



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381

AUG 16 1995

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

Gentlemen:

In the Matter of the Application of) Docket Nos. 50-390
Tennessee Valley Authority) 50-391

WATTS BAR NUCLEAR PLANT (WBN) - NRC INSPECTION REPORT 50-390/95-202
- REPLY TO DEFICIENCIES

The purpose of this letter is to provide a reply to the weaknesses and deficiencies identified in the subject inspection report. Although not required, this response is being provided to formally address issues identified by the inspection team.

It should be noted that some of the weaknesses and similar deficiencies had already been identified by Maintenance management and/or Phase II of the Maintenance Performance Evaluation Program performed by Nuclear Assurance just prior to this NRC inspection. Activities to address the weaknesses/deficiencies were underway or being developed prior to the NRC inspection. For example, work planning concerns, especially concerns with post-maintenance testing requirements, were identified during the Maintenance Performance Evaluation Program.

Enclosure 1 contains a reply to weaknesses identified in the subject inspection report. Enclosure 2 contains a reply to deficiencies identified in the subject inspection report. Enclosure 3 contains a list of commitments made in this letter.

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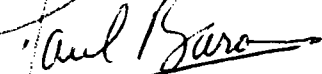
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If you have any questions, please contact P. L. Pace at
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Sincerely,



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Enclosures

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ENCLOSURE 1

NRC INSPECTION 50-390, 391/95-202
PERFORMANCE TEAM INSPECTION OF MAINTENANCE
REPLY TO WEAKNESSES

Inspection Report 50-390, 391/95-202 identified several weaknesses. In addition to the measures taken to address the identified weaknesses, as described below, and the results of the Nuclear Assurance Performance Evaluation Program, the Maintenance Department is utilizing the results of ongoing Nuclear Assurance (NA) oversight efforts, together with continuing maintenance management assessments, to effect maintenance improvements and measure the effectiveness of improvement plans. The NA efforts include: ongoing Quality Engineering (QE) sampling of work orders (WOs); Quality Assurance (QA) vertical slice reviews of selected WO completion packages; QA in-process work sampling; and special assessments on WO planning and implementation adequacy. Maintenance management has initiated periodic communication meetings with NA to discuss, evaluate, and resolve matters of mutual interest.

The identified weaknesses, along with TVA's reply, are addressed below:

WEAKNESS

The team noted weaknesses in WO preparation by maintenance planning. Some WOs did not specify the procedure steps that should be used and specified test acceptance criteria (in some instances incorrectly), without referring to approved documents that contained the acceptance criteria.

TVA REPLY

Maintenance management had previously identified weaknesses in planning and initiated a number of improvement initiatives:

A revision to the Planner's Guide was initiated to provide management expectations, guidelines, and supporting references to planners. These instructions are for additional guidance and do not supersede or replace plant procedures.

Enhancements to planner training were initiated. A job task analysis and personnel skills assessment have been completed. Specialized planner training has been initiated and is continuing.

As an interim action, component engineers now perform a technical review of safety-related WOs. This review includes ensuring appropriate vendor technical requirements are incorporated, appropriate plant instructions are utilized, appropriate level of reviews for work instructions are obtained, and appropriate acceptance criteria are incorporated. Component engineers will discontinue these reviews when the specialized planner training has been completed and management has confidence in the planning process.

WEAKNESS

The maintenance history and trending program and procedures were adequate, but the Maintenance Planning and Control [MPAC] database did not contain adequate information to be useful for trending purposes. TVA staff also needed training in the use of the database.

TVA REPLY

Personnel skill assessments were performed on planning personnel as part of the maintenance planning improvement initiatives. These assessments revealed that specialized training in the utilization of the MPAC database for history and planning purposes is required. Appropriate planning and other station personnel will be trained on the use of this database by September 15, 1995.

WEAKNESS

Although the maintenance and engineering support programs and their implementation were good, the team noted 11 deficiencies. These deficiencies are categorized as: (A) inadequate procedures, (B) not following approved procedures, (C) lack of thoroughness in the review of completed WOs, and (D) lack of design documents or engineering evaluations in support of maintenance work.

TVA REPLY

Each of the 11 identified deficiencies are addressed in Enclosure 2 to this submittal. In addition to the corrective actions identified therein, the following actions have been or will be taken.

- (A) The identified examples of inadequate procedures have been corrected. The examples are not considered to represent a condition requiring corrective actions beyond those identified in Enclosure 2 to this submittal.
- (B) "Lessons learned" summaries have been developed from the potential findings and areas of weakness identified during the subject inspection. These "lessons learned" re-emphasized, in part, verbatim compliance with procedures and were provided to appropriate Maintenance Department supervisory personnel.
- (C) The importance of work package quality continues to be emphasized to Maintenance personnel. Accountability for the closure, content, final review, and overall quality of maintenance work packages is focused on the work implementing supervisors. Reliance on separate section reviewers, not directly responsible for performing the work, has been decreased. (These reviews in the Mechanical and Electrical Maintenance groups have been discontinued. The Instrument Maintenance group reviews are scheduled to be discontinued when a sufficient number of work implementing supervisors are in place.) The elimination of these layers of review will enhance accountability.

It should be noted that the results of QE sampling review of completed work orders does not indicate a major problem in this area. The acceptance rate from this review consistently exceeds an Acceptable Quality Level of 98 percent. The discrepancies identified are usually administrative in nature.

(D).

When this concern was identified, Technical Support and Maintenance Engineering personnel were instructed, during an informal meeting, to obtain design output/approval prior to performing work activities affecting equipment important to safety when design output is not available. This use of judgement on the need for design output was discussed in more detail at a joint meeting held with Maintenance planners, Maintenance engineers, and Technical Support engineers on July 10, 1995. The following action plan is being pursued and is scheduled to be completed by September 11, 1995.

- Team Formed and Problem Defined - COMPLETE
- Analysis (Gather data from BFN, SQN, INPO, and other selected utilities.) - COMPLETE
- Develop a set of solutions for WBN.
- Implement revised procedures and train affected personnel. Monitor for compliance and results.

ENCLOSURE 2

NRC INSPECTION REPORT 50-390/95-202
PERFORMANCE TEAM INSPECTION OF MAINTENANCE
REPLY TO DEFICIENCIES

The subject NRC inspection report identified eleven deficiencies. Each deficiency is addressed individually below:

DEFICIENCY 50-390/95-202-01

WO 94-21953-00 was written to calibrate solid state speed-sensing relays for generator 2-GEN-082-0002B-B in accordance with Master Preventive Maintenance Instruction 2188V, Revision 2. The team reviewed the calibration test data and identified that many of the contacts for the speed switches did not meet the closure and reset frequency criteria specified in the instruction. TVA revised the acceptance criteria on October 24, 1994, after the test was completed on October 21, 1994. TVA did not prepare a design output document that accurately reflected the design requirements in support of the acceptance criteria as required by Site Standard Practice (SSP)-9.03, "Plant Modification and Design Change Control."

TVA'S REPLY TO DEFICIENCY 50-390/95-202-01

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by the lack of clear guidance as to when to request design output from Nuclear Engineering (NE). A contributing factor may have been the absence of a setpoint scaling document for the subject instruments.

Prior to performance of Preoperational Test Instruction (PTI)-262-01, "Integrated Safeguards Test," the Startup Test engineer used the associated Preventive Maintenance (PM) instruction to verify the Diesel Generator speed switch setpoints. The tolerance (\pm 50 Hertz) was given by the PM instruction. This tolerance could not be met. The cognizant Technical Support engineer was on duty at the time and provided a technically acceptable tolerance. The tolerance provided was not in the form of engineering design output. In fact, no engineering design output (tolerance) existed for these devices.

Corrective Steps Taken And Results Achieved

SSP-6.03, "Preventive Maintenance Program," has been revised to require that design output documentation be used when verifying design parameters for safety-related applications. If design output is not available, NE should be contacted to determine whether or not design output is required.

NE has obtained the Diesel Generator speed switch setpoint tolerance from the vendor and has revised the Vendor Technical Manual.

Corrective Steps Planned To Avoid Further Potential Findings

Other Diesel Generator System critical instrument setpoints have been reviewed. Setpoint scaling documents exist for these instruments.

Instrument setpoints for two selected chiller packages were reviewed for existence of the subject deficiency. No deficiencies were noted.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

DEFICIENCY 50-390/95-202-02

WO 95-10065-10 was written to calibrate device 59 N relay (neutral overvoltage relay) to the values specified by the relay setting sheet (RSS) No. 322195. The team noted that the completed calibration data did not meet the acceptance criteria of the relay setting sheet (RSS). Even though the relay is bypassed during an accident condition and hence not a safety concern, the team was concerned about the adequacy of TVA's review process for closeout of this WO. TVA did not properly evaluate and close out the WO in accordance with procedure SSP-6.02, "Maintenance Management System," Revision 15, to ensure that the tests specified in the WO met all the requirements.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-02

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by the lack of explicit guidance to Customer Group (CG) personnel for resolving RSS deficiencies. Disparities regarding actual relay setpoints and RSS acceptance criteria were resolved by engineering evaluation during the relay calibration test performances. However, subsequent revisions to the RSS acceptance criteria did not occur. This deficiency will only arise during the performance of a work implementing document which applies initial or revised relay settings. Repetitive task calibration tests performed as Surveillance Instructions (SIs), Maintenance Instructions (MIs), or Preventive Maintenances (PMs), will explicitly stipulate critical setpoint data as acceptance criteria.

Corrective Steps Taken And Results Achieved

The CG Field Test Manual has been revised to clarify relay setting acceptance criteria and to provide guidance to relay engineers for reporting problems.

The importance of package quality has been discussed with the responsible individuals.

Corrective Steps Taken To Avoid Further Potential Findings

A random sampling of 58 relay calibration setpoints (11 critical and 47 noncritical) performed within the last year was conducted. This sampling indicated that relay setpoints that are critical values are set within ± 3.3 percent, which is within ± 5 percent of the relay setpoint sheet acceptance criteria. Noncritical values were within ± 15 percent, which is within the ± 20 percent required by the relay setpoint sheet acceptance criteria.

This deficiency and the requirements of SSP-6.02 and SSP-6.52, "Activities of Customer Group at Watts Bar Nuclear Plant," have been discussed with the CG engineering unit personnel.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

DEFICIENCY 50-390/95-202-03

WO 94-24725-00 was written to test and calibrate an Agastat time delay relay in System 213 (Reactor Motor Operated Valve Power System) in accordance with MI-57.034, Revision 5. During its review of the completed MI attached to the WO, the team noted that second-party verification as shown in Section 6.0(2) was marked "N/A" (not applicable). TVA stated that System 213 did not require second-party verification because Appendix A to procedure SSP-12.06, "Verification Program," Revision 2, did not list this system as one that required second-party verification. TVA could not explain why this safety-related system was not included in the procedure. The procedure was deficient because Appendix A did not list all safety-related electrical systems. The team was concerned that all electrical maintenance work performed while this procedure was in effect might not have been verified by a second party.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-03

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by unclear procedural guidance. The subject relay was associated with System 213. MI-57.034, "Agastat Time Delay Relays," has a note above Step 6.0 [2] stating that a second party verification is required if the relay is used in a system listed in Appendix A of SSP-12.06. Appendix A does not list System 213, but does list System 57 as "Class 1E Electrical Distribution System for Systems Listed in this Appendix."

Corrective Steps Planned/Taken And Results Achieved

SSP-12.06, Appendix A, will be revised by September 5, 1995, to clarify which systems require independent or second party verification.

Corrective Steps Planned To Avoid Further Potential Findings

An extent of condition review was performed for this issue. The review was limited to MI-57 series procedures because they perform work on the general category of safety-related electrical systems identified under System 57 in Appendix A to SSP-12.06. Other MI series procedures are system specific. The sixty (60) MI-57 series procedures were reviewed. Only Step 6.0 [2] of MI-57.034 was found to contain a note stating that a second party verification is required if the component is used in a system listed in Appendix A of SSP-12.06.

Step 6.0 [2] of MI-57.034 required that the relay specified in the work implementing document be positively identified. This action is not critical to the function of the relay. Therefore, TVA has determined that the subject procedural inadequacy did not affect work performed on the System 213 safety-related electrical relay.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, full compliance will be achieved by September 5, 1995.

DEFICIENCY 50-390/95-202-04

WO 95-08915-00 was issued on May 18, 1995, to investigate the failure of valve 1-FCV-063-0005-B (safety injection pump suction isolation valve) to operate when manipulated from the main control room. TVA also wrote Problem Evaluation Report (PER) WBP950295 on May 23, 1995, identifying the subject valve failure to be the second time that a motor operated valve (MOV) had failed to operate in this configuration. The PER identified that the same condition was found on 1-MVOP-062-0061-B (reactor coolant pump seal flow return isolation valve), as documented on August 3, 1993, in WO 93-14535-00.

The team reviewed both WO packages and noted that TVA corrected each valve problem by grinding a portion of the Limitorque actuator housing to provide additional clearance for the tripper finger which was getting stuck in the housing when the actuator was operated electrically after the valve was in the manual mode. SSP-9.52, "Initiating Design Change Notices [DCNs]," requires that a DCN be prepared to implement changes to the plant. No engineering evaluations or DCNs were issued to support the modification work.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-04

TVA agrees that the deficiency occurred.

Reason For Deficiency

This deficiency was caused by the lack of adequate maintenance guidelines for determining when NE approval of a maintenance activity is required.

Corrective Steps Taken And Results Achieved

NE has provided guidance to Maintenance for determining when NE involvement in maintenance activities should be required.

SSP-6.02 has been revised to incorporate the above NE guidance.

The subject valve actuators were evaluated. NE determined that the structural integrity and seismic qualification had not been jeopardized due to the small amount of material removed from the actuator casings.

Corrective Steps Taken/Planned To Avoid Further Potential Findings

Limitorque has recommended that the Model 00 valve actuators be modified by installing a new "tripper stop." MI-16.02 will be revised by September 15, 1995, to require installation of the Limitorque repair on an as-maintained basis.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, full compliance will be achieved by September 15, 1995.

DEFICIENCY 50-390/95-202-05

WO 95-00177-00 directed that the oil sight glass on the Auxiliary Feedwater (AFW) turbine lubricating oil sump be replaced. The team noted that the WO was very brief and did not invoke a procedure to perform the work. The WO instructed that oil be drained, the sight glass be replaced, and the oil level be restored to the middle of the sight glass. The team noted that the turbine VTM, VTM-DR04-0240, "Dresser Rand Turbine Driven Auxiliary Feedwater Pump [TDAFWP]," Revision 20, provided specific instructions for establishing a high level and low level mark on the sight glass. The team noted that the TVA procedure for disassembly and reassembly of the turbine, MI-1.003, Revision 2, also erroneously specified that the required oil level be marked at the middle of the sight glass, and did not incorporate the vendor's requirements.

TVA'S REPLY TO DEFICIENCY 50-390, 391/95-202-05

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by personnel error. The work planner failed to reference the Vendor Technical Manual (VTM) in the WO instruction. The VTM provides technical direction for marking the sight glass to verify proper oil level.

Corrective Steps Taken And Results Achieved

This deficiency was discussed with the mechanical planners. The planners were advised of the importance of ensuring the appropriate VTM requirement is used when replacing a sight glass.

The oil sight glass has been marked with high and low oil marks in accordance with the VTM.

A review of past maintenance history on the TDAFWP revealed that the oil level sight glass had been replaced under WO 94-00639-00 on February 28, 1994. During this replacement, the oil level sight glass markings had been verified in accordance with the VTM.

Corrective Steps Taken To Avoid Further Potential Findings

Maintenance improvement initiatives are in place as identified in Enclosure 1 of this submittal. These initiatives ensure that vendor technical information is incorporated into planned work packages.

MI-1.003 has been revised to enhance reference to the dual sight glass oil level marking.

A walkdown of 18 safety-related, nonsafety-related and quality related pumps and motors was performed to verify that vendor requirements for sight glass markings are properly addressed in the field. No deficiencies were found.

During a recent inspection of the Vendor Information Corrective Action Program (CAP), a concern related to the Emergency Diesel Generator Woodward Governor oil level sight glass markings was identified. Replacement sight glasses had been received from the vendor with either one mark or two marks on the sight glass and had been installed

in the field. No guidance was provided in the VTM for marking the sight glasses. Since this issue did not involve the failure to implement vendor technical information, TVA determined it not to be similar to the TDAFWP lubricating oil level sight glass issue.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

DEFICIENCY 50-390/95-202-06

WO 94-11277-03 dealt with the attempted resolution of an apparent TDAFWP shaft binding problem. In reviewing the completed work package, the team noted an example where the craft failed to follow procedure. Instruction MI-3.012, Revision 0, Step 6.9(2)(a) required the hub area to be heated with "a rosebud tip torch" to install a pump half coupling. The procedure was marked up by the maintenance personnel with a note which stated that a bearing heater was used instead of a rosebud tip torch. The WO was completed and closed out. However, the change to the procedure was not reviewed and approved as required by SSP-2.03, "Administration of Site Procedures," Revision 12.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-06

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by personnel error. The involved individuals did not realize that any change to a technical procedure required a procedural change in accordance with SSP-2.03.

Corrective Steps Taken And Results Achieved

Personnel involved in this deficiency have been made aware of their responsibilities with respect to making required procedure changes.

MI-3.012 has been revised to allow the use of other acceptable heating devices.

Corrective Steps Taken/Planned To Avoid Further Potential Findings

A word search of the Work Request/Work Order database has been performed to locate other work implementing documents assigned to the crew of the involved individual. A review was performed to identify similar deficiencies. No similar deficiencies were identified.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

DEFICIENCY 50-390/95-202-07

WO 94-04878-00 specified corrective maintenance of 6900V circuit breaker WBN-0-BKR-569-4605016-S in shutdown board 2B-B. While reviewing the work instruction, the team noted that the acceptance criteria for the tripping time (54 ms) specified in the WO did not agree with the tripping time (50 ms) specified for this breaker in DCN Q-22832-A. However, the recorded test value (47 ms) was found to be within the tripping time requirement stated in the DCN. The work instruction was inadequate in specifying the acceptance criteria.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-07

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by personnel error. The acceptance criteria tripping time for 6.9kV breaker 0-BKR-569-4605016-S was specified as 50 milliseconds in DCN Q-22832-A. However, an acceptance criteria tripping value of 54 milliseconds was transposed into WO 94-04878-00. This WO was subsequently copied by planners for use on other breakers.

Corrective Steps Taken And Results Achieved

"Lessons learned" information on this example was provided to maintenance planners. Attention to detail was emphasized.

WOs that performed the Time Test on 6.9kV breakers using DCN Q-22832-A acceptance criteria were reviewed. Of 178 WOs, 17 WOs contained the same error as the example. Each of the 17 errors was the result of copying the instructions that contained the original error. A review of the 17 completed WOs revealed that the tripping time for each of the affected breakers was acceptable (less than 50 milliseconds). No repeat field work is required since the breakers passed the correct acceptance criteria.

Corrective Steps Taken To Avoid Further Potential Findings

No further corrective actions are considered necessary.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

DEFICIENCY 50-390/95-202-08

WO 95-04731-00 was written to functionally check 1-LPT-030-1032 (lower containment ambient temperature loop) to verify that a change in temperature was registered in the loop, including at the main control room indicator. The loop contained environmentally qualified (EQ) equipment, and hence harsh environment record system (HERS) data sheets had to be completed per Plant Administrative Instruction (PAI)-10.12. The team noted that the HERS data sheets for the loop that was being tested were not in the WO package. TVA concluded that the HERS data sheets for two similar loops were inadvertently interchanged either while the work was being done or while the general foreman was reviewing the WOs. TVA did not meet the requirements in Steps 2.3.3.c and 2.4.3.c of procedure SSP-6.02, that the foreman and the general foreman review the final package and verify that it was complete and free of mistakes in documentation.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-08

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by personnel error. Documents having identical parameters were placed in opposite WO packages during assembly of the completed packages.

Corrective Steps Taken And Results Achieved

The importance of package quality was discussed with the involved individual.

WOs 95-04731-00 and 95-04731-01 have been amended to replace the HERS data sheets with the correct HERS data sheets.

Corrective Steps Taken To Avoid Further Potential Findings

A sample of 23 other WO packages found no other incidents of switched HERS data sheets.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

DEFICIENCY 50-390/95-202-09

WO 95-04740-07 directed that the scale of 2-FI-067-0061 (ERCW supply header A flow) be replaced to implement a recent DCN. Calibrations of the flow indicator were performed before removing the scale to obtain the "as found" readings, and after installing the new scale to obtain the "as left" readings. The team noted that for one of the three input signals used in the calibration, the "as found" and "as left" values were outside the tolerance limits. The foreman's and general foreman's failure to adequately review completed work packages is another example of the failure to follow Steps 2.3.3.c and 2.4.3.c of procedure SSP-6.02.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-09

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by personnel error. The instrument mechanic used the wrong input signal. Previous scales were calibrated using 10 milliamps (ma) which is the normal input for low-end scale calibration. However, the low-end was elevated to 11 ma (500 gpm) instead of 10 ma (0 gpm) for the subject instrument. This condition was not detected by either the instrument mechanic or reviewer.

Corrective Steps Taken And Results Achieved

The importance of package quality has been discussed with the responsible individuals.

The subject instrument was recalibrated and found to be calibrated correctly and within limits.

Corrective Steps Taken To Avoid Further Potential Findings

Quality Engineering sampled 44 Maintenance Instrument Group WOs completed between June 6 and June 13, 1995. Only four minor administrative errors were found. No rework was required.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

DEFICIENCY 50-390/95-202-10

WO 94-03644-00 involved replacement of the leaking pump seals of Centrifugal Charging Pump (CCP) 1B-B. The seal replacement was performed successfully over several shifts. However, when problems with the parts and procedure occurred, the craft did not record the problems for resolution as required by TVA procedures for problem reporting and resolution. The parts received were not sufficient to complete the seal replacement and old parts were refurbished to complete the job. Although the use of refurbished parts was technically satisfactory, the parts problem was not recorded on a PER, which would have made a lasting correction of the problem possible. The procedure, MI-62.001, "Centrifugal Charging Pump," Revision 16, described two possible seal configurations but did not describe the actual configuration installed on the pump, which was a hybrid of the two. Maintenance personnel successfully assembled a hybrid seal package and installed it in the pump. However, contrary to procedure SSP-3.04, "Corrective Action Program," Revision 14, they did not record the problem on a PER to request a formal acceptance of the new configuration or resolution of the configuration problem for future work.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-10

TVA agrees that the deficiency occurred.

Reason For The Deficiency

This deficiency was caused by personnel error. Involved individuals did not utilize the SSP-6.01, "Conduct of Maintenance," feedback process to improve the availability of correct seal replacement parts and initiate enhancements to MI-62.001. Additionally, the involved individuals failed to recognize seal replacement problems as an issue that should have been documented on a PER.

Corrective Steps Taken And Results Achieved

Training on the SSP-6.01 feedback process has been provided to appropriate maintenance personnel.

Maintenance management continues to emphasize the development of a questioning attitude, and the prompt identification and documenting of problems, using the following tools: reenforcement of management expectations during plant/shop tours by managers and supervisors; section meetings; tool box meetings; the periodic publication of the Maintenance Minute Newsletter; and issuance of a Site Bulletin.

A new training course (MTS343.004 - Corrective Action Program) has been developed and taught to Maintenance supervisors, engineers and planners to strengthen understanding of the condition adverse to quality process, its benefits, its necessity, and the application of management expectations regarding the documenting of problems.

Corrective Steps Taken To Avoid Further Potential Findings

A list of parts required for rebuilding a centrifugal charging pump mechanical seal has been provided to the Procurement Engineering Group (PEG).

MI-62.001 has been revised to allow the CCP mechanical seal replacement activity to be performed in a more logical manner.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

DEFICIENCY 50-390/95-202-11

WO 95-08167-00 was issued to troubleshoot and repair or replace low inverter output alarm card and cabinet cooling fans for Class 1E inverter 1-II. The team noted that two cooling fans (No. 1 and No. 3) on the inverter cabinet were replaced. A review of the Material Requisition No. 945966 showed that the fans were purchased as QA Level III (nonsafety-related) in accordance with PEG package B26901030751. The original fans were qualified as part of the safety-related inverter installation. Neither seismic evaluations nor any qualification evaluations (commercial-grade dedication, failure modes and effects analyses, and qualification tests) were performed by TVA to verify that the inverter could perform its intended design function with nonsafety-related fans. Section 2.3.3.A of procedure SSP-10.05, "Technical Evaluation for Procurement of Materials and Services," Revision 12, states that for spare and replacement parts, an equivalency evaluation must be performed and documented to ensure that such items were purchased to requirements equivalent to those specified for the original equipment.

TVA'S REPLY TO DEFICIENCY 50-390/95-202-11

TVA agrees that the deficiency occurred.

Reason For Deficiency

This deficiency was caused by personnel error. In 1990, a PEG engineer made a classification determination incorrectly for the subject component. PEG package B26901030751 was used to establish the technical and quality requirements for the purchase of the fan. The package was completed in accordance with Administrative Instruction (AI)-5.23, Revision 1. This procedure required the PEG engineer to state the item function and determine if the item was a basic component. The PEG engineer determined that this item was not a basic component and provided the following bases: (1) failure of the fans will not affect inverter operations; (2) the fans are plug-in type and may be replaced without affecting inverter operation; and (3) the fans are isolated by a fuse from Class 1E power.

The PEG engineer considered this procurement to be a purchase of a nonsafety-related replacement subcomponent. However, the engineer did not indicate how the technical evaluation was performed. The subcomponent was not addressed in the design specification, and the functional, technical, and quality requirements were not available.

Corrective Steps Taken And Results Achieved

Spare fans in stock were placed on "Hold".

A memorandum was issued to and a training session was conducted for the affected individual and PEG engineers to review a white paper which discusses the engineering practices for technical evaluation and determination of safety classification governed by SSP-10.05. Also, the importance of reviewing those sections of SSP-10.05 which address the determination of critical characteristics for design based on an analysis of safety functions and failure modes and effects was emphasized.

PEG package 9500060038 was issued which evaluated PEG package B26901030751 and dedicated the installed components.

Corrective Steps Taken To Avoid Further Potential Findings

PEG performed a broad scope assessment of PEG packages which procured/evaluated QA Level III subcomponents with a safety-related host. Each package selected was reviewed to determine that adequate bases were provided to justify the use of a nonsafety-related component when the host was determined to be a basic component. Packages generated between October 1990 and June 1995 were selected. In total, this assessment reviewed 455 QA Level III packages and examined 90 packages in detail. One defective item was identified, which was the same item that initiated this example. Based on engineering judgement, this assessment provides adequate confidence that a breakdown in the safety classification system does not exist.

Date When Full Compliance Will Be Achieved

With respect to this deficiency, TVA is in full compliance.

ENCLOSURE 3

LIST OF COMMITMENTS

As an interim action, component engineers now perform a technical review of safety-related WOs. Component engineers will discontinue these reviews when the specialized planner training has been completed and management has confidence in the planning process.

Appropriate planning and other station personnel will be trained on the use of this database [Maintenance Planning and Control] by September 15, 1995.

The Instrument Maintenance group review of work packages is scheduled to be discontinued when a sufficient number of work implementing supervisors are in place.

The following action plan [maintenance-to-engineering interface] is being pursued and is scheduled to be completed by September 11, 1995.

SSP-12.06, Appendix A, will be revised by September 5, 1995, to clarify which systems require independent or second party verification.

Limatorque has recommended that the Model 00 valve actuators be modified by installing a new "tripper stop." MI-16.02 will be revised by September 15, 1995, to require installation of the Limatorque repair on an as-maintained basis.