Docket Nos. 50-361/362

50.55(e) Report

SCE

Southern California Edison Company

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April 5, 1982

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

Dear Mr. Engelken:

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

In a letter to your office dated March 9, 1982 we identified a condition which we consider reportable in accordance with 10CFR50.55(e). The condition involves a potential deterioration of carbon-type electrical resistors in Model 9270 Lumigraph instrument indicators which could, over a period of time, cause the indicators to malfunction.

Enclosed in accordance with 10CFR50.55(e) are twenty-five (25) copies of a Final Report entitled, "FINAL REPORT ON SIGMA MODEL 9270 INDICATOR RESISTOR PROBLEM."

If you have any questions regarding this report, we would be pleased to discuss this matter with you at your convenience.

Very truly yours,

Enclosure
cc: Victor Stello (NRC, director I&E)
A. E. Chaffee (NRC, San Onofre Units 2 and 3)

FINAL REPORT ON SIGMA MODEL 9270 INDICATOR RESISTOR PROBLEM

San Onofre Nuclear Generating Station
Units 2 and 3

INTRODUCTION

This report is submitted pursuant to 10CFR50.55(e)(3). It describes a condition identified by the equipment supplier, International Instruments, a division of Sigma Instruments, Inc., of Orange, Connecticut. This report includes a description of the deficiency, analysis of the safety implications, and a summary of the corrective actions to be taken. By letter dated March 9, 1982, Edison confirmed notification to the NRC of this potentially reportable condition for San Onofre Units 2 and 3.

BACKGROUND

International Instruments, a division of Sigma Instruments, Inc., notified Bechtel Power Corporation by letter dated December 10, 1981, of a potential problem with the Model 9270 Lumigraph indicators supplied to San Onofre Units 2 and 3. The potential problem was described as incorrectly specified resistors within the indicator circuitry, which could result in indicator malfunction after one to many years of service. The indicators are installed in control panels located in the main control room, and on the remote shutdown panel.

DISCUSSION

The following discussion is responsive to 10CFR50.55(e)(3).

DESCRIPTION OF THE DEFICIENCY

As described in the vendor's letter, specific resistors, due to their wattage rating and construction (27Kohm, one-watt, carbon composition), can overheat and change value. The result can be display malfunction. The vendor states that it will take one to many years of service before the possible malfunction can occur.

ANALYSIS OF SAFETY IMPLICATIONS

As identified in this report, the Sigma Model 9270 indicators are used in Quality Class 2, Seismic Category 1 applications. Included in this service is safety-related display instrumentation that is available to the operator to allow him to adequately monitor conditions in the containment and safety-related process systems throughout all operating conditions of the plant so that he may perform all required manual actions important to plant safety. Also included are indicators used in post accident monitoring instrumentation.

Malfunction of the Sigma Model 9270 indicators as described herein, may prevent the operator from receiving accurate display information required in order to assess the need for manual actions important to plant safety. The vendor's statement that the potential problem will not appear before one to many years of service indicates that short term malfunctions should not be expected.

CORRECTIVE ACTION

Resolution of the potential problem consists of replacing the present resistors with 27Kohm, 3-watt, wire-wound resistors. All work will be completed prior to full power operation for Unit 2 and prior to fuel load for Unit 3.

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