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SCE&G
A SCANA Company

South Carolina Electric & Gas Company
P.O. Box 764
Columbia, SC 29218
(803) 748-3604

Osmund W. Dixon, Jr., PE
Senior Vice President
Nuclear Power
Construction
Production Engineering

February 5, 1986

Mr. J. M. Taylor
Director, Office of Inspection
and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
Response to Notice of Violation and
Proposed Imposition of Civil Penalty
(NRC Inspection Report No. 50-395/
85-34)

Dear Mr. Taylor:

On January 6, 1986 the Nuclear Regulatory Commission (Region II) issued a Notice of Violation and Proposed Imposition of Civil Penalty for alleged violations of NRC requirements at the Virgil C. Summer Nuclear Station. Attached to this letter are the responses of South Carolina Electric & Gas (SCE&G) to the Notice of Violation and to the Proposed Imposition of Civil Penalty.

SCE&G considers this enforcement action seriously, as we pride ourselves on our excellent operating record. This is the first civil penalty proposed for the Summer Nuclear Station and we intend to do everything possible to make it the last. To accomplish that goal, we have instituted prompt and extensive corrective actions. These actions are addressed more fully in the Response to the Notice of Violation (Attachments I and II).

The Licensee is in agreement with the basic facts set forth in the Notice of Violation and will not contest the Imposition of Civil Penalty. Attachment III provides a discussion of extenuating circumstances which we believe are material to the issue of mitigation of the civil penalty. However, we have concluded that it is in our best interest to focus our attention toward critical self-evaluation and improvement rather than request mitigation of the fine. Enclosed is our check in the amount of fifty thousand dollars ($50,000.00).

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If there are further questions or comments, please contact us at your earliest convenience. The undersigned affirms that the statements and matters set forth in this letter and its attachments are true and correct to the best of my knowledge, information, and belief.

Very truly yours,

O. W. Dixon, Jr.

RMF/OWD:dwf
Attachments

pc: V. C. Summer
O. W. Dixon, Jr./T. C. Nichols, Jr.
E. H. Crews, Jr.
E. C. Roberts
D. A. Nauman
J. G. Connelly, Jr.
W. A. Williams, Jr.
H. R. Denton
J. Nelson Grace
Group Managers
O. S. Bradham
C. A. Price
W. T. Frady
C. L. Ligon (NSRC)
R. M. Campbell
K. E. Nodland
R. A. Stough
G. O. Percival
R. L. Prevatte
J. B. Knotts, Jr.
Document Management Branch
NPCF
File

ATTACHMENT I
RESPONSE TO NOTICE OF VIOLATION
VIOLATION I

I. ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

South Carolina Electric and Gas Company (SCE&G) is in agreement with the alleged violation.

II. REASON FOR THE VIOLATION

The Licensee attributes this event to personnel error for failure to follow procedures and inadequate procedural guidance. The General Operating Procedure (GOP-1) for Hot Shutdown (Mode 4) operation requires the Operator-at-the-Controls (OATC) to secure Residual Heat Removal (RHR) and realign the system for safety injection prior to entry into Hot Standby (Mode 3). Contrary to this requirement the system operating procedure realignment was not adequately performed. In addition, the performance of the Surveillance Test Procedure (STP-105.006) required for entry into Mode 3 should have verified proper system alignment but did not include verification of the position of valves XVG-8888 A and B.

III. CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

Upon discovery of the system misalignment, immediate action was taken to return the RHR System to its proper alignment.

IV. CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION

The Licensee has taken the following corrective action to avoid further violation. Disciplinary action was taken against the OATC for failure to follow procedures when aligning the ECCS subsystem. The Control Room Supervisor was counselled concerning his failure to adequately monitor activities in the control room during the plant mode changes. This event was discussed in detail with all Operations personnel who are involved in the shutdown and startup activities.

The Surveillance Test Procedure (STP-105.006) required to be performed for alignment of the ECCS subsystems per Technical Specification 4.5.2b has been revised to include valves XVG-8888 A and B. Previously, alignment verification for these valves was accomplished per the main control board logs for Technical Specification 4.5.2a. The RHR System Operating Procedure (SOP-115) has been revised to caution the operator concerning the Technical Specification requirements when placing the system in recirculation for boron equilization.

V. DATE OF COMPLIANCE

South Carolina Electric and Gas Company is in full compliance with respect to the corrective action stated above.

ATTACHMENT II
RESPONSE TO NOTICE OF VIOLATION
VIOLATION II

I. ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

South Carolina Electric and Gas Company (SCE&G) is in agreement with the alleged violation.

II. REASON FOR THE VIOLATION

The nonconservative response of the Overpower Delta Temperature (OPDT) circuitry resulted from a failure to install an electrical jumper on channel logic cards TY 412L, TY 422L and TY 432L. The purpose of the jumper is to ensure that the OPDT circuitry provides protection for decreasing average temperature as might be expected on a steam line break. Due to personnel oversight, the jumpers were not installed during plant startup. The oversight was not previously detected since surveillance tests only verified that protection would be provided for increasing average temperatures.

III. CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The three instrumentation channels were declared inoperable at 1215 hours on August 28, 1985 and a plant shutdown was subsequently initiated per the requirements of Limiting Condition for Operation (LCO) 3.0.3. The missing jumpers were installed and their function tested prior to declaring the channels operable at 1530 hours on August 28, 1985. The shutdown was terminated and the plant returned to 100% power.

An engineering evaluation performed during a review of the event determined that the safety limit curves for the Virgil C. Summer Nuclear Station would not be violated for operation without OPDT. As shown in FSAR Figure 15.1-1, and confirmed by the NSSS vendor, the safety limits can be protected for all conditions of T_{ave}, Delta T and Reactor Coolant System (RCS) pressure without relying on the OPDT trip. Protection is provided by High Neutron Flux, Overtemperature Delta Temperature (OTDT), and Pressurizer Low Pressure trips.

IV. CORRECTIVE ACTION TAKEN TO AVOID FURTHER VIOLATION

Calibration procedures for OPDT have been revised. The procedures now functionally test the circuit response on increasing and decreasing temperatures. The Licensee is confident that this is an isolated case. A review of the Reactor Trip System Instrumentation Trip Setpoints in Technical Specifications indicates that the OPDT trip is unique with respect to its circuitry design; a design which requires a constant to change state for a change (increasing or decreasing) in an input variable. The procedure revisions are considered to be adequate corrective action to avoid further violation.

V. DATE OF COMPLIANCE

South Carolina Electric and Gas Company is in full compliance with respect to the corrective action stated above.

ATTACHMENT III
RESPONSE TO PROPOSED IMPOSITION
OF CIVIL PENALTY

Two violations were cited in NRC Inspection Report No. 50-395/85-34. Both violations were for events which were identified by the Licensee and for which prompt corrective action was taken. The two events were promptly reported to the NRC and both were followed by Licensee Event Reports (LERs 85-023 and 85-025) which detailed the events and corrective actions taken by the Licensee. This information has also been provided in Attachments I and II, "Response to Notice of Violation."

Violation I involved a misalignment of the low head safety injection system for approximately one hour and fifteen minutes following a mode change from Hot Shutdown (Mode 4) to Hot Standby (Mode 3) conditions. The Licensee considers this to be a serious personnel error; however, management controls were in place which mitigated the consequences of this event. The Shift Technical Advisor identified the misalignment during a review of the Bypassed and Inoperable Status Indication (BISI) System. This is indicative that the appropriate checks are in place to promptly identify and correct errors of this nature. Additionally, Emergency Operating Procedures (EOPs) require flow verification for the low head safety injection system following an actuation. If flow is not verified, operators are directed to check for proper system alignment to restore flow. Based on the existence of these controls, the Licensee considers the consequences of this event to be minimal. The response to this event is a good demonstration that the Licensee's programs ensure that conditions inconsistent with plant Technical Specifications are promptly identified and corrected.

Violation II involved a condition of the Reactor Protection System (RPS) Overpower Delta Temperature (OPDT) circuitry which resulted in the generation of nonconservative setpoint values for decreasing average reactor coolant temperatures. This condition was identified by the Licensee during a Reactor Trip review on August 24, 1985. Initially, the condition was determined to be acceptable since the response of the setpoint circuitry was within the required tolerance of the instrumentation. However, further investigation was performed by the Shift Technical Advisor, including a review of previous Reactor Trip packages, and a determination of a valid problem resulted. On August 28, 1985, the Licensee notified the NRC of the problem and immediately initiated a shutdown in accordance with Technical Specifications. The problem was immediately corrected and the plant shutdown was terminated within three hours and fifteen minutes. The Licensee considers this to be another demonstration that Technical Specification problems are identified, promptly corrected and reported to the NRC.

The consequences of this event are considered to be minimal. The OPDT trip is a backup to other RPS trips (High Neutron Flux, Overtemperature Delta Temperature, and Pressurizer Low Pressure). Its purpose is to provide diversity for the Reactor Protection System. The level of protection provided by the RPS was not significantly degraded.

The Commission identified two opportunities which the Licensee had to discover and correct the problems associated with OPDT. The Licensee agrees that two opportunities did exist to identify the problem. However, neither opportunity provided sufficient technical information to determine if the problem existed at the Summer Nuclear Station. The first was notification by the Westinghouse Site Service Manager on December 5, 1984, through an EMAIL communique. EMAIL is an internal Westinghouse communications system which provides information on an informal basis to all Westinghouse Site Service Managers. The one paragraph communique was provided to the Licensee for information only. This was not a formal bulletin or notice for which specific corrective action was recommended. It does not receive a technical review or verification from Westinghouse. Action in response to such information could be taken without sound technical basis. The EMAIL communique identified a potential problem with missing jumpers on 7300 process cards TY-412S and TY-442S at the McGuire Nuclear Station. Also identified in the communique was a concern with lack of administrative control to ensure the proper jumpers remain in place. The Licensee reviewed the EMAIL communique upon receipt and took action to verify the configuration of TY-412S, TY-422S, and TY-432S cards in the 7300 process racks. These cards were determined to be of the proper configuration. The Licensee also conducted a review of administrative controls to ensure that the proper card configurations are maintained. The controls were determined to be adequate in that all card configurations are detailed and verified within the associated surveillance test procedures. The missing jumpers at the Summer Nuclear Station were not associated with the cards identified in the EMAIL communique. This was due to the difference in the function of various process cards in 7300 process racks for three loop and four loop Westinghouse units. The missing jumpers at the Summer Nuclear Station were associated with TY-412L, TY-422L, and TY-432L, which were not checked as part of the Licensee's response to the EMAIL communique.

The second opportunity cited by the Commission was an I&E Information Notice No. 85-23, "Inadequate Surveillance and Postmaintenance and Postmodification System Testing," issued on March 22, 1985. This notice was generic in nature and identified a concern with inadequate surveillance, postmaintenance, and postmodification system testing. The Licensee reviewed the notice with respect to the generic issue it raised. The McGuire event concerning the missing jumpers for the OPDT circuitry was an example cited in the notice and was characterized in the notice as "a completely unrelated event." The notice did not provide sufficient technical information to identify the jumper problem at the Summer Nuclear Station. To further substantiate this position, the Licensee would like to make note of the issuance of an additional I&E Information Notice No. 85-98, "Missing Jumpers from Westinghouse Reactor Protection System Cards for the Overpower Delta Temperature Trip Function," following the event at the Summer Nuclear Station. This provides further evidence that the Commission did not consider the previous notice IN 85-23 to be adequate in addressing the OPDT concerns.