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Al Kaplan

VICE PRESIDENT
NUCLEAR GROUP

March 18, 1988
PY-CEI/NRR-0822 L

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

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

Gentlemen:

This letter provides a revision to our response to the Notice of Violation 50-440/87016-02 contained within our letter PY-CEI/NRR-0763L dated January 8, 1988. Inspection Report 50-440/87016 dated December 10, 1987 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. This revision is provided as a result of discussions with the Perry Senior Resident Inspector, in which this clarification was requested.

If there are any further questions, please feel free to call.

Very truly yours,

Al Kaplan
Vice President
Nuclear Group

AK:cab

Attachment

cc: K. Connaughton
T. Colburn
USNRC Region III

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50-440/87016-02

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 contractor 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.

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

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supervision of NCSS and within the CEI 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-F0028B seat leakage was the apparent insufficient 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 machining was sufficient to remove all evidence of the depressions to the extent that a satisfactory blue check and subsequent LLRT were obtained and no further lapping was considered necessary. However, as the valve was cycled, the seat contact point moved deeper into the seat and after several cycles reached a depressed area of the valve seat not discovered during the blue check or leak test, allowing leakage. As a result of this event, verification of a uniform seating surface following lapping with detailed emphasis on the need for the seating surface to be defect free has been determined to be necessary.

Corrective Actions to Prevent Recurrence

The seating surface of the 1B21-F0028B valve was lapped using a Dexter seat lapping tool and a blue check of the entire seating surface was 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 have been incorporated into Generic Maintenance Instruction (GMI)-0096, "MSIV Disassembly, Repair, Reassembly Instruction", to provide step by step guidance for MSIV maintenance. Specifically, the GMI requires seat polishing and proper 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.

Evaluation of the cause of this event, determined that revising the job traveler would not have prevented the MSIV leakage since the seating surface successfully passed the acceptance criteria in place at the time. However, as a result of this event, an enhancement to the work order program, Maintenance Administrative Procedure (MAP)-0203, "Conduct of Maintenance", will be revised to provide additional guidance to the work supervisors for recognizing the need to revise a job traveler if/when the work scope or job conditions are altered. In this instance, the impact on the lapping procedure due to the differences in the use and operation of the PCI tool versus the Dexter tool was not recognized. Additionally, training will be conducted for all maintenance supervisors emphasizing the need for closer supervision whenever vendor or contractor personnel are utilized.

Date of Full Compliance

The GMI-0096 became effective February 9, 1988. The MAP-0203 is scheduled to be revised by April 15, 1988. All work supervisors will receive training by April 1, 1988.