

*Southern California Edison Company*

**SCE**

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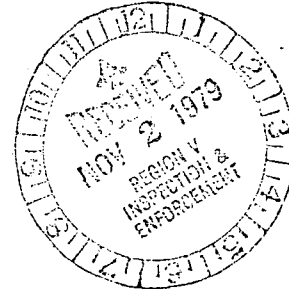
ROSEMEAD, CALIFORNIA 91770

A. ARENAL  
VICE PRESIDENT

TELEPHONE  
213-572-1476

October 31, 1979

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



Dear Mr. Engelken:

Subject: Docket Nos. 50-361 and 50-362  
San Onofre Nuclear Generating Station, Units 2 and 3

In a letter from your office dated October 2, 1979, we were requested to respond to a Notice of Violation resulting from an inspection of San Onofre Units 2 and 3 construction activities which took place during the period August 13-31, 1979. Our response is enclosed.

I trust the enclosure responds adequately to all aspects of the Notice of Violation. If you have any questions, or if we can provide additional information, please let me know.

Very truly yours,

*A. Arenal*

Enclosure

cc: R. J. Pate (NRC-San Onofre 2&3)

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RESPONSE TO NOTICE OF VIOLATION  
DATED OCTOBER 2, 1979

San Onofre Nuclear Generating Station, Units 2 and 3

Response to the Notice of Violation is provided below. A statement of the condition described by the Notice is given for reference.

NOTICE OF VIOLATION

"Appendix B of 10CFR50, Criterion V, states in part that, Activities affecting quality shall be prescribed by documented instructions ... and shall be accomplished in accordance with these instructions... Appendix A to the PSAR commits to comply with the requirements of 10CFR50, Appendix B.

Contrary to the above, the requirement of construction specification CS-E01, Revision 3, 'Installation of Electrical Cables in Conduit and Duct Banks' was not followed when the calculations of the maximum expected tension for the pull were made. A cable pull (No. EP-151) through a conduit and duct bank was done in one continuous operation. The calculations for the conduit and duct bank were not added to determine the need for a tension limiting puller as required by the specification. The calculations were reviewed by the NRC inspector on August 30, 1979 and was found to be in error.

This is an infraction."

RESPONSE

1. Corrective Actions Which Have Been Taken and Results Achieved

A detailed review of all safety-related cable pulling calculations has been conducted and a comparison to installation techniques has been made. It was determined that the subject calculation was the only case in which components of the tension calculation were not properly summed.

The tension and sidewall pressure calculations for cable pull No. EP-151 (Scheme Cable number 2AA0404P1) have been reviewed and corrected. The tension and sidewall pressure limits of the

corrected calculation were less than 95% of the maximum allowable tension. Therefore, the use of a tension measuring device during installation of the subject cable scheme was not required by CS-E01.

The accessible portions of scheme cable number 2AA0404P1 were inspected by Bechtel Quality Control personnel during the pull, and no signs of damage were identified.

To strengthen procedural controls and provide concise direction to cognizant personnel, a Field Change Request (FCR) to Construction Specification CS-E01, "Installation of Electrical Cables in Conduit and Duct Banks," Revision 3 has been issued as follows:

"When a cable is pulled in one continuous operation between any two points, the tensions are additive, even if a discontinuity such as a cable tray or man-hole exists between conduits in the run."

A training session for cognizant cable pulling Field Engineers has been conducted. Personnel have been instructed on the content of Construction Specification CS-E01, relating to tension and sidewall pressure formulas; all conditions requiring calculations; use of Dynamometers; and additive calculations for "Broken Pulls."

2. Corrective Actions Which Will Be Taken

Surveillance has been scheduled on cable pulling operations periodically to assure proper application of calculation in future installations.

3. Date By Which Full Compliance Will Be Achieved

Full compliance was achieved on September 28, 1979, when calculations were reviewed and corrected; procedural controls strengthened; and training classes conducted.