

DUKE POWER COMPANY

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VICE PRESIDENT
NUCLEAR PRODUCTION

July 25, 1984

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Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Subject: McGuire Nuclear Station
Docket Nos. 50-369 and 50-370

Reference: RII:WTO
NRC/OIE Inspection Reports 50-369/84-11 and 50-370/84-09

Dear Mr. O'Reilly:

Pursuant to 10 CFR 2.201, please find attached a response to violations 50-369/84-11-03, 50-370/84-09-02, and 50-369/84-11-03 which were identified in the above referenced inspection report.

Duke Power Company does not consider any information contained in this report to be proprietary.

Very truly yours,

H. B. Tucker

H. B. Tucker

PBN/rhs

Attachment

cc: Mr. W. T. Orders
Senior Resident Inspector-NRC
McGuire Nuclear Station

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PDR ADDCK 05000369
Q PDR

DUKE POWER COMPANY

McGuire Nuclear Station
Response to NRC/OIE Inspection Report
50-369/84-11 and 50-370/84-09

Violation 50-369/84-11-02 and 50-370/84-09-03, Severity Level IV:

10 CFR Part 50, Appendix J, IV.A., Special Testing Requirements - Containment modification, requires that any modification which is part of the primary reactor containment boundary, performed after the preoperational leakage rate test shall be followed by either a Type A, B, or C test, as applicable for the area affected by the modification.

The Reactor Vessel Level Indication Systems (RVLIS) were installed on Units 1 and 2 in March 1981 and July 1983, respectively. The RVLIS consists of tubing which connects to the containment penetration fittings. Containment penetration leakage test is required prior to unit startup.

Contrary to the above, a leakage test on the Unit 2 RVLIS and its associated containment penetration had not been performed until March 14, 1984. Unit 1 RVLIS testing was performed in June 1982. Units 1 and 2 had entered into operating modes 1 through 4 during the 15 month and eight month duration, respectively, without having verified containment integrity. The belated test results have shown that the penetrations would have maintained containment integrity.

Response:

1. Duke Power Company admits the event occurred as initially reported in LER 369/84-09.
2. This violation is attributed to Administrative Deficiency, due to the lack of administrative controls in the design, installation, and follow-up on RVLIS. The installation problem occurred because the RVLIS package was not a typical Duke Power installation, and there was a lack of central control of the project. In most instrument installations, Duke is the designer supplier and installer. The RVLIS package was designed and supplied by Westinghouse. The installation drawings were prepared by Duke and the installation was Duke's responsibility. As a result of unclear responsibility definitions within various internal Duke Power Departments, the instrument detail was incorrectly interpreted resulting in tubing installations with no verifications being performed as required by Q. A. Condition 1. Since the system on each unit did not have to be functional prior to the first refueling, the containment integrity issue was not noticed. Additional details on the cause are available in LER 369/84-09.
3. Containment integrity was verified on Unit 1 on June 29, 1982 with the puff and pressure test performed by Westinghouse. Unit 2 containment integrity was verified when a leak test was performed on RVLIS on March 14, 1984.

4. The potential for these problems to occur in the future will be eliminated by Duke Power's review and clarification of design requirements associated with containment penetrations. Containment integrity will be specifically reviewed at the end of each outage to assure that all completed or uncompleted modifications have not adversely affected containment integrity. These actions will eliminate future occurrences of this problem.
5. The station is presently in full compliance with the code of Federal Regulations in this area.

Violation 50-369/84-11-03, Severity Level IV:

Technical Specification 6.8.1 requires that written approved procedures be established implemented and maintained covering surveillance testing of safety related equipment. Procedure PT/1/A/4200/09A, an approved station procedure for surveillance testing of the engineered safety features actuation system was amended by change numbers 54 and 57 to cover black-out response testing of a nuclear service water system isolation valve.

Contrary to the above, on April 20, 1984, an electronics technician failed to follow the requirements of procedure PT/1/A/4200/09A, Change No. 57 when he incorrectly connected a lead wire to a power supply, resulting in an inadvertent initiation of train A blackout sequence. Furthermore, procedure PT/1/A/4200/09A, Change No. 54 was incorrect in that it specified the opening of sliding link B-13 instead of B-14.

Response:

1. Duke Power Company admits the event occurred as initially reported in LER 369/84-14.
2. This violation is attributed to Personnel Error because a jumper wire was attached to the wrong place in the circuit being tested, and was independently verified as being correctly installed. Also contributing to the event was Administrative/Procedural Deficiency due to an erroneous procedure and misleading electrical elementary drawings. Additional details on the cause are available in LER 369/84-14.
3. Review of the procedure after the blackout discovered the problem and the procedure was revised. The LER was covered with appropriate station personnel, addressing the following items:
 - * Individuals should exercise particular care when modifying or verifying the modifications of systems. They should not be lulled into a false sense of security because the step has been done before.
 - * Modifications of systems for testing must be researched to the extent that all possible consequences are known and understood. Technical reviews of procedures must be thorough and should be performed with the same source documents used for the preparation. Sufficient manhours must be scheduled to accomplish these tasks.

Personnel responsible for scheduling testing activities should consider the manpower and added risks involved in separating components or parts of systems from the integrated test. The main effort should be directed toward having complete systems available at the scheduled test times. Problems in test scheduling should be identified early enough (long before outages) so that procedure revisions can be prepared and reviewed when adequate manpower is available.

4. Corrective Steps to avoid further violations have been taken as indicated above.
5. The station is presently in full compliance with technical specifications in this area.