

Sequoyah 1

4Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Dec 27, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

Failure to Maintain Configuration Control of Turbine Oil Valves Resulted in Reactor Trip

The inspectors identified a finding for a self-revealing failure to follow the plant configuration control process on non-safety related equipment. An instrument isolation valve on the Unit 1 turbine front standard was inappropriately left closed following a refueling outage and resulted in a generator load rejection and reactor trip.

This finding is more than minor because it affected the configuration control attribute of the initiating event cornerstone and challenged the ability of operators and the reactor protection system to safely shut down the plant. With the isolation valve to Pressure Switch 1-PS-47-76 inappropriately closed, a generator load rejection and subsequent reactor trip were assured when the turbine thrust bearing trip test was performed. This finding is of very low safety significance because no mitigating system was affected. The cause of the finding is related to the cross-cutting element of human performance.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Dec 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Configuration Control Procedures

The inspectors identified a non-cited violation of Technical Specification (TS) 6.8.1 for failure to comply with plant configuration control procedures. Both pressurizer power-operated-relief-valve block valves on both units were simultaneously closed without the use of an approved work document, resulting in a missed risk assessment.

This finding is more than minor because it affected the configuration control attribute of the Initiating Events cornerstone. Alteration of safety related equipment configuration outside of approved processes would, if left uncorrected, result in a more significant safety concern. While not prohibited by TS, this action removed an over-pressure reactor trip barrier and would challenge the pressurizer safety valves in response to an over-pressure transient. This finding is of very low safety significance because closure of the block valves only affected the initiating event cornerstone and did not directly contribute to the likelihood of a primary system event initiator.

Inspection Report# : [2003006\(pdf\)](#)

Significance: N/A Sep 04, 2003

Identified By: NRC

Item Type: FIN Finding

Special Inspection Conclusions

Operations personnel both at the turbine front standard and in the control room took the proper actions for the observed plant indications and the nature of the event. The quick response of the control room operators to trip the reactor was appropriate and mitigated the event before a reactor protection system (RPS) setpoint was reached. The declaration of

an Alert made by the Shift Manager was appropriate based on the nature of the event and the understanding of plant conditions at the time of the declaration.

The turbine control system responded as designed and no RPS logic input was required from the turbine auto-stop oil system to automatically trip the reactor. RPS logic inputs, which would initiate an automatic reactor trip, were not generated from the auto-stop oil pressure switches or from the turbine main stop valves.

The inspectors independently reviewed the information from the licensee's event investigation and concluded that the licensee's investigation of this event was thorough and comprehensive and that the identification of the closed auto-stop oil pressure switch isolation valve fully explained the cause and the resulting sequence of events. The investigation identified two possible causes for the closed isolation valve: An inappropriate verification process following calibration of the auto-stop oil pressure switch or inappropriate configuration control while troubleshooting problems with turbine latching during the last unit startup.

There were two opportunities for which the licensee did not complete actions that could have prevented the August 28 event. A single point failure identified in a Problem Event Report (closed pressure switch contacts) was not addressed before performing the turbine testing on August 28. Also, a computer point indicating a generator trip would occur during the last turbine test in June 2003 (unit was not on-line) was not investigated or addressed prior to the August 28 testing.

Inspection Report# : [2003010\(pdf\)](#)

Mitigating Systems

Significance:  Dec 27, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Maintain Qualification Records for Licensed Operator Reactivation

The inspectors identified a non-cited violation (NCV) for failure to certify qualifications and status of licensed operators were current and valid and that the requirements of 10 CFR 55.53, "Conditions of Licenses" for license reactivation were met prior to their resumption of license duties. Only four out of the thirteen selected operator reactivation records were available for inspection.

The finding is greater than minor because it is associated with the Mitigating Systems Cornerstone human performance attribute that affects the availability, reliability, and capability of operators to respond to initiating events to prevent undesirable consequences that could pose a potential risk to operations. The finding was evaluated using the Operator Requalification Human Performance SDP and was determined to be a finding of very low safety significance because there was no evidence of an inactive operator standing a watch. Since more than 20% of the reactivation records had deficiencies in that they were not available and could not be verified to meet reactivation requirements, the issue was determined to be a green finding.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Dec 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Manage the Risk from Proposed Maintenance Activities

The inspectors identified a non-cited violation of 10 CFR, Part 50.65, Paragraph (a)(4), for the failure to properly manage risk when removing the Unit 1 B-Train components from service for a component cooling and essential raw cooling water header outage. Centrifugal Charging Pump 1B was inadvertently tagged out and made unavailable when it was not part of the scheduled maintenance plan. This put Unit 1 in a configuration different from that evaluated in the risk assessment and resulted in a situation not allowed by licensee site risk procedures.

This finding is more than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and affected the availability of the charging pumps. It resulted in an unplanned 8.5 hour unavailability of the pump and an unplanned, unrecognized increase in risk. This finding is of very low safety significance because it did not represent an actual loss of safety function of a system nor did it represent an actual loss of safety function of a single train for greater than its technical specification-allowed outage time.

Inspection Report# : [2003006\(pdf\)](#)

Barrier Integrity



Significance: Apr 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Instructions for Controlling Shield Building Breaches

Green. Inadequate technical guidance was identified because the associated procedure did not contain the necessary steps to ensure that multiple breaches of the shield building would be adequately controlled.

This inspector-identified finding was determined to be a non-cited violation of (NCV) Technical Specification 6.8.1.a. It was more than minor, because if left uncorrected it could result in the actual shield building breached area exceeding the margin of operability for the emergency gas treatment system. The finding also affected the configuration control attribute of the containment barrier. The finding is of very low safety significance because the actual margin was not exceeded. It was also considered to constitute a deficiency in the cross-cutting element of Problem Identification and Resolution.

Inspection Report# : [2003003\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Significance: SL-IV Dec 28, 2001

Identified By: NRC

Item Type: VIO Violation

DISCRIMINATION AGAINST A CONTRACT SECURITY OFFICER

The NRC determined that a violation of 10 CFR 50.7, Employee Protection, occurred on April 19, 2000 when the licensee discriminated against a contract security officer as a result of engaging in protected activity. Specifically, the individual objection to being instructed not to follow Physical Security Instruction PHYSI-32, which was part of his assigned responsibilities.

The violation had very low safety significance because the uncertainty of the intent of the verbal communications, and the low underlying safeguards significance of the procedural violation (i.e., the procedure was subsequently revised to allow security guards the discretion to conduct a physical search instead of requiring an individual to remove his or her shoes and process through the metal detector again).

Inspection Report# : [2001007\(pdf\)](#)

Miscellaneous

Significance: N/A Sep 26, 2003

Identified By: NRC

Item Type: FIN Finding

PI&R Inspection Results

Overall, the licensee was effective at identifying problems, entering them into the corrective action program (CAP) for resolution, and implementing corrective actions to prevent recurrence. However, there were several examples where the documentation of problem evaluation reports (PERs) was not clear, concise, or comprehensive. The team had to seek out knowledgeable plant personnel to understand the issue in order to assess if the corrective actions were adequate. The inspection team did identify a significant improvement in the quality of PER development and documentation during recent months, indicating increased management and supervisory attention to overall PER quality.

Senior management involvement in the problem identification and resolution (PI&R) program was evident in the daily management review committee meeting review of all PERs. The licensee's threshold for identifying problems was low and the number of PERs met the licensee's goal for problem identification. However, due to the large number, backlog presented a challenge and did not meet the licensee's goals. The team did not identify any significant problems due to the backlog. The team also did not identify any adverse conditions which were not in the CAP for resolution.

Licensee assessments critically assessed PI&R activity and identified improvement needs. Prioritization and evaluation of problems were generally effective and consistent with risk and safety significance; however, there were some examples where evaluations were not thorough and detailed. Corrective actions were generally adequate; although some minor examples were identified where the corrective actions were not complete, or not comprehensive.

Long term equipment problems continue to challenge plant staff and unit operation, especially for safety related chillers and plant electrical breakers. Some corrective actions for chiller problems and component performance were not timely. The overall system health of safety related chillers, since the last PI&R inspection in December 2001, has declined. However, slight improvement was noted for specific components. The trending element of the CAP was not always effective in identifying potential adverse trends. The corrective actions for balance-of-plant equipment issues were not as detailed, rigorous, or effective in correcting problems as with safety related equipment.

Based on interviews conducted during the inspection, workers at the site feel free to raise issues with their management and to input them into the problem identification and resolution program.

Inspection Report# : [2003009\(pdf\)](#)

Significance: SL-II Jun 30, 2001

Identified By: NRC

Item Type: VIO Violation

EMPLOYEE PROTECTED ACTIVITY

On February 7, 2000, a Severity Level II violation with civil penalty was issued to the licensee. The violation was not site-specific and involved employment discrimination contrary to the requirements of 10 CFR 50.7, "Employee Protection," in that the licensee did not select a former employee to a competitive position in the corporate chemistry organization in 1996, due, at least in part, to his engagement in protected activities. On January 22, 2001, the licensee denied the violation and on May 4, an Order was issued sustaining the violation and imposing the civil penalty. On June 1, TVA requested an enforcement hearing on the Order.

Inspection Report# : [2001002\(pdf\)](#)

Last modified : March 02, 2004