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SUBJECT: Responds to NRC 910722 ltr re violations noted in Insp Rept  
 50-263/91-13 on 910626-27. Corrective actions: Positive  
 Discipline Program implemented for personnel involved in  
 event.

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August 16, 1991

10 CFR Part 2,  
Section 2.201

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
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MONTICELLO NUCLEAR GENERATING PLANT  
Docket No. 50-263 License No. DPR-22

Response to NRC Inspection Report No. 91013  
Concerning a Notice of Violation Concerning  
a Scram While Shutting Down

Pursuant to the provisions of 10 CFR Part 2, Section 2.201, the following response to the notice of violation contained in your letter of July 22, 1991 is submitted.

VIOLATION

During an NRC inspection conducted on June 26 and 27, 1991, a violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1991), the violation is listed below.

10 CFR 50, Appendix B, Criterion V states, in part, that activities affecting quality shall be prescribed by documented instructions and procedures of the type appropriate to the circumstances and shall be accomplished in accordance with these instructions and procedures.

Monticello Technical Specification Section 6.5 requires that detailed written procedures, including the applicable check-off lists and instructions, covering areas of plant operations shall be prepared and followed.

- a. Monticello Nuclear Generating Plant Administrative Work Instruction (AWI) 04.07.05, General Plant Operating Activities, Revision 1, Section 4.2.4.A, Performance of Operators While On-Duty, requires all on-duty operators and the Shift Supervisor to be aware of and responsible for the plant status at all times.

Contrary to the above, on June 6, 1991, the on-duty operators and the shift supervisor were not aware of and responsible for the plant status at all times in that they did not monitor, recognize, and understand the significance of the lack of decay heat which affected the normal conduct of the reactor shutdown. They also

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failed to effectively monitor the reactor shutdown including the reactivity transients associated with the turbine bypass valves and the decreasing reactor pressure. Furthermore, the shift supervisor left the control room after giving instructions to the reactor operator.

- b. Section 4.2.4.B, of the same procedure requires that operators be particularly attentive to the instrumentation and controls at all times.

Contrary to the above, on June 6, 1991, the reactor operator was not attentive to the instrumentation and controls at all times in that he failed to correctly monitor the fast speed Intermediate Range Monitor (IRM) channel 13 recorder and subsequently did not identify nor understand the reactivity anomaly during the reactor shutdown (specifically, the cycling between subcritical and critical during rod insertion), which resulted in a reactor scram. Additionally, as the lone reactor operator at the controls, he failed to identify the abnormal conditions of unexpected reactor pressure decrease, unexpected closure of the turbine bypass valves, and failed to recognize/acknowledge the Main Steam Line Low Pressure alarms.

This is a Severity Level IV violation (Supplement I).

#### Reasons for the Violation

The reasons for this violation are:

- 1) Inadequate supervision by control room supervisors in directing the reactivity changes of the reactor,
- 2) A lack of awareness and inattention to plant status by licensed personnel, and
- 3) Inadequate training of licensed personnel with respect to the possibility of criticality occurring due to a pressure decrease while the reactor is being shutdown.

#### Corrective Steps Taken and Results Achieved

The following steps have been taken to improve control room management and operator performance:

- a. Administrative Work Instruction 04.07.05 has been revised to clarify the responsibilities of licensed control room personnel as follows:
1. Operators must monitor indications and utilize the correct procedures. One operator shall be designated to have

responsibility for the reactor control panel and other operators shall be designated to have responsibility for all other control panels.

2. The lead operator shall ensure that appropriate procedures are being used.
3. Shift supervision must:
  - a) Set priorities for all activities affecting reactor operation.
  - b) Hold shift briefings and designate specific assignments for the operators during operational transitions.
  - c) Maintain knowledge of overall plant status and ensure effective teamwork and communications are occurring among all operating personnel on duty.
- b. Operating procedures have been revised to require that either all control rods be inserted or that guidance be obtained from nuclear engineers prior to establishing a reactor cooldown rate. Such guidance is intended to assist operations personnel with reactor steam load management so that reactivity changes due to unexpected cooldowns are avoided.
- c. The Positive Discipline Program was implemented for personnel involved in this event.
- d. On-shift seminars have occurred for all operating shift personnel highlighting the possibility of criticality occurring due to a pressure decrease while inserting rods.
- e. The General Superintendent of Operations, Plant Manager and Site General Manager have reviewed this event with shift supervisors and shift managers. The proceedings of the enforcement conference and the seriousness of the event were conveyed during these discussions.

These combined actions have improved the capability of the control room crew to assess and respond properly to reactor operating characteristics during all modes of reactor operation.

#### Corrective Steps to be Taken to Avoid Further Violations

The following corrective steps will be taken to avoid further violations:

- a. A simulator scenario which models low decay heat will be developed. This scenario will be presented to all operating shift personnel during Licensed Operator Requalification Training. These actions will be completed by November 1, 1991.

- b. Lesson plans utilizing this scenario and the revised administrative and operating procedures will be written to reinforce the lessons learned from this event. The importance of monitoring Intermediate Range Monitor trend recordings, evaluating the decay heat component of reactor power during reactor startup and shutdown, and monitoring the reactivity transients associated with turbine pressure control and reactor cooldown will be emphasized. These actions will be completed by November 1, 1991.
- c. Monticello is an active participant in the BWR Owners Group Reactivity Controls Review Committee. This committee is developing recommendations to improve control of reactivity during all modes of reactor operation. Recommendations from the committee are assessed and incorporated into procedures on an on-going basis.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.

Please contact us if you have any questions or wish further information concerning this matter.



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