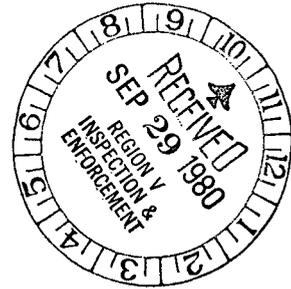


Southern California Edison Company



P.O. BOX 800
2244 WALNUT GROVE AVENUE
ROSEMEAD, CALIFORNIA 91770

September 17, 1980



U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement
Region V
1990 North California Boulevard
Suite 202, Walnut Creek Plaza
Walnut Creek, California 94596

Attention: Mr. R. H. Engelken, Director

DOCKET No. 50-206
SAN ONOFRE - UNIT 1

Dear Sir:

This letter describes a reportable occurrence involving inadvertent boron dilution in the reactor coolant system. Submittal is in accordance with the reporting requirements of Section 6.9.2.b of Appendix A to Provisional Operating License DPR-13.

On September 1, 1980, in connection with the current steam generator tube inspection and repair program, work was underway to remove a tube from "C" steam generator for further inspection. Reactor Coolant System water level was at mid-loop. The secondary side of "C" steam generator had been previously drained. A non-watertight plug was installed in the nozzle of the generator to prevent foreign material from entering the Reactor Coolant System (RCS). Upon tube removal, water streamed from the secondary side of the steam generator from the opening, impinging on the channel head manway edge. A portion of the water was observed to swirl into the channel head and enter the RCS. The remaining water spilled out of the open manway onto the deck. The source of the water in the secondary side of the generator has subsequently been determined to be feedwater from the Feedwater and Condensate system (pressurized at that time to 100 psig for corrosion control) leaking past a block valve downstream of the feedwater regulator valve.

Boron concentration was immediately sampled with sampling continuing at two hour intervals for a period of 6 hours. The results of the boron analyses indicate that a maximum dilution of 35 ppm occurred during this event. This represents a positive reactivity insertion of 44¢. Containment integrity was not established as required by Technical Specification 3.6.B(3).

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September 17, 1980

During investigation and evaluation of this incident, daily RCS boron analyses were reviewed to establish a baseline boron concentration. During the refueling, a conservative boron concentration of approximately 3500 ppm had been established. However, the results of the above mentioned evaluation show a gradual dilution of the RCS corresponding, over a period of time, to routine automatic makeup.

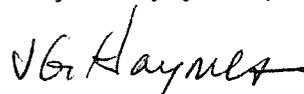
A review of the makeup process showed a maximum boron concentration of approximately 2900 ppm in the blended makeup at the prescribed makeup rate of 45GPM. Since RCS boron concentration was greater than 3000 ppm, a slow continuing dilution occurred. The lowest boron concentration which has occurred, since refueling was completed, is 3002 ppm (which occurred during a prior dilution event described in LER 80-29). At no time, since refueling has the RCS boron concentration dropped below 2400 ppm which represents a 10% shutdown margin as required by the technical specifications.

The Standard Technical Specifications pertaining to RCS dilution when containment integrity is not established are being reviewed and evaluated for possible application at San Onofre, Unit 1. If appropriate, a proposed change to the San Onofre Technical Specifications will be submitted to incorporate applicable portions of the Standard Technical Specifications.

Boron concentration will now be controlled with a revised makeup process which will preclude similar type dilution events. Other actions taken include the installation of inflatable watertight seals in the steam generator nozzles and the draining of the feedwater lines to the steam generators.

If you have any questions, or desire further information on this matter, please contact me.

Very truly yours,



J. G. Haynes
Manager of Nuclear Operations

Enclosure: Licensee Event Report 80-034

cc: L. Miller - USNRC Resident Inspector
Director
Division of Reactor Operations Inspection
c/o Distribution Services Branch
Division of Document Control, Administration
Washington, D.C. 20555