

NIRC

AP 1001

Three Mile Island Nuclear Station

SIDE 1

Figure 1001-8

Special Operating Procedure

SOP No. Z-88
(From SOP Log Index)

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

Unit No. 2

Date _____

1. Title POWER RANGE VTL CURRENT MEASUREMENT
2. Purpose (include purpose of SOP) CORRELATE & DECAY WITH KNOWN DECAY HEAT TO VERIFY DETECTOR OPERATION

NOTE: THIS PROCEDURE CANCELS SOP Z-49

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

B. Prerequisites

C. Procedure

Attached

4. Generated by D N MENARD ^(DOUG WEAVER) Date 04/09/79

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 N/A

(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?

If "yes", complete Environmental Evaluation. (Side 2 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

ALARA [Signature] Approved - Shift Supervisor [Signature] 4/10/79 Date

ALC [Signature] 4/12/79 Reviewed - List members of PORC contacted [Signature] 4/10/79 Date

R&W [Signature] 4/10/79 Approved - Unit Superintendent [Signature] 4/10/79 Date

[Signature] RW Bonser 4/10/79 Date

[Signature] 4/10/79 Date

8. SOP is Cancelled

Shift Supervisor/Shift Foreman _____ Date 132 162

"EVALUATION"

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Three Mile Island Nuclear Station

SIDE 2

Figure 1001-8

Nuclear Safety/Environmental Impact Evaluation

SOP No. _____

1. Title _____

2. Nuclear Safety Evaluation

Does this SOP:

- * (a) increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety? yes no
- * (b) create the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report? yes no
- * (c) reduce the margin of safety as defined in the basis for any technical specification? yes no

Details of Evaluation (Explain why answers to above questions are "no". Attach additional pages if required.)

Evaluation By _____ Date _____

3. Environmental Impact Evaluation

Does this SOP:

- (a) possibly involve a significant environmental impact? yes no
- * (b) have a significant adverse effect on the environment? yes no
- * (c) involve a significant environmental matter or question not previously reviewed and evaluated by the N.R.C. yes no

Details of Evaluation

Evaluation By _____ Date _____

*NOTE: If these questions are "yes", the change must receive N.R.C. approval.

4. Review (PORC review of evaluation is required only when requested by the Station Superintendent/Unit Superintendent. If this review is made, the PORC must consist of two off-site members.)

1. _____

2. _____

Off-Site Member

PORC Chairman Signature

Date

5. Approval

Station Superintendent/Unit Superintendent

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Date

DN MEMARK
04/09/79

POWER RANGE VIC CURRENT MEASUREMENT

- PROCEDURE -

PURPOSE: This procedure measures VIC γ current on all power range VICs in order to correlate VIC γ measurement with predicted core gamma decay.

METHOD:

THE FOLLOWING 4 STEPS PROVIDE DETAILED DATA TAKING INSTRUCTIONS. DATA SHOULD BE TAKEN ONCE DAILY, PREFERABLY AT EQUAL INTERVALS (24 HRS).

IT IS HIGHLY RECOMMENDED THAT THE SAME PICOAMMETER BE USED FOR ALL MEASUREMENTS. KEITHLEY 4.19 SER NO 72053 HAS BEEN USED FOR THIS IN THE PAST.

THE KEITHLEY MUST BE POWERED THROUGH AN ISOLATION XFMR, AND MUST BE PERMITTED TO FLOAT WITH RESPECT TO ~~AND~~ GROUND.

DISPOSITION: THROUGH DOUG WEAVER TO LA BANDA.

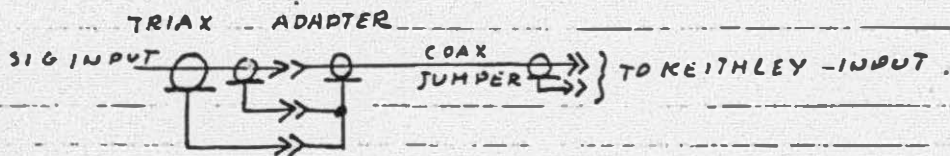
DATA TAKER IS REQUESTED TO SIGN ON BOTTOM OF TABLE 1 PAGE.

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PROCEDURE

CHANNEL A (B, C, D)

- ① OBTAIN PERMISSION TO PLACE APPROPRIATE CHANNEL OUT OF SERVICE.
- ② SECURE HIGH VOLTAGE AT HV POWER SUPPLY FOR NE 5 (6, 7, 8) LOCATED IN CABINET 37, 20, 34, 35.
- ③ IN REAR OF CABINET, REMOVE TRIAXIAL INPUT CABLE FROM THE UPPER UIC INPUT (JA). CONNECT TRIAXIAL TO COAXIAL ADAPTER TO CABLE. COAXIAL CABLE SHALL HAVE ITS SHIELD SHORTED TO BOTH THE INNER AND OUTER TRIAXIAL SHIELD OF THE CABLE. BY MEANS OF THIS ADAPTER.



- ④ PLACE KEITHLEY PICOAMMETER IN HIGHEST RANGE (10^{-2} A OR ABOVE) AND CONNECT THE SIGNAL INPUT TO THE KEITHLEY INPUT.
- ⑤ RANGE THE KEITHLEY TO THE APPROPRIATE SCALE. (ACTUAL CURRENT WILL BE BETWEEN -10^{-9} AND -10^{-8} AMPS INITIALLY)
- ⑥ RECORD CURRENT UNDER "HV OFF" IN TABLE 1.
- ⑦ RANGE KEITHLEY TO HIGHEST RANGE (10^{-2} A OR ABOVE) AND TURN HV ON.
- ⑧ RANGE KEITHLEY TO THE APPROPRIATE SCALE (ACTUAL CURRENT BETWEEN

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10^{-9} AND 10^{-8} A INITIALLY.)

- ⑨ RECORD CURRENT UNDER "HV ON" IN TABLE 1.
- ⑩ RECORD DATE AND TIME OF READING IN APPROPRIATE COLUMN OF TABLE 1.
- ⑪ SECURE HV AFTER RANGING KEITHLEY UPWARDS (THIS SHOULD BE DONE FOR ALL POWER TRANSIENTS).
- ⑫ RECONNECT TRIAXIAL CABLE TO JA IN CABINET, AND DISCONNECT CABLE FROM JB (LOWER DETECTOR INPUT).
CONNECT THE ADAPTER AND
- ⑬ PERFORM STEPS 4 THROUGH 11 FOR THE LOWER INPUT.
- ⑭ RESTORE CHANNEL TO SERVICE AFTER DISCONNECTING KEITHLEY.
- ⑮ PERFORM STEPS ① THROUGH ⑭ ON ALL FOUR CHANNELS, RECORDING DATA IN APPROPRIATE PLACE IN TABLE 1.

TABLE 1. UIC CURRENT.

CABINET	CHANNEL N	JACK	CURRENT (RA)		DATE	TIME
			HV OFF	HV ON		
37	NI 5 (A)	JA (UPPER) JB (LOWER)				
30	NI 6 (B)	JA (UPPER) JB (LOWER)				
34	NI 7 (C)	JA (UPPER) JB (LOWER)				
38	NI 8 (D)	JA (UPPER) JB (LOWER)				

KEITHLEY PICOAMMETER MODEL _____ SER NO _____

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