"AP 1001

ure 1001-8

Three Mile Island Nuclear Station

Special Operating Procedure

NRC

SIDE 1

SOP No. 2-96 (From SOP Log Index)

Unit No. 2

Date

NOTE: Instructions and guidelines in AP 1001 must be followed when completing this form.

1. Title BACKup T/C Indication For CR

2. Purpose (include purpose of SOP)

To PROVIDE CONTROL ROOM INDICATION/TRENDING OF 6 HIGHEST IN-CORE THERMOCOUPLES IN CASE OF LOSS OF BAILEY COMPUTER

3. Attach procedure to this form written according to the following format.

A. Limitations and Precautions
   1. Nuclear Safety
   2. Environmental Safety
   3. Personnel Safety
   4. Equipment Protection

Attach (

B. Prerequisites

C. Procedure

Generated by L. Bonola Date 4/11/79

5. Duration of SOP - Shall be no longer than 90 days from the effective date of the SOP or (a) or (b) below - whichever occurs first.

(a) SOP will be cancelled by incorporation into existing or new permanent procedure submitted by ☐

(b) SOP is not valid after ☐

(fill in circumstances which will result in SOP being cancelled)

6. (a) Is the procedure Nuclear Safety Related?
If "yes", complete Nuclear Safety Evaluation. (Side 2 of this Form) . . . . . Yes ☐ No ☐

(b) Does the procedure affect Environmental Protection?
" "yes", complete Environmental Evaluation. (Side 3 of this Form) . . . . . Yes ☐ No ☐

(c) Does the procedure affect radiation exposure to personnel? . . . . . Yes ☐ No ☐

NOTE: If all answers are "no", the change may be approved by the Shift Supervisor. If any questions are answered "yes", the change must be approved by the Unit Superintendent.

7. Review and Approval

Approved – Shift Supervisor 4/12/79

Reviewed – List members of PORC contacted

GEW 4/12/79 — RP Warren 4/12/79

TACOMBE 4/12/79 — J P Barbita 4/12/79

NRC Representative 4/12/79 — V.P. Colelli 4/12/79 — J Brummer 4/12/79

CAN 4/12/79 — Approved - Unit Superintendent — J B Lynch 4/12/79

133 022

# Backup T/C Indication

Background: Core T/C's can only be read by the computer, therefore this procedure will provide a means of taking readings upon loss of computer.

Procedure:

1.) Locate 4 Brush 8 pen recorders in the Unit #2 Cable Room.

2) Locate 1 Brush 6 pen recorder in the Unit #2 Control Room.

3.) Hookup one T/C incore to the brush recorder in the Cable Room. Monitor computer output for loading, if loading occurs disconnect recorder connection and notify Instrumentation and Control Engineer.

CAUTION! This step should use an average reading Incore T/C, not one of the hottest or coldest.

4) If loading does not occur

4.1) Hookup the 6 hottest indicating Incore T/C's to the 6 pen Brush recorder in the Control Room via Backup Incore Recorder cabling.

4.2) Hookup the remaining Incore T/C's to the recorders in the Cable Room (step 1)

5.) Monitor all Incore T/C's for loading.

6.) Notify lead Instrument & Control Engineer upon completion.

133 023

Remove Backup Recorder inputs from Computer Remote Analog Multiplexer and reconnect to Thermocouple inputs in Computer Remote Analog Multiplexer. Install shorting link # across recorder input terminals from which ~~have been~~ wires have been removed in Computer Remote Analog Multiplexer.

Remove Backup Recorder inputs from rear terminal strips of Control Room Panel 14 and connect to Gould Brush Recorder (6 pen)

133 024

I

Remote Analog Multiplexer

| | | | | |
|---|---|---|---|---|
| Recorder | | | | |
| 4798 C | 2 | 7 | 10 | 3 |
| 4798 D | 2 | 7 | 10 | 4 |
| Thermocouple To | | | | |
| 507 A | 1 | 2 | 15 | + |
| 507 B | 1 | 2 | 15 | − |
| | | | | |
| Recorder | | | | |
| 4802 C | 2 | 7 | 10 | 7 |
| 4802 D | 2 | 7 | 10 | 8 |
| T/c To | | | | |
| 506 A | 1 | 2 | 14 | + |
| 506 B | 1 | 2 | 14 | − |
| | | | | |
| Recorder | | | | |
| 4800 C | 2 | 7 | 12 | 3 |
| 4800 D | 2 | 7 | 12 | 4 |
| T/c To | | | | |
| 505 A | 1 | 2 | 13 | + |
| 505 B | 1 | 2 | 13 | − |

## Remote II Analog Multiplexer

| | | | | |
|---|---|---|---|---|
| Recorder | | | | |
| 4830 C | 2 | 8 | 10 | 3 |
| 4830 D | 2 | 8 | 10 | 4 |
| T/C | To | | | |
| 504 A | 1 | 2 | 12 | + |
| 504 B | 1 | 2 | 12 | − |
| | | | | |
| Recorder | | | | |
| 4834 C | 2 | 8 | 10 | 7 |
| 4834 D | 2 | 8 | 10 | 8 |
| T/C | To | | | |
| 503 A | 1 | 2 | 11 | + |
| 503 B | 1 | 2 | 11 | − |
| | | | | |
| Recorder | | | | |
| 4832 C | 2 | 8 | 12 | 3 |
| 4832 D | 2 | 8 | 12 | 4 |
| T/C | To | | | |
| 502 A | 1 | 2 | 10 | + |
| 502 B | 1 | 2 | 10 | − |

III

Back up Recorder

CR Panel 14 (IM - 1M NRSC)

| | | | |
|---|---|---|---|
| 4798 | C | TB 9 | 1 |
| 4798 | D | TB 9 | 2 |

To

Brush Recorder

CR Panel 14

| | | | |
|---|---|---|---|
| 4802 | C | TB 3 | 1 |
| 4802 | D | TB 3 | 2 |

To

Brush Recorder

CR Panel 14

| | | | |
|---|---|---|---|
| 4800 | C | TB 6 | 1 |
| 4800 | D | TB 6 | 2 |

To

CR Panel 14

| | | | |
|---|---|---|---|
| 4830 | C | TB 7 | 4 |
| 4830 | D | TB 7 | 5 |

To

Brush Recorder

IV

Back up Recorder

CK Panel 14 (IM - 2NRSC)

| | | | |
|---|---|---|---|
| 4834 | C | TB 2 | 4 |
| 4834 | D | TB 2 | 5 |

To

Brush Recorder

CK Panel 14

| | | | |
|---|---|---|---|
| 4832 | C | TB 5 | 4 |
| 4832 | D | TB 5 | 5 |

To

Brush Recorder