October 25, 2004

Mr. T. Palmisano
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
NRC INTEGRATED INSPECTION REPORT 05000263/2004004

Dear Mr. Palmisano:

On September 30, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Monticello Nuclear Generating Plant. The enclosed integrated inspection report documents the inspection findings which were discussed on October 7, 2004, with Mr. Conway 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, there was one NRC-identified finding of very low safety significance which involved a violation of NRC requirements. However, because this violation was of very low safety significance and because the issue was entered into the licensee's corrective action program, the NRC is treating this finding as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Monticello Nuclear Generating Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

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

Enclosure: Inspection Report 05000263/2004004
w/Attachment: Supplemental Information

cc w/encl: J. Cowan, Executive Vice President
and Chief Nuclear Officer
Manager, Regulatory Affairs
J. Rogoff, Vice President, Counsel, and Secretary
Nuclear Asset Manager, Xcel Energy, Inc.
Commissioner, Minnesota Department of Health
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-263
License No:	DPR-22
Report No:	05000263/2004004
Licensee:	Nuclear Management Company, LLC
Facility:	Monticello Nuclear Generating Plant
Location:	2807 West Highway 75 Monticello, MN 55362
Dates:	July 1 through September 30, 2004
Inspectors:	S. Burton, Senior Resident Inspector R. Orlikowski, Resident Inspector D. Karjala, Resident Inspector, Prairie Island M. Miller, Project Engineer M. Mitchell, Radiation Specialist
Observers:	None
Approved by:	B. Burgess, Chief Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000263/2004004; 07/01/2004 - 09/30/2004; Monticello Nuclear Generating Plant. Surveillance Testing.

This report covers a 3-month period of baseline resident inspection and announced baseline inspections of radiation protection. The inspections were conducted by Region III reactor inspectors, a regional radiation specialist inspector, and the resident inspectors. 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 NRC management review. The NRC'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. Inspector-Identified and Self-Revealed Findings

Cornerstone: Initiating Events

- Green. A finding of very low safety significance was identified by the inspectors for a violation of Technical Specifications when operators failed to follow administrative procedures which require that operators notify radiation protection and chemistry personnel prior to a system alignment change that could affect exposure rates. A worker received an electronic dose rate alarm when a transient high radiation area was created while restoring the reactor core isolation cooling system after performing surveillance testing. The primary cause of this finding was related to the cross-cutting area of Human Performance. No workers exceeded their dose limits during the event. The licensee has instituted corrective actions including procedural revisions and personnel training.

  The issue was more than minor because the operator's failure to anticipate plant changes prior to operating equipment could reasonably be viewed as a precursor to a significant event such as an overexposure to plant personnel. The issue was of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator; 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; and the finding did not increase the likelihood of a fire or internal or external flooding. The issue was a Non-Cited Violation of Technical Specification 6.5.A, which requires that written procedures be implemented for control of radioactivity for limiting personnel exposure. (Section 1R22)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Monticello operated at full power for the entire assessment period except for brief down-power maneuvers to accomplish rod pattern adjustments and to conduct planned surveillance testing activities.

- On July 25, 2004, reactor power was reduced to approximately 75 percent while performing work on the condensate demineralizer system. Reactor full power was achieved on July 25, 2004.

1. REACTOR SAFETY

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

1R04 Equipment Alignment (71111.04)

.1 Partial Walkdown

a. Inspection Scope

The inspectors performed partial walkdowns of accessible portions of trains of risk-significant mitigating systems equipment. The inspectors reviewed equipment alignment to identify any discrepancies that could impact the function of the system and potentially increase risk. Identified equipment alignment problems were verified by the inspectors to be properly resolved. The inspectors selected redundant or backup systems for inspection during times when equipment was of increased importance due to unavailability of the redundant train or other related equipment. Inspection activities included, but were not limited to, a review of the licensee's procedures, verification of equipment alignment, and an observation of material condition, including operating parameters of equipment in-service. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following equipment trains to assess operability and proper equipment line-up for a total of three samples:

- 11 emergency diesel generator (EDG) with 12 EDG out-of-service for maintenance, during the week ending July 31, 2004;
- reactor core isolation cooling (RCIC) following maintenance, during the week ending August 14, 2004; and
- Division II residual heat removal (RHR) system with Division I RHR system out-of-service for maintenance, during the week ending September 11, 2004.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown

a. Inspection Scope

The inspectors performed a complete walkdown of equipment for one risk significant mitigating system. The inspectors walked down the system to review mechanical and electrical equipment line-ups, 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. A review of past and outstanding work orders was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the corrective action program database to ensure that any system equipment alignment problems were being identified and appropriately resolved. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following system to assess operability and proper equipment line-up for a total of one sample:

- 11 EDG, for the week ending September 25, 2004.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Fire Zone Walkdowns (71111.05Q)

a. Inspection Scope

The inspectors walked down risk significant fire areas to assess fire protection requirements. The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and had implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems or features. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events (IPEEE), the potential to impact equipment which could initiate or mitigate a plant transient, or the impact on the plant's ability to respond to a security event. The inspection activities included, but were not limited to, the control of transient combustibles and ignition sources, fire detection equipment, manual suppression capabilities, passive suppression capabilities, automatic suppression capabilities, compensatory measures, and barriers to fire propagation. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following areas for review for a total of ten samples:

- Fire Zone 4-A, reactor building 985' elevation south, during the week ending July 17, 2004;
- Fire Zone 4-B, reactor building closed loop cooling water (RBCCW) heat exchanger area, during the week ending July 17, 2004;
- Fire Zone 4-D, standby gas treatment (SBGT) system area, during the week ending July 17, 2004;
- Fire Zone 7-B, Division I - 250 Vdc battery room, during the week ending July 31, 2004;
- Fire Zone 7-C, Division II - 125 Vdc battery room, during the week ending July 31, 2004;
- Fire Zone 14-A, upper 4 kV bus area, during the week ending July 31, 2004;
- Fire Zone 14-B, isophase bus area, during the week ending July 31, 2004;
- Fire Zone 15-A, 12 diesel generator room, during the week ending July 31, 2004;
- Fire Zone 15-B, 11 diesel generator room, and 11 and 12 diesel generator day tank rooms, during the week ending July 31, 2004; and
- Fire Zone 34, east electrical equipment room and 13 diesel generator room, during the week ending August 14, 2004.

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Review (71111.05A)

a. Inspection Scope

The inspectors reviewed fire drill activities to evaluate the licensee's ability to control combustibles and ignition sources, the use of fire fighting equipment, and their ability to mitigate the event. The inspection activities included, but were not limited to, the fire brigade's use of fire fighting equipment, effectiveness in extinguishing the simulated fire, effectiveness of communications amongst fire brigade members and the control room, command and control of the fire commander, and observation of the post-drill critique. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors observed the following fire drill for a total of one sample:

- the fire brigade's response to an announced fire drill in the turbine building hydrogen seal oil area, on August 1, 2004.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

The inspectors performed an annual review of the licensee's testing of heat exchangers. The inspection focused on potential deficiencies that could mask the licensee's ability to detect degraded performance, identification of any common cause issues that had the potential to increase risk, and ensuring that the licensee was adequately addressing problems that could result in initiating events that would cause an increase in risk. The inspection activities included, but were not limited to, a review of the licensee's observations as compared against acceptance criteria, the correlation of scheduled testing and the frequency of testing, and the impact of instrument inaccuracies on test results. Inspectors also verified that test acceptance criteria considered differences between test conditions, design conditions, and testing criteria. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following equipment for a total of one sample:

- 12 EDG, emergency service water heat exchanger test, for the weeks ending July 24 and August 7, 2004.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

a. Inspection Scope

The inspectors performed a quarterly review of licensed operator requalification training. The inspection assessed the licensee's effectiveness in evaluating the requalification program, ensuring that licensed individuals operate the facility safely and within the conditions of their license, and evaluated licensed operator mastery of high-risk operator actions. The inspection activities included, but were not limited to, a review of high risk activities, emergency plan performance, incorporation of lessons learned, clarity and formality of communications, task prioritization, timeliness of actions, alarm response actions, control board operations, procedural adequacy and implementation, supervisory oversight, group dynamics, interpretations of Technical Specifications (TS), simulator fidelity, and licensee critique of performance. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors observed the following requalification activity for a total of one sample:

- a requalification crew during an evaluated simulator scenario that included a reactor recirculation pump seal failure and a security threat with two bomb detonations. This resulted in two emergency plan classification opportunities, an opportunity to isolate a recirculation loop, insert a manual reactor scram, and emergency depressurize the reactor pressure vessel, during the week ending September 25, 2004.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed systems to assess maintenance effectiveness, including maintenance rule activities, work practices, and common cause issues. Inspection activities included, but were not limited to, the licensee's categorization of specific issues including evaluation of performance criteria, appropriate work practices, identification of common cause errors, extent of condition, and trending of key parameters. Additionally, the inspectors reviewed implementation of the Maintenance Rule (10 CFR 50.65) requirements, including a review of scoping, goal-setting, performance monitoring, short-term and long-term corrective actions, functional failure determinations associated with reviewed corrective action program documents, and current equipment performance status. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors performed the following maintenance effectiveness reviews for a total of three samples:

- a function-oriented review of the control room ventilation (CRV) emergency filtration system because it was designated as risk significant under the Maintenance Rule, during the weeks ending August 21 and August 28, 2004;
- a function-oriented review of the RHR system because it was designated as risk significant under the Maintenance Rule, during the weeks ending September 18 through September 30, 2004; and
- a function-oriented review of the EDG system because it was designated as risk significant under the Maintenance Rule, during the weeks ending September 25 through September 30, 2004.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed maintenance activities to review risk assessments (RAs) and emergent work control. The inspectors verified the performance and adequacy of RAs, management of resultant risk, entry into the appropriate licensee-established risk bands, and the effective planning and control of emergent work activities. The inspection activities included, but were not limited to, a verification that licensee RA procedures were followed and performed appropriately for routine and emergent maintenance, that RAs for the scope of work performed were accurate and complete, that necessary actions were taken to minimize the probability of initiating events, and that activities to

ensure that the functionality of mitigating systems and barriers were performed. Reviews also assessed the licensee's evaluation of plant risk, risk management, scheduling, configuration control, and coordination with other scheduled risk significant work for these activities. Additionally, the assessment included an evaluation of external factors, the licensee's control of work activities, and appropriate consideration of baseline and cumulative risk. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors observed maintenance or planning for the following activities or risk significant systems undergoing scheduled or emergent maintenance for a total of four samples:

- routine scheduled maintenance and risk management when the electrical distribution system was identified as unstable by the system operator, during the week ending July 3, 2004;
- emergent maintenance to correct a cooling water leak on the main generator exciter rectifier bank, during the weeks ending July 3 and August 7, 2004;
- emergent maintenance to correct a failed pressure switch on 12 EDG, during the weeks ending July 3 and August 7, 2004; and
- routine scheduled maintenance and risk management during RCIC system maintenance, during the week ending August 14, 2004.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events (71111.14)

a. Inspection Scope

The inspectors reviewed personnel performance to planned evolutions to review operator performance and the potential for operator contribution to the evolution. The inspectors observed or reviewed records of operator performance during the evolution. Reviews included, but were not limited to, operator logs, pre-job briefings, instrument recorder data, and procedures. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors observed the following evolutions for a total of one sample:

- planned diving operations, during the week ending September 4, 2004.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed operability evaluations which affected mitigating systems or barrier integrity to ensure that operability was properly justified and that the component or system remained available. The inspection activities included, but were not limited to, a review of the technical adequacy of the operability evaluations to determine the impact on TS, the significance of the evaluations to ensure that adequate justifications were documented, and that risk was appropriately assessed. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors reviewed the following operability evaluations for a total of five samples:

- installation configuration of ASCO solenoid valves, during the weeks ending July 3 through August 7, 2004;
- oil leaking from Division II core spray (CS) test return line to torus valve actuator, during the week ending July 24, 2004;
- dead legs on service water discharge header may not be operable during a seismic event, during the week ending August 21, 2004;
- Regulatory Issue Summary (RIS) 2004-12 pertaining to the use of Code revisions found to apply to Monticello Nuclear Generating Plant (MNGP), during the weeks ending August 7 through August 28, 2004; and
- winter mode of heating ventilation line-up may challenge high energy line break (HELB) analysis of record, during the weeks ending August 7 through August 28, 2004.

b. Findings

The engineering group identified that the GOTHIC computer model used to analyze a turbine building HELB failed to include four flow paths within the turbine building. The condition had the potential to affect the operability of equipment associated with the 4160 volt alternating current (AC) system (Bus-15 and Bus-16), the 480 volt AC system (LC-103 and LC-104), and the 125 volt direct current (DC) system (D111 and D211). Specifically, the engineering group identified three heating, ventilation, and air conditioning (HVAC) flow paths that existed between a single turbine building mild environment and three turbine building harsh environments. The turbine building mild environment included both 4160 volt essential switchgear rooms, the 941' elevation cableway, and the 931' elevation Division II essential motor control centers (MCCs). The harsh environments included the 911' elevation condenser area, the 951' elevation turbine building operating floor, and the 911' elevation feedwater pump area. The unanalyzed flow paths may allow steam to travel to the mild environment areas during a HELB via the existing HVAC ductwork.

Upon discovery, the engineering department initiated CAP033462 to document the issue. The operations department took compensatory measures to block shut three dampers to isolate the flow paths between the turbine building harsh and mild environments. An operability evaluation was performed documenting the operability of the potentially affected equipment.

The inspectors reviewed the operability evaluation and noted that it took credit for a vent path in the ventilation system that would help mitigate the consequences of a HELB by

relieving steam and pressure. However, when the inspectors raised questions about the design of a damper in the vent path, it was identified that the damper failed shut on a loss of service air isolating the vent path. The engineering department initiated CAP034281 to document the issue. Subsequently, compensatory measures were taken to ensure the vent path damper remained open. A period of approximately 55 days passed from the time compensatory measures were first taken to isolate the flow paths to when the licensee took compensatory measures to block open the damper to ensure the vent path remained open.

Since HELB modeling issues have been identified in both Licensee Event Report (LER) 96-003 and also in 2001 corrective action program documents, and since the licensee failed to recognize the vulnerabilities associated with the required vent path during this evaluation, a performance deficiency existed. The inspectors determined that a feedwater HELB had the potential to affect redundant trains of multiple systems of safety-related equipment in both the barrier integrity and mitigating system cornerstones; therefore, the issue was more than minor. Affected equipment included the 4160 volt AC essential switchgear which supplies power to emergency core cooling systems (ECCS) such as RHR and CS pumps; the 480 volt AC essential switchgear which supplies power to RHR and CS valves as well as standby liquid control (SBLC) pumps; and the 125 volt DC essential switchgear which supplies control power to both EDGs.

This issue is considered an unresolved item (URI) because the effect of the HELB on the equipment in the mild environment is under evaluation. The inspectors review of this evaluation will include the conditions which existed prior to the discovery of the unanalyzed ventilation flow paths and the conditions which existed after compensatory measures were taken to block the three dampers shut but failed to ensure the vent path damper remained open. (URI 05000263/2004004-01)

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors review of permanent plant modifications focused on verification that the design bases, licensing basis, and performance capability of related structures, systems or components were not degraded by the installation of the modification. The inspectors also verified that the modifications did not place the plant in an unsafe configuration. The inspection activities included, but were not limited to, a review of the design adequacy of the modification by performing a review, or partial review, of the modification'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. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following permanent plant modifications for review for a total of one sample:

- replacement of gaskets for V-EAC-14A and V-EAC-14B shaft seal kits, during the weeks ending July 24 and September 4, 2004.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors verified that the post-maintenance test procedures and activities were adequate to ensure system operability and functional capability. Activities were selected based upon the structure, system, or component's ability to impact risk. The inspection activities included, but were not limited to, witnessing or reviewing the 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, 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, TS, and USAR design requirements. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following post-maintenance activities for review for a total of three samples:

- control room fire detection panel, during the week ending July 24, 2004;
- 12 EDG low turbo oil pressure alarm relay replacement, during the week ending July 31, 2004; and
- testing of valve MO-2096, RCIC barometric condenser cooling water supply, during the weeks ending August 14 and August 28, 2004.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed surveillance testing activities to assess operational readiness and to ensure that risk-significant structures, systems, and components were capable of

performing their intended safety function. 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 was left unresolved. The inspection activities included, but were not limited to, a review 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, TS applicability, impact of testing relative to performance indicator reporting, and evaluation of test data. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following surveillance testing activities for review for a total of four samples:

- instrument air compressor weekly surveillance test, during the weeks ending July 17 and July 24, 2004;
- RCIC pump and valve test, during the week ending August 14, 2004;
- accident monitoring instrumentation calibration, during the week ending September 25, 2004; and
- SBLC pump and valve quarterly tests, during the week ending September 30, 2004.

b. Findings

Introduction

The inspectors identified a Non-Cited Violation (NCV) of TS having very low safety significance (Green) for failing to follow administrative work instructions (AWI). These procedures require that operators notify radiation protection and chemistry personnel prior to a system alignment change that could affect exposure rates. The issue was more than minor because the operator's failure to anticipate plant changes prior to operating equipment could reasonably be viewed as a precursor to a significant event such as an overexposure to plant personnel.

Description

On August 10, 2004, operators restored the RCIC system after performing surveillance testing. During this evolution, a transient high radiation condition was created in the RCIC room when the steam isolation valves were opened. Localized dose rates exceeded 100 mrem/hr for a short time, as indicated by an electronic dosimeter reading. The worker did not exceed any exposure limits. Administrative Procedure 4 AWI-04.01.06, "Conduct of Operations," FP-OP-COO-01, Attachment 7, "Equipment Manipulation and Status Control," Section 3.11, requires that operators notify radiation protection and chemistry personnel prior to a system alignment change that could affect exposure rates.

Analysis

The inspectors determined that the failure to notify radiation protection and chemistry personnel prior to system alignment changes which could affect exposure rates was a performance deficiency warranting further evaluation. The inspectors reviewed this finding using the guidance contained in Appendix B, “Issue Disposition Screening,” of IMC 0612, “Power Reactor Inspection Reports.” The inspectors determined that the issue was more than minor because the operator’s failure to anticipate plant changes prior to operating equipment could reasonably be viewed as a precursor to a significant event such as an overexposure to plant personnel.

The inspectors reviewed this finding in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Using the Phase 1 SDP worksheet for the initiating events cornerstone, the inspectors determined that the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator; 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; and the finding did not increase the likelihood of a fire or internal or external flooding. Therefore, the finding was considered to be of very low safety significance (Green).

Enforcement

Technical Specification 6.5.A.1 requires written procedures be established, implemented and maintained for the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, February 1978. Appendix A of Regulatory Guide 1.33 requires written procedures be implemented for control of radioactivity for limiting personnel exposure. Administrative Procedure 4 AWI-04.01.06, “Conduct of Operations,” FP-OP-COO-01, Attachment 7, “Equipment Manipulation and Status Control,” Section 3.11, requires that operators notify radiation protection and chemistry personnel prior to a system alignment change that could affect exposure rates. Contrary to the above, on August 10, 2004, the operating crew failed to notify radiation protection and chemistry personnel prior to restoring the RCIC system to service. Because this violation was of very low safety significance and it was entered into the licensee’s corrective action program, this violation is being treated as a NCV consistent with Section VI.A of the NRC Enforcement Policy (NCV 05000263/2004004-02). The licensee entered this issue into their corrective action program as CAP034431 and have recommended corrective actions, including procedural revisions and personnel training.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed temporary modifications to assess the impact of the modification on the safety function of the associated system. The inspection activities

included, but were not limited to, a review of design documents, safety screening documents, USAR, and applicable TS 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. As part of this inspection, the documents in Attachment 1 were utilized to evaluate the potential for an inspection finding.

The inspectors selected the following temporary modifications for review for a total of two samples:

- turbine building HELB dampers blocked shut, during the week ending July 17, 2004; and
- turbine building HELB vent path damper blocked open, during the weeks ending August 14 and August 21, 2004.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walkdowns and Radiation Work Permit Reviews

a. Inspection Scope

The adequacy of the licensee's internal dose assessment process for internal exposures greater than 50 millirem committed effective dose equivalent (CEDE) was assessed. There were no exposures greater than 50 millirem CEDE. This review represented one sample.

b. Findings

No findings of significance were identified.

.2 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed one corrective action report related to access controls and high radiation area radiological incidents when available (non-performance indicators (PIs)) identified by the licensee in high radiation areas <1R/hr). Staff members were interviewed and corrective action documents were reviewed to verify that follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

- initial problem identification, characterization, and tracking;
- disposition of operability/reportability issues;
- evaluation of safety significance/risk and priority for resolution;
- identification of repetitive problems;
- identification of contributing causes;
- identification and implementation of effective corrective actions;
- resolution of NCVs tracked in the corrective action system; and
- implementation/consideration of risk significant operational experience feedback.

This review represented one sample.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed the plant FSAR to identify applicable radiation monitors associated with transient high and very high radiation areas, including those used in remote emergency assessment. The inspectors identified the types of portable radiation detection instrumentation used for job coverage of high radiation area work, other temporary area radiation monitors currently used in the plant, continuous air monitors associated with jobs with the potential for workers to receive 50 mrem CEDE, whole body counters, and the types of radiation detection instruments utilized for personnel release from the radiologically controlled area. This review represented one sample.

The inspectors verified calibration, operability, and alarm setpoint (if applicable) of the following five instruments:

- Argos 4G Personnel Contamination Monitor;
- Telescan 330A;
- Eberline AMS-4;

- Area Radiation Monitors; and
- Radios 51 Electronic Dosimeters.

This review represented one sample.

The inspectors determined what actions were taken when, during calibration or source checks, an instrument was found significantly out of calibration (>50 percent), determined possible consequences of instrument use since last successful calibration or source check, and determined if the out of calibration result was entered into the corrective action program. There were no instances where the instrument was found significantly out of calibration. The inspectors also reviewed the licensee's 10 CFR Part 61 source term reviews to determine if the calibration sources used are representative of the plant source term. This review represented one sample.

b. Findings

No findings of significance were identified.

.2 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed the licensee's self-assessments, audits, LERs, and special reports that involved personnel contamination monitor alarms due to personnel internal exposures to verify that identified problems were entered into the corrective action program for resolution. All event reports involving internal exposures >50 mrem CEDE were reviewed to determine if the affected personnel were properly monitored utilizing calibrated equipment and if the data was analyzed and internal exposures properly assessed in accordance with licensee procedures. This review represented one sample.

The inspectors reviewed corrective action program reports related to exposure significant radiological incidents that involved radiation monitoring instrument deficiencies since the last inspection in this area. Staff members were interviewed and corrective action documents were reviewed to verify that follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

- initial problem identification, characterization, and tracking;
- disposition of operability/reportability issues;
- evaluation of safety significance/risk and priority for resolution;
- identification of repetitive problems;
- identification of contributing causes;
- identification and implementation of effective corrective actions;
- resolution of NCVs tracked in the corrective action system and
- implementation/consideration of risk significant operational experience feedback.

The inspectors determined if the licensee's self-assessment activities were identifying and addressing repetitive deficiencies or significant individual deficiencies in problem identification and resolution. This review represented two samples.

b. Findings

No findings of significance were identified.

.3 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspectors verified the calibration expiration and source response check currency on radiation detection instruments staged for use and observed radiation protection technicians for appropriate instrument selection and self-verification of instrument operability prior to use. This review represented one sample.

b. Findings

No findings of significance were identified.

.4 Self-Contained Breathing Apparatus Maintenance and User Training

a. Inspection Scope

The inspectors reviewed the status and surveillance records of self-contained breathing apparatus (SCBA) staged and ready for use in the plant and inspected the licensee's capability for refilling and transporting SCBA air bottles to and from the control room and operations support center during emergency conditions. The inspectors determined if control room operators and other emergency response and radiation protection personnel were trained and qualified in the use of SCBAs (including personal bottle change-out). The inspectors verified the status of three individuals on each control room shift crew, and three individuals from each designated department, currently assigned emergency duties (e.g., onsite search and rescue duties). This review represented one sample.

The inspectors reviewed the qualification documentation for at least 50 percent of the onsite personnel designated to perform maintenance on the vendor-designated vital components, and the vital component maintenance records over the past 5 years for three SCBA units currently designated as "ready for service." The inspectors also ensured that the required, periodic air cylinder hydrostatic testing was documented and up-to-date, and that the Department of Transportation (DOT) required retest air cylinder markings were in place for these three units. The inspectors reviewed the onsite maintenance procedures governing vital component work including those for the low-pressure alarm and pressure-demand air regulator and licensee procedures and the SCBA manufacturer's recommended practices to determine if there were inconsistencies between them. This review represented one sample.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

Cornerstone: Barrier Integrity

.1 Reactor Safety Strategic Area

a. Inspection Scope

The inspectors' review of PIs used PI guidance and definitions contained in Nuclear Energy Institute (NEI) Document 99-02, Revision 2, "Regulatory Assessment Performance Indicator Guideline," to assess the accuracy of the PI data. The inspectors' review included, but was not limited to, conditions and data from logs, LERs, corrective action program documents, and calculations for each PI specified. As part of the inspection, the documents listed in Appendix 1 were utilized to evaluate the accuracy of PI data.

The following PIs were reviewed for a total of two samples:

- reactor coolant system (RCS) specific activity, for the period of June 2003 through June 2004; and
- RCS leakage, for the period of June 2003 through June 2004.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

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

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As part of the routine inspections documented above, the inspectors verified that the licensee entered the problems identified during the inspection into their corrective action program. Additionally, the inspectors verified that the licensee was identifying issues at an appropriate threshold and entering them in the corrective action program, and verified that problems included in the licensee's corrective action program were properly addressed for resolution. Attributes reviewed included: complete and accurate identification of the problem; that timeliness was commensurate with the safety significance; that evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent of condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue.

b. Issues

The inspectors noted several instances of operators not anticipating plant response prior to operating equipment. On August 13, 2004, operators created a transient high radiation area when they opened the RCIC system isolation valves (Section 1R22). While searching prior corrective action program documents, the inspectors found an

example of a similar occurrence where operators created a transient high radiation area while draining a tank. This occurred in August 2003. A third example of operators not anticipating plant response prior to equipment operation occurred when operators restored an average power range monitor (APRM) to service prior to completing post-maintenance testing on the APRM.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by reviewing daily corrective action program summary reports and attending corrective action review board meetings.

b. Findings

No findings of significance were identified.

.3 Selected Issue Follow-up Inspection: Root Cause Evaluation Report for the Inappropriate Bypass of Average Power Range Monitor

Introduction

Monticello Nuclear Generating Plant performed a root cause evaluation (RCE) to determine the causes that led operators to inappropriately return an APRM to service prior to completion of its post-maintenance testing. The inspectors selected this root cause evaluation, RCE000857, for a detailed review.

a. Inspection Scope

The inspectors reviewed RCE000857 to determine whether the licensee's identification of the problems were complete, accurate, and timely, and that the consideration of extent of condition review, generic implications, and common causes was adequate.

b. Issues

The inspectors assessed the root causes and contributing causes listed in RCE000857. The root cause was completed in accordance with Administrative Procedure 4 AWI-10.01.05, "Investigation of Level A Action Requests." In the process of reviewing associated corrective action program documents, control room logs, and control room recorder data, the inspectors did not identify any additional root causes or contributing causes that were not discussed in the root cause evaluation. Further, the inspectors reviewed licensee corrective actions to ensure that the each of the root causes and

contributing causes was appropriately addressed by the corrective action program. Corrective actions appeared to be adequate and were focused on the apparent cause of each condition.

4OA4 Cross-Cutting Aspects of Findings

A finding described in Section 1R22 of this report had, as its primary cause, a human performance deficiency, in that operators failed to anticipate the effects on plant operations prior to operating plant equipment and caused a transient high radiation area.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. Conway and other members of licensee management on October 7, 2004. 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

An interim exit meeting was conducted for:

- Radioactive gaseous and liquid effluent treatment and monitoring systems, with Mr. Conway on September 3, 2004.

4OA7 Licensee-Identified Violations

None.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

T. Palmisano, Site Vice President
J. Conway, Site Director for Operations
J. Purkis, Plant Manager
R. Baumer, Licensing
K. Jepsen, Radiation Protection Manager
D. Neve, Regulatory Affairs Manager
E. Sopkin, Director of Engineering

Nuclear Regulatory Commission

B. Burgess, Chief, Reactor Projects Branch 2

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000263/2004004-01	URI	Feedwater Line HELB Could Potentially Impact Multiple Safety Related Systems (Section 1R15)
05000263/2004004-02	NCV	Failure to Follow Administrative Work Procedures Results in Transient High Radiation Condition (Section 1R22)

Closed

05000263/2004004-02	NCV	Failure to Follow Administrative Work Procedures Results in Transient High Radiation Condition (Section 1R22)

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection reports.

1R04 Equipment Alignment

Documents and Procedures:

2124; Plant Prestart Checklist Diesel Generators and Fuel Oil System; Revision 7
2154-14; Fuel Oil System Prestart Valve Checklist; Revision 14
2154-28; Diesel Generator Air Start System Prestart Valve Checklist; Revision 8
2121; Plant Prestart Checklist RCIC System; Revision 13
2154-13; RCIC System Prestart Valve Checklist; Revision 25
B.02.03; DBD for RCIC System; Revision C
2154-12; RHR System Prestart Valve Checklist; Revision 38
B.09.08; EDGs; Revision 3
B.8.1.2-01; EDG Emergency Service Water (ESW); Revision 6
0187-01B; 11 EDG /11 ESW / DOL Transfer Monthly Tests; Revision 1
MNGP - System Health Report For System: DGN Emergency Diesel Generators; September 22, 2004
Team Track Database Search on Query 1: G-3A and Query 2: 11 EDG; run on September 22, 2004
CHAMPS Database Search for Work Orders on Equipment G-3A; run on September 22, 2004

Drawings and Prints:

NH-36251; RCIC (Steam Side); Revision AQ
NH-36252; RCIC (Water Side); Revision AD
NH-36664; RHR Service Water and ESW Systems; Revision BM
NH-36246; RHR System; Sheet 1 of 2; Revision BM
NH-36247; RHR System; Sheet 2 of 2; Revision BQ
NH-36664; RHR Service Water & ESW; Revision BM
NH-36665; Service Water and Make-Up Intake Structure; Revision CF
NH-36259-1; Auxiliary & Heating Steam System, Non 1E Elect. Equip. Room, Standby Diesel Gen. Bldg., Turb. Bldg. Addition, Heating Boiler Room & Machine Shop; Revision C
NH-36051-1; Diesel Oil System; Sheets 1 and 2; Revision J

Technical Specifications:

3.5/4.5 and Bases; Core and Containment Spray/Cooling Systems
3.7/4.7 and Bases; Containment Systems

Operations Manual:

B.02.03-05; RCIC System: System Operation; Revision 12
B.03.04-01; RHR System Function and General System Description of System; Revision 7
B.03.04-02; RHR System Description of Equipment; Revision 7

Corrective Action Program Documents:

CAP034962; NRC Identifies Issues in Safety Related Room (#11 Diesel Generator Room) (NRC Identified)
CAP035051; NRC Identified Potential EDG Air Start System Moisture Issue (NRC Identified)
CAP033945; NRC Resident Questions Tygon Sample Tubing Attachment to the Wide-Range Gas Monitor (WRGM) Skids (NRC Identified)

1R05 Fire Protection

Pre-Fire Fighting Procedures and Strategies:

A.3-04-A; Reactor Building 3rd Floor South; Revision 3
A.3-04-B; RBCCW Heat Exchanger Area; Revision 2
A.3-04-D; SBGT System Area; Revision 4
A.3-07-B; Division I - 250 Vdc Battery Room; Revision 5
A.3-07-C; Division II - 125 Vdc Battery Room; Revision 3
A.3-12-B; Hydrogen Seal Area; Revision 4
A.3-14-A; Upper 4 kV Bus Area; Revision 9
A.3-14-B; Isophase Bus Area; Revision 3
A.3-15-A; Number 12 Diesel Generator Room; Revision 5
A.3-15-B; Number 11 Diesel Generator Room, and Number 11 and 12 Diesel Generator Day Tank Rooms; Revision 6
A.3-34; East Electrical Equipment Room and 13 Diesel Generator; Revision 5

Documents and Procedures:

4 AWI-08.01.01; Fire Prevention Practices; Revision 20
0275-03; Fire Door Inspections; Revision 26
4 AWI-08.01.02; Combustible Source Use Permit (CSUP); Revision 6
4 AWI-08.01.04; Fire Protection Combustible Loading; Revision 0
2176; Fire Drill Procedure; Revision 14
Fire Strategy Update Status Tracking Form; September 28, 2004
Fire Strategy Checklist; September 28, 2004
Fire Strategy Standard Review Statements

Operations Manual:

B.04.02-01; Secondary Containment/Standby Gas Treatment; Revision 5

Corrective Action Program Documents:

CAP034425; Scrap Wood Material Was Allowed to Accumulate in Nonessential Electrical Equipment (non-1E) Room (NRC Identified)
CA020866; Upgrade the Combustible Load Tracking Program in Accordance with the Fire Protection Improvement Project
CA020231; Improve the Use of Form 3722, Combustible Load Change Request, and Develop Criteria to Close it Out
CAP034241; Fire Drill Observation Indicates Possible Knowledge Deficiency Regarding Doors
CAP034242; Observations of Unannounced Fire Drill Held 8/1/04 Some Problems Identified
CAP034244; NRC Resident Question on Fire Drill Procedure Noted Inconsistencies in Completion (NRC Identified)
CAP034245; NRC Resident Noted Inconsistencies in Fire Strategies (NRC Identified)
CAP034515; Acceptability of Detector [fire sensor] Above Roll Up Door in Non 1E Room (NRC Identified)

1R07 Heat Sink Performance

Documents and Procedures:

1404-01; EDG ESW Heat Exchanger Performance Test; Revision 9
0187-02; 12 EDG / 12 ESW Quarterly Pump and Valve Tests; Revision 50
CA-04-166; 12 EDG ESW Heat Exchanger Performance Test - Summer 2004
CA-04-167; 11 EDG ESW Heat Exchanger Performance Test - Summer 2004

Operations Manual:

B.08.11; Diesel Oil System - Multiple Sections; Revisions effective August 7, 2004
B.09.08; EDGs - Multiple Sections; Revisions effective August 7, 2004

1R11 Licensed Operator Requalification Program

Documents and Procedures:

Simulator Exercise Guide RQ-SS-47E; Security Compromise HPCI & RCIC Systems Disabled; Revision 1
C.5-1100; RPV Control; Revision 9
C.5-1300; Secondary Containment Control Radioactivity Release Control; Revision 9
C.5-1200; Primary Containment Control; Revision 12
C.5.2002; Emergency RPV Depressurization; Revision 6

1R12 Maintenance Effectiveness

Documents and Procedures:

Monticello Maintenance Rule Program System Basis Document for CRV Emergency Filtration Train (EFT) System; Revision 2
Monticello Maintenance Rule Program System Basis Document for RHR; Revision 4
Maintenance Rule Database Data for EFT Division I and II; July 2002 through July 2004
Narrative Control Room Logs for the period of July 2002 through July 2004
EWI-05.02.01; Monticello Maintenance Rule Program Document; Revision 7
NRC Regulatory Guide 1.160; Monitoring the Effectiveness of Maintenance at Nuclear Power Plants; Revision 2; March 1997
NUMARC 93-01; Nuclear Energy Institute; Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants; Revision 2
Monticello Maintenance Rule Periodic Update; April 2004 to August 2004
Monticello Maintenance Rule Periodic Assessment Report; October 2002 - May 2003
0187-01B; 11 EDG /11 ESW / DOL Transfer Monthly Tests; Revision 1
MNGP - System Health Report For System: DGN EDGs; September 22, 2004
Team Track Database Search on Query 1: G-3A and Query 2: 11 EDG; run on September 22, 2004
CHAMPS database search for work orders on equipment G-3A; run on September 22, 2004
RHR Shutdown Cooling Mode Indicator; Revision 1
Maintenance Rule Data for RHR and Sub-Systems; August 1, 2002 to August 2004
Control Room Logs for RHR; April 26, 2003 to September 20, 2004

Drawings and Prints:

M-120; Piping & Instrumentation Diagram (P&ID) RHR; Revision AV
M-121; P&ID RHR System; Revision AV
M-131; P&ID Instrument Air System; Sheet 13; Revision B
0187-01B; 11 EDG /11 ESW / DOL Transfer Monthly Tests; Revision 1

Technical Specifications:

3.17/4.17 and Bases; Control Room Habitability

Updated Safety Analysis Report:

8.1.2.2 Unit Class 1E A-C Power System
8.3.1.1.2 Unit Class 1E A-C Power System

Operations Manual:

Section C.5; Emergency Operating Procedures; Revision 9

Corrective Action Program Documents:

CAP032266; Unplanned 30 Day CRV Limited Condition of Operation (LCO) Due to V-EAC-14B Shaft Seal Failure Causing Oil/Freon Leak
CAP027056; Unable to Obtain Desired Cooling Flow Through V-EAC-14B During Surveillance 0255-11-III-4
CAP034107; Unplanned 24 Hour LCO Entered Following Trip of "A" CRV with "B" CRV Isolated
Apparent Cause Evaluation (ACE) 004235; Unplanned 24 Hour LCO Entered Following Trip of "A" CRV with "B" CRV Isolated
Maintenance Rule Evaluation (MRE) 000102; Unplanned 24 Hour LCO Entered Following Trip of "A" CRV with "B" CRV Isolated
Corrective Action (CA) 022226; Unplanned 24 Hour LCO Entered Following Trip of "A" CRV with "B" CRV Isolated
CAP031580; Improper Design Inputs Used in Alteration 03A073 for Replacement of EFT Fan and Motor Sheaves
CAP013568; V-EAC-14A Tripped on Low Oil Pressure
CAP013219; Unplanned LCO per Technical Specification 3.17.A.2.a for Trip of V-EAC-14A Compressor on Low Oil Pressure as Indicated by Local Annunciator Light
CAP034107; "A" CRV Seal Failure
CAP0275056; Unable to Obtain Desired Cooling Flow Through V-EAC-14B During Surveillance Test 0255-11-III-4
CAP032266; Unplanned 30 Day CRV LCO Due to V-EAC-14B Shaft Seal Failure Causing Oil/Freon Leak
CAP013581; Performance of EFT-CRV (V-EAC-14A and V-EAC-14B) Does Not Meet Management Expectations of System Health - Adverse Trend
CAP034646; Info Missed in Maintenance Rule Database Due to Operator Logs Not Carrying over LCO Entry (NRC Identified)
CAP034647; Missing Data Point in Maintenance Rule Database Was Not Self Identified (NRC Identified)
CAP034649; CAP Not Immediately Initiated When Notified by NRC of Data Entry Problem (NRC Identified)
CAP031145; Smaller Y-Strainer Installed on 11 EDG #2 Air Start System than on All Other Air Start Systems
CAP031886; Abnormal Noise from 11 EDG Circulating Oil Pump. Noise Traced to Resonating Steel Ramp That Bridged a Starting Air System Drain Line
CAP031888; TB Vibrations Causing 11 EDG Air Start Dryer Blow-down to Rattle Against the Pipe Plate
CAP034799; 11 RHR Pump Minimum Flow Valve Indicated Open for 9 Minutes Following Pump Shutdown
CAP035085; Evaluate Potential Maintenance Rework Issue On EDG's as Identified by NRC (NRC Identified)
CAP034646; Information Missed in Maintenance Rule Data Base Due to Operator Logs Not Carrying Over LCO Entry (NRC Identified)

Work Orders:

04000835; “B” CRV Oil Leak
0109341; Oil Weeping from Top Deck
0109799; Repair Loose Air Line to Air Start Motors
0202368; Repair Sheathing on 11 EDG Gov
0205017; Air Filter Has Loose Support Bolts
0307575; Repair/Replace Inadequate Silencer Bolts

1R13 Maintenance Risk Assessments and Emergent Work Control

Documents and Procedures:

2004-05-03; Operating Guide - Monticello Generating Station Transmission Operation; May 3, 2004
4AWI-08.15.01; Risk Management for Outage and On-line Activities; Revision 0
Grid Instability Assessment, Anthony Sarrack; July 12, 2004
4263; Pre-job Briefing Checklist for WO 0402721; Revision 11
3749; Monticello Impact Statement for WO 0402721; Revision 5
Monticello Station Log; July 28, 2004 through July 30, 2004
Clearance 1-DGN 0401556-E-0 Hung on July 28, 2004
Clearance 1-CWT 0402653-M-2 Hung on July 28, 2004
Monticello Daily Work Schedule and Risk Assessment; for the week ending July 31, 2004
Daily Plant Status Reports for August 9 and 10, 2004
MNGP Schedule; for work weeks ending August 7 and 14, 2004

Corrective Action Program Documents:

CAP033949; Monticello Plant Not Notified by Xcel Marketing of Change to [Grid] Condition Yellow

Work Orders:

0402734; Check Tightness of Fitting on #1 Rectifier Bank
0402721; Demineralized Water Leak on #1 Rectifier Bank
0401556; 12 EDG Low Turbo Oil Pressure Alarm

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events

Documents and Procedures:

3560; Infrequent Test or Evolution Briefing Guide; Revision 6; dated September 9, 2004
SM-23.01; Safety Manual: Confined Space Entry (FP-IH-CS-01); Revision 4
4 AWI-04.05.18; Pre-Job Briefings and Post-Job Critiques; Revision 1

1R15 Operability Evaluations

Documents and Procedures:

4920-01-OCD; Replacement of SV-1478 (Pilot Operator for CV-1478 - Instrument Air to Drywell Isolation Valve); Revision 2
10 CFR 21 Report; Rotork Controls Inc. to NRC Operations Centre; June 10, 2002
B.3.1; DBD for Core Spray; Revision 2
0255-03-IA-1-2; Core Spray Loop B Quarterly Pump and Valve Test; Revision 39
Generic Letter 96-05; Periodic Verification of Design-Basis Capability of Safety Related Motor Operated Valves (MOV)
Northern States Power letter; 60 Day Response to NRC Generic Letter 96-05; November 15, 1996
Northern States Power letter; 180 Day Response to NRC Generic Letter 96-05; March 13, 1997
Northern States Power letter; Response to NRC Generic Letter 96-05; March 23, 1998
NRC letter; Request for Additional Information Regarding Generic Letter 96-05 Program; November 4, 1998
Northern States Power letter; Response to Request for Additional Information; November 4, 1998
NRC letter; Response to NRC Generic Letter 96-05, Periodic Verification of Design-Basis Capability of Safety Related MOVs, MNGP; March 18, 1999
Generic Letter 87-02; Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, Unresolved Safety Issue (USI) A-46; February 19, 1987
NUREG 1030; Seismic Qualification of Equipment in Operating Nuclear Power Plants, USI A-46; February 1987
Supplement Number 1 to GL-87-02 that Transmits Supplemental Safety Evaluation Report Number 2 (SSER No. 2) in Seismic Qualification Utility Group (SQUG) Generic Implications Procedure, Revision 2; as corrected on February 14, 1992 (GIP-2); May 22, 1992
NSP Letter dated September 21, 1992; Response to Supplement 1 to Generic Letter 87-02 in SQUG Resolution USI A-46
NRC Letter dated December 10, 1992; Monticello Evaluation to Licensee's 120-day Response to Supplement Number 1 to Generic Letter 87-02
NSP Letter dated November 20, 1995; Response to Supplement 1 to Generic Letter 87-02; Submittal of USI A-46 Seismic Evaluation Report
NSP Letter dated February 19, 1996; Supplemental Response to Supplement 1 to Generic Letter 87-02, Verification of Seismic Adequacy of Mechanical and Electrical Equipment in Operating Reactors, USI A-46
NSP Letter dated April 29, 1997; Update on Status of Response to NRC Generic Letter 87-02 Supplement 1, USI A-46 Seismic Evaluation Report
NSP Letter dated September 17, 1998; Completion of Commitments Associated with Generic Letter 87-02 Supplement 1 USI A-46 Seismic Evaluation Report
OPR000101; Operability Recommendation; Bus-15, Bus-16, LC-103, LC-104, D111, D211
PRA-CALC-04-004; Flood Initiating Events Frequency
Automated Engineering Services Corp.; Prompt Operability Evaluation of Non-Safety Related HVAC Ducting; May 28, 2004

LER 96-003; During a Re-analysis of the HELB, an Error was Found in the Existing Analysis
Information Notice 2000-20; Potential Loss of Redundant Safety-Related Equipment Because of Lack of HELB Barriers
Letter from NRC to MNGP; MNGP - Clarification of the Safety Evaluation Related to Amendment No. 102; November 24, 2000
Letter from NRC to MNGP; MNGP - Request for Additional Information on License Amendment Request Entitled “Supporting the MNGP Power Rerate Program” (TAC No. M96238); March 6, 1998
Letter from NMC to the NRC; NSP Response to Supplemental Request for Additional Information Concerning the MNGP Power Rerate Program (TAC No. M96238); March 26, 1998
NRC Memorandum from John N. Hannon to John A. Grobe; Response to the Task Interface Agreement (TIA) Regarding Use of Gothic Computer Code for Determining Environmental Profiles Outside of Containment (AIT 97-005); May 23, 1997
3494; Calculation Cover Sheet; GOTHIC Verification; Revision 10
CA-94-151; GOTHIC Verification; Revision 1
RIS 01-009; Control of Hazard Barriers; April 2, 2001
IE Bulletin 79-01B; Environmental Qualification of Class 1E Equipment; June 14, 1980
RIS 2004-12; Clarification of Use of Later Editions and Addenda to the ASME OM Code and Section XI; July 28, 2004

Drawings and Prints:

NH-36263; MNGP Air Flow Diagram Turbine Building; Revision M
NE-93194-13; MNGP 480 V Station Auxiliary MCC-133A and MCC-133B Turbine Building; Revision L
NE-93194-15; MNGP MCC 142A Essential Turbine Building and MCC 142B Non-Essential 480V Station Auxiliary; Revision J
NE-93194-16; MNGP 480V Station Auxiliary MCC-143A and B Essential Turbine Building; Revision M
NF-36298-1; MNGP Electrical Load Flow One Line Diagram; Revision R

Technical Specifications:

3.5/4.5 and Bases; Core and Containment Spray/Cooling Systems

Updated Safety Analysis Report:

6.2; ECCS; Revision 20
14.7; Accident Evaluation Analysis; Revision 20

Operations Manual:

B.03.03-01; Core Spray Cooling; Functional and General Description of the System

Corrective Action Program Documents:

CAP034100; Installed Configuration of ASCO Solenoid Valves is in Question
CAP034079; Oil Leak on MO-1750 is Not Being Addressed Properly
CAP033789; Oil on Torus, Torus Ring Header and Floor. MO-1750 Actuator is the Source of the Leak
01003174; Actuator Leaking Oil. Must Be Wiped up Daily. This Has Been Identified as an Operational Challenge on the Equipment Issues List
02008947; MO-1750 Oil Leak
CAP009096; Excessive Oil Found Leaking from MO-1987 Actuator
CAP003595; MO-1989 (RHR Division II Shutdown Cooling Suction) Valve Actuator is Leaking Oil
CAP034462; Dead Legs on Service Water Discharge Header May Not Be Operable During a Seismic Event
CAP034442; RIS 2004-12 Pertaining to Use of Code Revisions Found to Apply to MNGP
CAP034281; Open Min FLow Intake Damper for V-MZ-6 to Assure Vent Path Outside During a HELB
CAP033462; Winter Mode of HVAC Operations may Challenge HELB Analysis of Record
CAP033911; HELB Snapshot Self-Assessment SA021618 Questions Balance Damper Integrity
Assessment for Issue Number 19992320; The Following Condition Reports, Actions, and USAR Related Issues are Being Cross Referenced to this Condition Report to Act as a Summary of Activities and Actions for the USAR Appendix I Review
GEN00004860; The Following Questions were Raised During License Operator Requalification Training on November 17, 2000, and Forwarded to Engineering for Response
ACE004212; The Existing MNGP HELB Calculations for the Turbine Building do not Include Certain Flow Paths
CAP033775; NRC Resident Questioned the Securing Method of V-MZ-6 for HELB Issue Report of NMC-Assisted Self-Assessment of MNGP Environmental Qualification and HELB Programs; August 6-10, 2001; Condition Report Number 20015064

Work Orders:

0402101; Secure V-MZ-6 Mixed Air Damper Closed

1R17 Permanent Plant Modifications

Documents and Procedures:

4 AWI-05.06.02; 10 CFR 50.59 Applicability and Screening; Revision 9
4 AWI-06.01.05; Alteration Process; Revision 17
3630; Alteration Package; Replacement of Gaskets for V-EAC14A and B Shaft Seal Kits; Revision 10
CC-080012-3; Revision 0; Certificate of Conformance; Nuclear Logistics Inc.

Updated Safety Analysis Report:

Section 6.7; Main Control Room, EFT Building, and Technical Support Center Habitability; Revision 20

Operations Manual:

B.08.13-4; Control Room Ventilation and EFT References; Revision 18
B.08.13-1; Control Room Ventilation and EFT Function and General Description of System; Revision 7

1R19 Post-Maintenance Testing

Documents and Procedures:

4900-01-PM; Preventative Maintenance for Limitorque MOVs , Revision 19
3108 Pump/Valve/Instrument Record of Corrective Action; Revision 12
3640; HELB Review for Breached Penetration; Revision 6
4063; MOV Data Sheet; Revision 12
4263; Maintenance and Construction Pre-job Briefing Checklist; Revision 11
3006; Stores Requisition; Revision 10
3186-G-01-03; Quality Control Inspection Record; Revision 5
3749; Monticello Impact Statement; Revision 5
0324; Fire Protection System - Sprinkler System Tests
0256-01; Fire Detection Instrumentation Test
1402-22; Computer Room Halon System
Post Maintenance Activities Control Cover Sheet for WO 0402454

Work Orders:

WO 0401556; 12 EDG Low Turbo Oil Pressure Alarm
WO 0306866; PM 4900-1/Spring Pack Change/VOTES Testing for MO-2096
0402454; Investigate/Repair Cause of C300-B-7 Fail to Annunciate

1R22 Surveillance Testing

Documents and Procedures:

1335; Air Compressor Weekly Checks; Revision 16
0255-08-IA-1; RCIC Pump and Valve Tests
American Society of Mechanical Engineers (ASME) Operation and Maintenance of Nuclear Power Plants; Section XI Subsection IWV; Inservice Testing of Valves in Nuclear Power Plants; July 1, 1998
B.02.03; DBD for RCIC System; Revision C
4 AWI-09.04.00; Inservice Inspection Licensee Control Program; Revision 3
4 AWI-09.04.01; Inservice Testing Program; Revision 17
4 AWI-04.01.01; General Plant Operating Activities; Revision 41
4 AWI-04.01.06; Conduct of Operations; Revision 1

0424; Accident Monitoring Instrumentation Calibration Wide Range Drywell Pressure and Wide Range Torus Level; Revision 9
0255-02-III-1A; SBLC Comprehensive Pump and Valve Tests; Revision 1
0255-02-III; SBLC Quarterly Pump and Valve Test; Revision 39

Drawings and Prints:

M-131; Instrument Air System - Multiple Sheets; Revisions in effect July 20, 2004

Technical Specifications:

3.5/4.5 and Bases; Core and Containment Spray/Cooling Systems
3.14/4.14 and Bases; Accident Monitoring Instrumentation
3.4/4.4 and Basis; SBLC System

Operations Manual:

B.02.03-06; RCIC Figures; Revision 2

Corrective Action Program Documents:

CAP034072; Instrument Air Dryer Bypassed Alarm Received During Weekly Air Compressor Test
CAP034431; Unexpected Transient High Radiation Condition Created in RCIC Room
CAP035088; NRC Inspector Questioned Whether Redundant SBLC Switch Contacts Should Be Tested (NRC Identified)

1R23 Temporary Plant Modifications

Documents and Procedures:

OPR000101; Operability Recommendation; Bus-15, Bus-16, LC-103, LC-104, D111, D211
PRA-CALC-04-004; Flood Initiating Events Frequency
Automated Engineering Services Corp.; Prompt Operability Evaluation of Non-Safety Related HVAC Ducting; May 28, 2004
LER 96-003; During a Re-analysis of the HELB, an Error was Found in the Existing Analysis
Information Notice 2000-20; Potential Loss of Redundant Safety-Related Equipment Because of Lack of HELB Barriers
Letter from NRC to MNGP; MNGP - Clarification of the Safety Evaluation Related to Amendment No. 102; November 24, 2000
Letter from NRC to MNGP; MNGP - Request for Additional Information on License Amendment Request Entitled “Supporting the MNGP Power Rerate Program” (TAC No. M96238); March 6, 1998
Letter from NMC to the NRC; NSP Response to Supplemental Request for Additional Information Concerning the MNGP Power Rerate Program (TAC No. M96238); March 26, 1998

NRC Memorandum from John N. Hannon to John A. Grobe; Response to the Task Interface Agreement (TIA) Regarding Use of Gothic Computer Code for Determining Environmental Profiles Outside of Containment (AIT 97-005); May 23, 1997
3494; Calculation Cover Sheet; GOTHIC Verification; Revision 10
CA-94-151; GOTHIC Verification; Revision 1
RIS 01-009; Control of Hazard Barriers; April 2, 2001
IE Bulletin 79-01B; Environmental Qualification of Class 1E Equipment; June 14, 1980

Drawings and Prints:

NH-36263; MNGP Air Flow Diagram Turbine Building; Revision M
NE-93194-13; MNGP 480 V Station Auxiliary MCC-133A and MCC-133B Turbine Building; Revision L
NE-93194-15; MNGP MCC 142A Essential Turbine Building and MCC 142B Non-Essential 480V Station Auxiliary; Revision J
NE-93194-16; MNGP Plant 480V Station Auxiliary MCC-143A and B Essential Turbine Building; Revision M
NF-36298-1; MNGP Electrical Load Flow One Line Diagram; Revision R

Corrective Action Program Documents:

CAP034281; Open Min FLow Intake Damper for V-MZ-6 to Assure Vent Path Outside During a HELB
CAP033462; Winter Mode of HVAC Operations may Challenge HELB Analysis of Record
CAP033911; HELB Snapshot Self-Assessment SA021618 Questions Balance Damper Integrity
Assessment for Issue Number 19992320; The Following Condition Reports, Actions, and USAR Related Issues are Being Cross Referenced to this Condition Report to Act as a Summary of Activities and Actions for the USAR Appendix I Review
GEN00004860; The following Questions were Raised During License Operator Requalification Training on November 17, 2000, and Forwarded to Engineering for Response
ACE004212; The Existing MNGP HELB Calculations for the Turbine Building do not Include Certain Flow Paths
CAP033775; NRC Resident Questioned the Securing Method of V-MZ-6 for HELB Issue Report of NMC-Assisted Self-Assessment of MNGP Environmental Qualification and HELB Programs; August 6-10, 2001; Condition Report Number 20015064

Work Orders:

0402101; Secure V-MZ-6 Mixed Air Damper Closed

2OS1 Access Control to Radiologically Significant Areas

CAP034431; Unexpected Transient High Radiation Condition Created in RCIC Room; August 12, 2004

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

Documents and Procedures:

1024; Area Radiation Monitor Calibration; Revision 28
5803; WCM Calibration Record; June 29, 2004
5849; Eberline Model PM-7 Calibration; Revision 0
5854; SAM-11 Calibration; Revision 0
R03.08; Smear Counters and Miniscalers; Revision 22
R03.11; Fastscan Quality Assurance Background Check; Revision 14
R05.04; Supplied-Air Respirator Usage; Revision 10
R05.07; SCBA Inspection and Functional Test; Revision 14
R09.01; FastScan Quality Assurance Calibration Check; Revision 12
R09.02; Pocket Ion Chamber Functional Check; Revision 12
R09.04; Smear Counter Functional Checks; Revision 25
R09.07; RO-2/RO-2A/Ro-20 Checks; Revision 14
R09.10; Jonson Extender Checks; Revision 11
R09.22; Frisker Calibration and Functional Check; Revision 18
R09.44; NNC Waste Curie Monitor Operation and Checks; Revision 6
R09.45; Fastscan Calibration; Revision 9
R09.50; DCA Area Radiation Monitor Checks; Revision 10
R09.62; Functional Check and Calibration of Canberra ARGOS 4AB(Zeus) Contamination Monitors; Revision 1
R09.61; Operation and Calibration of the SAM-11; Revision 2
R09.63; Functional Check and Calibration of PCM-1C; Revision 0
M-7704L-007; MSA SCBA Training; Revision 1
Waste Stream Report (Part 61); April 16, 2002
2004-02-5-010; Nuclear Oversight Observation Report Radiation Protection; May 7, 2004
2004-02-5-037; Nuclear Oversight Observation Report Quality Control Plan Status Inspection; June 17, 2004
2004-003-5-024; Nuclear Oversight Observation Report NNC Friskall Functional Checks and Unconditional Release of Materials/Equipment; August 11, 2004

Corrective Action Program Documents:

CAP012814; Converted Issue #3001203 Title: SCBA Bottle Valve Stem Bent During 5 Year Hydro; February 3, 2004
CAP012821; Converted Issue #3001202 Title: SCBA Failed Quarterly Function Test; February 3, 2004
CAP028444; Converted Issue #3007835 Title: ARM B-1 Spuriously Spikes High; July 26, 2003
CAP029500; Converted Issue #3009852 Title: Hoses Stored in the Control Room; September 29, 2003
CAP031167; Converted Issue #3013103 Title: SCBA in Fire Brigade Room Had Regulator Bypass; December 21, 2003

CAP031324; Converted Issue #4000866 Title: ALARA RPT Received Extra Dose During ARM Functional Test; January 26, 2004
CAP031437; Converted Issue #4001132 Title: Respiratory Protection - Potential SCBA Mask Seal Deformation; February 2, 2004
CAP032807; Converted Issue #4003973 Title: Monthly Frequency of ARM Functional; April 22, 2004
CAP033762; Inventory 1224 Finds No Corrective Lenses in Brigade Room for One Brigade Member; June 22, 2004
CAP033990; Argos Contamination Monitor at Access Control Shows Upward Trending Count Time; July 8, 2004
CAP034346; SCBA Taken Out of Service Due to Regulator Failure; August 1, 2004
CAP034372; Step 115 of RPP 09.01 Not Performed During Fastscan Daily QC Source Check; August 9, 2004
CAP034560; During Calibration Several Area Radiation Monitors Found Outside As Found Specification; August 24, 2004

4OA1 Performance Indicator Verification

3530-08; Performance Indicator RCS Activity Worksheet; Revision 2
MNGP Digi Chem System Parameter Data; June 2003 through June 2004
3530-12; NRC Performance Indicator Drywell Equipment Drain Leakage Worksheet; Revision 3; June 2003 through June 2004

4OA2 Identification and Resolution of Problems

Documents and Procedures:

Control Room Alarm Recorder Print Out for June 1, 2004 through June 4, 2004
4 AWI-10.01.05; Investigation of Level A Action Requests; Revision 11

Corrective Action Program Documents:

CAP034425; Scrap Wood Material Was Allowed to Accumulate in Nonessential Electrical Equipment (non-1E) Room (NRC Identified)
RCE000857; Inappropriate Bypass of APRM Results in only on Operable APRM on A RPS
CAP033575; Procedure 0012 Part B Does not Provide Adequate Guidance for APRM Bypass Control
CA021836; Determine if any Nuclear Instrument Procedures have Adequate Configuration Control
CAP033575; Address 0012 Test Inadequacies
CA021847; Management Expectations for Improved Formality for APRM Switch Operation

LIST OF ACRONYMS USED

AC	Alternating Current
ACE	Apparent Cause Evaluation
ALARA	As-Low-As-Is-Reasonably-Achievable
APRM	Average Power Range Monitor
ARM	Area Radiation Monitor
ASME	American Society of Mechanical Engineers
AWI	Administrative Work Instruction
CA	Corrective Action
CAP	Corrective Action Program
CEDE	Committed Effective Dose Equivalent
CFR	Code of Federal Regulations
CR	Condition Report
CRD	Control Rod Drive
CRV	Control Room Ventilation
CS	Core Spray
CSUP	Combustible Source Use Permit
DBD	Design Basis Document
DC	Direct Current
DG	Diesel Generator
DOT	Department of Transportation
DRP	Division of Reactor Projects
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EFT	Emergency Filtration Train
ESW	Emergency Service Water
EWI	Engineering Work Instruction
FSAR	Final Safety Analysis Report
HELB	High Energy Line Break
IMC	Inspection Manual Chapter
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
kV	Kilovolt
LCO	Limiting Condition for Operation
LER	Licensee Event Report
MCC	Motor Control Center
MNGP	Monticello Nuclear Generating Plant
MOV	Motor-Operated Valve
MRE	Maintenance Rule Evaluation
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NMC	Nuclear Management Company
P&ID	Piping & Instrumentation Diagram
PARS	Publicly Available Records
PI	Performance Indicator
PM	Planned or Preventative Maintenance

RA	Risk Assessment
RAM	Radioactive Material
RBCCW	Reactor Building Closed Loop Cooling Water
RCE	Root Cause Evaluation
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
RHR	Residual Heat Removal
RIS	Regulatory Issue Summary
RPV	Reactor Pressure Vessel
SBGT	Standby Gas Treatment
SBLC	Standby Liquid Control
SDP	Significance Determination Process
TIA	Task Interface Agreement
TS	Technical Specification
URI	Unresolved Item
USAR	Updated Safety Analysis Report
USI	Unresolved Safety Issue
Vac	Volts Alternating Current
Vdc	Volts Direct Current
VOTES	Valve Operational Testing & Evaluation System
WO	Work Order
WRGM	Wide-Range Gas Monitor