

# Monticello

## 4Q/2006 Plant Inspection Findings

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### Initiating Events

**Significance:**  Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **UNEXPECTED HALF SCRAM DUE TO INADEQUATE WORK PLAN.**

A self-revealed finding of very low safety significance was identified for a violation of 10 Code of Federal Regulations (CFR) 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when an unexpected half scram occurred on October 3, 2006. Specifically, the half scram occurred due to the licensee's failure to fully evaluate the impact of installing test equipment used to perform Work Order 293156, "Document Operating Point of FCI SDV Level Switches." The inspectors determined that the performance deficiency affected the cross-cutting area of Human Performance, having Work Control components, and involving aspects associated with the failure to appropriately coordinate the work activity by incorporating actions to address the operational impact of the testing.

This finding was more than minor because the performance deficiency affected the procedure quality attribute of the Initiating Events cornerstone's objective of limiting the likelihood of events that upset plant stability. The inspectors determined that the finding was of very low safety significance because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available.

Inspection Report# : [2006005](#) (*pdf*)

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### Mitigating Systems

**Significance:**  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

#### **LICENSEE ANNOUNCED FIRE DRILL IMPLEMENTATION PRACTICE INCONSISTENT WITH THE REQUIREMENTS OF APPENDIX R.**

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50, Appendix R, Section III.I.3.e, when the licensee did not demonstrate the minimum-required attributes to successfully complete a required quarterly announced fire brigade drill. Specifically, by completely pre-briefing the fire brigade members and the control room staff on the exact fire scenario just prior to the execution of the drill, the licensee was unable to effectively assess the fire brigade's selection and use of equipment and fire fighting strategies; each brigade member's knowledge of his or her role in the fire fighting strategy for the area assumed to contain the fire; and the fire brigade leader's direction of the fire fighting effort as to thoroughness, accuracy, and effectiveness. Specific corrective actions taken by the licensee to address this issue included counting the specific drill as unsuccessful, re-performing the drill for the specific fire brigade within 30 days of the unsuccessful drill, and revising the fire drill procedure to eliminate the pre-briefing of fire scenarios during announced fire brigade drills. The inspectors determined that the performance deficiency affected the cross-cutting area of Problem Identification and Resolution, having Self and Independent Assessment components, and involving aspects associated with the failure to conduct independent assessments of sufficient scope and depth to identify the deficiencies associated with the conduct of their announced fire brigade drills.

The finding was more than minor because the failure to conduct adequate announced fire brigade drills could adversely impact the fire brigade's ability to fight a fire. The finding was related to the performance of the fire brigade and was not suitable for SDP evaluation. Therefore, the finding was reviewed by NRC management and determined to be of very low

safety significance due to the licensee's demonstration of at least minimal fire brigade capability combined with credit for installed fixed fire protection systems and robust plant design.

Inspection Report# : [2006005](#) (*pdf*)

**Significance:**  Jun 30, 2006

Identified By: NRC

Item Type: FIN Finding

**IMPROPER LOOSE MATERIAL STORAGE ADJACENT TO LPCI COMPONENTS.**

A finding of very low safety significance was identified by the inspectors for failure to control loose materials, located above and adjacent to the Division II low pressure coolant injection (LPCI) inboard isolation valve and associated piping. Once identified, the licensee took action to relocate the material.

The issue was more than minor because the loose items located above and adjacent to the Division II LPCI components impacted the Mitigating Systems objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, it affected the cornerstone's attribute for the protection against external factors such as seismic events. The issue was of very low safety significance because the finding did not represent a loss or degradation of equipment specifically designed to mitigate a seismic initiating event, nor did it represent a total loss of any safety function identified by the licensee that contributes to external event initiated core damage accident sequences. This finding had a cross-cutting aspect in the area of Human Performance because licensee personnel failed to determine the potential impact of the unsecured material on the Division II LPCI components during a seismic event as required by station procedures. No violation of NRC requirements was identified.

Inspection Report# : [2006003](#) (*pdf*)

**Significance:**  Jun 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**Voltage Drop Assumption in Calculation Was Not Met**

The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance (Green) involving the voltage drop on cables from motor control center (MCC) 134 to various loads. Specifically, the inspectors identified that the licensee failed to verify the calculation assumption that the voltage drop from the MCC to the load was below 2.5%. In several cases, this assumption was not met, which resulted in little or no available margin to the safety-related equipment. There was not an operability issue as the voltage at the loads was determined to be adequate for the equipment to function. The licensee's corrective action included performing an extent of condition to identify additional cables that may not meet this design assumption and entered this performance deficiency into their corrective action program for resolution.

The finding was more than minor because the failure to adequately verify documented assumptions in design calculations could result in failure of the motors to operate properly during starting or running (i.e., creating design margin capability that would not exist) and could have affected the mitigating systems cornerstone objective of design control. The finding was of very low safety significance based on the results of the licensee's analysis and screened as Green using the SDP Phase 1 screening worksheet.

Inspection Report# : [2006009](#) (*pdf*)

**Significance:** SL-IV Jun 23, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Perform a 50.59 Evaluation**

The inspectors identified a Non-Cited Violation of 10 CFR Part 50.59, "Changes, Tests, and Experiments," which had very low safety significance (Green). Specifically, the licensee failed to complete a 50.59 evaluation for an operating procedure change that substituted remote manual operator actions for automatic actions during a station blackout. This procedure change directed the operators to control the reactor vessel water level by manually operating the high pressure core injection pump during a station blackout, bypassing the automatic injection controls. The licensee entered this performance deficiency into their corrective action program for resolution.

The finding was more than minor because the inspectors could not reasonably determine that these procedure changes

would not have ultimately required prior approval from the NRC. This finding was categorized as Severity Level IV because the underlying technical issue for the finding was determined to be of very low safety significance using the SDP Phase 1 screening worksheet.

Inspection Report# : [2006009](#) (*pdf*)

**Significance:**  Mar 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**FAILURE TO IMPLEMENT EXISTING PROCEDURAL GUIDANCE FOR THE CONTROL OF CLEARANCES BETWEEN INSTALLED SCAFFOLDING AND PLANT EQUIPMENT.**

A Green non-cited violation of 10 CFR 50, Appendix B, Criterion V, was identified by the inspectors when the licensee failed to implement existing procedural guidance for the control of clearances between installed scaffolding and plant equipment. Specifically, engineering personnel failed to perform an engineering evaluation for one scaffold that was in contact with safety-related equipment and two other scaffolds that were less than 2 inches from fire protection piping. The licensee entered the deficiencies into their corrective action program and took prompt action to bring all three scaffolds into compliance with the requirements of their scaffold control procedure.

This finding is greater than minor since it was associated with the attributes of protection against external factors and configuration control and affected the mitigating systems objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined that the finding was of very low safety significance because there was no actual loss of function of any of the plant safety-related systems due to the placement of the scaffold. The primary cause of this finding was related to the cross-cutting area of Human Performance.

Inspection Report# : [2006002](#) (*pdf*)

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## Barrier Integrity

**Significance:**  Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**LICENSEE FAILED TO INCORPORATED CURRENT LICENSING BASIS INFORMATION INTO THE ENGINEERING CHANGE PACKAGE AND 50.59 SCREEN PRIOR TO THE IMPLEMENTING THE MODIFICATION.**

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50, Appendix B, Criterion III, when the licensee failed to incorporate current licensing basis information into the engineering change package and 50.59 screening for a modification of safety-related equipment associated with the south spent fuel pool diffuser piping prior to the implementation of the modification. Specifically, both the engineering change package and associated 50.59 screening referenced the spent fuel pool level requirements as outlined in the Custom Technical Specifications, and did not consider the requirements of the station's current design basis under Improved Technical Specifications. Once identified, the licensee immediately stopped the work associated with the engineering change, restored the spent fuel pool level, and entered the issue into their corrective action program. The inspectors determined that the performance deficiency affected the cross-cutting area of Human Performance, having Work Control components, and involving aspects associated with the failure to effectively implement those procedures prior to the implementation of the design change associated with the south spent fuel pool sparger.

The finding was more than minor because the performance deficiency affected the spent fuel pool cooling system design control attribute associated with the Barrier Integrity Cornerstone's objective to provide reasonable assurance that physical design barriers (fuel cladding, reactor coolant system, and containment) protect the public from radio nuclide releases caused by accidents or events. Per Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," the issue was determined to be of very low safety significance because the inspectors determined that the finding only represented a degradation of the radiological barrier function provided by the spent fuel pool.

Inspection Report# : [2006005](#) (*pdf*)

**Significance:**  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**I&C TECHNICIANS PERFORMED UNAUTHORIZED POST MAINTENANCE TESTS DURING A TORUS TO REACTOR BUILDING VACUUM BREAKER OPERABILITY CHECK.**

A finding of very low safety significance was identified by the inspectors for a violation of 10 CFR 50, Appendix B, Criterion V, when licensee Instrumentation & Controls (I&C) technicians deviated from existing procedural guidance to perform unauthorized post-maintenance tests during the performance of torus vacuum breaker testing. Specifically, maintenance personnel inappropriately cycled the isolation valves to differential pressure transmitters DPIS-2572 and DPIS-2573 to perform leak checks subsequent to the removal of test equipment. Specific corrective actions taken by the licensee to address this issue included counseling of the responsible technician regarding procedure use and adherence expectations and supervisor discussions with the I&C shop personnel to reinforce standards regarding procedure use and adherence.

This finding was more than minor because if left uncorrected, the performance deficiency could become a more significant safety concern. The inspectors determined that the finding was of very low safety significance because the performance deficiency did not result in an actual open pathway in the physical integrity of the reactor containment, or actual reduction in the defense-in-depth for the atmospheric pressure control or hydrogen control functions of the reactor containment. This finding had a cross-cutting aspect in the area of Human Performance because licensee personnel failed to follow established procedures.

Inspection Report# : [2006003](#) (*pdf*)

**Significance:**  Mar 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

**UNMONITORED CONTROL ROD MOVEMENT DURING CONTROL ROD TESTING.**

A Green self-revealing non-cited violation of 10 CFR 50, Appendix B, Criterion V, was identified during the performance of control rod drive scram insertion time testing when an operator initiated the movement of a control rod without first verifying that the desired rod had been selected. This resulted in the insertion of an unmonitored control rod approximately five steps during the performance of the stall flow testing section of a surveillance procedure. At least two licensed operators failed to identify that the incorrect control rod was selected prior to placing the rod movement control switch to the ROD IN position. The licensee removed the responsible individuals from licensed operator duty pending the resolution of the issue via their corrective action process.

This finding is greater than minor because it affected the Human Performance attribute under the Barrier Integrity Cornerstone. This finding was of very low safety significance because issues affecting fuel barrier screen to Green in accordance with Phase I of the Significance Determination Process for Reactor at Power situations. The primary cause of this finding was related to the cross-cutting area of Human Performance.

Inspection Report# : [2006002](#) (*pdf*)

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## Emergency Preparedness

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## Occupational Radiation Safety

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## Public Radiation Safety

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### Physical Protection

[Physical Protection](#) information not publicly available.

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### Miscellaneous

**Significance:** N/A Dec 01, 2006

Identified By: NRC

Item Type: FIN Finding

#### **2006 Binnial Problem Identification and Resoluion Inspection**

The team identified that the licensee was effectively prioritizing, evaluating, and correcting issues. However, the team identified several problems with the licensee's corrective action program that were similar to previous issues identified during inspections occurring in 2004 and 2005. The team identified that some of the internal CAP performance indicators, which showed potential deficiencies in the program, had not been evaluated by the licensee. There were also examples where the documentation of an issue did not clearly indicate whether it had been properly evaluated, what the status of the corrective actions were, or whether it had been effectively resolved. The team also noted that operating experience was not always considered as a precursor to events. In particular, the licensee's guidance for performing apparent cause evaluations specifically precluded a review of operating experience as part of the evaluation.

Licensee audits and self-assessments were generally thorough, probing, and made good use of outside resources to maintain independence. The team noted that identified issues were properly tracked in the CAP. Workers were generally encouraged to identify issues through the CAP and were familiar with the various other avenues available. However, the team observed that the licensee's lack of rigor associated with the Differing Professional Opinions program may result in some individuals being reluctant to use this process in the future.

Inspection Report# : [2006008](#) (*pdf*)

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