

Duane Arnold 1Q/2004 Plant Inspection Findings

Initiating Events



Significance: Nov 07, 2003

Identified By: NRC

Item Type: FIN Finding

FAILURE TO ENSURE PROPER REASSEMBLY OF THE 'E' CONDENSATE DEMINERALIZER RESULTED IN A MANUAL REACTOR SCRAM.

A finding of very low safety significance was identified through a self-revealing event when the licensee failed to ensure that the 'E' condensate demineralizer was properly reassembled following a septum replacement. The improperly assembled demineralizer resulted in a resin intrusion, which caused an increase in reactor water conductivity, and a subsequent reactor scram. The licensee repaired the 'E' condensate demineralizer.

Inspection Report# : [2004002\(pdf\)](#)



Significance: Jun 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

No Procedure To Implement Examination Of Welds Subject To Crevice Corrosion

Green. The inspectors identified a finding of very low safety significance regarding failure to issue a procedure to examine Code Class 1 welds subject to crevice corrosion.

This finding was more than minor because if left uncorrected, it could have resulted in failure to examine Code Class 1 welds subject to crevice corrosion and consequently could have allowed flawed Code components to go undetected. Undetected flaws in these areas could lead to failure of Class 1 piping components and result in an increased frequency for a loss of coolant accident. This finding was of very low safety significance because the inspectors identified this issue prior to the first scheduled inspection of components susceptible to crevice corrosion. This finding was determined to be a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion V (Section 1R08).

Inspection Report# : [2003004\(pdf\)](#)



Significance: May 15, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE DEDICATION OF COMMERCIAL GRADE EQUIPMENT.

A finding of very low safety significance was identified by the inspectors as a result of the licensee's failure to follow procedures associated with the procurement and commercial grade dedication of inverter capacitors. The finding is more than minor as the capacitors failed resulting in the inoperability of the safety related inverter. The finding was determined to be of very low safety significance because a back-up alternate source of power was available to supply power to safety related loads. A Non-Cited Violation of Appendix B of 10 CFR 50, Criterion V, was identified by the inspectors.

Inspection Report# : [2003008\(pdf\)](#)



Significance: May 15, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE ASSESSMENT OF RISK DUE TO OUT OF SERVICE EQUIPMENT.

A finding of very low safety significance was identified by the inspectors when the licensee failed to consider the unavailability of the 1D15 inverter as part of their daily risk assessment for out-of-service equipment. The finding is more than minor because it affected the outcome of the licensee's daily risk assessment used for maintenance planning. The finding was determined to be of very low safety significance since the impact to overall plant risk was relatively minor. A Non-Cited Violation of 10 CFR 50.65.a(4) was identified by the inspectors.

Inspection Report# : [2003008\(pdf\)](#)

Mitigating Systems

Significance:  Feb 28, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE ACCEPTANCE CRITERIA FOR EMERGENCY DIESEL GENERATOR HEAT EXCHANGERS INSPECTIONS.

A finding of very low safety significance was identified by the inspectors when the licensee failed to provide appropriate quantitative or qualitative acceptance criteria for determining that important activities were satisfactorily accomplished for the Generic Letter (GL) 89-13 heat exchanger inspections on the emergency diesel generators (EDGs). The licensee has revised their inspection procedures to include adequate acceptance criteria and documentation.

Inspection Report# : [2004002\(pdf\)](#)

Significance:  Feb 14, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO MAINTAIN ADEQUATE DESIGN CONTROL WHEN THE RESIDUAL HEAT REMOVAL SERVICE WATER/EMERGENCY SERVICE WATER PIT LEVEL INDICATING SWITCHES WERE DOWNGRADED.

A finding of very low safety significance was identified by the inspectors when the licensee failed to ensure proper design control was maintained when the residual heat removal service water (RHRSW)/emergency service water (ESW) pit level indicating switches (LIS) 4935A and LIS4935B were downgraded to non safety-related components. When the LISs were downgraded, safety-related and non safety-related circuits were cross connected without appropriate isolation devices. The licensee rededicated the LISs as safety-related components.

Inspection Report# : [2004002\(pdf\)](#)

Significance:  Feb 13, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Incorrect Factor of Safety Specified in Design Evaluation of HPCI Pipe Support

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance. Specifically, when relocating a high pressure coolant injection turbine exhaust line valve the licensee failed to correctly use the original design anchor bolt safety factor in the supporting calculation. Following discovery, the licensee entered the violation into their corrective action system as condition report CAP 030373.

Inspection Report# : [2004006\(pdf\)](#)

Significance:  Feb 13, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Enter a Condition Adverse to Quality into the Corrective Action Program

The team identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," having very low safety significance. Specifically, the licensee failed to promptly identify and evaluate a calculation error that resulted in a potentially non-conservative technical specification value for the condensate storage tank low level setpoint. The licensee agreed that the issue was not adequately entered into the corrective action program, initiated CAP 030703 to address the issue, and performed an immediate operability review.

Inspection Report# : [2004006\(pdf\)](#)

Significance:  Sep 13, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY DEMONSTRATE THE PERFORMANCE OR CONDITION OF THE REACTOR BUILDING CRANE.

A finding of very low safety significance was identified by the inspectors for the licensee's failure to demonstrate that the performance of the reactor building crane was being effectively controlled through appropriate maintenance. Once identified, the licensee placed the reactor building crane in (a)(1) status and developed a performance improvement plan to return the crane to (a)(2) status.

Inspection Report# : [2003005\(pdf\)](#)

Significance:  Jul 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO ADEQUATELY DESIGN THE CHROMOLAX TIS CIRCUIT.

A finding of very low safety significance was self-revealed during temperature indicating switch failures. An inadequate design resulted in failures of temperature indicating switches due to a power surge from the HFA relays. Once identified, the licensee redesigned the circuit to place the surge suppressor in line with the HFA relays and also to place a metal oxide varistor across the relay coil to eliminate any effects from the power surge.

Inspection Report# : [2003005\(pdf\)](#)**Significance:** Jun 30, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure For Surface Examination of Code Components

Green. The inspectors identified a finding of very low safety significance regarding inadequate qualification of a procedure used to conduct surface examination of safety-related piping system welds. Specifically, the licensee had not demonstrated that the dye penetrant materials used would identify flaws in safety-related welds at the expanded temperature ranges allowed in this procedure.

This finding was more than minor because if left uncorrected, it could have adversely affected the licensee's ability to perform an adequate inspection of safety-related piping welds. This finding was of very low safety significance because the licensee confirmed that this procedure had not been used on piping welds at the lower temperature ranges where it would not have adequately detected flaws. This finding was determined to be a Non-Cited Violation of 10 CFR Part 50.55a(g)4. (Section 1R08)

Inspection Report# : [2003004\(pdf\)](#)**Significance:** Jun 18, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW THE TEMPORARY MODIFICATION PROCEDURE FOR ID15 (SECTION1R23).

A finding of very low safety significance was identified through a self-revealing event when the licensee failed to follow procedures during plant equipment manipulations on the 1D15 120 VAC instrument inverter. The failure to follow procedures resulted in a blown fuse, thereby rendering the 1D15 inverter unavailable. The primary cause of this issue was related to the cross-cutting area of Human performance.

The issue was more than minor because the failure to follow procedures resulted in a blown fuse that made the 1D15 120 VAC instrument inverter unavailable. The issue was determined to be of very low safety significance, since the 1Y1A regulating transformer supplied power to the division one instrument bus after the 1D15 inverter was made unavailable. An NCV of 10 CFR 50, Appendix B, Criterion V, related to the failure to follow procedures during plant equipment manipulations was identified through a self-revealing event.

Inspection Report# : [2003004\(pdf\)](#)**Significance:** May 15, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE CORRECTIVE ACTION TO MULTIPLE EQUIPMENT FAILURES.

A finding of very low safety significance was identified by the inspectors for inadequate corrective action associated with seal leakage of the High Pressure Coolant Injection (HPCI) pump and equipment damage in the drywell caused by maintenance personnel. The finding was more than minor because, in each case, either the operability of the equipment was affected or the equipment was degraded. The finding was determined to be of very low safety significance because, in each case, alternate equipment was available to perform the intended safety functions. A Non-Cited Violation of Appendix B of 10 CFR, Criterion XVI was identified by the inspectors.

Inspection Report# : [2003008\(pdf\)](#)**Significance:** May 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW MAINTENANCE PROCEDURE FOR RETURNING TC7539A TO SERVICE.

A finding of very low safety significance was identified through a self-revealing event, during the operation of the "A" RHRSW/ESW Pump Room ventilation system. The primary cause of this finding was related to the cross-cutting area of human performance for the failure to follow maintenance procedures during the installation of a temperature controller TC7539A. Once identified, the licensee correctly installed the temperature controller to reestablish proper ventilation control in the "A" RHRSW/ESW Pump Room.

Inspection Report# : [2003006\(pdf\)](#)

G**Significance:** Apr 19, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE PROCEDURE TO PERFORM PRIMARY CONTAINMENT CLOSEOUT.

A finding of very low safety significance was identified by the inspectors when the licensee failed to have an adequate procedure for the primary containment closeout. The procedure did not adequately address the evaluation of debris left inside containment to ensure that the Emergency Core Cooling Systems (ECCS) strainers were not impacted.

The issue was more than minor because if left uncorrected, it could become a more significant safety concern since the failure to perform an evaluation could result in exceeding the assumptions utilized in the ECCS strainer design calculations, thereby potentially degrading the ECCS strainers and affecting the plants mitigating systems. The issue was determined to be of very low safety significance, since the amount of debris left in the primary containment did not exceed the assumptions in the design criteria for the ECCS strainers. An NCV of 10 CFR 50, Appendix B, Criterion V, related to an inadequate procedure to closeout primary containment was identified by the inspectors.

Inspection Report# : [2003004\(pdf\)](#)G**Significance:** Apr 18, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

INADEQUATE PROCEDURE FOR POST MAINTENANCE TESTING OF PSV 4405 (SECTION 1R19).

A finding of very low safety significance was identified through a self-revealing event when the licensee failed to adequately test the pilot solenoid valve replacement on Pressure Setpoint Valve (PSV) 4405 of the Automatic Depressurization System (ADS), during post maintenance testing. The inadequate testing procedure resulted in exceeding the required technical specification condition with the valve being inoperable. The valve was inoperable due to a wiring error during the installation of the pilot solenoid valve. The primary cause of this issue was related to the cross-cutting area of human performance. The licensee failed to adequately ensure that the PSV-4405 was operable prior to entering conditions that it required.

The issue was more than minor because PSV-4405 was rendered inoperable for the ADS function. The issue was determined to be of very low safety significance, since the other ADS and Low Level Set (LLS) valves were available to perform the relief function. An NCV of 10 CFR 50, Appendix B, Criterion V, related to an inadequate test procedure for post maintenance testing of the ADS system pilot valve replacement was identified through a self-revealing event.

Inspection Report# : [2003004\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

G**Significance:** Aug 21, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

FAILURE TO FOLLOW PCP 2.8 PROCEDURE FOR RETURNING KAMAN 8 TO SERVICE.

A finding of very low safety significance was identified through a self-revealing event related to the failure to follow the procedure for sampling gaseous effluent systems. The primary cause of this violation was related to the cross-cutting area of Human Performance, since the licensee failed to reopen a sample inlet valve, in accordance with procedures, after a leak check for a Reactor Building Gaseous Effluent Monitor. This resulted in the monitor being inoperable. Once identified, the licensee opened the sample inlet valve to restore operability. In

addition, the licensee placed verification steps in the associated chemistry procedures to ensure proper equipment lineups.
Inspection Report# : [2003005\(pdf\)](#)

Physical Protection

Miscellaneous

Last modified : May 05, 2004