

REACTOR BREAKERS UNDERVOLTAGE AND SHUNT TRIP DEVICE CIRCUIT TEST

Attach 12

PMO NUMBER 819016

DATA RECORD

UNIT 3

Test Shop File No. S023-II-2214-TSP

6.1 Communications verified, (prerequisite).

Wm Spillman 13-1-83  
 Technician Date

6.2 Plant status and CEDM system lineup verified,  
 (prerequisite).

Wm Spillman 13-1-83  
 Technician Date

UNDER VOLTAGE TRIP DEVICE

Reactor Breaker	Closed Indication	Trip	Open Indication	Alarm In	Breaker Closed	Alarm Reset
TCB-1	OK	OK	OK	OK	OK	OK
TCB-2	OK	OK	OK	OK	OK	OK
TCB-3	OK	OK	OK	OK	OK	OK
TCB-4	FAILED SEE REMARKS					
TCB-5	OK	OK	OK	OK	OK	OK
TCB-6	OK	OK	OK	OK	OK	OK
TCB-7	OK	OK	OK	OK	OK	OK
TCB-8	OK	OK	OK	OK	OK	OK
TCB-9	OK	OK	OK	OK	OK	OK

SHUNT TRIP DEVICE

Reactor Breaker	Closed Indication	Trip	Open Indication	Alarm In	Breaker Closed	Alarm Reset
TCB-1	WHP	WHP	WHP	WHP	WHP	WHP
TCB-2	WHP	WHP	WHP	WHP	WHP	WHP
TCB-3	WHP	WHP	WHP	WHP	WHP	WHP
TCB-4	WHP	WHP	WHP	WHP	WHP	WHP
TCB-5	WHP	WHP	WHP	WHP	WHP	WHP
TCB-6	WHP	WHP	WHP	WHP	WHP	WHP
TCB-7	WHP	WHP	WHP	WHP	WHP	WHP
TCB-8	WHP	WHP	WHP	WHP	WHP	WHP
TCB-9	WHP	WHP	WHP	WHP	WHP	WHP

6.6 Restoration

6.6.1 Restoration Completed

W.M. Sullivan / 3-1-83  
 Technician / Date

Michael W. Allhart <sup>3/1/83</sup> ~~1-3/83~~  
 Second Qualified Person / Date

6.8 REMARKS

NO M.G. SETS RUNNING  
TCB 4 FAILED UNDER VOLTAGE TRIP TEST (NOT LATTER)  
RISER # 3-243 WORKORDER # 24228

TECHNICIAN(S) W.M. Sullivan DATE 3-1-83

Michael W. Allhart DATE 3/1/83

DATE \_\_\_\_\_

DATE \_\_\_\_\_

ELECTRICAL TEST SUPERVISOR DATE \_\_\_\_\_

SUPERVISOR OF ELECTRICAL TEST DATE \_\_\_\_\_

I&C ENGINEERING REPRESENTATIVE DATE \_\_\_\_\_

REACTOR BREAKERS UNDERVOLTAGE AND SHUNT TRIP DEVICE CIRCUIT TEST

Attachment 13

PMO NUMBER 219016

DATA RECORD

UNIT 2

Test Shop File No. S023-II-11-267-TSP

6.1 Communications verified, (prerequisite).

*W. Spillman* / 3-8-83  
 Technician Date

6.2 Plant status and CEDM system lineup verified,  
 (prerequisite).

*W. Spillman* / 3-8-83  
 Technician Date

UNDER VOLTAGE TRIP DEVICE

Reactor Breaker	Closed Indication	Trip	Open Indication	Alarm In	Breaker Closed	Alarm Reset
TCB-1	See Comments					
TCB-2	WHS	WHS	WHS	WHS	WHS	WHS
TCB-3	WHS	WHS	WHS	WHS	WHS	WHS
TCB-4	See Comments					
TCB-5	WHS	WHS	WHS	WHS	WHS	WHS
TCB-6	See Comments					
TCB-7	WHS	WHS	WHS	WHS	WHS	WHS
TCB-8	WHS	WHS	WHS	WHS	WHS	WHS
TCB-9	WHS	WHS	WHS	WHS	WHS	WHS

SHUNT TRIP DEVICE

Reactor Breaker	Closed Indication	Trip	Open Indication	Alarm In	Breaker Closed	Alarm Reset
TCB-1	WHP	WHP	WHP	WHP	WHP	WHP
TCB-2	WHP	WHP	WHP	WHP	WHP	WHP
TCB-3	WHP	WHP	WHP	WHP	WHP	WHP
TCB-4	WHP	WHP	WHP	WHP	WHP	WHP
TCB-5	WHP	WHP	WHP	WHP	WHP	WHP
TCB-6	WHP	WHP	WHP	WHP	WHP	WHP
TCB-7	WHP	WHP	WHP	WHP	WHP	WHP
TCB-8	WHP	WHP	WHP	WHP	WHP	WHP
TCB-9	WHP	WHP	WHP	WHP	WHP	WHP

6.6 Restoration

6.6.1 Restoration Completed

Wm. [Signature] / 3-5-83  
 Technician / Date

[Signature] / 3-5-83  
 Second Qualified Person / Date  
 ERIC J. GURKOV

6.8 REMARKS

ALL SKETS NOT RUNNING  
 TCB 1 - 4196 DID NOT TRIP AND RESET. THIS NCR TO BE  
 WORKED. THE NCR # 2-163 WORK ORDER # 24223

TECHNICIAN(S) Wm. [Signature] DATE 3-5-83

x [Signature] DATE 3-5-83

DATE \_\_\_\_\_

DATE \_\_\_\_\_

ELECTRICAL TEST SUPERVISOR DATE \_\_\_\_\_

SUPERVISOR OF ELECTRICAL TEST DATE \_\_\_\_\_

I&C ENGINEERING REPRESENTATIVE DATE \_\_\_\_\_

March 14, 1983

MR. A. E. CHAFFEE

SUBJECT: UV Device Surveillance Testing

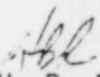
For your information, here is a package that addresses the issue of surveillance testing of the UV device in the TCB's.

1. 5-27-81 letter, CE to SCE, transmitting the quarterly report of the CE Availability Data Program. Section 2.2 discusses the problem and recommends:
  - a. P/M once every refueling interval unless periodic testing indicates a more frequent interval is required.
  - b. Independent actuation of the UV and shunt trip devices should be verified during "normal surveillance testing."
  - c. Perform response time testing on a refueling basis.
2. 8/7/81 letter from Manager Operations to Station Manager requesting inclusion of CE recommendations in appropriate Station procedures.
3. 9/29/81 letter from Station Technical Manager to Station Manager responsive to the 5-27-81 CE letter indicating that UV and shunt trips will be done independently on a 31 day interval. To facilitate this, a design change was to be requested.
4. 12-3-81 letter, SCE to CE, requesting a design change to permit independent UV and shunt actuation during "normal surveillance testing" pursuant to IEC '81-12.
5. 1/25/82 letter, CE to SCE, responding to the 12/3/81 SCE letter. It states that:
  - a. CE developed a procedure to perform the recommended testing without a design change.
  - b. The testing is to be performed during a refueling outage (every 18 months) pursuant to the Technical Specifications.
  - c. "Normal surveillance testing" will continue to test operability of the TCB.

March 14, 1983

6. 3/12/82 letter from Station Technical Manager to Project Manager indicating that both UV and shunt trips are being exercised independently. Concern is expressed about possible over-exercise of the TCB's, and a perception of change in the CE recommendation is raised. The reference to 18 month interval in the Technical Specification is noted.
7. 4/12/82 letter from lead Project NSSS Engineer (Phelps) to the Project Engineer. It states that:
  - a. Vendor adjustments in response to NCR P-152 should be a permanent corrective action for problems recognized at that time.
  - b. The requested design change is not needed.
  - c. The 18 month interval for independently testing the UV and shunt functions is adequate provided monthly testing for two (2) more months verifies assumption a. above.
8. 4/12/81 letter from Project Engineer to Station Technical Manager implementing 7. above.

Note: The History of Surveillance provided to you on 3/13/82 showed no problems revealed by UV and shunt testing on 4/4/82, 5/4/82 and 6/4/82. The requirements for extension of this testing to an 18 month interval were considered to have been met.

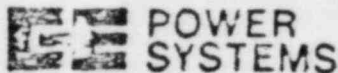
  
H. B. RAY

HBR:1626v:1h

cc: J. M. Price  
CDM files

C-E Power Systems  
Combustion Engineering Inc.  
1000 Prospect Hill Road  
Windsor, Connecticut 06095

Tel 203/688-1911  
Telex 99297



May 27, 1981

S-CE-6603

Southern California Edison Co.  
San Onofre Units 2 & 3  
SCE Order No. N1800001  
Bechtel Job No. 10079  
C-E Contracts 1370 & 1470

RECEIVED  
JUN 02 1981  
H. L. RICHTER

Mr. J. G. Haynes, Manager  
Nuclear Operations  
Southern California Edison Co.

Subject: Availability Data Program

Enclosure: Quarterly Report - January - March, 1981

Dear Mr. Haynes:

The enclosed first quarter, 1981 Availability Data Program (ADP) report is provided for your information. Issues highlighted in this report include a Loss of a 125V DC Bus, undetected malfunction of Reactor Trip Circuit Breaker under-voltage devices, and Control Element Assembly (CEA) Drop update. Also included is an overview of C-E PWR performance during the first quarter 1981.

If you have any questions, please contact me.

Sincerely,

*VCHall*

V. C. Hall  
Project Manager

VCH:ABS:jkd

Enclosure

cc: H. B. Ray (SCE) w/encl.  
W. L. MacDonald (C-E Irvine) w/o encl.  
R. M. Bockhorst (C-E San Clemente) w/encl.  
H. E. Morgan (SCE) w/encl.  
C. Manna (C-E Irvine) w/o encl.  
H. Richter (SCE) w/encl.

REC'D  
JUN 02 1981  
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Volume 4  
Number 1

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# AVAILABILITY DATA PROGRAM

MA-RAB

21  
DO 3

Quarterly  
Report

March  
1981

JUN 02 1981

**EE** POWER  
SYSTEMS  
COMBUSTION ENGINEERING INC