

FEB 22 1995

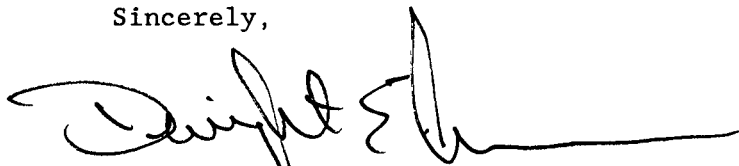
Consistent with these upgrades, Enclosure 1 provides a revised response for items 3 and 6 of the referenced letter, and provides updated information for Appendices A, B, and D. Appendix A illustrates the revised layout of the SPDS display consoles. Appendix B provides printouts showing the modified SPDS display formats and a discussion of operation methods. Appendix D depicts the updated SPDS keyboard layout.

Areas that have been revised are noted with a revision bar. The remaining portions of the referenced letter are not affected by this submittal.

As indicated in TVA's July 11, 1989, response to Generic Letter 89-06 and WBN Supplemental Safety Evaluation Report (SSER 6), the WBN SPDS will be installed and "functional" prior to Unit 1 fuel load.

Enclosure 2 clarifies several commitments made in the referenced submittal. If you should have any questions, contact J. Vorees at (615)-365-8819.

Sincerely,



Dwight E. Munn
Vice President
New Plant Completion
Watts Bar Nuclear Plant

Enclosures

cc (Enclosures):

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ENCLOSURE 1
WATTS BAR NUCLEAR PLANT (WBN)
REVISED RESPONSE TO NRC'S CONCERNS FROM THE AUGUST 23, 1990 AUDIT
SAFETY PARAMETER DISPLAY SYSTEM (SPDS)

The following information revises several of TVA's November 1, 1990, responses (i.e., items 3 and 6 and Appendices A, B, and D) to NRC's request for documented information concerning the eight issues that resulted from the subject audit. The information presented below has been formatted to correspond with the related Standard Review Plan (NUREG-0800) guidelines as headings for ease of review.

3. CONTINUOUS DISPLAY OF CRITICAL PLANT VARIABLES

NRC Comment:

Confirm TVA's commitment to not overwrite (e.g., with temporary error or prompt messages) the SPDS target boxes (located at the bottom left corner of the displays) and provide documentation of TVA's plans to continuously display the status of all five of the critical safety functions.

TVA Response:

The following response supersedes TVA's letter dated June 25, 1985 concerning NRC Question 620.01 (Human Factors Program). To ensure that the status boxes are continuously displayed, the WBN SPDS will be designed to continuously display the SPDS status box on all displays under any conditions. The WBN cathode ray tube SPDS displays are shown in Appendix B. These displays are consistent with the current EOPs. The five critical safety functions will continuously display by virtue of (1) the containment isolation status panels (CISPs) that monitor the position of the containment isolation valves that have automatic actuation from a Phase A, Phase B or containment vent isolation signal, (2) the status boxes that change color in accordance with the Emergency Operating Instructions (EOI) status tree alarms, and (3) an additional box that changes color when any of the other critical parameters (displayed on the plant status screens [2PS1] and/or on the Additional SPDS Parameters) go into the alarm state. These parameters include steam generator (SG) blow down radiation, main steam line (SG discharge) radiation, effluent radiation levels, and residual heat removal. Containment hydrogen is also displayed on 2PS1, but high hydrogen concentration does not result in an SPDS (status box) alarm.

The status boxes ("S", "C", "H", "P", "Z", "I", and "A" (for Additional SPDS Parameters)) will be continuously displayed in the same location on the various displays in the system, including non-SPDS displays.

HUMAN FACTORS ENGINEERING FEATURES

NRC Comment:

TVA is to document its process for ensuring that adequate operator review of and input into the SPDS design occurs. In addition, the following specific items were noted:

- Setpoints need to be verified against control room annunciators,
- Status tree logic flows need to be verified against EOI hard copies and in consideration of sensor characteristics (e.g., H₂ analyzers),
- Verify display formats (e.g., 2CS1),
- Dark blue is very difficult to distinguish from the black display background,
- Consideration should be given representative positioning of the page up, down right, and left keys.

TVA Response:

WBN has obtained control room operator input on the SPDS design (display formats, content, logic flow, set points, etc.) as part of the SPDS User's Group effort. The User's Group was utilized to review and assist in the development of the SPDS resulting in issuance and approval of the SPDS Software Requirement Specification, Revision 0. This was followed by a Human Factors Review which included conducting reviews and interviews with the operators of the SPDS at the WBN simulator.

Users of the SPDS can document problems and/or request changes to SPDS software (subject to approval) under the process described in Plant Administrative Instruction (PAI)-1.05, "Software Development and Maintenance for Plant Process Monitoring and Control Computers." Changes to the EOI's may effect the SPDS, therefore, the EOI writer's guide will include reference to the need to verify the SPDS as part of any EOI revision. SPDS set points, logic flows, and display formats will be verified against control room instrumentation, operating procedures, and system/sensor characteristics, as applicable. TVA has utilized lighter colors (high contrast blue and white) to provide greater contrast between the previous blue (text & piping) and the black display background. A lighter blue is now used for poor/bad data instead of a dark blue. TVA has rearranged the SPDS keyboard as shown in Appendix D. TVA will replace the arrow keys with PAGE FORWARD and PAGE BACKWARD keys (see keyboard diagram in Appendix D). These keys will allow access to displays on the same level in the SPDS hierarchy. Access to displays on other levels is available through touch areas on the displays or keyboard input.

APPENDIX A

WBN SPDS CONTROL ROOM LAYOUT

Notes to attached figure:

1. During normal operation, lead and balance of plant (BOP) operators (both licensed reactor operators) have SPDS data provided on control room SPDS displays at CRT's shown as "SPDS #2" and "SPDS #1". The Assistant Shift Operating Supervisor (ASOS) also has SPDS data provided at "SPDS CRT #3,".
2. During an emergency, the lead and BOP operators are standing at the control boards. During this situation, typically, the ASOS serves as the procedure reader utilizing either SPDS Turret #1 or #2, allowing the remaining turrets to be utilized by other licensed crew members to assist and consult.
3. The CISPs that monitor the position of the containment isolation valves that have automatic actuation from a Phase A, Phase B, or containment vent isolation signal is located as shown and is high enough to be visible from the three SPDS CRT locations.

WATTS BAR NUCLEAR PLANT

MAIN CONTROL ROOM

UNIT 2

UNIT 1

SPDS
Turret #1

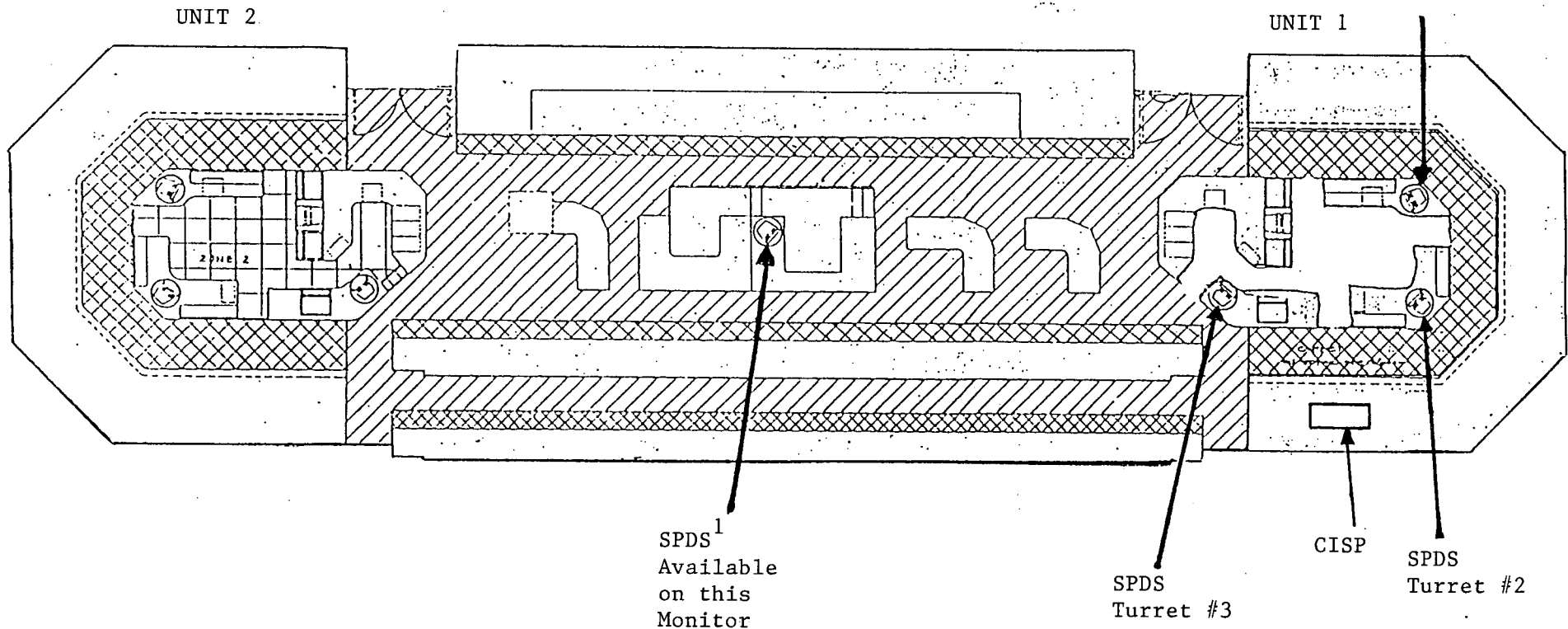
SPDS¹
Available
on this
Monitor

SPDS
Turret #3

CISP

SPDS
Turret #2

1. Not powered by UPS



APPENDIX B
WBN SPDS DISPLAYS

The SPDS system consists of 16 displays arranged in the attached hierarchy.

The plant status display (2PS1) can be called up by pressing the SPDS touch area in the upper right corner of every display. It may also be called up by pressing the 'Plant Status' key or by typing 2PS1 on the keyboard.

The additional SPDS (ASPD) display which contains additional SPDS parameters can be called up by pressing the ASPDS touch area on the 2PS1 display or by typing ASPDS on the keyboard.

The 2FRx displays (where x is S,C,H,P,Z, or I) can be called up by pressing the S,C,H,P,Z or I touch area on the lower left of the SPDS displays. They may also be called up by pressing the S,C,H,P,Z, or I function keys or by typing 2FRS, 2FRC, 2FRH, 2FRP, 2FRZ, or 2FRI as appropriate on the keyboard.

The 3FRx displays (where x is S,C,H,P,Z, or I) can be called up by pressing the text boxes on the appropriate 2FRx display. For example, if the current display is 2FRS, the user can touch the box with the text 'POWER RANGE LESS THAN 5%' to activate the 3FRS display. NOTE: An exception is made for the 2FRP display, which has two text boxes which refer to SPDS curves (see discussion of the 4FRP1 and 4FRP2 displays below). They may also be activated by typing 3FRS, 3FRC, 3FRH, 3FRP, 3FRZ, or 3FRI as appropriate on the keyboard.

The 4FRP1 display is called up pressing the text box labeled 'RCS PRESSURE LESS THAN COLD OVERPRESSURE LIMIT' on the 2FRP display. It can also be activated by typing 4FRP1 on the keyboard.

The 4FRP2 display is called up pressing the text box labeled 'ALL RCS PRESSURE - COLD LEG TEMP POINTS TO RIGHT OF LIMIT A' on the 2FRP display. It can also be activated by typing 4FRP2 on the keyboard.

Notes to attached figures:

1. The attached figures shows the hierarchy of SPDS displays.
2. Each of the TVA six status trees are consistent with the hardcopy EOI status trees.
3. The color of each of the SPDS status boxes (upper right hand corner of each display) corresponds to the terminus color of its corresponding EOI status tree or the Additional SPDS Parameters.
4. The "SPDS" status box is normally green (no alarm) and changes to a solid color in accordance with the level of the status tree alarm (red-highest, orange-middle, yellow-lowest). Upon alarm of the Additional SPDS Parameters the "A" box turns yellow.
5. The second level of SPDS displays are parameter display pages corresponding to each of the six SPDS status tree displays.
6. There are two third level SPDS displays (4FRP1&2) which display the cold over pressure limit and limit A curves in support of the pressurizer thermal shock (PTS) status tree.

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A

SPDS MENU

PLANT OVERVIEW 2PS1					ADDITIONAL SPDS PARAMS ASPD5
SUBCRIT 2FRS	CORE COOLING 2FRC	HEAT SINK 2FRH	PTS 2FRP	CONTAINMENT 2FRZ	INVENTORY 2FRI
SUBCRIT PARAMETERS 3FRS	CORE COOLING PARAMETERS 3FRC	HEAT SINK PARAMETERS 3FRH	PTS PARAMETERS 3FRP	CONTAINMENT PARAMETERS 3FRZ	INVENTORY PARAMETERS 3FRI
			COLD OVERPRESSURE 4FRP1		
RESET TRIP BREAKERS ON COMPUTER			LIMIT A CURVES 4FRP2		

UTILITY	SPDS	NSSS	ROP	GROUP	SUMMARY	LOG	SINGLE POINT	SYSTEM MIMICS	ALARM
TERMINAL MODES	HELP	ASST	PREVIOUS FUNCTION	CANCEL	PAGE BACK	PAGE FWD	TSC MIMICS		

F1= CLEAR
PREV CANG

F2=
CPU=1

F3=
TERM=TT76/TYP-8

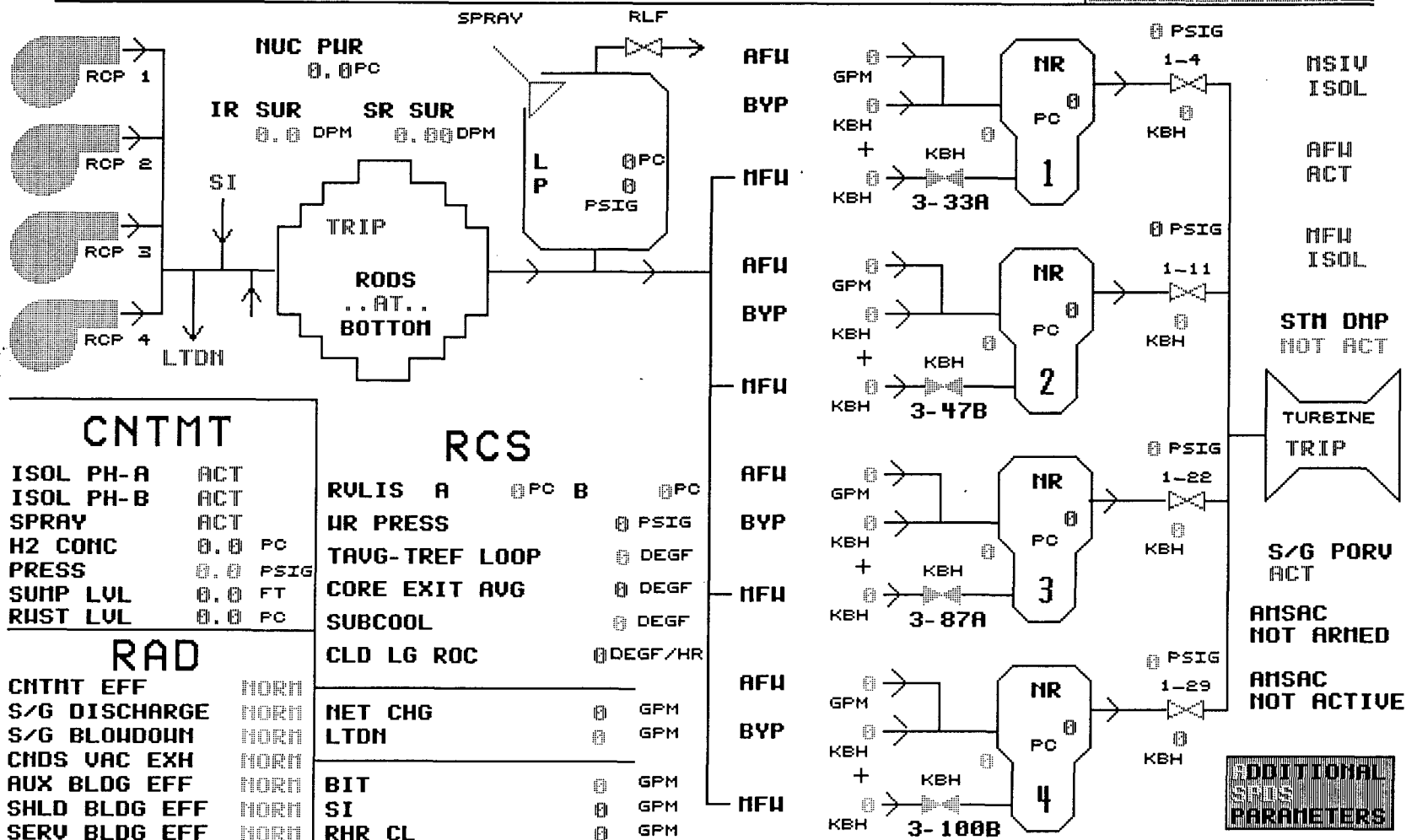
F4=
1/ 5/95

F5=
18:10:30G

F6=
7.00000000 DATA
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A



CNTMT

ISOL PH-A	ACT
ISOL PH-B	ACT
SPRAY	ACT
H2 CONC	0.0 PC
PRESS	0.0 PSIG
SUMP LVL	0.0 FT
RUST LVL	0.0 PC

RAD

CNTMT EFF	NORM
S/G DISCHARGE	NORM
S/G BLOWDOWN	NORM
CHDS VAC EXH	NORM
AUX BLDG EFF	NORM
SHLD BLDG EFF	NORM
SERV BLDG EFF	NORM

RCS

RVLIS A	0 PC	B	0 PC
NR PRESS	0 PSIG		
TAUG-TREF LOOP	0 DEGF		
CORE EXIT AVG	0 DEGF		
SUBCOOL	0 DEGF		
CLD LG ROC	0 DEGF/HR		
NET CHG	0 GPM		
LTON	0 GPM		
BIT	0 GPM		
SI	0 GPM		
RHR CL	0 GPM		

PREV SCHPZI 2PS1 - PLANT STATUS A B

F1= CLEAR
PREV CANG

F2= CPU=1

F3= TERM=TT76/TYP-8

F4= 1/ 5/95

F5= 18:10:55G

F6= 7/10/1995
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A

	VALUE	QUALITY		VALUE	QUALITY
UD6040 - CMNT H2 > 0.5%	NO	GOOD	UD6212 - CMNT UPR/LHR RAD OK	YES	GOOD
UY1005 - CMNT H2 AVG	0.00	UNK	RE-90-271-A	10.00	GOOD
			RE-90-272-B	10.00	GOOD
UD6200 - CMNT EFFL OK	YES	GOOD	RE-90-273-A	10.00	GOOD
RE-90-130-A	1.00	GOOD	RE-90-274-B	10.00	GOOD
RE-90-131-B	1.00	GOOD			
UD6201 - AUX BLDG EFFL OK	YES	GOOD	UD6203 - SERVICE BLDG EFFL OK	YES	GOOD
RE-90-101A-N	10.00	GOOD	RE-90-132A-N	10.00	GOOD
RE-90-101B-N	10.00	GOOD	RE-90-132B-N	10.00	GOOD
RE-90-101C-N	10.00	GOOD	RE-90-132C-N	10.00	GOOD
UD6202 - SHIELD BLDG EFFL OK	YES	GOOD	UD6211 - COND VAC EXH OK	YES	GOOD
1-RM-90-400-C	10.00	GOOD	RE-90-119-N	10.00	GOOD
2-RM-90-400-CA	10.00	GOOD	RE-90-404A	0.00	GOOD
			RE-90-404B	0.00	GOOD
UD6208 - STEAM GEN BLDN RAD OK	YES	GOOD	UD6206 - FLOW THROUGH RHR HEAT	NO	ALM
RE-90-120-N	10.00	GOOD	NTR-74-10-A	ON	GOOD
RE-90-121-N	10.00	GOOD	NTR-74-20-B	ON	GOOD
UD6209 - SG DISCHARGE RAD OK	YES	GOOD	FCV-74-12-A	OPEN	GOOD
RE-90-421B	0.01	GOOD	FCV-74-24-B	OPEN	GOOD
RE-90-422B	0.01	GOOD			
RE-90-423B	0.01	GOOD			
RE-90-424B	0.01	GOOD			

PREV S C H P Z I ASPDS - ADDITIONAL SPDS PARAMETERS A B

F1= CLEAR
PREV CANC

F2= CPU=1

F3= TERM=TT76/TYP-8

F4= 1/ 5/95

F5= 18:15:20G

F6= PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A

BREAKER(S)



OPEN

RESET
UNIT
TRIP
ON
COMPUTER

POWER RANGE
LESS THAN
5% YES

GO TO
FR-S. 1

INTERMEDIATE
RANGE SUR
ZERO
OR NEGATIVE YES

GO TO
FR-S. 1

INTERMEDIATE
RANGE SUR
MORE NEGATIVE
THAN -0.2 DPH NO

GO TO
FR-S. 2

SOURCE
RANGE
ENERGIZED NO

OK

SOURCE RANGE
SUR ZERO
OR NEGATIVE

GO TO
FR-S. 2

OK

PREV SCHPZI

2FRS - SUBCRITICALITY

A B

F1= CLEAR
PREV CANC

F2= CPU= 1

F3= TERM= TT76/TYP- 8

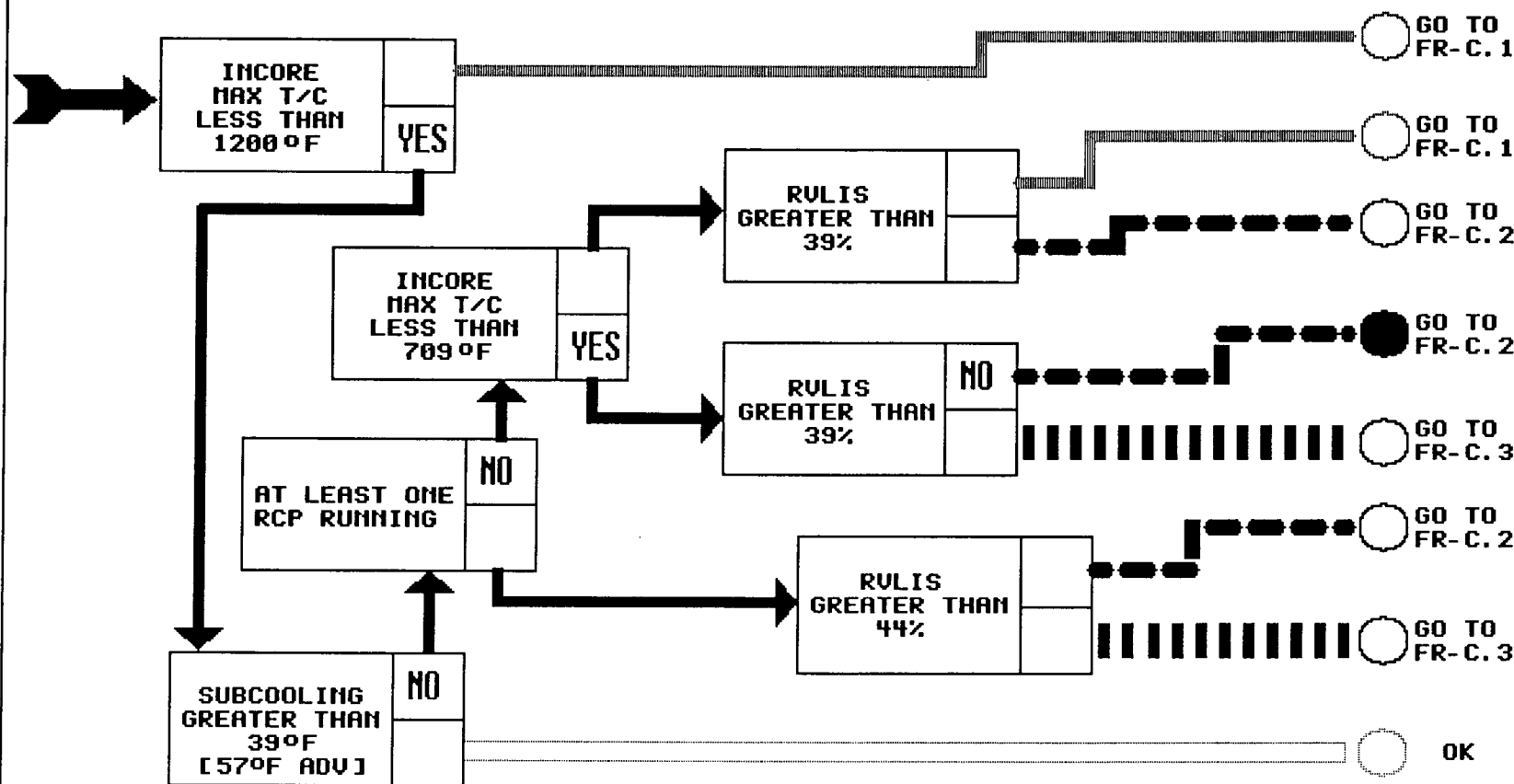
F4= 1/ 5/95

F5= 18: 13: 30G

F6= POINT IDS
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A



PREV SCHPZI 2FRC - CORE COOLING A B

F1= CLEAR
PREV CANG

F2= CPU=1

F3= TERM= TT76/TYP- 8

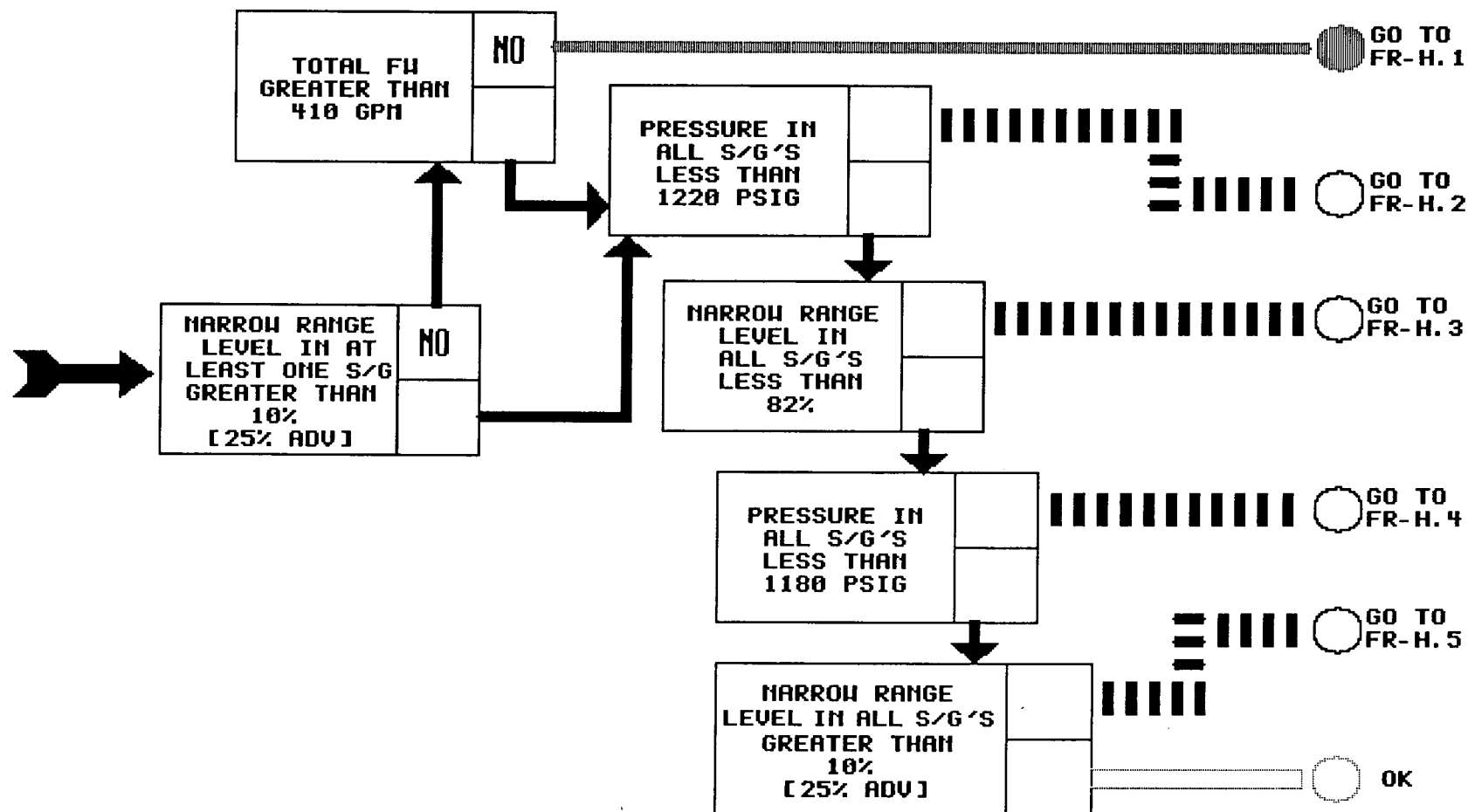
F4= 1/ 5/95

F5= 18: 13: 40G

F6= POINT IDs
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A



PREV SCHPZI ZFRH - HEAT SINK A B

F1= CLEAR
PREV CANCEL

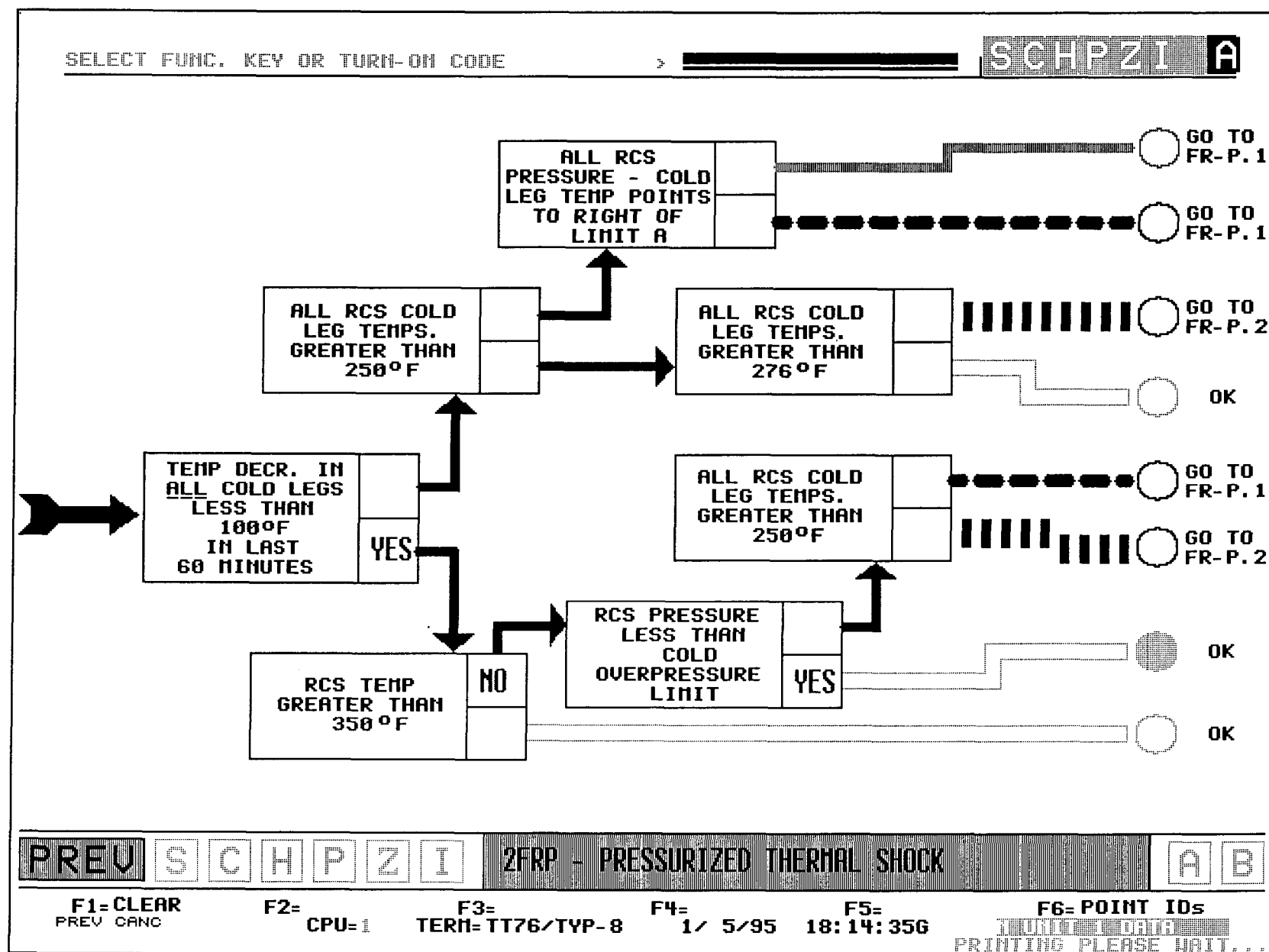
F2= CPU=1

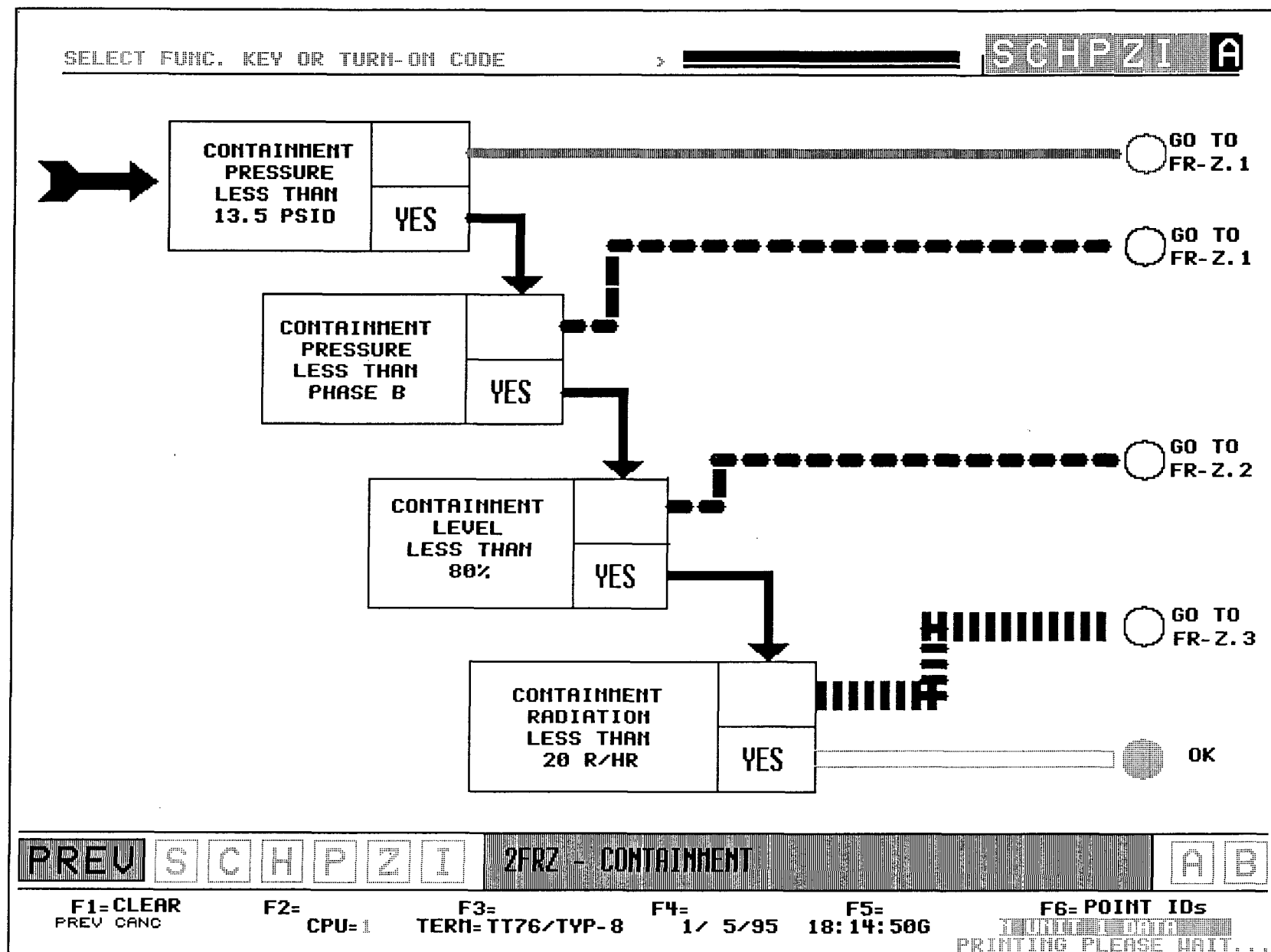
F3= TERM=TT76/TYP-8

F4= 1/ 5/95

F5= 18:14:20G

F6= POINT IDS
PRINTING PLEASE WAIT...

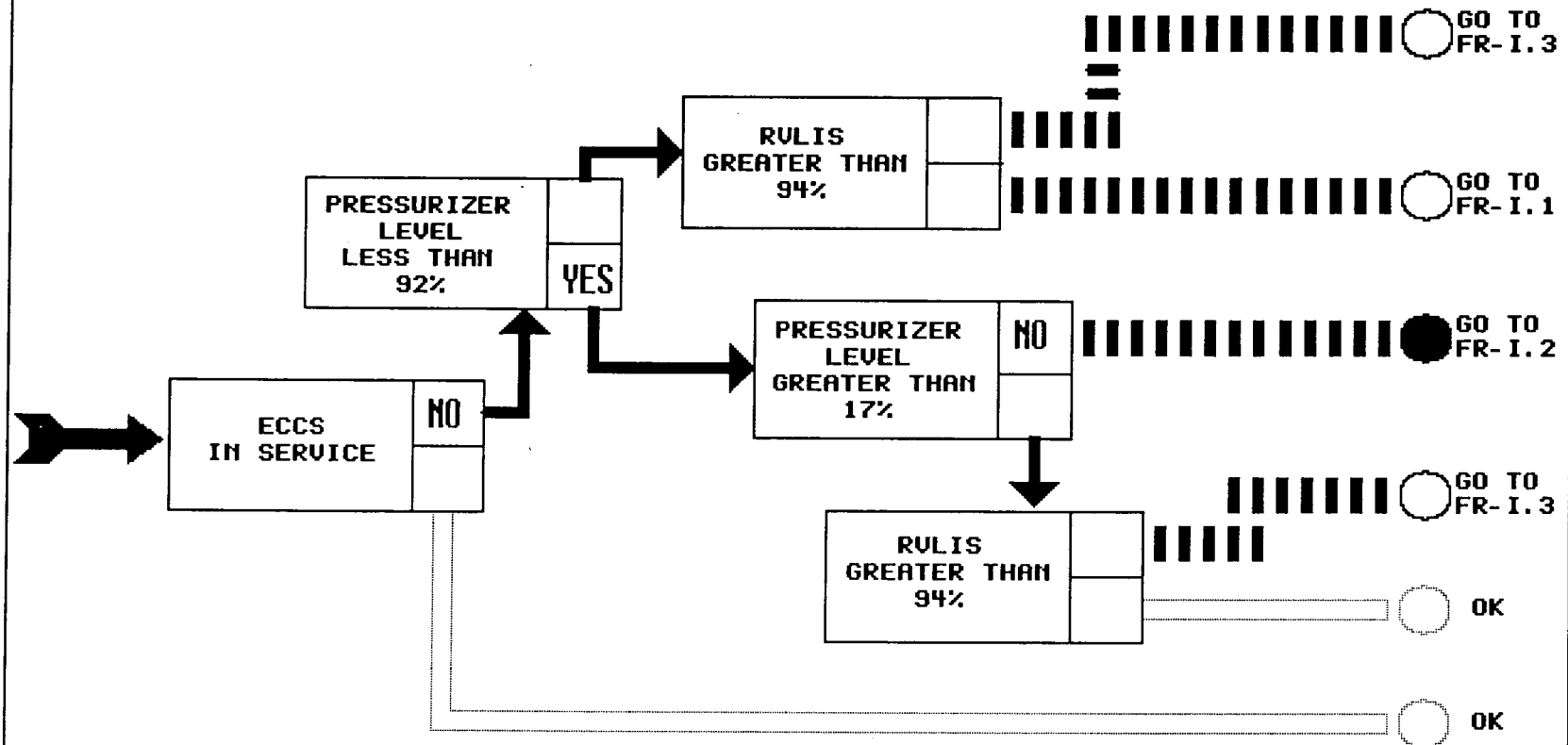




SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A

MAXIMUM
VENT TIME



PREV SCHPZI 2FRI - INVENTORY A B

F1= CLEAR
PREV CANC

F2= CPU=1

F3= TERM=TT76/TYP-8

F4= 1/ 5/95

F5= 18:15:05G

F6= POINT IDs
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

>

SCHPZI A

	VALUE	QUALITY
REACTOR TRIP BREAKER CLOSED	OPEN	ALN
RTS-99-1A MAIN BREAKER A	NO TRIP	GOOD
RTS-99-1B MAIN BREAKER B	NO TRIP	GOOD
RTS-99-2A BYPASS BREAKER A	NO TRIP	GOOD
RTS-99-2B BYPASS BREAKER B	NO TRIP	GOOD
POWER RANGE < 5 %	YES	GOOD
POWER RANGE AVERAGE	0 %	LOLO
NE-94-41 PUR RNG CH1 QD4	0	GOOD
42 PUR RNG CH2 QD2	0	UNK
43 PUR RNG CH3 QD1	0	GOOD
44 PUR RNG CH4 QD3	0	GOOD
INTERMEDIATE RANGE SUR	0.000 DPM	GOOD
LOG IR FLUX	0.00 LOG%POWER	LOLO
IR SUR FLUX	0.00%POWER	GOOD
NI-92-135-D IR FLUX CH 1	0.0000 LOG%POWER	UNK
136-E IR FLUX CH 2	0.0000	UNK
SOURCE RANGE ENERGIZED	NO	GOOD
SOURCE RANGE SUR	0.000 DPM	GOOD
LOG SOURCE RANGE FLUX	0.000 LOGCPS	GOOD
SOURCE RANGE FLUX	0 CPS	GOOD
NI-92-131-D SR FLUX CH 1	0.000 LOGCPS	GOOD
132-E SR FLUX CH 2	0.000	GOOD

RESET
UNIT
TRIP
ON
COMPUTER

PREV S C H P Z I 3FAS - SUBCRITICALITY PARAMETERS A B

F1= CLEAR
PREV CANC

F2= CPU=1

F3= TERM= TT76/TYP-8

F4= 1/ 5/95

F5= 18:15:45G

F6= POINT IDs
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

>

SCHPZ I A

	VALUE	QUALITY
INCORE TEMPERATURE < 1200 F °	YES	GOOD
INCORE TEMPERATURE	0 °F	GOOD
RCS SUBCOOLING ADEQUATE	NO	GOOD
SUBCOOL MARGIN TR A	0 °F	GOOD
TR B	0 °F	GOOD
AT LEAST ONE RCS PUMP RUNNING	NO	GOOD
PMP-68-8 RCP 1	OFF	GOOD
31 RCP 2	OFF	GOOD
50 RCP 3	OFF	GOOD
73 RCP 4	OFF	GOOD
INCORE TEMPERATURE < 700 F °	YES	GOOD
RVLIS LEVEL > 39%	NO	GOOD
RVLIS LEVEL > 44%		
LCP94-7902 RVLIS LEVEL TRAIN A	0 %	GOOD
LCP94-8002 RVLIS LEVEL TRAIN B	0 %	GOOD

PREV

S

C

H

P

Z

I

3FRC - CORE COOLING PARAMETERS

A

B

F1= CLEAR
PREV CANC

F2= CPU=1

F3= TERM= TT76/TYP-8

F4= 1/ 5/95

F5= 18:16:05G

F6= POINT IDs
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A

	VALUE	QUALITY		VALUE	QUALITY
SG 1 NR AVERAGE	0.0 %	LOLO	SG 2 NR AVERAGE	0.0 %	GOOD
LT-3-39-F	0.0	GOOD	LT-3-52-F	0.0	LOLO
42-G	0.0	LOLO	55-G	0.0	LOLO
SG 3 NR AVERAGE	0.0 %	GOOD	SG 4 NR AVERAGE	0.0 %	LOLO
LT-3-94-F	0.0	LOLO	LT-3-107-F	0.0	LOLO
97-G	0.0	LOLO	110-G	0.0	LOLO

TOTAL FM FLOW 0 GPM LOLO

SG 1 FM-3-163A-A (AFU) 0 GPM GOOD
 FT-3-235A (BYPASS) 0 KBH GOOD
 FT-3-35A/B (MFU) 0 KBH GOOD

SG 2 FM-3-155-B (AFU) 0 GPM GOOD
 FT-3-238A (BYPASS) 0 KBH GOOD
 FT-3-48A/B (MFU) 0 KBH GOOD

SG 3 FM-3-147A-A (AFU) 0 GPM GOOD
 FT-3-241A (BYPASS) 0 KBH GOOD
 FT-3-90A/B (MFU) 0 KBH GOOD

SG 4 FM-3-170B-B (AFU) 0 GPM GOOD
 FT-3-244A (BYPASS) 0 KBH GOOD
 FT-3-103A/B (MFU) 0 KBH GOOD

SG 1 MS PRESS AVG 0 PSIG GOOD
 PT-1-2A-D 0 LOLO
 2B-E 0 LOLO

SG 2 MS PRESS AVG 0 PSIG LOLO
 PT-1-9A-D 0 LOLO
 9B-E 0 LOLO

SG 3 MS PRESS AVG 0 PSIG GOOD
 PT-1-20A-D 0 LOLO
 20B-E 0 LOLO

SG 4 MS PRESS AVG 0 PSIG GOOD
 PT-1-27A-D 0 LOLO
 27B-E 0 LOLO

PREV S C H P Z I

3FRH - HEAT SINK PARAMETERS

A B

F1= CLEAR
PREV CANG

F2= CPU=1

F3= TERM= TT76/TYP-8

F4= 1/ 5/95

F5= 18:16:20G

F6= POINT IDs

THESE DATA
 PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZ I A

	VALUE	QUALITY
COLD LEG DECREASE < 100 °F IN LAST 60 MINUTES	YES	GOOD
ALL RCS PRESS-CL TEMPS TO RIGHT OF LIMIT A		
LIMIT A	0 °F	UNK
ALL RCS CL TEMPS > 250 °F		
ALL RCS CL TEMPS > 276 °F		
ALL RCS CL TEMPS > 350 °F	NO	GOOD
RCS PRESS < COLD OVERPRESSURE LIMIT	YES	GOOD
COLD OVERPRESSURE LIMIT	0	GOOD
RCS CL TEMP AVG	557 °F	GOOD
TE-68-18-D LP 1 CL HR TEMP	0	LRL
41-D LP 2 CL HR TEMP	0	LRL
60-E LP 3 CL HR TEMP	0	LRL
83-E LP 4 CL HR TEMP	0	LRL
RCS HR PRESS AVG	0 PSIG	LOLO
PT-68-63-D RC HR PRESS LP 1	0	GOOD
64-E RC HR PRESS LP 3	0	GOOD

B-14

PREV S C H P Z I 3FRP - PTS PARAMETERS A B

F1= CLEAR
PREV CANG

F2= CPU=1

F3= TERM= TT76/TYP-8

F4= 1/ 5/95

F5= 18:16:45G

F6= POINT IDs
THU JUN 11 1992 18:16:45G
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

>

SCHPZ I A

	VALUE	QUALITY		VALUE	QUALITY
CNTHT PRESS < 13.5 PSIG	YES	GOOD	CNTHT PRESS < PHASE B	YES	GOOD
CNTHT AVG PRESS - WR	3.0000 PSIG	GOOD	1-XS-99-88B-A	NOT ACT	ALM
PT-30-310-A	0.0000	GOOD	1-XS-99-88B-B	ACT	GOOD
311-B	0.0000	GOOD			
CNTHT SUMP LEVEL < 80 %	YES	GOOD			
CNTHT SUMP LEVEL AVG	0.0000 FT	LOLO			
LT-63-180-D LEV I	0.0000	GOOD			
181-E II	0.0000	GOOD			
182-F III	0.0000	GOOD			
183-G IV	0.0000	GOOD			
CNTHT RAD < 20 R/HR	YES	GOOD			
UPPER CNTHT RAD AVG	1.000E+00 R/HR	GOOD	LOWER CNTHT RAD AVG	4.000E+00 R/HR	REDU
RE-90-271-A	1.000E+01	GOOD	RE-90-273-A	1.000E+01	GOOD
272-B	1.000E+01	GOOD	274-B	1.000E+01	GOOD

PREV

S

C

H

P

Z

I

3FRZ - CONTAINMENT PARAMETERS

A

B

F1= CLEAR
PREV CANC

F2= CPU=1

F3= TERM=TT76/TYP-8

F4= 1/ 5/95

F5= 18:16:55G

F6= POINT IDs
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A

	VALUE	QUALITY
ECCS IN SERVICE	NO	GOOD
PMP-63-10-A SI PMP 1A-A	OFF	GOOD
15-B SI PMP 1B-B	OFF	GOOD
FCV-63-25-B SIS BIT SHUTOFF VALVE	CLOSED	GOOD
26-A SIS BIT SHUTOFF VALVE	CLOSED	GOOD
PRESSURIZER LEVEL < 92 %	YES	GOOD
PZR LEVEL AVG	0 %	LOLO
LT-68-339-D	0	LOLO
335-E	0	LOLO
320-F	0	LOLO
RULIS > 94 %		
RULIS MIN	0 %	GOOD
LCP94-7902 RULIS LEVEL TR A	0	GOOD
LCP94-8002 RULIS LEVEL TR B	0	GOOD
PZR LEVEL > 17 %	NO	GOOD
RULIS > 94 %		

PREV

S

C

H

P

Z

I

3FRI - INVENTORY PARAMETERS

A

B

F1= CLEAR
PREV CANG

F2= CPU=1

F3= TERM= TT76/TYP-8

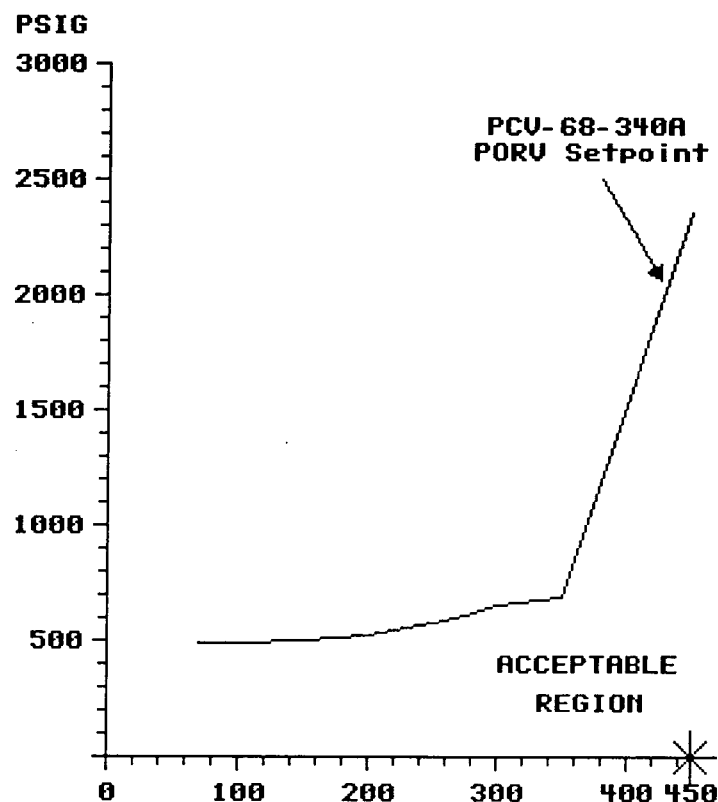
F4= 1/ 5/95

F5= 18:18:15G

F6= POINT IDs
PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A



RCS CL AVG TEMP 557 °F
RCS PRESS AVG 0 PSIG

PREV SCHPZI 4FRP1 - COLD OVERPRESSURE LIMIT CURVE A B

F1= CLEAR
PREV CANC

F2= CPU=1

F3= TERM= TT76/TYP-8

F4= 1/ 5/95

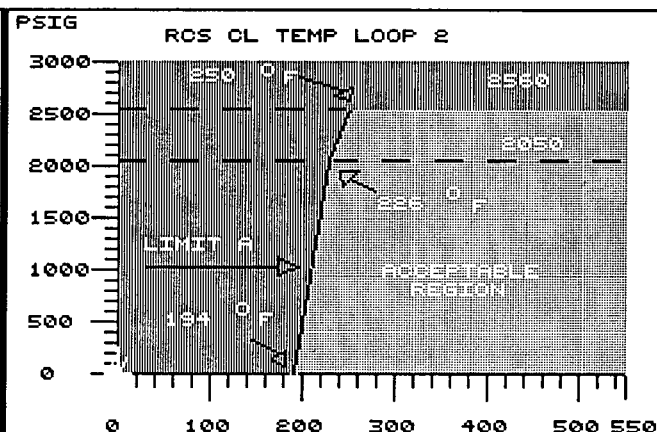
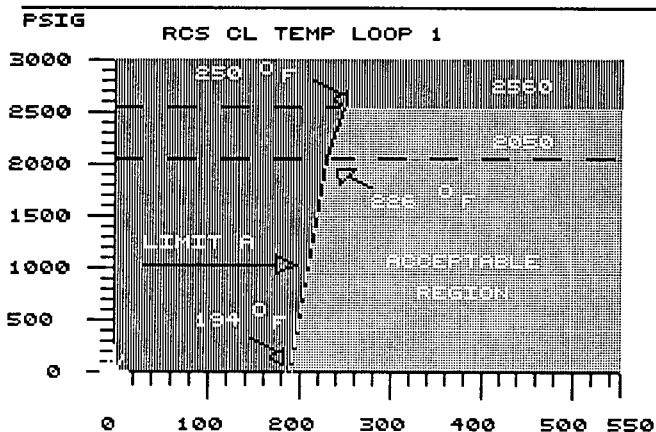
F5= 18:18:30G

F6= POINT IDs

PRINTING PLEASE WAIT...

SELECT FUNC. KEY OR TURN-ON CODE

SCHPZI A



RCS PRESS AVG

0 PSIG

RCS LOOP 1

0 DEGF

RCS LOOP 2

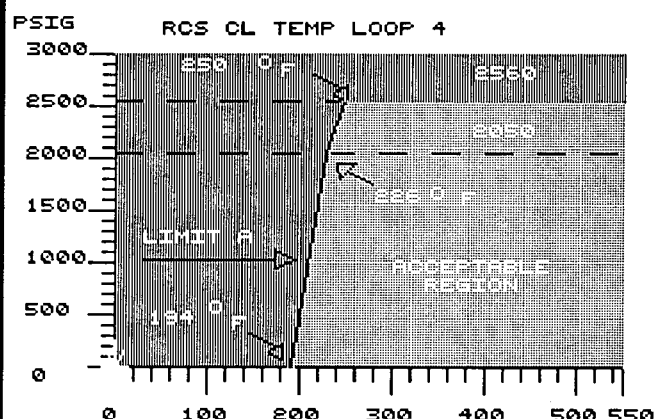
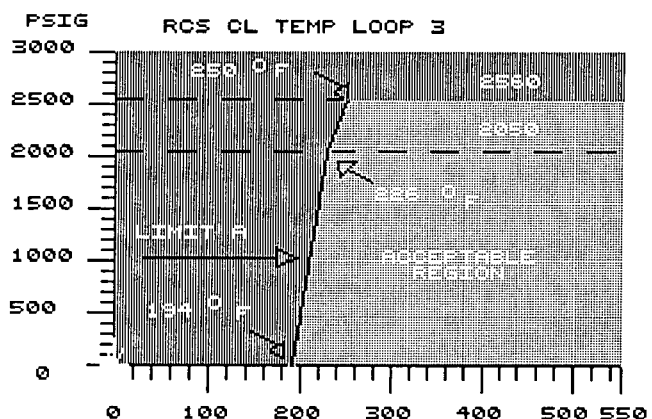
0 DEGF

RCS LOOP 3

0 DEGF

RCS LOOP 4

0 DEGF



PREV S C H P Z I

4FRP2 - LIMIT A CURVE

A B

F1= CLEAR
PREV CANG

F2= CPU=1

F3= TERM= TT76/TYP-8

F4= 1/ 5/95

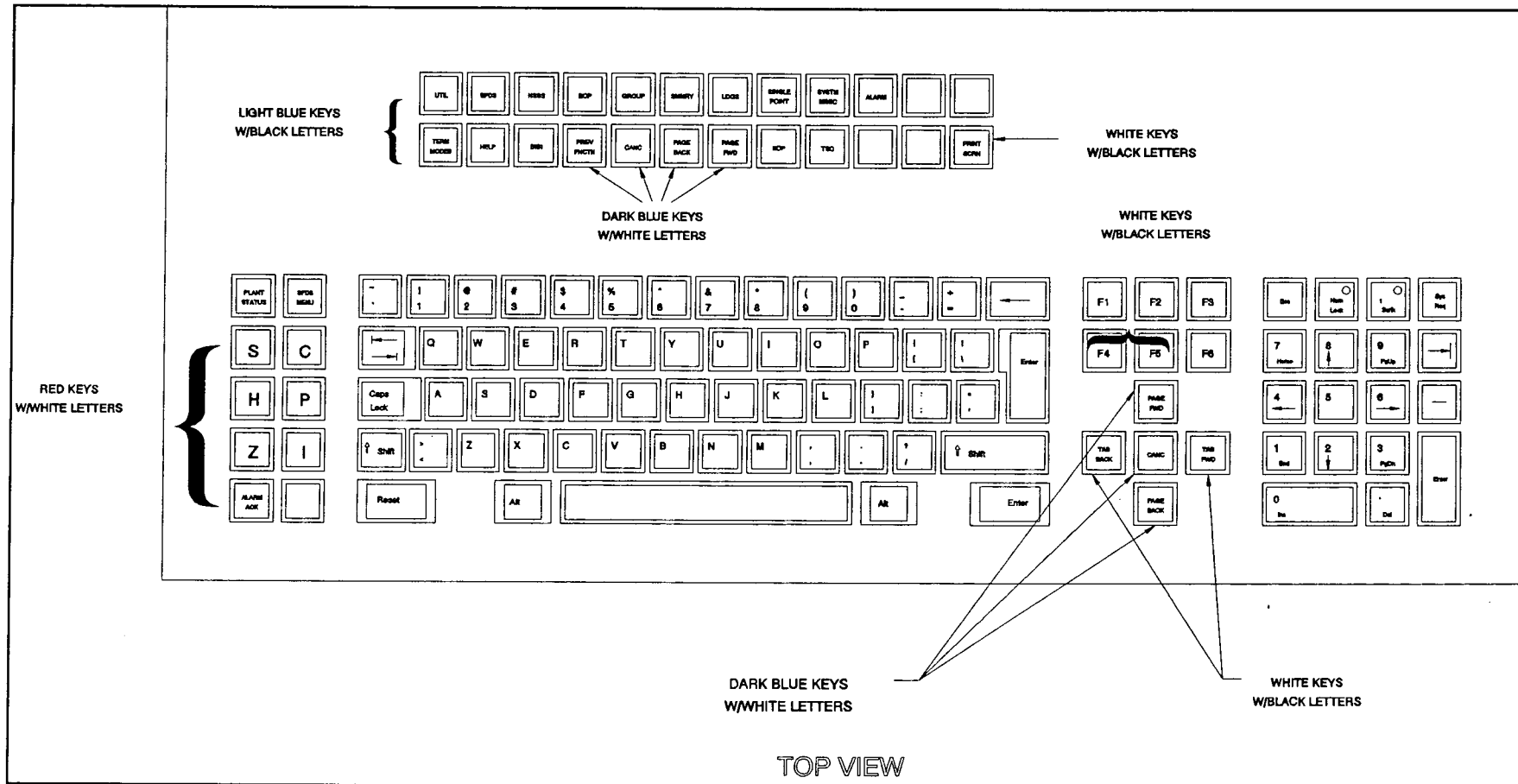
F5= 18:18:40G

F6= POINT IDs

PRINTING PLEASE WAIT...

APPENDIX D

WBN SPDS KEYBOARD LAYOUT



ENCLOSURE 2

LIST OF REVISED COMMITMENTS

(Commitment numerical order corresponds to TVA Letter of November 1, 1990)

1. To ensure that the status boxes are continuously displayed, the WBN SPDS will be designed to continuously display the SPDS status box on all displays under any conditions.
2. The five critical safety functions will continuously display by virtue of the containment isolation status panels (CISPs), the six status tree boxes, and the single additional SPDS parameters status box. The seven status boxes ("A", "S", "C", "H", "P", "Z", and "I") will be continuously displayed in the same location on the various displays in the system, including non-SPDS displays.
12. TVA will utilize lighter colors (high contrast blue and white) to provide greater contrast between the previous blue (text & piping) and the black display background. A lighter blue is now used for poor/bad data instead of a dark blue.