July 18, 2001

Mr. J. Morris
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 INSPECTION REPORT 50-263-01-06(DRP)

Dear Mr. Morris:

On June 30, 2001, the NRC completed an inspection at your Monticello Nuclear Generating Plant. The results of this inspection were discussed on June 29, 2001, with you and other members of your staff. The enclosed report presents the results of that inspection.

The inspection was an examination of activities conducted under your license as they relate to reactor safety, verification of performance indicators, event followup, radiation safety, and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the NRC did not identify any issues which were categorized as being risk significant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures 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/NRC/ADAMS/index.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 50-263-01-06(DRP)

See Attached Distribution

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cc w/encl: Plant Manager, Monticello
R. Anderson, Executive Vice President
and Chief Nuclear Officer
Nuclear Asset Manager
Site Licensing Manager
Commissioner, Minnesota Department of Health
J. Silberg, Esquire
Shaw, Pittman, Potts, and Trowbridge
R. Nelson, President
Minnesota Environmental Control Citizens
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-263
License No:	DPR-22
Report No:	50-263-01-06(DRP)
Licensee:	Nuclear Management Company, LLC
Facility:	Monticello Nuclear Generating Plant
Location:	2807 West Highway 75 Monticello, MN 55362
Dates:	May 16 through June 30, 2001
Inspectors:	S. Burton, Senior Resident Inspector D. Kimble, Resident Inspector M. Mitchell, Radiation Specialist H. Walker, Regional Inspector
Approved by:	Bruce L. Burgess, Chief Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000263-01-06(DRP), on 05/16-06/30/2001; Nuclear Management Company, LLC; Monticello Nuclear Generating Plant. Routine Resident Inspection Report.

The inspection was conducted by resident inspectors and regional inspectors. The report covers a 6½-week period of resident inspection. No findings were identified in any cornerstones. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

A. Inspector-Identified Findings

None.

B. Licensee-Identified Findings

None.

Report Details

Summary of Plant Status: The unit operated at or near full power for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather (71111.01)

a. Inspection Scope

The inspectors performed a walkdown of the licensee's preparations for adverse weather, including conditions that could lead to loss of off-site power and conditions that could result from high temperatures or high winds. The licensee's procedures and preparations for the impending tornado season were reviewed by the inspectors and were verified to be adequate. During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Updated Safety Analysis Report (USAR) and performance requirements for systems selected for inspection and verified that operator actions were appropriate as specified by plant specific procedures.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed a partial walkdown of the Division I emergency core cooling systems (ECCS) to verify operability and proper equipment lineup while the counterpart train was disabled due to planned maintenance. These systems were selected due to the increase in core damage frequency caused by rendering one train of ECCS out-of-service for maintenance. The inspectors verified the position of critical redundant equipment and looked for any discrepancies between the existing equipment lineup and the required lineup.

Due to the system's risk significance, the inspectors selected the residual heat removal service water (RHRSW) 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.

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
- Outage Planning and Emergent Work Review
- MO-2008, RHR [Residual Heat Removal] Torus Return Valve Failed to Close

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

No findings of significance were identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events (71111.14)

a. Inspection Scope

The inspectors reviewed the licensed operators' response to a reactor recirculating system scoop-tube lock-up event that occurred on June 21, 2001. Root cause analysis determined that this event was caused by a power interruption in the associated computer power supply. The inspectors observed the Operation department's response to the evolution in the control room. Additionally, the inspectors reviewed the specific factual circumstances leading to the event, including the initiating cause and personnel performance during the non-routine evolution and immediate and proposed corrective actions for the event.

b. Findings

No findings of significance were identified.

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 (TS), the significance of the evaluations, and to ensure that adequate justifications were documented.

- LEXAN Contacts in Circuit Breaker 152-610 Susceptible to Failure
- 14 RHR Pump Breaker Would Not Trip From Control Room
- Review of Operability of 4160 Vac [volts alternating current] Circuit Breakers Due to Possible Degradation of Auxiliary Contact Switches
- MO-2008, RHR Torus Return Valve Failed to Close

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 (OWAs) (71111.16)

a. Inspection Scope

The inspectors reviewed OWA 01-01, “Potential Misoperation of LPCI [Low-Pressure Coolant Injection] Swing Bus Post-SBO [station black-out] Will Require Operator Intervention to Assure Swing Bus Availability.” The inspectors reviewed the workaround’s potential to impact the operators’ ability to adequately transfer the LPCI swing bus and ensure continued availability of the system following a SBO.

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.

- 4160 Vac Circuit Breaker 152-610
- AO-2541A, Drywell Floor Drain Sump Isolation Valve, Solenoid Valve

- CV-1728, “A” Service Water Differential Pressure Control Valve, Solenoid Valve

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, TS 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, TS, and 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 impact upon risk that an unidentified performance degradation of the structure, system, or component could have if unresolved for long periods of time.

- RHR System Instrument Maintenance Procedure, performed on May 21, 2001
- Drywell-Torus Vacuum Breaker Monthly, performed on June 13, 2001
- RHR Pump and Valve Test, performed on June 15, 2001

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, TS applicability, impact of testing relative to performance indicator reporting, and evaluation of test data.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walkdowns and Radiation Work Permit Reviews

a. Inspection Scope

The inspector conducted walkdowns of radiologically significant areas (radiation and high radiation areas) to verify the adequacy of the licensee's radiological controls (surveys, postings, barricades). Specifically, radiation surveys were reviewed and portions of radiologically significant areas were walked down in the Auxiliary Building, Reactor Building, and Radioactive Waste Building to determine whether radiation work permit (RWP) prescribed radiological and engineering controls were in place, and whether licensee surveys and postings were complete and accurate in accordance with 10 CFR Part 20 and the licensee's procedures. The inspector also reviewed RWPs used to access these areas to verify that work instructions and controls had been adequately specified, and that electronic pocket dosimeter set points were in conformity with survey indications.

b. Findings

No findings of significance were identified.

.2 Job-In-Progress Reviews

a. Inspection Scope

The following high exposure or high radiation area work activities were observed and evaluated against the licensee's radiological controls:

- Phase Separator Room Resin Cleanup
- High Integrity Container (HIC) Dewatering

The inspector reviewed all radiological job requirements for each activity and observed job performance with respect to those requirements. Required surveys, radiation protection job coverage, and contamination controls were reviewed to verify that appropriate radiological controls were utilized consistent with the RWP. Also, the inspector verified the accuracy of selected radiation surveys and applicable postings and barricades. Radiation protection technicians and workers were observed at work sites to determine if the technicians and workers were aware of the significance of the radiological conditions in their workplace and the applicable RWP controls and limits. Actual work activities performed by radiation workers and technicians were observed to determine if they were performed adequately, given the level of radiological hazards present and the level of their training.

b. Findings

No findings of significance were identified.

2OS2 As-Low-As-Is-Reasonably-Achievable (ALARA) Planning and Controls (71121.02)

.1 Station Exposure History

a. Inspection Scope

The inspector reviewed the station's collective exposure histories for 2000. The review also included collective exposures during the 2001 unscheduled outage and the year-to-date 2001. The inspector performed the reviews to evaluate the licensee's ALARA program's strengths and weaknesses.

b. Findings

No findings of significance were identified.

.2 Job Site Inspections and ALARA Controls

a. Inspection Scope

The inspector selected the high exposure or high radiation area work activities described in Section 20S1.2 and evaluated the licensee's use of ALARA controls.

The inspector reviewed ALARA plans for each activity and observed work activities associated with the RWP. The licensee's use of engineering controls was evaluated by the inspector with respect to the achievement of dose reductions. Radiation workers were observed for utilization of low dose waiting areas for each activity and whether the first-line supervisor for each job ensured that the jobs were conducted in a dose efficient manner. The inspector also reviewed individual exposures of the selected work groups to determine if there were any significant exposure variations which may exist among workers.

In addition, the inspector reviewed RWP No. 145, "Spilled Resin Cleanup in the Condensate Phase Separator Room," for protective clothing requirements, dosimeter use, and electronic dosimeter alarm set points for both dose rate and accumulated dose. The inspector attended the pre-job ALARA and work control briefings, and observed portions of the work evolution, in order to verify that adequate work controls were in place to maintain worker exposures ALARA.

b. Findings

No findings of significance were identified.

.3 Radiological Work Planning

a. Inspection Scope

The inspector reviewed the general ALARA planning procedures and the ALARA coordinator methodology to assure proper implementation of the site ALARA plan. The following job activities were selected by the inspector (from an unscheduled outage) that resulted in the highest person-rem total exposure and were assessed for adequacy of radiological controls and work planning:

- General Access to all Radiation Controlled Areas
- Drywell General Area Radiation Protection Coverage
- Drywell General Operations Entry

For each job activity, the inspector reviewed ALARA evaluations including initial reviews and in-progress reviews to evaluate the licensee's exposure estimates and performance. The inspector also assessed the integration of ALARA requirements into work packages to evaluate the licensee's communication of radiological work controls.

b. Findings

No findings of significance were identified.

.4 Verification of Exposure Goals and Exposure Tracking System

a. Inspection Scope

The inspector reviewed the methodology and assumptions used for the unscheduled outage exposure estimates and exposure goals and compared job dose rate and man-hour estimates for accuracy. Job dose history files and dose reductions anticipated through lessons learned were reviewed to verify that the licensee appropriately forecasted outage doses.

b. Findings

No findings of significance were identified.

.5 Declared Pregnant Workers

a. Inspection Scope

The inspector reviewed the controls implemented by the licensee for one worker who voluntarily declared a pregnancy within the last 18 months. Specifically, the inspector reviewed the licensee's adherence to the requirements contained in 10 CFR 20.1208 and its procedures, and reviewed the licensee's evaluation of the dose to the individual's embryos/fetus to verify that appropriate limitations were implemented to control dose from both external and internal sources.

b. Findings

No findings of significance were identified.

.6 Identification and Resolution of Problems (71121.01 and 71121.02)

a. Inspection Scope

The inspector evaluated the effectiveness of the licensee's self-assessment process to identify, characterize, and prioritize problems. Outage Assessments for the unscheduled outage related to ALARA and access control issues were reviewed to evaluate the licensee's ability to assess its radiation protection program during that outage. The inspector also reviewed the 2000 Quality Assurance Assessment Report for Radiation Protection Activities performed by the Quality Assurance Department and observation reports to assess overall problem identification and resolution capabilities in the radiation protection area.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA6 Meeting

Exit Meeting

The inspectors presented the inspection results to Mr. Morris and other members of licensee management on June 29, 2001. 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.

The inspectors presented the preliminary Occupational Radiation Safety Program inspection results to Mr. Morris, Site Vice President, on June 8, 2001. 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.

KEY POINTS OF CONTACT

Licensee

J. Forbes, Plant Manager
J. Grubb, General Superintendent, Engineering
K. Jepson, General Superintendent, Chemistry and Radiation Services
B. Linde, Superintendent, Security
G. Mathiasen, Site Health Physicist and Acting RPM
J. Morris, Site Vice President
D. Neve, Acting Licensing Project Manager
B. Sawatzke, General Superintendent, Maintenance
C. Schibonski, General Superintendent, Safety Assessment
E. Sopkin, General Superintendent, Operations
L. Wilkerson, Manager, Quality Services

NRC

Bruce Burgess, Chief, Reactor Projects Branch 2

ITEMS OPENED, CLOSED, AND DISCUSSED

None

LIST OF ACRONYMS USED

ALARA	As-Low-As-Is-Reasonably-Achievable
AWI	Administrative Work Instructions
CFR	Code of Federal Reguations
DBD	Design Basis Document
DP	Differential Pressure
DRP	Division of Reactor Projects
ECCS	Emergency Core Cooling Systems
FOI	Follow-On Items
HIC	High Integrity Container
IPEEE	Individual Plant Examination of External Events
LPCI	Low-Pressure Coolant Injection
OWA	Operator Workaround
P&ID	Piping & Instrument Diagram
RHR	Residual Heat Removal
RHRSW	Residual Heat Removal Service Water
RWP	Radiation Work Permit
SBO	Station Black-out
TS	Technical Specification
USAR	Updated Safety Analysis Report
Vac	Volts Alternating Current
WO	Work Order

LIST OF DOCUMENTS REVIEWED

1R01 Adverse Weather Protection

Operations Manual A.6	Acts of Nature	Revision 12
Operations Manual B.4.1	Primary Containment	
USAR Section 5.2	Primary Containment System	Revision 18
NSPLMI-95001	Individual Plant Examination of External Events (IPEEE)	Revision 1, November 1995

1R04 Equipment Alignment

00-03657	Equipment Isolation for RHR/RHRSW Maintenance Activities	
01-06375	Equipment Isolation for RHR/RHRSW Maintenance Activities	
M-811, Sheet 1	Service Water System & Makeup Intake Structure	Revision CC
M-121, Sheet 2	RHR System	Revision BK
M-122	Core Spray System	Revision AH
M-112	RHR & Emergency Service Water Systems	Revision BF
00Q015	Modification, RHR Service Water Piping Repair/Replacement	Revision 0
NH-36664	Piping & Instrument Diagram (P&ID), RHR Service Water & Emergency Service Water Systems	Revision BF
NH-36247	P&ID, Residual Heat Removal System, Sheet 2	Revision BK
NH-36247	P&ID Residual Heat Removal System, Sheet 1	Revision BH
2145	RHR System Discharge Venting	
B.03.04	Operations Manual, Section H.1, Transferring 'A' RHR from LPCI to Torus Cooling with Normal Off-site Power Available During Abnormal and Emergency Conditions	
B.03.04	Operations Manual, Section G.1, RHR to Radwaste - Normal Mode	

B.3.4	Operations Manual, Residual Heat Removal	
B.03.04	Operations Manual, Sub-Section D.1. Shutdown Cooling Mode - Loop A Startup	
B.03.04	Operations Manual, Sub-Section 3. Torus Cooling Mode - Startup	

1R13 Maintenance Risk Assessments and Emergent Work Control

4 AWI-04.01.01	Administrative Work Instruction, General Plant Operating Activities	Revision 28
SWI-14.01	Support Work Instruction, Risk Management of On-line Maintenance	
Work Order (WO) 0107971	Investigate/Rework Bucket B3337	
WO 0107966	MO-2008 Failed To Close	

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events

Condition Report (CR) 20013563	Accidental Trip of Computer Power Distribution System Result in Recirc. Scoop Tube Locks and Loss of 3D Monicore
WO 0108030	Apply Insulation to Exposed Shunt Trip of C40 PDS2

1R15 Operability Evaluations

CR 20013037	Operability of Circuit Breaker In Cubicle 152-610 Called Into Question During Extent Of Condition Review for 20011332
CR 20011332	14 RHR Pump Breaker Would Not Trip From Control Room C-03 So Operator Tripped Breaker Locally With Manual Trip Button
WO 0107966	MO-2008 Failed To Close

1R16 Operator Workarounds

CR 20001486	In an SBO Event, B4300 Will Attempt to Close With Low Control Power Available, Likely Resulting in Blown Control Fuse	
	Quarterly Operator Work-around Review and Assessment	June 21, 2001

1R19 Post-Maintenance Testing

0107852	Restoration Work Order for Circuit Breaker 152-610	
NRC IN 80-13	General Electric Type SBM Control Switches Defective Cam Followers	April 2, 1980
4920-PM	ASCO Solenoid Valve Changeout Procedure	Revision 14
0255-04-IA-1	RHR Pump and Valve Test	Revision 50
7070	RHR Service Water System Instrument Maintenance Procedure	Revision 15
4920-02-OCD	Replacement of SV-1728 Pilot Operator for CV-1728-RHR Service Water “A” Loop DP [Differential Pressure] Control Valve	Revision 3
3069	Post Maintenance Activity Control Cover Sheet for WO 0106673	Revision 9
3069	Post Maintenance Activity Control Cover Sheet for WO 0001605	Revision 9
3069	Post Maintenance Activity Control Cover Sheet for WO 0106031	Revision 9
3069	Post Maintenance Activity Control Cover Sheet for WO 0106427	Revision 9
3069	Post Maintenance Activity Control Cover Sheet for WO 0106461	Revision 9

1R22 Surveillance Testing

7110-01	RHR System Instrument Maintenance Procedure, Division I	Revision 0
TS 3/4.5	Core and Containment Spray/Cooling Systems, and Basis	

0255-04-IA-1	RHR Pump and Valve Test	Revision 50
0143	Drywell-Torus Monthly Vacuum Breaker Check and Instrument Air System Valve Exercise	Revision 26

20S1 Access Control to Radiologically Significant Areas

Station Procedures

MNGP 4198-PM	Hydrostatic Test of RDS-1000 Waste Hose	Revision 1
MNGP 5528	Radiation Protection Survey Record	Revision 17
MNGP 5528	Radiation Protection Survey Record	Revision 19
MNGP 5929	Cond/Clean-up Phase Sep Tank Rooms	Revision 1
MNGP 8205	High Integrity Container handling Procedure	Revision 18

Condition Reports

CR 20013069	Radwaste: Approximately 50 Gallon Spill Due to Failed Resin Transfer Hose	June 4, 2001
CR 20012304	Exposure Control Item Stored in Fuel Pool by Lanyard not IAW 4 AWI-04.05.13 Step 4.2.3.C.2 (Lanyard not labeled)	April 19, 2001

Radiation Work Permits

RWP 145	Clean-up Spilled Resin in 962 Radwaste	Revision 0

2OS2 As-Low-As-Is-Reasonably-Achievable (ALARA) Planning and Controls

Station Procedures

MNGP R.01.01	RWP Preparation and Issuance	Revision 33
MNGP R.01.06	RWP ALARA Reviews	Revision 2

Condition Reports

CR 20003658	Exposure Control: Staytime Calculations for High Radiation Areas	September 22, 2000
CR 20012834	Exposure Control: Unanticipated ED Dose Rate Alarms	May 25, 2001
CR 20013025	ALARA: Radwaste Systems Not effective in Processing Resins	June 1, 2001

Reports

PMETS Report	Gamma DDE by RWP (02/25/01 to 04/04/01)	
Personal Notes	ALARA Coordinator's 2000 Drywell Work List	
PMETS Report	Summary DRD Exposure-RWP 145	June 7, 2001

Audits

	Chemistry and Radiation Protection Effectiveness Report 3rd Quarter 2000	December 6, 2000
	Chemistry and Radiation Protection Effectiveness Report 4th Quarter 2000	March 28, 2001
	Chemistry and Radiation Protection Effectiveness Report 1st Quarter 2001	May 2, 2001
OR 2000092	Observation Report Radiation Protection Program (SCR-02, 03, 04, 05)	April 4-28, 2000
OR 2000093	Observation Report Radiation Protection Program (SCR-01)	May 2-12, 2000
OR 2000094	Observation Report Radiation Protection Program (SCR-01)	May 10-18, 2000
AG 2000-S-2	Internal Audit Report-Radiation Exposure and Contamination Control	April 1-June 30, 2000
	Declaration of Worker Pregnancy Paperwork	May 9, 2001