# Monticello
# 4Q/2005 Plant Inspection Findings

## Initiating Events

## Mitigating Systems

**Significance:** G Nov 04, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
**FAILURE TO ADDRESS SIGNIFICANT OBSTRUCTION OF SPRINKLER HEADS.**
A finding of very low safety significance was identified by the inspectors for the failure to address a deviation from the applicable fire protection code for emergency diesel generator room sprinkler systems. Specifically, the sprinkler systems deviated from the code in that a sprinkler head in each room was significantly obstructed. The primary cause of this finding was related to the Corrective Action subcategory of the Problem Identification and Resolution cross-cutting area.
Inspection Report# : 2005013*(pdf)*

**Significance:** G Sep 16, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
**FAILURE TO PROTECT FLOOD PROTECTION EQUIPMENT.**
A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50, Appendix B, Criterion V. The licensee failed to establish and accomplish procedures that were appropriate to the circumstances to ensure that flood protection equipment would remain available during an internal flooding event in order to protect safety-related equipment. Specifically, the inspectors identified loose debris in the East Turbine Building (elevation 931') that had the potential to block drainage paths. The licensee failed to implement procedures for controlling loose material that could have adversely impacted flood protection equipment and therefore safety-related motor control centers (MCCs) during an internal flooding event. In addition, the procedure that controlled loose material was not safety-related although the equipment that it affected was safety-related. The licensee entered the issue into their corrective action program to secure the loose material and to perform a cause evaluation.

The finding was more than minor because the failure to have adequate internal flood protection controls could have impacted the availability, reliability, and capability of the safety-related MCCs in flood-affected areas of the turbine building. In the event of a pipe break, loose material could have blocked water passage through floor drains or clearances under doors. The finding also affected the cross-cutting area of Problem Identification and Resolution because the failure to have adequate debris control procedures and instructions was previously identified by the NRC. The finding was of very low safety significance because the inspectors determined that some of the drainage paths would have remained available, and operators would have had time to prevent adverse affects to the redundant safety-related MCC.
Inspection Report# : 2005011*(pdf)*

**Significance:** G Jun 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
**FAILURE TO FULLY EVALUATE THE AVAILABILITY OF A VENT PATH CREDITED IN THE OPERABILITY EVALUATION FOR A DEGRADED HELB ISSUE.**
A finding of very low safety significance and Non-Cited Violation (NCV) was identified on August 3, 2004, by the inspectors when the engineering and operations groups failed to fully evaluate the availability of a vent path credited in the operability evaluation for a degraded high energy line break (HELB) issue. Specifically, the inspectors identified that the ventilation damper credited as a vent path for a feedwater HELB failed in the shut position on a loss of service air, isolating the vent path. The primary cause of this finding was related to the cross-cutting area of Human Performance. The licensee entered this into their corrective action program (CAP) and completed plant modifications to install HELB dampers to isolate the turbine building mild environments from the turbine building harsh environments.

The inspectors determined that the issue was more than minor because it directly impacted the equipment performance attribute for availability and reliability of the mitigating systems. The finding was of very low safety significance because it was considered a design deficiency which did not result in loss of function per Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1. This issue was an Non-Cited Violation (NCV) of 10 CFR 50, Appendix B, Criteria III, "Design Control."

Inspection Report# : 2005003*(pdf)*

**Significance:** G Apr 02, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
**INADVERTENT ENGINEERRED SAFETY SYSTEM ACTUATIONS DURING TESTING.**
A finding of very low safety significance and Non-Cited Violation (NCV) was self-revealed when, on April 2, 2005, with the reactor shutdown during a refueling outage, performance of an inadequately written and reviewed post-maintenance test (PMT) resulted in a temporary loss of electrical bus 16 and actuation of several engineered safety features. The primary cause of this finding was related to the cross-cutting area of Human Performance. Corrective actions included restoring the bus and increasing technical and management reviews of PMTs. In addition, the licensee was in the process of revising the PMT development process to strengthen the levels of review in a graded approach.

The event was more than minor because it involved the Mitigating Systems Cornerstone attribute of procedure quality and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. During the time period that bus 16 was lost, one train of mitigating system equipment was not available. The finding was determined to be of very low safety significance by comparing it with the results of a Phase 3 SDP for a similar earlier event. Since, in this case, shutdown cooling was not actually lost and other plant conditions were similar to the previous event, the significance was no more than for the previous event which had been categorized as of very low safety significance. This was an NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for a PMT procedure that was not appropriate for the circumstances.
Inspection Report# : 2005003*(pdf)*

**Significance: SL-IV** Apr 02, 2005
Identified By: NRC
Item Type: VIO Violation
**FAILURE TO REPORT INADVERTENT ENGINEERED SAFETY SYSTEM ACTUATIONS DURING TESTING.**
The inspectors identified a Severity Level IV violation when the licensee failed to make a notification, within 8 hours, to the NRC Operations Center, in accordance with 10 CFR 50.72(b)(3)(iv)(A), for an event involving loss of bus 16 and actuation of engineered safety features on April 2, 2005. The licensee did not restore compliance or take any corrective actions.

Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The violation of 10 CFR 50.72 is categorized in accordance with the NRC Enforcement Policy at Severity Level IV. Since the licensee failed to place the violation into a corrective action program to address recurrence, the violation was cited.
Inspection Report# : 2005003*(pdf)*

**Significance:** G Mar 16, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
**FAILURE TO CHECK THE ILLUMINATION LEVELS OF THE BATTERY POWERED LIGHT BEFORE OR AFTER THE VT-3 EXAMINATION OF AN RHR HEAT EXCHANGER SUPPORT.**
The inspector identified a finding of very low safety significance involving a failure to follow a procedure, in that the adequacy of illumination was not verified by an examiner for a visual exam being performed on a residual heat removal (RHR) heat exchanger support.

This finding was greater than minor because the issue involved procedural errors being performed by more than one examiner, involved more than one type of examination, and extended to other systems and components. Specifically, the licensee's subsequent extent of condition (EOC) evaluation (Condition Evaluation CE012073) determined that two examiners had performed visual examinations and system pressure tests without the use of illumination checks as required by procedure and American Society of Mechanical Engineers (ASME) Code. This resulted in numerous inadequate examinations being performed, including those which involved mitigating systems (MS) and primary containment (PC). As a result of the EOC evaluation, the licensee was required to re-perform approximately 60 exams/tests (VT-1, VT-3, pressure tests, or other periodic tests). Because the examinations were re-performed (or relief requested to allow acceptance of several non-repeatable tests) to demonstrate code compliance without revealing any degradation, this issue was considered a finding of very low safety significance. This finding was a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, which required activities to be accomplished in accordance with procedures and 10 CFR 50.55a(g)4, which requires, in part, that components (including supports) must meet the requirements set forth in the ASME Code Section XI.
Inspection Report# : 2005002*(pdf)*

**Significance:** G Mar 08, 2005
Identified By: Self-Revealing
Item Type: FIN Finding
**LOSS OF SHUTDOWN COOLING DUE TO #12 RESIDUAL HEAT REMOVAL PUMP TRIP.**
A finding of very low safety significance was self-revealed on March 8, 2005, when residual heat removal (RHR) flow to the shutdown reactor was lost for approximately 13 minutes due to an inadequately written and reviewed isolation procedure for outage work. The primary cause of this finding was related to the cross-cutting area of Human Performance. Corrective actions included immediate restoration of shutdown cooling, placing all outage isolations on hold for additional reviews and impact assessments, an operations department stand down, and

increased management observations of equipment isolations. Additional corrective actions to revise work control and outage processes were in progress and being tracked through the corrective action program.

The inspectors evaluated the finding using the IMC 0609 Appendix G, "Shutdown Significance Determination Process (SDP)." Using a Phase 3 SDP, the NRC determined that the finding was of very low safety significance because multiple systems were available for manual injection and recovery of RHR was uncomplicated. Because procedures required by Technical Specifications for initiating isolations were adequate and were followed, albeit inadequately, this finding was not considered a violation of NRC requirements.
Inspection Report# : 2005003*(pdf)*

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# Barrier Integrity

**Significance:** G Aug 05, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
**"A" CONTROL ROOM VENTILATION (CRV) TRIPPED DUE TO DIFFERENTIAL PRESSURE SWITCH SETPOINT DRIFT.**
A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" requirements. The inspectors identified that the engineering department failed to promptly correct a calibration setpoint drift problem with the "A" Control Room Ventilation (CRV) system cooling water flow differential pressure (DP) switch. This failure involved the inability to correct the repeated setpoint drift of the "A" CRV cooling water flow DP switch and also to adequately address the potential for a common mode failure in the "B" CRV train. The primary cause of this finding was related to the cross-cutting area of problem identification and resolution. A subsequent modification has removed the trip function of the CRV cooling water flow DP switches from the "A" and "B" trains of CRV.

This issue was more than minor because the finding is associated with the design control attribute of operational capability for the Barrier Integrity Cornerstone objective of maintaining functionality of containment. This finding was determined to be of very low safety significance because no barrier functions were ever lost. A Non-Cited Violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action" was issued for failure of the licensee to promptly correct a problem with the cooling water flow DP switch setpoint drift on the "A" CRV system.
Inspection Report# : 2005004*(pdf)*

**Significance:** G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
**FAILURE TO COMPLETE REQUIRED PROCEDURE STEPS LEADS TO INOPERABLE PRIMARY CONTAINMENT ISOLATION VALVE.**
A finding of very low safety significance was self-revealed for a violation of Technical Specifications for maintenance personnel failing to perform maintenance in accordance with written procedures associated with air-operated valve AO-2381, the drywell purge inboard isolation valve. In February 2005, AO-2381 was declared inoperable after it was determined that the valve's as-found seating force exceeded that allowed by calculational limits and the valve may not be able to close under a design basis accident condition. During a review of the maintenance history for AO-2381 it was discovered that, in February 2000, maintenance workers failed to complete a step in the procedure used to replace the T-ring seal of this valve. The cause of the failure of this valve was due to interference of the valve disc with the T-ring seat. The primary cause of this finding was related to the cross-cutting area of Human Performance. The licensee replaced the T-ring seat during the March 2005 refuel outage and the valve was declared operable after post-maintenance testing.

The issue affected the Barrier Integrity cornerstone attribute of maintaining the functionality of containment. Specifically, this issue affected the containment isolation system, structure, and component (SSC) reliability/availability element of the SSC and Barrier Performance attribute and, therefore, was determined to be more than minor. This finding was of very low safety significance because there was no degradation of the radiological barrier function provided for the control room, auxiliary building, spent fuel pool, or standby gas treatment system; no degradation of the smoke or toxic gas barrier function of the control room; and the finding did not represent an actual open pathway in the physical integrity of the reactor containment or involve an actual reduction in defense-in-depth for the atmospheric pressure control or hydrogen control functions of the primary containment. The issue was a Non-Cited Violation of Technical Specification 6.5.A, which requires that maintenance that can affect the performance of safety-related equipment should be properly performed in accordance with written procedures, documented instructions, or drawings appropriate for the circumstances.
Inspection Report# : 2005002*(pdf)*

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# Emergency Preparedness

**Significance: SL-IV** Sep 02, 2005
Identified By: NRC

Item Type: NCV NonCited Violation
**THE LICENSEE FAILED TO REPORT THAT THE ANS RELIABILITY PI CROSSED THE GREEN TO WHITE THRESHOLD IN THE FIRST QUARTER OF 2003.**
The inspectors identified a Severity Level IV Non-Cited Violation of 10 CFR 50.9 because the licensee failed to provide complete and accurate information in a submittal of siren test data for the ANS PI. Specifically, licensee staff inappropriately added the results of weekly siren tests to the results of monthly siren tests when calculating the ANS PI for the first calendar quarter of 2003. On March 31, 2003, licensee staff changed a procedure for computing the ANS PI to include the results of weekly siren tests and inappropriately implemented the procedure revision retroactive to the first day of the quarter (January 1, 2003). By adding the weekly siren test data, the licensee changed the overall character of its quarterly siren performance indicator results. The licensee has subsequently conducted an adequate root cause evaluation and initiated adequate corrective action to correct and re-submit the first quarter 2003 ANS PI data.

Inspection Report# : 2005012*(pdf)*

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## Occupational Radiation Safety

**Significance:** G Feb 18, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
**INEFFECTIVE CORRECTIVE ACTION FOR TRANSIENT HIGH RADIATION CONDITION.**
A finding of very low safety significance was identified by the inspectors for a violation of Technical Specification administrative procedure adherence requirements. Operations personnel failed to notify radiation protection and chemistry personnel, as required by administrative procedures, prior to a system alignment change of the reactor core isolation cooling (RCIC) system that could affect exposure rates. The primary cause of this finding was related to the cross-cutting area of Problem Identification and Resolution in that the licensee failed to take effective corrective actions with respect to previously identified issues concerning transient high radiation areas. Specifically, the licensee had previously experienced a transient high radiation incident involving a system alignment change of the RCIC (Reactor Core Isolation Cooling) system. This prior incident was the subject of a Non-Cited Violation. Despite this prior incident, the licensee failed to make adequate revisions of their operating procedures to prevent recurrence. The licensee has initiated corrective actions which include appropriate procedure revisions.

The issue was more than minor because the failure to include appropriate guidance in surveillance procedures could become a more safety significant concern in that it could result in unnecessary dose in individuals. The finding was of very low safety significance because the three-year rolling average collective dose for the Monticello Nuclear Generating Plant was less than 240 person-rem per unit. The issue was an NCV of Technical Specification 6.5.A.1 which required that procedures be implemented for control of radioactivity for limiting personnel exposure.
Inspection Report# : 2005006*(pdf)*

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## Public Radiation Safety

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## Physical Protection

Physical Protection information not publicly available.

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## Miscellaneous

Last modified : March 03, 2006