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MURRAY R. EDELMAN

VICE PRESIDENT
NUCLEAR

November 1, 1985
PY-CEI/OIE-0134 L

Mr. C. J. Paperiello
Division of Reactor Safety, Region III
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Perry Nuclear Power Plant
Docket Nos. 50-440; 50-441
50-440/85053 Noncompliance Response

Dear Mr. Paperiello:

This letter is to acknowledge receipt of Inspection Report 50-440/85053 attached to your letter dated October 3, 1985. This report identifies areas examined by Messrs. D. E. Hills and G. F. O'Dwyer during their inspection conducted August 3 through September 13, 1985 at the Perry Nuclear Power Plant.

Attached to this letter is our response to the Notice of Violation dated October 3, 1985. This response is in accordance with the provisions of Section 2.201 of the NRC's "Rules of Practice", Part 2, Title 10, Code of Federal Regulations.

Our response has been submitted to you within thirty days of the date of the Notice of Violation as you requested. If there are additional questions, please do not hesitate to call.

Very truly yours,

Murray R. Edelman
Vice President
Nuclear Group

MRE:njc

Attachment

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Mr. C. J. Paperiello

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November 1, 1985
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cc: Mr. J. A. Grobe
USNRC Site, SBB50

Mr. K. Connaughton
USNRC Site, SBB50

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Mr. R. F. Warnick, Chief
Reactor Projects Branch 1
Division of Reactor Projects
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

RESPONSE TO NONCOMPLIANCE
50-440/85053-01

A. Statement of Violation

10 CFR 50, Appendix B, Criterion V, as implemented by CEI's Corporate Nuclear Quality Assurance Program (CNQAP), Section 0500, Revision 6, states that, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances."

Contrary to the above, preoperational test procedure TP 1P57-P001, "Safety-Related Instrument Air", is not appropriate in that this procedure does not adequately control the sequence of testing. Although Section 6.0, Note 2, indicates that any independent section can be done in any order, there are two identified instances where performing the sections out of order will result in failed or inadequate testing. Contrary to test requirements, failing to perform Step 6.1.1 prior to Section 6.5 will prevent depressurization of the compressor discharge piping. In addition, failing to perform Steps 6.3.6 and 6.3.8 prior to Section 6.5 will result in a nonconservative partial test instead of a system wide pressure drop test.

B. Response

1. Corrective Action Taken and Results Achieved:

Prior to being released for test performance, TP 1P57-P001 was reviewed by the NRC inspector who identified that, if the test steps were performed out of sequence, the potential existed to perform a portion of the test without completing the test prerequisites. There was little potential that inadequate testing of the system would have occurred because:

- . The steps of a test procedure are written in the sequence that provides for the most logical and efficient performance of the test. The test is normally performed in the sequence written.
- . Any deviations from the written sequence are noted. Test steps are signed and dated when performed and a chronological log of the test performance is maintained. Using these program controls, the actual sequence in which a test is performed is scrutinized by the Test Program Review Committee during test results approval as a final check that the sequence of test performance did not invalidate the results.
- . Test performance is subject to extensive monitoring by Quality Assurance and the Performance Evaluation Team.

TP 1P57-P001 has been changed to ensure adequate prerequisites are established for each test section independent of the sequence in which the test is performed.

Because this test had been reviewed and approved by the Management Procedure Review Team, the other test procedures reviewed by the same reviewer have been re-evaluated. No discrepancies were identified and CEI has concluded this was an isolated case.

2. Corrective Action Taken to Prevent Further Noncompliance

The Test Program Review Committee will continue to closely evaluate the potential for problems resulting from incorrect test sequence. This evaluation is performed at both the release for test and the final review of test results for approval.

3. Date When Full Compliance Will be Achieved

Full compliance has been achieved.

RESPONSE TO NONCOMPLIANCE
50-440/85053-03

A. Statement of Violation

10 CFR 50, Appendix B, Criterion V, as implemented by CEI's CNQAP, Section 0500, Revision 6, states that "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances, and shall be accomplished in accordance with these instructions, procedures or drawings."

Contrary to the above, testing conducted in conjunction with pre-operational test Procedures TP 1R76-P001, "ECCS Initiation/Loss of Offsite Power", TP 1C71-P001, "Reactor Protection System," and TP 1M51-P001, "Combustible Gas Control System", was not accomplished in accordance with applicable procedure requirements.

In procedure TP 1R76-P001, Step 6.4.9.a(4) consists of raking-in breaker EH1210 and verifying that its associated system is in readiness for auto-start and operation. A failure to properly perform this procedure step by not turning on the charging spring motor resulted in a failure of Residual Heat Removal Pump C to start during the simultaneous Loss of Offsite Power and Loss of Coolant Accident test. In addition, Reperformance #1 of procedure TP 1M51-P001 was not conducted in accordance with administrative requirements of Test Program Instruction (TPI)-28, "Conduct of Preoperational, Special and Acceptance Tests". The System Test Engineer (STE) did not specify to the Lead Test Engineer (LTE) the particular steps to be reperformed and did not have the LTE sign the chronological log entry depicting these steps to show his approval prior to the reperformance. Furthermore, in procedure TP 1C71-P001, pre-requisite Step 5.2 was improperly verified and signed off as completed. This step indicated installation of the Main Steam Isolation Valve (MSIV) open limit switches was complete, even though the limit switch for MSIV 1B21-F022B was disassembled and incapable of supporting the test. Finally, a change was made to Attachment 5 of procedure TP 1C71-P001 to modify the method of simulating an open MSIV without processing a Test Change Form in accordance with the requirements of TPI-28.

B. Response

1. Corrective Action Taken and Results Achieved

TP 1R76-P001

System Operating Instruction (SOI)-R22 was the document controlling circuit breaker operations during the performance of Test Procedure (TP) 1R76-P001. The Test Procedure was properly written and performed, but performance of the test identified that incomplete

execution of SOI-R22 will result in the failure of a safety related breaker to function when required. Following the failure of the breaker to operate, Condition Report 85-136 was initiated; the cause of the failure was investigated and corrected; and, the appropriate portions of the test were successfully repeated.

TP 1C71-P001

The essential prerequisite to the performance of TP 1C71-P001 was the ability to reset the scram signal in all four Reactor Protection System channels. Meeting this prerequisite was fully verified in Step 6.1.4 which required observing the individual scram indicating lights before actual system testing was performed. Therefore, this violation could not have resulted in an improper or inadequate test of the system.

Resetting the scram (Step 6.1.4) required simulating "on-line" conditions in order to obtain scram reset permissive signals from many different plant systems including the limit switches on the Main Steam Isolation Valves. Since the procedure was written when many of the devices needed to obtain these permissive signals were not turned over for test, the procedure contained prerequisites to check if the installation of devices such as MSIV limit switches was complete. However, in all cases, the full scram test could be conducted successfully with or without the devices installed since the permissive signal can be obtained by actuating the device (limit switch) or installing a jumper. The test procedure explains that for any device either of these actions may be necessary.

When completing the prerequisites of TP 1C71-P001, the Test Engineer incorrectly relied on his earlier observations that the MSIV limit switches were installed and failed to recognize that one of the devices was removed for maintenance. When the Test Procedure required actuation of that limit switch, a Test Exception instead of a Test Change was issued to permit jumpering past the limit switch instead of actuating it. This administrative error was corrected the next day by a Test Change (C-006). However, prior to the actual performance of the full scram test, the MSIV limit switch was re-installed and the test was again changed (C-024) to reflect the use of the MSIV limit switches to generate the permissive signal.

TP 1M51-P001

TP 1M51-P001 Steps 6.3.6 through 6.3.9 require the removal and reinstallation of fuses in order to verify out of service alarms function properly.

TP IM51-P001 (continued)

When the alarms failed to function when required, the Test Engineer generated a Test Exception to initiate an investigation and allow him to proceed with the test. Before proceeding with the test, the cause of the alarm failure was identified as the incorrect fuse having been removed. The Test Engineer reperformed the steps after making the required entries into the test chronological log. However, the STE failed to obtain the concurrence of the Lead STE prior to the actual reperformance which is required by the Test Program Manual. The LSTE concurred with reperformance and initialled the chronological log the following morning.

Although the STE violated the TPM by reperforming the steps without the LSTE concurrence, the events were completely and accurately recorded, correctly performed and subject to post performance review by the LSTE and the Test Program Review Committee.

2. Corrective Action Taken to Avoid Further Noncompliance:

TP 1R76-P001

The operator involved in improperly racking-in the breaker has been reprimanded and other plant operators have been advised of the details of this event.

To ensure that safety system breakers are not rendered inoperable as a result of incomplete rack-in, post fuel load operating procedures require independent verification of the racking-in of safety related breakers. In addition, prior to loading fuel, system electrical lineups will be conducted, which contain specific steps requiring checking the switches for the charging spring motors prior to declaring equipment operable. These actions are considered adequate to prevent recurrence because the charging spring motor switch is located inside the breaker cabinet and is operated only when the breaker is racked-out.

TP 1C71-P001 and TP IM51-P001

The Test Section General Supervising Engineer has met with all System Test Engineers and stressed the importance of strict adherence to CEI policy and program requirements regarding verification signatures and the use of Test Exceptions and Test Changes.

3. Date When Full Compliance Will be Achieved:

Full compliance has been achieved.