*Southern California Edison Company*

SAN ONOFRE NUCLEAR GENERATING STATION
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March 1, 1985

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

Attention: Mr. J. B. Martin, Regional Administrator

Dear Sir:

Subject: Docket Nos. 50-361 and 50-362
Diesel Generator Annual Report - 1984
San Onofre Nuclear Generating Station, Units 2 and 3

Pursuant to Section 6.9.1.4 of Appendix A, Technical Specifications to Facility Operating License Nos. NPF-10 and NPF-15 for San Onofre Nuclear Generating Station Units 2 and 3, this Special Report is being submitted in accordance with Surveillance Requirement 4.8.1.1.3. This Surveillance Requirement requires that a Special Report be submitted to the Commission for all diesel generator failures, valid and invalid, as determined by Regulatory Position C.2.e of Regulatory Guide 1.108. In addition, this report includes two failures in 1983 not previously reported.

Please contact us if we can be of further assistance.

Sincerely,

J. G. Haynes

Enclosure

cc: F. R. Huey (USNRC Resident Inspector, Units 1, 2 and 3)
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

U.S. Nuclear Regulatory Commission
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Institute of Nuclear Power Operations (INPO)



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DIESEL GENERATOR REPORT
SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
UNIT NO. 2 AND 3, DOCKET NOS. 50-361 AND 50-362

EVENT DATE: December 11, 1984

The following information is provided in accordance with Technical Specification Surveillance Requirement 4.8.1.1.3 and Regulatory Position C.3.b of Regulatory Guide 1.108:

1. The diesel generator involved was 2G003.

2. This was not considered a valid test or failure of the diesel generator.

3. The failures occurred during a scheduled maintenance overhaul, planned to coincide with the refueling outage and therefore were not considered valid failures. On 12/11/84 the generator failed to start during maintenance testing at 1507, 1720 and 1735. Investigation revealed that the synchro-start relay had failed, and had drifted out of calibration. The relay was replaced and the diesel was started at 0100 on 12/12/84. It was noted that the fuel rack did not move into position as fast as normally expected, although it was within the required time period.

   After the diesel had been secured it failed an attempted restart at 1023. An investigation revealed that the air booster cylinder hydraulic hoses had been incorrectly installed in a reversed position during the maintenance overhaul, and had caused the slower than normal starting time, and failure to start. The hoses were correctly installed and the diesel started successfully at 0322 on 12/14/84.

4. Corrective action was taken to clean and repair the faulty relay. The error in installing the air booster cylinder hoses was made because the contract maintenance personnel did not adhere to the procedure, which clearly identified the need to mark the hoses for correct installation.

5. The diesel generator was removed from service for the scheduled maintenance and inspections from 1355 on 12/10/84 through 2040 on 12/15/84. During this time period it was started for maintenance testing several times, however, it was not considered to be operable for automatic starting.

6. The test interval has remained at 31 days.

7. The test schedule remained in conformance with the schedule of Regulatory Position C.2.d of Regulatory Guide 1.108.

DIESEL GENERATOR REPORT
SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
UNIT NO. 2 AND 3, DOCKET NOS. 50-361 AND 50-362

EVENT DATE: June 16, 1984

The following information is provided in accordance with Technical Specification Surveillance Requirement 4.8.1.1.3 and Regulatory Position C.3.b of Regulatory Guide 1.108:

1. The diesel generator involved was 3G002.

2. This was not considered a valid test or failure of the diesel generator.

3. During maintenance testing the diesel was started and then automatically tripped after 20 seconds on 6/16/84 at 2115, 2119, 2135 and 2245, and on 6/17/84 at 0127.

4. The cause was determined to be a failure of the underexcitation trip relay. It was temporarily removed from the circuit, and subsequently replaced. The diesel was successfully started and run at 1520 on 6/17/84.

5. The diesel was unavailable for autostart from 2115 on 6/16/84 to 1925 on 6/17/84. The underexcitation trip relay is bypassed by a safeguards actuation signal such that the diesel would have been available if required.

6. The test interval remained at 31 days as specified by Technical Specification Table 4.8-1.

7. This test interval is in conformance with Regulatory Position C.2.d of Regulatory Guide 1.108.

DIESEL GENERATOR REPORT
SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
UNIT NO. 2 AND 3, DOCKET NOS. 50-361 AND 50-362

EVENT DATE: February 3, 1984

The following information is provided in accordance with Technical Specification Surveillance Requirement 4.8.1.1.3 and Regulatory Position C.3.b of Regulatory Guide 1.108:

1. The diesel generator involved was 3G002.

2. This was the third valid failure of a diesel generator of the same design and size in the last 100 tests at Unit 3.

3. The diesel generator failed to manually start during the monthly surveillance test at 1329 on 2/3/84.

4. A contact in the starting relay did not close, and the relay was subsequently replaced. At 0350 on 2/4/84 the diesel was successfully restarted.

5. The diesel was not available for autostart during this event from 1329 on 2/3/84 to 0350 on 2/4/84.

6. The test interval was increased to 7 days in conformance with Technical Specification Table 4.8-1.

7. This test interval is in conformance with Regulatory Position C.2.d of Regulatory Guide 1.108.

DIESEL GENERATOR REPORT
SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
UNIT NO. 2 AND 3, DOCKET NOS. 50-361 AND 50-362

EVENT DATE: November 23, 1983

The following information is provided in accordance with Technical Specification Surveillance Requirement 4.8.1.1.3 and Regulatory Position C.3.b of Regulatory Guide 1.108:

1. The diesel generator involved was 3G003.

2. This was the second valid failure of a diesel generator of the same design and size in the last 58 tests at Unit 3.

3. When started for the 31 day surveillance test on 11/23/83, the diesel tripped at 0157 with a low lube oil pressure alarm indicated. Subsequent investigation revealed that the "B" phase immersion heater had failed, however the diesel should have remained operable at the reduced lube oil temperatures. A leaking "A" Train air start pilot operated valve was found to have caused a reduction in starting air pressure and caused both air compressors to run continuously. The continuous operation of the air compressors contributed to damaging the compressor second stage head gaskets and required that both compressors be removed from service for replacement of the head gaskets.

4. The equipment failures were determined to be insufficient to cause the trip. The actual cause of the trip cannot be determined. The failed immersion heater and air start pilot was cleaned and replaced, and the diesel was returned to service at 0525 on 11/24/83.

5. The diesel was not available for automatic start from 0157 on 11/23/84 to 0525 on 11/25/83.

6. The test interval was increased to 14 days in accordance with Technical Specification Table 4.8-1.

7. The test interval is in conformance with Regulatory Position C.2.d of Regulatory Guide 1.108.

DIESEL GENERATOR REPORT
SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION
UNIT NO. 2 AND 3, DOCKET NOS. 50-361 AND 50-362

EVENT DATE: September 12, 1983

The following information is provided in accordance with Technical Specification Surveillance Requirement 4.8.1.1.3 and Regulatory Position C.3.b of Regulatory Guide 1.108.

1. The diesel generator involved was 2G003.

2. This was not considered a valid test or failure of the diesel generator.

3. During the monthly surveillance test on 9/12/83 at 1155, the diesel tripped on high engine coolant temperature, prior to reaching the normal trip setpoint. Investigation revealed that three of the switches were set about 30 degrees lower than the normal trip setpoint.

4. The temperature switches were recalibrated, and the miscalibration was reviewed with the personnel involved. The diesel surveillance test was satisfactorily completed at 1855 on 9/12/83.

5. The diesel generator was removed from autostart capability from 1118 to 1855 on 9/12/83. The temperature trip is not critical and is bypassed, such that the diesel remains operable during a safeguards actuation signal.

6. The surveillance interval remained at 31 days as specified by Technical Specification Table 4.8-1.

7. This test interval is in conformance with Regulatory Position C.2.d of Regulatory Guide 1.108.

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