

Reactor Breakers Undervoltage and Shunt Trip Device Circuit Test

PMO NUMBER 790016 6.7 Data Record

Att. 6.5

UNIT 2

Test Shop File No. S023-II-11.16

6.1 Communications verified.

John M. [unclear] / June 4, 1982
 Technician / Date

6.2 Plant status and CEDM system lineup verified.

John M. [unclear] / June 4, 1982
 Technician / Date

UNDER VOLTAGE TRIP DEVICE

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

SHUNT TRIP DEVICE

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

TEST TECH FILE

TEST SHOP FILE NUMBER S023-II-11.161

6.6 Restoration

6.6.1 All fuses in place and jumpers removed.

John A. Williams ^{June} / 4/1982
Technician / Date
Harold R. [unclear] / 6/9/82
Second Qualified / Date
Person

6.8 REMARKS

TECHNICIAN(S) *John A. Williams* DATE June 4, 1982
Harold R. [unclear] DATE 6/9/82

FOREMAN *N/A* DATE _____

APPROVED BY *[Signature]* DATE 6/14/82

TEST TECH FILE

Reactor Breakers Undervoltage and Shunt Trip Device Circuit Test

PMO NUMBER 7900116 6.7 Data Record

Att. 1.6

UNIT 2

Test Shop File No. S023-II-11.161T

6.1 Communications verified.

RKA / 7-6-82
 Technician / Date

6.2 Plant status and CEDM system lineup verified.

RKA / 7-6-82
 Technician / Date

UNDER VOLTAGE TRIP DEVICE

| Reactor Breaker | Closed Indication | Trip | Open Indication | Alarm In | Breaker Closed | Alarm Reset |
|-----------------|-------------------|------|-----------------|----------|----------------|-------------|
| TCB-1 | N/A | | | | | |
| TCB-2 | N/A | | | | | |
| TCB-3 | N/A | | | | | |
| TCB-4 | N/A | | | | | |
| TCB-5 | RKA | RKA | RKA | RKA | RKA | RKA |
| TCB-6 | N/A | | | | | |
| TCB-7 | N/A | | | | | |
| TCB-8 | N/A | | | | | |
| TCB-9 | N/A | | | | | |

SHUNT TRIP DEVICE

| Reactor Breaker | Closed Indication | Trip | Open Indication | Alarm In | Breaker Closed | Alarm Reset |
|-----------------|-------------------|------|-----------------|----------|----------------|-------------|
| TCB-1 | N/A | | | | | |
| TCB-2 | N/A | | | | | |
| TCB-3 | N/A | | | | | |
| TCB-4 | N/A | | | | | |
| TCB-5 | RKA | RKA | RKA | RKA | RKA | RKA |
| TCB-6 | N/A | | | | | |
| TCB-7 | N/A | | | | | |
| TCB-8 | N/A | | | | | |
| TCB-9 | N/A | | | | | |

TEST TECH FILE

TEST SHOP FILE NUMBER S023-II-11.161-TSP

6.6 Restoration

6.6.1 All fuses in place and jumpers removed.

| | |
|-------------------------|-----------------|
| <u>RYA</u> | <u>1 7-6-82</u> |
| Technician | / Date |
| <u>DC</u> | <u>1 9-6-82</u> |
| Second Qualified Person | / Date |

6.8 REMARKS

TCR-5 TRD'd from #3 UNIT TO #2 UNIT.
NCR S023 P-451
NCR SE-E-0967
TRC 0624
NO 9930 which reached NO 9239
which was lost.

TECHNICIAN(S) Robt. K. Audey DATE 7-6-82

W. C. Beck DATE 7-6-82

____ DATE ____

____ DATE ____

____ DATE ____

FOREMAN [Signature] DATE 7-6-82

APPROVED BY [Signature] DATE 7-6-82

TEST TECH FILE

wo Reactor Breakers Undervoltage and Shunt Trip Device Circuit Test

PMO NUMBER 10245

6.7 Data Record

7H. 1. 7

UNIT 2

Test Shop File No. S023-II-11.161

6.1 Communications verified.

S.M. Chaney 17/12/82
 Technician / Date

6.2 Plant status and CDM system lineup verified.

D. J. Clark 17/12/82
 Technician / Date

UNDER VOLTAGE TRIP DEVICE

| Reactor Breaker | Closed Indication | Trip | Open Indication | Alarm In | Breaker Closed | Alarm Reset |
|-----------------|-------------------|------|-----------------|----------|----------------|-------------|
| TCB-1 | SOM | SOM | SOM | SOM | SOM | SOM |
| TCB-2 | SOM | SOM | SOM | SOM | SOM | SOM |
| TCB-3 | SOM | SOM | SOM | SOM | SOM | SOM |
| ✓ TCB-4 | N/A | N/A | N/A | N/A | N/A | N/A |
| TCB-5 | SOM | SOM | SOM | SOM | SOM | SOM |
| TCB-6 | SOM | SOM | SOM | SOM | SOM | SOM |
| ✓ TCB-7 | N/A | N/A | N/A | N/A | N/A | N/A |
| TCB-8 | SOM | SOM | SOM | SOM | SOM | SOM |
| TCB-9 | SOM | SOM | SOM | SOM | SOM | SOM |

SHUNT TRIP DEVICE

| Reactor Breaker | Closed Indication | Trip | Open Indication | Alarm In | Breaker Closed | Alarm Reset |
|-----------------|-------------------|------|-----------------|----------|----------------|-------------|
| TCB-1 | SOM | SOM | SOM | SOM | SOM | SOM |
| TCB-2 | SOM | SOM | SOM | SOM | SOM | SOM |
| TCB-3 | SOM | SOM | SOM | SOM | SOM | SOM |
| OK TCB-4 | N/A | N/A | N/A | N/A | N/A | N/A |
| TCB-5 | SOM | SOM | SOM | SOM | SOM | SOM |
| TCB-6 | SOM | SOM | SOM | SOM | SOM | SOM |
| OK TCB-7 | N/A | N/A | N/A | N/A | N/A | N/A |
| TCB-8 | SOM | SOM | SOM | SOM | SOM | SOM |
| TCB-9 | SOM | SOM | SOM | SOM | SOM | SOM |

TEST TECH FILE

TEST SHOP FILE NUMBER S023-II-11.161-T21

6.6 Restoration
6.6.1 All fuses in place and jumpers removed.

S. McElhane 7/12/82
Technician / Date
D. Clark 7/12/82
Second Qualified / Date
Person

6.8 REMARKS

W0 10245 To check TCB'S 1, 2, 3, 5, 8 and 9

TECHNICIAN(S) S. McElhane DATE 7/12/82
D. Clark DATE 7/12/82
DATE _____
DATE _____
DATE _____
FOREMAN J. H. Allen DATE 7-12-82
APPROVED BY Fred Love DATE 7-19-82

TEST TECH FILE

REACTOR BREAKER UV, SHUNT TEST DATA RECORD

Reactor Breakers Undervoltage and Shunt Trip Device Circuit Test

PMO NUMBER 717016 6.7 Data Record

A.H. 8

UNIT 2

Test Shop File No. 23-II-11-10-1

6.1 Communications verified.

M.J. Meloy 17-13-82
 Technician / Date

6.2 Plant status and CEDM system lineup verified.

M.J. Meloy 17-13-82
 Technician / Date

UNDER VOLTAGE TRIP DEVICE

| Reactor Breaker | Closed Indication | Trip | Open Indication | Alarm In | Breaker Closed | Alarm Reset |
|-----------------|-------------------|-------|-----------------|----------|----------------|-------------|
| TCB-1 | N/A | → | → | → | → | → |
| TCB-2 | N/A | → | → | → | → | → |
| TCB-3 | N/A | → | → | → | → | → |
| TCB-4 | refer | refer | refer | refer | refer | refer |
| TCB-5 | N/A | → | → | → | → | → |
| TCB-6 | N/A | → | → | → | → | → |
| TCB-7 | refer | refer | refer | refer | refer | refer |
| TCB-8 | N/A | → | → | → | → | → |
| TCB-9 | N/A | → | → | → | → | → |

SHUNT TRIP DEVICE

| Reactor Breaker | Closed Indication | Trip | Open Indication | Alarm In | Breaker Closed | Alarm Reset |
|-----------------|-------------------|-------|-----------------|----------|----------------|-------------|
| TCB-1 | N/A | → | → | → | → | → |
| TCB-2 | N/A | → | → | → | → | → |
| TCB-3 | N/A | → | → | → | → | → |
| TCB-4 | refer | refer | refer | refer | refer | refer |
| TCB-5 | N/A | → | → | → | → | → |
| TCB-6 | N/A | → | → | → | → | → |
| TCB-7 | refer | refer | refer | refer | refer | refer |
| TCB-8 | N/A | → | → | → | → | → |
| TCB-9 | N/A | → | → | → | → | → |

TEST CHECKLIST

TEST SHOP FILE NUMBER S023-II-11.161-TS1

6.6 Restoration

6.6.1 All fuses in place and jumpers removed.

M. J. McElroy 7-13-82
Technician / Date

R. Loving 7-13-82
Second Qualified / Date
Person

6.8 REMARKS

PER WO 10305 and NCR S023-P-511

TECHNICIAN(S) M. J. McElroy DATE 7-13-82

R. Loving DATE 7-13-82

5.05
7-22-82 NO DATE _____

DATE _____

DATE _____

FOREMAN J. H. Allen DATE 7-22-82

APPROVED BY [Signature] DATE 7/22/82

Reactor Breakers Undervoltage and Shunt Trip Device Circuit Test

PMO NUMBER 719C14 6.7 Data Record

UNIT 2

Test Shop File No. S023-II-11.161-7

6.1 Communications verified.

Sutun M. Kelly 7/21/82
 Technician / Date

6.2 Plant status and CEDM system lineup verified.

K. M. Kelly 7-21-82
 Technician / Date

CHECKED 3 TIMES EACH

UNDER VOLTAGE TRIP DEVICE

| Reactor Breaker | Closed Indication | Trip | Open Indication | Alarm In | Breaker Closed | Alarm Reset |
|-----------------|-------------------|------|-----------------|----------|----------------|-------------|
| TCB-1 | SM | SM | SM | SM | SM | SM |
| TCB-2 | SM | SM | SM | SM | SM | SM |
| TCB-3 | SM | SM | SM | SM | SM | SM |
| TCB-4 | SM | SM | SM | SM | SM | SM |
| TCB-5 | SM | SM | SM | SM | SM | SM |
| TCB-6 | SM | SM | SM | SM | SM | SM |
| TCB-7 | SM | SM | SM | SM | SM | SM |
| TCB-8 | SM | SM | SM | SM | SM | SM |
| TCB-9 | N/A | N/A | N/A | N/A | N/A | N/A |

SHUNT TRIP DEVICE

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

TC9 TRIP PB ON DOOR IS ALL THAT PROCEDURE CALLS FOR LOCAL

TEST TECH FILE

TEST SHOP FILE NUMBER S023-II-11-161-75

6.6 Restoration

6.6.1 All fuses in place and jumpers removed.

Richard McHenry 7/21/82
Technician / Date

[Signature] 7-21-82
Second Qualified / Date
Person

6.8 REMARKS

UNDER VOLTAGE TRIP TESTED THREE TIMES ON TCB1-8

⊙ TCB9 TRIP LOCALLY BY PB AT BREAKER PER PROCEDURE

LINK 245

TECHNICIAN(S) Richard McHenry DATE 7/21/82

Richard McHenry
NQC

DATE _____

DATE _____

DATE _____

DATE _____

FOREMAN [Signature] DATE 7-21-82

(CEDM BKR. POSITION SERIAL NUMBER) APPROVED BY [Signature] DATE 7/21/82

TCB1 SN# 256A4002-656-3

TCB2 SN# 256A4002-656-29

TCB3 SN# 256A4002-656-12

TCB4 SN# 256A4002-656-24

TCB5 SN# 256A4002-656-2

TCB6 SN# 256A4002-656-8

TCB7 SN# 256A4002-656-45

TCB8 SN# 256A4002-656-14

TCB9 SN# 256A4002-656-7

TEST SHOP FILE NUMBER _____

6.6 Restoration

6.6.1 All fuses in place and jumpers removed.

RL / 8-23-82
Technician / Date

Robert K. Ashby / 8-23-82
Second Qualified / Date
Person

6.8 REMARKS

TECHNICIAN(S) R. Loving DATE 8-23-82

Robert K. Ashby DATE 8-23-82

DATE _____

DATE _____

DATE _____

FOREMAN _____
DATE _____

APPROVED BY _____
DATE _____

Reactor Breakers Undervoltage and Shunt Trip Device Circuit Test

PMO NUMBER 819016 6.7 Data Record

11/16/82

UNIT 3

Test Shop File No. 5023-II-11.161

6.1 Communications verified.

C Pope / 11/10/82
 Technician / Date

6.2 Plant status and CEDM system lineup verified.

G Gant / 11/10/82
 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 | OK | OK | OK | OK | OK | OK |
| 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 | See remarks | | | | | |

**SONGS 2&3
 TEST TECH
 FILE COPY**

SHUNT 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 | OK | OK | OK | OK | OK | OK |
| 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 | see remarks | | | | | |

TEST SHOP FILE NUMBER S023-II-11.161

6.6 Restoration

6.6.1 All fuses in place and jumpers removed.

C Pope / 10/30/82
Technician / Date

G Gant / 10/30/82
Second Qualified / Date
Person

6.8 REMARKS

TCB 9 is wired per original design ie. when
the breaker is open the alarm will clear, when
the breaker closes the alarm comes in solid (print # 31542 Rev 1)
TCB 9 tested as follows for both undervoltage and shunt;

| <u>Open Indication</u> | <u>Closed</u> | <u>Closed</u> | <u>Alarm</u> | <u>Breaker</u> | <u>Alarm</u> |
|------------------------|---------------|-------------------|--------------|----------------|--------------|
| <u>OK</u> | <u>OK</u> | <u>Indication</u> | <u>In</u> | <u>Open</u> | <u>Reset</u> |
| <u>OK</u> | <u>OK</u> | <u>OK</u> | <u>OK</u> | <u>OK</u> | <u>OK</u> |

B9

TECHNICIAN(S) [Signature] DATE 10-30-82

[Signature] DATE 10-30-82

DATE _____

DATE _____

DATE _____

FOREMAN NIA DATE _____

APPROVED BY [Signature] DATE 10/30/82

**SONGS 2&3
TEST TECH
FILE COPY**