October 25, 2002

Mr. J. Forbes
Site Vice-President
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT
USNRC INTEGRATED INSPECTION REPORT 50-263/02-05

Dear Mr. Forbes:

On September 30, 2002, the U.S. Nuclear Regulatory Commission (USNRC) completed an integrated inspection at your Monticello Nuclear Generating Plant. The enclosed report documents the inspection findings which were discussed on October 3, 2002, with Mr. Jack Purkis and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the USNRC identified one finding of very low safety significance (Green) and an associated Non-Cited Violation. If you contest the subject or severity of this Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with a basis for your denial, to the U. S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, Region III, 801 Warrenville Road, Lisle, IL 60532-4351; the Director, Office of Enforcement, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspectors' Office at the Monticello Nuclear Generating Station.

A previous inspection report, 50-263/02-04, dated July 24, 2002, contained an administrative error in the table of "Items Opened, Closed, and Discussed" on page 27. Please be advised that NCV No. 50-263/02-04-02 was listed in the "Closed" section in error. No such enforcement item was ever opened.

In response to the terrorist attacks on September 11, 2001, the USNRC issued an Order and several threat advisories to commercial power reactors to strengthen licensees' capabilities and readiness to respond to a potential attack. The USNRC established a deadline of September 1, 2002, for licensees to complete modifications and process upgrades required by the order. In order to confirm compliance with this order, the USNRC issued Temporary Instruction 2515/148, and over the next year the USNRC will inspect each licensee in accordance with this Temporary Instruction. The USNRC continues to monitor overall security

controls and may issue additional temporary instructions or require additional inspections should conditions warrant.

In accordance with 10 CFR 2.790 of the USNRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the USNRC Public Document Room or from the Publicly Available Records (PARS) component of USNRC's document system (ADAMS). ADAMS is accessible from the USNRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA by Geoffrey Wright Acting for/

Bruce L. Burgess, Chief
Branch 2
Division of Reactor Projects

Docket No. 50-263
License No. DPR-22

Enclosure: Inspection Report 50-263/02-05

cc w/encl: J. Purkis, Plant Manager
R. Anderson, Executive Vice President
and Chief Nuclear Officer
Nuclear Asset Manager
Site Licensing Manager
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-263
License No:	DPR-22
Report No:	50-263/02-05
Licensee:	Nuclear Management Company, LLC
Facility:	Monticello Nuclear Generating Plant
Location:	2807 West Highway 75 Monticello, MN 55362
Dates:	July 1 through September 30, 2002
Inspectors:	S. Burton, Senior Resident Inspector D. Kimble, Resident Inspector J. Adams, Senior Resident Inspector - Prairie Island R. Jickling, Emergency Preparedness Inspector M. Mitchell, Radiation Specialist G. Wright, Project Engineer
Approved by:	Bruce L. Burgess, Chief Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000263-02-05; Nuclear Management Company, LLC; on 07/01-09/30/2002, Monticello Nuclear Generating Plant. Maintenance Risk Assessments and Emergent Work Control.

This report covers a 3 month period of baseline resident inspection and announced baseline inspections in radiation protection and emergency preparedness. The inspections were conducted by resident inspectors and Region III inspectors. One Green finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609 “Significance Determination Process” (SDP). Findings for which the SDP does not apply may be "Green," or be assigned a severity level after USNRC management review. The USNRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspection Finding

Cornerstone: Barrier Integrity

Green. A finding and an associated Non-Cited Violation (NCV) for failure to follow applicable procedural guidance as required by Technical Specifications were identified by NRC inspectors. The finding and NCV were associated with a loss of spent fuel pool cooling which resulted from an improper licensee valve tagout/clearance operation. Because the decay heat load in the spent fuel pool was relatively low, the spent fuel pool temperature only increased from 90.5 degrees Fahrenheit to approximately 96.5 degrees Fahrenheit and the event involved only the fuel cladding barrier, the finding was determined through a Phase 1 SDP to be of very low safety significance and within the licensee response band. (Section 1R13)

B. Licensee Identified Violations

No violations of significance were identified.

REPORT DETAILS

Summary of Plant Status

The plant began the inspection period operating at full power. On August 4, 2002, operators were forced to reduce power to approximately 90 percent in response to problems with the "D" demineralizer vessel in the condensate system. Full power operation was resumed later that same day. On August 10, 2002, power was reduced to approximately 75 percent to facilitate normal periodic main steam valve testing and control rod pattern adjustments. Full power operation was resumed again on August 11, 2002. The plant operated at or near full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R04 Equipment Alignment (71111.04)

.1 Partial Train/System Alignment Verification

a. Inspection Scope

The inspectors performed a partial walkdown of the following equipment trains to verify operability and proper equipment lineup. These systems were selected based upon risk significance, plant configuration, system work or testing, or inoperable or degraded conditions.

- Division II Low Pressure Coolant Injection (LPCI) with Division I Out-of-Service for Routine Maintenance (Week Ending 9/14)
- Vital Electrical Distribution While Stand-by Liquid Control System Was Out of Service for Surveillance Testing (Week Ending 7/13)
- Reactor Core Isolation Cooling (RCIC) During Performance of Emergency Core Cooling System (ECCS) Initiation Sensor Testing (Week Ending 9/27)

The inspectors verified the position of critical redundant equipment and looked for any discrepancies between the existing equipment lineup and the required lineup.

b. Findings

No findings of significance were identified.

.2 Semiannual Complete System Alignment Verification

a. Inspection Scope

Due to the system's risk significance, the inspectors selected the RCIC system for a complete walkdown. The inspectors walked down the system to verify mechanical and electrical equipment lineups, component labeling, component lubrication, component and equipment cooling, hangers and supports, operability of support systems, and to ensure that ancillary equipment or debris did not interfere with equipment operation. (Week Ending 7/20)

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Fire Zone Inspections

a. Inspection Scope

The inspectors walked down multiple plant areas important to safety to assess the material condition of reactor plant active and passive fire protection systems and features and to look for any fire protection issues. The inspectors selected several areas containing systems, structures, or components that the licensee identified as important to reactor safety. (7/15 through 7/27)

- Fire Zone A.3-13-A, Lube Oil Storage Tank Room
- Fire Zone A.3-13-B, Reactor Feed Pump and Lube Oil Reservoir Room
- Fire Zone A.3-13-C, Turbine Building 911' Elevation East Motor Control Center (MCC) Area
- Fire Zone A.3-15-B, No. 11 Diesel Generator Room and Day Tank Rooms
- Fire Zone A.3-18-A, Hot Machine Shop
- Fire Zone A.3-18-B, Oil Drum Storage Room
- Fire Zone A.3-20, Auxiliary Boiler Room
- Fire Zone A.3-21, Radwaste Shipping Building
- Fire Zone A.3-04-D, Standby Gas Treatment Room

The inspectors reviewed the control of transient combustibles and ignition sources, fire detection equipment, manual suppression capabilities, passive suppression capabilities, automatic suppression capabilities, and barriers to fire propagation.

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Observation

a. Inspection Scope

On September 1, 2002, the inspectors conducted an annual observation of the station's fire brigade during a drill which simulated a lubricating oil fire on the turbine building 911' elevation in and around the area of MCC 133. The inspectors evaluated the readiness of the licensee's personnel to prevent and fight fires by verifying that: protective clothing/turnout gear was properly donned; self-contained breathing apparatus equipment was properly worn and used; fire hose lines were capable of reaching all necessary fire hazard locations, the lines were laid out without flow constrictions, the hoses were simulated being charged with water, and the nozzles were pattern (flow stream) tested prior to entering the fire area; the fire area was entered in a controlled manner; sufficient fire fighting equipment was brought to the scene by the fire brigade; the fire brigade leader's directions were thorough, clear, and effective; communications with plant operators and between fire brigade members were efficient and effective; the fire brigade checked for fire victims and for fire propagation into other plant areas; effective smoke removal operations were simulated; fire fighting pre-plan strategies were utilized; and the drill scenario was followed and the drill objectives met.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

Over several weeks in August 2002, the inspectors reviewed the licensee's flooding mitigation plans and equipment to determine consistency with design requirements and risk analysis assumptions. Specifically, the inspectors conducted a review of the licensee's plans and equipment intended to control internal flooding within the safety-related intake structure. Applicable walkdowns and reviews were performed that considered design measures, seals, drain systems, contingency equipment condition, availability of temporary equipment and barriers, performance and surveillance tests, procedural adequacy, and planned compensatory measures.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

On September 4, 2002, the inspectors observed a training crew during an evaluated simulator scenario and reviewed licensed operator performance in mitigating the consequences of events. The scenario included an inadvertent initiation of RCIC, a loss and subsequent recovery of a load center, and an accidental containment isolation accompanied by a failure of control rods to insert. The transient resulted in the operating crew implementing multiple emergency operating procedures while responding to the failure to scram and associated torus heating. Areas observed by the inspectors included: clarity and formality of communications, timeliness of actions, prioritization of activities, procedural adequacy and implementation, control board manipulations, managerial oversight, emergency plan execution, simulator configuration, and group dynamics.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the licensee's handling of performance issues and the associated implementation of the Maintenance Rule (10 CFR 50.65) to evaluate maintenance effectiveness for the selected system. The following system was selected based on being designated as risk significant under the Maintenance Rule, being in the increased monitoring (Maintenance Rule category a(1)) group, or due to an inspector identified issue or problem that potential impacted system work practices, reliability, or common cause failures:

- Instrument Air System Piping Leak and Repair (Weeks Ending 8/3 - 8/17)

The inspectors' review included verification of the licensee's categorization of specific issues, including evaluation of the performance criteria, appropriate work practices, identification of common cause errors, extent of condition, and trending of key parameters. Additionally, the inspectors reviewed the licensee's implementation of the maintenance rule requirements, including a review of scoping, goal-setting, performance monitoring, short-term and long-term corrective actions, functional failure determinations associated with the condition reports reviewed, and current equipment performance status.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed and observed emergent work, preventive maintenance, or planning for risk significant maintenance activities. The inspectors observed maintenance or planning for the following activities or risk significant systems undergoing scheduled or emergent maintenance:

- Weekly Scheduling and Planning Meetings (All Weeks)
- Outage Planning and Emergent Work Review (All Weeks)
- Risk Management During Reactor Protection System Testing Combined With Rescheduled Standby Liquid Control System Testing (Week Ending 7/13)
- Risk Management During Identification and Resolution of Cooling Tower and Basin Instrument Air System Leak (Weeks Ending 8/3 and 8/10)
- Emergent Maintenance and Risk Management for Repair of 11 Control Rod Drive Hydraulic Pump Leaking Casing (Week Ending 8/17)
- Maintenance and Risk Management During Work on Fuel Pool Cooling System and Subsequent Loss of Fuel Pool Cooling Event (Week Ending 8/24)

The inspectors also reviewed the licensee's evaluation of plant risk, risk management, scheduling, and configuration control for these activities in coordination with other scheduled risk significant work. The inspectors verified that the licensee's control of activities considered assessment of baseline and cumulative risk, management of plant configuration, control of maintenance, and external impacts on risk. In-plant activities were reviewed to ensure that the risk assessment of maintenance or emergent work was complete and adequate, and that the assessment included an evaluation of external factors. Additionally, the inspectors verified that the licensee entered the appropriate risk category for the evolutions.

b. Findings

(1) Introduction

A finding of very low safety significance (Green) and an associated NCV for failure to follow applicable procedural guidance were identified by inspectors. The finding and NCV were associated with the loss of spent fuel pool cooling which resulted from an improper licensee valve tagout/clearance operation.

(2) Description

On August 23, 2002, the licensee initiated a tagout to isolate the No. 12 fuel pool filter/demineralizer for planned maintenance. Included in this tagout was valve AO-2807, the drain valve for the in-service No. 11 fuel pool filter/demineralizer. As

indicated on the licensee's spent fuel pool cooling system drawing, AO-2807 was a normally closed, fail closed valve. Thus, the licensee's tagout called for AO-2807 to be tagged in the shut position with operating air removed from the valve.

When plant operators applied the tagout to AO-2807 and removed the valve's operating air, the valve unexpectedly moved to the open position. This immediately established a drain path between the operating train of spent fuel cooling and the waste sludge tank in the radwaste system. Approximately 10 minutes elapsed before operators in the field were informed of the problem by the control room, returned to AO-2807, and reapplied operating air to shut the valve. During this time, approximately 2000 gallons, or 25 percent of the available surge volume, was drained from the operating train of spent fuel pool cooling to the radwaste system. Although actual spent fuel pool level was never affected, the loss of inventory from the surge tank brought in multiple alarms in the control room, including the spent fuel pool surge tank low-low level alarm, which caused the operating spent fuel pool cooling pump to trip. Control room operators immediately entered the abnormal operating procedure for loss of spent fuel pool cooling. Recognizing that the decay heat load in the spent fuel pool was relatively small, the operations crew was able to take well planned and deliberate steps to restore flow to the spent fuel pool cooling system. Although spent fuel pool cooling flow was not reestablished until almost 16 hours later because of ongoing maintenance on various parts of the system, spent fuel pool temperature increased by only 6 degrees Fahrenheit over that time due to the low amount of decay heat being produced by the irradiated fuel in the pool.

Upon investigation of this event, the licensee identified that the licensed operators who had prepared the tagout and the system engineer for the spent fuel pool cooling system had missed critical information concerning the operation of AO-2807. General precautions regarding AO-2807 listed in the licensee's operating procedures for the spent fuel cooling system warn personnel against removing air from the valve operator, as the spring force is insufficient, by design, to maintain the valve in the closed position against normal system pressure and flow. Additionally, the licensee's investigation revealed that special gagging devices were available specifically for AO-2807 to hold it closed against system pressure and flow. However, these devices were in the possession of a previous system engineer and neither the current system engineer nor any of the operations personnel involved with the tagout had any knowledge of their existence.

(3) Analysis

With respect to the tagout for the isolation of No. 12 fuel pool filter/demineralizer, the inspectors determined that the licensee's failure to recognize established procedural guidance regarding the inability of AO-2807 to remain in the closed position without control air constituted a performance deficiency in accordance with USNRC Inspection Manual Chapter (IMC) 0612, Appendix B, "Issue Dispositioning Screening." Further, the inspectors determined that the loss of spent fuel pool cooling event which resulted from this performance deficiency was more than minor in that it directly affected the objective of the Barrier Integrity Reactor Safety Cornerstone.

With respect to the irradiated fuel in the spent fuel pool, the primary physical design barrier which provides protection to the public is the fuel cladding. The spent fuel pool cooling system is designed to remove decay heat and thereby maintain fuel cladding integrity. Thus, the tagout error(s) by the licensee which resulted in the loss of the in-service spent fuel pool cooling train had an effect on the fuel cladding temperature of the spent fuel in the spent fuel pool. Specifically, the loss of the in-service train of spent fuel pool cooling resulted in a measurable cladding temperature increase.

In order to determine the significance of the event, the inspectors performed a Phase 1 SDP in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." The inspectors concluded that because the decay heat load in the spent fuel pool was relatively low, the spent fuel pool temperature only increased from 90.5 degrees Fahrenheit to approximately 96.5 degrees Fahrenheit, and the event involved only the fuel cladding barrier, the finding was of very low safety significance (Green) and within the licensee response band.

(4) Enforcement

Technical Specification 6.5.A.1, via Regulatory Guide 1.33, Revision 2, Appendix A, requires that the licensee establish and follow appropriately approved procedures for the operation of the spent fuel pool cooling system. Contrary to this requirement, the licensee failed to follow approved procedural guidance in Operations Manual Section B.02.01-05 related to the operation of the AO-2807 valve when the valve was tagged in the shut position with control air removed to support work on No. 12 fuel pool filter/demineralizer on August 23, 2002. This violation is being treated as a NCV consistent with Section VI.A of the USNRC Enforcement Policy (NCV 50-263/02-05-01). The licensee has entered this issue into their corrective action program as CR 20027940. Planned corrective actions include procedural and component database enhancements regarding the use of this type of air operated valve as an isolation boundary, and enhancements to the system engineer turnover process.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the technical adequacy of the following operability evaluations to determine the impact on Technical Specifications, the significance of the evaluations, and to ensure that adequate justifications were documented.

- 12 Emergency Diesel Generator (EDG) Lube Oil Lead Content Increasing to the Point of Additional Monitoring (Week Ending 8/10)

- Main Steam Line Radiation Monitors Not Maintained as Safety-Related (Week Ending 8/24)

- Diesel Fire Pump Discharge Check Valve Inadequate Bolting (Week Ending 8/31)

- Residual Heat Removal (RHR) Corner Room Calculation Assumptions Inconsistent with Current Plant Operating Practices (Week Ending 8/31)

Operability evaluations were selected based upon the relationship of the safety-related system, structure, or component to risk.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

During the week ending September 21, 2002, the inspectors reviewed Operations Challenge No. 02-042, "Annunciator 7-B-17 For Vacuum 24 Inch Trip No. 2 Alarmed." The inspectors reviewed the workaround's potential to impact the operators' ability to respond to a decreasing condenser vacuum situation.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

During the week ending August 24, 2002, the inspectors reviewed an alteration to the control room emergency filtration train (EFT) charcoal filters to verify that the design basis, licensing basis, and performance capability of the system was not degraded by the alteration. The inspectors also verified that the alteration did not place the plant in an unsafe configuration.

The inspectors considered the design adequacy of the alteration by performing a review of the alteration's impact on plant electrical requirements, material requirements and replacement components, response time, control signals, equipment protection, operation, failure modes, and other related process requirements.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors selected the following post-maintenance activities for review. Activities were selected based upon the structure, system, or component's ability to impact risk.

- No. 12 EDG Testing Following Speed Changer Motor Replacement (Week Ending 7/6)

- Post Maintenance Testing of RCIC Following Repairs to Leaking Components (Week Ending 7/27)

- Post Maintenance Testing Following Failure of HPCI Test Return Line Control Air Supply (Week Ending 8/17)

- Post Maintenance Testing Following Routine Scheduled Work on the Diesel Fire Pump (Week Ending 8/24)

- Post Maintenance Testing Following Routine Preventative Maintenance of Division I RHR LPCI Inboard Isolation Valve, MO-2014 (Week Ending 9/14)

- Post Maintenance Testing Following Routine Preventative Maintenance on No. 13 Residual Heat Removal Service Water (RHRSW) Pump Motor Cooler (Week Ending 9/14)

The inspectors verified by witnessing the test or reviewing the test data that post-maintenance testing activities were adequate for the above maintenance activities. The inspectors' reviews included, but were not limited to, integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use and compliance, control of temporary modifications or jumpers required for test performance, documentation of test data, Technical Specification applicability, system restoration, and evaluation of test data. Also, the inspectors verified that maintenance and post-maintenance testing activities adequately ensured that the equipment met the licensing basis, Technical Specifications, and Updated Safety Analysis Report (USAR) design requirements.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors selected the following surveillance test activities for review. Activities were selected based upon risk significance and the potential risk impact from an unidentified deficiency or performance degradation that a system, structure, or component could impose on the unit if the condition were left unresolved.

- ECCS [Emergency Core Cooling System] Drywell Pressure Sensor Test (Week Ending 7/27)

- Drywell High Pressure Scram Test and Calibration (Week Ending 7/27)

- Turbine Control Valve Fast Closure Scram Test and Calibration (Week Ending 7/27)

- Reactor Building to Torus Vacuum Breaker Operability Test (Week Ending 7/27)

- GE 7700 Line Motor Control Center Maintenance Procedure (Week Ending 7/27)
- Main Steam Isolation Instrument Test and Calibration (Week Ending 8/24)
- Fire Protection Heat Actuated Detector Tests (Week Ending 9/21)

The inspectors observed the performance of surveillance testing activities, including reviews for preconditioning, integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use, control of temporary modifications or jumpers required for test performance, documentation of test data, Technical Specification applicability, impact of testing relative to performance indicator reporting, and evaluation of test data.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the following temporary modifications:

- Drywell Equipment Drain Pump Bypass of Standby Function (Week Ending 9/28)
- Disable of High Temperature Alarm for CRD-24-47 (Week Ending 10/5)

The inspectors reviewed the safety screening, design documents, USAR, and applicable Technical Specifications to determine that the temporary modification was consistent with modification documents, drawings and procedures. The inspectors also reviewed the post-installation test results to confirm that tests were satisfactory and the actual impact of the temporary modification on the permanent system and interfacing systems were adequately verified.

b. Findings

No findings of significance were identified.

1EP2 Alert and Notification System (ANS) Testing (71114.02)

a. Inspection Scope

The inspectors discussed with emergency preparedness (EP) staff the design, equipment, and periodic testing of the public ANS for the Monticello reactor facility emergency planning zone to verify that the system was properly tested and maintained. The inspectors also reviewed procedures and records for a 15 month period ending June 2002, related to ANS testing, annual preventive maintenance, and non-scheduled maintenance. The inspectors reviewed the licensee's documentation for determining whether each model of siren installed in the emergency planning zone would perform as

expected if fully activated. Records used to document and trend component failures for each model of installed siren were also reviewed to ensure that corrective actions were taken for test failures or system anomalies.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Augmentation Testing (71114.03)

a. Inspection Scope

The inspectors reviewed the licensee's ERO augmentation testing to verify that the licensee maintained and tested the ability to staff the ERO during an emergency in a timely manner. Specifically, the inspectors reviewed quarterly, off-hours staff augmentation test procedures, dated August 7, 2002, April 30, 2002, February 6, 2002, November 1, 2001, August 7, 2001, May 8, 2001, February 8, 2001, November 14, 2000, and August 7, 2000, test records, primary and backup provisions for off-hours notification of the Monticello reactor facility emergency responders, and the current ERO rosters for Monticello. The inspectors also reviewed and discussed the facility EP staff's provisions for maintaining ERO call out lists.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspectors reviewed the nuclear oversight staff's 2001 - 2002 audits and field observations to ensure that these audits complied with the requirements of 10 CFR 50.54(t), and to ensure that the licensee adequately identified and corrected deficiencies. The inspectors also reviewed the EP staff's 2002 self assessment and critiques to evaluate the EP staff's efforts to identify and correct weaknesses and deficiencies. Additionally, the inspectors reviewed a sample of EP items, condition reports, and action requests related to the facility's EP program to determine whether corrective actions were acceptably completed.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

On September 4, 2002, the inspectors observed a simulator-based training evolution to evaluate drill conduct and the adequacy of the licensee's critique of performance to identify weaknesses and deficiencies. The inspectors selected simulator scenarios that the licensee had scheduled as providing input to the Drill/Exercise Performance Indicator. The inspectors observed the classification of events, notifications to off-site agencies, protective action recommendation development, and drill critiques. Observations were compared to the licensee's observations and corrective action program entries. The inspectors verified that there were no discrepancies between observed performance and performance indicator reported statistics. The simulator scenario observed resulted in an alert classification.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control

.1 Plant Walkdowns, Radiological Boundary Verifications, and Radiation Work Permit Reviews (71121.01)

a. Inspection Scope

The inspector conducted walkdowns of the radiologically restricted area to verify the adequacy of radiological boundaries and postings. Specifically, the inspector walked down several high and locked high radiation area boundaries in the reactor and turbine buildings. The inspector observed the pre-job briefing and reviewed the radiation work permit for main steam low pressure surveillance testing for protective clothing requirements, dosimetry requirements including electronic dosimeter set points, boundary controls, and radiation monitoring locations.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

.1 Offsite Dose Calculation Manual (ODCM) (71122.01)

a. Inspection Scope

The inspector reviewed the 2001 Annual Radiological Environmental Operating Report to verify that the radiological effluent program was implemented as described in the Updated Safety Analysis Report (USAR) and the Offsite Dose Calculation Manual (ODCM). The inspector reviewed the report for significant changes to the ODCM and to the design and operation of the radioactive waste processing system. The inspector also reviewed revisions made to the ODCM in calendar year 2001 and the justifications for the changes, to verify they were completed and reported in accordance with Technical Specifications and the ODCM.

b. Findings

No findings of significance were identified.

.2 Gaseous and Liquid Release Systems Walkdowns (71122.01)

a. Inspection Scope

The inspector performed walkdowns of selected components of the liquid and gaseous effluent monitoring and control systems, including point of discharge effluent radiation monitors to verify that the current system configuration was as described in the USAR and was consistent with the ODCM, and to observe equipment material condition. The inspector also discussed the gaseous waste processing system, including operations and components with the cognizant system engineer.

b. Findings

No findings of significance were identified.

.3 Gaseous and Liquid Releases (71122.01)

a. Inspection Scope

The inspector reviewed liquid and gaseous radioactive waste (radwaste) release records to verify that appropriate treatment equipment were used and that the radwaste effluents were processed and released in accordance with the ODCM. As there were no liquid batch releases performed during the inspection, the inspector reviewed the release packages for two small unplanned liquid effluent releases made in 2001 and reported in the 2001 Radioactive Effluent Release Report. The inspector reviewed the release calculations to verify that the licensee's release procedures and practices, including dose projections to members of the public and use of station specific scaling factors, were

technically sound and conformed to ODCM methodology and Technical Specification requirements. The inspector also reviewed selected gaseous effluent release data including results of chemistry sample analyses, to independently verify that the data was properly used to complete calculations of offsite dose. Additionally, the inspector reviewed sample collection data to verify that compensatory samples were taken and properly analyzed as required by the ODCM when the discharge canal water monitor was out of service.

b. Findings

No findings of significance were identified.

.4 Liquid and Gaseous Effluent Monitor Calibration

a. Inspection Scope

The inspector reviewed records of instrument calibrations performed since the last inspection for selected point of discharge effluent radiation monitors, to determine if they had been calibrated consistent with industry standards and in accordance with station procedures and the ODCM. Specifically, the inspector reviewed the calibration records for:

- Reactor Building Vent Wide Range Gas Monitor
- Stack Wide Range Gas Monitor
- Discharge Canal Monitor
- Service Water Monitor

The inspector also reviewed current alarm setpoint values for these monitors to assess compliance with ODCM requirements. Additionally, the inspector examined the licensee's calendar year 2000 through 2001 data for tracking the reliability and maintenance of selected point of discharge effluent radiation monitors, to assess the adequacy of the licensee's efforts to identify repetitive problems and improve the overall operating condition of the effluent radiation monitoring system.

b. Findings

No findings of significance were identified.

.5 Dose Calculations (71122.01)

a. Inspection Scope

The inspector reviewed the 2001 annual dose calculations and a selection of year 2002 monthly dose calculations to ensure that the licensee had properly calculated the offsite dose to the public from radiological effluent releases, and to determine if any

annual Technical Specifications or ODCM (i.e., Appendix I to 10 CFR Part 50 values) limits were exceeded.

b. Findings

No findings of significance were identified.

.6 Air Cleaning Systems (71122.01)

a. Inspection Scope

The inspector reviewed air cleaning system surveillance test results to ensure that test results were within the licensee's acceptance criteria. The inspector reviewed surveillance test results for the station vent flow to verify that the flow rates were consistent with USAR values.

b. Findings

No findings of significance were identified.

.7 Counting Room Instrument Calibrations and Quality Control (71122.01)

a. Inspection Scope

The inspector reviewed the quality control records for radiochemistry instrumentation used to identify and quantify radioisotopes in effluents, to verify that the instrumentation was calibrated and maintained as required by site procedures. This review included calibrations of gamma spectroscopy systems.

b. Findings

No findings of significance were identified.

.8 Interlaboratory Comparison Program (71122.01)

a. Inspection Scope

The inspector reviewed the results of the 2001 Interlaboratory Comparison Program in order to assess the quality of radioactive effluent sample analyses performed by the licensee. The inspector reviewed the licensee's quality control evaluation of the interlaboratory comparison program and associated corrective actions for any deficiencies identified.

b. Findings

No findings of significance were identified.

.9 Identification and Resolution of Problems (71122.01)

a. Inspection Scope

The inspector reviewed audits and self-assessments conducted during 2001 to evaluate the effectiveness of the licensee's self-assessment process in the identification, characterization, and prioritization of problems. Selected condition reports written during 2000, 2001, and year to date 2002, that addressed radioactive treatment and monitoring program deficiencies were also reviewed to verify that the licensee had effectively implemented the corrective action program.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection (PP)

3PP3 Response to Contingency Events (71130.03)

The Office of Homeland Security (OHS) developed a Homeland Security Advisory System (HSAS) to disseminate information regarding the risk of terrorist attacks. The HSAS implements five color-coded threat conditions with a description of corresponding actions at each level. USNRC Regulatory Issue Summary (RIS) 2002-12a, dated August 19, 2002, "NRC Threat Advisory and Protective Measures System," discusses the HSAS and provides additional information on protective measures to licensees.

a. Inspection Scope

On September 10, 2002, the USNRC issued a Safeguards Advisory to reactor licensees to implement the protective measures described in RIS 2002-12a in response to the Federal government declaration of threat level "Orange." Subsequently, on September 24, 2002, the OHS downgraded the national security threat condition to "Yellow" and a corresponding reduction in the risk of a terrorist threat.

The inspectors interviewed licensee personnel and security staff, observed the conduct of security operations, and assessed licensee implementation of the threat level "Orange" protective measures. Inspection results were communicated to regional and headquarters security staff for further evaluation.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

Cornerstones: Mitigating Systems, Barrier Integrity, and Emergency Preparedness

.1 Mitigating Systems and Barrier Integrity Performance Indicator Verification

a. Inspection Scope

During the week ending July 27, 2002, the inspectors reviewed licensee event reports (LERs), licensee memoranda, plant logs, and prior USNRC inspection reports to verify the following performance indicators for the 3rd quarter of 2002:

- Safety System Functional Failures
- Reactor Coolant System Specific Activity

b. Findings

No findings of significance were identified.

.2 Emergency Preparedness Performance Indicator Verification

a. Inspection Scope

The inspector verified that the licensee had accurately reported the following performance indicators:

- ANS
- ERO Drill Participation
- Drill and Exercise Performance (DEP)

Specifically, the inspector reviewed the licensee's PI records, data reported to the USNRC, and condition reports for the period April 2001 through June 2002 to identify any occurrences that were not identified by the licensee. Records of relevant control room simulator training sessions, periodic ANS tests, and excerpts of drill and exercise scenario and evaluations were also reviewed.

b. Findings

No findings of significance were identified.

.3 Data Submission Issue

a. Inspection Scope

During the week ending July 27, 2002, the inspectors reviewed the data submitted by the licensee for the 3rd quarter 2002 performance indicators for any inconsistencies prior to its public release in accordance with IMC 0608, "Performance Indicator Program."

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up (71153)

Cornerstone: Barrier Integrity

.1 (Closed) Licensee Event Report (LER) 50-263/2002-004: "Unplanned Loss of Both Trains of Control Room Ventilation During Auto Start Testing Due to Timing Circuit Relay Failure"

On April 1, 2002, both trains of the control room ventilation system (CRV) were found to be inoperable during routine surveillance testing. During performance of the test, Train B of CRV is made inoperable to induce a low flow signal and validate the auto start feature of Train A. Upon performance of the test CRV Train A failed to auto start, thereby causing both trains of CRV to be simultaneously inoperable. Upon discovery, appropriate Technical Specifications were entered and all conditions of the license met. The inspectors reviewed the issue and determined the safety significance to be very low because, with the exception of the performance of the test, both the Train B auto start feature and the Train A manual initiation feature were always operable. The licensee has entered this issue into their corrective action program as Condition Report (CR) 20023185.

4OA4 Cross-cutting Issues

Human Performance

A finding of very low safety significance (Green) and an associated NCV for failure to follow applicable procedural guidance were identified by inspectors. The finding and NCV were associated with a loss of spent fuel pool cooling which resulted from an improper licensee valve tagout/clearance operation. The cause of the improper valve tagout/clearance operation was the system engineer's and licensed operators lack of understanding of the system and their failure to adhere to the cautions in the system operating procedure. A contributing cause was a less than complete turnover from the previous system engineer. The errors involved were determined to be human performance related. (Section 1R13)

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. J. Purkis and other members of licensee management on October 3, 2002. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meetings

Interim exit meetings were conducted for:

- Emergency Preparedness Inspections with Mr. J. Purkis on August 16, 2002
- Radiation Protection Inspections with Mr. J. Purkis on August 23, 2002

KEY POINTS OF CONTACT

Licensee
R. Baumer, Licensing
G. Bregg, Manager, Quality Services
G. Brevig, Internal Assessment Supervisor
T. Corrigan, Radiation Protection Technician
D. Fadel, Director of Engineering
J. Forbes, Site Vice-President
J. Grubb, General Superintendent, Operations
M. Holmes, Chemistry Supervisor
G. Holthaus, Emergency Preparedness Coordinator
D. Horgen, Emergency Preparedness Instructor
K. Jepson, General Superintendent, Chemistry and Radiation Services
B. Linde, Superintendent, Security
D. Neve, Licensing Project Manager
D. Pedersen, Acting Emergency Preparedness Manager
J. Purkis, Plant Manager
B. Sawatzke, General Superintendent, Maintenance
C. Schibonski, General Superintendent, Safety Assessment
E. Sopkin, General Superintendent, Engineering
A. Ward, Business Support Manager
L. Wilkerson, Operations Support

USNRC
B. Burgess, Chief, Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-263/02-05-01	NCV	Tagout/Isolation Error Discharges 2000 Gallons From Fuel Pool Surge Tank To Radwaste and Results in Loss of Spent Fuel Pool Cooling (Sections 1R13 and 4OA4)

Closed

50-263/02-05-01	NCV	Tagout/Isolation Error Discharges 2000 Gallons From Fuel Pool Surge Tank To Radwaste and Results in Loss of Spent Fuel Pool Cooling (Sections 1R13 and 4OA4)
50-263/2002-004	LER	Unplanned Loss of Both Trains of Control Room Ventilation During Auto Start Testing Due to Timing Circuit Relay Failure (Section 4OA3.1)

Discussed

None.

LIST OF ACRONYMS USED

AC	Alternating Current
ANS	Alert and Notification System
ASME	American Society of Mechanical Engineers
ATWS	Anticipated Transient Without Scram
AWI	Administrative Work Instruction
CAM	Continuous Air Monitor
CFR	Code of Federal Requirements
CR	Condition Report
CRD	Control Rod Drive
CRV	Control Room Ventilation
DBD	Design Basis Document
DC	Direct Current
DEP	Drill and Exercise Performance
DRP	Division of Reactor Projects
DW	Drywell
DWEDS	Drywell Equipment Drain Sump
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EFT	Emergency Filtration Train
EMD	Electromotive Division
EP	Emergency Preparedness
EPR	Electronic Pressure Regulator
FOI	Follow-On Item
HPCI	High Pressure Core Injection
HSAS	Homeland Security Advisory System
IMC	Inspection Manual Chapter
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
LCO	Limiting Condition For Operation
LER	Licensee Event Report
LPCI	Low Pressure Core Injection
MCC	Motor Control Center
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NMC	Nuclear Management Company
NUMARC	Nuclear Management and Resources Council
ODCM	Offsite Dose Calculation Manual
OHS	Office of Homeland Security
OWI	Operations Work Instruction
P&ID	Piping and Instrumentation Drawing
PANS	Public Alert Notification System
PI	Performance Indicator
RBV	Reactor Building Ventilation
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
RFO	Refueling Outage

RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water
RIS	Regulatory Issue Summary
RP	Radiation Protection
RPS	Radiation Protection Specialist
SCTMT	Secondary Containment
SDP	Significance Determination Process
SER	Safety Evaluation Report
SRI	Safety Review Item
TS	Technical Specification
USAR	Updated Safety Analysis Report
USNRC	U.S. Nuclear Regulatory Commission

LIST OF DOCUMENTS REVIEWED

1R04 Equipment Alignment

NF-36298-1	Electrical Load Flow One Line Diagram	Revision P
B.9.13	Instrument AC and Uninterruptible AC Distribution System	
NH-36251	P&ID RCIC (Steam Side) Diagram	Revision AN
NH-36252	P&ID RCIC (Water Side) Diagram	Revision AC
B.02.03-01	Reactor Core Isolation Cooling Functional and General Description of System	November 3, 2000
B.02.03-02	Reactor Core Isolation Cooling Description of Equipment	December 15, 2000
B.02.03-03	Reactor Core Isolation Cooling Instrumentation and Controls	November 3, 2000
B.02.03-05	Reactor Core Isolation Cooling System Operation	June 24, 2002
CR 20011367	Drain Line Configuration for RCIC 50 As-shown does not match As-Built	March 8, 2001
CR 20011420	Potential to Pressurize HPCI and RCIC Suction Piping Above Design Not Recognized in Check Valve Cold S/V Tests	March 9, 2001
CR 20012898	Failed PMT per WO 0107737 Results in RCIC Inoperability for Additional 4 hours	May 25, 2001
CR 20014637	Basis For RCIC Cooling Water Flow Requirement Cannot Be Located	September 11, 2001
CR 20016336	Declared RCIC Inoperable and Entered Unplanned LCO Due to Indicated Turbine Inlet Drain Pot High Level	October 20, 2001
CR 20021666	Drawing Discrepancies Noted on Three RCIC Drawings	February 22, 2002
CR 20024414	MO-2076 Failed to Fully Open During RCIC Steam Line High Area Temperature Test and Calibration	May 8, 2002
CR 20025729	Final Results of RCIC Design Self Assessment	June 21, 2002
CR 20025730	Declining Trend of RCIC NRC Indicators for Several Quarters	June 21, 2002

CR 20026529	RCIC-65 was Physically Moved During RFO 2001 and Champs was Not Updated	July 16, 2002
M-121	Residual Heat Removal System (Division I)	Revision BM
2120	Plant Prestart Checklist RHR System	Revision 8
2154-12	Residual Heat Removal System Prestart Valve Checklist	Revision 35
B.3.4	Operations Manual: Residual Heat Removal System	Revision 4
Section 6.2	USAR: - Emergency Core Cooling Systems	Revision 19
M-120	Residual Heat Removal System (Division II)	Revision BJ

1R05 Fire Protection

NX-16991	Technical Manual, Monticello Updated Fire Hazards Analysis	
	Pre-Fire Strategies:	
A.3-13A	- Lube Oil Storage Tank Room	Revision 3
A.3-13B	- Reactor Feedpump and Lube Oil Reservoir Room	Revision 5
A.3-13C	- Turbine Building 911' Elevation East MCC Area	Revision 2*
A.3-15B	- No. 11 Diesel Generator Room and Day Tank Rooms	Revision 6
A.3-18A	- Hot Machine Shop	Revision 3
A.3-18B	- Oil Drum Storage Room	Revision 2
A.3-20	- Auxiliary Boiler Room	Revision 4
A.3-21	- Radwaste Shipping Building	Revision 3
A.3-04D	- Standby Gas Treatment Room	Revision 3*
	Procedures and Forms:	
A.2-101	- Classification of Emergencies	Revision 28
2176	- Fire Drill Procedure	Revision 12
Drill Guide No. 15	- Fire at MCC 133 and Reactor Feed Pump Area	
5790-103-01	- Alert Checklist	Revision 11

1R06 Flood Protection Measures

DBD - T.5	Design Basis Document (DBD) T.5, External Flooding	

	Design Basis Document Follow-On Items (FOI):	
91-0126	- Emergency Procedure A.6, Section B (Flooding) Concerns	
91-0125	- Unlocated External Flood Study Documents	
91-0073	- Predicted Delivery Time for Sandbags	
	Individual Plant Examination of External Events (IPEEE)	
	Updated Safety Analysis Report (USAR):	Revision 19
Section 12.2.1.7.1	- External Flooding	
Section 2.4.1	- Surface Water	
Section 1.3.1.4	- Hydrology	
M-801 M-803 M-804 M-805	Intake Structure Drawings	
	Operations Manual:	Revision 0
A.6	- External Flooding	
NH-178639	Flood Barriers for A.6 Acts of Nature Procedure	Revision A
NH-33453	Intake Structure Sections and Detail - Sheet 1	Revision A
NF-36454	Intake Structure Plan at Elevation 919'-0"	Revision D
MNTS-83-0438	Flood Protection Requirements for Maximum Probable Flood, 82-02-SPEC	
FOI 96-0116	Qualification of the Intake Structure Pump Room Slab and Hatches Due to Probable Maximum Flood Uplift Pressure Loads	3/11/93

1R11 Licensed Operator Requalification Program

RQ-SS-08E	Simulator Exercise Guide - Spurious Group 1 With an ATWS	Revision 6
B.03.05-05.G.1	Standby Liquid Control System	Revision 9
C.4-G	Inadvertent ECCS Initiation	Revision 2
C.5-3101	Alternate Rod Insertion	Revision 3
C.5.3205	Terminate and Prevent Injection	Revision 2

1R12 Maintenance Effectiveness

	NUMARC [Nuclear Management and Resources Council]:	
93-01	- Nuclear Energy Institute Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants	Revision 2
93-01, Section 11	- Assessment of Risk Resulting from the Performance of Maintenance Activities	February 22, 2000
	Regulatory Guides:	
1.160	- Monitoring the Effectiveness of Maintenance at Nuclear Power Plants	Revision 2
1.182	- Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants	May 2000
05.02.01	Engineering Work Instruction, Monticello Maintenance Rule Program Document	Revision 5
	Operations Manual:	
B.8.4.1	- Instrument and Service Air	
	Maintenance Rule Program System Basis Document:	
B.8.4.1	- Instrument and Service Air	Revision 2
	USAR:	Revision 19
10.3.4	- Plant Air Systems and Nitrogen Systems	
WO 0203880	Install Temp Air Compressor To Supply Discharge Structure	
3278	NMC Standard 10 CFR 50.59 Screening Form - Screening Number SCR-02-0462, Revision 0	Revision 3*
3434	Jumper Bypass Form, Dated 8/2/02, for Temporary Instrument Air System WO 0203880	Revision 20
	Maintenance Rule Performance Data for Instrument Air System	January 2000 to August 8, 2002
CR 20017166	13 Air Compressor Tripped on Low Lube Oil Pressure Due to Cool Ambient Conditions	
WO 0203873	May Be Air Leaking-Bubbling in Puddle North of E-100A	
CR 20027014	Air Leaking up From Ground by East Side of Cooling Tower	
M-131	Piping and Instrument Diagram, Instrument Air - Turbine Building	Revision AA

M-800-1	Piping and Instrument Diagram, Circulating Water System	Revision A

1R13 Maintenance Risk Assessments and Emergent Work Control

	Procedures:	
4AWI-04.01.01	- General Plant Operating Activities	Revision 33
SWI-14.01	- Risk Management of On-line Maintenance	Revision 0
	Drawings and Prints:	
M-131	- Instrument Air - Turbine Building	Revision AA
M-136	- Fuel Pool Filter/Demin	Revision T
M-135	- Fuel Pool Cooling and Clean Up System	Revision AB
CR 20027014	Air Leak Bubbling up from Ground by East Side Cooling Tower	
WO 0203987	CRD Pump Casing Bolt to Casing Leak	
	Reactor and Control Room Log	August 23, 2002
	Operations Manual:	
B.2.1-05	- Fuel Pool Cooling System Operation	Revision 14

1R15 Operability Evaluations

CR 20026336	12 EDG Lube Oil Lead Content Increasing to Point of Additional Monitoring	
MI 1760	Lubricating Oil for EMD Engines - Marine, Power, and Drilling Rig	Revision G
MI 1762	Lubricating Oil for Industrial Power Engines	Revision E
MI 1750	Diesel Fuel Recommendations All EMD and Former COED Engines	Revision H
TRF 90-215	Product Data Sheet - Mobilgard 450	
CR 20026579	Main Steam Line Radiation Monitors Not Maintained with Safety-Related Parts	
	USAR:	Revision 19
Section 7.5	- Plant Radiation Monitoring System	
	Operations Manual:	
B.05.11	- Process Radiation Monitoring System	
TAC No. M82783	License Amendment No. 83	August 18, 1992
CR 20027876	Flanged Connection Bolting for FP-13 (Diesel Fire Pump Check Valve) Has Insufficient Thread Engagement	

EPRI TR-104213s	Electric Power Research Institute Report - Bolted Joint Maintenance & Application Guide	December 1995
CR 20027020	RHR Corner Room Calculation Assumptions Are Inconsistent with Current Plant Operating Practices	
CR 20027443	Running Room Coolers for the RHR Rooms Continuously Could Be a Concern in the Winter	
CR 20026989	SRI 86-015 Allowed a 2 Hour Operation with No RHR Room Cooling Inconsistent with Heatup Calc CA 97-157 Rev 1 Assumptions	

1R16 Operator Workarounds

	Operations Manual:	
C.6-007-B-17	- Alarm Response For 24" Vacuum Trip No. 2	Revision 1
C.4-B.6.3.A	- Decreasing Condenser Vacuum	Revision 7
	Operations Work Instruction:	
OWI-01.07	- Operations Department Self Assessment	Revision 17
CR 20025993	Unexpected Alarm C07-B-17, Vacuum 24 Inch Trip No. 2	

1R17 Permanent Plant Modifications

CR 20027798	American Air Filter Replacement Charcoal Trays Do Not Match Currently Installed Trays	
02A047	Alteration Package - Replacement of Charcoal Filter Trays in the EFT System	August 20, 2002
NEI 96-07	Guidelines For 10 CFR 50.59 Implementation	Revision 1
	Procedures:	
4AWI-06.01.05	- Alteration Process	Revision 11
4AWI-05.06.02	- 10 CFR 50.59 Applicability and Screening	Revision 5

1R19 Post-Maintenance Testing

	Procedures and Forms:	
0255-08-IA-1	- RCIC System Pump Flow and Valve Tests	Revision 51
3069	- Post-Maintenance Testing Activities Control Cover Sheet for WO 0204052	Revision 11
3069	- Post-Maintenance Testing Activities Control Cover Sheet for WO 0200757	Revision 11
0255-06-IA-1	- HPCI Pump Flow and Valve Tests	Revision 58
1158-B	- Diesel Fire Pump Weekly Check	Revision 12
4190-OCD	- Diesel Engine, Fire Protection Pump	Revision 13
4058-03	- RHRSW Pump No. 11 and No. 13 Motor Cooler Chemical Cleaning and Pressure Test	Revision 7
WO 0203204	No. 12 EDG Testing Following Speed Changing Motor Replacement/Repair	
WO 0110563	PI-13-69 Isolation Valve Packing Leak	
WO 0110650	Small Leak Through Plug on RCIC Trip Valve MO-2080 on PS-13-72B	
WO 0204123	Replace Diesel Fire Pump Coolant Hose	
WO 0204052	Repair of CV-3503 Air Line	
CR 20027611	Air Line Failed on HPCI Test Return Valve CV-3503 Resulting In Aborted Test and Extended HPCI LCO Time. WO Initiated	
	Operations Manual:	
B.08.05	- Fire Protection	
	USAR:	Revision 19
Section 10.3.1	- Fire Protection System	

1R22 Surveillance Testing

	Procedures and Forms:	
0030	- ECCS Drywell Pressure Sensor Test	Revision 10
0003	- Drywell High Pressure Scram and Group 2, 3 and SCTMT Isolation Test and Calibration	Revision 16
0011-A	- Turbine Control Valve Fast Closure SCRAM Test and Calibration (>30% of Rated)	Revision 3
0141	- Reactor Building to Torus Vacuum Breaker Operability Test	Revision 19
4847-PM	- GE 7700 Line Motor Control Center Maintenance Operability Test	Revision 11
0054-B	- Main Steam Line Low Pressure Group 1 Isolation Instrument Test and Calibration (Reactor in Run)	Revision 5
	Technical Specifications:	
3.2/4.2	- Protective Instrumentation	
PS-10-101A-D	Instrument Calibration Worksheet	July 15, 2002
WO 0204394	Perform Intake Structure Pre-Action Detector Test	
WO 0204393	Perform Diesel Pre-Action Detector Test	
NFPA 72E-1974	Chapter 7: Maintenance and Testing	
NFPA 72E-1982	Chapter 8: Maintenance and Testing	

1R23 Temporary Plant Modifications

3034	Jumper Bypass 02-39, Prevent Starting of P-20A When Moving Switch Through Standby Position	Revision 20
3034	Jumper Bypass 02-40, Disable of High Temperature Alarm for CRD-24-47 From TR-3-244 by Program Change	Revision 20
WO 0204379	Spurious CRD High Temp Alarm TR-3-244	

1EP2 Alert and Notification System (ANS) Testing

	Monticello Area PANS Implementing Procedure and Supplementary Documents	June 1, 1984
NF-108565-2	Monticello Emer. Plan Sirens and Contours	May 15, 1999
Project 01Q095	Public Alert Notification System Replacement	Revision 0
Surv. Test 1359	PANS Weekly Cancel Signal Test	Revision 6
Surv. Test 1409	PANS Monthly Siren Activation Testing	Revisions 3-7
Contract Agreement	MNGP Public Alert and Notification System	October 22, 1996

	General Conditions For Maintenance, Repair, And Operations Contracts	September 24, 1996
	PANS Monthly Test Report, Failure Matrix	February-May 2002
FEMA Letter	MNGP Alert and Notification System Evaluation	April 25, 1985
EPWI-01.05	PANS Maintenance And Testing	Revision 0

1EP3 Emergency Response Organization (ERO) Augmentation Testing

Sections 5.0 & 7.0	MNGP Emergency Plan	Revision 21
5790-001-01	MNGP Emergency Response Organization	August 6, 2002
Surv. Test 1317	MNGP Emergency Alert Notification System Test	Revision 12
5790-104-04	Emergency Call List-Alert/Site Area/General	June 5, 2002
Surv. Test 1317	MNGP Emergency Alert Notification System Test Results: August 2000 - August 2002	

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

	Nuclear Oversight 1st Quarter 2002 Assessment Report For Monticello	April 30, 2002
2002-001-5-002	Nuclear Oversight Observation Report	April 3, 2002
2002-001-5-046	Nuclear Oversight Observation Report	April 24, 2002
Self Assessment	Emergency Preparedness Program Assessment	August 9, 2002
AG 2001-S-1	Internal Audit Report, Emergency Preparedness	April 30, 2001
AG 2000-S-1	Internal Audit Report, Emergency Preparedness	April 28, 2000
4AWI-10.01.03	Condition Report Process	Revision 18
	Drill Critique Report Conducted April 25, 2001	
	Exercise Critique Report Conducted June 6,2001	
	Drill Critique Report Conducted March 27, 2002	
	Drill Critique Report Conducted June 12, 2002	
CA 20003000	Add SER Lessons Learned To EP Training	August 3, 2000
CA 20003370	Provide Ops. Shift Mgt. Guidance On Filling Unexpected Vacancies	September 6, 2000
CA 20010988	Evaluate Need For Training Shift Em. Comms.	February 20, 2001
CR 20015705	Discrepancies Noted In Em. Equip. Inventory	September 27, 2001
CR 20020316	PASS Procedures Were Wrong Revisions	January 17, 2002
CR 20020362	Em. Plan Proc. Manual Found With Old Revision	January 18, 2002
CR 20020369	Em. Equip. Locker Has Old Revisions EP Maps	January 18, 2002
CR 20020374	Em. Plan Manual Missing Some Procedures	January 18, 2002
CR 20023651	Corrective Actions To Resolve EP Inventory Problems	April 17, 2002
CR 20024480	NOUE Classification Review (Ft. Calhoun)	May 10, 2002
CR 20023409	Evacuation From The Owner Controlled Area	August 2, 2002
CR 20016978	ERO Augmentation Test Issues	November 7, 2001
CR 20010175	Re-evaluation Of Policy On KI	March 9, 2001

CR 20012400	Assessment Of April 25, 2001 Full Scale Drill	July, 23, 2001
CR 20013176	Critique Of June 6, 2001, EP Exercise	August 14, 2001
CR 20014820	Less Than 30% ERO Respond For Pager Test	August 14, 2001
CR 20003136	Inadvertent Activation Of PANS For Weekly Test	August 17, 2000
CR 20026555	EP Inventory Surveillance Finds Missing Items	July 17, 2002
CR 20025894	PANS Electrical Disconnect Notice Received	June 27, 2002
CR 20016589	Abnormal Procedure Issued Without EP 50.54(q)	October 30, 2001
CR 20014819	Failure To Meet Min. Staffing During ERO Test	August 14, 2001
CR 20015043	Failure To Identify Default PAR In Simulator	August 27, 2001

1EP6 Drill Evaluation

	Procedures and Forms:	
A.2-101	- Classification of Emergencies	Revision 28
5790-103-01	- Alert Checklist	Revision 11
5790-102-02	- Emergency Notification Report Form	Revision 25
5790-501-03	- Emergency Communicator Checklist	Revision 4
5790-104-04	- Emergency Call List - Alert/Site Area/General	Revision 77
RQ-SS-08E	Simulator Exercise Guide - Spurious Group 1 With an ATWS	Revision 6

2PS1 Radiological Effluents

0147	Standby Gas Treatment System Filter Tests	Revision 10
0149	Standby Gas Treatment Charcoal Adsorber Cartridge Test	Revision 7
0163	Stack Wide Range Gas Monitor Calibration	Revision 25
0171	Discharge Canal Monitor Calibration	Revision 13
0248	Reactor Building Vent Wide Range Gas Monitor Calibration	Revision 21
0290	Service Water Monitor Calibration	Revision 8
0363-01	RBV Wide Range Gas Monitors Process and Sample Flow Instrument Calibration Procedure	Revision 5
0372	Stack Wide Range Gas Monitors Process and Sample Flow Instrument Calibration Procedure	Revision 8
0385-A	Drywell Particulate Monitor Functional Test	Revision 8
1118	Off-Gas Compressors Suction Filters DOP and Freon Efficiency Test	Revision 5
1119	Stack Filters DOP Efficiency Test	Revision 3

1399	Liquid Process Monitor-Grab Sampling	Revision 3
5090	Software Verification-Liquidose	Revision 3
CR 20027821	Improper Routing of Drain Hose Results in Unplanned Radioactive Liquid Release	December 4, 2001
CR 20020231	2001 Chemistry Self-Assessment	January 16, 2002
CR 20022866	Discharge Canal Monitors Experience a MRFF Due to Loss of SX Pump During Storm	March 22, 2002
CR 20023425	Received Discharge Canal Hi Radiation Alarm 4-B-22	April 10, 2002
CR 20024422	Discharge Canal Hi Rad, 4-A-22 was Received Following Heavy Rain	May 8, 2002
CR 20025368	Received Discharge Canal Hi Rad Alarm 4-A-22 During Period of Heavy Rain	June 7, 2002
CR 20026685	Discharge Canal Hi Rad 4-A-22 Received Following Heavy Rain	July 20, 2002
CR 20026950	Received Discharge Canal High Radiation Alarm 4-B-22	July 29, 2002
CR 20027107	Annunciator 4-A-22 Discharge Canal Hi Radiation Alarms whenever Heavy Rains Occur. Operational Challenge 02-048	August 1, 2002
	Abnormal-Release Calculations Week #52 of 2001	December 4, 2001
Section 9.3	USAR: Plant Radioactive Waste Control Systems	Revision 19
	2001 Radioactive Effluent Release Report	May 15, 2002
	Internal Correspondence-Revision to ODCM	November 30, 2000

4OA1 Performance Indicator Verification

	Monticello Performance Indicator Data Summary Report - 2nd Quarter 2002	July 3, 2002
NEI 99-02	Regulatory Assessment Performance Indicator Guideline	Revision 2
3530-09	NRC Performance Indicator Safety System Functional Failures	Revision 2
3530-08	Performance Indicator RCS Activity Worksheet	Revision 2
1.3.13	Reactor Water and Cleanup Systems Iodine	Revision 11

CR 20014093	Unexpected Alarm DW Equipment Drain Leak Rate During Pump Down of DWEDS	July 12, 2001
CR 20014636	Unexpected Alarm 3-A-17 Auto Blowdown Valve Bellows Leaking	August 3, 2001
CR 20014975	Tiny Leak in HPCI Main Pump	August 22, 2001
CR 20015261	Unexpected Alarm C04-B-13 Drywell Equipment Drain Leak Rate High	September 8, 2001
CR 20016595	Unexpected Alarm C04-B-13 Drywell Equipment Drain Leak Rate High	October 31, 2001
CR 20018193	Leakage Observed from RV-2031 After Completion of RHR Surveillance	December 20, 2001
CR 20020010	Received Annunciator C-04-B-13 Drywell Equipment Drain Leak Rate High	January 2, 2002
CR 20020078	Unexpected Alarm C04-B-13 Drywell Equipment Drain Leak Rate High	January 5, 2002
CR 20022008	Unexpected Alarm C04-B-13 Drywell Equipment Drain Leak Rate High	March 1, 2002
CR 20022737	Unexpected Alarm C04-B-13 Drywell Equipment Drain Leak Rate High	March 19, 2002
CR 20023139	Packing Leak on HWC-61-1 Degraded Steam Leak	March 29, 2002
CR 20024350	Unexpected Alarm C04-B-13 Drywell Equipment Drain Leak Rate High when P-20 Started	May 6, 2002
CR 20025147	Small Steam Leak from HPCI Instrument Root Valve R-6	June 2, 2002
CR 20025262	DW CAM Count Rate Increasing with Corresponding Increase in DW Floor Drain Leakage	June 4, 2002
CR 20025527	Received Alarm 4-B-32 DWEDS High Temperature and 4-B-18 DWEDS Leak Rate Change High Simultaneously	June 14, 2002
CR 20025986	Unexpected Alarm C04-B-13 Drywell Equipment Drain Leak Rate High	June 30, 2002
CR 20026217	Unexpected Alarm C04-B-13 Drywell Equipment Drain Leak Rate High	July 5, 2002
EPWI-01-06	Emergency Plan Performance Indicator Program	Revision 0

	PANS Quarterly Operability Results: April 2001 - June 2002	
	ERO Quarterly Participation Results: April 2001 - June 2002	
	DEP Quarterly Performance Results: April 2001 - June 2002	

4OA3 Event Follow-up

LER 2002-004	Unplanned Loss of Both Trains of Control Room Ventilation During Auto Start Testing Due to Timing Circuit Relay Failure	Revision 0
CR 20023185	Entered Unplanned 24 Hour LCO Upon Failure of V-EAC-14A to Auto Start on Low Flow per CRV-EFT Test 1429	
WO 0201969	Investigate/Repair V-EAC-14A Auto Start Relay Circuitry	
CR 20023386	Revise Procedure 1429 to Correct LCO Entries. Attempt to Develop Test Method Which Will Not Create 24-hour LCO Entry	
1429	CRV-EFT Low Flow Test	Revision 10
CR 20023387	Submit a Request for Estimate on Replacing Struthers / Dunn Relays With Alt Control System to the Plant Health Committee	