UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

January 24, 2006

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 05000327/2005005 AND 05000328/2005005

Dear Mr. Singer:

On December 31, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Sequoyah Nuclear Power Plant Units 1 and 2 and the Sequoyah Independent Spent Fuel Storage Installation. The enclosed integrated inspection report documents the inspection results, which were discussed on January 05, 2006, 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.

Based on the results of this inspection, no findings of significance were identified. However, licensee-identified violations, which were determined to be of very low safety significance, are listed in this report. NRC is treating these violations as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance of the violations and because they are entered into your corrective action program. If you contest these non-cited violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Sequoyah Nuclear Power Plant.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publically Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Website 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, 72-34
License No.: DPR-77, DPR-79

Enclosure: Inspection Report 05000327/2005005 AND 05000328/2005005
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-327, 50-328, 72-34
License Nos:	DPR-77, DPR-79
Report No:	05000327/2005005, 05000328/2005005
Licensee:	Tennessee Valley Authority (TVA)
Facility:	Sequoyah Nuclear Plant
Location:	Sequoyah Access Road Soddy-Daisy, TN 37379
Dates:	October 1, 2005 - December 31, 2005
Inspectors:	S. Freeman, Senior Resident Inspector M. Speck, Resident Inspector B. Holbrook, Reactor Inspector (Sections 1R06, 1R15)
Approved by:	S. Cahill, Chief Reactor Projects Branch 6 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000327/2005005, IR 05000328/2005005; 10/01/2005 - 12/31/2005; Sequoyah Nuclear Power Plant, Units 1 & 2 resident inspector integrated report.

The report covered a three-month period of inspection by resident inspectors and associated support inspection by a regional inspector. 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. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

Violations of very low safety significance, identified by the licensee, were reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective actions are listed in Section 4OA7.

Enclosure

REPORT DETAILS

Summary of Plant Status:

Unit 1 began the period at 100% rated thermal power (RTP) and remained at ot near 100% RTP for the entire inspection period.

Unit 2 began the period at 100% RTP and also remained there for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

The inspectors reviewed design features and licensee preparations for protecting the Essential Raw Cooling Water (ERCW) intake structure and both Unit 1 and 2 Refueling Water Storage Tanks (RWSTs) from extreme cold and freezing conditions. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), and Technical Specifications (TSs), reviewed and observed implementation of licensee freeze protection procedures, and walked down portions of the systems to assess deficiencies and the system readiness for extreme cold weather. The inspectors performed corrective action program keyword searches to verify that deficiencies were being identified at an appropriate level and that actions were taken to correct problems. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns: The inspectors performed a partial walkdown of the following three 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 system 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 alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program. Documents reviewed are listed in the attachment.

- Motor-Driven Auxiliary Feedwater (AFW) Trains 1A and 1B During Turbine-Driven AFW Pump Section XI Testing
- Containment Spray Train 1A During Testing on Train 1B
- Safety Injection Train 2B During Maintenance on Train 2A

Complete System Walkdown: The inspectors performed a thorough system walk-down of the Component Cooling System A-Train associated with safety-related equipment to verify proper equipment alignment, 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 UFSAR, system procedures, system drawings, and system design documents to determine the correct lineup and then examined system components and their configuration and labeling to identify any discrepancies between the existing system equipment lineup and the correct lineup. The inspectors examined operating pumps for excessive vibration, overheating, and pump leakoff and examined heat exchangers, piping, and supports for signs of leakage and water hammer. The inspectors examined supporting electrical system for proper configuration and labeling. In addition, the inspectors interviewed the system engineer to discuss system health reports, reviewed system corrective action program documents and 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; that fire detection and suppression equipment was available for use; that passive fire barriers were maintained in good material condition; and that compensatory measures for out-of-service, degraded, or inoperable fire protection equipment were implemented in accordance with the licensee's fire plan.

- Control Building Elevation 669 (Mechanical Equipment Room, 250-VDC Battery and Battery Board Rooms)
- Control Building Elevation 685 (Auxiliary Instrument Rooms)
- Auxiliary Building Elevation 690 (Corridor)
- Emergency Diesel Generator Building
- Control Building Elevation 706 (Cable Spreading Room)

- Control Building Elevation 732 (Mechanical Equipment Room and Relay Room)
- Auxiliary Building Elevation 714 (Corridor)
- Auxiliary Building Elevation 734 (Shutdown Board Rooms, Auxiliary Control Room, Battery Board Rooms)
- Auxiliary Building Elevation 749 (Reactor MOV Board Rooms and Battery Rooms)

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors reviewed the turbine building internal flood protection design to assess the interface with and potential flood propagation to the auxiliary and control buildings. The inspectors reviewed the Sequoyah Probabilistic Safety Assessment Individual Plant Examination to verify that assumptions and mitigating elements of various flood scenarios were addressed by plant procedures and operator actions. The inspectors reviewed the two most recent performances of Preventative Maintenance (PM) Work Instruction, PM 007560000, 0-Door-410-A055, covering the past 12 months, to verify that inspection and PM activities for special purpose doors, such as flood doors, were being conducted as required by procedure and regulatory requirement. The inspectors also reviewed calculation SQN-SQS4-0067, Turbine Building Flooding Due to Breaks in the Condenser Circulating Water System, Revision 2, to verify that assumptions were reasonable and actions were addressed by plant procedures and processes. The inspectors walked down selected areas of the plant to view flood protection doors and level detection devices to assess material condition and general condition. Documents reviewed are listed in the attachment.

b. Findings

No Findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

The inspectors observed licensed operator requalification simulator testing on November 22, 2005. The observation involved two crews using the same scenario which involved the loss of an operating Component Cooling System (CCS) pump followed by a secondary leak inside containment requiring operators to perform a rapid shutdown. During the shutdown, a loss of off-site power occurred resulting in an automatic reactor trip. The loss was compounded by an emergency diesel generator failing to start and a cooling water valve on the running diesel engine that failed to automatically open requiring operator action. During the recovery, the secondary leak

degraded into a faulted steam generator resulting in an automatic engineered safety feature (ESF) actuation with the only available containment spray pump failing to auto-start. 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 the Shift Manager, including the ability to identify and implement appropriate TS actions; independent event classification by the Shift Technical Advisor; and group dynamics involved in crew performance. The inspectors also observed the examining staff's assessment of the crew's performance and compared them to inspector observations. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following three 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 the Maintenance Rule, 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 SSCs and functions classified as (a)(2); and 9) appropriateness of goals and corrective actions for systems, structures, and components (SSCs) and functions classified as (a)(1). Documents reviewed are listed in the attachment.

- Repetitive Unplanned Limiting Condition for Operation (LCO) Entry for Failed AFW Flow Indicator
- B-Train 480V Board Room Ventilation Exceeded Reliability Criteria
- A-Train Component Cooling System

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the following five activities to verify that the appropriate risk assessments were performed prior to removing equipment from service for maintenance. 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 7, and Instruction 0-TI-DSM-000-007.1, Risk Assessment Guidelines, Revision 8. Documents reviewed are listed in the attachment.

- U1 Turbine-Driven AFW Pump Maintenance and Testing
- Removal of Emergency Diesel Generator (EDG) 2B from Service during a Raccoon Mountain Inter-tie Transformer and Common Station Service Transformer (CSST) B Breaker Outage
- Removal of Various A-Train Components from Service Plus Vital Battery III and 480V Shutdown Board Room Chiller 2B
- Removal of Unit 2 Turbine-Driven AFW from Service During Switchyard Inter-tie Transformer Breaker Outage
- Sentinel Risk Assessment for Week of December 12, 2005 to December 18, 2005

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Non-Routine Plant Evolutions and Events

a. Inspection Scope

On October 28, 2005, the inspectors observed operator actions following a Unit 2 turbine seal pressure control valve failure in order to assess operator performance during an unplanned non-routine evolution. The failure resulted in a turbine seal steam supply system relief valve opening and an increase in steam demand requiring operators to reduce reactor power and turbine load to avoid exceeding license power limits. The inspectors observed operators follow alarm response procedures and shift management perform command and control functions in the control room, observed personnel in the turbine building establish adequate personnel safety boundaries in the vicinity of the relief valve steam plume, and observed operators perform valve manipulations to stop the leak and establish an alternate seal steam supply. The inspectors reviewed plant data to verify that licensed power limits were not exceeded. The inspectors also observed operators in the control room respond to reactivity transients associated with xenon. Once conditions were stabilized, the inspectors observed power ascension back to 100% RTP and then reviewed operator logs to verify their accuracy and completeness. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

For the seven 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 to verify that the system or component remained available to perform its intended function. In addition, the inspectors reviewed compensatory measures implemented to verify that the compensatory measures worked 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 92090, Temperature Correction for Battery Cell Voltages
- PER 91295, Pipe Chase Room Cooler 2A Past Operability
- PER 91428 & 91429, Containment Spray Heat Exchanger 1A Outlet Valve Throttled Closed
- PER 91330, ERCW Pipe Below Minimum Wall Thickness
- PER 90565, 2A Motor-Driven AFW Oil Viscosity
- PER 93017, Diesel Generator 1A Engine Coolant Leak
- PER 85469, Elevation 714 Penetration Room Cooler 1B Temperature Switch

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the five 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.

- WO 05-775152-000, Charging Pump 2A Auxiliary Oil Pump Pressure Switch Failure
- WO 05-779534-003, Load Test and Inspections of Auxiliary Building Crane

- WO 04-778001-000, Replace Amplifier Card in 1-S Vital Battery Charger
- WO 05-782888-000, Clean Air Side Cooling Coil for Containment Spray Pump 2A Room Cooler
- WO 05-752980-000, Lube, Bridge and Megger Safety Injection (SI) Pump 2A Motor

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the five 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, and 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:

- 2-SI-SXP-063-201.A, Safety Injection Pump 2A-A Performance Test, Revision 10*
- 0-SI-SLT-030-258.1, Containment Isolation Valve Local Leak Rate Test - Purge Air, Revision 4**
- 2-SI-OPS-063-129.B, SI Pump 2B-B Casing and Discharge Piping Vent, Revision 9
- 0-SI-EBT-250-100.5, Performance Testing of 125-VDC Vital Batteries and 125-VDC Vital Battery Charger Test, Revision 13
- 1-SI-ICC-090-106.0, Channel Calibration of Containment Building Lower Compartment Air Monitor, Revision 14***

*This procedure included inservice testing requirements.
**This procedure included testing of a large containment isolation valve.
***This procedure included a leak detection system surveillance.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the two Temporary Alteration Control Forms (TACFs) 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

any safety system. The inspectors walked down each modification to ensure that it was installed in accordance with the modification documents and reviewed post-installation and removal testing to verify that the actual impact on permanent systems was adequately verified by the tests. The inspectors also verified that permanent plant documents were updated to reflect the modification to ensure that plant configuration control was maintained. Documents reviewed are listed in the attachment.

- TACF 1-05-013-063, Temporary Cold Leg Accumulator (CLA) #3 Fill Pump (Phase 2 of TACF 1-05-002-063)
- TACF 1-05-017-062, Temporary Alteration for Unit 1 Loop 1 Reactor Coolant Pump (RCP) Number One Seal Water Temperature Indication 1-TI-62-4

For the temporary CLA # 3 fill pump, the inspectors also 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 meetings which reviewed and approved the installation. Following installation and testing, the inspectors observed system operations at the local operating station and the main control room, observed control room indications affected by the modification and discussed them with operators. Inspectors also verified that the modification and its operation did not adversely affect safety system functions.

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 November 1, 2005, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation (PAR) development activities. The inspectors observed emergency response operations in the simulated control room to verify that event classification and notifications were done in accordance with EPIP-1, Emergency Plan Classification Matrix, Revision 35. 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

.1 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 daily management review committee meetings.

.2 Annual Sample Review of Problems with Refueling Water Storage Tank (RWST) Level Instrument Enclosures

a. Inspection Scope

In January 2003, fluid in two of the wide range level instruments for the Unit 2 RWST froze completely, rendered the instruments inoperable, and resulted in the Unit entering TS 3.0.3. The instruments were subsequently restored to operability before the unit was required to be shutdown. Later that year, following questions by the inspectors, the licensee discovered significant corrosion in all of the level instrument enclosures that, while not specifically affecting the operability of the instruments, required corrective action. The inspectors reviewed licensee actions to resolve this issue because of the history described here and because the RWST wide range level instruments enable the transfer of the emergency core cooling system (ECCS) pump suction from the RWST to the recirculation sump. The inspectors reviewed several PERs, interviewed engineering personnel, and observed several of the corrective actions for this issue. Documents reviewed are listed in the attachment.

b. Findings and Observations

No findings of significance were identified; however, the inspectors noted that the problem statement listed in the apparent cause evaluation did not match the description in the associated PER and that, during corrective actions on Unit 2, several problems occurred that were not originally identified in a PER. The apparent cause evaluation resulted in corrective actions that, while fixing the immediate problem, did not address all causes and may result in repeat corrosion of the enclosures in the future.

PER 27268 documented a series of problems with the local enclosures for the RWST wide range level instruments on each unit. The description of the PER listed problems like a missing door gasket, a lower door flange completely rusted away, a sensing line clamp missing, and tygon tubing connected to the sensing line and extended outside the enclosure. The apparent cause evaluation, which used the "why staircase" method of evaluation, listed the deficiency as problems on the RWST wide range level instrument enclosures not identified or corrected. Consequently, the evaluation determined the

cause to be tolerance for not reporting degraded conditions. The licensee generated corrective actions to address this cause such as revising a maintenance procedure for personnel to be aware of any degraded conditions outside the scope of work being performed, distributing Lessons Learned to all maintenance sections, and consideration of additional training. PER 27268 also contained corrective actions to rework the enclosures and to consider relocating or modifying the enclosures to reduce the possibility of oxidation. Rework of the enclosures, which was complete on Unit 2 and planned on Unit 1, sufficiently corrected the problems. However, because the cause evaluation did not address corrosion caused by water buildup in the moat surrounding the RWST, the licensee considered the actions to relocate or modify the enclosures to only be enhancements which had yet to be implemented.

While observing rework of the enclosures on the Unit 2 RWST, the inspectors observed several problems with the replacement effort. These included leveling of the new enclosures and determining the transmitter height. While these occurred during work in progress and eventually were documented in PER 84212, the inspectors questioned the threshold within the maintenance department for entering problems into the corrective action program. In response, the licensee initiated PER 84694 to address PER initiation within the maintenance department. As a corrective action, maintenance personnel developed a performance indicator to measure self-identification of PERs by each maintenance shop.

.3 Semi-Annual Trend Review

a. Inspection Scope

As required by Inspection Procedure 71152, the inspectors performed a review of the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also included licensee trending efforts and licensee human performance results. The inspectors' review nominally considered the six-month period of July 2005 through December 2005, although some examples expanded beyond those dates when the scope of the trend warranted. Specifically, the inspectors consolidated the results of daily inspector screening discussed in Section 4OA2.1 into a log, reviewed the log, and compared it to licensee trend reports for the period from January 2005 through September 2005 in order to determine the existence of any adverse trends that the licensee may not have previously identified. The inspectors also independently reviewed the Reactor Coolant System (RCS) leakage data for the six-month period of July 2005 through December 2005.

b. Findings and Observations

No findings of significance were identified. In general, the licensee had identified trends and appropriately addressed them in the corrective action program. The inspectors evaluated the licensee trending methodology and observed that the licensee had performed a detailed review. The licensee routinely reviewed cause codes, involved organizations, key words, and system links to identify potential trends in the data. The

inspectors compared the licensee process results with the results of the inspectors' daily screening and did not identify any discrepancies or potential trends that the licensee had failed to identify.

Two equipment issues continued throughout 2005 that have the potential to develop further in a more safety significant issue. The initial discussion of each of these issues was included in IR 05000327, 328/2005003. Unit 1 RCS activity, as measured by dose-equivalent iodine, remained one order of magnitude above normal as compared to the activity before January 2005. While this was well below the TS limits, the licensee determined that a small leak had developed in one rod of one fuel assembly on its first cycle. The licensee has continued sampling the RCS at an increased frequency and monitoring the concentration of various iodine and xenon isotopes in order to detect any changes that would indicate a worsening fuel leak. The trend has remained stable since January 2005 at about 1E-2 micro curies/gram.

Leakage continued through Residual Heat Removal (RHR) Check Valve 1-63-634 in the reverse direction allowing water from CLA # 3 into the RHR headers causing them to pressurize. The licensee had previously installed a temporary continuous vent on the RHR headers to reduce the operator burden and, during December 2005, installed a temporary modification to keep the accumulator filled and reduce the number of starts on the SI pumps. The leakage rate has remained stable at approximately 13 gallons/hour since June 2005, well below the TS limit of 3 gallon/minute.

4OA5 Other Activities

.1 Review of the Operation of an Independent Spent Fuel Storage Installation (ISFSI) (60855.1)

a. Inspection Scope

The inspectors reviewed the ISFSI to verify that normal operations were conducted in a safe manner in accordance with approved procedures and without undue risk to the health and safety of the public. The inspectors walked down the ISFSI pad to assess the material condition of the casks. The inspectors also reviewed dry cask storage records from the previous loading campaign to verify that the licensee had identified each fuel assembly placed in the ISFSI, identified the parameters and characteristics of each fuel assembly, maintained controlled copy records of all spent fuel placed in the ISFSI, maintained duplicate records at a separate location, and performed a physical inventory every 12 months. Documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2 (Closed) Unresolved Item (URI) 05000327/2004009-03, Inadequate Design Control for Calculation 44N300C7, 125-Ton Crane-Auxiliary Building (ISFSI)

This issue was thoroughly addressed in Inspection Report 07200034/2005002, issued on January 9, 2006. The URI is closed based on the findings of that inspection.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On January 5, 2006, the resident inspectors presented the inspection results to Mr. Randy 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.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (green) were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as NCVs.

- TS 6.8.1 required procedures covering the activities specified in Appendix A of Regulatory Guide (RG) 1.33, Revision 2. Paragraph 3m of the Appendix required procedures for operating the service water system. Procedure 0-SI-OPS-067-682.M, ERCW Flow Balance Valve Position Verification, Revision 23, specified the valve lineup needed to ensure that each throttled valve in the ERCW System was in its correct position. Contrary to that procedure, from October 1, 2005, until October 24, 2005, Containment Spray (CS) Heat Exchanger 1A Throttle Valve 1-67-537A was incorrectly positioned resulting in a low flow condition through the heat exchanger. This was discovered by a licensee system engineer and documented in PERs 91428 and 91429. This violation was of very low significance because licensee evaluation showed that, during system operation in design basis conditions, flow through CS Heat Exchanger 1A would remain above the design requirements.

- TS 6.8.1 required procedures covering the activities specified in Appendix A of RG 1.33, Revision 2. Paragraph 3m of the appendix required procedures for operating the service water system. Procedure 0-PI-SFT-067-003.0, ERCW System Manipulation for Plant Activities, Revision 15, controlled the valve alignment during chemical treatment of the ERCW system. Contrary to that procedure, from October 15, 2005, to October 20, 2005, Pipe Chase Cooler 2A Temperature Control Valve 2-FCV-67-342 was failed closed due to incorrect positioning of 3-way Air Supply Valve 2-XDV-67-342 resulting in no cooling for the Unit 2 Pipe Chase. This was discovered by a licensee system engineer and documented in PER 91295. This violation was of very low significance because licensee evaluation showed that equipment located in the pipe chase would remain functional following analyzed transients and design basis accidents.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee personnel:

J. Bajraszewski, Licensing Engineer
D. Bodine, Chemistry/Environmental Manager
K. Clayton, Maintenance Manager
B. Dungan, Outage & Site Scheduling Manager
R. Douet, Site Vice President
R. Goodrich, (Acting) Site Security Manager
S. Hilmes, (Acting) Systems Engineering Manager
Z. Kitts, Licensing Engineer
D. Kulisek, Plant Manager
M. A. Palmer, Radiation Protection Manager
M. H. Palmer, Operations Manager
K. Parker, Maintenance and Modifications Manager
R. Richie, Human Performance Manager
R. Rogers, (Acting) Engineering and Site Support Manager
J. Smith, Site Licensing Supervisor
T. Whitten, Operations Superintendent
K. Wilkes, Emergency Preparedness Manager

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

Closed

05000327/2004009-03	URI	Inadequate Design Control for Calculation 44N300C7, 125-Ton Crane-Auxiliary Building. (ISFSI) (Section 4OA5.2)

Attachment

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

M&AI-27, Freeze Protection, Revision 12
1-PI-EFT-234-706.0, Freeze Protection Heat Trace Functional Test, Revision 28
2-PI-EFT-234-706.0, Freeze Protection Heat Trace Functional Test, Revision 18
PER 82635, Determining Need to Insulate RWST Level Transmitter Boxes
SQN-SQS2-0101, Qualitative Evaluation of the Heating Capacity Provided by the RWST Instrument Enclosure dated 11/11/89
PER 73150, Clarification of 1/2-PI-EFT-234-706.0 Acceptance Criteria and Measurement Practices

Section 1R04: Equipment Alignment

UFSAR Section 9.2.1
Component Cooling Water System Status Reports
Component Cooling System Health Report Cards
2-SO-70-1, Attachment 4, Component Cooling Water System "A" Train Valve Checklist 2-70-1.04, Change 4
2-SO-70-1, Attachment 3, Component Cooling Water System "A" Train Valve Checklist 2-70-1.03, Change 11
1-SO-70-1, Attachment 3, Component Cooling Water System "A" Train Power Checklist 0-70-1.03, Change 9
2-SO-70-1, Attachment 1, Component Cooling Water System "A" Train Power Checklist 2-70-1.01, Change 10
1-SO-70-1, Attachment 1, Component Cooling Water System "A" Train Valve Checklist 1-70-1.01, Change 10
1-SO-70-1, Attachment 2, Component Cooling Water System "A" Train Power Checklist 1-70-1.02, Change 5
1-SO-70-1, Attachment 5, Component Cooling Water System "A" Train Valve Checklist 1-70-1.05, Change 4
1-SO-70-1, Attachment 6, Component Cooling Water System "A" Train Valve Checklist 0-70-1.06, Change 10
1,2-47W859-1, Mechanical Flow Diagram Component Cooling System, Revision 51
2-47W859-3, Mechanical Flow Diagram Component Cooling System, Revision 31
1,2-47W859-4, Mechanical Flow Diagram Component Cooling System, Revision 21
1-47W859-2, Mechanical Flow Diagram Component Cooling System, Revision 31

Section 1R06: Flood Protection Measures

UFSAR Section 6.3
1-AR-M15-B, Miscellaneous 1-XA-55-15B, Revision 25
1-AR-M15-A, Service Water - CCW- HPFP (1-XA-55-15A), Revision 22
0-PI-IFT-040-001.0, Functional Test of Auxiliary and Reactor Building Flood Alarms, Revision 4
1,2-44W364-1, Watertight Personnel Doors Arrangement and Details, Sheet 1, Revision 1

46W402-1, Architectural Plans Elevation 669.0 & 685.0, Revision 21F
NC0880164018, Develop Procedures for Testing of the Turbine, Auxiliary and Reactor Building Flood Alarm Detection System
IN 2005-30, Safe Shutdown Potentially Challenged by Unanalyzed Internal Flooding Events and Inadequate Design

Section 1R11: Licensed Operator Requalification

TRN-11-10, Annual Requalification Examination Development and Implementation, Revision 9
PER 93388, Simulator Electronic Recorders Not Advanced

Section 1R12: Maintenance Rule Implementation

PER 76282, Failed AFW Flow Indication
PER 88070, Failed AFW Flow Indication (2-FI-3-147)
PER 88303, AFW Flow Modifier Found Out-of-Tolerance
WO 05-771159-000, Troubleshoot/Repair Aux Control Room Loop 3 AFW Flow Indicator
WO 05-779084-000, Troubleshoot/Repair Aux Control Room Loop 3 AFW Flow Indicator
Functional Failure Records for Auxiliary Control Room

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

FSAR Section 8.1
FSAR Section 8.2
GOI 6, Apparatus Operations Section AA, Revision 105
1,2-15E500-1, Station Aux Power System, Revision 24
1,2-15E500-2, Station Aux Power System, Revision 11
1,2-15E500-3, Transformer Taps and Voltage Limits, Aux Power System, Revision 15
Sentinel Data for October 17 to November 6, 2005

Section 1R14: Operator Performance During Non-routine Evolutions and Events

AOP-S.05, Steam Line or Feedwater Line Break/Leak, Revision 5
2-AR-M2-A, Alarm Response Procedure A-5, PS 47-196B Turbine Seal Steam Press Abnormal, Revision 27
Control Room Operating logs for October 28, 2005

Section 1R15: Operability Evaluations

NEDP-22, Functional Evaluations, Revision 2
SPP-3.1, Corrective Action Program, Revision 9
IEEE Standard 450-1980, Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations
SQN-VTD-C173-0020, C&D Power Systems Stationary Battery Installation and Operating Instructions
0-SI-EBT-250-100.2, 125VDC Vital Battery Quarterly Surveillance, Revision 10 - Performances Dated August 24, 2005, September 6, 2005, October 6, 2005, October 17, 2005, October 20, 2005, October 24, 2005, and October 27, 2005

0-SI-EBT-082-238.2, Diesel Generator Battery Quarterly Operability, Revision 11 - Performances Dated August 2, 2005, August 17, 2005, September 21, 2005, October 28, 2005, November 4, 2005
PER 81726, Unit 1 AFW Pump Oil Sample Indicated Particle Count Exceeded Guideline
PER 90628, Containment Spray Pump 1A Oil Viscosity Out of Specification
Sequoyah Program Document for 10 CFR 50.49
UFSAR Sections 3.11 and 6.3.2.2
Sequoyah Program Document for Age Analysis
MDQ000-067-2004-0149, Determination of ERCW System Flow Capability, Revision 0
1-SI-OPS-82-024.A, 1A-A D/G 24 Hour Run and Load Rejection Testing, Revision 14
PER 90113, Low water Level in Diesel Generator 1A
Procedure 0-PI-DXX-000-704.1, MIC and Cavitation Degradation Monitoring Program, Revision 4
SQN-DC-V-13.9.3, Auxiliary Building Ventilation and Cooling Design Criteria, Revision 3
SQN-DC-V-21.0, Sequoyah Environmental Design, section 6.2.3, Revision 19
1,2-45N779-19, Wiring Diagram 480V Shutdown Aux Power Schematic, Revision 22
SQNAPS2-121, Environmental Response of Auxiliary Building to High Energy Line Breaks, Revision 3
TI-54, Compliance Instruments, Revision 23
TI-59, Listing of Technical Specification, TRM, ODCM and Compliance Instruments, Revision 14

Section 1R19: Post Maintenance Testing

SPP-6.3, Pre/Post-Maintenance Testing, Revision 2
0-MI-ECR-303-921.0, Auxiliary Building Crane Periodic Inspection, Revision 8
WO 04-778000-000, Replace Discrete Capacitors and Resistors on 125V Vital Battery Charger 1-S
WO 05-782683-000, Troubleshoot Overheated Resistors in 125V Vital Battery Charger 1-S
DWG IDF-230-B9-10-1, Three Phase Constant Potential Power Supply, Revision B
0-PI-SFT-030-755.0, Equipment Coolers Operability Test, Revision 4

Section 1R22: Surveillance Testing

SPP 10.3, Verification Program, Revision 1
NEDP 14, Containment Leak Rate Programs, Section 4 and Appendix B, Revision 5
NEDP 14 TVAN Leak Rate Certification Records (2 samples)
2-47W811-1, Flow Diagram-Safety Injection System, Revision 57
0-PI-EBM-000-001.2, Battery Bank High Level Equalize Charge, Revision 15
SSD 1-R-90-106, Engineering Setpoint and Scaling Document For Lower Containment Radiation Monitor
1-SI-OPS-000-002.0, Shift Log, Revision 75
PER 92687, Temporary Power Lost during Calibration of Lower Containment Radiation Monitor
PER 92560, Rubber Grommet on 1-RE-90-106B Improperly Installed.

Section 1R23: Temporary Plant Modifications

SPP-9.5, Temporary Alterations, Revision 8
SPP-9.3, Plant Modifications and Engineering Change Control: Appendix C - Technical Evaluation Considerations, Revision 12

Section 4OA2: Identification and Resolution of Problems

PER 27268, RWST Wide Range Level Instrument Enclosure Inspections
PER 27271, RWST Wide Range Level Instrument Enclosure Venting Inspection
PER 82624, Tubing Support not Located in Accordance with Drawings
PER 84212, Problems with RWST Level Instrument Enclosures During U2C13
PER 84694, Maintenance Department does not Consistently Initiate PERs in a Timely Manner
PER 85151, Actions From Self-Assessment SQN-SIT-05-007
SQN-SIT-05-007, Corrective Action Program - Focused on NRC Module 71152
SPP-3.1, Corrective Action Program, Revision 9

Section 4OA5: Other Activities

PFE-445, Execution of NFTP-100 Procedure for SQN Dry Cask Campaign 1, Revision 0
SNM Inventory Forms dated June 9, 2004; July 16, 2004; July 28, 2004; and May 19, 2005
WO 04-774191-001, Perform the First Spent Fuel Loading Campaign Using MPC SN-0006
WO 04-774191-002, Perform DCS Spent Fuel Loading Operations Using MPC SN-0004 and Hi Storm 0064
WO 04-774191-003, Perform DCS Spent Fuel Loading Operations Using MPC SN-0005 and Hi Storm 0077