UNITED STATES



NUCLEAR REGULATORY COMMISSION

REGION II SAM NUNN ATLANTA FEDERAL CENTER 61 FORSYTH STREET, SW, SUITE 23T85 ATLANTA, GEORGIA 30303-8931

April 25, 2005

Tennessee Valley Authority ATTN: Mr. K. W. Singer Chief Nuclear Officer and Executive Vice President 6A Lookout Place 1101 Market Street Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR POWER PLANT - NRC INTEGRATED INSPECTION REPORT 05000327/2005002 and 05000328/2005002

Dear Mr. Singer:

On March 31, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Sequoyah Nuclear Power Plant, Units 1 and 2. The enclosed integrated inspection report documents the inspection findings, which were discussed on April 1, 2005 with Mr. R. Douet and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

On the basis of the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/**RA**/

Stephen J. Cahill, Chief Reactor Projects Branch 6 Division of Reactor Projects

Docket No.: 50-327, 50-328 License No.: DPR-77, DPR-79

Enclosure: Inspection Report 05000327/2005002 and 05000328/2005002 w/Attachment: Supplemental Information

cc w/encl: (See page 2)

TVA

cc w/encl: Ashok S. Bhatnagar Senior Vice President Nuclear Operations Tennessee Valley Authority Electronic Mail Distribution

Larry S. Bryant, General Manager Nuclear Engineering Tennessee Valley Authority Electronic Mail Distribution

Randy Douet Site Vice President Sequoyah Nuclear Plant Electronic Mail Distribution

General Counsel Tennessee Valley Authority Electronic Mail Distribution

John C. Fornicola, Manager Nuclear Assurance and Licensing Tennessee Valley Authority Electronic Mail Distribution

Fredrick C. Mashburn Sr. Program Manager Nuclear Licensing Tennessee Valley Authority Electronic Mail Distribution

Paul L. Pace, Manager Licensing and Industry Affairs ATTN: James D. Smith Sequoyah Nuclear Plant Tennessee Valley Authority Electronic Mail Distribution

David A. Kulisek, Plant Manager Sequoyah Nuclear Plant Tennessee Valley Authority Electronic Mail Distribution

Lawrence E. Nanney, Director TN Dept. of Environment & Conservation Division of Radiological Health Electronic Mail Distribution County Mayor Hamilton County Courthouse Chattanooga, TN 37402-2801

Ann Harris 341 Swing Loop Rockwood, TN 37854

James H. Bassham, Director Tennessee Emergency Management Agency Electronic Mail Distribution

Distribution w/encl: (See page 3)

TVA

Distribution w/encl: Douglas Pickett, NRR L. Slack, RII EICS RIDSNRRDIPMLIPB PUBLIC

 □ SISP REVIEW COMPLETE: Initials:
 □ SISP REVIEW PENDING*: Initials:
 *Non-Public until the review is complete

 □ PUBLICLY AVAILABLE
 □ NON-PUBLICLY AVAILABLE
 □ SENSITIVE
 NON-SENSITIVE

 ADAMS:
 □ Yes
 ACCESSION NUMBER:
 □
 SENSITIVE
 □

OFFICE	DRP:RII		DRP:RII		DRP:RII									
SIGNATURE	RPC		MSF1		MES4									
NAME	RPCarrion:aws		SFreeman		MSpeck									
DATE	04/19/2005		04/18/2005		04/18/2005									
E-MAIL COPY?	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO	YES	NO

OFFICIAL RECORD COPY DOCUMENT NAME: E:\Filenet\ML051160130.wpd

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-327, 50-328					
License Nos:	DPR-77, DPR-79					
Report No:	05000327/2005002 and 05000328/2005002					
Licensee:	Tennessee Valley Authority (TVA)					
Facility:	Sequoyah Nuclear Plant					
Location:	Sequoyah Access Road Soddy-Daisy, TN 37379					
Dates:	January 1, 2005 - March 31, 2005					
Inspectors:	S. Freeman, Senior Resident Inspector M. Speck, Resident Inspector R. Carrion, Project Engineer (Sections 1R12, 1R16)					
Approved by:	S. Cahill, Chief Reactor Projects Branch 6 Division of Reactor Projects					

SUMMARY OF FINDINGS

IR 05000327/2005002, IR 05000328/2005002; 01/01/2005 - 03/31/2005; Sequoyah Nuclear Power Plant, Units 1 & 2; resident inspector integrated report.

The report covered a three-month period of inspection by resident inspectors and a project engineer. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. <u>NRC-Identified and Self-Revealing Findings</u>

None.

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status:

Unit 1 operated at or near 100% rated thermal power (RTP) during the entire inspection period.

Unit 2 operated at or near 100% RTP during the inspection period except for an automatic reactor trip on February 23, 2005, when maintenance technicians inadvertently opened two DC power breakers causing the loss of main feedwater and a low steam generator level. Following repairs, the unit was taken critical on February 25, 2005. The unit returned to 100% RTP on February 27, 2005.

1. **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns The inspectors performed a partial walkdown of the following four systems to verify the operability of redundant or diverse trains and components when safety equipment was inoperable. The inspectors attempted to identify any discrepancies that could impact the function of the system, and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, walked down control systems components and verified that selected breakers, valves, and support equipment were in the correct position to support system operation. The inspectors also verified that the licensee had properly identified and resolved equipment problems and entered them into the corrective action program. Documents reviewed are listed in the attachment.

- Unit 1 Safety Injection System Train B during SI Pump 1A Testing
- Emergency Diesel Generators 1A, 2A, and 1B during Diesel Generator 2B Outage
- Centrifugal Charging Pump 2B while Charging Pump 2A was Inoperable
- Unit 2 Residual Heat Removal (RHR) Train B during Outage on Train 2A

<u>Complete System Walkdown</u> The inspectors performed a complete system walk-down of the Unit 1 Auxiliary Feedwater system to verify proper equipment alignment, to identify any discrepancies that could impact the function of the system and increase risk, and to verify that the licensee properly identified and resolved equipment alignment problems that could cause events or impact the functional capability of the system.

The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), system procedures, system drawings, and system design documents to determine the correct lineup and then examined system components and their configuration to identify any discrepancies between the existing system equipment lineup and the correct lineup. In addition, the inspectors reviewed outstanding maintenance work requests and design

issues on the system to determine whether any condition described in those work requests could adversely impact current system operability. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

- 1R05 Fire Protection
 - a. Inspection Scope

The inspectors conducted a tour of the nine areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that combustibles and ignition sources were controlled in accordance with the licensee's administrative procedures; fire detection and suppression equipment was available for use; passive fire barriers were maintained in good material condition; and compensatory measures for out-of-service, degraded, or inoperable fire protection equipment were implemented in accordance with the licensee's fire plan. Documents reviewed are listed in the attachment.

- Essential Raw Cooling Water (ERCW) Building
- Control Building Elevation 669 (250-VDC Battery and Battery Board Rooms)
- Auxiliary Building Elevation 734 (Shutdown Board Rooms, Battery Board Rooms, and Auxiliary Control Room)
- Control Building Elevation 706 (Spreading Room)
- Auxiliary Building Elevation 690 (Corridor)
- Control Building Elevation 685 (Auxiliary Instrument Rooms)
- Switchyard (Common Station Service Transformers)
- Auxiliary Building Elevation 714 (Corridor)
- Control Building 732 (Mechanical Equipment Room and Relay Room)

The inspectors observed the performance of the site fire brigade during an unannounced drill on March 21, 2005, to evaluate the readiness of the fire brigade to fight fires and to assess the drill against the requirements of the Sequoyah Nuclear Plant Fire Protection Report, Revision 17. The observed drill simulated a fire at a chemical storage area on the road to the ERCW building. Specifically, the inspectors reviewed the following aspects of the drill: use of protective clothing, use of breathing apparatus, proper use of fire hoses, and control of the drill scenario.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspectors reviewed the licensee's execution and on-line monitoring of biofouling controls to verify that the licensee had developed acceptance criteria for these controls. Specifically the inspectors reviewed Procedure SPP-9.7, Corrosion Control Program, Revision 9, interviewed chemistry and engineering personnel, and reviewed chemistry implementing procedures to ensure that Procedure SPP-9.7 requirements were implemented. The inspectors also observed the inspection and cleaning of the 1A1 and 1A2 Component Cooling System Heat Exchangers. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors observed as-found simulator training on January 31, 2005. The training involved two scenarios. The first was a turbine trip resulting in a reactor trip without complications. The second scenario was a loss of a condensate booster pump followed by a loss of coolant accident (LOCA), operator-initiated reactor trip and engineered safety feature (ESF) actuation with several component malfunctions. This placed the simulated unit in a functional response procedure for high containment pressure. The inspectors observed crew performance in terms of communications; ability to take timely and proper actions; prioritizing, interpreting and verifying alarms; correct use and implementation of procedures, including the alarm response procedures and emergency plan event classification; timely control board operation and manipulation, including high-risk operator actions; oversight and direction provided by shift manager, including the ability to identify and implement appropriate technical specifications (TS) actions; independent event classification by the Shift Technical Advisor; and group dynamics involved in crew performance. The inspectors also observed the scenario debrief and evaluation and reviewed simulator fidelity to verify that it closely paralleled changes from the recent refueling of Unit 1.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following two maintenance activities to verify the effectiveness of the activities in terms of: 1) appropriate work practices; 2) identifying and addressing common cause failures; 3) scoping in accordance with 10 CFR 50.65(b); 4) characterizing reliability issues for performance; 5) trending key parameters for condition monitoring; 6) charging unavailability for performance; 7) classification in accordance with 10 CFR 50.65(a)(1) or (a)(2); 8) appropriateness of performance criteria for systems, structures, and components (SSCs) and functions classified as (a)(2); and 9) appropriateness of goals and corrective actions for SSCs and functions classified as (a)(1). Documents reviewed are listed in the attachment.

- 125-VDC Vital Battery Boards
- Unit 1 Auxiliary Feedwater

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the following six activities to verify that the appropriate risk assessments were performed prior to removing equipment for work. The inspectors verified that risk assessments were performed as required by 10 CFR 50.65 (a)(4), and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors verified the appropriate use of the licensee's risk assessment tool and risk categories in accordance with Procedure SPP-7.1, On-Line Work Management, Revision 6, and Instruction 0-TI-DSM-000-007.1, Risk Assessment Guidelines, Revision 8. Documents reviewed are listed in the attachment.

- Maintenance of One Supply Breaker to Common Station Service Transformer C
- Testing of Unit 1 Turbine Driven Auxiliary Feedwater (AFW) Pump Concurrent with ERCW Pump and Switchyard Breaker Maintenance
- Removal of Two ERCW Pumps from Service Simultaneously
- Outage on Diesel Generator 2B Concurrent with Work in the 161-kV Switchyard
- Removal of RHR Train 2A from Service for Maintenance
- RHR Train 2B Mid-cycle Outage

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

For the six operability evaluations described in the problem evaluation reports (PERs) listed below, the inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and that the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors reviewed the UFSAR for criteria to verify that the system or component remained available to perform its intended function. In addition, the inspectors reviewed as stated and that the measures were adequately controlled. The inspectors also reviewed a sampling of PERs to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the attachment.

- PER 74322, Emergency Diesel Generator 2A Cooling Water Leak
- PER 75520, Incorrect Value for Steam Generator Hi-Hi Level Margin
- PERs 64337 & 74711, Emergency Diesel Engine 2B1 Starting Air Blowdown
- PER 67654, Containment Spray Flow Indicator Reading High
- PER 77750, Problems with Emergency Diesel Generator 2A Hot Restart Test
- PER 77412, Auto Stop Oil Switches Out of Tolerance

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors reviewed the cumulative effects of deficiencies that constituted operator workarounds to determine whether or not they could affect the reliability, availability, and potential for misoperation of a mitigating system; affect multiple mitigating systems; or affect the ability of operators to respond in a correct and timely manner to plant transients and accidents.

The inspectors reviewed the increased venting frequency of the Unit 1 RHR discharge header (required due to cold leg accumulator check valve backleakage) to determine whether or not the functional capability of the RHR system or human reliability in responding to an initiating event was affected. The inspectors specifically considered whether the workaround affected the operators' ability to implement emergency operating procedures. The inspectors also assessed whether operator workarounds were being identified and entered into the corrective action program at an appropriate threshold. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the seven post-maintenance tests listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the licensee's test procedure to verify that the procedure adequately tested the safety function(s) that may have been affected by the maintenance activity, that the acceptance criteria in the procedure were consistent with information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed the test data, to verify that test results adequately demonstrated restoration of the affected safety function(s). Documents reviewed are listed in the attachment.

- Work Order (WO) 04-778820-000F, Lube, Bridge, and Megger Containment Spray Pump 2B Motor
- WO 04-778029-000, Component Cooling Heat Exchanger 1A1 Clam & MIC Inspection and Cleaning
- WO 03-011932-000, Replace Capacitors in Power Supply for Diesel Generator 2B Woodward Electronic Governor
- WO 03-002187-000, Replace Obsolete Daniel Check Valve 2-VLV-067-0508B with Stainless Steel Flowserve Check Valve
- WO 03-012343-000, Diagnostic Testing of Diesel Generator 2B Power Cables
- WO 04-778310-000, Bridge and Megger Component Cooling Pump 1A
- WO 04-780941-000, Lube, Bridge, and Megger RHR Pump 2A

b. Findings

No findings of significance were identified.

1R22 <u>Surveillance Testing</u>

a. Inspection Scope

For the six surveillance tests identified below, by witnessing testing and/or reviewing the test data, the inspectors verified that the SSCs involved in these tests satisfied the requirements described in the TS surveillance requirements, the UFSAR, applicable licensee procedures, and that the tests demonstrated that the SSCs were capable of performing their intended safety functions. Documents reviewed are listed in the attachment. Those tests included the following:

- 1-SI-SXP-063-201.1, Safety Injection Pump 1A Performance Test, Revision 6*
- 2-SI-OPS-082-007.A, Electrical Power System Diesel Generator 2A-A, Revision 32
- 0-SI-ICC-090-101.B, Calibration of Auxiliary Building Gaseous Radiation and Vent Flow Monitor, Revision 6
- O-SI-OPS-082-007.W, AC Electrical Power Source Operability Verification, Revision 10
- 1-SI-OPS-082-007.B, Electrical Power System Diesel Generator 1B-B, Revision 31
- 2-SI-082-024.A, 2A-A Diesel Generator 24-Hour Run and Load Rejection Test, Revision 8

*This procedure included inservice testing requirements.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the two temporary modifications listed below and the associated 10 CFR 50.59 screening, and compared each against the UFSAR and TS to verify that the modification did not affect operability or availability of the affected system.

- Ice Condenser Floor Monitoring System
- TACF 1-05-002-063, Unit 1 RHR Continuous Vent, Revision 0

Due to previous problems with floor movement obstructing the operation of the ice condenser lower inlet doors, the licensee had been monitoring position of the ice condenser floor with a temporary system for several cycles. The inspectors reviewed the installation and design of the system, the evaluating procedure for each unit, and the amount of material used in the design to verify that the licensee had evaluated the system for its potential effects on the containment sump.

Due to leakage from Cold Leg Accumulator 3 through Check Valve 1-63-634, the licensee installed a continuous vent on the Unit 1 RHR discharge piping. The inspectors reviewed the technical evaluation considerations associated with the modification, discussed the system configuration changes with cognizant licensee engineering staff, evaluated changes to system operating procedures, and attended the Plant Operations Review Committee meeting which approved the installation. Following installation and testing, the inspectors observed control room indications affected by the modification, discussed them with operators, and entered reactor containment to verify that the modification was installed properly and its operation did not adversely affect safety system functions. Documents reviewed are listed in the attachment.

Enclosure

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

Resident inspectors evaluated the conduct of a routine licensee emergency drill on March 16, 2005, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendations (PARs) development activities. The inspectors observed emergency response operations in the simulated control room and the technical support center to verify that event classification and notifications were done in accordance with EPIP-1, Emergency Plan Classification Matrix, Revision 36. The inspectors also attended the licensee critique of the drill to compare any inspector-observed weakness with those identified by the licensee in order to verify whether the licensee was properly identifying failures.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

Daily Review

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This was accomplished by reviewing the description of each new PER and attending management review committee meetings.

4OA3 Event Followup

Unit 2 Manual Reactor Trip With Loss of Normal Heat Sink

On February 23, 2005, following a Unit 2 reactor trip due to inadvertent operation of two DC control power breakers by maintenance personnel, the inspectors evaluated plant status, mitigating actions, and the licensee's classification of the event, to enable the NRC to determine an appropriate NRC response. Opening of the breakers removed control power to all four feedwater regulating valves causing them all to close simultaneously, which resulted in a loss of the normal heat sink.

The event was reported to the NRC as event notification (EN) 41437 and documented in the licensee corrective action program as PER 77234. The inspector's review of the cause of the event was ongoing at the end of this report period. Disposition of the performance deficiencies that precipitated this event will be done in the subsequent integrated inspection report in conjunction with closure of the licensee's pending Licensee Event Report (LER).

40A5 Other Activities

Institute of Nuclear Power Operations (INPO) Plant Assessment Report Review

a. Inspection Scope

The inspectors reviewed the final report for the INPO plant assessment of Sequoyah conducted in August 2004. The inspectors reviewed the report to ensure that issues identified were consistent with the NRC perspectives of licensee performance and to verify if any significant safety issues were identified that required further NRC follow-up.

b. Findings

No findings of significance were identified.

4OA6 Meetings, including Exit

.1 Exit Meeting Summary

On April 1, 2005, the resident inspectors presented the inspection results to Mr. R. Douet and other members of his staff, who acknowledged the findings.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Annual Assessment Meeting Summary

Subsequent to the end of this inspection period, on April 12, 2005, the NRC's Chief of Reactor Project's Branch 6 and the Senior Resident Inspector assigned to the Sequoyah Nuclear Plant met with the Tennessee Valley Authority (TVA) to discuss the NRC's Reactor Oversight Process (ROP) and the Sequoyah annual assessment of safety performance for the period of January through December 2004. The major topics addressed were: the NRC's assessment program, the results of the Sequoyah assessment, and NRC inspection plans. Attendees included Sequoyah site management, members of site staff, and corporate management.

This meeting was open to the public. The presentation material used for the discussion is available from the NRC's document system (ADAMS) as accession number ML051080310. ADAMS is accessible from the NRC Web site at http://www/reading-rm/pdr.html (the Public Electronic Reading Room).

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION PARTIAL LIST OF PERSONS CONTACTED

Licensee personnel:

- J. Bajraszewski, Licensing Engineer
- R. Douet, Site Vice President
- R. Ford, Emergency Preparedness Manager
- M. Gillman, Operations Manager
- K. Jones, System Engineer Manager
- Z. Kitts, Licensing Engineer
- D. Kulisek, Plant Manager
- P. Pace, Licensing and Industry Affairs Manager
- K. Parker, Maintenance and Modifications Manager
- R. Reynolds, Interim Security Manager
- R. Richie, Chemical/Environmental Manager
- R. Rogers, Engineering Manager
- P. Sawyer, Radiation Protection Manager
- J. Smith, Site Licensing Supervisor

NRC personnel:

- R. Bernhard, Region II, Senior Reactor Analyst
- D. Pickett, Project Manager, Office of Nuclear Reactor Regulation

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Opened</u>

None

Opened and Closed

None

<u>Closed</u>

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1R04 Equipment Alignment

1-SO-3-2 Auxiliary Feedwater System Operating Instruction, Revision 33 1-SO-3-2, Attachment 1, Auxiliary Feedwater System Power Checklist, Change 10 1-SO-3-2, Attachment 2, Auxiliary Feedwater System Valve Checklist, Change 15 2-SO-63-5, Emergency Core Cooling System, Revision 36 UFSAR Section 6.7, Auxiliary Feedwater 1, 2-47W803-2, Auxiliary Feedwater System Flow Diagram, Revision 53

Section 1R05 Fire Protection

Fire Drill Critique Form for Chemical Storage Area Fire Drill dated 3/11/05 SQN Fire Drill Evaluation Manual, Revision 4

Section 1R07 Heat Sink Performance

- RCTP-108, Technical Chemistry Standards for SPP-9.7, Appendix C MIC and Macrofouling Treatment, Revision 0
- 0-PI-CEM-000-460.4, Raw Water Quaternary Amine Treatment Monitoring, Revision 10
- 0-PI-CEM-067-712.0, Essential Raw Cooling Water Microbiologically Induced Corrosion/Mollusk Control, Revision 10
- WO 04-778029-000, Component Cooling Heat Exchanger 1A1 Clam & MIC inspection and Cleaning

Section 1R12 Maintenance Rule Implementation

- Monthly Unavailability Records for 125-VDC Vital Battery Boards for period of May 2002 through January 2005
- Monthly Unreliability Records for 125-VDC Vital Battery Boards for period of May 2002 through February 2005
- Unavailability Records for System 250-B from April 2000 through February 2005
- Sequoyah Electrical Engineering Instruction 99001, Revision 0, Evaluation of Littelfuse FLAS-5 Failures, Acceptance Criteria, and Trending of Failures
- Records for Grounds for Vital Battery Boards I, II, III, and IV since 2003
- List of Work Orders for Vital Battery Boards I, II, III, and IV since 2003
- System Health Report Cards for U0-System 250, Vital Low Voltage AC/DC for FY 2004 P2 and P-3
- Cause Determination Evaluation (CDE) 1662, 125-VDC Vital Battery Power, During Maintenance on Energized Jumper Fell Off Resulting in De-Energizing Fuse Column B in Vital Battery Board I
- CDE 1663, 125-VDC Vital Battery Power, Vital Battery Board I Breaker 212 Failed the Acceptance Criteria
- CDE 1664, 125-VDC Vital Battery Power, Vital Battery Board II Breaker 212 Maintenance Activities Resulted in Power Interruption to Fuse Column C
- CDE 1926, 125-VDC Vital Battery Power, During Quarterly Voltage Readings, Vital Battery II Cell 15 Voltage Was Found to be Less than that Required by the TSs

CDE 1946, 125-VDC Vital Battery Power, During Maintenance on Vital Battery Board IV Breaker 214, Power Was Interrupted to Breakers 213 and 215, Resulting in a Feedwater Isolation and Unit Trip

Problem Evaluation Report (PER) 03-003904-000, During Maintenance an Energized Jumper Fell Off Resulting in De-Energizing Fuse Column B in Vital Battery Board I

PER 03-004344-000, Maintenance Activities Resulted in Power Interruption to Fuse Column C PER 20478, Identification of Adverse Trend for Emergency Lighting Breaker

PER 21804, 125-VDC Vital Battery Board I Alarmed Due to +130V Ground Due

- PER 24941, Tagged Fuses Had Fallen Out Due to Use of New Fuses
- PER 25507, A Westinghouse-Type HFB Molded Case Circuit Breaker Failed Acceptance Criteria for Thermal Trip Time
- PER 27426, Maintenance Rule Function of 250-B 125-VDC Vital Battery Power Needs to be Evaluated for Placement into Maintenance Rule A1 Status
- PER 27968, Trouble Alarm Came In for Vital Battery Board I and Dead Ground Identified PER 72914, Return Battery IV to Normal
- PER 77234, Unit 2 Reactor Trip
- Work Order (WO) 04-783539-000, Adjust Battery IV Voltage to Bring It Within Limits
- WO 02-000050-000, Perform 0-MI-EBR-317-010.0 on This Breaker
- WO 02-005770-000, Perform 0-MI-EBR-317-010.0 on This Breaker
- Licensee Event Report 50-328/2003-005-00, Reactor Trip Resulting From a Spurious Turbine Vibration Trip Signal
- TI-4, Maintenance Rule Performance Indicator Monitoring, Trending, and Reporting 10 CFR 50.65, Revision 17
- CDE 1875, Thermal Overload Relay for 1-FCV-001-0015, Steam Supply to 1A-S AFW Terry Turbine Steam Supply Valve Failed to Pass Acceptance Criteria
- CDE 1736, Unplanned Start of Unit 1 Terry Turbine AFW Pump

Section 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

- Unit 1 Sentinel Run for January 24, 2005, Through February 13, 2005
- Unit 1 Sentinel Run for February 7, 2005, Through February 27, 2005
- Unit 2 Sentinel Run for March 7, 2005 Through March 27, 2005

Unit 2 Sentinel Run for March 14, 2005 Through April 3, 2005.

Section 1R15 Operability Evaluations

Functional Evaluation # 40934 (2A EDG Voltage/Frequency Slow Response on Hot Restart) UFSAR Sections 8.3 and 9.5.6 Functional Evaluation # 40663 (DG 2-PCV-082-262 Blowdown)

Section 1R16 Operator Work-Arounds

1-SO-63-1 Section 8.1, Adding Makeup Water to the Cold Leg Accumulators, Revision 31 ODMI Evaluation Report dated 1/10/05, U1 RHR System Pressurization Through Secondary Check Valve Seat Leakage OWA #SQ04001, Unit 2 Main Generator H2 Purity

OWA #SQ04002, Unit 1 RHR Discharge Piping Pressurizing Due to Backleakage Through Secondary Check Valve from #3 CLA

OWA #SQ05001, Building Heating System Heat Exchanger "A" TCV Does Not Respond to Temperature Controller OWA #SQ05002, Due to Minor Speed Deviations of 2B MFP and Potential Speed Controller Issues from High Resistence of the Speed Controller K1 Relay, Perform Weekly Swiping of the K1 Relay by Taking Controller from Manual to Auto AUO Round Deficiency (ARD) 1, Unit 1 Auxiliary Building ARD 2, Unit 2 Auxiliary Building ARD 3, Unit 1 Turbine Building ARD 4, Unit 2 Turbine Building ARD 5, Control Building ARD 6, Radwaste ARD 7, Outside

ARD 8, Con DI

Section 1R19 Post Maintenance Testing

0-SI-SXV-067-245.4, Full Stroking of the 2B-B Diesel Generator ERCW Supply Check Valve, Revision 3 WO 01-004767-000, Replace Obsolete Daniel Check Valve 2-VLV-067-0513B With Stainless Steel Flowserve Check Valve 0-SI-SXV-067-237.4, Inspection of Diesel Generator 2B-B Essential Raw Cooling Water Supply

Check Valves, Revision 0

2-SI-OPS-082-007.B, Electrical Power System Diesel Generator 2B-B, Revision 31

Section 1R22 Surveillance Testing

0-SO-82-2, Diesel Generator 1B-B, Revision 21 2-SI-OPS-082-24.A, 2A-A DG 24 Hour Run and Load Rejection Test, Revision 8 0-SI-OPS-082-007.W, AC Electrical Power Source Operability Verification, Revision 10 2-SI-OPS-082-007.A, Electrical Power System Diesel Generator 2A, Revision 32 0-SO-82-3, Diesel Generator 2A-A, Revision 22 1-SI-SXP-063-201.A, Safety Injection Pump 1A Performance Test, Revision 6 0-SI-ICC-090-101.B, Calibration of Auxiliary Building Gaseous Radiation Monitor and Exhaust Flow Monitor, Revision 6 0-SO-30-10, Auxiliary Building Ventilation Systems, Revision 23

Section 1R23 Temporary Plant Modifications

PER 72626, Ice Condenser Floor Monitoring System Installed in 1992 as a TACF TACF 1-92-0017-061, Unit 1 Ice Condenser Floor Monitoring System TACF 2-92-0022-061, Unit 2 Ice Condenser Floor Monitoring System 0-PI-SXX-061-001.0, Ice Condenser Lower Plenum Floor Monitoring System, Revision 5 TACF 1-05-002-063, Unit 1 RHR Continuous Vent, Revision 0