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Vogtle Project

July 29, 1985

Director of Nuclear Reactor Regulation
Attention: Ms. Elinor G. Adensam, Chief
Licensing Branch #4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

File: X7BC35
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REF.: BAILEY TO DENTON, GN-609, DATED 5/10/85

NRC DOCKET NUMBERS 50-424 AND 50-425
CONSTRUCTION PERMIT NUMBERS CPPR-108 AND CPPR-1209
VOGTLE ELECTRIC GENERATING PLANT - UNITS 1 AND 2
SER OPEN ITEM-12: SIMULATOR RESPONSE TEST

Dear Mr. Denton:

As a result of a telephone conversation with your staff on July 17, 1985, the attached changes will be made to the VEGP FSAR. These changes supercede those contained in the referenced letter and will appear in FSAR Amendment 18.

If your staff requires any additional information, please do not hesitate to contact me.

Sincerely,

J. A. Bailey
Project Licensing Manager

JAB/caa
Attachment

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VEGP-FSAR-1

1.9.148 REGULATORY GUIDE 1.148, MARCH 1981, FUNCTIONAL SPECIFICATION FOR ACTIVE VALVE ASSEMBLIES IN SYSTEMS IMPORTANT TO SAFETY IN NUCLEAR POWER PLANTS

1.9.148.1 Regulatory Guide 1.148 Position

This guide delineates a procedure acceptable to the NRC for implementing regulations with respect to the detailed specification of information pertinent to defining operating requirements for active valve assemblies in light-water-cooled nuclear power plants.

1.9.148.2 VEGP Position

Conformance is addressed in table 3.9.B.3-10.

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1.9.149 REGULATORY GUIDE 1.149, APRIL 1981, NUCLEAR POWER PLANT SIMULATORS FOR USE IN OPERATOR TRAINING

1.9.149.1 Regulatory Guide 1.149 Position

This regulatory guide describes a method acceptable to the NRC for specifying the functional requirements of a nuclear power plant simulator to be used for operator training.

1.9.149.2 VEGP Position

~~Conform, except with regard to Section 5.4(3) of ANSI/ANS 3.5-1981. GPC will conduct periodic simulator performance testing in response to plant changes which affect training. Since digital software does not drift or change, retesting of verified simulator response will not be conducted. Through the use of startup test data, operator observations supported by plant transient charts and plant change notices, the VEGP simulator will be modified and tested to match plant response. See subsection 13.2.1 for additional discussion.~~

Conform. See subsection 13.2.1 for additional discussion.

water reactors. The cold license training program will also contain a program of 10 reactor startups on a research/test type reactor to gain actual "at the controls" experience. Personnel with prior Navy nuclear experience as an engineering watch officer, engineering watch supervisor, reactor operator, or other equivalent positions or those who have prior commercial nuclear plant licensed operator experience or those who have prior test reactor experience shall be exempted from 10 reactor startup requirements. A combination of the preceding will satisfy the experience requirements of NUREG-0737, items I.A.2.1. The details of the simulator program are contained in tables 13.2.1-1 through 13.2.1-5.

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see insert to 13.2.1.2

~~The VEGP simulator will conform with the guidance given in Regulatory Guide 1.149. Since digital software does not drift or change, retesting of previously verified response would be redundant or unnecessary. Performance testing will be conducted for any hardware or software modifications made to the simulator as a result of plant changes that affect training. The simulator will be tested continuously while it is in use. Operators and instructors will identify any incorrect simulator responses or inconsistencies. These discrepancies shall be documented at the time of discovery, investigated by the simulator maintenance crew, and corrected as appropriate. The continuous feedback system utilizing experienced operators and instructors will adequately exercise and test the simulator. More immediate follow through on identified discrepancies will be possible in comparison to conducting annual performance testing. This continuous, ongoing simulator improvement program exceeds the requirements and will be conducted in lieu of annual performance testing. Documentation of discrepancy identification, investigation, and resolution will be retained as a part of the simulator performance documentation.~~

13.2.1.3 Qualification and Requalification Program

The qualification and requalification program for licensed operators and the training department is described in the following paragraphs.

13.2.1.3.1 Licensed Operator Qualification

Reactor operator and senior reactor operator training programs include the qualification requirements contained in NUREG-0737, item I.A.2.1, and are described in tables 13.2.1-1 through 13.2.1-5.

Insert to 13.2.1.2

The VEGP simulator will conform to the guidance given in each of the regulatory positions in Regulatory Guide 1.149. Conformance to regulatory position C.4 will be met by implementing paragraph 5.4 of ANSI/ANS-3.5-1981 in the following manner:

1. Comparison of the steady state operating values of critical and noncritical parameters between the VEGP Unit 1 control room and the simulator at various power levels.
2. Maneuvering of the simulator through the following plant evolutions listed in paragraph 3.1.1 of the standard.
 - (a) Plant startup - cold to hot standby. The starting conditions shall be refueling conditions of temperature, and pressure
 - (b) Nuclear startup from hot standby to rated power
 - (c) Turbine startup and generator synchronization
 - (d) Reactor trip followed by recovery to rated power
 - (e) Operations at hot standby
 - (f) Load changes (manual and automatic control)
 - (g) Plant shutdown from rated power to hot standby to cooldown to cold (refueling) conditions
 - (h) Startup, shutdown and power operations with less than full reactor coolant flow is not permitted by the VEGP operating license and therefore will not be conducted.
3. Core physics testing will be comprised of an evaluation of simulation of:
 - (a) Estimated critical position computation
 - (b) Estimated critical concentration computation
 - (c) Shutdown margin computation
 - (d) Estimating criticality by the I/M plotting method
4. Operations surveillance procedure testing will be comprised of those control room operations which are required to conduct the operability tests of the following systems:
 - (a) Diesel generators
 - (b) Auxiliary feedwater
 - (c) High lead safety injection
 - (d) Safety injection
 - (e) Residual heat removal
 - (f) Nuclear service cooling water
5. Simulator malfunction conditions shall be evaluated by experienced staff members for best estimate response or compared to actual plant data or other best estimate data.
6. When a limited change is made, a specific performance test on the affected systems and components shall be performed.

Factory acceptance testing of the VEGP simulator has already been completed. The performance test described above will be completed prior to August 1, 1988 and not less than every four years thereafter.