

Sequoyah 1

1Q/2012 Plant Inspection Findings

Initiating Events

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Procedures for Tornado Watch/Warning

The inspectors identified a noncited violation of Units 1 & 2 Technical Specification of 6.8.1.a for the licensee's failure to adequately implement procedure AOP-N.02, "Tornado Watch/Warning," Revision 28. On March 2, 2012, the licensee entered AOP-N.02 due to a tornado watch/warning and failed to secure or remove loose material in the Switchyard/Transformer Yard as required by the procedure. This issue was entered into the licensee's corrective action program as Problem Evaluation Report (PER) 515684.

Inspection Report# : [2012002](#) (*pdf*)

Significance:  Mar 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Reactor trip due to unplugged steam dump load reject controller

A self-revealing finding was identified for the licensee's failure to perform adequate post-maintenance testing, as specified by procedures SPP-8.3, Post-Modification Testing, revision 10, and NPG-SPP-06.3, Pre-/Post-Maintenance Testing, revision 0, in conjunction with a work order which implemented a plant modification on Unit 1 and included the relocation of the steam dump load reject controller. This resulted in a manual trip of Unit 1 following a turbine trip from 26 percent rated thermal power due to the steam dump load reject controller power supply not being properly connected. The licensee entered this issue into their corrective action program as PERs 285349. The licensee implemented corrective actions to include a revision to post-modification testing procedures to require an additional post maintenance testing (PMT) review for large/complex modifications, as well as revision to applicable maintenance procedures to require verification for plug-in type connections.

The finding was determined to be greater than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, this finding resulted in a reactor trip. Using IMC 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance (Green) because although it did contribute to the likelihood of a reactor trip, it did not contribute to the likelihood that mitigating systems will not be available.

The cause of this finding was determined to have a cross-cutting aspect of Work Planning, in the area of Human Performance associated with the Work Control component. The work planning processes failed to identify the need to include steps to verify the operational status of the controller following completion of the activity, considering the physical conditions and requirements associated with relocating the device. [H.3(a)]. (Section 4OA3.4)

Inspection Report# : [2011002](#) (*pdf*)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: FIN Finding

Feedwater regulating valve failure due to inadequate maintenance procedure

A self-revealing finding was identified for an inadequate maintenance procedure which was used to perform a rebuild

of the Unit 1, Loop 1, main feedwater regulating valve (FRV) actuator. The failure to specify an applicable torque requirement associated with the installation of the control air diaphragm resulted in a failure of the diaphragm and a reactor trip due to a loss of main feedwater to the Loop 1 steam generator. The event was reported to the NRC as event notification (EN) 45045 and documented in the licensee corrective action program as PER 170598.

The finding was determined to be greater than minor because it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability, in that the FRV actuator failure caused a reactor trip and loss of main feedwater to the Loop 1 steam generator. Using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating systems will not be available. The cause of this finding was determined to have a cross-cutting aspect in the area of human performance associated with the resources component. It was directly related to the availability of resources necessary for complete accurate and up-to-date work packages. [H.2(c)] Specifically, the licensee's vendor manual for the affected component was not maintained up-to-date to contain the most current information and requirements from the vendor applicable to the maintenance activities conducted (Section 4OA3.2).

Inspection Report# : [2009004](#) (pdf)

Mitigating Systems

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Meet Fire Drill Training Requirements

The inspectors identified a noncited violation of facility operating license DPR-77 condition 2.C.(16) and facility operating license DPR-79 condition 2.C.(13) for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, Sequoyah's Fire Protection Report Part II, Section 9.3.b.2 – Fire Drills requires a minimum of one drill per shift every calendar quarter, a minimum on one unannounced drill per shift per year, at least one drill per shift per year is performed on a "backshift" for each fire brigade, and fire brigade members including leaders shall participate in at least two drills per year. The inspectors identified multiple examples of the licensee's failure to meet these requirements in calendar years 2010 and 2011. This issue was entered into the licensee's corrective action program as Problem Evaluation Report (PER) 513378, 512736, and 527875. Inspection Report# : [2012002](#) (pdf)

Significance:  Mar 31, 2012

Identified By: NRC

Item Type: FIN Finding

Failure to Follow Corrective Action Program Procedures

The inspectors identified a finding for the licensee's failure to meet the requirements of corrective action program procedure NPG-SPP-03.1.7, PER Actions, Revision 2. Specifically, the licensee failed to ensure that the corrective action plan and associated actions addressed the required action and schedule associated with PER 432510, which documented the need to address a condition involving water accumulation in manhole locations containing electrical cable runs. This issue was entered into the licensee's corrective action program as Problem Evaluation Report (PER) 433761, 432510, and 505259.

Inspection Report# : [2012002](#) (pdf)

Significance: **G** Mar 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Turbine Driven Auxiliary Feedwater Pump Inoperable Due to Overspeed Trip

A self-revealing NCV of Unit 1 TS 6.8, "Procedures & Programs," was identified for the licensee's failure to provide adequate procedures for a maintenance activity involving the required inspection of an Essential Raw Cooling Water (ERCW) pipe leak in the Unit 1 Turbine Driven Auxiliary Feedwater Pump (TDAFW) room. This resulted in water intrusion into the governor control cabinet of the TDAFW Pump, which caused the pump to be inoperable due to an electrical overspeed trip caused by fluctuating speed indications. This issue was entered into the licensee's corrective action program as Problem Evaluation Report (PER) 470310.

Inspection Report# : [2012002](#) (*pdf*)

Significance: **G** Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Change to Fire Protection Program Which Adversely Affected Safe Shutdown Without Prior NRC Approval

The inspectors identified a non-cited violation of Sequoyah operating license conditions 2.C. (16) and 2.C. (13) for Units 1 and 2 respectively, for a change made to the Sequoyah fire protection program which was determined to adversely affect safe shutdown (SSD), without prior NRC approval. Specifically, in lieu of protecting the cables and equipment to ensure that one train of equipment required for SSD was free of fire damage, the licensee made a change to the Sequoyah fire protection program in 2002 that added new operator manual actions (OMAs) to achieve SSD, without prior NRC approval. The evaluation performed in 2002 for the new OMAs was not adequate to support the conclusion that adding the OMAs did not adversely affect post-fire SSD because the evaluation only addressed OMA feasibility and did not address defense-in-depth. The licensee entered this issue in the corrective action program as problem evaluation report 324757 to track resolution.

Inspection Report# : [2012002](#) (*pdf*)

Significance: **G** Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to perform instrumentation surveillance testing within required frequency

The inspectors identified a non-cited violation of Units 1 and 2 TS Surveillance Requirement (SR) 4.0.2 for the licensee's failure to perform SRs specified in Units 1 and 2 TS 3/4.3.1, "Reactor Trip System Instrumentation," and 3/4.3.2, "Engineered Safety Feature Actuation System (ESFAS) Instrumentation," within the required surveillance frequencies. The inspectors identified eight examples over the last three years (five examples on Unit 1 and three examples on Unit 2) where the interval between tests of the automatic actuation logic and reactor trip breaker functions required by SRs 4.3.1.1.1 and 4.3.2.1.1 exceeded the maximum surveillance interval allowed by TS. The licensee entered this issue into their corrective action program as PER 369938. Corrective actions included ensuring that work control processes correctly implement the required surveillance intervals.

The finding was determined to be greater than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, extending beyond the required maximum interval between TS surveillance tests affects the ability to confirm continued availability of TS equipment, and the ability to detect potential latent operability concerns in a timely manner. Using Inspection IMC 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance (Green) since it did not represent an actual loss of safety function of a single train for greater than the associated TS allowed outage time. The inspectors did not identify that the cause of this finding was related to any of the cross-cutting

aspects defined in IMC 0310, and therefore no cross-cutting aspect was assigned to this finding. (Section 1R22)

Inspection Report# : [2011003](#) (*pdf*)

Significance:  Jun 13, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Compensatory Actions for Blocked Sprinklers

The inspectors identified a non-cited violation of Sequoyah Operating License Conditions 2.C.(16) and 2.C.(13) for Units 1 and 2, respectively, for failure to establish compensatory measures for an obstructed sprinkler system.

Specifically, scaffolding installed in auxiliary building fire area FAA-054/Room A01 was in a configuration which obstructed sprinkler heads A198 and A208. The licensee entered this issue into the corrective action program as Problem Evaluation Report 321911 and implemented compensatory measures (fire watches) in accordance with the approved fire protection program.

Inspection Report# : [2011006](#) (*pdf*)

Significance:  Jun 13, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Sprinkler System in Room 690.0-A1 of the Auxiliary Building has NFPA Code Deviation

The inspectors identified a non-cited violation of Operating License Conditions 2.C.(16) and 2.C.(13), for Units 1 and 2 respectively, for failure to install the automatic suppression system (sprinkler system) in the auxiliary building corridor 690 foot elevation, in accordance with applicable National Fire Protection Association (NFPA) Standard No. 13, "Automatic Sprinkler Systems." Specifically, NFPA 13-1975 required sprinklers to be installed within 12-inches of the ceiling. Portions of the auxiliary building sprinkler system were installed greater than 12-inches below the ceiling. As a result, the actuation of the fusible link type sprinklers would have been slower than originally intended after fire ignition. The licensee entered this issue into the corrective action program as Problem Evaluation Report 147467 and implemented compensatory measures (fire watches) in accordance with the approved fire protection program. The inspectors determined that there was no cross-cutting aspect associated with this finding because the condition has existed since initial plant licensing and was not reflective of present performance.

Inspection Report# : [2011006](#) (*pdf*)

Barrier Integrity

Significance:  Dec 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Thermal Power Less Than Licensed Limit

The inspectors identified a non-cited violation of Unit 1 Operating License DPR-77 Condition 2. (C).1 "Maximum Power Level" for the licensee's failure to take prudent action to ensure that the licensed power limit was not exceeded during a pre-planned evolution which involved manual reactivity manipulations. Prompt action was not taken by operators to reduce power when reactor thermal power exceeded the licensed power limit during a control rod full out position reset activity. Additionally, prudent action to sufficiently reduce power prior to the activity to accommodate the power transient was not taken. This issue was entered into the licensee's corrective action program as PER 437068.

Inspection Report# : [2011005](#) (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Last modified : May 29, 2012