

TENNESSEE VALLEY AUTHORITY

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AUG 24 1988

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

In the Matter of) Docket Nos. 50-327
Tennessee Valley Authority) 50-328

SEQUOYAH NUCLEAR PLANT (SQN) UNITS 1 AND 2 - NRC INSPECTION REPORT NOS.
50-327, -328/88-27 - RESPONSE TO NOTICE OF VIOLATION (NOV)
50-327, -328/88-27-01

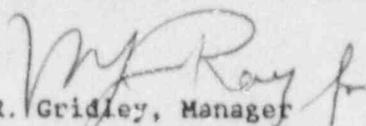
Enclosed is TVA's response to F. R. McCoy's letter to S. A. White dated
July 27, 1988, that transmitted the subject NOV.

Enclosure 1 provides my response. Enclosure 2 addresses specific NRC concerns
cited in the letter transmitting the NOV.

If you have any questions, please telephone M. A. Cooper at (615) 870-6549.

Very truly yours,

TENNESSEE VALLEY AUTHORITY


R. Gridley, Manager
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Regulatory Affairs

enclosures
cc: See page 2

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U.S. Nuclear Regulatory Commission

AUG 24 1988

(Enclosures):

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ENCLOSURE 1

RESPONSE TO NRC INSPECTION REPORT
NOS. 50-327, -328/88-27
F. R. McCOY'S LETTER TO S. A. WHITE
DATED JULY 27, 1988

Violation 50-327, -328/88-27-01

"10 CFR 50, Appendix B, Criterion XVI states that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. Criterion XVI further states that in the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. This requirement is implemented at Sequoyah by the Nuclear Quality Assurance Manual (NQAM), the accepted QA program (TCA-TR75-1A) and Administrative Instruction (AI) 12, Adverse Conditions and Corrective Actions.

Contrary to the above, the licensee failed to initiate any long-term corrective actions to prevent the recurrence of events where positive reactivity changes were made while both trains of the Control Room Ventilation System were inoperable. These positive reactivity changes were violations of Action Statement (b) to Technical Specification 3.7.7 which occurred during September through December 1987 and were reported to the NRC through Licensee Event Report 327/87078.

As of April 1, 1988, the licensee had not revised (or provided for future revision of) site procedures Technical Instruction (TI)-19 (Chemical Feed Controls), SOI-62.2 (Boron Concentration Control), and SOI 62.3 (Reactor Coolant Chemical Addition and Control) by which positive reactivity changes occur during chemical additions. No other administrative controls related to these events had been issued.

This is a Severity Level IV violation (Supplement I)"

Admission or Denial of the Alleged Violation

TVA admits the violation.

Reason for the Violation

The reason for the violation can be attributed to a miscommunication between two sections--the Chemistry Section responsible for revising the appropriate procedures, and the Plant Reporting Staff (PRS) responsible for reporting the event to NRC. The event and the corrective action were complicated by the fact that the system utilized for addition of chemicals was inoperable. An auxiliary system was used; therefore, a temporary revision to the procedures controlling the auxiliary system was logical. While the situation existed--CREVS inoperable--the temporary revisions to the procedures provided recurrence control. The long-term corrective action was not addressed in revisions 0 and 1 of the Licensee Event Report (LER) because the Control Room Emergency Ventilation System (CREVS) had been returned to service, thus

eliminating the situation. The Chemistry Section did not initially consider long-term corrective action necessary to control the addition of chemicals to the reactor coolant system (RCS) to prevent a positive reactivity change while in modes 5 or 6 with both trains of the CREVS inoperable because the potential of a recurrence was considered remote. During preparation of revisions 0 and 1 to the LER, the PRS engineer was not aware that the procedure changes were not permanently implemented and that additional long-term corrective action was necessary.

Corrective Steps That Have Been Taken and Results Achieved

Both trains of the CREVS have been returned to service.

During subsequent follow-up investigation into this issue, SQN recognized that the procedural changes referenced in the LER were not permanently implemented and that additional procedure changes were necessary in order to ensure recurrence control of such events in the long term.

SQN has permanently revised the following three procedures that control the addition of chemicals of the RCS:

1. Technical Instruction 19, "Chemical Feed Addition"
2. System Operating Instruction (SOI) 62.2, "Boron Concentration Control"
3. SOI-62.2, "Reactor Coolant Chemical Addition And Control"

These procedures will provide instructions for RCS chemical additions that will not cause positive reactivity changes when prohibited by TSS.

PRS engineers have been directed to verify that corrective actions have been adequately and correctly described when writing LERs. The Chemistry Section has been directed to consider the possibility of requiring long-term corrective action in their solutions to problems.

Corrective Steps That Will Be Taken to Avoid Further Violations

The revision of the procedures should be sufficient to prevent further violations relative to positive reactivity changes to the RCS by addition of chemicals while both trains of the CREVS are inoperable. No additional corrective actions are considered necessary.

Date When Full Compliance Will Be Achieved

SQN is in full compliance.

ENCLOSURE 2

SQN'S RESPONSE TO THE THREE PROGRAMMATIC CONCERNS
LISTED IN THE INSPECTION REPORT

TVA has reviewed the three programmatic issues identified in NRC's July 7, 1988 letter to TVA and concludes that an effective corrective action program and reliable reporting program are in place at SQN. The individual issues are discussed below.

1. Chemistry section personnel initiated a condition adverse to quality report (CAQR) on November 30, 1987, when they determined the chemical additions had reduced RCS boron concentration to below 2,050 parts per million (ppm). The Unreviewed Safety Question Determination (USQD 87-10R1) written on the addition of hydrazine and lithium in the RCS for control of oxygen and potential hydrogen activity levels specified a minimum boron concentration limit of 2,050 ppm. The USQD was based on 1986 NRC/TVA discussions (documented by memorandum), which indicated that, as long as RCS boron concentration was maintained at greater than 2,000 ppm (after any dilution), there would be no significant reactivity change and therefore the intent of the action statement (b) of T.S. 3.7.7 would not be violated. For conservatism, the USQD administratively limited the concentration to 2,050 ppm. The RCS sample taken and analyzed with regard to this event produced a boron concentration figure of 2,044 ppm. The acceptable margin of error for the boron concentration test is ± 0.5 percent, which would allow the actual boron concentration to be between 2,034 ppm and 2,054 ppm. The deviation from desired concentration was within the acceptable error of measurement and, even taking the worst case, would put the boron concentration well above the value of 2,000 ppm.

Accordingly, Chemistry personnel involved did not believe a violation of TSS had occurred. As a result, the condition adverse to quality report written to identify the problem was determined not to be significant; therefore, the root cause analysis and recurrence controls were not required. As was previously addressed in enclosure 1, the Chemistry section did not initially consider long-term corrective action necessary to control the addition of chemicals to the RCS because the potential of a recurrence of this situation was considered remote. Accordingly, the CAQR was closed based on temporary revision of the associated procedures. Upon subsequent review of the issue and interpretation regarding positive reactivity changes, a potential reportable occurrence and LER were initiated. Additional details are provided in enclosure 1.

2. SQN admits that the PRS did not know that the procedures referenced in revisions 0 and 1 of LER 87078 had been only temporarily revised. It is believed this was an isolated case resulting from miscommunication and is not indicative of program weaknesses. PRS engineers have been directed to verify that corrective actions have been adequately and correctly described when writing LERs.

3. Responsibilities regarding commitment management are specified in SQN Standard Practice SQA-135, "Commitment Management Tracking and Closure." With regard to closure of commitments, the following information is provided. In preparation of an LER, the PRS engineer consults with affected plant staff to determine root causes and corrective action for an event. Commitments are then made in LERs with concurrence of responsible plant organizations. PRS is not responsible for ensuring commitments are carried out; that responsibility rests with the lead coordinator and implementor for the commitment. Site Licensing is responsible for ensuring the commitments are entered on Corporate Commitment Tracking System (CCTS), assigning responsibility for each commitment to a lead coordinator and implementing organization, notifying NRC of schedule extensions or commitment changes, determining closure action requirements, and arranging for independent verification if necessary. In review of closure documentation, Site Licensing engineers evaluate whether the completed action fully implements each commitment and whether the completion is adequately documented. Independent verification is obtained from site Quality Assurance (QA) for approximately 10 percent of all commitments, randomly selected, plus any additionally specified by the licensing engineers.