

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|----|----|----|----|---|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---|---|---|---|--|--|--|--|--|-------------|--|--|--|--|--|--|--|--|--|
| CONTROL BLOCK | | | | | | | | | | (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | C | A | S | 0 | S | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | 5 | | | | | | | | | | | | | | | |
| LICENSEE CODE | | | | | | | | | | LICENSE NUMBER | | | | | | | | | | LICENSE TYPE | | | | | | | | | | CAT 58 | | | | | | | | | |
| CONT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 01 | L | 0 | 5 | 0 | 0 | 0 | 3 | 6 | 1 | 7 | 1 | 2 | 0 | 4 | 8 | 3 | 8 | 0 | 1 | 0 | 4 | 8 | 4 | 9 | | | | | | | | | | | | | | | |
| REPORT SOURCE | | | | | | | | | | DOCKET NUMBER | | | | | | | | | | EVENT DATE | | | | | | | | | | REPORT DATE | | | | | | | | | |
| EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 02 | On December 4, 1983, with Unit 2 in Mode 5, Reactor Trip Breaker (RTB) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 03 | surveillance testing was in progress. During this testing, the under- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 04 | voltage (UV) trip devices of RTB's #1 and #4 exhibited scattered and | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 05 | unacceptable response times. Public health and safety were not affected | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 06 | since the shunt trip feature functioned properly and would have performed | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 07 | the trip function if called upon to do so. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 09 | I | A | E | A | C | K | T | B | R | K | A | Z | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LER NO. REPORT NUMBER EVENT YEAR SEQUENTIAL REPORT NO. OCCURRENCE CODE REPORT TYPE REVISION NO. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 8 | 3 | 1 | 5 | 3 | 1 | 3 | X | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NFRD-4 FORM SUB PRIME COMP. SUPPLIER COMPONENT MANUFACTURER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | C | X | Z | Z | 0 | 0 | 0 | 0 | N | Y | N | G | 0 | 8 | 0 | | | | | | | | | | | | | | | | | | | | | | | | |
| CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | The RTB's were removed from service and replaced with spares. Mainte- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | nance was performed on RTB's #1 and #4 on December 8 and 12, 1983. UV | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | response times were acceptable in both cases, and the breakers were | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | placed in spares and will be maintained in their surveillance and mainte- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | nance schedules. RTB investigations continue. See also LER 83-125 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (Docket No. 50-361). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FACILITY STATUS POWER OTHER STATUS METHOD OF DISCOVERY DISCOVERY DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | G | 0 | 0 | 0 | NA | B | Surveillance Testing | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY LOCATION OF RELEASE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16 | Z | Z | NA | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17 | 0 | 0 | 0 | Z | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PERSONNEL INJURIES NUMBER DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18 | 0 | 0 | 0 | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19 | Z | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PUBLICATION ISSUED DESCRIPTION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20 | N | NA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NAME OF PREPARER J. G. HAYNES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PHONE 714/492-7700 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

840116019B 840104
PDR ADOCK 05000361
S PDR

NRC USE ONLY

RECEIVED
NRC

Southern California Edison Company

SAN ONOFRE NUCLEAR GENERATING STATION

P.O. BOX 128

SAN CLEMENTE, CALIFORNIA 92672

REGION VISE

SCE

TELEPHONE
(714) 492-7700

J. G. HAYNES
STATION MANAGER

January 4, 1984

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 No. 50-361
Informational Report
Licensee Event Report No. 83-153
San Onofre Nuclear Generating Station, Unit 2

Reference: Letter, J. G. Haynes (SCE) to J. B. Martin (NRC),
"14-Day Follow-Up Report, Licensee Event Report 83-125,"
dated October 18, 1983

This report is submitted to provide information involving operation of Reactor Trip Breakers (RTB's) on their undervoltage (UV) trip devices. (As in the past, the breakers continue to function acceptably using the shunt trip device.) Although this occurrence was determined to be not reportable under the Unit 2 Technical Specifications, we are submitting this report to inform you of the circumstances involved and corrective actions taken.

On December 4, 1983, with Unit 2 in a Mode 5 maintenance outage and during independent measurement and verification of UV trip devices per our Procedures SO23-II-11.161 and SO23-II-11.162 prior to the scheduled RTB maintenance as described in the reference, the UV trip devices for RTB #1 and #4 exhibited scattered and procedurally unacceptable response times. The response times (in order) were 74 msec, 100 msec and 115 msec for RTB #1. Response times for RTB #4 were 72 msec, 83 msec and 184 msec. Our Procedure SO23-II-11.162 contains an acceptance criterion of 82 msec, which was developed from baseline testing and consideration of the Combustion Engineering (CE) guideline of 100 msec.

IE-22

January 4, 1984

No Action Statements were entered, since the Control Element Assembly (CEA) drive system was not capable of CEA withdrawal. The RTB's were immediately removed from service and replaced with spares. They were then subjected to bench testing with and without their electrical spiking suppression diodes. Response time testing for both RTB's was found to be acceptable. Normal maintenance was performed on both RTB's. Post-maintenance time response testing for RTB #1, completed on December 8, 1983, was determined to be 68 msec, 59 msec and 64 msec. Post-maintenance time response testing for RTB #4 was determined to be 55 msec, 60 msec and 57 msec.

Though all times determined in the post-maintenance surveillance completed on December 8, 1983, were found to be within the 82 msec criterion, maintenance was performed again since the times were slightly scattered. In addition to the normal maintenance, the armature to rivet clearances were also verified. Post-maintenance surveillance, completed on December 12, 1983, determined UV response times of 68 msec, 66 msec and 67 msec for RTB #1. UV response times for RTB #4 were determined to be 57 msec, 57 msec and 56 msec.

Since no problems were encountered during the bench testing or the post-maintenance response time testing, the breakers were evaluated as acceptable. They have been returned to service as designated spares and will be maintained in the normal surveillance and maintenance intervals.

In addition, our investigation of the breakers and related data is continuing, with the support and assistance of SCE and CE organizations and the vendor, as appropriate. We will continue to keep you abreast of this and any conclusions in regard to the cause of the anomalies observed as we continue our investigation.

Public health and safety were not affected since the shunt trip feature functioned properly and would have performed the trip function if called upon to do so.

If you require any additional information, please so advise.

Sincerely,

W. C. Haynes/HBR

Enclosure: LER No. 83-153

January 4, 1984

cc: A. E. Chaffee (USNRC Resident Inspector, Units 1, 2 and 3)
J. P. Stewart (USNRC Resident Inspector, Units 2 and 3)

U. S. Nuclear Regulatory Commission
Office of Inspection and Enforcement

U. S. Nuclear Regulatory Commission
Division of Technical Information and Document Control

Institute of Nuclear Power Operations (INPO)