

DS

AP 1001

Three Mile Island Nuclear Station

SIDE 1

Figure 1001-8

Special Operating Procedure

SOP No. 2-54  
(From SOP Log Index)

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

Unit No. 2

Date 4/5/79

1. Title Increase Letdown Flow by Throttling ICCW

2. Purpose (Include purpose of SOP) Attempt to increase letdown flow.

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

*Attach* **NRC**

4. Generated by C.P. DeHete Date 4/5/79

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 NA
- (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 Station Superintendent/Unit Superintendent.

7. Review and Approval

Approved - Shift Supervisor [Signature] 4/6/79 Date

Reviewed - List members of PORC contacted [Signature] 4/6/79 Date

[Signature] 4/6/79 Date

Approved-Station Superintendent/Unit Superintendent [Signature] 4/6/79 Date

8. SOP is Cancelled \_\_\_\_\_ Date 4/31/79

Z-54

# INCREASE LETDOWN FLOW BY THROTTLING ICCW FLOW

## A. PURPOSE

To increase Letdown Flow for degassing,  
and to determine where flow blockage  
paths in the letdown line exist.

## B. LIMITS & PRECAUTIONS

1. Do not exceed  $125^{\circ}\text{F}$  on any  
letdown temperature.
2. Do not exceed 110 psig on letdown  
line to prevent lifting relief  
valve MU-123 (Setpoint = 130 psig)
3. Care should be taken to prevent  
inadvertent closure of Letdown  
Cooler primary inlet valves  
(MU-V1A and MU-V1B)

# C. Procedure

1. Modify control circuits to permit independent operation of valves IC-VIA / MU-VIA and valves IC-VIB / MU-VIB. (Procedure in Preparation) in accordance with Z-56.

2. Backflush instrument lines and letdown flow and pressure instruments <sup>4</sup> MU-4-FI and MU-PI-1579, if possible.

2. Verify <sup>MU-4-FI & MU-PI-1579</sup> ~~the instrument~~ respond to system changes as follows:

a. Log letdown flow and pressure  
Flow \_\_\_\_\_ GPM  
Press \_\_\_\_\_ psig

b. Close MU-V376 (Letdown Isol. Valve)

c. Log letdown flow and pressure  
Flow \_\_\_\_\_ GPM  
Press \_\_\_\_\_ psig

d. Open MU-V376

e. Log letdown flow and pressure  
Flow \_\_\_\_\_ GPM  
Press \_\_\_\_\_ psig



These actions are intended to ascertain whether the Letdown flow and pressure indications follow operation of the valve.

3.4. Establish a hard copy computer trend @ 1 minute intervals of the following

- 156 a. Letdown Flow MU-4-FI
- 159 b. Letdown Pressure MU-PI-1579
- 996 c. Letdown Temperature MU-S-TI
- 994 d. Letdown Cooler 1A RCS outlet temp MU-TR-739
- 995 e. " " " " " " MU-TR-740

4.5. Read data on Attachment "A" and repeat at 30 minute intervals for 4 hours.

~~Throttle closed about 75% valve IC-VIA (Letdown cooler = A I-CW supply). (Closed position to be determined by stroke time and removing electrical power to valve.)~~

~~If RCS temperature at cooler outlet increases, throttle valve IC-VIA to maintain 120°F see indicator MU-TR-739. If temperature does not increase, leave valve IC-VIA at 50% closed.~~

5. Check operation of valves IC-VIA & B, <sup>individually</sup> by jogging them closed for 5 sec.; verify them to be in the intermediate position by observing both the Red and Green indicating lights to be on. Then re-open the valves and verify that the Green light goes off and the Red stays on.

6. Valve closing times ~~are~~ from full closed to full open are:

IC-VIA 15 sec.

IC-VIB 13 sec.

7. Stroke valve IC-VIA closed

7. Throttle valve IC-VIA closed in increments and observe the cooler outlet temperature. The increments shall be by jogging the valve for 3 sec. which corresponds to approximately 20% stroke. Do not throttle for more than for more than 11 sec for valve IC-VIA and 9 sec for valve IC-VIB total jogging time. If an increase in temperature is observed, then stop throttling and leave valve in that position. Do not.

CAUTION: If pressure on MU-PS-1579 increases to 50 psig, close MU-V376.

8. After 1 hour, return the system to the normal valve line up with valve IC-VIA 100% open.

CAUTION: Do not allow Lowdown Temperature to exceed 135°F. CLOSE MU-V 376

IF NECESSARY.

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8. Evaluate letdown flow conditions  
in accordance with Attachment 'B'.  
After 4 hours, return the system to the normal valve line up with  
valve IC-VIA 100% open.

9. Repeat steps 6 and 7. for valve  
IC-VIB using temperature indicator  
MU-TR-740.

10. Increase letdown flow to the  
maximum possible, using normal  
system controls.





ATTN: "B"

CLOSE VALVE  
IC-V-LA(B)

TEMP @ TR-739 INC. TEMP @ TR-739 = CONST.

(TR-740)

(TR-790)

FLOW  
EXISTS

COOLER  
PLUGGED

LOOK AT  
LETDOWN  
TEMPERATURE

INCREASING AND  
 $\Delta T^{\circ}$  CONST.

↓  
LB(A) COOLER  
PROBABLY  
PLUGGED

INCREASING BUT  
 $\Delta T^{\circ}$  INCREASES



SOME FLOW IS  
TAKING PLACE  
LB(B) COOLER

\*  $\Delta T^{\circ}$  COOLER OUTLET TEMP (TR-739) - LETDOWN TEMPERATURE