

REVISED FINAL REPORT
ON THE CRACKING OF STAINLESS STEEL
LINER PLATE MATERIAL USED IN CONSTRUCTION OF
SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 & 3

INTRODUCTION

This report is submitted pursuant to 10CFR50.55 (e) (3). It describes action taken to resolve construction deficiencies related to cracking discovered in austenitic stainless steel liner plate used in the construction of spent fuel handling and storage facilities for San Onofre, Units 2 and 3.

BACKGROUND

By letter dated August 31, 1977, Edison submitted a final report concerning cracking of certain stainless steel plates used in the spent fuel handling and storage facilities. A program was described in that report for correction of noted problems. Since the date of submittal of that report, certain changes have been made in our crack monitoring and investigation plans. These changes are based on further evaluation and experience and are described in the following paragraphs.

DISCUSSION

Section 6, Subsection C, of the final report indicated that many techniques were being considered for monitoring for growth of cracks with time. It stated that automatic ultrasonic testing was deemed most appropriate for the situation. Further evaluation disclosed that liquid penetrant testing was the preferred examination method instead, and it was used for monitoring for growth of cracks at 30-day intervals for 5 months.

The results of this crack monitoring showed no crack propagation of the original test indications. In addition, areas selected for monitoring where a high potential residual stress could develop due to field welding operations showed no indications of crack initiation.

Section 8 of the final report discussed the potential for cracking of other stainless steel at the site based on the evaluation of cracking of the liner plate. It stated that the present assessment was that the possibility for such cracking was remote due to the absence of excessive residual stresses such as were present in the liner plate. Nevertheless, it also stated that a general program to verify that assessment was being developed.

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Further development of such a program led to the conclusion that examinations, in addition to those which are part of the construction process, are unwarranted. Accordingly, a separate and additional program to monitor for such cracking will not be conducted.

CONCLUSION

The program for monitoring of cracks in stainless steel plate material was modified as described above. This modification does not affect the correction of previously noted quality problems or the safety-related aspects of the spent fuel handling and storage facilities with respect to their intended design function.