

TASK CLOSE OUT DOCUMENT

Task Scope Instrument Development  
Directed Measurement System  
Production Drive Control

To: M. Levenson  
S. Levy  
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Task No. 11-3

Date Complete 4/13/74

Reason felt task is complete:

Required  
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\_\_\_\_\_  
\_\_\_\_\_

Members of Committee

K. J. ...  
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J. ...  
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[Signature]  
Signed  
Committee Leader

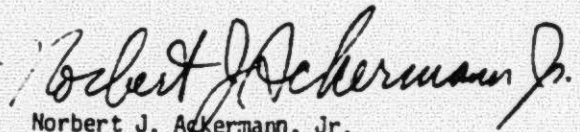
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TO: SIG DISTRIBUTION

April 13, 1979

Attached is a listing of the diagnostic instrumentation and data recording procedures to be used during the cool-down mode to 230<sup>o</sup>F. We also identify the action to be taken in case of an unexpected system transient.



Norbert J. Ackermann, Jr.  
SIG Coordinator

NA:ms

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REACTOR COOLDOWN  
280°F → 230°F

INSTRUMENTATION REQUIREMENTS

ASSUMPTIONS

1. COOLDOWN RATE WILL BE 2°/HR - 4°/HR.  
A 2 HR HOLD FOR STABILIZATION
2. WILL BE ESTABLISHED AT 260°F AND 240°F

PARAMETERS TO MONITOR

A ALL THOT + TCOLD RTD'S.

(1) 1 THOT + 1 TCOLD RTD. TIED TO DANA (FLURE) DVM FOR DIRECT RESISTANCE READINGS OF SENSITIVE PLOT RESISTANCE VS TEMP VS TIME.  
PURPOSE: MOST ACCURATE TEMP. MEASUREMENT (± 0.2°F) TH + TC FOR ΔT ACROSS CORE.

(2) OTHER THOT RTD LOCATED IN 500° RANGE SINCE TEMP 500 - 550 TO 5 - 500°F.  
PURPOSE: ALLOW COMPILER TO USE TH.

POOR ORIGINAL

B. ALL CORE OUTLET TEMPERATURES

- (1) LOG ALL CORE OUTLET T/C'S FROM COMPUTER ON HOUR AND EVERY 15 MIN.
- (2) PLOT ALL T/C'S VS T<sub>COOL</sub> RTD
- (3) CONTINUOUS STRIP CHART OF 4 HOTTEST T/C (IF NO COMPUTER LOADING)
- (4) BACKUP RECORDING OF 6 CHANNELS AVAILABLE WITH 1300XZ AMPLIFIERS IF COMPUTER FAILS.

PURPOSE (A) CORE OUTLET DISTRIBUTION

(B) T/C LINEARITY RESPONSE TEST

(C) T/C BIAS TEST

C. 15 SEVERE SPINDS

- (1) LOG ON HOUR AND EVERY 15 MIN.
- (2) PLOT SPIND VS T<sub>COOL</sub> RTD

PURPOSE: TEST FOR TEMPERATURE SENSITIVITY OF SPINDS

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D. STARTUP DETECTOR COUNT RATE.

(1) TAKE 200 SEC. COUNT RATE ON BOTH BF3.

(2) PLOT  $1/N$  CURVE VS T<sub>COU</sub> RFD.

PURPOSE: MONITOR SOURCE RINGS FOR NEUTRONS

E. RCS PRESSURE

(1) CONTINUOUS STRIP CHART OF A/C NOISE ON RCS PRESSURE TRANSMITTERS

PURPOSE: MONITOR FOR ONSET OF CAVITATION.

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COOL DOWN INSTRUMENTATION

<u>QUANTITY</u>	<u>DESCRIPTION</u>	<u>READOUT</u>	<u>LOCATION</u>
2	BF3		CONTROL ROOM
8	UNCOMP ION CHAMBER		CONTROL ROOM
2	INCORE TC	BRUSH RECORD	CONTROL ROOM
2	INCORE TC	BRUSH RECORD	SPREAD ROOM
1	TH	DVM	CONT ROOM
1	Tc	DVM	SPREAD ROOM
1	MOVABLE INCORE	STRIP CHART	SPREAD ROOM
1	INCORE	COMPUTER	CONT. ROOM

ACTION IN EVENT OF  
PLANT TRANSIENT

1. IF SPEED ON THEM RECORDERS  
§ RE PAUSE AS REQ'D.
2. READ TH
3. READ BF3
4. PRINT OUT INCORE TC (COMPUTER) AS OFTEN  
AS THE WRITER IS AVAILABLE