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10 CFR Part 2  
Section 2.201

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT  
Docket No. 50-263 License No. DPR-22

Reply to Notice of Violation Contained  
in NRC Inspection Report No. 50-263/94009

Pursuant to the provisions of 10 CFR Part 2, Section 2.201, our reply to the notice of violation contained in your letter of October 20, 1994 is provided as Attachment A.

In addition to responding to the four violation examples cited in the subject inspection report, we are also addressing two additional examples that were discussed with the Monticello Sr. Resident Inspector subsequent to issuance of the report. It is our understanding the two examples will be discussed in a future Inspection Report, but since the examples are similar to those noted in IR 50-263/94009 and occurred during the same general time frame, we consider it appropriate to respond to them at this time. For the purposes of this letter, the two items will be referred to as violation examples (E) and (F) in the attachment.

NSP management is acutely aware of the need to maintain a high level of personnel performance in all aspects of plant operations. A number of broad corrective actions directed towards addressing this issue were described in our August 4, 1994 response to Inspection Report 50-263/94004. Most of those actions have been implemented but it will take additional time for them to be fully effective. One immediate improvement observed is that the Monticello staff is more aware of management's desire to document the occurrence of personnel errors to ensure evaluation through the self-assessment process. As a result, occurrences that may have remained undocumented previously due a perceived lack of significance or absence of adverse consequences are now reported. Examples of this type were noted in IR 50-263/94009 and are also included in Attachment A. We believe that this lower threshold for reporting errors explains, in part, why the number of such reports has increased. However, we acknowledge that this is not the case for all of the violation examples noted and that further action is warranted.

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To address the issue of personnel performance on a more generic basis, we are utilizing a consultant specializing in this field to independently evaluate operations department personnel errors. It is believed that through this third party approach the consultant will help us gain insights into the root cause(s) of recent personnel performance related events, such as the ones noted in this violation example, that are eluding identification through our internal self assessment processes. Any insights gained by this third party review will be incorporated into specific action items to address the root cause(s). We believe that this action, in addition to our increased management focus on this issue, will ensure that a high level of personnel performance is maintained at Monticello. We will contact you after we have received the consultant's report to share the results and discuss any additional corrective actions we plan to take as a result.

Attachment A to this letter contains the following new NRC commitments:

Violation Example A:

1. Special Procedure #8192 will be enhanced by revising it to include detailed system valve alignment tables which address the pre-existing system configurations that might exist, thereby ensuring possible diversion flow paths and alternate pump suction sources are identified and addressed. This action will be completed by January 31, 1995. An administrative hold was placed on the procedure to preclude its use until the desired changes are incorporated.
2. Additional corrective actions of a broader nature are planned as discussed in this cover letter.

Violation Example B:

1. Additional corrective actions of a broader nature are planned as discussed in this cover letter.

Violation Example C:

1. The involved procedure (#0301) will be enhanced by revising it to control the reinstallation of the clear plastic covers on the 4kV undervoltage relays. This action will be completed by February 1, 1995.

Violation Example D:

1. Formal written guidance on the management position that work should not be performed on unlabeled equipment has been issued. This guidance will also be put into the maintenance manual by March 1, 1995.

2. Valves ESW-15 and ESW-13 will be labeled in a manner that will be effective when the insulation is removed. This action will be completed by March 1, 1995. A review of other valves and components is planned to identify other instances where similar labeling enhancements are warranted.
3. The pre-job briefing checklist will be revised to enhance and emphasize the information to be presented to workers, including description and location of the equipment to be worked on. This action will be completed by March 31, 1995.

Violation Example E:

1. Shift management will conduct shift seminars with all operations personnel to discuss this event and lessons learned.
2. Additional corrective actions of a broader nature are planned as discussed in this cover letter.

Violation Example F:

1. A discussion of this event and the event discussed elsewhere as violation example (D) will be added to the pre-outage training for traveling maintenance personnel. This training will emphasize the importance of understanding the job before beginning work and explain the self-checking concept. This action will be completed by March 1, 1996 in preparation for the next scheduled refueling outage.
2. Similar refresher training on self-checking will be added to the mechanical, electrical and I&C continuing training programs and presented on a recurring basis as determined by the training advisory committee. Inclusion of this training in the continuing training program is to be completed by March 31, 1995.
3. Improvements to the methods used to mark components scheduled for work will be investigated. Enhancements will be implemented as appropriate. This action will be completed by March 1, 1996 in preparation for the next scheduled refueling outage.
4. "Corrective Action to be Taken" No. 3 for violation example (D) also applies to this example.

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Please contact Terry Coss, Sr. Licensing Engineer, at (612) 295-1449 if you have any questions or wish further information concerning this matter.



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Plant Manager  
Monticello Nuclear Site

c: Regional Administrator, Region III, NRC  
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Attachment: A - Reply to Notice of Violation

Attachment A

REPLY TO NOTICE OF VIOLATION

Violation:

Note: For purposes of clarity, examples (A) through (D) of the violation are addressed individually below. Examples (E) and (F) were not included in the written violation but represent similar examples subsequently discussed with the Monticello Resident Inspector.

*"Technical Specification 6.5 requires, in part, that detailed written procedures, including applicable check-off lists and instructions, covering the following, shall be prepared and followed.*

- A. *Specification 6.5.A.1 requires integrated and system procedures for normal startup, operation, and shutdown of the reactor and all systems and components involving nuclear safety of the facility. Step 3 of Special Procedure #8192, 'Residual Heat Removal Intertie Flush', requires, in part, that valve MO-1988 be positioned or be verified to be open.*

*Contrary to the above, on September 19, 1994, during performance of procedure #8192, valve MO-1988 was not positioned or verified to be open."*

NSP Response:

NSP acknowledges the above violation example. As a point of clarification, the valve involved in this event was MO-1989 (B RHR Shutdown Cooling Valve), and it was while performing Step 9 of Special Procedure #8192 that the problem occurred. The reasons for the violation, as well as corrective actions taken and actions planned to prevent recurrence, are discussed below.

Reason for the Violation:

The cause of this violation was cognitive personnel error. The two operators involved did not utilize proper self- or independent checking techniques. Therefore, both operators failed to notice that valve MO-1989 did not stroke open when the valve handswitch was placed in the open position as directed by procedure.

A possible contributing factor was the procedure (#8192) being used by the operators. Although the procedure was adequate as written, the event might have been averted if the procedure had addressed RHR system alignments other than normal RHR shutdown cooling that could exist, thus identifying the interlock with MO-1987 (B RHR

Torus Suction Valve) that prevented MO-1989 from opening when the handswitch was placed in the open position.

Corrective Action Taken and Results Achieved:

1. The company Positive Discipline (PD) program was implemented for the two operators involved.
2. The two operators involved were asked to prepare memos describing their personal insights concerning the circumstances surrounding the event and lessons learned. These memos were subsequently distributed to the other operators for review. This action was not designed as a disciplinary measure, but rather was intended to heighten overall operator awareness of the importance of self-checking by encouraging communications on a peer level.

Corrective Action to be Taken to Avoid Further Violation

1. Special Procedure #8192 will be enhanced by revising it to include detailed system valve alignment tables which address the pre-existing system configurations that might exist, thereby ensuring possible diversion flow paths and alternate pump suction sources are identified and addressed. This action will be completed by January 31, 1995. An administrative hold was placed on the procedure to preclude its use until the desired changes are incorporated.
2. Additional corrective actions of a broader nature are planned as discussed in the cover letter to this attachment.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.



"B. Specification 6.5.A.1 requires integrated and system procedures for normal startup, operation and shutdown of the reactor and all systems and components involving nuclear safety of the facility. Step 4 of Operations Manual Section B.8.1.3-05.F.1, 'Shutdown of Residual Heat Removal Service Water (RHRSW) Loop', requires that the RHRSW pump(s) be stopped.

*Contrary to the above, on September 23, 1994, during performance of Operations Manual Section B.8.1.3-05.F.1, the #14 RHRSW pump was not stopped."*

NSP Response:

NSP acknowledges the above violation example. The reasons for the violation, as well as corrective actions taken and actions planned to prevent recurrence, are discussed below.

Reason for the Violation:

The cause of this violation was cognitive personnel error. The operator involved with this event did not apply appropriate self-checking techniques by examining available confirmatory indications (mechanical red flag on pump start/stop handswitch, green pump stopped indicating light, and 'B' loop RHR Heat Exchanger differential pressure indicator) to verify the desired condition (#14 RHRSW pump shutdown) had been achieved.

A contributing factor was the fact the red pump running indicating light was burned-out, leading the operator to incorrectly assume the pump was already stopped.

Corrective Action Taken and Results Achieved:

1. The company Positive Discipline (PD) program was implemented for the operator involved.
2. The operator involved was asked to prepare a memo describing his personal insights concerning the circumstances surrounding the event and lessons learned. This memo was subsequently distributed to the other operators for review. This action was not designed as a disciplinary measure, but rather was intended to heighten overall operator awareness of the importance of self-checking by encouraging communications on a peer level.
3. Details concerning the unplanned long term operation of #14 RHRSW pump with less than the specified minimum flow were forwarded to the system

engineer for evaluation. Through subsequent testing and evaluation it was determined that there was no significant adverse affect on pump service life.

Corrective Action to be Taken to Avoid Further Violation

1. Additional corrective actions of a broader nature are planned as discussed in the cover letter to this attachment.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.



"C. Specification 6.5.A.4 requires [detailed written procedures be prepared and followed for] surveillance and testing requirements that could have an effect on nuclear safety. Step 48 of Surveillance Test 0301, "Safeguard Bus Voltage Protection Relay Functional Test", requires that relay 127-6 in breaker cubicle ACB-152-605 be manually closed.

*Contrary to the above, on September 7, 1994, during the performance of test 0301, a different relay in a different breaker cubicle (ACB-152-601) was manually closed instead."*

NSP Response:

NSP acknowledges the above violation example. The reasons for the violation, as well as corrective actions taken and actions planned to prevent recurrence, are discussed below. This event was also addressed in Monticello Licensee Event Report (LER) 94-009, submitted on October 7, 1994.

Reason for the Violation:

The cause of this violation was cognitive personnel error. The worker did not adequately review the procedure step before performance and did not verify he was manipulating the correct relay. If either self-check action had been performed, the worker would likely have recognized that a note associated with the step identified the location of the correct relay, which was in a different breaker cubicle. As discussed in Monticello LER 94-009, manipulation of the wrong relay resulted in an unplanned fast start of both emergency diesel generators.

Another contributing factor was that the relay test push button, used in error by the worker, is normally covered by a clear plastic plate. These covers are not controlled by the procedure and are normally removed at the beginning of the test and installed following completion of the test. Had these covers been installed while Step 48 was being performed, it is believed that this error would not have occurred.

Corrective Action Taken and Results Achieved

1. The company Positive Discipline (PD) program was implemented for the worker involved.

Corrective Action to be Taken to Avoid Further Violation

1. The involved procedure (#0301) will be enhanced by revising it to control the reinstallation of the clear plastic covers on the 4kV undervoltage relays. This action will be completed by February 1, 1995.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.

"D. Specification 6.5.C.3 requires maintenance and test procedures for preventive or corrective maintenance of plant equipment and systems that could have an effect on nuclear safety. Maintenance Work Request (MWR) 94-03778 provided instructions for disassembly of emergency service water (ESW) system check valves ESW-15 and ESW-16 in order to perform a preventive inspection.

Contrary to the above, on September 16, 1994, during the performance of MWR 94-03778, the wrong check valves service water (SW) system check valves SW-15 and SW-16 were disassembled."

NSP Response:

NSP acknowledges the above violation example. The reasons for the violation, as well as corrective actions taken and actions planned to prevent recurrence, are discussed below. As a point of clarification, the inspection report states that the workers, with supervisor knowledge, were allowed to disassemble SW-15 and SW-16. In fact, the workers did not contact the supervisor prior to beginning disassembly, thus the supervisor had no knowledge of the event until the workers reported the system was still pressurized. It should also be noted that valves SW-15 and SW-16 were not actually disassembled and there was no loss of system function. The valve bonnets bolts were loosened and, when leakage occurred, the bolts were immediately re-tightened.

Reason for the Violation:

The primary cause of this violation was cognitive personnel error (failure to apply good work practices). The workers involved did not take sufficient actions to confirm the identification of the valves before they commenced work, even though they were uncertain they had located the correct valves. The workers rationalized that they had likely located the correct valves and, since the valves were part of a raw water system, there was little risk in proceeding cautiously. While the workers' assessment of the risk was correct in this instance, they exercised poor judgment and poor work practices by proceeding without positively identifying the valves.

A contributing factor in this case was the difficulty involved with identifying the correct valves. The valves that were supposed to be disassembled (ESW-15 and ESW-16) are normally identified by stenciling on the valve insulation lagging. In order to expose the valves for the required maintenance work, the lagging was removed by an insulating crew in advance of the maintenance crew arriving on the scene. No temporary labeling was provided. Thus, when the maintenance workers arrived, there was no way to positively identify the correct valves. When the workers saw valves SW-

15 and SW-16, they mistakenly assumed these were the components to be disassembled.

Corrective Action Taken and Results Achieved

1. This event was discussed with the workers. The importance of resolving uncertainties before proceeding with work was emphasized. Although this instruction had been put forth to all traveling maintenance workers before the outage, it was given again to all maintenance personnel as a reminder.
2. The General Superintendent of Maintenance discussed this event with all maintenance personnel to reinforce management's position that work should not be performed on unlabeled equipment.

Corrective Action to be Taken to Avoid Further Violation

1. Formal written guidance on the management position that work should not be performed on unlabeled equipment has been issued. This guidance will also be put into the maintenance manual by March 1, 1995.
2. Valves ESW-15 and ESW-16 will be labeled in a manner that will be effective when the insulation is removed. This action will be completed by March 1, 1995. A review of other valves and components is planned to identify other instances where similar labeling enhancements are warranted.
3. The pre-job briefing checklist will be revised to enhance and emphasize the information to be presented to workers, including description and location of the equipment to be worked on. This action will be completed by March 31, 1995.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.

- E. Specification 6.5 required, in part, that detailed written procedures, including applicable check-off lists and instructions, covering the following, shall be prepared and followed. Specification 6.5.A.4 requires surveillance and testing requirements that could have an effect on nuclear safety. Surveillance Test 0379, "Electrical Protection Assembly (EPA) Functional Test," required transfer of RPS "B" to the alternate source using Operations Manual B.9.12-05 Special Procedure B.2.

Contrary to this, on October 3, 1994, while performing an operations manual procedure to transfer the Division II Reactor Protection System (RPS) power supply to its alternate source, an operator did not verify the primary containment isolation logic bypass switches were in the proper position as required by procedure. As a result, an unplanned trip of the Division II radiation monitors and a partial containment isolation occurred.

NSP Response:

NSP acknowledges the above violation example. The reasons for the violation, as well as corrective actions taken and actions planned to prevent recurrence, are discussed below. This event was also addressed in Monticello Licensee Event Report (LER) 94-14, submitted on November 14, 1994.

Reason for the Violation:

The cause of this violation was cognitive personnel error. The operator had performed a similar procedure earlier that day to transfer the Division I RPS power supply from the alternate source to the normal source. He had verified the Division I logic bypass switches were in the proper position at that time. When later asked to transfer the Division II power supply, the operator encountered a similar step to place the Division II logic switches in "BYPASS". Believing the logic was still bypassed from performance of the earlier procedure, he proceeded to perform subsequent steps without reconfirming the action. The operator had forgotten that it was the Division I logic, not the Division II logic, that was bypassed during the earlier procedure. By failing to self-check, the operator missed an opportunity to catch this cognitive error.

A contributing factor was that shift supervision should not have assigned the operator the task of transferring the Division II power supply until the procedure for the earlier Division I transfer was completed. If the first procedure had been completed and the operator had performed or verified removal of the Division I logic bypass keys, it is unlikely the cognitive error would have occurred.

Corrective Action Taken and Results Achieved

1. Containment isolation signals were reset and the affected systems were restored to normal.
2. The company Positive Discipline (PD) program was implemented for the operator involved.

Corrective Action to be Taken to Avoid Further Violation

1. Shift management will conduct shift seminars with all operations personnel to discuss this event and lessons learned.
2. Additional corrective actions of a broader nature are planned as discussed in the cover letter to this attachment.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.



- F. Specification 6.5 required, in part, that detailed written procedures, including applicable check-off lists and instructions, covering the following, shall be prepared and followed. Specification 6.5.C.3 requires preventive or corrective maintenance of plant equipment that could have an effect on nuclear safety. Maintenance Work Request (MWR) 94-04755 required disassembly for an internal inspection of Reactor Core Isolation Cooling (RCIC) check valve AO-13-22.

Contrary to the above, on September 28, 1994, during the performance of MWR 94-04755, the wrong valve, MO-2565, was partially disassembled.

NSP Response:

NSP acknowledges the above violation example. The reasons for the violation, as well as corrective actions taken and actions planned to prevent recurrence, are discussed below.

Reason for the Violation:

The cause of this violation was cognitive personnel error. The workers involved did not adequately review the work package before starting disassembly to confirm that they were working on the correct component. In addition, the workers did not perform adequate self and independent checking.

Both valves (AO-13-22 and MO-2565) are located in the same area of the steam chase. A drawing provided in the package showing the location of AO-13-22 also depicted the location of MO-2565. When the workers arrived in the steam chase, they encountered MO-2565 and performed a cursory review of the package. They noted MO-2565 was shown on the drawing and incorrectly concluded they had found the proper component. If the workers had reviewed the package more carefully they would have recognized that the package called for work to be performed on AO-13-22. As disassembly progressed, the workers realized that the valve & actuator design was not consistent with what they expected. At that point the workers checked the work package again, recognized their error, and notified supervision.

Corrective Action Taken and Results Achieved

1. Within two hours of the event, all mechanical maintenance work was stopped and a group meeting with all day shift maintenance was conducted by the General Superintendent of Maintenance. This event and the event noted elsewhere in this attachment as violation example (D) were discussed. The potentially significant consequences of working on the wrong component were emphasized. Notes from that discussion were documented and reviewed with the afternoon maintenance shift later that same day.

2. The company Positive Discipline (PD) program was implemented for the workers involved.

Corrective Action to be Taken to Avoid Further Violation

1. A discussion of this event and the event discussed elsewhere as violation example (D) will be added to the pre-outage training for traveling maintenance personnel. This training will emphasize the importance of understanding the job before beginning work and explain the self-checking concept. This action will be completed by March 1, 1996 in preparation for the next scheduled refueling outage.
2. Similar refresher training on self-checking will be added to the mechanical, electrical and I&C continuing training programs and presented on a recurring basis as determined by the training advisory committee. Inclusion of this training in the continuing training program is to be completed by March 31, 1995.
3. Improvements to the methods used to mark components scheduled for work will be investigated. Enhancements will be implemented as appropriate. This action will be completed by March 1, 1996 in preparation for the next scheduled refueling outage.
4. "Corrective Action to be Taken" No. 3 for violation example (D) also applies to this example.

Date When Full Compliance Will Be Achieved

Full compliance has been achieved.