

SOUTH CAROLINA ELECTRIC & GAS COMPANY

POST OFFICE BOX 764

COLUMBIA, SOUTH CAROLINA 29218

T. C. NICHOLS, JR.  
VICE PRESIDENT AND GROUP EXECUTIVE  
NUCLEAR OPERATIONS

December 11, 1980

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Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

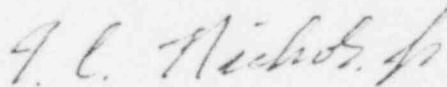
Subject: Virgil C. Summer Nuclear Station  
Docket No. 50/395  
TMI Items II.K.1 (C.1.5) and I.C.6

Dear Mr. Denton:

As requested by the NRC, South Carolina Electric and Gas Company (SCE&G) acting for itself and agent for South Carolina Public Service Authority provides forty-five (45) copies of the SCE&G position on TMI items II.K.1 (C.1.5) regarding measures to mitigate small break LOCAs and Topics of Feedwater Accidents and I.C.6 regarding guidance on procedures for verifying correct performance of operator activities. Positions are given in attachments I and II.

If you have any questions, please let us know.

Very truly yours,



T. C. Nichols, Jr.

RBC:TCN:rh

Enclosures:

- cc: V. C. Summer w/o enclosures
- G. H. Fischer w/o enclosures
- T. C. Nichols, Jr. w/o enclosures
- E. H. Crews, Jr.
- O. W. Dixon, Jr.
- O. S. Bradham
- D. A. Nauman
- A. A. Smith
- A. R. Koon
- R. B. Clary
- W. A. Williams, Jr.
- B. A. Bursey
- J. B. Knotts, Jr.
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- NPCF/Whitaker
- File

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NUREG-0694-II.K.1 IE Bulletin on Measures to Mitigate Small Break LOCAs and Loss of Feedwater Accidents.

POSITION

C.1.5 Review all valve positions, positioning requirements, positive controls and related test and maintenance procedures to assure proper ESF functioning.

RESPONSE

Virgil C. Summer has developed an overlapping and redundant series of procedures, (Administrative, Operating, Maintenance, Testing) to provide control of valve alignments, positioning requirements, and positive control requirements to assure proper ESF functioning.

Virgil C. Summer System Operating Procedures (SOPs) for safety related systems include valve checklists that specify initial valve alignment requirements for system startup. The checklists have provision for sign offs for valve position verification, and second review of the completed checklists. Valve manipulations required during the conduct of the procedure are specified within the body of the procedure as required so that the system is correctly aligned at all times for the current plant mode of operation.

All engineered safeguard systems are specified in the Technical Specifications. Surveillance Test Procedures (STP) have been developed which require verification of correct valve alignments by either visual observation or flow verification. Such verification requires a sign off. STPs which require valve manipulations are written in such a manner that they require sign offs for each manipulation plus a sign off verification at the completion of the test by an independent qualified operator that the valves have been restored to the system procedure designated status.

Administrative Procedures (AP) have been developed to control any alterations of safety related systems for test or maintenance. They insure that Technical Specification Limiting Conditions for operation are maintained or appropriate corrective action is taken. They require that an independent qualified person verify that the proper valve has been repositioned and that the proper valve is returned to the procedure designated status at the completion of maintenance activities to assure proper ESF system operability.

Requirements for positive controls (locks on valves or electrical breakers) are specified in the Technical Specifications and plant procedures. An Administrative procedure has been developed to control such locks and to verify on a periodic basis that they have not been tampered with. This control reinforces any other checks of the locked equipment required by SOPs, STPs or APs

Shift relief procedures further require a walk down of the main control board to check the alignment of control board operated equipment.

NUREG 0737 I.C.6 - Guidance on procedures for verifying correct performance of operator activities.

POSITION (1)

Applicability of the guidance of ANS 3.2, Section 5.2.6, should be extended to cover surveillance testing in addition to maintenance.

RESPONSE (1)

Instructions dealing with equipment control are basically included in four (4) Station Administrative Procedures. These are AP-204.1, "Safety Tagging"; AP-217, "Removal and Restoration of Station Equipment"; AP-401, "Maintenance Work Request"; and AP-801, "Surveillance Test Program".

Station Administrative Procedure AP-217, "Removal and Restoration of Station Equipment", addresses equipment control from the standpoint of placing equipment in and out of service. This procedure designates the Operations Shift Supervisor (SRO Certified) as having responsibility for granting permission to release plant systems or equipment for maintenance or surveillance testing. This procedure requires a verification that the equipment or system can be released, a determination of how long it may be out of service, and a determination of what functional testing of redundant systems is required prior to and during the out-of-service period. Granting of such permission is documented and attention is given to the potentially degraded degree of protection when one subsystem of a redundant safety system has been removed for maintenance or surveillance testing. This procedure requires the Control Room Operator (Reactor Operator) to perform an independent verification that the conditions and actions specified are correct.

Station Administrative Procedure AP-204.1, "Safety Tagging", contains measures which provide for protection of equipment and workers. Strict control measures for affected equipment are enforced. These control measures include locking and/or tagging to secure and identify equipment.

AP-217 requires that prior to removal of equipment or systems from service, conditions such as Technical Specifications and the overall effect on Plant operations be considered. Station Procedure AP-204.1 includes requirements for insuring that proper valve lineups are identified and performed and that proper control measures are established as required.

Station Administrative Procedure AP-401, "Maintenance Work Request", addresses performing temporary modifications, such as temporary bypass lines, electrical jumpers, and lifted electrical leads. Status and control of such temporary modifications are maintained under the Maintenance Work Program. This procedure requires that a functional test be performed to conclusively prove the proper installation or removal of temporary modifications.

The status of inspections and tests performed upon individual equipment and/or systems is compiled and updated on a daily basis. Each piece of Station equipment has a unique identification number which is traceable to records of the status of inspections and tests.

Station Administrative Procedure AP-801, "Surveillance Test Program", addresses the process of identifying and handling items which have not satisfactorily passed required inspections and tests. Until suitable documentary evidence is available to show that equipment or material is in conformance, affected systems shall be considered to be inoperable and reliance shall not be placed on such systems to fulfill their intended safety function.

Station Administrative Procedure AP-401 addresses returning equipment to service. This procedure requires Operations to accept items when they are ready to be returned to service. Functional acceptability of the equipment is required. Removal of temporary jumpers, signals, etc. used during maintenance and testing is also addressed in AP-401. Station Administrative Procedure AP-204.1 will require an independent verification by a second qualified person of proper alignment of equipment important to safety prior to return to operation. Also, Station Administrative Procedure AP-217 requires that the proper surveillance testing be performed when equipment is placed into service.

It should be noted that Virgil C. Summer Nuclear Station will have automatic system status monitoring as discussed in Task Action Plan items I.D.3, NUREG-0660.

POSITION (2)

In lieu of any designated Senior Reactor Operator (SRO), the authority to release systems and equipment for maintenance or surveillance testing or return-to-service may be delegated to an on-shift SRO, provided provisions are made to ensure that the Shift Supervisor is kept fully informed of system status.

RESPONSE (2)

Station Administrative Procedures AP-217, "Removal and Restoration of Station Equipment", and AP-204.1, "Safety Tagging", detail administrative controls for taking systems out-of-service and return-to-service. Both procedures are being revised to define the authority of the Control Room Foreman (second SRO on-shift) via the Shift Supervisor and his responsibility in keeping the Shift Supervisor apprised of plant/system status. The responsibility and authority to release systems for maintenance or testing and to return systems to service currently is held by the on-shift Shift Supervisor and designated shift members only. Other personnel not assigned to operating shifts such as Training Instructors and Plant Engineers who are in the Operator License Training Program do not have and will not have this authority.

POSITION (3)

Except in cases of significant radiation exposure, a second qualified person should verify correct implementation of equipment control measures such as tagging of equipment.

RESPONSE (3)

AP-204.1 "Safety Tagging", is being revised to require a second independent verification of proper implementation of equipment control measures such as equipment tagging by a Licensed Operator. This presently means an Operator in the Cold License Training Program.

POSITION (4)

Equipment control procedures should include assurance that Control-Room Operators are informed of changes in equipment status and the effects of such changes.

RESPONSE (4)

AP-217, "Removal and Restoration of Station Equipment", currently reflects a requirement that the Control Room Operator review and signoff prior to removing equipment from service or returning it to service. The form defines why the equipment is out of service, what changes are to be made to the system, and its impact on Technical Specifications or redundant system. AP-1500, "Plant Modifications", is under development. This procedure will insure by signoff that when modification changes are made to systems, the Operators receive training of the changes and any revised procedures as a result of those changes.

POSITION (5)

For the return-to-service of equipment important to safety, a second qualified Operator should verify proper systems alignment unless functional testing can be performed without compromising plant safety, and can prove that all equipment, valves, and switches involved in the activity are correctly aligned.

RESPONSE (5)

For initial system startup after a maintenance refueling outage, a system valve and electrical lineup is required. These lineups are documented on checklists with signoffs. The checklists are reviewed by a second qualified Operator and signed off. The second Operator may, but is not required to, do another independent physical valve alignment verification. To be declared operable, a system important to safety must have a current acceptable surveillance test performed. AP-217, "Removal and Restoration of Station Equipment", details the requirements for restoring systems important to safety to operable after maintenance or testing outage. It provides for QC acceptance if necessary, retest or functional verification if necessary, and surveillance testing if necessary. AP-201.1, "Safety Tagging", is being revised to require a second independent qualified Operator verification of removal of safety tags and restoration of valves and equipment to procedure designated status. AP-401, "Maintenance Work Request", requires specifying and signoff of functional testing and verification by Plant Operators before releasing the Work Request. It also requires signoff by the Shift Supervisor that the work has been completed, all required tests and signoffs have been completed, and is acceptable to him. Preventive maintenance tasks have a computerized cover sheet that requires Shift Supervisor approval prior to starting the task and Shift Supervisor acceptance at the end of the task.