

April 15, 2003

Stephen A. Byrne
Senior Vice President, Nuclear Operations
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
Post Office Box 88
Jenkinsville, South Carolina 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION — REQUEST FOR ADDITIONAL
INFORMATION REGARDING REVISIONS TO ENGINEERED SAFETY
FEATURES ACTUATION SYSTEM TECHNICAL SPECIFICATIONS
(TAC NO. MB7978)

Dear Mr. Byrne:

By letter dated February 25, 2003, South Carolina Electric & Gas Company requested an amendment to the Facility Operating License for the Virgil C. Summer Nuclear Station. The proposed amendment would add an allowed outage time for Engineered Safety Features Actuation System (ESFAS) instrumentation channels to be out of service in a bypassed state.

The NRC staff has reviewed the amendment request and determined that it did not provide sufficient information to permit evaluation of the increase of the allowed outage time for ESFAS instrumentation channels to be out of service in a bypassed state. The enclosed request for additional information (RAI) contains specific questions related to these issues. I have discussed this RAI with Mr. Robert Sweet, Licensing Engineering Supervisor, Virgil C. Summer Nuclear Station, and he agreed to respond to this request by May 9, 2003. Please contact me at 301-415-1438 if you have any questions.

Sincerely,

/RA/

Karen R. Cotton, Project Manager, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-395

Enclosure: RAI on V.C. Summer's
Revision to the Engineered Safety Feature Actuation
System Instrumentation Tables

cc w/encl: See next page

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REQUEST FOR ADDITIONAL INFORMATION

PERTAINING TO REVISION TO ENGINEERED SAFETY FEATURE ACTUATION SYSTEM

INSTRUMENTATION TABLES

AT V. C. SUMMER NUCLEAR STATION (VCSNS)

In order to complete our review, the U.S. Nuclear Regulatory Commission (NRC) staff requests that South Carolina Electric & Gas Company provide the following information:

1. VCSNS Technical Specifications (TSs) page 3/4 3-23, Table 3.3-3, Action Statement 16 states:

With the number of OPERABLE channels one less than the Total Number of Channels operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met. One additional channel may be bypassed for up to 4 hours for surveillance testing per Specification 4.3.2.1.

The licensee stated that Action Statement 16 applies to channels that energize to actuate and currently these channels are permitted by TS to be placed in a bypassed state indefinitely. Specifically these are level channels for the Refueling Water Storage Tank that initiate the semi-automatic swap-over to the Reactor Building recirculation sumps; the pressure channels in the suction piping to the Emergency Feedwater pumps that initiate the swap-over to the safety-related source of water; and the Reactor Building pressure channels that initiate the containment spray system. The licensee proposes to change Action Statement 16 to meet its commitment as reported in License Event Report 2000-004-00. The purpose of the Action Statement 16 changes is to resolve a condition where, due to a newly identified single failure consideration, the above functions may not occur when needed.

The licensee proposes to retain the ability to proceed with plant operations, provided the inoperable channel is placed in channel bypass, but not for an indefinite period. The revised Action Statement 16 will add requirements to:

. . . restore the inoperable channel to OPERABLE status in 6 hours otherwise;

Place the affected channel in trip within the following hour

Or

Be in at least HOT STANDBY (MODE 3) within the next 6 hours and in COLD SHUTDOWN (MODE 5) within the following 30 hours.

* * * *

The NRC staff notes that the purpose of placing one inoperable channel of the above functions in bypass rather than trip is to decrease the probability of inadvertent actuations of containment spray or premature swap-over to safety related sources of

water, as appropriate. The Standard TSs (STSs, NUREG-1431) action requirements for the above functions establish a precedent that is consistent with current VCSNS Action Statement 16. The STSs permit only one channel to be bypassed indefinitely. Upon a second channel becoming inoperable, Limiting Condition for Operation (LCO) 3.0.3 must be entered.

Furthermore, the STS Bases note that none of these signals has input to a control function, thus, two-out-of-three logic is necessary to meet acceptable protective requirements.

Provide a discussion of the VCSNS design to explain why the proposed action to place an inoperable channel in trip will not increase the probability of inadvertent actuations of containment spray or premature swap-over to safety related sources.

2. Action 25 is added to VCSNS TSs to describe an action for inoperable channels of Table 3.3-3, function 5.b, "Turbine Trip and Feedwater Isolation Automatic Actuation and Actuation Relays." Function 5.b is required to be OPERABLE in Power Operation (MODE 1). The proposed Action 25 requires the plant to be in Cold Shutdown (MODE 5) if inoperable channels are not restored within 6 hours. The NRC staff notes that exiting the mode of applicability (i.e., placing the plant in Hot Shutdown (MODE 4)) is a sufficient remedial action to comply with current TS LCO 3.0.1 requirements. Add a statement to the TS Bases giving the basis for requiring the conservative action to place the plant in Cold Shutdown (MODE 5).

Mr. Stephen A. Byrne
South Carolina Electric & Gas Company

VIRGIL C. SUMMER NUCLEAR STATION

cc:

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