

TENNESSEE VALLEY AUTHORITY

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APR 03 1989

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

Gentlemen:

In the Matter of )  
Tennessee Valley Authority )

) Docket Nos. 50-327, 50-328  
) 50-390, 50-391  
) 50-259, 50-260  
) 50-296, 50-438  
) 50-439

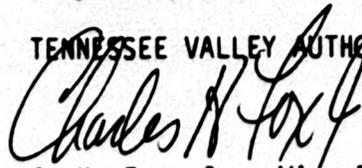
EMPLOYEE CONCERNS TASK GROUP

The attached enclosure transmits the Annual Report of Employee Concerns Special Program Corrective Actions Implementation, February 1, 1986 - September 30, 1988. This report has undergone a final review by the Employee Concerns Special Program management and it has been concurred with by the Vice Presidents of Nuclear Construction, Nuclear Power Production, Nuclear Business Operations and Nuclear Engineering. Our Senior Management Review Group has approved the report. With this letter and attached report, TVA is complying with the commitment to you as identified in a letter to S. C. Black dated July 6, 1988.

If you have any questions, please telephone M. J. Ray at (615) 751-8438.

Very truly yours,

TENNESSEE VALLEY AUTHORITY



C. H. Fox, Jr., Vice President and  
Nuclear Technical Director

Enclosure  
cc: See page 2

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U. S. Nuclear Regulatory Commission

**APR 03 1989**

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**ENCLOSURE**

**ANNUAL REPORT OF  
EMPLOYEE CONCERNS SPECIAL PROGRAM  
CORRECTIVE ACTIONS IMPLEMENTATION  
FEBRUARY 1, 1986 - SEPTEMBER 30, 1988**

**TVA  
NUCLEAR POWER**

**ANNUAL REPORT OF  
EMPLOYEE CONCERNS SPECIAL PROGRAM  
CORRECTIVE ACTIONS IMPLEMENTATION**

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**ANNUAL REPORT OF  
EMPLOYEE CONCERNS SPECIAL PROGRAM  
CORRECTIVE ACTIONS IMPLEMENTATION**

**EXECUTIVE SUMMARY**

This report is the first to be submitted by the Tennessee Valley Authority (TVA) to the Nuclear Regulatory Commission (NRC) as a result of a commitment made by TVA to the NRC in July, 1988. TVA committed to submitting to the NRC an annual report of all approved changes to Employee Concerns Special Program (ECSP) Corrective Action Plans (CAPs) implemented during the reporting period. In addition TVA committed to submitting to NRC for review, prior to implementation, those changes to CAPs that significantly deviate from the original intent of the CAPs.

This report provides information pertaining to the implementation and verification of actions required to resolve employee concerns evaluated under the ECSP. The concerns included in the ECSP's scope were collected or otherwise identified before February 1, 1986, and generally dealt with TVA's nuclear activities between 1980 and 1985.

The report presents a summary of the status of CAPs resulting from the ECSP that have been implemented and verified complete through September 30, 1988. It also discusses any changes made to the original CAP commitments, provides technical justifications for the changes, and where necessary documents the NRC prior approval of those changes that were considered to be significant.

As of September 30, 1988, 608 CAPs resulting from the ECSP had been completely implemented by the line organization and had been verified by the ECSP as closed. In addition, 45 CAPs had been partially implemented and verified complete, primarily to support restart of Sequoyah Nuclear Plant units 1 and 2. In these partially closed CAPs, a minimum of those steps potentially impacting plant restart were implemented and verified; the remaining steps are to be completed post-restart. There is a total of 938 CAPS that remain open.

Overall, of the 608 CAPs completely closed and 45 CAPs partially closed by the ECSP through September 30, 1988, there were 36 CAPs where implemented actions deviated from the original plan. One of the 36 CAPs, which had been partially closed to support restart of Sequoyah, was considered to be a significant deviation from the original commitment. NRC approval of this CAP deviation had been obtained prior to implementation of those steps impacting Sequoyah restart.

In general, the ECSP gave priority during this reporting period to the verification and closeout of actions impacting restart of (1) Sequoyah unit 2, and (2) Sequoyah unit 1. As of September 30, 1988, all actions resulting from ECSP evaluations that had impacted restart of Sequoyah's two units had been completed and verified as closed. With the restart of Sequoyah's second unit, the ECSP began to focus its attention on the verification and closeout of

## **EXECUTIVE SUMMARY**

(continued)

actions impacting the restart of Browns Ferry unit 2. In the meantime, post-restart actions at Sequoyah, start-up actions at Watts Bar Nuclear Plant, and nonplant-specific actions affecting the overall TVA nuclear organization are continuing to be implemented, verified, and documented by the line organizations for closure by the ECSP. Actions not related to the preventive maintenance/preservation of Bellefonte Nuclear Plant have been placed in inactive status as part of the overall cost-cutting and deferral measures for that plant.

Based on the CAP implementation, verification, and closeout activities conducted through September 30, 1988, it can be concluded that the completion of CAPs is ensuring correction of problems identified by the ECSP and is playing an important part in TVA's overall effort to restore its nuclear program to normal operations. TVA intends to continue implementing, verifying, and closing out identified actions resulting from ECSP evaluations in order to fulfill its commitments for the ECSP to its employees and the NRC and to realize the maximum benefit from the program.

## 1.0 INTRODUCTION

This report provides information pertaining to the implementation and verification of actions required to resolve employee concerns evaluated under the Employee Concerns Special Program (ECSP) of the Tennessee Valley Authority (TVA). The concerns included in the ECSP's scope were collected or otherwise identified before February 1, 1986, and generally dealt with TVA's nuclear activities between 1980 and 1985.

The report presents a summary of the status of Corrective Action Plans (CAPs) resulting from the ECSP that have been implemented and verified complete through September 30, 1988. It also discusses any changes made to the original CAP commitments, provides technical justifications for the changes, and where necessary documents the NRC prior approval of those changes that were considered to be significant.

This report is the first to be submitted to the NRC as a result of a commitment made by TVA to the NRC in July, 1988. A synopsis of the events leading to this commitment is provided below.

In February 1986 TVA established the ECSP to evaluate approximately 6000 employee concerns that had originated primarily at Watts Bar Nuclear Plant. The major findings, actions, and conclusions resulting from the nearly two years of ECSP evaluations were documented in a series of reports.

On March 11, 1988 the NRC forwarded to TVA its preliminary Safety Evaluations on the ECSP reports relating to Sequoyah Nuclear Plant. One of these Safety Evaluations dealt with engineering issues of a programmatic nature, primarily organizational and/or procedural problems in the engineering design process. In this particular Safety Evaluation, the NRC made the following statement: "Any additional program changes should be submitted for staff review and should not be implemented prior to review and approval by the staff."

In a letter dated July 6, 1988 from Mr. R. L. Gridley, TVA's Director of Nuclear Licensing and Regulatory Affairs, TVA provided the NRC with comments on the preliminary Sequoyah Safety Evaluations. In response to the statement quoted above, TVA committed to submitting to NRC for review, prior to implementation, any change to a CAP commitment that significantly deviates from the original intent of the CAP. For those CAP changes not considered significant, TVA stated its intention to implement such changes without prior NRC approval and to notify NRC subsequently in an annual report of all approved changes to CAPs implemented during the reporting period.

TVA developed a set of criteria for judging the significance of a change to a CAP. Changes to CAPs were divided into three levels of importance defined as follows:

- Level I deviation (significant deviation) - a proposed change to a CAP whose implementation would 1) require a change to existing technical specifications, or 2) potentially involve the reduction of any plant safety margins.
- Level II deviation - a change to a CAP that does not require NRC review prior to implementation of the change but that still requires adequate technical justification to support its implementation. (Such changes would include those that 1) affect multiple plants, 2) affect a programmatic area of weakness, 3) involve organizational changes that directly affect implementation of the program, or 4) delay completion of the CAP by more than one year.)
- Level III deviation - a change to a CAP that does not require either NRC review prior to implementation of the change or technical justification to support its implementation. (Such changes typically would be administrative in nature and would not affect any technical aspects of the commitments previously made - e.g., a procedure was revised different from that which had been originally identified for revision.)

Section 2 of this report presents a status of the implementation and closeout of the CAPs resulting from the ECSP for each TVA nuclear site through September 30, 1988. It also summarizes the approved CAP deviations implemented at each site through September 30, 1988. Section 3 presents some concluding remarks regarding the overall status of the ECSP CAP implementation, verification, and closeout activity.

## 2.0 CAP IMPLEMENTATION STATUS AND DEVIATION SUMMARY

As of September 30, 1988, 608 CAPs resulting from the ECSP had been completely implemented by the line organization and had been verified by the ECSP as closed. In addition, 45 CAPs had been partially implemented and verified, primarily to support restart of Sequoyah Nuclear Plant units 1 and 2. In these partially closed CAPs, a minimum of those steps impacting plant restart were implemented and verified; the remaining steps are to be completed post-restart.

Overall, of the 608 CAPs completely closed and 45 CAPs partially closed by the ECSP through September 30, 1988, there were 36 CAPs where implemented actions deviated from the original commitments. One of the 36 CAPs, which had been partially closed to support restart of Sequoyah, was considered to be a Level I deviation from the original commitment. NRC approval of this CAP deviation had been obtained prior to implementation of those steps impacting Sequoyah restart. Of the remaining 35 deviations, there were seven Level II deviations and 28 Level III deviations occurring at the various sites. Data regarding the 36 CAP deviations and overall CAP closures are provided by site in Appendix A.

In the remainder of this section, a summary is provided by site of the CAP implementation status and of the Level I, II, and III CAP deviations implemented through September 30, 1988.

### 2.1 SEQUOYAH NUCLEAR PLANT

As of September 30, 1988, actions resulting from ECSP evaluations that had impacted restart of Sequoyah's two units were completed and verified as closed. There were 178 CAPs completely closed, 35 CAPs partially closed to support restart of units 1 and 2, and 121 CAPs remaining open.

#### 2.1.1 Level I Deviation

##### 80101-SQN-01, Procurement Practices Related to Use of Spare and Replacement Items

Sequoyah Nuclear Plant's procurement program had not ensured that safety-related materials, components, devices, equipment, and systems comply with applicable regulatory, design bases, and qualification requirements. Actions for these findings were already underway through the Sequoyah Replacement Items Program (RIP), the primary objectives of which were as follows: 1) to verify that equipment previously qualified for seismic and environmental requirements had not been degraded through the use of spare and replacement items; and 2) to establish programs and practices that will ensure that equipment previously qualified for seismic and environmental requirements will not be degraded in the future through the use of spare and replacement parts.

In the original RIP Plan, which formed the basis for the CAP commitment, Sequoyah had committed to reviewing and evaluating all installed replacement items within the scope of 10 CFR 50.49 and seismically sensitive replacement items within the boundary of the Sequoyah unit 2 pre-restart phase of the Design Baseline Verification Program (DBVP). All other unit 2 installed safety-related replacement items were to be reviewed and evaluated post-restart. Similar reviews and evaluations were to be performed on unit 1 with the same pre-restart and post-restart scheduling commitments.

The pre-restart reviews and evaluations were performed for unit 2 as required. Based on these reviews, TVA concluded that post maintenance practices have had an insignificant impact on the ability of Sequoyah's plant equipment to perform its intended safety function. Therefore, TVA proposed a change in its RIP Plan for unit 2 post-restart items and unit 1 pre-restart and post-restart items.

The revised RIP Plan allowed for the substitution of a warehouse inventory review and evaluation of safety-related replacement items for adequacy of qualification instead of performing the review and evaluations on actual installed replacement items covered within the original scope of unit 2 post-restart items and unit 1 pre-restart and post-restart items. The plan also provided for review of deficiencies identified during the unit 2 pre-restart efforts and the warehouse inventory efforts relative to the need for corrective action on replacement items installed in the plant.

The proposed change to the RIP Plan and technical justification for the change were sent to NRC in a letter dated February 10, 1988 from R. L. Gridley, Director of Nuclear Licensing and Regulatory Affairs. In a letter to Mr. S. A. White dated May 25, 1988, the NRC approved the revised RIP Plan and requested a schedule for the implementation of the plan. On August 10, 1988 in a letter from Mr. R. L. Gridley, TVA reported to NRC that many of the elements of the revised plan had been implemented already and that several were complete. TVA stated in this letter that items related to 10 CFR 50.49 and seismically sensitive items within the restart phase of the DBVP had been sufficiently addressed for restart of unit 1.

After the NRC's concurrence with the revised RIP Plan, Sequoyah revised CAP 80101-SQN-01 to reflect the new commitments. The actions to support restart of unit 1 were verified as complete by the ECSP, and the CAP was partially closed for unit 1 restart items. Post-restart activities are in progress and include 1) reviews of seismic-sensitive items, 2) reviews of the suitability of quality assurance level II items in the warehouse inventory for use in safety-related applications, and 3) development of Q-list and preengineered specifications.

## 2.1.2 Level II Deviations

### 22110-SQN-01, Discrepancy between Analysis and As-Constructed Status For Pipe Support

A discrepancy had been identified for a specific pipe support in the Upper Head Injection system in units 1 and 2. For each unit, the support in question had been analyzed as a rigid restraint but had actually been installed as a dynamic restraint. Sequoyah committed to removing the dynamic restraint in each unit and to replacing them with rigid supports. This action was implemented for unit 2 prior to restart in accordance with the commitment.

For unit 1, a decision was made to leave the installed support as a dynamic restraint and to revise the appropriate calculations to be in conformance with the as-built condition. This decision was based on an evaluation of manpower and budget constraints and the needs of ongoing programs. The NRC was informed of the decision by telephone and gave its concurrence with the alternate approach. The applicable pipe support calculation was revised, approved, and issued prior to unit 1 restart.

### 24102-SQN-01, -02, Rework of Specific Terminal Connectors

A problem concerning AMP Diamond Grip Insulated (PIDG) terminal connectors was identified at Sequoyah. The PIDG connectors had been used on solid wire and were intended to be used on stranded wire. Rework (replacement or soldering) of these terminal lugs had been partially completed at Sequoyah, and a commitment was made in the CAP to complete the rework.

Initially, Sequoyah indicated that the PIDG connectors for all Class 1E arc suppressors would need to be reworked. This issue was addressed at Sequoyah by Significant Condition Report (SCR) SQN EEB 86201, which was referenced in the CAP. The engineering evaluation for the SCR determined that, contrary to the CAP commitment, rework of PIDG connectors on solenoid valve arc suppressors would only be required when the solenoid valve current exceeds the inductive rating of the circuit contact and failure of that contact would create a safety concern. On non-arc suppressor circuits, the rework included all safety-related circuits except where the engineering analyses showed that failure would not create a safety concern.

### 30107-SQN-01, Outstanding Deficiencies Related to Containment Protective Coatings

Deficiencies related to containment protective coatings had been identified by various organizations, including the site's Quality Assurance staff, the Nuclear Safety Review Staff, and the ECSP. Actions taken by Sequoyah included (1) generation of a new site standard (SQM-67) establishing a protective coatings program at Sequoyah, (2) revision of Maintenance Instruction 10.14 to clarify film thickness and adhesion testing requirements, (3) revision of unit 1 and unit 2 uncontrolled coatings logs to identify the actual amount of uncontrolled coatings in the containments as being below the maximum allowable, and (4) repair or rework of various coatings to bring each unit's containment protective coating within the limits for uncontrolled coatings as established by the Division of Nuclear Engineering (DNE).

During implementation of corrective action for unit 1, it was determined, based on DNE calculation SQN-SQS4-0154, that some physical repair work was not required prior to restart as had been committed to in the CAP. The calculation showed the zones to be in the unit 1 steam generator and pressurizer elevated slabs (elevation 778) and the west wall of the refuel canal, all of which had been identified for coatings repair prior to restart. These areas were found to be outside of the zone where failed coatings during a Loss of Coolant Accident could potentially create debris clogging the containment sump and thus affect core cooling capability. Therefore, the coatings repair work for these areas was deferred.

### 40512-SQN-01, Correctness of Material Used For Hanger Base Plate

There was a question as to whether or not the correct material had been used for fabrication of a specific hanger base plate in Sequoyah unit 1. Documentation of the base plate's original installation referenced the heat number of an ASTM A-36 heat of material rather than the required A-516 material. Sequoyah committed to performing a metallurgical verification to determine the type of material installed for the plate and to taking corrective action if the material was found to be incorrect.

During preparation of the plate's surface for microstructural evaluation, the heat number for the proper type of material (A-516) was found stenciled in the plate. This gave an initial indication that the proper material had been installed.

Further evaluation showed that the chemical and mechanical requirements for A-36 and A-516 heats differed very little. Therefore, it was determined that testing for these properties would not provide a reliable distinction between one type of material and the other. Because A-516 specifications call for a finer grain size than the A-36 specifications, the base plate was evaluated to determine if the grain size conformed to the requirements of the A-516 material. The finer grain size for A-516 material results in better impact qualities, which would have been the designer's intent in specifying A-516 material instead of A-36.

To determine the grain size of the material, Sequoyah elected to perform an in-situ metallography of the base plate material. It was found that the grain size met A-516 specifications. With the second piece of evidence that the proper type of material had been used, Sequoyah chose not to do further metallurgical verification of the material type as stated in its CAP. It was determined that there was sufficient evidence that the proper material had been installed.

### 2.1.3 Level III Deviations

Ten of the CAP deviations for Sequoyah were judged to be Level III. These deviations were administrative in nature and did not affect any technical aspects of the commitments previously made. No additional technical justification was required for these deviations.

#### 10703-SQN-02, Procedure Revision Regarding Surveillance and Controls For Damaged Bending Tools

Toolroom, Maintenance, and Testing Procedure TOL-2 was revised to include requirements for periodic visual inspections of bending tools and handling of damaged bending tools. In the CAP Sequoyah originally had committed to incorporating these requirements in a Mechanical Maintenance Procedure.

#### 17301-SQN-01,-02, Evaluation of Instrument Sensing Lines

The original CAPs stated that an engineering analysis would be sufficient to resolve a question regarding the ability of various instrument sensing lines to vent entrapped air and gasses. In actuality, Sequoyah performed a more in-depth evaluation including walkdowns of instrument lines and some field modifications.

#### 20504-SQN-03, Verification and Documentation of Cable Routing Software

A commitment was made to complete verification and documentation of the Sequoyah Cable Routing System (CRS) software by October 1, 1987 under Nonconforming Condition Report (NCR) SQN ECB 8501. As a result of an Engineering Assurance Audit, this NCR was closed and superseded by two Condition Adverse to Quality Reports (CAQRs). Therefore, verification and documentation of the CRS software was completed by October 15, 1987, under one of these two CAQRs rather than under the original NCR.

#### 21301-SQN-01,-02, Corrections to Electrical Calculations

In the original CAPs, Sequoyah had committed to several actions to correct deficiencies in electrical calculations. Among these actions was a commitment to revise SCR SQN EEB 8527 to include a reference to the two CAPs. In actuality the SCR was closed before it was revised to reference the CAPs, and revising the closed SCR would have served no purpose. All other restart-related actions in the CAPs were implemented and were found acceptable by NRC.

### 24300-SQN-02, Revision of a Diesel Generator Calculation

A revision was to be made to SCR SQN EEB 8629 to reference this CAP, and this was not done. However, the corrective actions in the SCR that were applicable to the CAP were verified as complete. These actions involved revising a diesel generator calculation, which had been performed assuming unit 2 in operation and unit 1 in cold shutdown, to reflect two-unit operations.

### 30713-SQN-01, Procedure Revisions Regarding As-Constructed Drawings

Sequoyah had committed to incorporating into two engineering procedures a list of drawings that should be maintained in an as-constructed status. These two procedures were SQEP-AI-11, "Handling of Engineering Change Notices," and SQEP-13, "Procedure for Transitional Design Change Control." Subsequently, several engineering procedures were revised to define a new drawing system that required and ensured clear classification of drawings. These new requirements were determined to be adequate to meet the intent of the original CAP, and the list of drawings to be maintained in as-constructed status was not incorporated in the two engineering procedures originally identified.

### 30901-SQN-01, Document Revision Regarding Use of Teflon Tape

A commitment was made to revise Standard Practice SQA 160 to clarify limitations on the use of Teflon Tape in the plant. In attempting to implement the action, Sequoyah determined that SQA-160 adequately discussed requirements for Teflon Tape and did not require revision. Construction Specification G-29 was revised to be consistent with SQA-160 on the limited use of Teflon Tape.

### 40703-SQN-04, Procedure Revisions Regarding Material Control

Sequoyah committed to revising various specific plant implementing procedures to provide for unquestioned material control and traceability. As the action was implemented, certain new procedures related to material control were developed. Also, some specific procedures previously identified for revision were deleted because they were determined to be no longer functionally necessary to ensure adequate material control.

## **2.2 BROWNS FERRY NUCLEAR PLANT**

As of September 30, 1988, there were 111 CAPs completely closed, one CAP partially closed, and 246 CAPs remaining open at Browns Ferry.

### **2.2.1 Level II Deviation**

#### 91200-BFN-06, Employee Asbestos Exposure

Weaknesses had been found in the Employee Asbestos Exposure data base that made it difficult to accurately assess hazards to craft personnel other than asbestos workers. Browns Ferry committed to several actions, including a requirement for each unit maintenance supervisor to initiate a procedure to notify the Industrial Safety Section at least once every six months to fulfill the monitoring requirements of Browns Ferry's Asbestos Standard Practice BF 14.45.

Subsequent to this commitment, Browns Ferry implemented a process for issuing and tracking asbestos work permits for any asbestos work on site. Because all asbestos work is documented and tracked under this process, all monitoring requirements are able to be identified and fulfilled in a systematic manner. It was determined that there was no longer a need for a procedure to be initiated by the unit maintenance supervisors requiring notification of the Industrial Safety Section for asbestos monitoring.

### 2.2.2 Level III Deviations

#### 20601-BFN-03, Procedure Revisions Regarding Configuration Drawing Control

Browns Ferry originally committed to revising procedures BFEP PI 86-03, "Preparation and Control of ECN Modification Package," and BFEP PI 87-41, "Handling Modifications Using Design Change Notices," to state the timeframe required to update drawings as a result of plant changes. This change actually was incorporated into BFEP PI 87-48, "Configuration Drawing Control," which provides guidelines for making drawing changes resulting from workplans generated by BFEP PI 86-03 and BFEP PI 87-41.

#### SWEC-BFN-45-03, Recommendations From General Electric Systems Reviews

A commitment was made to have the Browns Ferry Restart Test Subcommittee review a list of recommendations compiled from various General Electric reports on certain Browns Ferry systems. In addition, Browns Ferry committed to having the Plant Operations Review Committee (PORC) review all recommendations not adopted. In implementing the CAP, Browns Ferry determined that review of the recommendations by the Restart Test Subcommittee was not necessary as long as all recommendations were reviewed by the PORC. Therefore, the recommendations were reviewed by Browns Ferry engineers against the restart criteria contained in the Nuclear Performance Plan, and all recommendations received a review by the PORC.

### 2.3 WATTS BAR NUCLEAR PLANT

For Watts Bar there were 211 CAPs completely closed, 1 CAP partially closed, and 320 CAPs remaining open as of September 30, 1988.

#### 2.3.1 Level II Deviations

##### 31107-WBN-01, Potential Contamination of Breathing Air Manifolds

It was noted that the possibility existed for personnel to use contaminated hoses for connecting MSA Breathing Air Manifolds to Service Air. Because Watts Bar is a preoperational plant, it was recognized that there would be no hazard prior to initial criticality. Nevertheless, the Watts Bar Radiological Control section committed to performing several actions, including 1) using air lines identified with a special sleeving material and having a Chicago-type fitting on one end (for connection to Service Air) and a different type fitting on the other end (for connection to the MSA Breathing Air Manifold), 2) requiring that a hold order be placed on those Service Air valves in use for supplying air to MSA Breathing Air Manifolds to prevent an inadvertent disconnection, and 3) revision of a Health Physics instruction and a Radiological Control instruction to reflect the controls being put on these special designated air lines.

During implementation of the CAP, Watts Bar deviated from its original commitments in three minor ways. First, the Health Physics instruction originally identified for revision was found to be outside the scope of the CAP, and another instruction was revised instead. Second, at the suggestion of Operations personnel, caution order tags will be used on Service Air valves rather than hold order tags to preclude disconnection of the air lines. Third, after checking with Radiological Control personnel at Sequoyah and Browns Ferry Nuclear Plants, Watts Bar chose not to require that the air lines have a unique fitting on the end being connected to the MSA Breathing Air Manifold. In order to standardize practices between the plants, Watts Bar committed to exercising the following precautions to prevent the use of contaminated hoses for connecting MSA Breathing Air Manifold to Service Air:

1. Radiological Control personnel will control all hoses and manifolds used for breathing air in contaminated areas.
2. Radiological Control personnel will be responsible for installation of air hoses and verification of hookups, including daily inspections.
3. Hoses to be used will be clearly marked, "BREATHING AIR ONLY."
4. A locking device will be installed on the hookups to discourage unauthorized removal or alteration.
5. The Shift Engineer will place a caution order tag on the line in use.

In view of the new commitments and other actions taken in accordance with the CAP, the minor deviations from the CAP were considered acceptable.

### 2.3.2 Level III Deviations

#### 10500-WBN-01, Revision of a Specific Drawing

A commitment was made to revise a drawing per Engineering Change Notice 6798 to upgrade the drainage and protective coating requirements on a specific set of missile shields. The revision was actually accomplished through a Design Change Notice instead of through Engineering Change Notice 6798.

#### 30701-WBN-01, Procedure Revision Regarding Instruction Change Processing

Watts Bar committed to changing Administrative Instruction (AI) 3.1 to require that the originator of an Instruction Change (IC) obtain an IC number from the Shift Engineer and provide the number to the PORC secretary within one working day of IC approval by the PORC. The intent of this change was to ensure that all IC serial numbers are included in PORC meeting minutes. The actual revision to AI 3.1 complied with the CAP commitment with the minor exception that it did not specify that the IC number be obtained from the Shift Engineer.

### 30905-WBN-01,-03, Procedure Revision Regarding Technical Staff and Manager Training Requirements

The CAP stated that Watts Bar AI-10.1, "Plant Training Program" would be revised to implement the requirements of Program Manual Procedure 0202.17, "Technical Staff and Manager Training for Nuclear Plant Site Personnel." Subsequently, the Watts Bar Training Branch determined that it was appropriate to create a new Site Director's procedure (AI-10.8, "Technical Staff and Manager Training") to implement the requirements of Program Manual Procedure 0202.17 instead of revising AI-10.1.

### 30905-WBN-02, Implementation of Technical Staff and Managers Orientation Training

The Division of Nuclear Training committed to conducting "Technical Staff and Managers Orientation Training" per Program Manual Procedure 0202.17 four times during 1987 and submitted a specific schedule for the course. Each course offering was comprised of four one-week long segments. Due to scheduling conflicts, two scheduled classes consisting of four days of instruction had to be canceled, but the trainees were enrolled in other classes.

### 90800-WBN-5, Procedure Revision Regarding Emergency Medical Responses

Watts Bar committed to revising Procedure WB 9.34, "Emergency Medical Response Team," to include requirements for documentation of emergency medical responses. This procedure was canceled subsequently, and IP 10, "Medical Emergency Procedures," was revised to incorporate the requirements of WB 9.34 as well as the requirements of this CAP for documentation of emergency medical responses.

## 2.4 BELLEFONTE NUCLEAR PLANT

As of September 30, 1988 there were 49 CAPs completely closed and 141 CAPs remaining open at Bellefonte. There were two Level III CAP deviations implemented at the plant.

### 17101-BLN-03, Document Revision Regarding Limitorque Valve Maintenance and Storage Requirements

A commitment was made to revise Standard Practice BLA 7.8, "Responsibilities for Transferred Equipment," to incorporate guidelines for system engineers to use in the assessment of Limitorque valve preventive maintenance and storage requirements. The exact wording of the change as stated in the CAP was not used, but the revision was considered acceptable as written. In addition to revising BLA 7.8, Bellefonte also incorporated the change in SDP-10.3.1, "Preventive Maintenance."

### 80106-BLN-03, Document Revision Regarding Inspection Rejection Notices

Bellefonte committed to revising Quality Control Procedure BNP-QCP-10.43, "Inspection Rejection Notice," to make the IRN a Quality Assurance record. Instead of revising the procedure, a new procedure BNP-QCP-10.58 was written to provide instruction for processing all IRNs.

## 1 2.5 CORPORATE (NONPLANT-SPECIFIC)

For corporate (nonplant-specific) commitments, there were 59 CAPs completely closed, 8 CAPs partially closed, and 110 CAPs remaining open as of September 30, 1988. There were eight Level III CAP deviations implemented for nonplant-specific commitments.

### 10000-NPS-02, Implementation of New Corrective Action Process

The initial training of applicable Nuclear Power personnel in the new corrective action process was conducted as committed to in Revision 2 of the TVA Nuclear Quality Assurance Manual (NQAM) and the CAP. However, the specified timeframe for the training (January 5, 1987 to March 30, 1987) was not met as the training sessions were conducted beyond the projected March 30, 1987 end date. This timeframe was deleted from Revision 3 of the NQAM.

### 10000-NPS-06, Document Revision Regarding Conditions Adverse to Quality

A commitment was made to revise part 1, section 2.16, paragraph 10.3 of the NQAM to clarify the requirements for personnel and organizations who review Conditions Adverse to Quality for potential generic applicability. In implementing this commitment, TVA actually revised paragraph 10.4 instead of 10.3.

### 30709-NPS-01, Document Revisions Regarding Experience Review Program

The Manager, Nuclear Experience Review committed to revising four specific site standard practices to reflect Experience Review Program requirements. Two of the four identified standard practices were subsequently superseded by other standard practices. The required changes were made in these superseding standard practices as well as in the other two standard practices originally identified in the CAP.

### 702-NPS-01, Dissemination of New Standard Work Procedures

TVA committed to incorporating newly developed standard work procedures into Program Manual Procedure 0905.05. "Disciplinary Action." The Division of Nuclear Personnel subsequently determined that this action would not be appropriate. Instead, the standard work practices and disciplinary guidelines were distributed to each division/site director for distribution to employees.

### 710-NPS-02,-03, Improved Management Performance at Watts Bar

The Watts Bar Division of Nuclear Construction (DNC) committed to improving its performance in management and mentioned that it was conducting biweekly meetings with employees to address specific quality-related issues. These meetings were described as being part of DNC's effort to achieve better visibility and emphasis on quality performance issues. Subsequently, these meetings were discontinued for three reasons. First, most of the relevant quality-related issues had already been addressed in the meetings. Second,

the Quality Improvement Group of the Site Quality Organization had begun conducting quality-related problem-solving meetings with appropriate construction personnel. Third, there had been a duplication of effort between Quality Assurance and Construction personnel in the trending and analysis of quality problems.

#### 718-NPS-02, Reduction In Force Procedures and Practices

The Division of Nuclear Personnel originally committed to issuing a Standard requiring the exchange of information between organizations laying off surplus employees and organizations who are hiring. The intent of this commitment was to avoid Reductions in Force of employees in one TVA organization while employees in the same classification were being hired by other TVA organizations. Later it was determined that TVA must comply with Federal Regulations issued by the Office of Personnel Management and negotiated contracts with the Tennessee Valley Trades and Labor Council regarding Reduction in Force. Compliance with these requirements sometimes leads to situations where one organization hires while another is reducing in force. Therefore, the committed action was not implemented.

#### 719-NPS-02, Documentation of Salary Policy Merit Awards

The Division of Nuclear Personnel committed to performing a survey of the adequacy of supporting documentation for salary policy merit awards. Later, the TVA Salary Policy Merit Pay Awards program was replaced by a system of within-grade progression based on time in grade and satisfactory service. Therefore, the commitment was no longer applicable.

### 3.0 CONCLUSION

In general, the ECSP gave priority during this reporting period to the verification and closeout of actions impacting restart of (1) Sequoyah unit 2, and (2) Sequoyah unit 1. As of September 30, 1988, actions resulting from ECSP evaluations that had impacted restart of Sequoyah's two units had been completed and verified as closed. With the restart of Sequoyah's second unit in November, 1988, the ECSP began to focus its attention on the verification closeout of actions impacting the restart of Browns Ferry unit 2. In the meantime, post-restart actions at Sequoyah, start-up actions at Watts Bar Nuclear Plant, and nonplant-specific actions affecting the overall TVA nuclear organization are continuing to be implemented, verified, and documented by the line organizations for closure by the ECSP. Actions not related to the preventive maintenance/preservation of Bellefonte Nuclear Plant have been placed in inactive status as part of the overall cost-cutting and deferral measures for that plant.

After two years of CAP development, implementation, verification, and closeout, approximately 40 percent of the CAPs at all sites have been closed as of September 30, 1988. As a result of this activity, only one CAP deviation has been considered significant by the TVA and NRC. NRC approval of this CAP change was obtained prior to implementation in accordance with TVA's commitment for significant CAP changes. TVA believes that these observations demonstrate that TVA is effectively implementing actions resulting from ECSP evaluations. TVA is intending to continue closely monitoring CAP implementation during the coming year, especially in view of recent organizational changes and new nuclear budget constraints.

CAPs that will continue to receive especially close monitoring by TVA are those that fall within the bounds of the general areas of weakness as identified in the ECSP's Executive Summary and Program Conclusions Report. The first of these four areas deals with management and employee job performance. The other three areas focus on implementation of various programs and/or processes--in particular, the program for reporting, resolving, and preventing recurrence of deficiencies; the design process; and work control systems.

Based on the CAP implementation, verification, and closeout activities conducted through September 30, 1988, it can be concluded that the completion of CAPs is ensuring correction of problems identified by the ECSP and is playing an important part in TVA's overall effort to restore its nuclear program to normal operations. TVA intends to continue implementing, verifying, and closing out identified actions resulting from ECSP evaluations in order to fulfill its commitment for the ECSP to its employees and the NRC and to realize the maximum benefit from the program.

APPENDIX A

CAP DEVIATION AND CLOSURE STATUS BY SITE

	SEQUOYAH		BROWNS FERRY		WATTS BAR		BELLEFONTE		CORPORATE		TOTALS
	Complete Closure	Partial Closure									
Level I Deviation	0	1	0	0	0	0	0	0	0	0	1
Level II Deviation	5	0	1	0	1	0	0	0	0	0	7
Level III Deviation	6	4	2	0	6	0	2	0	8	0	28
Deviation TOTALS	11	5	3	0	7	0	2	0	8	0	36
CAPs Closed Overall	178	35	111	1	211	1	49	0	59	8	608 complete 45 partial
CAPs Remaining Open	121	35	246	1	320	1	141	0	110	8	938 complete 45 partial

Total Closures = 608 Complete + 45 Partial

= 653 Closures

Percent Deviations = 36 Deviations/653 Closures

= 5.5%