D.C. Cook 1
2Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jun 30, 2005
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Maintenance Procedure Led to Extended Time to Complete Unit 1 West Charging Pump Repair
The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when licensee personnel failed to perform maintenance on the Unit 1 west centrifugal charging pump with a procedure that was appropriate to the circumstances. The cumulative effect of several delays, including a need to disassemble and reassemble the outboard bearing mechanical seal due to improper installation and the lack of an appropriate fit check, resulted in the unavailability of the pump beyond the originally planned 58-hour maintenance window. The licensee was granted an emergency license amendment to extend the Technical Specification 72-hour allowed outage time to preclude a plant shutdown. The licensee implemented appropriate changes to the maintenance procedure to prevent recurrence. This finding affected the cross-cutting area of human performance.

The inspectors determined that this finding was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences since the Unit 1 west charging pump was rendered unavailable for an extended period of time. The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." The inspectors determined that the additional outage time for the Unit 1 west charging pump was a degradation of the Mitigating System Cornerstone; however, this finding 1) was not a design deficiency or qualification deficiency confirmed to result in a loss of function per Generic Letter 91-18; 2) did not represent an actual loss of safety function of a system; 3) did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; 4) did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk significant; and 5) did not screen as potentially risk significant due to seismic, flooding, or a severe weather initiating event. Therefore, the finding screened as Green and was considered to be of only very low safety significance.
Inspection Report# : 2005004*(pdf)*

Significance: G Jun 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Prompt Corrective Actions for Conditions Adverse to Quality
The inspectors identified two examples of a finding of very low safety significance and a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," associated with the review of operating experience information. Licensee personnel failed to take prompt and effective corrective actions to address asbestos-filled spiral wound gaskets subject to limited shelf life, which resulted in a steam leak from the Unit 2 pressurizer manway cover. The licensee also failed to take prompt and effective corrective actions to address tempered 414 stainless steel centrifugal charging pump shafts susceptible to high cycle fatigue cracking, which resulted in the failure of the Unit 1 west charging pump. The licensee subsequently replaced the failed components. The inspectors considered each of the two examples separately when completing the SDP review since each example occurred apart in time and neither one influenced the other.

The failure of the Unit 2 pressurizer manway gasket was associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operation. Specifically, the manway gasket failure resulted in reactor coolant system (RCS) leakage that necessitated the reactor be shut down for repair. The inspectors determined that this example was of very low safety significance during a Phase 1 SDP evaluation because it would not likely result in exceeding the Technical Specification limit for identified RCS leakage and would not likely affect other mitigation systems, resulting in a total loss of their safety function. As part of the licensees immediate corrective actions, the gasket was replaced.

The Unit 1 charging pump failure was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP review of this finding The inspectors determined that the additional outage time for the Unit 1 west charging pump was a degradation of the Mitigating System Cornerstone; however, this finding 1) was not a design deficiency or qualification deficiency confirmed to result in a loss of function per Generic Letter 91-18; 2) did not represent an

actual loss of safety function of a system; 3) did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; 4) did not represent an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk significant; and 5) did not screen as potentially risk significant due to seismic, flooding, or a severe weather initiating event. Therefore, the finding was considered to be of very low safety significance. As part of the licensee's immediate corrective actions, the charging pump was replaced.
Inspection Report# : 2005004*(pdf)*

Barrier Integrity

Significance: G Jun 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Use a Code Qualified Weld Procedure for a Weld Overlay Repair Completed on a Pressurizer Nozzle-to-Safe End Weld
The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," when licensee personnel failed to use a Code qualified weld procedure for a weld overlay repair completed on a pressurizer nozzle-to-safe end weld. Specifically, the licensee staff failed to perform Charpy V-notch impact tests to support weld procedure qualification and failed to incorporate a supplemental essential welding variable into the weld procedure as required by the American Society of Mechanical Engineers (ASME) Code.

This finding was more than minor because if left uncorrected, the issue could have become a more significant safety concern since unqualified weld process could have reduced the impact toughness of the pressurizer weldment such that it would be susceptible to brittle fracture. The finding was of low safety significance because subsequent Charpy V-notch impact tests that were conducted as part of the licensee's immediate corrective actions, demonstrated adequate impact toughness.
Inspection Report# : 2005004*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Physical Barrier for a Locked High Radiation Area Was Not Adequate to Prevent Unauthorized Entry
The inspectors identified a finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 6.12.2 when licensee personnel failed to provide an adequate physical barrier to prevent unauthorized entry into a locked high radiation area. The barrier for a locked high radiation area did not extend fully across an accessible area and allowed passage by an individual around the barrier.

The issue was more than minor because it was associated with the plant facilities/equipment attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The issue represented a finding of very low safety significance because it did not involve As Low As Is Reasonably Achievable (ALARA) Planning or work controls, and there was no overexposure or substantial potential for an overexposure, nor was the licensee's ability to assess worker dose compromised. Corrective actions included the installation of a flashing light and temporary physical barrier pending plans to construct a permanent extension to the barrier. Since the issue was initially licensee-identified, but was not characterized correctly, the licensee's initial corrective actions were not adequate. Consequently, the finding was also related to the cross-cutting area of problem identification and resolution.
Inspection Report# : 2005004*(pdf)*

Significance: G Dec 17, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Promptly Correct Radiological Survey Maps
A finding of very low safety significance was identified by the inspectors when licensee personnel failed to adequately address repetitive radiological posting errors. The issue was more than minor since it was associated with the Program and Process attribute of the Occupational

Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the adequate protection of worker health and safety from exposure to radiation.
The finding was of very low safety significance since the issue did not directly impact As Low As Reasonably Achievable (ALARA) planning or work controls, was not associated with an overexposure or a substantial potential for an overexposure, or compromise the licensee's ability to assess dose. As part of the licensee's immediate corrective actions, areas with survey maps which were outdated were immediately updated to reflect the most recent survey results. One Non-Cited Violation of Technical Specification 6.8.1 was identified.
Inspection Report# : 2004014*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Dec 17, 2004
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution
The inspectors concluded that the licensee's corrective action program was adequately identifying, prioritizing, evaluating and resolving problems. The conclusion of inspectors, largely born out in the opinions of the licensee staff who were interviewed, was that the identification of issues was good, but that problem resolution, though improved, needed further improvement. Licensee efforts through a Recovery Plan appeared to have a positive effect on problem resolution and the issues identified by the inspectors were of very low significance. The inspectors also concluded, based on the activities performed, that there was no evidence to support that management did not foster an environment where workers felt free to raise safety issues.
Inspection Report# : 2004014*(pdf)*

Significance: SL-III Jun 04, 2004
Identified By: NRC
Item Type: VIO Violation
Failure to Provide Complete and Accurate Information to the NRC Which Impacted A Licensing Decision.
D. C. Cook management personnel informed NRC Region III by letter dated March 24, 2004, that one senior reactor operator had a pre-existing medical condition (since 1996) that required the presence of another qualified individual (i.e., "no solo") when performing licensed duties and requested a "no solo" license restriction for the individual. The letter from the company physician also described a medication the individual was taking for the medical condition. The medical condition described by the physician was considered a disqualifying condition in accordance with American National Standards Institute/American Nuclear Society (ANSI/ANS)-3.4 - 1983, "American National Standard Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants." On December 28, 1999, the licensee provided information to the NRC regarding the medical status of the same individual applying for a renewal of the individual's senior reactor operator license with no recommendation for a "no solo" license. The individual's license was renewed by the NRC on February 1, 2000, based on the information provided by the licensee on December 28, 1999. Again, the medical condition was considered a disqualifying condition in accordance with ANSI/ANS-3.4 - 1983, and should have been reported to the NRC on NRC Form 396 for the renewal of the applicant's license requesting a "no solo" restriction on the individual's license. Therefore, the information provided to the NRC on December 28, 1999, was material to the NRC licensing action. [Note: The information concerning the individual's specific medical condition is considered medical privacy information under 10 CFR 2.390(2)(6) and is not specifically discussed here.]

As noted above, Region III received a letter from the D. C. Cook Nuclear Power Plant dated March 24, 2004, requesting a "no solo" license restriction for the individual. Region III received another letter from the D. C. Cook Nuclear Power Plant dated May 20, 2004, notifying the NRC that the recommendation of the "no solo" license condition for the individual not be implemented. The letter stated that upon further review of the individual's medical records, the company physician determined that the individual met ANSI/ANS-3.4 - 1983 to work as an operator in a multi-person facility; therefore, no license condition for solo operation was required. The NRC's medical officer again determined on May 26, 2004, that the operator required a "no solo" restriction to the operator's license. Since NRC intervention was required to identify the requirement for the operator to have a "no solo" restriction, this apparent violation was considered NRC identified.

Because the issue affected the NRC's ability to perform its regulatory function, it was evaluated with the traditional enforcement process. The finding was determined to be of low safety significance because the operator had not acted in a solo capacity prior to the license being amended. However, the regulatory significance was important because the incorrect information was provided under a signed statement to the

NRC and impacted a licensing decision for the individual. The issue was preliminarily determined to be an apparent violation of 10 CFR 50.9.

AV Closed. Notice of Violation Issued September 29, 2004.
Inspection Report# : 2004007*(pdf)*
Inspection Report# : 2005004*(pdf)*

Last modified : August 24, 2005