Byron 1
3Q/2003 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Sep 30, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURE WHEN MAKING-UP ELECTROLYTE LEVEL.
A finding of very low safety significance and an associated NCV were identified through a self-revealing event. The licensee failed to follow procedure for nickel cadmium battery bank surveillances when the licensee added boric acid as a makeup electrolyte solution vice demineralized water, as specified in the procedure, into the nickel cadmium battery bank cells that supply power to start the diesel engine of the train B essential service water makeup pump assembly. This primary cause of this finding affects cross-cutting area of Human Performance. The licensee replaced the battery assemblies to correct the problem; however, this resulted in additional system unavailability time.

This finding was more than minor because it involved the equipment availability attribute of the Mitigating System cornerstone objective regarding the availability of a system that responds to initiating events to prevent undesirable consequences. The finding was of very low safety significance because there was no design deficiency, no actual loss of safety function, no single train loss of safety function for greater than the technical specification allowed outage time and no risk due to external events. The issue was a Non-Cited Violation of Technical Specification paragraph 5.4.1(a) which required adherence to written procedures for performing maintenance that can affect the performance of safety-related equipment.
Inspection Report# : 2003006*(pdf)*

Significance: G Sep 30, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO SPECIFY A CRITICAL DESIGN DIMENSION IN PROCUREMENT DOCUMENTATION.
A finding of very low safety significance and an associated Non-Cited Violation (NCV)were identified through a self-revealing event. The licensee failed to adequately specify, in procurement documentation, the proper length for a replacement resistance temperature detector (RTD) installed into the diesel engine oil pan of the train B essential service water makeup pump assembly. This was discovered when an engineer observed excessive vibration of the RTD during the diesel pump operation. The vibration was excessive enough such that continued operability of the pump to perform its intended safety function could not be assured without removing the RTD. The primary cause of this finding was related to the cross-cutting area of Human Performance. The licensee removed the RTD to correct the problem; however, this resulted in additional system unavailability time.

This finding was more than minor because it involved the equipment availability attribute of the Mitigating System cornerstone objective regarding the availability of a system that responds to initiating events to prevent undesirable

consequences. The finding was of very low safety significance because there was no design deficiency, no actual loss of safety function, no single train loss of safety function for greater than the technical specification allowed outage time and no risk due to external events. The issue was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion IV, "Procurement Document Control."
Inspection Report# : 2003006*(pdf)*

Significance: G Jun 30, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ASSESS RISK ASSOCIATED WITH THE ISOLATION OF A PRESSURIZER PORV AFTER CLOSING ITS ASSOCIATED BLOCK VALVE.
The inspectors identified a finding of very low significance regarding the licensee's failure to assess the increase in risk in accordance with 10 CFR 50.65(a)(4) that resulted following the isolation of a pressurizer power operated relief valve (PORV) by closing its associated block valve. The primary cause of this finding was related to the cross-cutting area of human performance. Despite the availability of a computer software tool that would have indicated additional evaluation was required, the risk evaluation was completed. Following identification of this issue, the licensee performed a risk review and determined that the plant was not in the condition of core life when immediate actuation of the pressurizer PORVs are required; therefore, isolation of the pressurizer PORV did not result in an increased online risk.

This finding was more than minor because it affected the human performance attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance because there was no design deficiency, no actual loss of safety function, no single train loss of safety function for greater than the Technical Specification allowed outage time, and no risk due to external events. The inspectors determined this to be a Non-Cited Violation of 10 CFR 50.65(a)(4).
Inspection Report# : 2003003*(pdf)*

Significance: G May 23, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN AUXILIARY FEEDWATER INSTRUMENTATION PIPING WATER SOLID
A finding of very low safety significance was identified involving a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that related to the design basis requirement to maintain auxiliary feedwater instrumentation piping water solid, not being correctly translated into specifications, drawings, procedures, or instructions. This resulted in a void developing in the piping to the suction pressure transmitters 1(2)PT-AF055, which perform a safety-related function to sense low suction pressure and initiate a swap over to the essential service water system on loss of the condensate storage tank.

The finding was more than minor because a lack of coordination between design requirements and procedural guidance affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because it did not represent an actual loss of a safety function as the automatic switchover would still have occurred prior to the pumps losing suction pressure.
Inspection Report# : 2003004*(pdf)*

Significance: G May 23, 2003

Identified By: NRC
Item Type: NCV NonCited Violation
DESIGN BASIS CALCULATIONS CONTAINED ERRORS OR DID NOT EXIST
A finding of very low safety significance was identified associated with a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that related to the coordination, content, and control of design basis engineering calculations. Specifically, the inspectors identified a number of concerns related to the coordination, content, and control of existing calculations (including the failure to coordinate calculation inputs and assumptions as existing design basis calculations are revised or as additional calculations are originated), the use of incorrect or unsupported inputs or assumptions in design basis calculations, the absence of calculations to support some aspects of the current design basis, the failure to appropriately supercede certain calculations or to denote other calculations as historical documents, and, in certain instances, errors in existing calculations. As a result of these issues, the current design basis calculations, as well as the existing calculation control processes, may not be adequate to ensure that the design basis will continue to be maintained. Although none of the specific deficiencies identified during the inspection resulted in immediate operability concerns, it was concluded that the auxiliary feedwater system design basis was not being adequately controlled by the existing calculations nor by the licensee's processes for coordination and control of the calculations.

This finding was more than minor based on the potential that the lack of adequate control and quality of design basis calculations could result in the ability of the auxiliary feedwater system to perform its safety functions to be degraded. Design basis calculations were routinely used in support of design changes, operating procedures, test acceptance criteria, and operability determinations. This finding is assessed as Green because it did not represent an actual loss of the auxiliary feedwater system's safety function.
Inspection Report# : 2003004*(pdf)*

Significance: G May 23, 2003
Identified By: NRC
Item Type: FIN Finding
COMMITMENT TO HAVE PLACARDS ON THE MAIN CONTROL BOARD CONCERNING MINIMUM FLOW FOR THE AUXILIARY FEEDWATER PUMPS NOT MAINTAINED
A finding of very low safety significance was identified involving not maintaining a commitment to the NRC to have placards on the main control board. The placards provided guidance to operators to ensure the auxiliary feedwater pumps had sufficient recirculation flow prior to reducing flow to the steam generators below 100 gpm [gallons per minute], such that the pumps remained protected from being run at shutoff conditions that would have resulted in pump damage.

This finding was more than minor because this lack of guidance could have affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because it did not represent an actual loss of a safety function.
Inspection Report# : 2003004*(pdf)*

Barrier Integrity

Significance: G Sep 26, 2003
Identified By: NRC

Item Type: NCV NonCited Violation
FAILURE TO PROMPTLY IDENTIFY A CONDITION ADVERSE TO QUALITY IN THAT THE REFUELING MACHINE MAST COULD HAVE BEEN DAMAGED BY UNDETECTED CONTACT WITH AN OBSTRUCTION
A finding of very low safety significance was identified by the inspectors for a failure to promptly identify a condition adverse to quality. A bent ladder was obstructing the normal fuel transfer path from the core to the containment upender. The obstruction was not noticed until commencing the first fuel move from the core. The inspectors determined that the refueling machine mast must have caused the ladder to get bent or had at least made contact with the bent ladder as it passed on its way to the core. This contact could have resulted in damage to the refueling machine mast such that fuel damage might have occurred during later fuel handling. There was no inspection of the refueling machine mast conducted to check for damage from this contact prior to handling fuel.
This issue was more than minor because it was associated with the human performance attribute of protecting the fuel cladding barrier integrity and affected the cornerstone objective of providing reasonable assurance that physical barriers protect the public from radionuclide releases caused by accidents or events. Because this issue was not suited for analysis through the SDP, the finding was reviewed by regional management. The finding was determined to be of very low safety significance because, in this case, there was no apparent damage to the refueling machine mast. The issue was a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI.
Inspection Report# : 2003008*(pdf)*

Significance: G Sep 26, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROMPTLY CORRECT A CONDITION ADVERSE TO QUALITY IN THAT THE REFUELING MACHINE WAS BEING OPERATED WITH INTERLOCKS BYPASSED FOR AN EXTENDED PERIOD WITH NO COMPENSATORY MEASURES
A finding of very low safety significance was self-revealed for failure to promptly correct a condition adverse to quality. When a bent ladder obstructing the normal fuel transfer path was identified, the fuel handlers, along with their supervisors, made the decision to avoid the obstruction by operating the refueling machine with travel interlocks bypassed so an alternate path could be followed. The purpose of those interlocks was to prevent the possibility of fuel damage resulting from contact of the mast with obstructions. Operation of the system with the interlocks bypassed for an extended period of time was a condition adverse to quality. The obstruction was not promptly removed and, while operating in this condition, no compensatory measures where put into place to provide protection at a level equivalent to the interlocks. The finding was self-revealed when the mast contacted the rod cluster control assembly change fixture basket while the refueling machine was being operated off its normal transfer path.
This issue was more than minor because it was associated with the human performance attribute of protecting the fuel cladding barrier integrity and affected the cornerstone objective of providing reasonable assurance that physical barriers protect the public from radionuclide releases caused by accidents or events. Because this issue was not suited for analysis through the SDP, the finding was reviewed by regional management. The finding was determined to be of very low safety significance because there was no apparent damage done to the fuel barrier and no radioactive release occurred. The issue was a Non-Cited Violation of 10CFR50, Appendix B, Criterion XVI.
Inspection Report# : 2003008*(pdf)*

Significance: G Mar 19, 2003
Identified By: NRC
Item Type: FIN Finding
FAILURE TO ADEQUATELY EVALUATE THE OPERABILITY OF THE NONACCESSIBLE AREA EXHAUST FILTER PLENUM VENTILATION SYSTEM DURING A WORK ACTIVITY.
The inspectors identified a finding of very low safety significance regarding the licensee's failure to appropriately

assess the operability of the nonaccessible area exhaust filter plenum ventilation system during a work activity to repair the discharge flow control damper for the 0A auxiliary building heating, ventilation and air conditioning system (VA) nonaccessible filter plenum exhaust fan. The primary cause of this finding was related to the cross-cutting area of human performance. The licensee failed to recognize that failing open an inlet damper within the system resulted in the associated train being inoperable. This finding was more than minor because it involved an inadequate operability evaluation of the nonaccessible area exhaust filter plenum ventilation system, which if left uncorrected, would have become a more significant safety concern, in that, it would impact the operators' ability to combat an accident and minimize offsite exposure for certain accidents. This finding is of very low safety significance because it only represented a degradation of the radiological barrier function provided for the auxiliary building. No violations of NRC requirements occurred.
Inspection Report# : 2003002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jul 14, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO COMPLY WITH RADIOLOGICAL POSTING RESULTING IN UNAUTHORIZED ENTRY INTO THE RADIOLOGICALLY CONTROLLED AREA
A finding of very low safety significance and an associated Non-Cited Violation (NCV) were identified through a self-revealing event, when a station laborer failed to comply with a radiological posting controlling access into the Radiologically Controlled Area (RCA) of the station while delivering a food order intended for the Technical Support Center. The laborer's failure to read and comply with the radiological posting resulted in his unauthorized entry into the RCA without the appropriate additional radiological controls (Radiation Worker Training, Radiation Work Permit, and primary and secondary dosimetry).

The issue was associated with the "Human Performance" attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective in ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material. The cornerstone objective was affected because the RCA boundary posting violated by the labor represents the final radiation exposure barrier in the field for those workers who are not normally authorized to enter the RCA. Although the laborer entered the RCA without the appropriate radiological controls, the radiological conditions the laborer could have encountered were not sufficient to produce a substantial potential for an exposure in excess of regulatory limits. Therefore, the finding was of very low safety significance. One Non-Cited Violation for the failure to meet the requirements of the licensee's procedure controlling access to the RCA was identified.
Inspection Report# : 2003006*(pdf)*

Public Radiation Safety

Physical Protection

Miscellaneous

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