Comanche Peak 2
4Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Oct 07, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inoperability of Emergency Power to a Safety Bus Due to Degraded Relay
A Green self-revealing noncited violation of Technical Specification 3.8.1 was identified, after both the alternate and emergency power supplies to a 6.9 kV safeguards bus failed to provide power to the bus within the time assumed in the accident analysis. On October 19, 2004, an unplanned loss of the preferred offsite power caused the Unit 2, Train B, 6.9 kV safeguards bus to de-energize. A degraded Agastat relay delayed the normal power supply breaker from opening for 30 seconds, which delayed powering the bus from the alternate offsite AC power supply or the emergency diesel generator. This issue had crosscutting aspects in the area of problem identification and resolution because the licensee previously identified that aged Agastat relays were unreliable and should be replaced if they were in service greater than 12 years. The failed relay had been in service for 16 years.

The violation was more than minor because it impacted the Mitigating Systems Cornerstone objective of availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," the finding was determined to be of very low safety significance because the likelihood of a medium or large break loss of coolant accident coincident with a loss of offsite power, which are the only conditions where the deficiency would cause a non-negligible change in the baseline risk profile, is less than or equal to 1E-6 per year. Therefore the change in core damage frequency will be less than 1E-6 per year. The licensee captured the issue in their corrective action program as Smart Form SMF-2004-003528.
Inspection Report# : 2005005*(pdf)*

Significance: G Sep 23, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate control room heat exchanger surveillance
NRC identified, noncited violation of Technical Specification Requirement 3.7.11.1 was identified because the licensee's surveillance that was performed to demonstrate compliance with the requirement was inadequate. Specifically, the acceptance criteria did not account for all differences between test conditions and accident conditions. The licensee performed an operability assessment to demonstrate current operability.

The failure to provide an adequate surveillance procedure to demonstrate the control room air conditioning system operability was a performance deficiency. The issue was more than minor because, if left uncorrected, it could become a more significant safety concern. Using the Phase 1 significance determination process worksheet, the finding was of very low risk significance because it was a qualification deficiency that did not result in a loss of function per Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1. The licensee captured the issue in their corrective action program as Smart Form 2005-000937-00.
Inspection Report# : 2005004*(pdf)*

Significance: G Jul 29, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Evaluation Resulted in Failure to Identify a Failed Containment Pressure Chaannel
A noncited violation of Technical Specification 3.3.2 was identified after the licensee failed to place an inoperable containment pressure channel isolation function in trip within 6 hours. While operating in Mode 1 on August 5, 2004, a control room containment pressure channel deviation alarm occurred. The licensee failed to recognize that the channel was inoperable. On August 6, 2004, the licensee identified that a grounded transmitter shield wire had caused the channel deviation alarm. Using a Channel Statistical Allowance analysis the licensee determined that the pressure channel became inoperable at the time of the alarm. The channel was inoperable for a total of 31 hours.

This finding is greater than minor because, if left uncorrected, the failure to recognize inoperable mitigating systems instrumentation would

become a more significant safety concern. This finding is only of very low safety significance because the condition was not a design or qualification deficiency confirmed to result in loss of function per Generic Letter 91-18; did not result in an actual loss of safety function of a system; did not increase the likelihood of a fire; and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding involved the failure of operations personnel to implement a Technical Specification action requirement and was associated with the crosscutting area of human performance. The licensee entered this condition into their corrective action program (SMF-2005-002752 and SMF-2005-003157).
Inspection Report# : 2005009*(pdf)*

Significance: G Jun 23, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49
A self-revealing NCV was identified for the failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49. The examination material was inadvertently left in the control room simulator facility following annual requalification examination administration. The material was subsequently discovered by the on-coming initial operator licensing instructors. The licensee has counseled individuals involved, reviewed and made changes to the controlling procedure, and reviewed the operator examination security processes and procedures to identify areas for improvement.

This finding was determined to be more than minor because, if left uncorrected, the finding could become a more significant safety concern. Based on the results of a Significance Determination Process using Manual Chapter 0609, Appendix I, this finding was determined to have very low safety significance, since compensatory actions were immediately taken upon discovery of the examination compromise. The cause of the finding is related to the cross cutting element of human performance.
Inspection Report# : 2005003*(pdf)*

Significance: G Jun 23, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to follow procedure by de-energizing the wrong battery charger resulting in the loss of all Unit 2 control room annunciators
A self-revealing NCV was identified for the failure of a plant operator to follow established procedures as required by Technical Specification 5.4.1 when the wrong Unit 2 battery charger was de-energized while the plant was shutdown in Mode 6. The battery charger that was inadvertently de-energized was the sole power source of the Unit 2 control room annunciators. All Unit 2 control room annunciators were lost for a period of approximately seven minutes. Refueling cavity level indication and the plant computer remained operational during the event.

This finding is greater than minor because it affected the configuration control, equipment performance, and human performance attributes of the Mitigating Systems Cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using the Inspection Manual Chapter 0609 Appendix G shutdown operations significance determination process, the inspectors determined the finding was of very low safety significance because the finding did not (1) increase the likelihood of a loss of RCS inventory, (2) degrade the licensee's ability to terminate a leak path or add RCS inventory when needed, or (3) degrade the licensee's ability to recover decay heat removal once it is lost. The cause of the finding is related to the cross cutting element of human performance.
Inspection Report# : 2005003*(pdf)*

Significance: G Mar 01, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Abnormal Procedure for Filling the CST during accident conditions
The examiners identified a noncited violation of Technical Specification 5.4.1 associated with an inadequate abnormal operating procedure. Specifically, the examiners determined that Procedure ABN-305, "Auxiliary Feedwater System Malfunction," Revision 5, was not adequate, in that, Attachment 4 of the procedure did not have an accurate list of all the adapters required to complete the connections to the valves listed in the attachment. Additionally, adapters required in Attachment 4 to complete connections to perform an emergency fill of the condensate storage tank with fire protection water were not readily available. This deficiency was discovered while walking down a job performance measure task during examination validation week. The licensed senior operator that was used for the task validation could not locate the required fitting in the nearby cabinets for the valve required to be used to fill the condensate storage tank in the procedure's attachment. Also, the attachment did not mention the specific types of adapters required for each of the different connection sources. The licensee is correcting the procedure to include information on the types of adapters required and the order of preference of these supply points for filling the condensate storage tank and has staged the proper adapters for each of the valve types in the area required by this procedure and has documented this issue in Condition Report/Smart Form SMF-2005-001022-00.

The finding is a performance deficiency in that the licensee failed to identify that the proper equipment was not readily available and the procedure did not correctly identify the required fittings for each of the possible supply valve choices. The finding is more than minor because it affects the Mitigating Systems Cornerstone of procedural quality and equipment performance, in that, it could result in a failure to locate and use the proper equipment to fulfill the abnormal procedure, Attachment 4, when the condensate storage tank is at a low level. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.

Inspection Report# : 2005301*(pdf)*

Barrier Integrity

Significance: G Jul 29, 2005
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Post Modification Test Resulted in the Introduction of Loose Parts into the Reactor Cavity
A self-revealing finding associated with inadequate postmodification testing of the Unit 2 refueling machine festoon was identified. The festoon failed during refueling operations, resulting in the introduction of loose parts into the lower internals storage area of the refueling cavity. The licensee installed the festoon during Refueling Outage 5 to replace the older take-up reel on the refueling machine, however the festoon rails were not adequate to allow bridge travel to the mechanical stops. When the bridge was operated beyond the length of the festoon rails, the cable trolleys became compacted and enough stress was placed on the tow rods to break the welds of the base plates holding the rods in place. The postmodification test only verified festoon clearance for bridge travel to the electrical bridge stops.

Failure of the licensee to perform a postmodification test that demonstrated that the festoon would perform satisfactorily in service was a performance deficiency. This finding is more than minor because the barrier integrity cornerstone objective to provide reasonable assurance that physical barriers (including the fuel clad) to protect the public from radionuclide releases caused by accidents or events is affected. The introduction of loose parts into the reactor cavity during refueling is associated with the fuel clad attributes of human performance and foreign material exclusion. The team analyzed the finding using Appendix G, "Shutdown Operations," of Manual Chapter 0609, "Significance Determination Process," Attachment 1, Checklist 4. The team concluded that the finding did not require a quantitative assessment because the condition does not increase the likelihood of a loss of reactor coolant system inventory or loss of reactor coolant system level instrumentation, does not degrade the licensee's ability to terminate a leak path or add reactor coolant system inventory when needed, and does not degrade the ability to recover decay heat removal once it is lost. Since a quantitative assessment was not required, the finding was of very low safety significance.

Inspection Report# : 2005009*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Sep 23, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to follow radiation work permit requirements
The inspector reviewed two examples of a self-revealing, non-cited violation of Technical Specification 5.4.1(a) resulting from failures to follow radiation work permit requirements. In the first example, workers entered the Unit 2 808-foot Incore Guide Tube Room even though the thimble guide tube were withdrawn because they were not cognizant of the radiation work permit requirements. A radiation protection technician failed to prevent the entry because the technician was also unfamiliar with the requirements of the applicable radiation work permit. In the second example, an operator failed to follow a general access permit instruction requiring radiation protection representative notification before accessing an area in the Unit 2 Room 077A overhead. Consequently, the operator became contaminated.

This finding is greater than minor because it is associated with the Occupational Radiation Safety Human Performance (Proficiency) Attribute and affected the cornerstone in that the failure to follow a radiation work permit requirement could increase personnel dose. The inspector determined that the finding was of very low safety significance because it did not involve: (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. In addition, this finding had cross-cutting aspects associated with human performance. The radiation workers, the operator, and the radiation protection technician did not review the radiation work permits sufficiently to understand the requirements, which directly contributed to the finding. The examples of this finding were placed into the licensee's corrective action program as Smart Forms 2005-1692 and 2005-1912.
Inspection Report# : 2005004*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Jul 29, 2005
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Inspection (PI&R) Team's Overall Assessment of the Licensee's PI&R Program
The team reviewed 151 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were generally effective. However, the team identified poor evaluation, prioritization, and corrective actions associated with longstanding safety related Agastat relay problems. A similar performance concern was documented in the last problem identification and resolution assessment. The team also concluded that licensee corrective actions taken to address an historical adverse trend in human performance have not been effective.

The team concluded that the licensee established a safety-conscious work environment at Comanche Peak Steam Electric Station. The team determined that employees and contractors felt free to enter issues into the corrective action program and raise safety concerns to their supervision, to the employees concern program, and to the NRC. All plant personnel, interviewed by the team, stated that potential safety issues were addressed by the licensee. However, the licensee had identified long-term organizational effectiveness issues within the operations department, which continued to challenge the safety-conscious work environment for shift operations personnel. The team concluded that licensee's past actions to improve operations department organizational effectiveness had not been fully effective.

Inspection Report# : 2005009*(pdf)*

Last modified : March 03, 2006