Comanche Peak 1
1Q/2007 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 22, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER EVALUATION OF POSTMAINTENANCE TEST FOR INSERVICE TESTING CREDIT
A noncited violation of Technical Specification 5.5.8 for inadequate inservice testing of safety related gate valves with stellite seats following maintenance. During maintenance a thin oxide coating forms on the internals of these valves, which acts as a lubricant and significantly reduces the torque and thrust required to operate the valves for some period of time. Contrary to the Inservice Testing Program required by Technical Specification 5.5.8, the licensee performed maintenance on 1-HV-4777 in 1998 and used the post-maintenance test for inservice test credit, despite the knowledge that these results were not representative of baseline valve performance. Since the results were not representative of baseline behavior, this test was not a valid inservice test. Therefore, no valid test was performed between 1997 and November 27, 2006, which exceeded the required test interval.

Failure to properly assess the test results following maintenance is a performance deficiency. This finding was more than minor because, if left uncorrected, it could become a more significant safety concern in that a valve performance problem might be masked following maintenance. This issue screened as Green during a Phase 1 significance determination process because the examples we reviewed indicated that this condition had never masked a condition that resulted in an inoperable valve in the past. This issue was entered into the corrective action program under SMF-2006-4161.
Inspection Report# : 2006009 *(pdf)*

Significance: G Dec 22, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
TWO CONTAINMENT SPRAY SYSTEM FUNCTIONS NOT DESCRIBED IN UFSAR OR DESIGN BASIS DOCUMENTS
A noncited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, with two examples, was identified for failure to correctly translate regulatory requirements and design bases associated with the containment spray system into specifications, drawings, procedures, and instructions. Specifically, the functioning of the vacuum breakers on the chemical additive tank and the chemical additive tank isolation valves were not described in the design basis documents for this system. The vacuum breakers must operate for the system to inject sodium hydroxide, and the isolation valves must shut prior to draining the tank to prevent injecting air into the containment spray pump. This finding was entered into the corrective action program under SMF-2006-4073 and SMF-2006-4097.

Failure to correctly translate regulatory requirements and design bases associated with the containment spray system into design basis documents was a performance deficiency. This finding was determined to be more than minor because, if left uncorrected, it could become a more significant safety concern. Absent a proper description of these important functions, operability evaluations or plant changes could be made which negatively impact the functions without being recognized. This issue screened as Green in Phase 1 because there was no identified loss of function as a result of this performance deficiency. This issue had cross-cutting aspects in Problem Identification and Resolution (Corrective Action Program, correcting problems in a timely manner), because a 2003 self-assessment identified that the isolation valves' function was not described in the UFSAR (documented in SMF-2003-3860), but this was never corrected.
Inspection Report# : 2006009 *(pdf)*

Significance: G Dec 20, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE DESIGN CONTROL TO EXCLUDE AIR FROM CONTAINMENT SPRAY PIPING
Two examples of 10 CFR 50, Appendix B, Criterion III violations were identified for failure to translate design basis into instructions, procedures, and drawings. The team found that surveillance testing drained water out of the containment sump suction line for the containment spray system with no provision to ensure the system was refilled prior to declaring it operable. Specifically, in August 2006, the Containment Spray Containment Sump Suction Valve 1-HV-4783 for Train B in Unit 1 was cycled for surveillance testing, draining approximately 61 gallons from the line. This allowed about 8 cubic feet of air into the system. The air remained in the system until it was vented on December 1, 2006, after the team questioned whether the system was filled. Also, the licensee failed to assess/prevent vortexing in the chemical additive tank for the containment spray system in the event of a design basis accident. The team independently determined that vortexing could occur for approximately 20 minutes before the tank would be isolated, entraining air in each of the running pumps.

This violation is more than minor because it affects the design control attribute of the mitigating system cornerstone objective to ensure the availability, reliability and capability of the containment spray system to respond to initiating events and prevent undesirable consequences. This finding screened as Green during a Phase 1 significance determination process because analyses showed that the small amount of air in these cases was not enough to cause a loss of function or detrimental fluid dynamic effects. This finding had cross-cutting aspects in problem identification and resolution (corrective action program, evaluating and prioritizing problems), because there were two prior opportunities to have identified that water was being drained from the suction piping. This issue was entered into the corrective action program under SMF-2006-3965.
Inspection Report# : 2006009 *(pdf)*

Significance: G Oct 18, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Both Unit 1 Channels of Reactor Trip P4 Interlock Disabled in Mode 3
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for I&C technicians disabling both channels of P4 Reactor Trip Interlock in Unit 1, without procedural guidance, while performing main turbine stop/control valve leakage testing in Mode 3. This resulted in the turbine unexpectedly speeding up from 74 rpm to 1800 rpm within one minute. The operators attempted to trip the turbine via the turbine trip pushbutton, but the trip push-button, as well as the P4 Reactor Trip Interlock was disabled. The operators eventually closed the control valves by setting the startup/load limit device to zero percent. The licensee entered the issue into their corrective action program.

This finding is more than minor because the procedural error caused a transient in Mode 3 that resulted in the main turbine speeding up to 1800 rpm and a RCS cooldown from 511 degrees F to 499 degrees F. In addition, the finding affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of a system that responds to initiating events to prevent undesirable consequences. This finding is of very low safety significance in accordance with Phase 1 of Manual Chapter 0609, Appendix A because it was not a design or qualification deficiency, did not represent a loss of system safety function nor an actual loss of safety function, and did not screen as potentially risk significant due to external events. The cause of this finding is related to the crosscutting area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance and personnel to follow procedures.
Inspection Report# : 2006004 *(pdf)*

Significance: G Jun 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Operators Unable to Meet Some Critical Action Times During Alternate Shutdown Walkthrough
The team identified a Green noncited violation of License Condition 2.G and Technical Specification 5.4.1.d for failure to complete simulated operator actions within analyzed times and for the inability to perform some of the required actions with five examples. Specifically, the following deficiencies were identified: (1) the shift manager was unable to easily obtain the keys needed to access the transfer and hot shutdown panels, which delayed taking the required actions; (2) directions for starting the safety chiller, if not already operating, were not provided, which could have delayed accomplishing the task; (3) the licensee had not accounted for 1.5 minutes needed by operators to perform required actions

prior to evacuating the control room; (4) operators took 4 minutes to mitigate a spuriously open power-operated relief valve, whereas, the analysis used 3 minutes; and (5) the 3.5 minutes needed to don the flash protective gear prevented completion of subsequent procedure steps within the time analyzed. The cause of the finding is related to the crosscutting aspect of human performance because: (1) operations personnel were unfamiliar with procedures and did not have some pertinent procedure steps available, and (2) organizations failed to communicate changes to the procedure that impacted the response time.

The team determined that this finding had more than minor significance because the inadequate procedure impacted the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of the system that responds to the event to prevent undesirable consequences. A Phase 3 analysis of the above issues concluded the finding was of very low risk significance. Specifically, the Phase 3 analysis concluded that the 8-minute delay in transferring equipment from the control room and an additional 10-minute delay in accessing the remote shutdown room, did not result in a significant increase in risk. The analyst determined that a hot-short to a power operated relief valve was the most risk significant situation. The risk associated with a stuck open power-operated relief valve combined with a fire in the control room panel not suppressed was determined to be 2.7E-11/year. The analyst concluded that it would require a 22 percent increase in the stress levels of the operators to result in the risk exceeding the threshold to be considered greater than that of very low risk significance.
Inspection Report# : 2006003 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to post a radiation area
The inspector reviewed a self-revealing noncited violation of 10 CFR 20.1902 for a failure to post a radiation area. The posting deficiency was identified during an investigation of a dosimeter dose alarm in Auxiliary Building Room 208. A radiological survey was performed two days prior with a radiation area being identified and documented on the survey; however, the radiation protection technician performing the survey failed to post the area. In addition, the lead technician who reviewed the survey failed to identify the posting deficiency. As an immediate corrective action, the licensee posted the area.

This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure control) and affects the Occupational Radiation Safety cornerstone objective, in that the failure to post a radiation area could result in additional personnel exposure. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an ALARA finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a cross-cutting aspect in the area of human performance related to work practices because the radiation protection technicians failed to use error prevention tools such as self and peer checking to identify the posting deficiency.
Inspection Report# : 2006005 *(pdf)*

Significance:  May 19, 2006
Identified By: NRC
Item Type: NCV NonCited Violation

Three Examples of a Failure to Conspicuously Post a Radiation Area
The inspector identified three examples of a non-cited violation of 10 CFR 20.1902(a) because the licensee failed to conspicuously post a radiation area. Specifically, on May 18, 2006, two discrete radiation areas in the fuel building and one in the auxiliary building were identified as not being conspicuously posted. The highest general area dose rate was 15 millirem per hour. The licensee conspicuously posted these areas and entered the finding into their corrective action program as Smart Form SMF-2006-001787-00.

The finding was greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Program and Process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation because not alerting workers to the presence of radiation could prevent them from taking measures to minimize radiation exposure. The finding was processed through the Occupational Radiation Safety Significance Determination Process and determined to be of very low safety significance because it was not an as low as reasonably achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.
Inspection Report# : 2006003 *(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

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