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Al Kaplan

VICE PRESIDENT
NUCLEAR GROUP

January 8, 1988
PY-CEI/NRR-0763 L

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

Perry Nuclear Power Plant
Docket No. 50-440
Response to Notices of Violation
50-440/87016-01 and -02

Gentlemen:

This letter acknowledges receipt of the Notices of Violation contained within Inspection Report 50-440/87016 dated December 10, 1987. Your report identified areas examined by Messrs. K. A. Connaughton, G. F. O'Dwyer and Ms. S. D. Eick during their inspection conducted from August 13 through October 19, 1987 at the Perry Nuclear Power Plant. Our response to Notices of Violation 50-440/87016-01 and -02 is enclosed. Please feel free to contact me should you have any additional questions.

Very truly yours,

Al Kaplan
Vice President
Nuclear Group

AK:cab

Attachment

cc: K. Connaughton
T. Colburn
USNRC Region III

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50-440/87016-01

Restatement of the Violation

10 CFR 50, Appendix B, Criterion V, as implemented by the PNPP Quality Assurance Plan, Section 5, requires, in part, that activities affecting quality shall be prescribed by clear and complete documented instructions, procedures and/or drawings, of a type appropriate to the circumstances.

Contrary to the above, Periodic Test Instruction (PTI)-N27-P0001, "Reactor Feedwater Pump Turbine Stop Valve Test" was inappropriate in that it did not require that the feedwater pump controller be operating/placed in the manual mode prior to stroking the associated feedwater pump turbine low pressure stop valve. Performance of the test, as written, on September 9, 1987, resulted in a feedwater pump trip signal to the feedwater control circuitry, an unanticipated feedwater flow transient, and reactor scram due to high reactor water level.

This is a Severity Level IV violation.

Corrective Actions Taken and Results Achieved

On October 5, 1987, PTI-N27-P0001 was revised to require each feedwater pump controller to be placed in manual prior to testing the associated feedwater pump turbine low pressure stop valve. This revision ensures that a turbine trip signal will not cause a flow control signal change during performance of the test.

Corrective Actions to Prevent Recurrence

The above instruction change has been implemented which will prevent recurrence of overfeeding the reactor vessel during low pressure stop valve testing. Additionally, all PTIs which had not been previously performed, were reviewed prior to performance to verify no similar consequences would occur.

Date of Full Compliance

Full compliance has been achieved with the revision to PTI-N27-P0001 (effective October 5, 1987) and the completion of a review of all PTIs which had not been previously performed. In addition, a Design Change Package (DCP) has been generated to utilize the limit switch on the feedwater pump turbine control valves instead of the present use of the limit switch on the low pressure stop valves for the turbine trip sensing logic. This design change is considered an enhancement to the system which will allow testing the low pressure stop valves with the feedwater controllers in automatic operation.

50-440/87016-02

Restatement of the Violation

10 CFR 50, Appendix B, Criterion V, as implemented by the PNPP Quality Assurance Plan, Section 5.0, requires, in part, that activities affecting quality shall be prescribed by clear and complete documented procedures, instructions and/or drawings, of a type appropriate to the circumstances, and shall be accomplished in accordance with these documents.

Plant Administrative Procedure (PAP)-905, "Work Order Process", states, in part, that the Job Traveler (step-by-step instruction) associated with a Work Order shall specify those instances when interface with other CEI organizational elements or suppliers is necessary and how that interface is accomplished.

Contrary to the above, the Job Traveler associated with Work Order 87-733 which authorized and directed the rework of Main Steam Isolation Valve (MSIV) 1B21-F028B in July and August, 1987, did not specify that interface with Power Cutting Incorporated (PCI) was necessary during the valve rework nor did it specify how the interface was to be accomplished. Valve seat lapping and verification of valve seating surface acceptability originally specified in the Job Traveler was not required to be performed following grinding of the valve seat by PCI. Valve seating surface irregularities which remained following grinding by PCI therefore went undetected and contributed to subsequent valve inoperability due to excessive leakage.

This is a Severity Level IV violation.

Response to Violation 87016-02

PAP-0905, "Work Order Process", paragraph 6.2.4.4 requires a Job Traveler to specify how a supplier will interface with the CEI organization performing work. The purpose of this paragraph is to ensure that when a portion of a job task is turned over to a contract organization, the scope of work to be performed is identified, contractor procedures for performing the work are utilized and the work meets all the requirements under the contractors quality program. When the entire job task is to be performed by a CEI organization, the best equipment available for the job and available qualified personnel will be utilized. If contractor personnel are available and qualified to perform a task, they may perform the task under the supervision of CEI and within the requirements of the Perry Quality Assurance Plan.

50-440/87016-02 (continued)

The lapping performed utilizing the PCI equipment under Work Order 87-0733 was in accordance with PAP-0905. Work Order 87-0733 was assigned to Nuclear Construction Services Section (NCSS) to perform rework of MSIV 1B21-F028B. The job traveler included the requirement to lap the seating surface and perform a blue check to verify proper seat contact. Subsequent to performing these steps, minor depressions in the seating surface were identified. The decision was made to use a PCI seat lapping tool with the assistance of PCI technicians to remove the defects. NCSS remained responsible for the entire MSIV workscope. The use of PCI personnel and equipment remained under the supervision of NCSS and met all the NCSS quality requirements. A poppet to seat blue check and a local leak rate test were performed satisfactorily following the PCI work.

The cause of MSIV 1B21-F028B seat leakage was a result of incomplete machining of the valve seating surface and failure to recognize that the seating contact point would move deeper into the seat when the valve was cycled. The PCI tool only laps part of the seating surface at a time and was used on the upper portion of the seat. This included the seat contact area, as verified by the poppet to seat blue check and the successful LLRT performed on the Main Steam Line. Based on the satisfactory tests, no further lapping was considered necessary. As the valve was cycled, the seat contact point moved deeper into the valve and after several cycles reached a depressed area of the valve seat allowing leakage. As a result of this event, verification of a uniform seating surface following lapping has been determined to be necessary. Generic Maintenance Instruction (GMI)-0096 "MSIV Disassembly, Repair and Reassembly Instructions" is being developed to ensure this requirement is met during any future MSIV work.

Corrective Actions to Prevent Recurrence

The seating surface of the 1B21-F028B valve was lapped using a Dexter seat lapping tool and blue checks were performed to verify all defects have been removed. A review of the completed work packages on the MSIVs has been conducted to develop a comprehensive package concerning the lessons learned. The identified improvements for maintenance of MSIVs will be incorporated into GMI-0096 to provide step by step guidance for MSIV maintenance. Specifically, the GMI will require seat polishing and blue checks to ensure the entire seating surface is free of defects following any grinding or machining. Additionally, the engineering staff has been made aware of movement of the seating contact area during valve operation and will utilize the information in any future evaluation.

Date of Full Compliance

The GMI-0096 is scheduled to be completed by January 30, 1988.