Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

Joseph R. Bynum
Vice President, Nuclear Operations

April 21, 1993

Director, Office of Enforcement
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) - REPLY TO NOTICE OF VIOLATION (NOV) AND PROPOSED IMPOSITION OF CIVIL PENALTIES - NRC INSPECTION REPORT NOS. 50-327, 328/92-36, 92-38, AND 93-02 - ENFORCEMENT ACTION 92-257 AND 93-034

Enclosed is TVA's reply to Stewart D. Ebneter's letter to Mark O. Medford dated March 23, 1993, which transmitted the subject NOV. This NOV pertains to three violations, each with separate civil penalties. The first violation is associated with mispositioned throttle valves in the essential raw cooling water and component cooling water systems. The second violation involves the failure to maintain the refueling water storage tank (RWST) temperature above the technical specification minimum limit for approximately 25 hours. The third violation addresses the December 31, 1992, dual-unit reactor trip recovery. TVA admits the cited violations. Payment of the proposed civil penalties in the amount of $225,000 has been made by electronic fund transfer No. 930407001207.

The events associated with the low RWST temperature (Violation II) and the December 31, 1992, dual-unit reactor trip (Violation III) were previously reported in accordance with 10 CFR 50.73 by Licensee Event Reports 50-328/92016 and 327/92027, respectively.

As reflected by the subject violations and associated events, the Operations department's performance has not met our expectations. While specific contributors are being addressed as detailed in the enclosure, broader initiatives to effect overall improvements in performance of the entire SQN management team and workforce are in progress. These efforts are receiving senior TVA management oversight and are being discussed with NRC as part of the current restart efforts for SQN Units 1 and 2.

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Enclosure 1 of this letter is TVA's reply to the NOV. Enclosure 2 further addresses actions taken regarding the three specific areas for which NRC requested a response. Enclosure 3 provides the list of commitments.

If you have any questions concerning this submittal, please telephone me at (615) 751-2601.

Sincerely,

J. R. Bynum

Sworn to and subscribed before me
this 21st day of April, 1993

Alice K Goodwick
Notary Public
My Commission Expires 2/8/97

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ENCLOSURE 1

REPLY TO NOTICE OF VIOLATION
NRC INSPECTION REPORT NOS. 50-327, 328/92-36, 92-38, AND 93-02
STEWART D. EBNETER'S LETTER TO MARK O. MEDFORD
DATED MARCH 23, 1993

"I. Violations Associated With Control of Throttle Valve Position

A. Technical Specification 6.8.1 requires, in part, that written procedures be established, implemented and maintained for applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Quality Assurance Program Requirements, Revision 2, February 1978. Appendix A to Regulatory Guide 1.33 requires administrative procedures for safe operation of nuclear power plants, and specific procedures for conducting surveillance tests.

Contrary to the above the following procedures were inadequate resulting in the mispositioning of the specified valves for the time periods indicated:

1. Surveillance Instruction 0-SI-OPS-067-682.M, ERCW FLOW BALANCE VALVE POSITION VERIFICATION, Revision 2, implements configuration control for the position of throttled valves in the Essential Raw Cooling Water (ERCW) system. The procedure was inadequate in that it did not provide proper instructions for accounting for slack travel in valve hand-operators which resulted in the Containment Spray Heat Exchanger ERCW throttle valves 1-67-537A and B being improperly positioned from November 30, 1991, through December 16, 1992.

2. Surveillance Instruction 2-SI-OPS-070-032.A, COMPONENT COOLING WATER VALVES POSITION VERIFICATION TRAIN A, Revision 1, implements configuration control for the position of throttled valves in the Component Cooling Water System (CCS). The procedure was inadequate in that it did not provide proper instructions for accounting for slack travel in the valve hand-operator which resulted in the Residual Heat Removal (RHR) Heat Exchanger CCS throttle valve 2-70-546A being improperly positioned from approximately March 1, 1989, through December 19, 1992.

B. Technical Specification 6.8.1 requires, in part, that written procedures be established, implemented and maintained for applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Quality Assurance Program Requirements, Revision 2, February 1978. Appendix A to Regulatory Guide 1.33 requires administrative procedures for safe operation of nuclear power plants, and specific procedures for conducting surveillance tests.

Contrary to the above, procedure SI-566, ERCW FLOW VERIFICATION TEST - UNITS 0, 1, AND 2, Revision 22 was inadequate in that, it did not include a requirement to verify that newly established valve throttle positions were correctly transferred to procedure 0-SI-OPS-067-682.M. Seven examples of improperly transferred valve positions were identified.

"This is a Severity Level III Problem (Supplement I).
Civil Penalty - $50,000."

Admission or Denial of the Alleged Violation

TVA admits the violation.

Reasons for the Violation

A. Mispositioning of the subject throttle valves was caused by conflicting and ambiguous procedural guidance on how to count the number of turns from the full open position. Surveillance Instructions (SIs) 0-SI-OPS-067-682.M and 2-SI-OPS-70-32.A state only that the "failure to allow for slack which exists between valve stem and handle on some throttle valves may lead to mispositioning of valves." This guidance is ambiguous in that it is not apparent if slack should or should not be taken into account in order to correctly position a valve. This condition is limited to 18-inch Pratt butterfly valves in the ERCW system and CCS. Further, the general operating instruction (GOI) that governs throttle valve positioning states the following: "Fully open the valve with the valve handwheel. Then turn the handwheel in the closed direction the appropriate number of turns to achieve the desired number of turns throttled from the full open position." This guidance could be interpreted to conflict with that provided by the subject procedures in that the SIs indicated slack may be required to be removed in order to correctly position the subject valves, while the GOI did not indicate that slack should be removed during throttle valve positioning. Overall, this procedure guidance supported varying interpretations regarding the manner in which to count turns in positioning throttle valves.

   A contributing cause to this event was that past operator training on throttle valve positioning was inconsistent with present procedures. Past operator training instructed Operations personnel to take the slack out of the valve before starting to count valve turns. This methodology was not supported by governing procedures as described above.

B. The failure to update Surveillance 0-SI-OPS-067-682.M was caused by inadequate procedural controls. No instructions or other controls were specified in these or other procedures that would have required and verified the revision of 0-SI-OPS-067-682.M following the performance of SI-566.

Corrective Actions Taken and Results Achieved

A. Upon discovery of the first mispositioned throttle valve, a reverification of throttle valve positions was initiated. As a result of this review, two additional valves were also found to be mispositioned. The three valves were correctly repositioned. As an interim measure, a training letter describing the proper method of throttle valve positioning was provided to Operations personnel. This letter required each individual to sign the letter signifying the understanding of the proper method of throttle valve positioning. SI-566 was subsequently performed to further verify proper system performance for the corrected throttle valve positions.

   Because past procedure guidance was subject to interpretation, procedures that require throttle valve positioning were revised to standardize a repeatable valve-positioning process. Implementation of a repeatable process should ensure that valves are positioned correctly. Additionally, a videotape was produced to instruct Operations personnel on standardized methods of configuration control on components including 6.9-kilovolt (kV) and 480-volt breakers, locked valves, throttle valves, and fire dampers.

B. SI-566 was revised to include a signoff step confirming revision of 0-SI-OPS-067-682.M after SI-566 performance and a step to place 0-SI-OPS-067-682.M on administrative hold until that revision is completed.

Corrective Steps That Will be Taken to Avoid Further Violations

In order to enhance the training of Operations personnel on various types of configuration methods (i.e., valves and breakers), comprehensive retraining is being conducted. This training includes appropriate lesson plans, job performance measures, mock-ups, and evaluation criteria to ensure that personnel have the proper knowledge and training to perform configuration manipulations. As possible, components with a history of or potential for misconfiguring are utilized and/or addressed.

A review of the components in plant systems required to be controlled by the plant configuration control process was performed. This review identified a number of components (such as handswitches) that were not being controlled by the configuration control procedure. Plant procedures will be revised before restart of the respective unit from the current outages to incorporate the results of this review.

A full verification of the configuration of plant components within the configuration control process is being performed and will be completed before restart of the respective unit from the current outages.

SQN procedures will be evaluated to determine the appropriate method of specifying component positioning, especially where different procedures align the same component. This will include a review to determine where unnecessary duplication of alignment exists; procedures will be revised as appropriate to eliminate configuration duplications, thereby minimizing potential for inconsistencies.

Date When Full Compliance Will be Achieved

SQN is in full compliance relative to the specific violations described above. Additional corrective actions are being taken to strengthen performance in the area of overall configuration control.

"II. Violations Associated With Control of RWST Temperature

A. Technical Specification 6.8.1 requires, in part, that written procedures be established, implemented and maintained for applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Quality Assurance Program Requirements, Revision 2, February 1978. Appendix A to Regulatory Guide 1.33 requires administrative procedures for safe operation of nuclear power plants, and specific procedures for conducting surveillance tests.

Technical Specification (TS) 3.5.5, requires that the RWST be operable in Modes 1, 2, 3, and 4 and, in part, for the RWST to be operable, solution temperature must be maintained above 60 degrees F. The action requirement for the TS requires that with the RWST inoperable it must be restored to operable status within one hour or be in hot standby within 6 hours.

Contrary to the above, with the Unit 2 in Mode 1 the following procedures were either inadequate or not followed on December 23 and 24, 1992 resulting in the Unit 2 RWST solution temperature being below the TS minimum limit for approximately 24 hours without the plant being placed in hot standby:

1. Surveillance Instruction 2-SI-SXP-072-001.B, CONTAINMENT SPRAY PUMP 2B-B QUARTERLY OPERABILITY TEST, Revision 0, was inadequate in that no precautions or limitations were identified with regard to system interactions. As a result, performance of the Surveillance Instruction on December 23, 1992, in conjunction with coincident ERCW testing cooled the Unit 2 RWST solution below the TS minimum temperature limit.

2. Site Standard Practice SSP-12.1, CONDUCT OF OPERATIONS, Revision 2, establishes requirements for control of equipment and system status, and requires operators to maintain cognizance of operational status of equipment and systems. This procedure was not followed between approximately 5:00 a.m. on December 23, 1992, and 3:00 a.m. on December 24, 1992, in that three operating shifts failed to identify the below minimum required solution temperature for the RWST despite performing shift turnovers and monitoring ongoing test evolutions.

"This is a Severity Level III Violation (Supplement I).
Civil Penalty - $75,000"

Admission or Denial of the Alleged Violation

TVA admits the violation.

Reasons for the Violation

The failure to maintain the refueling water storage tank (RWST) temperature above the TS minimum limit was caused by inadequate Operations command and control over the ASME Section XI testing evolution. Appropriate cognizance and control of the multiple testing activities initiated by Technical Support personnel were not established and maintained. Operations personnel approved conduct of the required testing without an adequate review of the test activities or initiation of augmented test controls/oversight. An adequate review by either Technical Support or Operations should have recognized the system interaction before starting the containment spray (CS) pump with ERCW aligned to the CS heat exchanger (HX). Further, testing activities and manipulations were not adequately logged or covered in Operations shift turnovers, and RWST temperature was not monitored during multiple evolutions over several shifts.

A contributing cause was that the procedures associated with this event did not contain any precautions or prerequisites to ensure that cool ERCW was not in service to the shell side of the CS HX before placing the CS system on recirculation to the RWST.

Corrective Actions Taken and Results Achieved

Upon discovery of the low RWST temperature [indicated at approximately 58 degrees Fahrenheit (F)], TS 3.5.5 was entered. RWST temperature was calculated to have decreased to an earlier minimum value of approximately 56 degrees F. Actions were immediately taken to raise the temperature above 60 degrees F. The RWST heaters were energized, and the 2A CS and SI pumps were started on recirculation to the RWST in order to supply pump heat. Approximately four hours later, the RWST temperature was verified greater than 60 degrees F, and TS 3.5.5 was exited.

The specific Operations personnel involved with this event were counseled regarding performance and management expectations. Those individuals then reviewed the lessons learned from this event with other Operations personnel with specific focus on logkeeping, turnover, and status monitoring. New Operations management evaluated the evidenced deficiencies in overall Operations performance associated with this event. Broad-based initiatives to clearly establish expectations and accountability were augmented as described below.

The appropriate procedures have been revised by adding cautions to ensure that system interaction between the CS and ERCW systems does not occur in the future.

Corrective Actions That Will be Taken to Avoid Further Violations

The processes being used by Operations management to evaluate Operations personnel performance are being strengthened to ensure that management expectations are satisfied especially in the areas of command and control, control board monitoring, logkeeping, and shift relief.

A process of continuous coaching has been undertaken to provide constant reinforcement and immediate feedback for improvement of Operations personnel performance. A review team has been formed with members consisting of licensed Operations personnel from the industry, TVA Training, and TVA Quality Assurance to provide around-the-clock observation of main control room (MCR) conduct of activities. Last fall (November 1992), the Site Quality organization completed an Operations Performance Evaluation Program (PEP). The PEP provides a baseline evaluation with various areas being ranked and charted for determination of overall performance. A follow-up PEP is in progress. This follow-up evaluation is focusing on areas identified in the baseline PEP that were deemed as needing improvement. During performance of the follow-up PEP, Operations management and PEP team members will discuss observations for immediate feedback. The follow-up PEP will be compared with the baseline PEP as an assessment of performance trends. Additionally, a restart readiness team is being developed to separately assess Operations' performance prior to restart of either unit from the current outages. This assessment will include oral examinations/simulator evaluations and MCR evaluations for various Operations personnel. Management expectations have been clearly communicated to Operations personnel with regard to these and other issues. A separate management evaluation of all Operations personnel will be conducted before restart of the units from the current outages to determine where additional actions are warranted. Senior management continues to closely monitor progress of these initiatives.

The new Operations management team is working closely with the Site Quality organization to ensure that poor performance trends are quickly identified and corrected.

Date When Full Compliance Will be Achieved

TVA is in full compliance relative to the specific violations stated. Additional corrective actions are being taken with regard to the broader Operations performance issues.

"III. Violations Associated With the December 31, 1992, Dual Unit Trip Recovery

A. Technical Specification 6.8.1 requires, in part, that written procedures be established, implemented and maintained for applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Quality Assurance Program Requirements, Revision 2, February 1978. Appendix A to Regulatory Guide 1.33 requires administrative procedures for the safe operation of nuclear power plants, and procedures for abnormal, off-normal, or alarm conditions.

Contrary to the above, the following procedures were either not followed or were inadequate in that the following examples resulted in the degradation of the Unit 2 high head safety injection capability for approximately one minute, increasing the probability of a reactor coolant pump seal loss-of-coolant-accident.

1. Abnormal Operating Instruction (AOI) 34, EMERGENCY BORATION, Revision 7, provides the necessary actions to initiate emergency boration when the reactor is shut down and directed by procedure. On December 31, 1992, Unit 2 operators failed to follow the requirements of AOI-34, in that, when reactor coolant system temperature dropped to 537 degrees F, the operators used a normal boration flowpath, rather than the emergency boration flowpath required by the AOI.

2. AOI-34, EMERGENCY BORATION, Revision 7, provides instructions to operators to adequately realign and restore components utilized in normal charging operations and boration flowpaths. These include precise steps to return the centrifugal charging pump (CCP) suction to the volume control tank (VCT) from the RWST source. On December 31, 1992, Unit 2 operators failed to follow the requirements of AOI-34 during restoration of the VCT as the suction to the operating CCP as described in the following examples.

   a. RWST suction valve handswitches, 2-HS-62-135 and 2-HS-62-136, were not pulled to the A-P AUTO position after manipulation as required. This resulted in the disabling of the process function to automatically open the RWST suction supply valves upon a closure of the VCT suction supply valves.

   b. During VCT/RWST valve manipulations the operator inadvertently closed the VCT outlet suction supply valves, 2-LCV-62-132 and 2-LCV-62-133. At the time, these valves were providing the suction supply to the operating CCP.

3. Sequoyah Nuclear Plant Final Safety Analysis Report (FSAR) Section 9.2.1.3.3, Thermal Barrier Booster Pumps, states that the purpose of the thermal barrier booster pumps (TBBP) is to provide the additional head necessary to overcome high head loss through the thermal barriers. Each of the four pump motors receives electric power from normal or emergency sources and is connected to one of the four shutdown boards.

   Tennessee Valley Authority Design Criteria for the Component Cooling Water System, SQN-DC-V-13.9.9, specifies that the TBBPs (two per unit) shall be loaded to the diesel generators simultaneously with the Component Cooling System pumps after a loss of offsite power (LOOSP). Placement of the control room TBBP handswitches in the A-P AUTO position ensures the above requirements are met.

System Operating Instructions (SOI) 1-SO-70-1, Component Cooling Water System - A Train, Revision 3, and 2-SO-70-1, Component Cooling Water System - A Train, Revision 1, provides the procedure requirements for controlling the TBBP control room handswitch positions, but were inadequate, in that, the procedure required the subject handswitches to be in the A-AUTO in lieu of the A-P AUTO position. This resulted in a failure of the TBBPs on both units to automatically restart as required, during the December 31, 1992 LOOSP event.

4. Site Standard Practice Procedure SSP-12.9, Incident Investigations and Root Cause Analysis, provides detailed guidance on post-trip review requirements, including the requirement to assure that plant equipment operated as designed to mitigate the event, and identify the true root cause of the event such that it can be corrected prior to resumption of power operation.

   The post trip review performed pertaining to the trip of Sequoyah Unit 2 on December 31, 1992, was inadequate in that the personnel performing the review did not analyze tank level chart recorder traces to verify the cause of the volume control tank outlet valves 2-LCV-62-132 and 133 closing after having been opened by the operators. The personnel assumed the level in the VCT had decreased below the low level isolation setpoint, when in fact, it had not.

B. 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, requires in part, that measures be established to assure that conditions adverse to quality such as failures, malfunctions, and deficiencies be promptly identified and corrected.

   Contrary to the above, a condition adverse to quality existed since March 14, 1992, when the hand switch for the 2A-A TBBP was recognized as being misaligned during the performance of test procedure 2-SI-OPS-082-026.A, "Loss of Offsite Power with Safety Injection-DG-2A-A Containment Isolation Test", and the test resolution of the test deficiency did not correct the condition. Consequently, the hand switches for all four of the TBBPs (2 per unit) remained inappropriately aligned, such that the TBBPs would not automatically restart following a momentary loss of offsite power. This condition adverse to quality existed until the December 31, 1992, event."

"This is a Severity Level III Problem (Supplement I).
Civil Penalty - $100,000."

EXAMPLES III.A.1, III.A.2.a, III.A.2.b

Admission or Denial of the Alleged Violation

TVA admits the violation.

Reasons for the Violation

The examples of not following Abnormal Operating Instruction 34, "Emergency Boration," reflect poor individual transient response performance.

The cause for failure to follow the procedure for emergency boration (Example III.A.1) was personnel error on the part of the operating crew. The Unit 2 Operations crew (one Assistant Shift Operations Supervisor [ASOS] and one Unit Operator [UO]) considered that using the normal boration flow path would require less operator attention and, therefore, would allow the UO to focus on other event response actions, e.g., taking manual control of auxiliary feedwater. Based on personnel statements, the crew incorrectly thought that the procedure allowed use of the normal boration flow path. The error in using normal boration precipitated the isolation of the VCT and swap-over to the RWST. Subsequent operator errors in the realignment of the VCT outlet valves lead to a loss of suction to the CCP. Review results concluded that the RWST handswitches were incorrectly left in the A-Auto position and that inadvertent operator action appears to have resulted in reclosure of the VCT valves (Examples III.A.2.a and III.A.2.b).

TVA reviews of event response concluded that the staffing level was adequate to have properly responded to the transient if the procedures had been followed. TVA believes the personnel involved had adequate knowledge and experience to appropriately respond to the event. Management expectations were not met by the individuals involved. It was, however, also concluded that a contributing factor for the event response weaknesses was lack of training, specifically, with varying shift complements under dual-unit transient conditions.

Corrective Steps That Have Been Taken and Results Achieved

The Unit 2 crew (ASOS and UO) has been counseled on the importance of following procedures. The responsible crew was tasked with developing a lesson plan to share the lessons learned with other crews. Controls have been established to ensure in the near term that two licensed operators (UOs) are maintained for each unit in addition to the ASOS. This increased staffing level provides additional operating margin while long-term Operations performance improvement efforts are in progress.

Training has been provided to licensed operators relative to the procedure noncompliance issues identified in the December 31, 1992, event.

Corrective Steps That Will Be Taken to Avoid Further Violations

As described in the previous violation response, a process of continuous coaching has been undertaken to provide constant reinforcement and immediate feedback for improvement of Operations personnel performance. A review team has been formed with members consisting of licensed Operations personnel from the industry, TVA Training, and TVA Quality Assurance to provide around-the-clock observation of MCR conduct of activities. Last fall (November 1992), the Site Quality organization completed an Operations Performance Evaluation Program (PEP). The PEP provides a baseline evaluation with various areas being ranked and

charted for determination of overall performance. A follow-up PEP is in progress. This follow-up evaluation is focusing on areas identified in the baseline PEP that were deemed as needing improvement. During performance of the follow-up PEP, Operations management and PEP team members will discuss observations for immediate feedback. The follow-up PEP will be compared with the baseline PEP as an assessment of performance trends. Additionally, an Operations restart readiness team is being developed to separately assess Operations' performance. This assessment will include oral examinations/simulator evaluations and MCR evaluations for various Operations personnel. A separate management evaluation of all Operations personnel will be conducted before restart of the units from the current outages to determine where additional actions are warranted.

Training will be conducted for licensed operators on the simulator with varying shift complements under transient conditions. The Operations Manager is now chairing the curriculum review committee to ensure appropriate levels of management involvement and oversight and fidelity between training and plant operations.

Date When Full Compliance Will be Achieved

TVA is in full compliance relative to the specific violations stated. As previously described, additional corrective actions are being taken with regard to broad Operations performance issues.

EXAMPLE III.A.3

Admission or Denial of the Alleged Violation

TVA admits the violation.

Reasons for the Violation

The incorrect thermal barrier booster pump handswitch positions in the system operating instruction resulted from an inadequate procedure revision. Reviews concluded that the incorrect change of handswitch position in the November 30, 1991, procedure revision was inadvertent and was not identified during the procedure review process. The supporting documentation for the enhancement of the procedure did not identify the handswitch position change. This change was unintentional and reflected a failure to provide adequate review of the procedure revision package.

Corrective Steps That Have Been Taken and Results Achieved

The procedures providing guidance for the TBBP handswitch have been revised to reflect the correct handswitch position requirement. Additionally, an evaluation of the current position of MCR handswitches was performed. This evaluation was performed by walking down the MCR and recording handswitch positions. Four components were determined to have handswitches in positions different than those specified by the associated procedure [the MCR air handling units (AHUs), the electrical board room AHUs, the upper containment cooling units, and the

lower containment cooling units]. The mispositioned handswitches did not adversely affect plant operations. A procedure review follow-up to verify configuration relative to procedure requirements was then performed. The walkdown and procedure data were compared with design output documents for verification of compliance with design requirements. Operations has completed these evaluations and identified a number of discrepancies associated with drawings, valve and power availability checklists, or references on these checklists. Technical Support was provided this evaluation data to perform an independent review.

Corrective Steps That Will Be Taken to Avoid Further Violations

Technical Support will complete an independent review of Operations' evaluation. Discrepancies identified by Technical Support will be provided to Operations for resolution as appropriate and as input for revision of appropriate procedures for enhancement of handswitch configuration control. These are ongoing efforts to be completed before restart of the units from the current outages.

Date When Full Compliance Will be Achieved

TVA is in full compliance relative to the specific violations stated. Additional corrective actions are being taken to strengthen overall configuration control of plant components.

Example III.A.4

Admission or Denial of Alleged Violation

TVA admits the violation.

Reasons for the Violation

The violation involving the posttrip review (PTR) resulted from inadequate review and verification of information. During the initial PTR, a senior reactor operator (SRO) team member considered that multiple independent failures of hardware, which would be necessary to result in the VCT outlet valves closure, to be incredible. The MCR operators stated during interviews that no action was taken that would have resulted in pump suction isolation. Therefore, the SRO assumed that VCT level dropped below the isolation setpoint; the SRO did not verify actual level.

Three contributing factors affected the PTR team performance. Assembly of the predesignated PTR team members was hampered by the timing of the event (New Year's Eve). Actions were not taken to augment the PTR team members to accomodate the magnitude of the event (partial loss of offsite power and dual-unit trip). PTR team effectiveness was diluted by requiring the PTR team members to perform collateral duties during the PTR process.

Corrective Steps That Have Been Taken and the Results Achieved

A detailed in-depth incident investigation followed the PTR to ensure that issues were appropriately addressed. This investigation included review of the initial PTR, testing, and evaluation of anomalous equipment conditions. It was during this review that TVA identified the oversights associated with the PTR. As a result, management directed the unit to be taken back to Mode 3 (hot shutdown) to conduct further testing.

The event PTR was critiqued and lessons learned were reviewed by the PTR team personnel. Management has emphasized the importance of shielding PTR team members from collateral duties. Management expectations have been communicated with regard to review and disposition of anomalies identified in the PTR. The PTR process has been improved by requiring an event critique with the involved personnel and PTR team before review by the Plant Operations Review Committee and by requiring a completed event and causal factor chart for unit restart.

Corrective Steps That Will be Taken to Avoid Further Violations

The PTR procedures will be revised to incorporate the improvements described above.

Staffing of the PTR team will be assessed following dual-unit or complex transients and augmented as determined appropriate.

Date When Full Compliance Will be Achieved

TVA is in full compliance.

Example III.B

Admission or Denial of the Alleged Violation

TVA admits the violation.

Reasons for the Violation

Failure to properly identify and resolve the handswitch position deficiency was caused by personnel inattention to detail. The involved personnel did not recognize that a deficiency existed with the Operations procedure for normal handswitch positioning during their resolution of an unrelated test deficiency identified during the Cycle 5 refueling outage. During the review of the associated diesel generator (D/G) testing, it was determined that the TBBPs for three of the four D/Gs restarted as required. The SI performance package for the remaining 2A-A D/G contained a deficiency indicating that the associated TBBP failed to sequence onto the board during the reload sequence. The deficiency description stated that the TBBP handswitch was in the A-P Auto position. A work document was initiated to perform troubleshooting

activities and identified an unrelated problem that could not have, by itself, prevented the TBBP from starting. The work document stated that probable failure was either the result of Operations returning the handswitch to the "normal" A-Auto position before the test or failure to pull the handswitch all the way out to its full A-P Auto position.

Neither the engineer performing the work nor the SOS signing for closure of the deficiency recognized the incorrect "normal" A-Auto position i.e., they should have recognized the A-Auto position would not allow performance of its intended function of auto-starting following a backout or SI signal. The D/G test deficiency disposition had provided an opportunity to discover the improper switch alignment incorrectly required by the normal operating instructions.

Corrective Steps That Have Been Taken and the Results Achieved

The procedure controlling TBBP handswitch position was revised to reflect the design-required configuration. The individuals involved with disposition of the test deficiency have been counseled concerning their failure to recognize that the handswitch for the TBBP was out of its correct position to perform its intended function. This discussion emphasized requisite standards of personnel performance, which include a questioning attitude in conduct of all activities.

Corrective Steps That Will be Taken to Avoid Further Violations

Broad initiatives are underway that are intended to further strengthen overall performance of the SQN workforce. These efforts include line management reinforcement of expectations; process enhancements in such areas as verification, configuration control and procedure usage; employee "stand downs" where shift activities are curtailed for conduct of site and section performance discussions; improvements in personnel performance assessments; follow-through on accountability, utilizing consistent disciplinary action where warranted; and ongoing management evaluations of site personnel to identify weak areas that may warrant change/development.

Date When Full Compliance Will be Achieved

TVA is in full compliance with regard to the specific violation noted. As indicated above, broad long-term efforts are ongoing to effect overall involvements in site performance.

ENCLOSURE 2

RESPONSE TO NRC REQUEST
STEWART D. EBNETER'S LETTER TO MARK O. MEDFORD
DATED MARCH 23, 1993

"In particular, you should address any actions you plan to take to assure that: (1) problems identified by QA receive the appropriate level of management attention and are resolved in a timely manner, (2) there is adequate staff available to safely operate the facility, notwithstanding the minimum level specified in the SNP Technical Specifications, and (3) operating crew training takes into account actual plant staffing practices."

Response to Issue No. 1

Management expectations are that the Site Quality Manager identify problems to the appropriate level of management. The Site Vice President is responsible for ensuring that once problems are identified by the Site Quality organization, actions are taken commensurate with the specific problem. Past examples have occurred where specific managers failed to take the appropriate actions associated with the problems identified by the Site Quality organization. Management changes have been made to ensure that this inattention to QA findings will not exist in the future. Management has further stressed the importance of utilizing the tools that the Site Quality organization provides to ensure that site processes are performing up to management expectations.

Response to Issue No. 2

TVA review concluded that previous Operations staffing levels have been sufficient to safely conduct plant operations and were consistent with both technical specification requirements and industry practices. Past performance by the operating crews during plant transient events has been noted as a strength. However, in consideration of noted overall Operations performance weaknesses and the need to provide additional margin during the ongoing improvement efforts, the staffing policy has been changed. On January 15, 1993, the Operations Superintendent formally specified a revised on-shift staffing policy. Specifically, a minimum staffing level of one SOS/senior reactor operator (SRO), four ASOSs, four UO/reactor operators, and nine AUOs was established. This policy will be periodically reviewed and revised as appropriate.

Response to Issue No. 3

Operator training will be provided on the simulator with varying shift complements. As a minimum, this training will consist of at least one simulator training exercise during each two-year Licensed Operator Requalification Training cycle with an operating crew at the minimum staffing level allowed by TSs (one UO and one SRO). On the broader perspective, training needs are addressed in meetings of the curriculum review committee. In this forum, management and training staff identify weaknesses, methods of improvement, and policy changes.

ENCLOSURE 3

REPLY TO NOTICE OF VIOLATION
NRC INSPECTION REPORT NOS. 50-327, 328/92-36, 92-38, AND 93-02
STEWART D. EBNETER'S LETTER TO MARK O. MEDFORD
DATED MARCH 23, 1993

Commitments

1. A review of the components in plant systems required to be controlled by the plant configuration control process was performed. This review identified a number of components (such as handswitches) that were not being controlled by the configuration control procedure. Plant procedures will be revised before restart of the respective unit from the current outages to incorporate the results of this review.

2. A full verification of the configuration of plant components within the configuration control process is being performed and will be completed before restart of the respective unit from the current outages.

3. SQN procedures will be evaluated to determine the appropriate method of specifying component positioning, especially where different procedures align the same component. This will be completed before restart of the respective unit from the current outages.

4. Training will be conducted for licensed operators by August 6, 1993, on the simulator with varying shift complements under transient conditions.

5. Technical Support will complete an independent review of Operations' MCR handswitch position evaluation to identify technical discrepancies. These are ongoing efforts to be completed before restart of the units from the current outages.

6. The PTR process will be enhanced by revising the appropriate procedure to require an event critique with the involved personnel and PTR team before review by the Plant Operations Review Committee and to require a completed event and causal factor chart for unit restart by June 4, 1993.