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

September 7, 2007

Tennessee Valley Authority
ATTN: Mr. William R. Campbell
Chief Nuclear Officer and
Senior Vice President
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT - NRC PROBLEM IDENTIFICATION AND RESOLUTION (PI&R) INSPECTION REPORT 05000327/2007008 AND 05000328/2007008

Dear Mr. Campbell:

On August 10, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Sequoyah Nuclear Plant, Units 1 and 2. The enclosed inspection report documents the inspection findings, which were discussed on August 10, 2007, with Mr. R. Douet and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and with the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, overall the team concluded that problems were being properly identified, documented, evaluated, and corrected. However the team identified several isolated examples where corrective actions did not appear appropriate, were not accurately documented, or were not completely carried out. The team observed that the quality of Problem Evaluation Report documentation has improved since the last NRC biennial PI&R inspection. The team did observe that there continues to be some lingering issues regarding extension of corrective actions due to resource limitations.

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/

Tilda Y. Liu, Acting Chief
Reactor Projects Branch 6
Division of Reactor Projects

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

Enclosure: Inspection Report 05000327/2007008 and 05000328/2007008
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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REGION II

Docket Nos:	50-327, 50-328
License Nos:	DPR-77, DPR-79
Report No:	05000327/2007008 and 05000328/2007008
Licensee:	Tennessee Valley Authority (TVA)
Facility:	Sequoyah Nuclear Plant
Location:	Sequoyah Access Road Soddy-Daisy, TN 37379
Dates:	July 23, 2007 - August 10, 2007
Inspectors:	J. Baptist, Team Leader S. Freeman, Senior Resident Inspector W. Fowler, Reactor Inspector A. Richardson, Physical Security Inspector
Approved by:	T. Liu, Acting Chief Reactor Projects Branch 6 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000327/2007008, IR 05000328/2007008; 07/23/2007 - 08/10/2007; Sequoyah Nuclear Plant, Units 1 & 2; Problem Identification and Resolution.

The inspection was conducted by one Region II senior project engineer, a senior resident inspector, one Region II reactor inspector, and a Region II physical security inspector. No findings were identified during this inspection.

Identification and Resolution of Problems

The team determined that the licensee was identifying plant deficiencies at an appropriately low level and effectively entering them into their corrective action program. The team also determined that the licensee was prioritizing and evaluating issues properly. The team identified several isolated examples where corrective actions did not appear appropriate, were not accurately documented, or were not completely carried out. Overall, the team found the effectiveness of corrective actions to be acceptable. The team observed that the quality of Problem Evaluation Report (PER) documentation has improved since the last NRC biennial PI&R inspection, but further improvements could be made. There continue to be multiple extensions for corrective actions with resources identified as the most significant contributing cause. The team concluded, however, that the licensee was generally providing an effective corrective action program.

The inspection team identified that the last NRC Sequoyah PI&R inspection report 50-327,328/2005009, issued 09/09/05 identified lingering technical problems with the Electronic Corrective Action Program (eCAP) electronic document management program. A review of the technical interface between personnel and the eCAP program identified that personnel were comfortable with the software and it's functionality in creating and processing PERs.

On the basis of interviews conducted during this inspection, the inspectors determined that workers at the site felt free to put safety concerns into the corrective action program. The inspectors concluded that the Employee Concerns Resolution program was functioning acceptably but the inspectors observed that there was a work backlog.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspectors reviewed items selected across the seven NRC cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program (CAP) for timely and complete evaluation and resolution. The inspectors reviewed in detail the licensee's CAP procedure, SPP-3.1, "Corrective Action Program," Revision (Rev.) 12, which described the process for documenting and resolving issues via problem evaluation reports (PERs). The licensee's CAP procedure defined four priority action categories for significance screening of their PERs. These categories include Level A for significant adverse conditions, Level B for adverse conditions of substantial severity potentially warranting corrective action, Level C for conditions adverse to quality where documentation of corrective actions is required, and Level D for conditions that are not adverse to quality and do not warrant correcting, but rather, can be enhanced, improved, or made more efficient. The team reviewed items selected across the span of plant activities to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. Specifically, the inspectors selected and reviewed approximately 340 PERs initiated by the licensee from July 2005, to July 2007. When necessary, the inspectors' reviews included PERs older than July 2005 that were referenced by the original PER sample set. The team examined PERs and work orders (WOs) associated with the Auxiliary Feedwater System, Emergency Raw Cooling Water System, and the Component Cooling Water System. The team reviewed PERs associated with Operations, Maintenance, Engineering, Radiological Protection, Chemistry, Security and Emergency Preparedness events, problems, and deficiencies. The team reviewed operating experience resolution documents, and Employee Concerns Resolution activities. The team also reviewed licensee corrective action trend reports, PER effectiveness reviews, as well as Nuclear Assurance department audits and surveillances from the review period. The team evaluated these items to determine the licensee's threshold for identifying problems.

The inspectors conducted walkdowns of components associated with the Auxiliary Feedwater System, Emergency Raw Cooling Water System, and the Component Cooling Water System to verify that problems had been properly identified and characterized in the CAP. System performance was reviewed by discussion with system engineers and by review of work requests (WRs) and completed maintenance work orders (WOs), maintenance rule data, and system health reports to verify that equipment deficiencies were being appropriately entered into the CAP. Control room operator logs were reviewed to verify that PERs were initiated for deficiencies described in the logs when appropriate. In addition, the inspectors attended plant morning status meetings and CAP initial review meetings to observe management oversight in the corrective action process. The inspectors reviewed licensee audits and self-assessments (focusing primarily on problem identification and resolution) to verify that findings were

entered into the CAP and to verify that these findings were consistent with the NRC's assessment of the licensee's CAP.

Documents reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues.

The team determined that the licensee was effective at identifying problems at an appropriately low threshold and entering them into the corrective action program. Only in review of PER 94993, written January 7, 2006 to document repetitive High Pressure Steam Supply controller component failure, was there evidence that a PER was never initiated to examine the cause of the repeat event. At the time of the close of the inspection, the licensee had already addressed this issue and entered the issue into the corrective action program as PER 128545.

The inspectors observed that the licensee had implemented a process for initiating an anonymous PER. Paper copies of PERs are available throughout the plant and have various drop-boxes for depositing the concerns. This is referenced in the last NRC Sequoyah PI&R inspection report 50-327,328/2005009, issued 09/09/05 and was verified to be functional through inspection of the anonymous PER database and interviews with site personnel.

Prioritization and Evaluation of Issues.

The team determined that PER level classifications were consistent with established procedures and that licensee audits and self-assessments generally confirmed that conclusion. The team further determined that operability, reportability, degraded or non-conforming condition determinations and cause evaluations were also consistent with SPP-3.1. However, the team did identify one evaluation and two classification deficiencies that were entered into the corrective action program by the licensee at the close of the inspection.

- On November 27, 2004, operations identified elevated RHR discharge pressures during an RCS leak search. Subsequently, PER 72764 was then generated to address the cause and affects on operability. The Functional Evaluation (FE) to determine RHR operability did not address potential affects on elevated RHR system suction side pressures in the event the RHR pumps are started and maintained on min-flow. After operating on min-flow the RHR discharge piping pressures will then equalize with pressures in the suction piping. Equalizing pressure in the suction piping could then impact the ability of the containment sump valves to open in order to enter recirculation. During the inspection further evaluations were performed and verified the suction piping would have equalized at 275 psi, which is below the 305 psid maximum opening pressure that the double-disk containment sump gate valves can operate under. At the time of the completion of this inspection, the licensee had entered the issue into the corrective action program as PER 128560.

- PERs 88634, “Fitting Omitted from Design Documentation for EDG Pressure Control Valve Modification” and 88773, “Expert Panel not Properly Notified When 480V Auxiliary Board Room A/C Train B Exceeded Maintenance Rule Functional Failure Criteria” were identified to have been improperly classified as “D” level PERs when they met the licensee’s criteria for issue classification of “C” level PERs. At the time of the completion of this inspection, the licensee had entered the issue into the corrective action program as PER 128216.

The inspectors observed that there had been many time extensions granted on PER actions in the past. The licensee has recently recognized this data, as well, and plans to revise procedures to require an escalating level of approval for successive corrective action extensions.

Effectiveness of Corrective Actions.

Based on a review of numerous corrective action plans and their implementation, the team found, for the most part, that the licensee’s corrective actions were effective. Effectiveness reviews and audits were generally of good depth and correctly identified issues similar to those raised during previous NRC inspections. However, the team did identify several corrective action deficiencies.

- During a review of a May 2007 security event identified in PER 124559, the inspectors noted that an issue related to Safeguards Information, was not effectively dispositioned. The license identified Safeguards Information in a non-Safeguards document and performed actions to remove the Safeguards Information but did not ensure all actions were taken to expunge the information from other potential sources. Based on a subsequent review of this issue by the licensee, PER 128744 was issued to document the issue and corrective actions were taken. This ineffective review is considered a weakness in the area of problem resolution, however, additional inspection is needed. Pending completion of additional inspection, this issue will be identified as URI 05000327, 328/2007008-01, Safeguards Information.

- On July 13, 2006, PER 104944 was created to address testing of eight GL 89-10 MOVs prior to the 120 day deadline requirement for issuance of the trend report after the U1C13 outage. Subsequently, not all MOVs were tested prior to the 120 day deadline. However, procedural guidance has been revised by requiring testing of all valves prior to issuance of the trend report rather than being an expectation.

- On April 26, 2007, the Main Control Room (MCR) weather radio did not perform its function of informing the MCR staff of a tornado watch in the local area. This failure prevented the MCR staff from initiating actions to mitigate the potential damage should a tornado strike the site. This issue was previously identified in PER 99140 on March, 14, 2006 which was closed to Work Order (WO) 06-773314 without any further actions taken. At the time of the completion of this inspection, the licensee had purchased a new MCR radio and entered the issue into the corrective action program as PER 128060.

- On April 23, 2006, PER 101573 was written identifying the 1B-B Emergency Diesel Generator (EDG) 1B2 engine Woodward governor speed droop setting found out of position. The governor speed droop setting stayed in such a configuration for approximately three months without correction. A functional evaluation was performed verifying that the 1B-B EDG remained operable but numerous monthly maintenance test procedures were performed with the setting in a position contrary to that identified in the surveillance procedure. The team determined that actions to immediately disposition the PER were not adequate addressed in a timely manner.

- On July 17, 2006, PER 106937 was written to evaluate measures that would prevent the potential for releasing Tritium from the Reactor Water Storage Tank (RWST) moat in times of heavy rainfall. Actions were taken, however, on July 11, 2007 and July 28, 2007 the RWST moat was allowed to overflow. The team concluded that the corrective actions to prevent such occurrences were inadequate even though radiological limits were not exceeded. At the time of the completion of this inspection, the licensee had devised a new process to attempt to prevent such occurrences.

- On February 23, 2006 PER 97828 was written to identify Abnormal Operating Problems in Radiological Emergency Preparedness Drill. The problem description section of the PER asked for a training needs evaluation after changes were made to the procedure, however, there were no actions specified in the PER to accomplish this activity. The team concluded that the licensee did not comply with prescribed closeout provisions of licensee procedure SPP-3.1, Corrective Action Program. At the time of the completion of this inspection, the licensee had entered the issue into the corrective action program as PER 127938 with plans to complete the training needs analysis as previously mentioned.

- On August 25, 2005, PER 88252 was written to document the storage of items in front of an Emergency Operating Instruction (EOI)/ Abnormal Operating Procedure (AOP) gang box. The items maintained in the gang box provide a means to mitigate a loss of the safety related service water to the plants coolant charging pumps. This was a repeat occurrence from July 9, 2005 when PER 85589 was written for a similar occurrence. The actions taken to disposition PER 88252 were adequate in preventing future occurrences of the same event, however a PER was never written questioning why the adequacy of PER 85589 was not successful in preventing recurrence. At the time of the completion of this inspection, the licensee had entered the issue into the corrective action program as PER 128058.

The inspectors did not identify any more than minor equipment performance issues from the above described deficiencies.

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The inspectors examined licensee programs for reviewing industry operating experience, reviewed the licensee's operating experience database, and interviewed personnel, to assess the effectiveness of how external and internal operating experience data was handled at the plant. In addition, the inspectors selected thirteen operating experience notification documents (NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and TVA plant internal operating experience items, etc.), which had been issued since April 2005, to verify whether the licensee had appropriately evaluated each notification for applicability to the Sequoyah plant. Documents reviewed are listed in the Attachment.

(2) Assessment

The team determined that the licensee was effective in screening operating experience for applicability to the plant. The inspectors verified that the licensee had entered those items determined to be applicable into the CAP and taken adequate corrective actions to address the issues. External and Internal operating experience was adequately utilized and considered as part of formal root cause evaluations for supporting the development of lessons learned and corrective actions for CAP issues.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The inspectors reviewed CAP trend reports, CAP backlogs, PER trend reports, department self-assessments, and Nuclear Assessment Section audits to verify that the licensee appropriately prioritized and evaluated problems with the CAP in accordance with their risk significance. The inspectors compared the NRC's CAP assessment results against the licensee's assessment of the CAP effectiveness.

(2) Assessment

The team determined that the scope of self-assessments and audits were adequate. Department self-assessments and Nuclear Assessment Section audits were generally self-critical and effective in identifying issues that were entered in the CAP for resolution. Corrective actions developed as a result of these assessments and audits were generally effective. The team noted that these audits and assessments identified issues similar to those identified by the NRC.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The team reviewed numerous audits, assessments, PERs, WOs, and other corrective action documents and held discussions with numerous personnel at various levels in the organization to assess if a work environment existed that was conducive to the

identification of nuclear safety issues. Inspectors also examined the licensee's employee Concerns Resolution Program records and discussed the program with the implementer to determine if issues affecting nuclear safety were being appropriately addressed.

(2) Assessment

The team determined that workers at the site felt free to raise safety concerns. Personnel stated that they do not hesitate to raise nuclear safety issues to their management without fear of retaliation by their management. The wide spectrum of PER documented issues supported this conclusion. The team had no indication during this inspection of individuals being inhibited from identifying problems using the corrective action process.

Inspectors concluded that the Concerns Resolution Program was functioning acceptably, but that there was a backlog of work to be done in the program. There were no technical safety issues identified that were lingering without attention in the program.

The inspectors reviewed the last three Nuclear Assurance (NA) assessments of the CAP program performance. The management organization is appropriately responding to NA by initiating PERs and taking corrective actions.

4OA6 Meetings

Exit Meeting Summary

On August 10, 2007, the 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.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee personnel:

P. Asendorf, Manager, Nuclear Security
R. Reynolds, Security Manager
J. Wilcox, Vice President Pinkerton Government Services
C. Sneed, Security Coordinator
K. Rao, AFW System Engineer
T. Noe, NSSS Engineering Supervisor
F. Little, Support Supervisor
M. Williams, Facilities Manager
S. Fraiser, System Engineer
D. Clift, Site Support Manager
D. Dotson, CCS System Engineer
J. Walker, Chiller System Engineer
R. Callergari, Mechanical Design Engineer
K. Wilkes, Emergency Preparedness Manager
K. Perkins, Operations Support Superintendent
B. McCreary, Employee Concerns Specialist
K. Jones, Engineering Manager
B. Knitter, EDG System Engineer

NRC personnel:

S. Freeman, Sequoyah Senior Resident Inspector
M. Speck, Sequoyah Resident Inspector
S. Vias, Branch Chief, PI&R

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000327, 328/2007008-01	URI	Safeguards Information

Opened and Closed

None.

Closed

None.

Discussed

None.

LIST OF DOCUMENTS REVIEWED

PERs Initiated as a Result of this Inspection

126565, Corrective Action Program Improvement Opportunities
127938, Corrective Action Program failed to address training aspects of PER
128055, Inadequate PER corrective action
128058, Inadequate PER corrective action plan
128062, NRC questions on PER 99140
128216, Improperly classified Engineering PERs
128235, PER classification guidance
128545, NRC PI&R item 11
128560, Inadequate Functional Evaluation
128673, Safeguards Information
128675, Procedure deficiency in OPS PI
128683, ERCW Strainers
128773, Evaluation of performance deficiencies
128774, Closing PER actions to work orders

Selected Problem Evaluation Reports (PERs)

78364, Manual operations for App B fire
82765, 125v VBB ground
85589, EOI/AOP Equipment
87768, Analysis of repeat LCO entries due to weather related MET Tower failures
87777, Improve PORC
87796, Cooling Tower Blowdown
87899, Loss of accident monitoring system
87934, SPP 10.0 Site specific revision
87970, Repeat Maintenance
87987, Unplanned LCO action entry 2-FI-3-147
88070, Repeat unplanned LCO action entry
88252, EOI/AOP Gang box
88320, Appendix R AOP-N.08 times not met during drill
88323, Different Cold Shutdown Requirements
88457, Containment Spray
88538, Missed compensatory fire watches
88546, Containment Spray Heat Exchanger ERCW Valve Cycling
88546, CS Htx ERCW vlv cycling
88624, SAFETY HAZARD in the U-2 Lower Containment ACC. #4
88634, Fitting Omitted from Design Documentation for EDG Pressure Control Valve Modification
88728, During the initial startup on 1A Diesel generator
88760, Work hour tracking system violation
88773, Expert Panel not Properly Notified When 480V Auxiliary Board Room A/C Train B Exceeded Maintenance Rule Functional Failure Criteria

88818, Lighting WOs affecting safety
88839, Woodward governor settings
88845, This PER is initiated to address generic review of Browns Ferry
88981, Procedure performance errors
89082, Cross-reference of PERs and Wos
89312, 1C CCW Strainer Bypass Valve
89315, Eagle rack card failure and LCO action entry
89434, Bowled Fuel Equipment RCFA
89508, RPI deviation
89667, Tracking of control room deficiencies
89727, RPIs nearing TS deviation limits during power reduction
89746, Late corrective action
90200, Fire pump operability miscommunication
90264, Procedure performance error
90289, Installation of improper gauge for troubleshooting
90293, Procedure compliance
90562, ERCW B-B Forebay Inspection
90565, Aux. FWP Motor 2AA outboard oil viscosity
90604, D/G 1B-B Woodward governor dial speed settings do not match procedure
90889, Human performance issues
91096, 0-PI-OPS-027-431.0
91236, Annual Force of Force drills
91275, RCP seal integrity – Appendix R requirements
91295, Improper Procedure Compliance Results in Inoperable ECCS Equipment
91295, Improper procedure compliance results in unplanned inoperable ECCS equipment
91382, Lower Compartment Cooler Temperature Controller Locked Up
91383, Validation of AOP-N.08 Appendix R fire safe shutdown
91429, Throttle valve misposition
91473, Rad Monitor 0-90-134 Declared Inoperable on Low Flow
91491, 171-MAI-B.2 NRSB item
91899, NRC Identified Lighting Issue
92021, Manhole #33
92056, Oil Containment Project
92192, RHR 1A sample lines
92217, Channeling barrier issue
92359, NPDES self-assessment SQN-ENV-06-001
92361, O-ring sealing
92433, COG report identified issue- Admin processes
92485, “A” HUT collapsed due to apparent lack of adequate vent path.
92538, A small tear was noted in the Containment Recirc Sump Screen
92581, Severe weather warning radio inoperable
92643, During the 11/14/05 performance of 0-SI-EBT-250-100.1
92664, NRC identified deficiencies in AOP-C.04
92767, Appendix R scenario – control building fire resulting in spurious SI
92781, During certain milling operation
92930, Unacceptable linear indications were found
93072, S/A SQN-OPS-05-006 Reactivity events

93120, LEFM
93201, Late corrective action plans
93347, CCP casing vents
93354, CTLP bearing lube water valve misposition
93408, Increasing tend of unplanned LCOs
93483, There has been an increasing trend of sodium in the 1A2 DG Engine
93598, Clearance hold order lifted improperly
93648, During the root cause investigation of HUT tank 'A'
94038, ERCW Header valves on elevation 669
94116, Flood mode discrepancies
94166, Aux Charging pump test deficiencies not adequately addressed
94381, During the post maintenance testing of the A Shutdown Board
94422, Chiller Oil Cooler TCV
94479, Preventative maintenance procedure
94714, No clearance on AHU with belts removed
94874, During a QC inspection of support 1-PSP-63-5416
94933, Failure of 2-PCV-47-183
94948, PER 27268 was initiated to address degradation
95000, Unplanned Entry into LCO Lower Compartment Cooler Temperature Control Valve Position Indication
95007, Component mispositioning
95086, On 07/17/2005 MSB initiated a potential trend PER 86076
95088, After the necessary repairs were made
95320, During the performance of 2-SI-IFT-099-90.8B
95328, SPP 10.3 CV
95391, Unit 2 forced shutdown due to 2B Main Bank Transformer gassing
95421, At the entrance of the CCW Pumping station
95459, Clearance 2-57-333-F/O error
95529, Equipment deficiency was not indicated on MCR panel
95589, AUO round quality
95595, Ability to terminate ECCS prior to pressurizer solid
95602, Beaver Valley identified a potential Appendix R fire scenario
95624, Dry cask storage multi-purpose canister lid for MPC-0011
95629, Inadequate clearance
95632, Reactivity Mgmt. review board minutes
95809, A gas analysis taken from the Main Bank Transformer 2A
95830, ILT suspension not documented in the CAP
96027, Conflicting requirements on number of SCBA-qualified AUOs
96470, Clearance Trend PER
96707, Need to evaluate level of use of FHIs
96885, Quarterly review identified adverse trend in admin process compliance
96893, Admin process weakness
96987, 1A Thermal Barrier Booster Pump degradation
96987, The AB AUO identified that there has been a recurring condition
96994, During the preventative maintenance calibration
97047, U1 RCS Nickel concentration exceeded action limit
97293, The INPO assist visit on rigging identified many examples

97397, During performance of WO 05-781372-002
97415, NSRB Management attention item
97417, NSRB Management attention item MAI #2
97472, Twenty-Five PERs or WOs have been written on delay gates
97488, UT of weld removal areas
97642, 2-VLV-84-504 failed one of two acceptance criteria
97837, Security Problems in Red Team REP Drill
97995, During review of level C apparent cause PERs
98061, Entry into AOP M.03
98110, Change out of lock cores
98212, Inconsistency Between FE and Associated Procedure Revision
98399, During a review of critical crack exclusion documentation
98572, In the past two years, at least a dozen closed work orders
99057, On 3/11/06 the U1 RCS nickel concentration increased
99087, During shop fabrication activities for DCN D21955
99140, Weather radio
99184, Elevated dose rates were identified in the Unit 1 Raceway
99396, Contamination of Explosive Detectors
99451, Benchmarking trips (Self assessment SQN-OPS-06-001)
99453, Self assessments frequently canceled (Self assessment SQN-OPS-06-001)
99455, Self assessment improvement awareness
99755, Unit 2 Generator Trip
99821, Unit 1 VCT divert valve
99878, Inappropriate PER action closure
100314, Unplanned LCO entry
100377, During QC inspection of pipe supports installed for TACF
100476, Midcycle findings on ODMI
100700, IM, TLD 1565, exited U-1 Annulus elevation 721’
100770, Individual (Inst. Maint., TLD #281890) received a Dose Rate alarm
100856, During removal of the CRDM platform seismic ties
100965, INPO SER 4-04 Not Fully Reviewed
100997, A spare 15 HK breaker was receipt inspection
101021, Just prior to head removal the cavity ladder extension is removed
101219, Valve stem for reactor head vent valve 1-FSV-068-0396
101294, Debris was identified
101556, During sleeve sealing activities in Accumulator Room #4
101573, Speed droop setting 1B-B D/G
101627, Breaker 204 and 205 on Vital Battery Board II
101657, Multiple remote shutdown transfer switch failures in 1-PI-OPS-000-010.D
101657, There have been multiple failures
101742, Failure to stroke of 1-FCV-63-72
101917, Minor maintenance work PMT
102424, During removal of the sump cover in the Terry Turbine Pump
102513, During the performance of WO # 05-778412-002
102591, RVLIS spoolpiece installed during draindown
102845, During initial pressurization of the Reactor Cooling System
102930, Steam header pressurization from steam seal header

103178, Rod speed indicator malfunction
103226, NRC Questions for PER 81622
103342, Motor Driven Auxiliary Feedwater Pump 1B-B
103342, PMT non-performance of 1-PI-EFT-003-128.1
103437, Control rod withdrawal without rod speed indicating 48 steps/min
103616, Reactivity management concern
103709, RPI F-2 failure
104029, Clearance backlog
104032, CCP and RHR room cooler TCV strokes
104344, Unplanned LCO entry
104392, Unplanned LCO entry
104669, The tritium concentration in Well-31
104933, Currently three through wall fire protection piping leaks exist
104944, Historically non-outage testing of GL 89-10 MOVs
104953, XE-133 result from U1 RCS sample collected
105035, For the past several months there has been an increasing dissolved
105267, This PER is to document the PM backlog of PMs in grace
105356, Generic review of BFN audit issue insufficient questioning by senior licensed operators
105611, PER 68218 effectiveness review
105764, During operator rounds no level indication could be determined
105801, On 6/23/06 U2 RCS lithium
105818, OPS coach of the day manipulated valve
106197, During recent MIG surveillance activities of 0-RM-90-101
106218, Reactivity management evaluations
106220, Missle cover holddown bolts
106366, Software used for calculating off-site dose in plant effluents
106419, The fan bearing for 6.9 kV AHU 1A
106473, 1-FCV-63-71 unplanned LCO entry
106582, D/G Engine 1B2 Woodward Governor dial setting
106677, During performance of PM #018160000
106739, Procedure adherence 1BB DG SI-7 B
106874, Adverse effects of Electrical Test Bench on 125V vital battery board II
106937, Tritium in unit 1 and 3 RWST moat
107427, Monthly report indicates weakness in intolerance of degraded equipment
107493, Non-functional aux. air hdr isol vlv
107611, Pressurizer heater capacity test/reactivity management
107646, Failure to log and generate PER
107698, Operator compensatory actions
108239, Conduct of Ops assessment identified for schedule preparation and adherence
108309, Valve Misalignment
108768, Reactivity control
109457, During maintenance to remove suspected blockage
109541, Breaker program inadequacy
109847, During the performance of WO 06-776146-000
110046, 0-PI-SXV-082-202.B procedure errors
110109, 2B Containment Spray Pump Blocking Device
110109, 2B CSP Room Cooler blocking device

110145, CCS Availability for Appendix R Fires
110493, Hexavalent Chromium issues not addressed in Safety Procedure 915
110567, Old tagging requests
110653, Inadequate clearance boundary
111770, Barton Transmitter – NRC IN 2006-14 SI
112711, A calibration was not attempted on Unit-2 containment sump level
112989, The breaker supplying power to the ERCW chemical
113796, RHR Procedure
114018, Preferred inverter 2
114160, TRB overturns OPS crew failure to meet a WOG critical task
114455, Untimely corrective action for PER 91383
115490, Inability to comply with App. R operator action time limit
115534, RCS Leak
115651, Safety Issues
115880, U2 upper cavity drain down started prior to completion
115927, While leveling the top surface of the exiting concrete curb
116116, Time critical manually operated valves PMT
116195, The breaker feeding the centrifugal charging pump
116231, On 12/02/06, reactor cavity leakage from the vortex top hat
116421, Anonymous-Card-reader and Balance Magnetic Switch
116426, Anonymous-P3 Door
116535, Scaffolding erected as interim action with no permanent fix
116536, During the performance of 2-PI-ICC-085-050.0
116537, eWorkplace failure
116720, During sense line slope inspection
116822, Improper monitoring of confined space entry
116874, Damaged threads on Unit 2 RPV stud number 30 were discovered
117590, Intolerance for Eqpt. Deficiencies indicators not meeting goals
117738, Medical examiners guide revisions
118060, Concerned employee comments on U2C14 fuel movement
118229, FME controls
118278, Appendix R problem with AOP-C.04
118286, Concerned individual exit interview
118339, U2 RWST sample 1/18/07 had a boron concentration of 2541
118464, Reactor trip resulting from failed air supply line
118475, Manual reactor trip expectations
118699, 2A bus duct cooler
118792, Testing on reach rod valves used during SBO event
118895, Anonymous-Comfortable uniforms
118998, Anonymous-Security dress
119026, PMT not formally documented on App R valve
119351, Anonymous-Suggestion process
119353, Anonymous-Pinkerton training
119354, Anonymous-Response gear
119663, The processing and implementation of Technical Specification
120294, An oil sample taken February 8, 2007
120654, Inadequate screening review on AOP revision

120946, HUT transfer to Fuel Transfer Canal
121173, Manhole 33 bolt requirements
121255, Anonymous-Security misconduct
121390, Anonymous-Motor patrols schedules
121391, Anonymous-Access portal issues
121395, Anonymous-Labor issues
121514, WOs 06-773656-000 and 06-773659-000 to clean and lube 1A-A
121526, Unit 2 manual reactor trip
121540, 91-18 PER was closed
121687, PMs are being deferred without being escalated
121872, Inadequate documentation of existing LCO action
121902, Anonymous-Anonymous PER's
122104, D-4 RPI fluctuating
122519, On 3/29/07 it was noted by an NRC inspector
122680, Anonymous-Searches at vehicle gate
122681, Anonymous-Weapons accountability
122683, Anonymous-Public address system
122818, The 1A-A Thermal Barrier Booster Pump discharge check valve
122849, Crane inspection
122893, Unapproved chemical stored on site
123080, Security escort
123349, WO 07-771087-000 identified a leaking unloader valve
123363, Anonymous-Service contract act in security
123372, 0-TC-313-364's mounting bolts are loose
123583, Evaluate need for strainer to protect TDAFW bearing cooling water orifice
123730, Anonymous-Feedback on anonymous PERs
124102, R-A ERCW Pump relief valve
124507, LEFM MWT change
124559, Safeguards Information
124581, The American Nuclear Insurers (ANI) inspection report
124666, Anonymous-Training for security officers
124686, Sequoyah: Contrary to the requirements of BP-250
125022, Adverse trend noted in the clearance program
125023, Operations fundamentals performance and effective use of indicators
125025, Evaluate the accuracy of the Operations dept indicators
125150, Anonymous-Security training schedule time frame
125151, Anonymous-Motor Patrols
125152, Anonymous-Security qualification training
125205, SQN has had seven non-outage recordable injuries
125301, Anonymous-100-yard run in security
125304, Anonymous-Shift briefings/turnover PGS policy 04-302
125451, Anonymous-:Line of sight at post 18
125492, Generic review of BFN PER 122729
125572, Anonymous-Unauthorized personnel on post
125573, Anonymous-Safety hazards at security post
125641, Extent Evaluation for Degraded Conditions
125642, Risk Management Comments by NSRB

125643, NSRB Recommendation Number 3
125644, Pre-Job Briefs, NSRB Recommendation 4
125645, On Line Tubing Repair
125776, Temporary gages for TDAFW not in calibration program
125999, PER is to document a performance gap for Chemistry
126035, U-2 demand step counter failure
126086, Garbage bins at loading dock
126146, 1-FSV-43-55 will not open
126313, S3/S4 examination
126401, In-complete paperwork
126423, This PER is to address the Generic Review request of BFN
126515, Failure of LEFM transducers
126523, Unit 1 B train annunciator not resetting
126543, 2-FM-3-147D-B failed
126553, Ion Track Model 85 Explosive Detector
126734, TDAFW Exhaust fan
126785, SQN's chemistry and corrosion control program
126821, Anonymous-Supervisor conduct allegation
126853, Crew SRO staffing not consistent with FPDP-4
126928, Erroneous temperature utilized in TDAFW pump room HVAC calculations
127048, Search procedures
127101, Security UPS battery procedures problems
127126, Anonymous-Pinkerton compensation
127353, Annual report entry
127610, EPIP data without MET available
127639, Anonymous-Security towers
127658, Incorrect paperwork
127659, Officers carrying hammocks/cots/mats
127842, Security officers discipline for incorrect paperwork
127843, Anonymous-Smoking in TVA vehicles
127979, Anonymous-Pinkerton issue of discipline
127991, Anonymous-Pinkerton management
127992, Anonymous-Flag etiquette
128123, RWST moat spill
128345, SQN063 Safety Injection

Audits, Self-Assessment

Nuclear Assurance Operations Functional Area Audit NO. SQA0601
Nuclear Assurance Engineering Functional Area Audit NO. SQA0603
Nuclear Assurance TVAN-Wide-Audit Report NO. SSA0304
Nuclear Assurance TVAN-Wide-Audit Report NO. SSA0407
Nuclear Assurance TVAN-Wide-Audit Report NO. SSA0503
Nuclear Assurance TVAN-Wide-Audit Report NO. SSA0601
Nuclear Assurance TVAN-Wide-Audit Report NO. SSA0701
Nuclear Assurance TVAN-Wide-Audit Report NO. SSA0703

PER's Reviewed For Operating Experience

Sequoyah Nuclear Plant – Revised Program and Status Update Regarding NRC Generic Letter 89-13, dated September 22, 1995.
PER 112800, Rigging, Lifting, & Material Handling, 10/13/2006
PER 98318, Braidwood – Tritium in Groundwater, 3/2/2006
PER 113488, Governance and Oversight for SOER 06-1, 10/25/2006
PER 111740, Changes in diesel fuel oil to meet EPA requirements, 9/28/2006
PER 114042, IN 2006-22 "New Ultra Low Sulfur Diesel fuel oil could impact DG performance", 11/2/2006
PER 124922, Rosemount 1152 Part 21, 5/16/2007
PER 81118, SSPS Universal Board Tin Whiskers, 4/21/2005
NER 05 1410, NRC IN 2005-23: Vibration – Induced Degradation of Butterfly Valves, 9/15/2005
NER 05-1886, NRC IN 2005-30: Safe Shutdown Potentially Challenged by Unanalyzed Internal Flooding Events and Inadequate Design, 12/8/2005
NER 06-0335, NRC IN 2006-09 "Loss of Offsite Power and Station Blackout are more probable during summer period", 3/23/2006
NER 06-0481, NRC IN 2006-09 "Performance of NRC-Licensed individuals while on duty with respect to control room attentiveness", 4/27/2006
NER 06-0380, NRC EN 42438 "Part 21 Notification Concerning Rosemount Transmitters", 3/30/2006

Procedures, Instructions, Guidance Documents, and Operating Manuals
MMDP-5, "MOV Program", Rev. 7
NEDP-22, "Functional Evaluations", Rev. 4
MMDP-1, Maintenance Management System, Rev. 10
NADP-1, Conduct of Quality Assessment and Inspection, Rev. 13
NADP-2, Audits, Rev.20
NADP-3, Managing the Operating Experience Program, Rev. 7
NEDP-12, System Component Health, Equipment failure Trending, Rev. 8
NEDP-22, Functional Evaluations, Rev. 4
SPP-1.6, TVAN Self-Assessment Program, Rev. 13
SPP-3.1, Corrective Action Program, Rev. 12
SPP-6.1 Work Order Process Initiation, Rev. 4
SPP-6.6 Maintenance Rule Performance Indicator Monitoring, Trending, and Reporting - 10 CFR 50.65, Rev. 9
SPP-7.0 Work Management, Rev. 1
SPP-7.1, On Line Work Management, Rev. 9
SPP-9.7, Corrosion Control Program, Rev. 14
BP 250 Corrective Action Program Handbook, Rev. 12

Miscellaneous Documents Reviewed

System Health Report Cards, Essential Raw Cooling Water, FY2007-P1
0-TI-SXX-000-146.0, Program for Implementing NRC Generic Letter 89-13, Revision 1
0-SI-OPS-000-011.0, Containment Access Control During Modes 1-4, Revision 24

0-PI-OPS-000-027.0, Shift Manager Clerk Duty Station Shift Relief and Office Round Sheets, Revision 26
Walkdown Sheet – System 030/Chillers, "Auxiliary Building: 6.9 kV Shutdown Board Room and 480 V Board Room Chillers (Both Trains) – Frequency: Bi Monthly
TACF 1-05-002-063, RHR Continuous Vent, Rev. 1
SQN-DC-V-13.9.9, Component Cooling Water System, Rev. 22
EPRI Report 1013420, Pressurized Water Reactor Primary Water Zinc Application Guidelines, Dec. 2006
1-47W470-1, Mechanical Sleeves Base Slab, Rev. 2
1-47W470-12, Mechanical Sleeve Seals Interior Walls & Floors, Rev. 9
1-47W470-5, Mechanical Sleeves Interior Walls & Floors, Rev. 7
1,2-47W810-1, Flow Diagram Residual Heat Removal System, Rev. 50
Auxiliary Feedwater System health report
CAP Quality Index Report October 2005 – June 2007
Integrated Quarterly Trend Report 1st Qtr 2007
Integrated Quarterly Trend Report 4th Qtr 2006
Integrated Quarterly Trend Report 3rd Qtr 2006
Integrated Quarterly Trend Report 2nd Qtr 2006
Integrated Quarterly Trend Report 1st Qtr 2006
Integrated Quarterly Trend Report 4th Qtr 2005
Department clock resets 8/1/2005-7/5/2007
Nuclear Safety Review Board Meeting Minutes 6/21/2005
Nuclear Safety Review Board Meeting Minutes 9/22/2005
Nuclear Safety Review Board Meeting Minutes 2/3/2006
Nuclear Safety Review Board Meeting Minutes 6/2/2006
Nuclear Safety Review Board Meeting Minutes 5/15/2007
Nuclear Safety Review Board Meeting Minutes 7/10/2006
Auxiliary Feedwater System Design Criteria