Braidwood 2

Initiating Events

Significance: G Nov 29, 2002
Identified By: Self Disclosing
Item Type: FIN Finding
FEEDWATER OIL DRAIN VALVE INADVERTENTLY LEFT OPEN
A finding of very low safety significance was identified through a self-revealing event when the main control room received a low oil level alarm for the 2C turbine-driven feedwater pump. The alarm was caused by an oil drain valve being inadvertently left open by a non-licensed operator during planned maintenance occurring on the previous shift. The primary cause of this finding was related to the cross-cutting area of human performance, in that the plant operator did not use adequate self-checking to verify the oil drain valve was closed. this finding was more than minor because it increased the likelihood of a reactor trip event due to low steam generator level, and could have affected the availability of the main feedwater mitigating system due to the potential loss of the 2C turbine-driven feedwater pump from low lube oil pressure. The finding was of very low safety significance because the exposure time was short, all other mitigating systems were available, and the main feedwater system could have been recovered by fairly simple operator actions. The finding was not considered a violation of regulatory requirements.
Inspection Report# : 2002009*(pdf)*

Significance: G Sep 30, 2002
Identified By: Self Disclosing
Item Type: FIN Finding
ERRORS DURING MODIFICATION OF ROD CONTROL SYSTEM RESULTS IN INCREASED LIKELIHOOD OF REACTOR TRIP INITIATING EVENT
A finding of very low safety significance was identified through a self-revealing event when Unit 2 experienced rod control urgent failure alarms and a dropped control rod. The cause of the event was improperly installed insulation on three heat sinks in the rod control power cabinets which caused grounds and reduced voltages to the control rod stationary gripper coils. The heat sinks were not properly insulated from the cabinet chassis during a modification performed in the spring 2002 refueling outage. The primary cause of this finding was related to the cross-cutting area of Human Performance with inadequate work instructions as a contributing factor. The finding was more than minor because it increased the likelihood of a reactor trip initiating event. The finding did not affect the ability to trip the reactor. Since the issue did not affect the likelihood of a loss of coolant, availability of mitigating systems, or the likelihood of a fire or flood, it was of very low safety significance. No violation of regulatory requirements occurred.
Inspection Report# : 2002007*(pdf)*

Significance: G Jun 30, 2002
Identified By: Self Disclosing
Item Type: FIN Finding
OPERATOR ERROR ISOLATING HEATER DRAIN FLOW
A finding of very low safety significance was identified through a self-revealing event when an operator inadvertently performed steps to isolate heater drain pump flow on Unit 1, which was operating at full power, instead of Unit 2, which was shutdown at the time. The primary cause of this finding was related to the cross-cutting area of Human Performance. Despite several unit-specific visual indications that were available, the operator did not perform adequate self-checking to ensure that he was on the correct unit. This finding was more than minor because it increased the likelihood of a reactor trip event due to low steam generator level and also could have affected the availability of the main feedwater mitigating system because the motor-driven main feedwater pump, if it had been operating, could have tripped on low suction pressure. The finding was only of very low safety significance because the exposure time was short, all other mitigating systems were available, and the main feedwater system could have been recovered by fairly simple operator actions. [This finding was determined not to be a violation of NRC requirements.]
Inspection Report# : 2002006*(pdf)*

Significance: G Feb 18, 2002
Identified By: Self Disclosing
Item Type: FIN Finding
CONFIGURATION CONTROL ERROR THAT RESULTED IN PLANT TRANSIENT
A finding of very low safety significance was identified when a plant transient resulted from a configuration control error on the January 23,

2002. An instrument maintenance technician assigned to perform a calibration of the 2A condensate booster pump flow loop connected a digital voltmeter to the Unit 2 heater drain tank level control loop card. This resulted in an erroneous control signal indicating the heater drain tank was empty. The heater drain pump discharge flow control valves went shut. This finding was determined to be of very low safety significance no actual initiating event occurred. The inspectors determined that this failure was a not a violation of NRC requirements because the equipment was non-safety related. However, the transient nearly resulted in an initiating event. An alert control room operator manually re-opened the heater drain pump discharge flow control valves and prevented a loss of feedwater and/or a loss of condenser vacuum.
Inspection Report# : 2002002*(pdf)*

Mitigating Systems

Significance: Sep 30, 2002
Identified By: Self Disclosing
Item Type: FIN Finding
MAINTENANCE ERROR ON 2A DG RESULTS IN INPLANNED UNAVAILABILITY OF MITIGATING SYSTEM
A finding of very low safety significance was identified through a self-revealing event after the 2A diesel generator tripped during routine Technical Specification surveillance testing. The cause of the trip was an improperly installed thrust bearing wear detector during routine maintenance about a month before the trip. The primary cause of this finding was related to the cross-cutting area of Human Performance. The issue was more than minor because the trip resulted in the unplanned unavailability of the generator in order to troubleshoot and repair the problem. The finding was of very low safety significance because the safety function of the 2A diesel generator was unaffected. No violation of regulatory requirements occurred.
Inspection Report# : 2002007*(pdf)*

Significance: Sep 30, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ESTABLISH COMPENSATORY FIREWATCHES FOR TWO REMOVED FIRE RATED BARRIERS
A finding of very low safety significance was identified by the inspectors for a violation of Technical Specification Fire Protection Program requirements. The licensee removed two fire rated barriers (floor plugs) in the auxiliary building, and left them off for over five months, without establishing the required compensatory fire watches. The primary cause of this violation was related to the cross-cutting area of Human Performance. The licensee Fire Marshall failed to identify that the floor plugs were rated fire barriers, despite labels indicating that the 10 CFR 50, Appendix R, program applied to them, before authorizing their removal. This issue was more than minor because a fire in one elevation of the auxiliary building could have spread to other elevations and therefore affected redundant trains of mitigating systems. The issue was of very low safety significance because the inspectors could not develop realistic fire scenarios in one elevation that could reasonably propagate to the elevations above. The issue was a Non-Cited Violation of Technical Specification 5.4.1 which required the implementation of written procedures covering the Fire Protection Program.
Inspection Report# : 2002007*(pdf)*

Significance: Mar 31, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURES
The inspectors identified a Non-Cited Violation for an operator failing to follow surveillance test procedures during the performance of Unit 2 auxiliary feedwater system slave-relay testing. This finding was of very low safety significance because the issue affected only one train of a safety-related system for less than the technical specification allowed outage time.
Inspection Report# : 2002005*(pdf)*

Significance: Mar 31, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY AND DOCUMENT FAILURE OF AF PUMP
The licensee failed to identify the cause and prevent recurrence for the September 1999 failure of the 1B auxiliary feedwater system, a significant condition adverse to quality. The cause of the failure was not determined until a subsequent failure occurred in November 2001. This finding was determined to be of very low safety significance because only one train of a Technical Specification safety-related system failed for less than the Technical Specification allowed outage time. The failure to identify the cause of the September 1999 failure was considered a Non-Cited Violation of 10 CFR 50, Appendix XVI.

Inspection Report# : 2002004*(pdf)*

Significance: G Mar 31, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO INCLUDE APPROPRIATE PREREQUISITES IN MONTHLY SURVEILLANCE
The inspectors identified a Non-Cited Violation for inadequate test controls during a monthly surveillance testing of the 1B auxiliary feedwater system monthly surveillance test. This finding was of very low safety significance because the inspectors determined that this preconditioning issue had not led to an actual decline in performance of the 1B auxiliary feedwater system.
Inspection Report# : 2002005*(pdf)*

Significance: G Feb 18, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW EQUIPMENT CONTROL PROCEDURE
A finding of very low safety significance was identified when the inspectors identified that the flood door to the 2B essential service water (SX) pump room was left open and with no station personnel in attendance. This finding was determined to be of very low safety significance because the door was open and unattended for a short period of time and there was no actual flooding in progress. The inspectors determined that this failure was a violation of Technical Specification 5.4.1.
Inspection Report# : 2002002*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO USE CORRECT INSTANTANEOUS CURRENT TRIP SETPOINT
The licensee failed to incorporate the correct instantaneous current trip setpoint following maintenance and replacement of a safety-related, motor operated valve's molded case circuit breaker. This issue was originally identified during the replacement of a similar molded case circuit breaker in September 2001. The inspectors identified a Non-Cited Violation for inadequate corrective actions. This finding was of very low safety significance because the issue did not represent an actual loss of a safety function of the reactor containment fan coolers.
Inspection Report# : 2002005*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A Feb 22, 2002
Identified By: NRC
Item Type: FIN Finding
INSPECTORS NOTED SEVERAL EXAMPLES WHERE APPARENT CAUSE EVALUATIONS (ACEs) WERE OF POOR QUALITY.
The inspectors concluded that the licensee adequately identified, evaluated, and resolved problems within the requirements of the corrective action program (CAP). In general, the significance threshold for entering issues into the corrective action program appeared appropriate. However, the inspectors noted several examples where apparent cause evaluations (ACEs) were of poor quality. These deficiencies were not identified by line management during the licensee's review and approval process. The types of deficiencies varied but included the following: • New information that could impact the original operability and reportability evaluations was not re-evaluated by shift management. • Other apparent problems were mentioned but were not fully addressed in the evaluation. For example, potential common cause failure mechanisms were included as possible apparent causes; however, the impact on like-equipment was not resolved or evaluated. • The extent of the evaluations and corrective actions were not always well documented. In addition, the inspectors noted that equipment problems identified during outages were not always evaluated for operability or reportability. In addition, causes for significant equipment problems were not always addressed prior to plant startup. The licensee was effective in correcting broke/fix type issues such as equipment problems, procedure deficiencies, and calculational errors. However, the licensee was less effective in correcting recurring human performance problems. This was evidenced by recurring problems associated with configuration control, contractor control, foreign material exclusion control, fire protection control, and rework issues. Through interviews and observations, the inspectors concluded that Braidwood established a safety-conscious work environment where people were not reluctant to raise issues. However, the inspectors noted that recent changes to the CAP made it somewhat burdensome to enter items into the corrective action program computerized process. Additionally, the inspectors ascertained that the recent changes to the CAP also made the trending condition report-related data burdensome by making the manipulation of the data difficult.
Inspection Report# : 2002003*(pdf)*

Last modified : March 25, 2003