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**DUKE POWER**

March 30, 1994

U. S. Nuclear Regulatory Commission  
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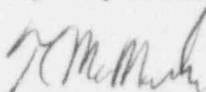
Subject: McGuire Nuclear Station, Units 1 and 2  
Docket Nos. 50-369 and 50-370  
NRC Inspection Report No. 50-369, 370/93-32  
Violation 50-369/93-32-01 and 50-369, 370/93-32-07  
Reply to a Notice of Violation

Gentlemen:

Enclosed is the response to the Notice of Violation issued March 4, 1994 concerning diesel generator fuel oil volume below Technical Specification requirements and failure to perform Technical Specification verification following diesel generator inoperability.

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)

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U.S. Nuclear Regulatory Commission  
March 30, 1994

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File: 815.01

McGuire Nuclear Station  
Reply to a Notice of Violation

Violation 369/93-32-01

- A. Technical Specification 3.8.1.1 requires that there be two separate and independent diesel generators with separate fuel oil storage systems containing a minimum volume of 39,500 gallons while in MODE 1.

Contrary to the above, the licensee did not maintain the required minimum volume of fuel oil in the 1B fuel oil storage tank for a period of five months prior to November 15, 1993 while in MODE 1.

This is a Severity Level IV violation (Supplement I), applicable to Unit 1.

Reply to Violation 369/93-32-01

1. Reason for the Violation:

The reason for the violation is Equipment Failure/Malfunction due to the malfunction of the diesel generator fuel oil storage tank gauge. The malfunctioning gauge is a Barton 288A pressure switch. The gauge consists, in part, of an indicator and a switch which are calibrated separately. The switch is setup to send an annunciator alarm to the Diesel Generator (DG) Control Panel when the setpoint of 40,886 +/- 750 gallons is reached, which in turn sends an alarm to the Control Room.

On November 15, 1993, Instrumentation and Electrical (IAE) personnel performed preventative maintenance on the DG 1B Fuel Oil Storage Tank level instrument. During the calibration check, the gauge indicator read 43,000 gallons. However, the indicator was found to read above the as found fuel oil level by 8,000 gallons. The actual level was 4,500 gallons below the Technical Specification required minimum. The IAE technician proceeded to calibrate the gauge indicator bringing it back within tolerance. When the switch calibration was checked, it was found to be within tolerance and at the correct setpoint. Therefore, when the switch reached its setpoint, there should have been an annunciator alarm at the DG Control Panel. This alarm was never received and it was verified that there was no alarm present prior to beginning work on the gauge. The switch did alarm, however, when the IAE technician was obtaining the as found data. The possibility exists that the switch may have become stuck, however, this cannot be proven. The switch had been previously exercised when the IAE technician was getting the as found data on the indicator. The switch is connected to the same drive arm as the indicator but the switch and indicator work off different linkages. If the switch was stuck, it freed itself when exercised.

Subsequent to the event, Operations personnel checked previous documentation to determine if 1B was past inoperable and determined that 1B had been past inoperable since June 7, 1993, the date Unit 1 entered Mode 4 from refueling outage (EOC8). During the refueling outage, maintenance activities performed on 1B caused the diesel to be run several times, burning additional fuel.

2. Corrective steps that have been taken and the results achieved:

- a. The 1B gauge indicator was immediately calibrated to bring it back into tolerance.
- b. Calibration checks were performed on 1A, 2A and 2B DG fuel oil level gauges. The results of these PMs revealed the Unit 1, 1A level gauge, 1FDLS5140, to be out of tolerance. However, the tank volume was above the Technical Specification required minimum volume of 39,500 gallons. The level gauge was subsequently calibrated. The Unit 2 level gauges, 2FDLS5140 and 2FDLS5150, were in tolerance.
- c. On November 16, 1993, 7,000 gallons of diesel fuel oil was delivered to the site and added to the 1B Fuel Oil Storage Tank bringing the level in the tank above the required 39,500 gallons.
- d. The preventative maintenance frequency on the existing gauges was increased from every twenty-four months to every three months. After the installation of new instrumentation, the preventative maintenance frequency will be reviewed by System Engineering personnel and the frequency reduced, if appropriate.
- e. Minor Modification (MM)-5032 was initiated to replace the existing gauge for Unit 1 with a more accurate gauge. This modification has been completed.

No similar events have occurred since implementation of the above corrective steps.

3. Corrective steps that will be taken to avoid further violations:

Minor modification (MM)-5033 has been initiated to replace the existing gauge for Unit 2. MM-5033 is scheduled to be completed by May 14, 1994.

4. Date when full compliance will be achieved:

Full compliance will be achieved upon completion of MM-5033 scheduled for May 14, 1994.

McGuire Nuclear Station  
Reply to a Notice of Violation

Violation 369, 370/93-32-07

Technical Specification 3.8.1.1.d requires that with one diesel generator inoperable that the offsite power sources shall be verified within one hour and every eight hours thereafter AND; if the inoperability was caused by an event other than preplanned maintenance or testing the licensee shall demonstrate the operability of the remaining diesel by performing Surveillance Requirement 4.8.1.1.1.a.4 and 4.8.1.1.12.a.5 within 24 hours.

Contrary to the above,

1. On January 24, 1994 at 0500 the 2A diesel was declared inoperable for scheduled maintenance and the licensee did not verify the offsite power sources until 11.5 hours later.
2. On November 15, 1993 the licensee declared the 1B diesel inoperable due to fuel oil tank storage level below technical specification requirements and the licensee did not perform the required surveillance tests on the remaining diesel.

This is a Severity Level IV violation (Supplement 1).

Reply to Violation 369, 370/93-32-07

Example 1 - January 24, 1994 Event

1. Reason for the Violation:

The reason for the violation is Inappropriate Action due to the Control Room Senior Reactor Operator (CRSRO) not ensuring the Technical Specification required surveillance was performed.

The first inappropriate action occurred when the night shift CRSRO chose to complete the Technical Specification Action Item Log (TSAIL) entries and Removal and Restoration (R&R) paperwork and not report the surveillance requirement to others on his team. The CRSRO elected to rely on memory to remember the surveillance requirement at the time the first equipment was taken out of service (planned for 0500 hours). When the R&R for the 2A RN Pump came to the Control Room for review, the "Technical Specification Log" block was already complete. It was not uncommon for this part of the R&R to be complete and equipment to already be listed in the TSAIL to facilitate the paperwork review. This caused the Control Room Staff (CRS) to assume that the required Technical Specification entries had been made and that any required surveillances had been initiated.

The second inappropriate action was due to the night shift CRSRO not recognizing the need to take action when required and failure to follow procedure. Failure to take action occurred when the night shift CRSRO initialed the TSAIL. The CRSRO failed to initiate the surveillance as required. The failure to follow procedure occurred when the CRSRO did not get the entry

independently acknowledged.

The surveillance was again missed at 1400 hours. The failure of the day shift CRS to perform the required surveillance is also attributed to the inappropriate actions by the night shift CRSRO. The oncoming CRS is not required to look up each item previously logged in the TSAIL to ensure the required Technical Specification actions were initiated by the outgoing CRS; therefore, Operations personnel did not immediately recognize the missed surveillance.

2. Corrective steps that have been taken and the results achieved:

- a. Upon discovery of the missed surveillances, Control Room Operations personnel immediately initiated procedure PT/2/A/4350/25, Essential Auxiliary Power System Source Verification.
- b. The CRS on duty when the diesel generator was taken out of service met as a team to discuss the event, identify the inappropriate actions and discussed the need for proper communication.

3. Corrective steps that will be taken to avoid further violations:

- a. Operations personnel will review these events with all licensed personnel emphasizing the need for improved communications. This review will be completed by May 6, 1994.
- b. Operations personnel will review Operations Management Procedure (OMP) 2-5 and OMP 2-17 and initiate appropriate procedure changes to clarify responsibilities and assure consistent TSAIL logging practices. This review will be completed by May 6, 1994.

4. Date when full compliance will be achieved:

Full compliance will be achieved by May 6, 1994.

Example 2 – November 15, 1993 Event

1. Reason for the Violation:

The reason for the violation is Inappropriate Action due to an inadequate review of Technical Specification 3/4.8.1.1. Action d. Action d requires that if a diesel generator is declared inoperable the opposite (operable) diesel generator shall be tested unless the inoperability is due to pre-planned testing or maintenance. The Technical Specification interpretation identified two additional conditions whereby the operable diesel generator would not have to be tested.

Investigation determined the Technical Specification interpretation was not consistent with the requirements of the Technical Specification by providing interpretation guidance that, if followed,



requirements of the Technical Specification by providing interpretation guidance that, if followed, allowed the requirements as specified in Technical Specification 3/4.8.1.1, Action d to be violated. The interpretation allowed the Technical Specification requirement to test the remaining diesel generator to be waived in situations where a diesel generator was inoperable due to a separately testable support system or if the inoperable support system was covered by another Technical Specification or Selected Licensee Commitment. Implementation of the interpretation without a Technical Specification change was an inappropriate action since it provided invalid instructions to station personnel to use in determining required Technical Specification actions.

During this event, the 1B diesel generator was determined to be inoperable due to inoperability of the FD system. At the time of the discovered inoperability, the interpretation was used by Operations personnel to determine the required actions as specified by the Technical Specification. Because of the interpretation, the required surveillance was not performed on 1A diesel generator. Also, further investigation revealed that the 2A diesel generator had been declared inoperable on February 6, 1992, due to inoperability of a fuel oil transfer pump. Because of the interpretation, the required surveillance was not performed on the 2B diesel generator.

2. Corrective steps that have been taken and the results achieved:

- a. Upon discovery of the problem, the interpretation was removed from use.
- b. Special Order 93-25 was issued to Operations personnel alerting them to the fact that the interpretation had been removed and directing that the actions of Technical Specification 3/4.8.1.1, Action d must be followed if a diesel generator is declared inoperable for any reason other than preplanned testing or preventative maintenance.
- c. Regulatory Compliance personnel revised the Compliance Manual, Section 3.4 to better specify requirements for Regulatory Compliance reviews of proposed Technical Specification interpretations and to establish a file to facilitate recovery of the bases associated with future Technical Specification interpretation decisions.

No similar events have occurred since implementation of the above corrective steps.

3. Corrective steps that will be taken to avoid further violations:

Regulatory Compliance personnel will evaluate the Technical Specifications and initiate appropriate actions to change the Technical Specifications as suggested by Generic Letter 93-05 by August 24, 1994.

4. Date when full compliance will be achieved:

McGuire is now in full compliance. The planned changes to Technical Specifications are considered an enhancement.