Braidwood 1
1Q/2008 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM AN EVALUATION ON A BOLTED CONNECTION
The inspectors identified a Non-Cited Violation of 10 CFR 50.55a(a)(3)(i) for failure to apply an approved alternative to the American Society of Mechanical Engineers Code to evaluate susceptibility of bolting corrosion and the potential for failure after identifying leakage at residual heat exchanger flow control valve assembly, valve 2RH606, bolted connection. The primary cause of this failure was related to the cross cutting component of Human Performance, Work Practices (Item H.4.(b) of IMC 0305) because licensee personnel failed to follow procedures. As part of its corrective actions, the licensee performed a review of 160 bolted-connection boric acid leaks and identified 47 similar examples (including 2RH606). The licensee planned to assign a work group evaluation to determine the appropriate additional corrective actions. The finding was more than minor because it met the criteria in IMC 0612, Appendix E, “Examples of Minor Issues,” Example 4a. Specifically, the licensee routinely failed to perform/document engineering evaluations to evaluate bolted connections with boric acid leaks. The issue was of very low safety significance based on Phase 1 screening in accordance with IMC 609, Appendix A, “Significance Determination of Reactor Inspection Findings for At-Power Situations.” Specifically, no failures of American Society of Mechanical Engineers Code bolted connections had actually occurred due to a failure to perform this evaluation.

Inspection Report# : 2007006 *(pdf)*

Significance: G Aug 24, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate test control for safety-related heat exchangers
The inspectors identified a finding having very low significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, “Test Control,” related to the failure to establish a formal heat exchanger testing program capable of identifying an unacceptable condition of the safety related cubicle coolers. Specifically, prior to 2003, the licensee’s program lacked formalized acceptance criteria. The current program did not provide guidance on how to translate design information into acceptance criteria or guidance on quantifying the results of the examinations.
Inspection Report# : 2007009 *(pdf)*

Significance: G Aug 24, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate safety-related heat exchanger examination procedure
The inspectors identified a finding of very low safety significance involving a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," with regard to the licensee’s heat exchanger examination procedure. Specifically, the procedure was inappropriate to ensure that the safety-related heat exchangers were satisfactorily inspected and evaluated. Upon discovery, the licensee initiated an evaluation to determine the operability of the affected heat exchangers.
Inspection Report# : 2007009 *(pdf)*

Significance: G Aug 24, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to take corrective action
The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” having very low safety significance. Specifically, the inspectors determined that the licensee failed to identify that operability of the AFW pump room coolers would not be supported above 100°F and subsequently correct the condition when the allowable heat sink temperature was raised. The licensee performed a preliminary calculation and determined the coolers remained operable.
Inspection Report# : 2007009 *(pdf)*

Significance: G Jun 12, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
THE LICENSEE'S FAILURE TO MAINTAIN A PROCEDURE ADEQUATE COULD HAVE RESULTED IN SECURING THE ONLY REMAINING RESIDUAL HEAT REMOVAL PUMP
The inspectors identified a violation of Technical Specification 5.4.1, "Procedures," for the licensee’s failure to provide an adequate procedure to ensure the continued operation of the "A" residual heat removal pump, during cold leg recirculation mode of operation, during conditions when the "B" residual heat removal pump was not available. The licensee initiated an issue report to track the resolution of this finding. Subsequently, the licensee revised the affected procedure on May 21, 2007 to ensure one residual heat removal pump remained operable. The licensee’s failure to maintain an adequate procedure to ensure the continued operation of the “A” residual heat removal pump was more than minor because the finding affected the mitigating systems cornerstone objective of ensuring the availability and reliability of the emergency core cooling system to respond to initiating events to prevent undesirable consequences. Specifically, the finding was associated with the mitigating systems attribute of procedure quality. The finding is of very low safety significance because the finding screened as Green during the Phase 1 Significance Determination Process.
Inspection Report# : 2007007 *(pdf)*

Significance: G Jun 12, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE EXTENT OF CONDITION REVIEW WHICH FAILED TO IDENTIFY THAT IST TESTING WAS NOT PERFORMED FOR COMPONENT COOLING WATER SYSTEMS VALVES
The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," because the licensee failed to include several manual component cooling water system valves, that were required to perform a safety function, in the inservice testing (IST) program and subsequently test the valves in accordance with IST program requirements. The finding was related to the cross-cutting area of Problem Identification and Resolution. A cross-cutting aspect in the corrective action program was identified because the licensee did not conduct an adequate extent of condition review, for a previously missed IST surveillance on several essential service water system valves. As a result, the licensee failed to identify that the component cooling water systems valves required inclusion in and testing by the IST program. The licensee initiated an issue report to track the corrective actions for this finding. Subsequently, the licensee placed the valves on the Plan-Of-The-Day Meeting Agenda to ensure testing, which was scheduled for June 30, 2007. The failure to account for these valves in the IST program was more than minor because the finding affected the mitigating systems cornerstone objective of ensuring the availability and reliability of the component cooling water and residual heat removal systems when required to respond to initiating events to prevent undesirable consequences. Specifically, the finding was associated with the mitigating systems attribute of equipment performance. The finding is of very low safety significance because the finding screened as Green during the Phase 1 Significance Determination Process.
Inspection Report# : 2007007 *(pdf)*

Barrier Integrity

Significance: G Sep 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Meet TRM Requirements for Spent Fuel Building Crane Interlocks and Physical Stops (1R20)
A finding of very low safety significance and associated Non-Cited Violation of Technical Specification 5.4.1 was identified by the inspectors for failure to have and follow procedures, which met the surveillance requirements of Technical Requirements Manual (TRM), Section 3.9.d.1. Specifically to verify that both the spent fuel pool crane electrical interlocks and physical stops were operable, with the purpose to prevent crane travel with loads greater than 2000 pounds over fuel assemblies. This was required to be completed within seven days prior to crane use. The inspectors identified that loads greater than 2000 pounds were regularly moved with the crane with the electrical interlocks bypassed and the physical stops removed.

The finding was greater than minor because, if left uncorrected, it could have become more significant as additional heavy loads were moved with no interlocks in place. The finding affected the attribute of maintaining functionality of spent fuel cladding in the Barrier Integrity cornerstone. Using the SDP Phase 1 Screening Worksheet of IMC 0609, the inspectors determined that the finding screened as Green because it only affected the fuel barrier. The licensee entered the issue into its corrective action program, temporarily suspended crane operation, and modified its procedures and practices to meet the TRM. The finding had a cross-cutting aspect in the area of Human Performance in the work practices component. Personnel failed to follow the TRM because implementing procedures did not require both the electrical interlocks and physical stops to be in place within seven days prior to crane use (H.4(b)).
Inspection Report# : 2007005 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IMPLEMENT A RADIATION PROTECTION PROGRAM COMMENSURATE WITH THE EXTENT OF PLANT RADIOLOGICAL HAZARDS
A finding of very low safety significance and an associated NCV of 10 CFR 20.1101(a) was identified by the inspectors for the licensee's failure to implement a radiation protection program commensurate with licensed activities and the ongoing radiological issues at the plant. Specifically, radiological controls were not effectively applied to secondary systems, which contained contaminated (tritium) fluids, to ensure that worker exposures and radiological effluents were fully monitored and controlled. The finding is greater than minor because it was associated with the process and procedures attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective to ensure the adequate protection of worker health and safety from exposure to radiation from radioactive material during nuclear reactor operation. Specifically, the inspectors determined that the finding did not involve unintended collective dose resulting from a deficiency in As-Low-As-Reasonably-Achievable (ALARA) planning, work control, or exposure control. The inspectors also determined that the finding did not involve an overexposure, the substantial potential for an overexposure, and did not compromise the licensee's ability to assess dose. Consequently, the inspectors concluded that the finding was of very low safety significance. Corrective actions taken by the licensee included characterizing secondary systems to determine tritium concentration and prescribing radiological coverage and contamination control requirements for each system based upon this characterization. The cause of the finding was related to a cross-cutting aspect in the area of Problem Identification and Resolution because the licensee did not address radiological safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity (P.1(d)).
Inspection Report# : 2007004 *(pdf)*

Significance: G Jun 30, 2007

Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO POST AREAS THAT CONTAIN RADIOACTIVE MATERIAL
A finding of very low safety significance and an associated NCV of 10 CFR 20.1902(e) was identified by the inspectors for the failure to post areas in which licensed material is used or stored. Specifically, two waste water lagoons, located within the Protected Area, and the Turbine Building each contained greater than 10,000 uCi of tritium and were not posted in accordance with 10 CFR 20.1902(e). The finding is greater than minor because it was associated with the process and procedures attribute of the Occupational Radiation Safety cornerstone and affected the cornerstone objective to ensure the adequate protection of the worker health and safety from exposure to radiation from radioactive material during nuclear reactor operation. Specifically, the inspectors determined that the finding did not concern unintended collective dose resulting from a deficiency in ALARA planning, work control or exposure control. The inspectors also determined that the finding did not involve an overexposure, the substantial potential for an overexposure, and did not compromise the licensee's ability to assess dose. Consequently, the inspectors concluded that the Significance Determination Process (SDP) assessment for this finding was of very low safety significance. Corrective actions taken by the licensee included posting the lagoons and areas of the turbine building appropriately as "CAUTION, RADIOACTIVE MATERIAL(S)." The cause of the finding was related to a cross-cutting aspect in the area of Human Performance because the licensee did not use conservative assumptions in decision making (H.1 (b)).
Inspection Report# : 2007004 *(pdf)*

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

Significance: SL-IV Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
DEFICIENT CONTROL OF PLANT STAFF OVERTIME
The inspectors identified a Severity Level IV Non-Cited Violation of Technical Specification 5.2.2.d for not properly implementing and maintaining procedures for controlling plant staff work hours of personnel performing safety-related activities. Procedure LS-AA-119, "Overtime Controls," Revision 4, was deficient in that it permitted the plant manager to authorize work-hour deviations for routine refueling outage activities. This issue has a cross-cutting aspect in the area of Human Performance, Resources (Item H.2.(c) of IMC 0305), because Procedure LS-AA-119 did not provide adequate instructions to provide reasonable assurance that station management would properly control overtime for plant staff performing safety-related functions to assure nuclear safety as required by Technical Specification 5.2.2.d. The violation is more than minor because, if left uncorrected, the excessive work hours would increase the likelihood of human errors during refueling outage activities and response to plant events and would become a more significant safety concern. The finding is not suitable for Significance Determination Process evaluation, but has been reviewed by NRC management in accordance with IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." The resulting increased likelihood of human error, would adversely affect the station's defense-in-depth. However, management determined the violation to be of very low significance, because no significant events or human performance issues were directly linked to personnel fatigue as a result of the hours worked. The licensee added this issue to their corrective action program to address correcting the procedure. In accordance with the NRC Enforcement Policy, Supplement I.D, the issue, being evaluated as having very low safety significance by the Significance Determination Process, is a Severity Level IV Violation.

Inspection Report# : 2007006 *(pdf)*

Last modified : June 05, 2008