ii), or (f)(6)(i) of 10 CFR 50.55a. In proposing alternatives or requesting relief, the licensee must demonstrate that: (1) the proposed alternatives provide an acceptable level of quality and safety; (2) compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety; or (3) conformance is impractical for its facility. Section 50.55a allows the NRC to authorize alternatives and to grant relief from ASME OM Code requirements upon making the necessary findings. NRC guidance contained in Generic Letter (GL) 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," provides alternatives to the Code requirements that are acceptable. Further guidance is given in GL 89-04, Supplement 1, and NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants," Revision 1.

Enclosure

TECHNICAL EVALUATION

By letter dated April 16, 2007, as supplemented by letter dated September 20, 2007, the licensee submitted relief request RR-V-1 for the VEGP, Units 1 and 2. Relief request RR-V-1 requested relief from the ASME OM Code, Appendix I, Section I-8000, requirement for a 5-minute hold time between successive setpoint tests for liquid service pressure relief valves. The Code of record is the 2001 edition with addenda through OMB – 2003. A description of the relief request and the NRC staff's evaluation are as follows.

Code Requirements

Appendix I, Section I-8000 of ASME OM Code contains test methods for ASME Code, Class 2 and 3 relief valves in liquid systems. Paragraph I-8130(g) requires a minimum of 5 minutes shall elapse between successive openings.

Licensee's Basis for Requesting Relief

IST programs require that the testing meets the ASME OM Code of record. Specifically, the Code requires performing a minimum of two consecutive valve actuations to determine the setpoint of the pressure relief valve. Under the ASME OM Code, Appendix I, the minimum elapsed time between valve openings is 5 minutes. Eliminating this 5-minute hold time will minimize test performance and system outage times, resulting in a more timely return to service.

At VEGP, Units 1 and 2, pressure relief valves in ASME Code, Class 2 and 3 liquid systems are bench tested at ambient conditions using water as the test medium. The setpoint testing is performed in a shop environment with the test medium and valve in thermal equilibrium. There is no thermal source introduced during the test that could result in a thermal imbalance or reduced accuracy of the test. Repeated valve actuations are conducted in a controlled environment under steady-state conditions.

Licensee's Proposed Alternative Testing

The licensee proposes the elimination of the 5-minute hold time for ASME Code, Class 2 and 3 setpoint tests for liquid service pressure relief valves.

Technical Evaluation

The ASME OM Code 5-minute hold time requirement is based on the assumption that the test medium temperature is different from the valve temperature. Setpoint testing with different valve and test medium temperatures would cause the temperature of the valve to change; therefore, the setpoint would be affected. The NRC staff finds that the ASME Code, Class 2 and 3 liquid system pressure relief valves are in thermal equilibrium under the ambient test temperature conditions. Thermal stabilization is achieved with no hold time; consequently, the setpoint is unaffected. Thus, the NRC staff finds that the proposed no hold time between setpoint tests of the ASME Code, Class 2 and 3 system liquid service pressure relief valves provides an adequate method of accurately and repeatedly determining setpoints.

Conclusion

The NRC staff concludes that the licensee's proposed alternative to the above discussed ASME OM Code testing requirement for ASME Code, Class 2 and 3 liquid service pressure relief valves in RR-V-1 is authorized pursuant to 10 CFR 50.55a(a)(3)(i) on the basis that the proposed alternative testing provides an acceptable level of quality and safety. The elimination of the hold time between consecutive setpoint tests should not impair the valve's operational readiness.

Principal Contributor: Michael D. Orenak

Date: November 15, 2007

Vogtle Electric Generating Plant, Units 1 & 2

cc:

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