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July 8, 1985

U.S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region V
1450 Maria Lane, Suite 210
Walnut Creek, California 94596-5368

Attention: Mr. J. B. Martin, Regional Administrator

Dear Sir:

Subject: Docket No. 50-206
IE Inspection Report 50-206/85-13
Response to Notice of Violation
San Onofre Nuclear Generating Station, Unit 1

Mr. D. F. Kirsch's letter of June 7, 1985, issued IE Inspection Report 50-206/85-13 and forwarded a Notice of Violation resulting from the April 1 through 19, 1985, inspection conducted by Mr. P. P. Narbut, of activities authorized by NRC License No. DPR-13. The enclosure to this letter provides our response to the Notice of Violation contained in Appendix A to Mr. D. F. Kirsch's letter of June 7, 1985.

If you require any additional information, please so advise.

Sincerely,

Kenneth P. Baskin

Enclosure

cc: F. R. Huey (USNRC Senior Resident Inspector, Units 1, 2 and 3)
A. J. D'Angelo (USNRC Resident Inspector, Unit 1)

IE-01

ENCLOSURE

Response to the Notice of Violation contained in Appendix A to Mr. D. F. Kirsch's letter of June 7, 1985.

Appendix A to Mr. D. F. Kirsch's letter states:

> "10 CFR 50 Appendix B Criterion III states in part that:
>
> 'Design changes including field changes shall be subject to design control measures commensurate with those applied to the original design.'
>
> 'The licensee's design control measures for repair and replacement activities are specified in the SCE Topical Quality Assurance Manual, Appendix IV 'ASME Code Section XI Repair and Replacement Program' which states in part 'Repairs and replacements performed at Unit 1 will implement the requirements of ASME Code Section XI, 1977 Edition through Summer 1978 Addenda....'
>
> "ASME Section XI, IWB 7600 states in part 'Materials shall comply with the requirements to which the original component or part was constructed.' IWA 7210 allows for replacement material provided, 'Modified or altered designs are reconciled with the Owner's Specification through the Stress Analysis Report, Design Report or other suitable method which demonstrates satisfactory use for the specified design and operating conditions....'
>
> "Contrary to the above, on May 16, May 18 and May 20, 1984, respectively, ASTM-A-193 Grade B7 carbon steel body-to-bonnet studs were replaced with significantly weaker ASTM-A-193 Grade B8 stainless steel studs on RHR valves MOV 814, 833 and 813 without performing a design reconciliation to demonstrate satisfactory use for the specified conditions.
>
> "This is a Severity Level IV Violation (Supplement II)."

RESPONSE

Corrective Steps Which Have Been Taken and the Results Achieved

The deficiency noted regarding RHR valves MOV 814, 833 and 813 was caused by failure to implement our existing design change process Procedure SO123-V-4.20, "Preparation and Review of Drawings," which meets the intent of IWA-7210, "Construction Codes." Procedure SO123-V-4.20 requires the performance of an engineering analysis and reconciliation of the change with the component design specifications.

ENCLOSURE (Continued)

RESPONSE (Continued)

This procedure was not adhered to on Maintenance Work Orders 307501, 307503 and 306819 which replaced the original carbon steel studs, which had begun exhibiting signs of corrosion, with the stainless steel studs. This error was a result of an oversight. During the ASME Section XI Traveler planning process, it was not recognized that a material substitution was involved, in that it was not itemized on the traveler; therefore, an engineering analysis, in accordance with IAW 7210, was not performed.

When this situation was recognized, during the week of April 15, 1985, an investigation was immediately initiated to identify all components in which the ASTM-A-193 Grade B8M stainless steel studs had been installed during the Unit 1 Return-To-Service (RTS) effort. Eleven components, in addition to those noted in Appendix A to Mr. Kirsch's letter of June 7, 1985, were identified as not having the required design review verification prior to bolting replacement. An analysis was immediately performed to determine the bolt load stresses on all affected components. The analysis was based on SCE established criteria which was developed using "good engineering practice," since the ASME Boiler and Pressure Vessel Code and ANSI B31.1 do not provide criteria for bolting operational stresses. Several bolts were identified as not meeting the SCE established criteria and were immediately replaced.

Since the stress calculations were based on maximum design stresses, the ASTM-8-193 Grade B8M stainless steel bolts did not affect the operability of the components in question.

As corrective action, the subject bolts were replaced with carbon steel bolts on May 10, 1985. To improve procedural compliance, SCE Management has had an ongoing program, since the bolting installation, to emphasize the importance of adherence to the established design change process and for verbatim compliance with procedures.

Corrective Steps Which Will be Taken to Avoid Further Items of Noncompliance

Formal maintenance planner training will be developed to include the interaction between maintenance activities and Station design change procedures. This training will reinforce the need for adherence to the established design change process and for all plant design changes to be reviewed by Engineering.

The ASME Section XI Traveler review process will be enhanced to include drawing reviews to assure that no material substitution occurs without appropriate design authorization. Several components in which the ASTM-A-193 Grade B8M stainless steel studs had been installed during the Unit 1 RTS effort were not subsequently replaced, since they met the SCE established stress criteria. These components have been evaluated to identify any existing design document conflicts which will then be dispositioned as appropriate.

ENCLOSURE (Continued)

Corrective Steps Which Will be Taken to Avoid Further Items of Noncompliance (Continued)

This condition is considered an isolated occurrence; however, Quality Assurance will perform selective examinations of SONGS Units 1, 2 and 3 appropriate maintenance orders to ensure material changes were properly processed.

Date When Full Compliance Will be Achieved

Full compliance was achieved on May 10, 1985, when the body-to-bonnet stainless steel studs for MOV-814, MOV-833 and MOV-813 were replaced with the original carbon steel bolting.