

Southern California Edison Company



P. O. BOX 800

2244 WALNUT GROVE AVENUE

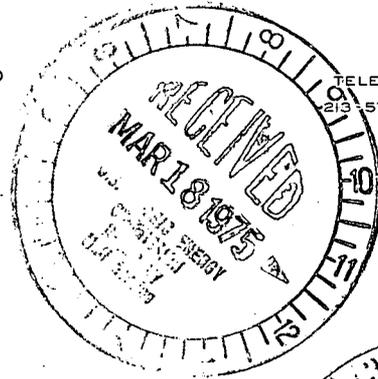
ROSEMEAD, CALIFORNIA 91770

DAVID J. FOGARTY
VICE PRESIDENT

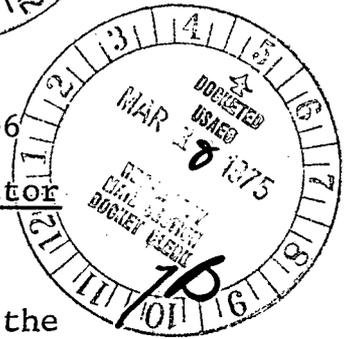
TELEPHONE
213-572-2796

March 12, 1975

Mr. Angelo Giambusso, Director
Division of Reactor Licensing
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Code: BETH 042
Washington, D. C. 20545



Docket Number 50-206
San Onofre Unit 1
No. 1 Diesel Generator



Dear Sir:

This report describes an incident experienced at the San Onofre Nuclear Generating Station concerning the No. 1 diesel generator.

In accordance with Station Order S-0-19 the two diesel generators are tested semi-annually. These tests are in addition to the weekly and refueling interval testing required by Technical Specifications 4.4 A and B. The semi-annual test requires that both diesel generators be operated at rated load (600 KW) for one hour. During this test, which was conducted on February 12, 1975, the No. 1 diesel generator tripped from loss of fuel after 45 minutes of operation.

The diesel fuel system consists of an underground fuel storage tank, a 50 gallon day tank at an elevation above the engine, an engine driven fuel transfer pump to lift fuel from the storage tank to maintain a constant level in the day tank and two engine driven injection pumps taking suction from the day tank and supplying the cylinders. A low day tank level alarm annunciates at a local panel along with other diesel generator alarms (overspeed, high temperature, etc.) A common master alarm in the control room is initiated when any one of these conditions exist.

During the course of the investigation, it was determined that the transfer pump originally provided with the No. 1 diesel generator was of lower capacity than the one provided with the No. 2 diesel generator. The No. 1 diesel transfer pump apparently did not have sufficient capacity to keep the day tank

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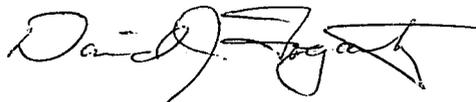
full at rated load. Since both diesels are identical, the transfer pumps should be the same capacity. The difference in capacities of the two transfer pumps had not been apparent previously because the exterior shape and dimensions of the two pumps are identical.

Despite a thorough investigation, it was not conclusively determined why the No. 1 diesel tripped on this occasion from loss of fuel after only 45 minutes of operation. Additionally, the No. 1 diesel generator had been operated at rated load for one hour on a number of previous occasions without loss of fuel. It is felt, however, that (1) a series of other periodic tests which were performed prior to the full load test resulted in excessive fuel usage and lowered the fuel level in the day tank prior to the start of the semi-annual full load test (2) the capacity of the transfer pump was not sufficient to maintain level in the day tank with the diesel operating at full load (600 KW), and (3) alarms from previous testing prevented reinitiation of the master alarm in the control room when a low fuel level occurred in the day tank.

A transfer pump of the size used on No. 2 diesel generator was obtained and installed on the No. 1 diesel generator. Testing at full load indicated that the new transfer pump has adequate capacity for extended full load operation.

In accordance with Technical Specification requirements, the No. 2 diesel generator remained operable during the period the No. 1 diesel generator was out of service. The fuel pump on No. 2 diesel generator was checked and found to be of the proper size and adequate capacity.

Sincerely,



cc: Director, Region V
Regulatory Operations Office