

TENNESSE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT
NUCLEAR ASSURANCE

AUDIT REPORT NO. SQA93401

CORRECTIVE ACTION/CORRECTION OF DEFICIENCIES

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Audit Report No: SOA93401

Audit Dates: October 18 to November 12, 1993

Audit Subject: Corrective Action/Correction of Deficiencies

Audit Location: Sequoyah Nuclear Plant

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- Attachment 3 - Audit Plan and Checklist

* The complete audit report and attachments can be obtained by using the RIMS number listed on the cover memorandum.

AUDIT DETAILS

The audit team evaluated the Corrective Action Program against the following objectives. Results are included. Additional details are contained in Attachment 3, "Audit Plan and Checklist," to this report.

1.0 Generic issues from other TVA sites are promptly evaluated for applicability at Sequoyah.

The audit team reviewed 10 corrective action documents received from other TVA sites since the last Corrective Action Program audit was completed in April 1993. The Sequoyah generic applicability determinations were reviewed to ensure an adequate evaluation was performed and it included information to substantiate the results. All of the determinations were processed within the established timeframes except one which was two days late. The late one was determined not to be applicable to SQN.

2.0 Commitments to the NRC are tracked and implemented by the commitment due date.

The team reviewed 10 NRC commitments made as a result of LERS issued since the last audit. Commitments made in response to NRC violation 50-327.328/93-32-01 were also reviewed. The commitment documents, the data maintained in the status tracking system database, and the completion documentation in Site Licensing files were reviewed to determine adequacy of tracking and completing NRC commitments. Timeliness statistics published in plant monthly reports were also reviewed. Commitments are being adequately tracked and completed in a timely and effective manner.

3.0 Deficiencies are properly evaluated for reportability (including 10CFR21) and accurately reported when required.

The audit team evaluated the reportability determinations of 15 closed PERs issued since SSP-3.4, "Corrective Action Program," Revision 8, was made effective. Fourteen IIs initiated since SSP-3.4, R8, became effective were also reviewed for adequacy of the reportability determinations. The team completed independent reportability determinations by comparing the conditions documented on the PERs and IIs with the reporting guidelines/criteria given in SSP-4.5, "Regulatory Reporting Requirements," Revision 2, and AI 18.5, "Plant Reporting Requirements-Operations," Revision 0. The reportability determinations reviewed were satisfactory.

4.0 Deficiencies are properly evaluated for effect on operability.

The team evaluated the operability determinations of the same PERs/IIs as for item 3.0. The team completed independent operability determinations by comparing the conditions with the operability guidelines contained in SSP-3.4, R8. The operability determinations were satisfactory.

5.0 10CFR21 notices are reviewed and potential defects in materials and services are identified, evaluated, and corrected.

The team evaluated resolution of seven 10CFR21 notices received since the last audit was conducted in April 1993. The dispositions of the notices reviewed were satisfactory.

6.0 Corrective actions taken resolve problems which occurred and similar related problems (extent of condition).

- A. The team evaluated the corrective actions for 18 PERs issued and/or closed since SSP-3.4, Revision 8, was made effective. This included how the responsible organization identified similar or related events and how Nuclear Assurance (NA) consolidated trending is functioning.

The team identified a problem with NA trending of corrective action documents. Trend-related information is reported to site management in the Weekly Corrective Action Status Report and the Level I Quarterly Trend Report. The team's review of the data contained in the weekly reports from July 13, 1993 to September 29, 1993 revealed potential adverse trends in the causal factors of "work practices," "interface design," "plant/system operation," "communication," "maintenance," "plant/system design," and "change management." None of the weekly reports or the draft Level I Trend Report for the fourth quarter of FY 1993 contained any discussion of these issues as potential adverse trends or any analysis to indicate whether or not they were potential adverse trends. The audit team initiated SQ930674PER to address this issue.

The team reviewed Independent Safety Engineer (ISE) Surveillance Report SQN-93-41 documenting ISE follow-up to corrective actions for SQPER930310. SQPER930310 documented damage to a switchyard grade-level cable trench cover caused by a vehicle driving over the cover. The approved corrective action plan consisted of issuing a work request (WR) to inspect the cables to assess damage to the cables and to replace the damaged fiberboard covers; requesting a Q-DCN to study the feasibility of metal grating or similar cover over the fiberboard to prevent future damage; and providing a procedure change request to Operations to revise access control to the switchyard. It is possible to close this PER without any action being taken to correct the actual deficiency that exists, namely, damaged cable trench covers and potentially damaged cables. The PER has been submitted for closure verification to the responsible organization and the TROI items for the above corrective actions closed without any work being accomplished in the field. The audit team believes that a more appropriate corrective action plan would have been developed had senior management been involved in plan development and/or approval. Consequently, the audit team makes the following recommendations.

Recommendation The Management Review Committee (MRC) should review and approve PER corrective action plans for a period of time to help provide consistency with corrective action plans.

Recommendation Site NA should provide examples of good corrective action plans to site organizations for their use in establishing management expectations for corrective action plans.

The audit team's review of PERs issued/closed since August 16, 1993 revealed that corrective action closures and extent of condition analyses have improved since Audit SSA93308 was conducted in April; however, attention to administrative detail is still a problem area.

Thirteen of 15 PERs and 14 of 14 IIs reviewed contained blanks which should have been completed. The majority of these blanks consist of the second two signature spaces in Section 10A for PERs and the "II only: Event/Time" and "Discovery Date/Time" blanks in Section 9A for IIs. Section 9A is where the initiator signs and dates the PER/II form, and where the supervisor approves the PER/II form. Section 10A is where Operations documents the operability, potentially affects operability of other sites, and reportability reviews. SQ930673PER was initiated by the audit team to address this issue.

SQPER930295 was closed September 13, 1993 when WRs were issued to accomplish the necessary field work but before the work was completed. There is conflicting closure guidance contained in SSP-3.4, Revision 8. Paragraph 3.3.8.A states that the initiator's supervisor may close a PER if the same condition is documented on an existing PER or other ACP. This is inconsistent with the closure criteria introduced in the August 16, 1993 program revision and led to the closure of SQPER930295 before the field work was complete. Twenty-five additional hardware-related PERs closed since August 16 were reviewed for similar problems. None were identified. The audit team initiated SQ930698PER R1 to address this issue.

- B. The team evaluated the corrective actions taken for the specific examples of corrective action documents cited in IIS93035.

IIS93035 listed five PERs/FIRs with specific problems such as inadequate extent of condition determinations, no justifications for nongeneric applicability determinations, lack of nonconforming item control, and missing PER numbers. The audit team reviewed the specific actions taken to correct these problems. Corrective actions were satisfactory and complete.

Corrective actions for IIS93035 also included consolidating trending under Site NA to ensure quality and effectiveness are evaluated and for Site NA to develop performance indicators to continually monitor the effectiveness of corrective actions. Problems identified with trending are discussed in Sections 6.A and 6.C of this report. Additionally, COTS, recommendations, management issues, and observations from audits/assessments are only trended if they are used in the quarterly assessments completed by Site NA. Interviews with the personnel who complete the assessments revealed that they do not generally consider such items.

The performance indicators chosen were number of corrective action documents open, number of late documents/items, causal factors, and numbers of items due during the week. These are published in the Weekly Corrective Action Status Report, but no use of the information to monitor effectiveness of corrective actions is apparent.

Recommendation Site NA should develop and implement quality and effectiveness performance indicators. Further, improved trending of COTS, recommendations, observations, and management issues needs to be developed to improve the effectiveness of the trend program.

- C. The team evaluated timeliness of the Corrective Action Program by review of trending data maintained by Site NA; by determining if the required timeframes for completion of reportability, operability, and generic applicability determinations were being met; and by comparison of event dates with initiation and approval dates of PER/IIs.

The audit team's review of Weekly Corrective Action Status Reports revealed that the number of late corrective action documents increased from 3 on August 17 to 38 on September 7, then decreased to 16 on September 17 before increasing to 50 on September 29, and finally decreased to 24 on October 13, 1993. On October 13 the Site Quality Manager issued a memorandum to the Site Vice President escalating the 24 late corrective action documents for resolution. Immediate actions included granting extensions to January 15, 1994 for nonhardware issues and to September 30, 1994 for hardware issues and creating the Corrective Action Review Panel. The hardware extensions were given to enable responsible organizations time to incorporate the issues into the business planning process either for this fiscal year or the next. The issues will be prioritized and worked depending on priority. The nonhardware issues will be reviewed and a plan developed for resolution by January 15, 1994. The Corrective Action Review Panel was created to aid in this process as well as review all open corrective action documents to determine what is needed to resolve them in the most timely manner. The audit team believes action may have been taken before the number of late documents became so large if a clearer definition of an adverse trend existed.

Recommendation Site NA should develop a better definition of what constitutes an adverse trend.

Timeliness of operability, reportability, generic applicability, and problem reporting were satisfactory for 15 PERs and 14 IIs reviewed.

The team reviewed the 13 open corrective action tracking documents (CATDs) for Sequoyan to determine scheduled completion dates. The team found that none had met the original scheduled completion date, that nine were late or about to be late for their current due dates, and that current due dates averaged seven years after identification. The team initiated SQ930672PER to address the lack of timely corrective action.

- D. The audit team reviewed deficiencies documented in the Sequoyah Administrative Control Programs (ACPs). The ACPs at Sequoyah consist of Radiological Awareness Report (RAR), Safeguard Event Report (SGER), Work Request (WR), Drawing Deviation (DD), Quality Control Inspection Report (QCIR), and Corrected-On-The-Spot (COTS) items initiated by Nuclear Assurance. Thirteen RARs, 38 SGERs, 52 WRs, 16 DDs, and 62 COTS items were reviewed. Additionally, a similar sample of QCIRs were reviewed.

The team evaluated the deficiencies for adequacy and timeliness of corrective actions, closure documentation, and comparison against PER/II criteria. The problems identified are discussed in the following paragraphs.

The audit team identified that nine of 38 SGERs reviewed were statused as closed, but the packages were incomplete or the forms were not filled out completely. Six of the nine related to hardware deficiencies and it was not clear from the documentation that the affected hardware had been corrected and returned to service. After discussions with Site Security and determining that the equipment had been returned to service, the SGERs were corrected. This issue is considered COTS.

The team further identified that RARs were sometimes closed with the RadCon and Chemistry Manager's approval of the corrective action plan but without the responsible organization's corrective action verification signature blank completed. This was discussed with the RadCon and Chemistry Manager. The manager stated that in most instances, he does not approve the plan until the action is completed; however, sometimes actions are long-term and the verification signature should be completed. SSP-5.5, "Reporting of Radiological Incidents," Revision 2, does not indicate that the verification signature can be waived. As a result, RadCon reviewed all FY 1993 RARs and obtained all missing signatures. This is considered a COTS item.

Trending of ACPs is discussed in Section 10.0 of this report.

- 7.0 Identified problems are evaluated for generic applicability to other TVA facilities.

The team evaluated the generic applicability determinations of the PERs evaluated for Items 3.0 and 4.0. The team completed independent determinations by comparing the conditions with the generic applicability guidelines contained in SSP-3.4, R8. The team also evaluated the timeliness of the determinations. The determinations were satisfactory.

- 8.0 The apparent or root cause of problems is determined; corrective actions prevent recurrence.

The team evaluated the cause analyses/recurrence controls of the PERs previously selected by comparing the documented cause with the descriptions of conditions and comparing the recurrence controls with

the cause. The analyses for 14 of the 15 PERs were acceptable as were the recurrence controls. TROI searches did not identify any recurring problems since the PERs were closed.

The MRC indicated for SQ930420PER that a root cause analysis was required; however, only an apparent cause was determined and the PER was submitted for closure. The audit team pointed this out to Site NA Technical Support who assigned a TROI action item to the responsible organization to perform the root cause analysis and returned the PER to the responsible organization. This was allowed since the PER was not yet closed. This is considered a COTS item.

9.0 Problems identified by external agencies are documented and resolved in the Corrective Action Program if the criteria are met. This includes items received through the NER Program.

There was one insurance report and one INPO report received since the last audit. Neither contained any results that should have been incorporated into the Corrective Action Program.

The team evaluated 18 items received through the NER Program. The team concluded that the items were adequately evaluated for applicability to Sequoyah with one exception. OER 93-5988 pertains to premature opening of Bussman model KTK fuses manufactured prior to 1989 because of cold solder joint weaknesses. Corporate NER classified this item as "information only" for Sequoyah because no problems were known to exist at Sequoyah. "Information only" means that no response or evaluation is required. None was performed. The audit team found that there are fuses of this model available for use in balance of plant service although the year of manufacture is not known to the audit team. Corporate NER agreed to re-evaluate the item for applicability to Sequoyah.

10.0 Administrative Control Programs use trending to determine the need for a PER/II.

The team reviewed trending of all ACPs. Trending was acceptable for all ACPs except DDs and RARs.

Contrary to Drawing Deviation (DD) Program requirements, Nuclear Engineering elected not to trend DDs for the third and fourth quarters of FY 1993 due to a belief that the workoff of backlogged circa 1986 DDs would skew data to show nonexistent adverse trends. This is a different finding from the one identified in the previous Corrective Action Program audit when NE was not trending nondispositioned DDs (at the end of a quarter) even after they were dispositioned in the next quarter. Over the course of the year (1992), this amounted to 75% of DDs not being trended. This was permitted by the program which was revised to eliminate the problem as a result of the finding. The current issue is that NE elected not to do required trending while the previous issue was that the program was flawed and permitted certain DDs not to be trended. The audit team initiated SQ930671PER to address this issue.

RAR trend reports for August and September 1993 reported a "negative trend" and the need for increased management attention, respectively, in the area of procedural compliance/worker performance. The September report also indicated that 26 of 34 RARs in FY 1993 were in this area. The audit team discussed with the RadCon and Chemistry Manager why a PER/II was not initiated. The manager explained that RadCon's analysis, which was not included in the reports, resulted in their determination that an adverse trend did not exist. Much of the analysis was subjective.

Recommendation RadCon should develop objective criteria to use to identify adverse trends of RARs.

11.0 Follow-up to previous audit findings.

In addition to evaluating the Corrective Action Program against the preceding 10 key objectives, the audit team followed up on the corrective action to SQA910019102SCA, associated IIS91003, and IIS92009. These document the failure to calibrate load sequence timers for the electric board room and main control room air handling units as required. The team found that the appropriate surveillance instructions had been revised and performed. The timers were within calibration and the required frequencies are now being met.

Attachment 1

AUDIT RESULTS SUMMARY SHEET

I. Problem Evaluation Reports/Incident Investigations (PER/IIIs) (Copies attached)

<u>PER/II</u>	<u>Responsible Organization</u>	<u>Initiator</u>
SQ930671PER	Nuclear Engineering	B. J. Burse
SQ930672PER	Concerns Resolution Staff	B. J. Burse
SQ930673PER	Site Nuclear Assurance	R. W. Jarvis
SQ930674PER	Site Nuclear Assurance	R. W. Jarvis
SQ930698PER R1	Site Nuclear Assurance	R. W. Jarvis

II. Corrected-On-The-Spot (COTS)

COTS 1 SQ930420PER was submitted for closure and was being processed although the MRC-required root cause analysis was not performed. After discussion with the CAC and NA Technical Support, a TROI action item was entered for the responsible organization to complete the analysis and the PER was returned to the responsible organization. (W. A. Pruett, Corrective Action Coordinator)

COTS 2 Nine of 38 SGERs reviewed were stasured as closed, but the packages were incomplete or the forms were not filled out completely. After discussion with Site Security, the SGERs were corrected. (J. R. Setliffe, Site Security Manager)

COTS 3 Some closed RARs did not contain the required responsible organization corrective action verification signature. After discussion with the RadCon and Chemistry Manager, the missing signatures were obtained. (C. E. Kent, RadCon and Chemistry Manager)

III. Recommendations

Recommendation 1 During the verification of corrective actions for II-S-93-035, it was not clear what Site NA is doing in trending to ensure quality and effectiveness are evaluated (Corrective Action D) nor how the performance indicators developed can be used to continually monitor the effectiveness of corrective actions (Corrective Action G). Site NA should develop and implement quality and effectiveness performance indicators. Further, improved trending of COTS, recommendations, observations, and management issues needs to be developed to improve the effectiveness of the trend program. (R. G. Newsom, Site NA Technical Support Manager)

Attachment 1

AUDIT RESULTS SUMMARY SHEET

- Recommendation 2 The corrective action plan for SQPER930310 only required the initiation of a WR, the request of a procedure change, and the request of a DCN. These actions can be completed without the correction of the deficiency itself. The Management Review Committee should review and approve PER corrective action plans for a period of time to help provide consistency with corrective action plans. (K. P. Powers, Plant Manager)
- Recommendation 3 Site NA should provide examples of good corrective action plans to site organizations for their use in establishing management expectations for corrective action plans. (R. G. Newsom, Site NA Technical Support Manager)
- Recommendation 4 A review of the Weekly Corrective Action Status Reports revealed that the number of late corrective action documents increased by a magnitude of 10 between August 17 and September 29, 1993. This was not considered an adverse trend. Action was taken October 13, 1993, when the Site Quality Manager issued a memorandum to the Site Vice President escalating 24 late corrective action documents for resolution. A clearer definition of an adverse trend may have resulted in quicker resolution of this issue. Site NA should develop a better definition of what constitutes an adverse trend. (R. G. Newsom, Site NA Technical Support Manager)
- Recommendation 5 RadCon trend reports for August and September reported negative trends and need for increased management attention in the area of procedural compliance/worker performance. The RadCon and Chemistry Manager stated analysis of the data indicated that these were not adverse trends. The analysis was briefly documented in the reports but no criteria exists on which to base this analysis. RadCon should develop objective criteria to use to identify adverse trends of RARs. (C. E. Kent, RadCon and Chemistry Manager)

JAN 06 1994

Site Vice President, 1 1E-BFN

**BROWNS FERRY NUCLEAR PLANT (BFN) - NUCLEAR ASSURANCE AND LICENSING -
CORRECTIVE ACTION/CORRECTION OF DEFICIENCIES AUDIT BFA93401**

Attached is the audit report which provides conclusions on the adequacy of the BFN Corrective Action/Correction of Deficiencies program. Audit results include two findings, two recommendations, and three minor deficiencies which were corrected during the audit. The two findings identified action not taken to document acceptability of a cable damaged during Unit 2 modifications and a work authorization document that could not be found for maintenance performed on the Unit 2 main generator. The findings were issued as Problem Evaluation Reports and are being processed in accordance with the BFN Corrective Action Program.

The responsible managers identified in the Results Summary should provide a response to the recommendations within 30 days after the date of this report.

T. D. Shriver
T. D. Shriver
 Manager
 Nuclear Assurance and Licensing
 PSB 1K-BFN

JDJ:RFM:SJS:PMJ

Attachment

cc (Attachment):

- W. E. Andrews, LP 4E-C
- **D. R. Armentrout, LP 4A-C
- R. R. Baron, LP 4A-C
- J. E. Brazell, PAB 1F-BFN
- J. D. Christensen, QAC 1A-WBN
- C. M. Crane, POB 2F-BFN
- R. F. Driscoll, OPS 4A-SQN
- M. R. Harding, BR 5A-C
- L. W. Jones, PSB 1H-BFN
- *D. R. Keuter, LP 3B-C
- *O. D. Kingsley, LP 6A-C
- R. D. Machon, POB 2C-BFN
- T. J. McGrath, LP 3B-C
- *M. O. Medford, LP 3B-C

- B. C. Morris, PAB 1G-BFN
- *D. E. Nunn, LP 3B-C
- L. W. Parvin, PSB 1K-BFN
- G. D. Pierce, OSB 1G-BFN
- J. R. Rupert, MOB 1G-BFN
- *P. Salas, PAB 1G-BFN
- B. S. Schofield, POB 5B-C
- A. W. Sorrell, POB 2H-BFN
- G. W. Waldrep, PAB 1G-BFN
- *D. K. White, PAB 1G-BFN
- *O. J. Zeringue, PAB 1K-BFN
- **Audit Working File, PSB 1K-BFN
- **RIMS, CST 13B-C

CONCERNS RESOLUTION STAFF	
JAN 12 '94	
Manager	FILE
CHA Site Per.	
BFN Site Per.	
OSB Site Per.	
MOB Site Per.	
WAB Site Per.	
PSB 1G-BFN	2
PSB 1K-BFN	
OSB 1G-BFN	
MOB 1G-BFN	
PAB 1G-BFN	
POB 5B-C	
POB 2H-BFN	
PAB 1G-BFN	
PAB 1K-BFN	
PSB 1K-BFN	

*Receives executive summary only
 **Receives complete report with attachment