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DUKE POWER

February 10, 1994

Director, Office of Enforcement
U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369 and 50-370
NRC Inspection Report No. 50-369, 370/93-20
Reply to a Notice of Violation and Proposed Imposition of Civil Penalty

Gentlemen:

By letter dated January 13, 1994, NRC Region II issued a Notice of Violation and Proposed Imposition of Civil Penalty. This action follows NRC Inspection Report Nos. 50-369/93-20 and 50-370/93-20 concerning a special inspection conducted by an Augmented Inspection Team (AIT) at McGuire Nuclear Station during the period of September 1-5, 1993. An NRC Enforcement Conference was held at Region II Headquarters in Atlanta, Georgia on November 17, 1993 to discuss the proposed violations.

Pursuant to 10 CFR 2.201, enclosed is the response to the Notice of Violation issued January 13, 1994. Also, attached is a check for the amount of Twenty-five Thousand Dollars ($25,000) as payment in full for the proposed civil penalty.

I declare under penalty of perjury that the statements set forth herein are true and correct to the best of my knowledge.

Should there be any questions concerning this response, contact Randy Cross at (704) 875-4179.

Very Truly Yours,

T. C. McMeekin

Attachment

xc: (w/attachment)

Mr. S. D. Ebneter
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta St., NW, Suite 2900
Atlanta, Georgia 30323

Mr. George Maxwell
NRC Senior Resident Inspector
McGuire Nuclear Station

Rec'd w/ck # 14237 for $25,000.00

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IE14

xc: (w/attachment)

Mr. Victor Nerses
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
One White Flint North, Mail Stop 9H3
Washington, D. C. 20555

McGuire Nuclear Station
Reply to a Notice of Violation

I. Violations Assessed a Civil Penalty

A. Technical Specification 3.0.4 requires that entry into an Operational Mode shall not be made when the conditions for the Limiting Condition for Operation are not met and the associated Action statement requires a shutdown.

Contrary to the above, on August 31, 1993, during a plant cooldown following a secondary system steam leak inside containment, the operator at the controls allowed the primary plant to change operational modes from hot shutdown (Mode 4) to hot standby (Mode 3) when the conditions for the limiting condition for operation specified by Technical Specification 3.6.5.3 were not met. (01013)

Reply to Violation I.A.

1. Admission or Denial of the Alleged Violation:

McGuire Nuclear Station admits the violation.

2. Reason for the Violation:

The inadvertent mode change was due to inappropriate action by the day shift Reactor Operator at the Controls (ROATC) for failure to provide the proper response in time to prevent going above the Mode 3 temperature limit of 350 degrees F. The plant cooldown had previously been temporarily terminated by the night shift ROATC with concurrence of the day shift ROATC at approximately 340 degrees F. during shift turnover. The day shift ROATC noticed shortly that the primary system began to heat back up and he decided to allow this to continue to gain a greater margin from the low temperature limit of 320 degrees F. for the existing primary system pressure. Once the day shift ROATC noted that primary system temperature was 345 degrees F. and increasing, he initiated steps to halt the heatup by opening the Steam Generator Blowdown Valves and throttling open the Condenser Dump Valves; however, this action was not sufficient in stopping the heatup. Even though the day shift ROATC knew that 350 degrees F. was the Mode 3 temperature limit, he failed to recognize that the unit was about to enter Mode 3.

The day shift ROATC did not communicate his intent to allow a slight heatup to gain a greater margin from the temperature limit for the existing pressure to the OPS Control Room Senior Reactor Operator (C/R SRO), or the OPS Shift Supervisor (SS) who were involved in the OPS Shift Briefing at the time. If the ROATC had communicated his intent to the C/R SRO or the SS, they may have recognized that the unit was close to the Mode 3 limit and may have warned him not to exceed a temperature of 350 degrees F.

3. Corrective Steps That Have Been Taken and the Results Achieved:

1. Ops personnel developed a reading package describing this event. Communication breakdowns that led to the event were addressed in the reading package. All licensed operators and staff personnel reviewed the reading package before October 1, 1993.

2. A case study training lesson was developed and presented in licensed operator requalification. The entire event was examined with emphasis on communications and teamwork. This also included simulator training on cooldown and depressurization with excess letdown in service rather than normal letdown. The case study training was completed on December 16, 1993.

3. OPS Management personnel modified the format of the OPS Shift Briefings to shorten them, reduce the number of persons involved and set expectations for participation. If any of the key members of the unit team's attention is diverted from the briefing, the briefing is temporarily suspended until that person can once again participate in the briefing. Key members include the SS, C/R SRO, Unit SRO, ROATC, and the Balance of Plant Reactor Operator (BOP). These actions were completed by September 13, 1993.

4. The individual RO was taken off of shift for a four week period and assigned to a training instructor for mentoring on proper communication. Good examples of RO communication were pointed out to this operator and he was assigned to observe RO's having good practices in both the plant and the simulator. The RO met with the Superintendent of Operations after the mentoring process and debriefed on what he had gained from the process. He also participated in the development of the case study training on the event and benefitted the shifts with his observations. After discussions with his Shift Supervisor, the training instructor and the Shift Operation Manager, the Superintendent of Operations returned him to service in the Control Room on November 13, 1993.

5. Bold lines have been placed on the procedural Heat-up and Cool-down Curves at the mode change temperatures as further reminders to the operators in the Control Room. This was completed on November 4, 1993.

No similar events have occurred since these corrective steps were completed.

4. Corrective Steps that will be Taken to Avoid Further Violations:

It has been determined that alarms from the Operator Aid Computer (OAC) warning of impending mode changes associated with primary system temperature are needed. Both units at McGuire will have their respective OAC's replaced during scheduled refueling outages in 1995 and 1996. Enhancements made during these replacements will resolve this problem.

5. Date When Full Compliance will be Achieved:

McGuire Nuclear Station is now in compliance with Technical Specification 3.6.5.3. Full compliance will be achieved upon completion of the corrective steps addressed in section 4.

I. Violations Assessed a Civil Penalty

B. Technical Specification 6.8.1 requires that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, which includes the operation of safety related systems.

Contrary to the above, although procedures and measures were established, they were inadequate in one case and not followed in another during the repair and operation of the following:

1. During the repair of valve 2CF-130, on August 4, 1993, a mechanic reassembled the valve using procedure MP/O/A/7600/06 for Kerotest valve maintenance. The procedure was inadequate in that it failed to provide sufficiently detailed instructions for reassembling valve 2CF-130 correctly. After the valve was returned to service, it leaked because the disk assembly had been installed incorrectly.

2. The incorrect reassembly of valve 2CF-130 caused the valve internals to be stuck in an open position which could not be corrected by turning the manual, "T" handle to the closed position. The post maintenance testing requirements called for the valve to be manually cycled after re-work to assure that it was functional. The valve was not manually cycled, as required. (01023)

This is a Severity Level III violation (Supplement I).
Cumulative civil penalty - $25,000.

Reply to Violation I.B.

1. Admission or Denial of the Violation:

McGuire Nuclear Station admits the violation. Although enhancements to procedure MP/O/A/7600/06 would ensure valve reassembly instructions are clear, proper valve reassembly could have been accomplished using the existing procedure.

2. Reason for the Violation:

The reason for the violation is Inappropriate Action by the valve technician reassembling valve 2CF-130 as a result of inattention to detail. During the investigation of the event, the valve technician stated the correct valve reassembly order and indicated the procedure did not cause the error.

Failure to Follow Procedures is attributed to improperly performing the functional verification that was performed after the completion of the maintenance activities performed on August 5, 1993. The valve was removed on September 2, 1993 and a new 1 inch Kerotest valve was tested. Test results showed that if the valve disc assembly were assembled as found in 2CF-130, and the stem assembly were installed one half turn from back seat (as per procedure), the valve would turn approximately one half turn. However, an excessive amount of force would have to be applied to the hand wheel to get it to turn. Also, the normal stroke for a valve of this type (1 inch Kerotest)

is one and one quarter turns. Therefore, a proper functional verification (Cycle Valve--Turning the hand wheel freely for one and one quarter turns in both directions) could not have been performed.

3. Corrective Steps Taken and the Results Achieved:

A. Split MP/0/A/7600/06 into two procedures. MP/0/A/7600/06 now covers handwheel operated kerotest glove valves only.

B. Created a new procedure MP/0/A/7600/120 which deals only with air operated or electric motor operated kerotest globe valves.

C. Performed an extensive human factors review of procedures MP/0/A/7600/120 and MP/O/A/7600/06.

D. Enhanced procedure MP/O/A/7600/06 to emphasize proper spring guide installation.

E. Shared all revised copies of MP/0/A/7600/06 and MP/0/A/7600/120 with the Mechanical Maintenance procedure groups at Catawba Nuclear Station and Oconee Nuclear Station.

F. Covered the 2CF-130 incident with all Mechanical Maintenance personnel using a videotape of the disassembly of the valve involved in the incident.

G. Covered the 2CF-130 incident with all McGuire NGD and GSD personnel who have the associated task relative to this incident (MM-OT-0808)

H. Implemented a Daily Risk Assessment of all Mechanical Maintenance items on schedule which are of medium to high risk.

I. Distribute the Daily Risk Assessment via electronic mail to all Mechanical Maintenance personnel.

J. Distribute the Daily Risk Assessment to any interested parties via the corporate electronic " Bulletin Board."

K. Counseled all Mechanical Maintenance procedure writers against using bullet lists for job sequences in which the order of performance is important.

L. Appropriate vendor personnel will be provided with appropriate management oversight and pre-job briefings prior to beginning their assigned tasks.

M. Proper control and training will be provided for non-assigned individuals in accordance with the McGuire Site Directive on control of non-assigned individuals and organizations performing work or directing activities in the station.

All of the above corrective actions were completed by January 26, 1994. Numerous repairs of kerotest valves have been performed in the six month period since the 2CF-130 event without recurrence of this reassembly error.

4. Corrective Steps That Will Be Taken To Avoid Further Violations:

No additional corrective actions are planned.

5. Date When Full Compliance Will Be Achieved:

McGuire Nuclear Station is now in full compliance.

II. Violations Not Assessed a Civil Penalty

Technical Specification 4.0.1 requires that Surveillance Requirements shall be met during operational modes or other conditions specified for individual Limiting Conditions for Operation unless otherwise stated in an individual Surveillance Requirement.

Technical Specification 4.6.5.4.a requires that a Channel Check be conducted within four hours of receiving an Ice Condenser Door open alarm.

Contrary to the abcve, on August 31, 1993, a Channel Check was not performed within four hours of receiving an "Ice Condenser Inlet Door Open" alarm at 12:38 a.m., although the ice condenser was declared inoperable.

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

Reply to Violation II:

1. Admission or Denial of the Alleged Violation:

McGuire Nuclear Station admits the violation of a Technical Specification requirement.

2. Reason for the Violation:

During the subject event, the Surveillance Requirement associated with the Inlet Door Position Monitoring System (4.6.5.4) was not performed. This requirement was to perform a channel check of the Inlet Door Position Monitoring System within four hours of receiving an annunciator alarm. Two and one half hours after receiving the alarm, the OPS Shift Manager sent a team into the Ice Condenser to evaluate the situation. They discovered that several Ice Condenser doors had opened and that some of the doors would not remain closed. The personnel in the Ice Condenser effectively met the intent of the channel check; however, no documentation was generated and the Technical Specification was not listed in the Technical Specification Action Item Logbook (TSAIL).

The Inlet Door Position Monitoring System operated without a problem during the event. It reliably provided information on the status of the Ice Condenser lower inlet doors to the Control Room staff. The basis for this surveillance requirement has historically been assumed to be to ensure proper monitoring following an inadvertent opening of the Ice Condenser lower inlet doors. The surveillance was completed in accordance with Technical Specifications prior to returning the unit to Mode 4.

The Control Room staff did not believe the surveillance requirement was applicable because the doors did not open inadvertently, the position monitoring system was obviously operable and operating and the procedure for the channel check would not normally be performed under these conditions.

McGuire OPS did not anticipate the need to perform this surveillance during an actual activation of the ice condenser. The surveillance procedure did not address this possibility. This was due to the assumption that the surveillance requirement was based on an inadvertent opening of an ice condenser lower inlet door.

3. Corrective Steps that have been Taken and the Results Achieved:

The annunciator response procedure for "Ice Condenser Lower Inlet Doors Open" has been changed to give the operators guidance under these conditions:

EITHER

Perform a qualitative assessment of the Inlet Door Position Monitoring Systems and log that assessment,

OR

Log the Inlet Door Position Monitoring System inoperable and apply the action statement.

The Technical Specification surveillance requirement has not been missed since implementation of the above corrective action.

4. Corrective Steps that will be Taken to Avoid Further Violations:

No additional corrective actions are planned. The specified surveillance does not add to the safety of the plant. It is not included in the new standard Technical Specifications (NUREG-1431, June 1992). McGuire plans to delete this surveillance requirement from its Technical Specifications if and when the standard Technical Specifications are adopted.

5. Date When Full Compliance will be Achieved:

McGuire Nuclear Station is now in full compliance.