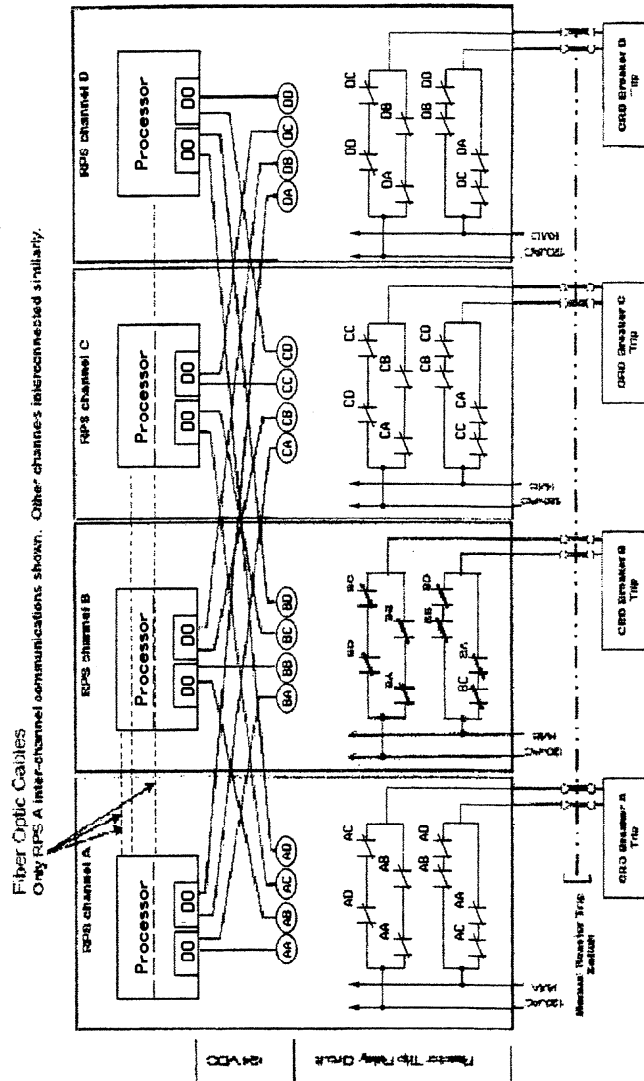


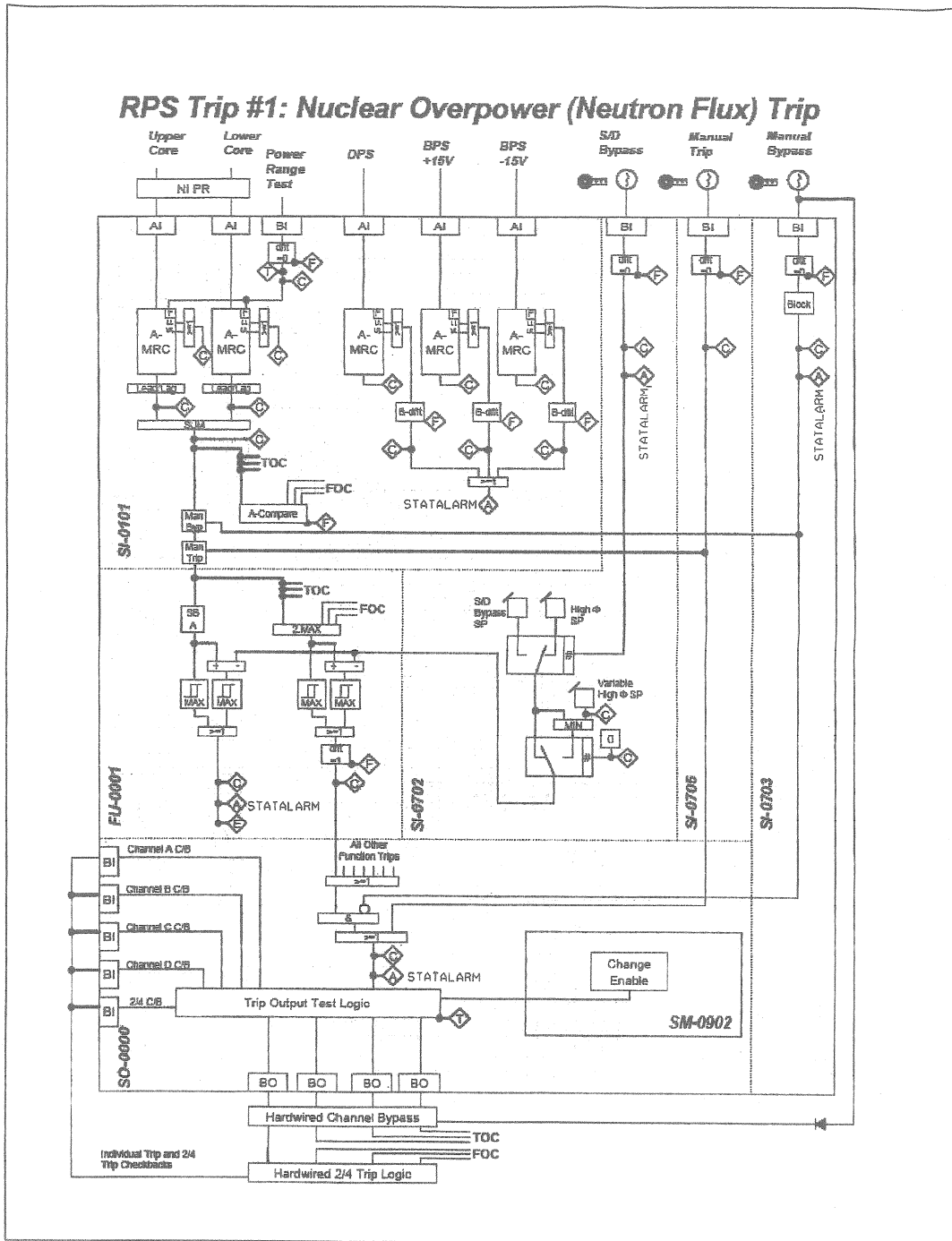
## Appendix 7B. Figures

**Figure 7-1. Reactor Protection System**

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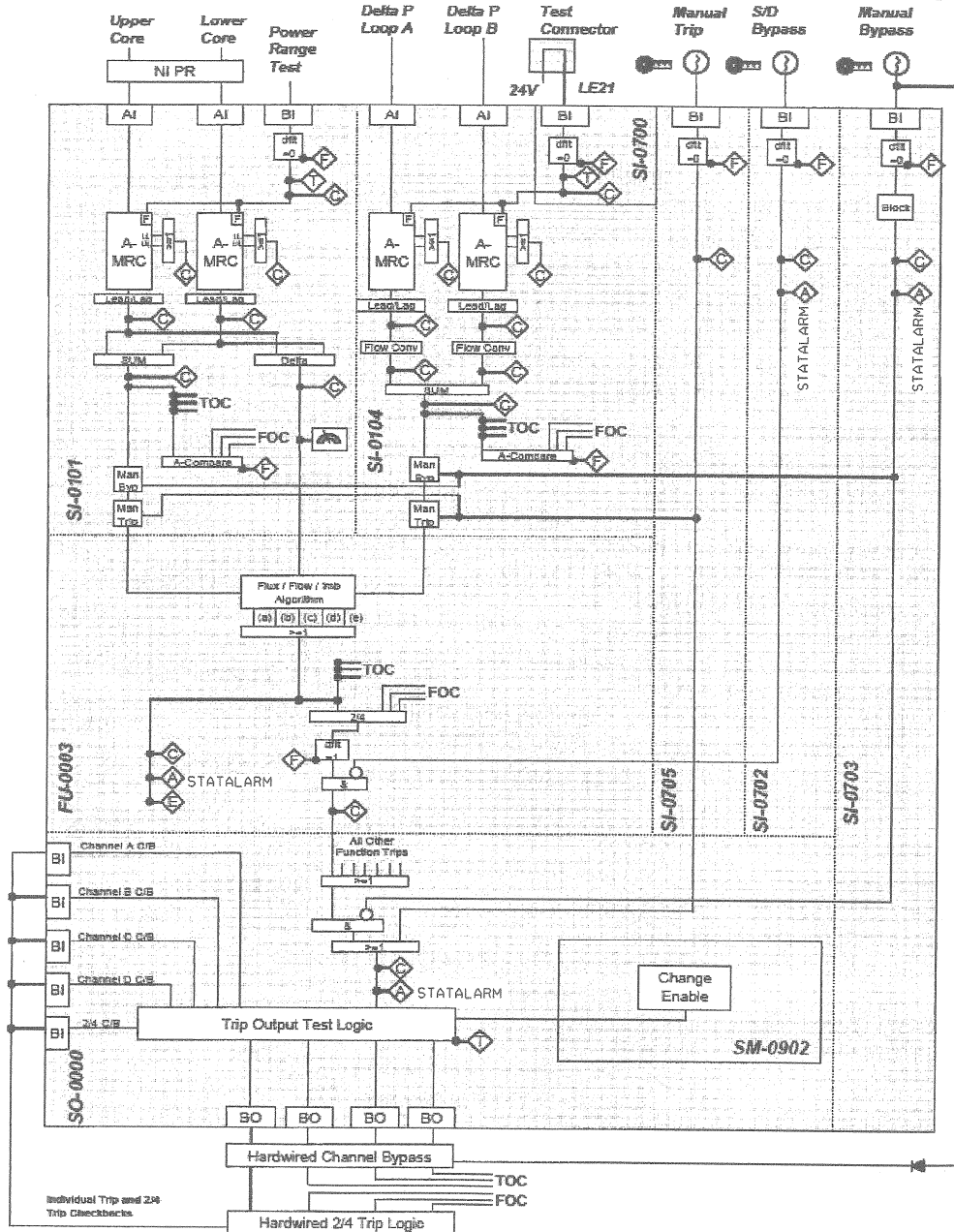
### TXS RPS Protection Channel Interconnections and Reactor Trip Relay Logic



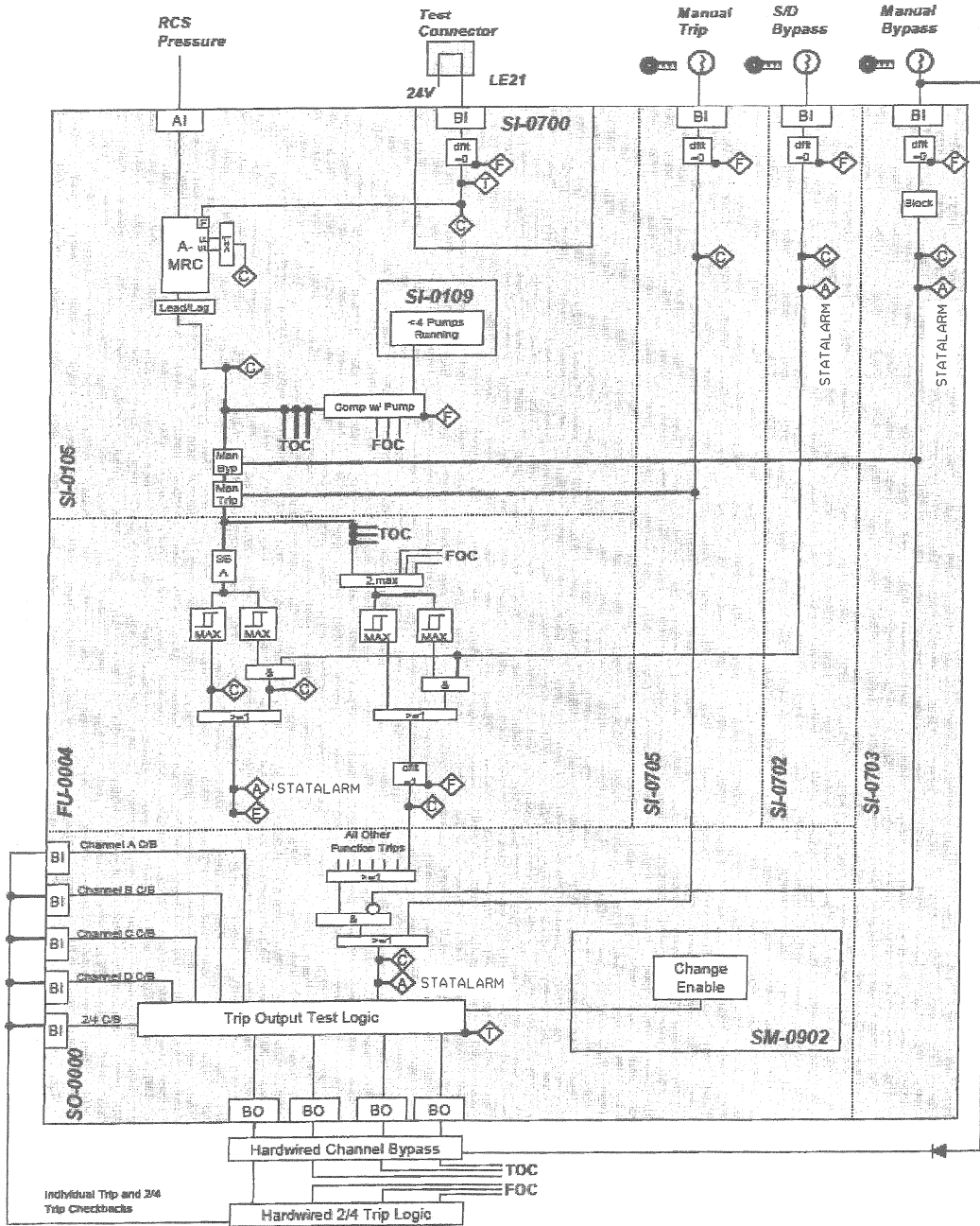


RPS #2 Trip Not Used

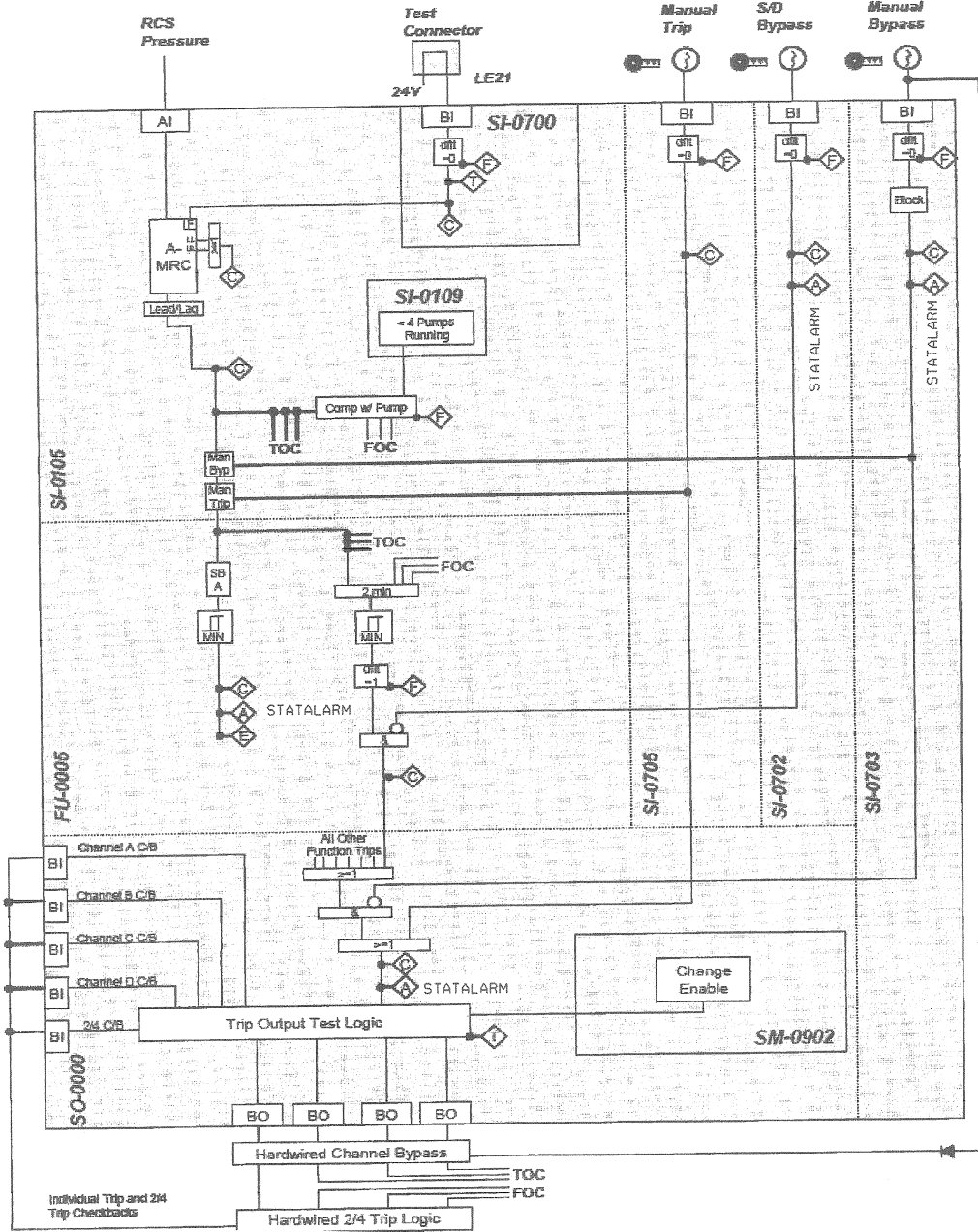
### RPS Trip #3: Nuclear Overpower Flux/Flow/Imbalance Trip



### RPS Trip #4: RCS High Pressure Trip



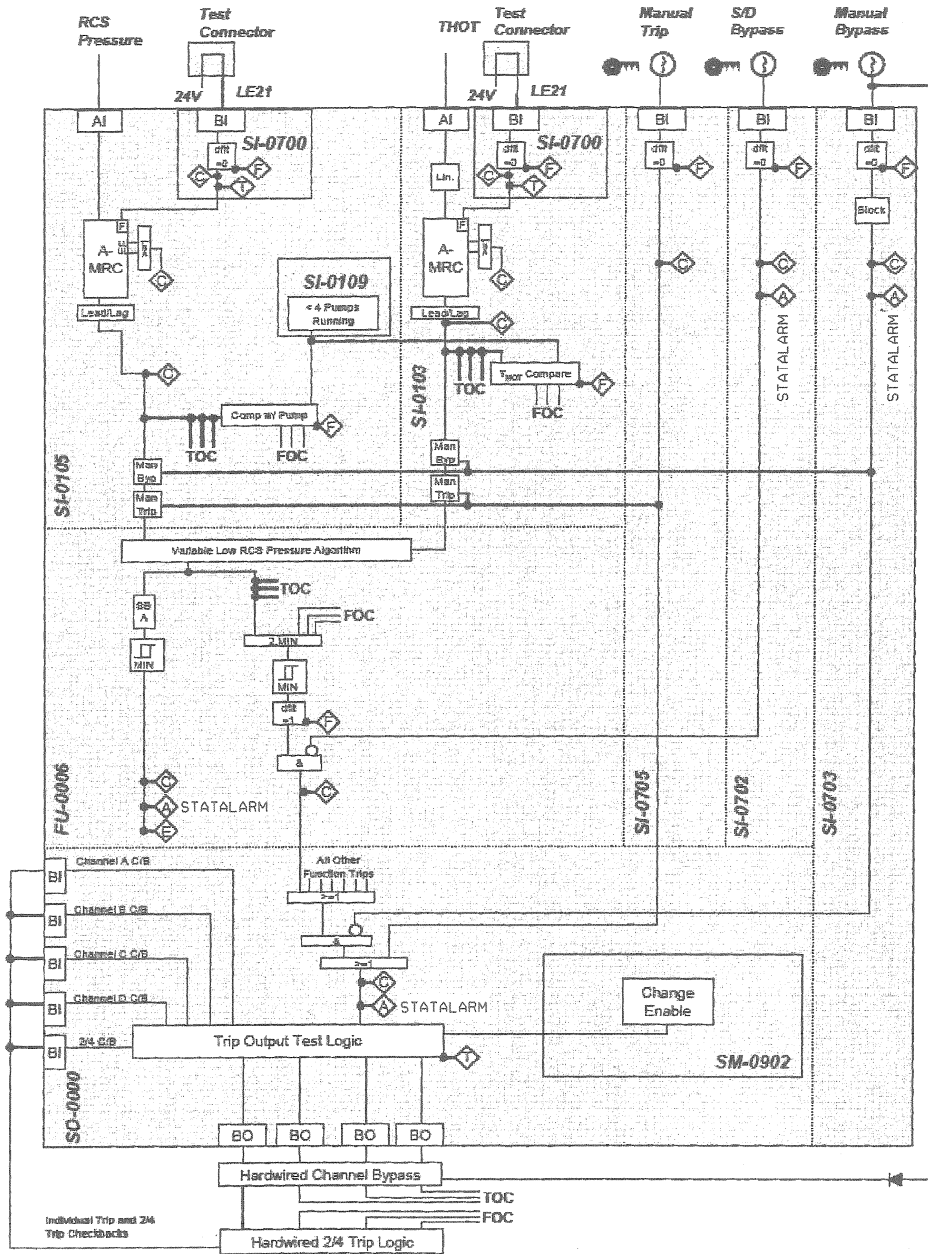
### RPS Trip #5: RCS Low Pressure Trip





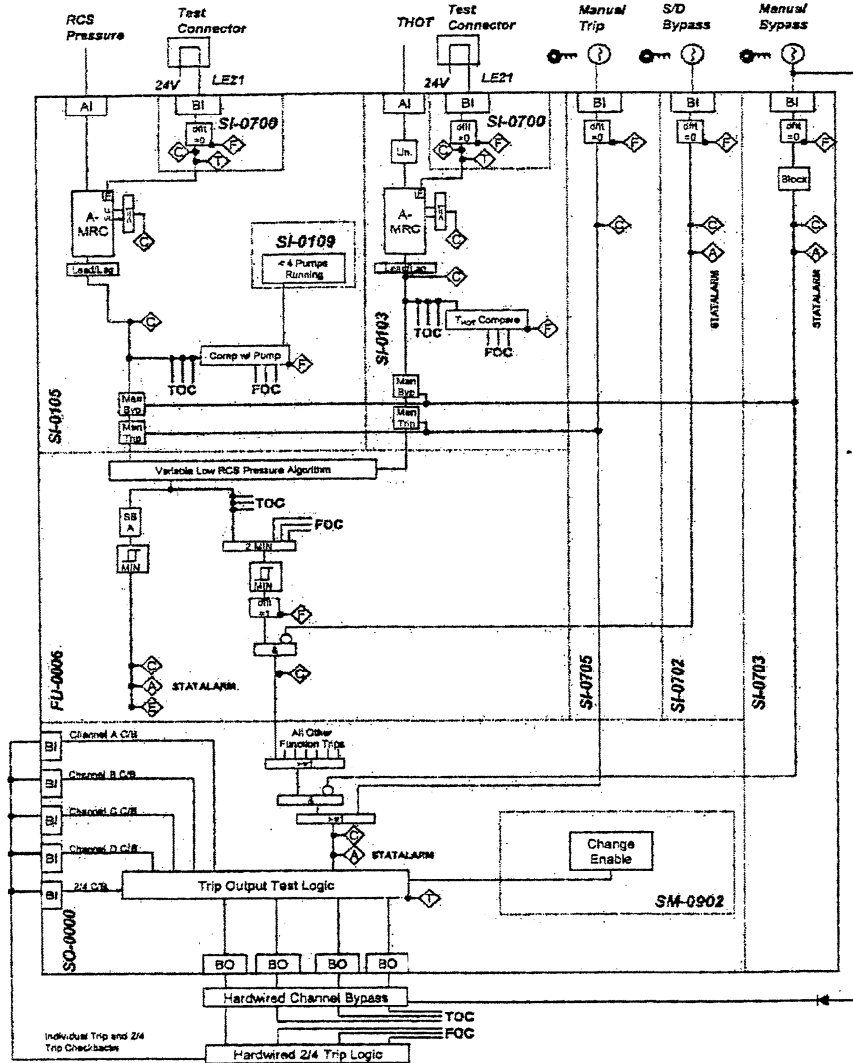
UNIT 1 ONLY

RPS Trip #6: RCS Variable Low Pressure Trip



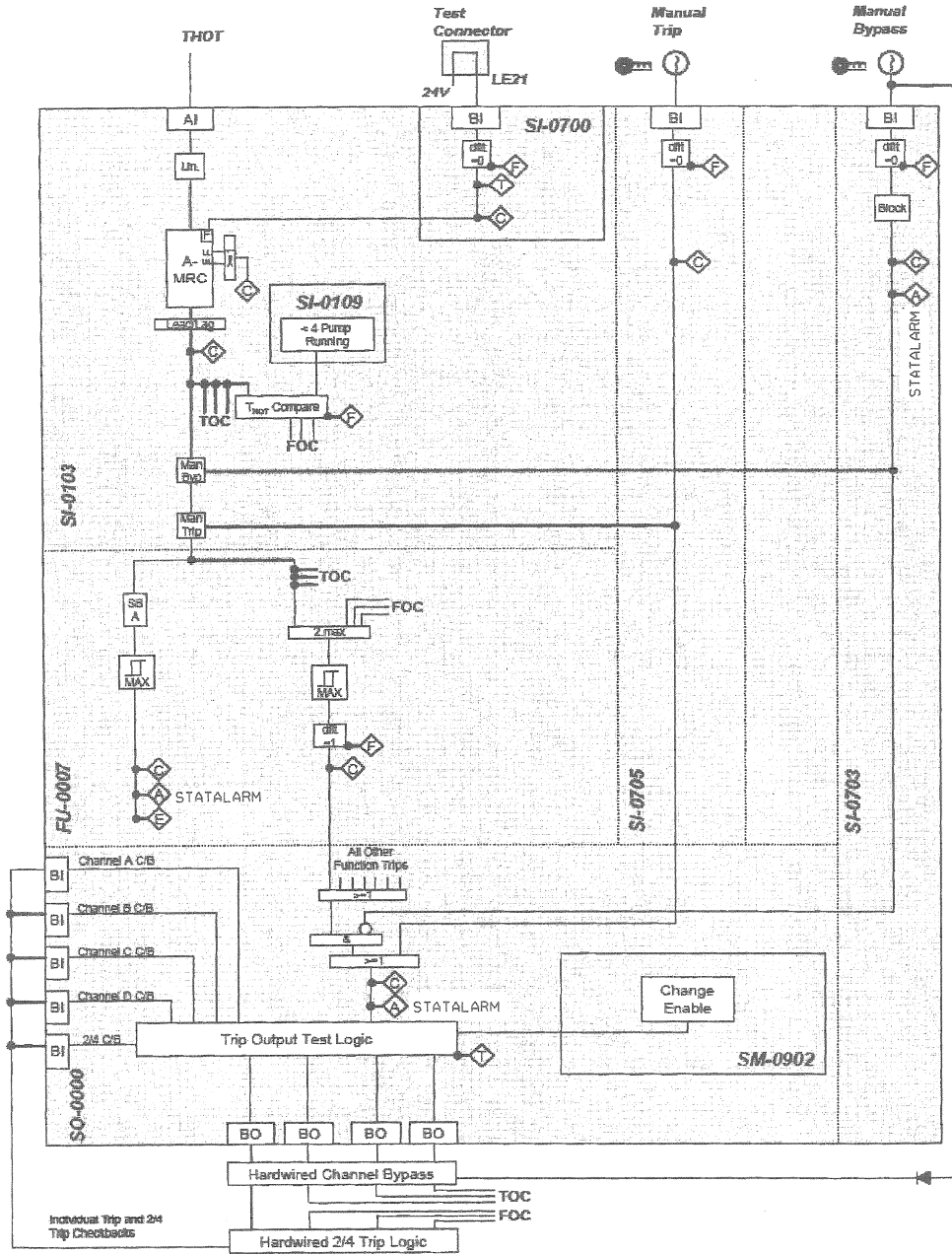
UNITS 2 & 3 ONLY

RPS Trip #6: RCS Variable Low Pressure Trip

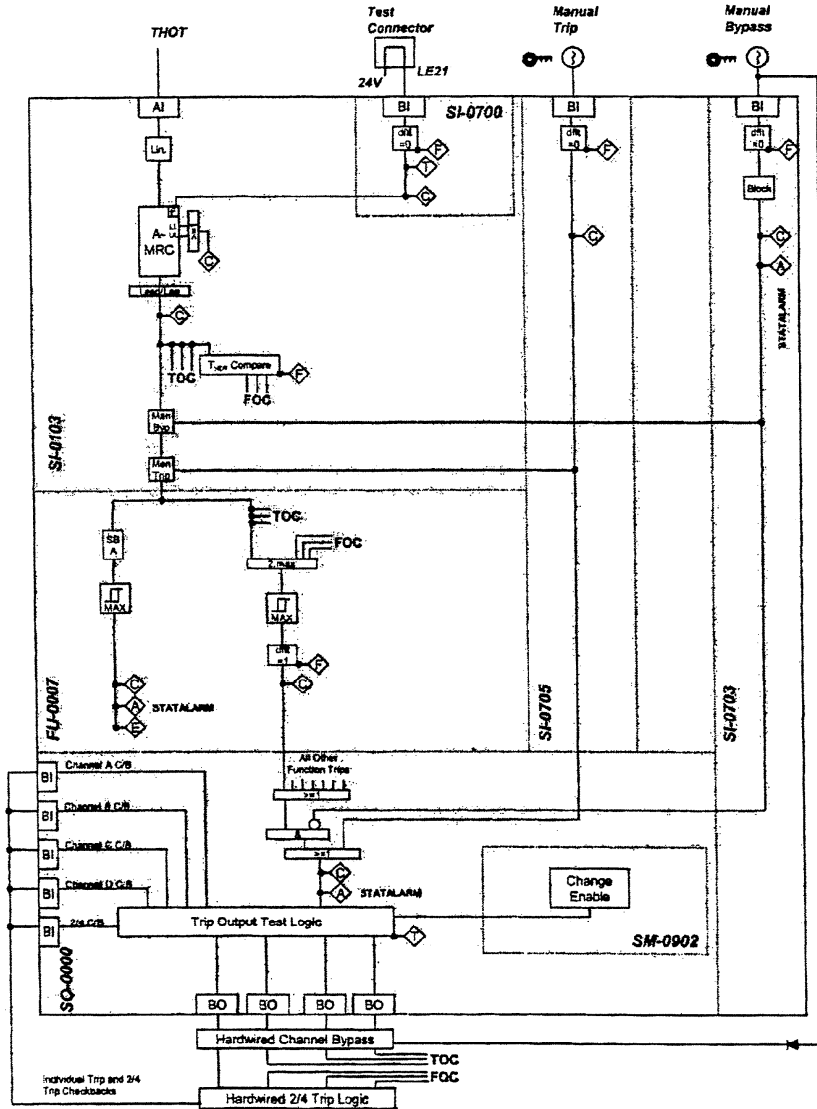


UNIT 1 ONLY

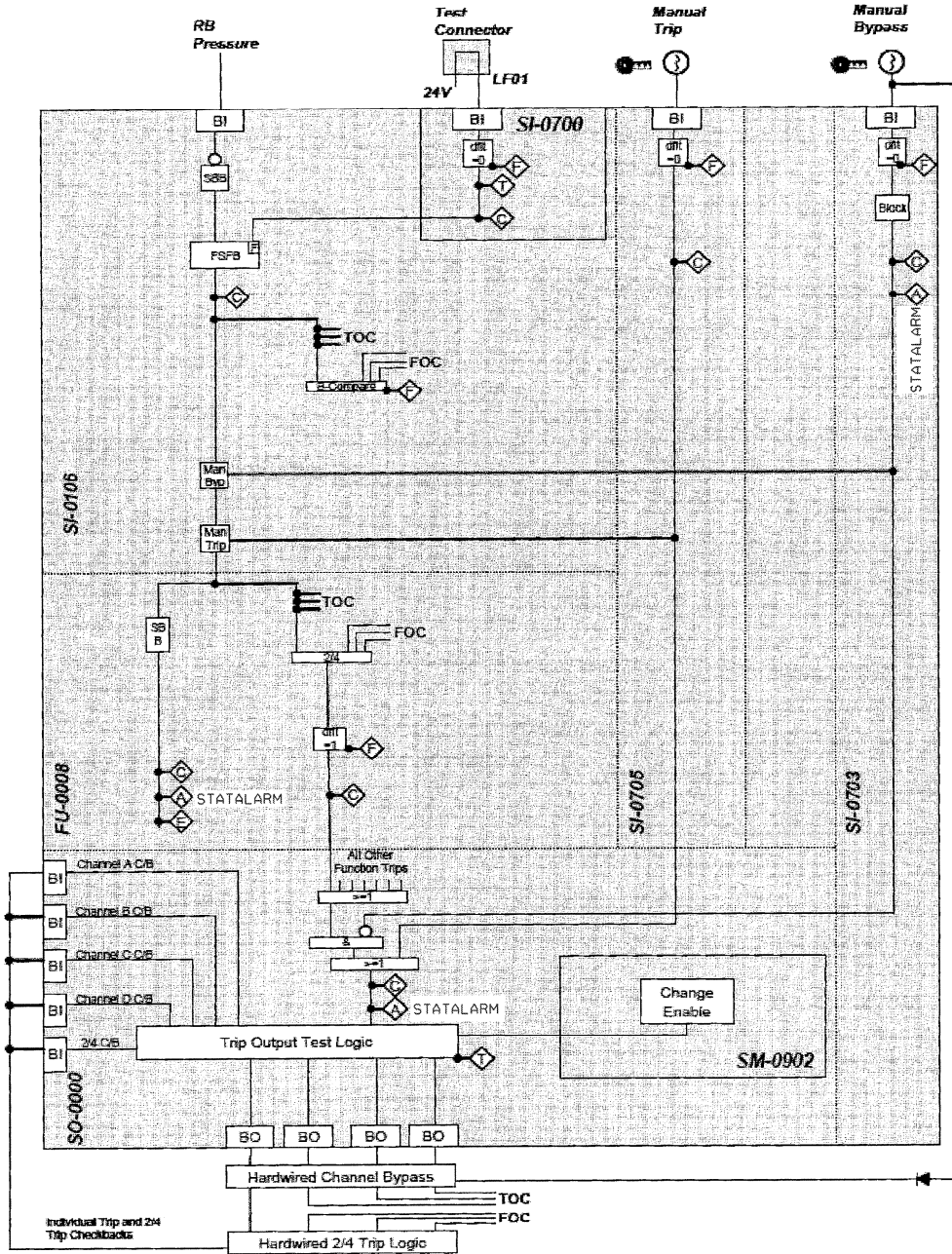
**RPS Trip #7: RCS High Outlet Temperature Trip**



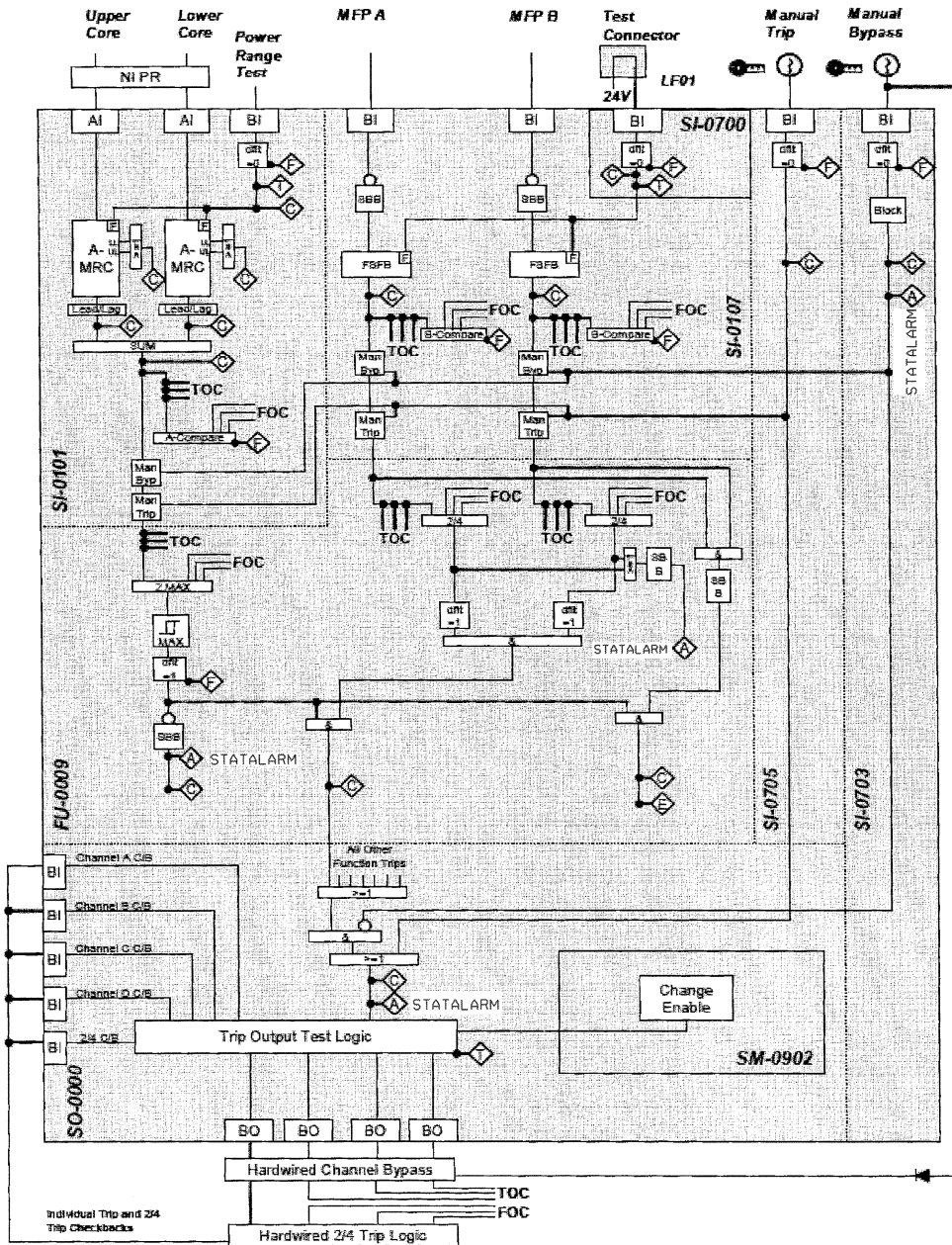
UNITS 2 & 3 ONLY  
**RPS Trip #7: RCS High Outlet Temperature Trip**



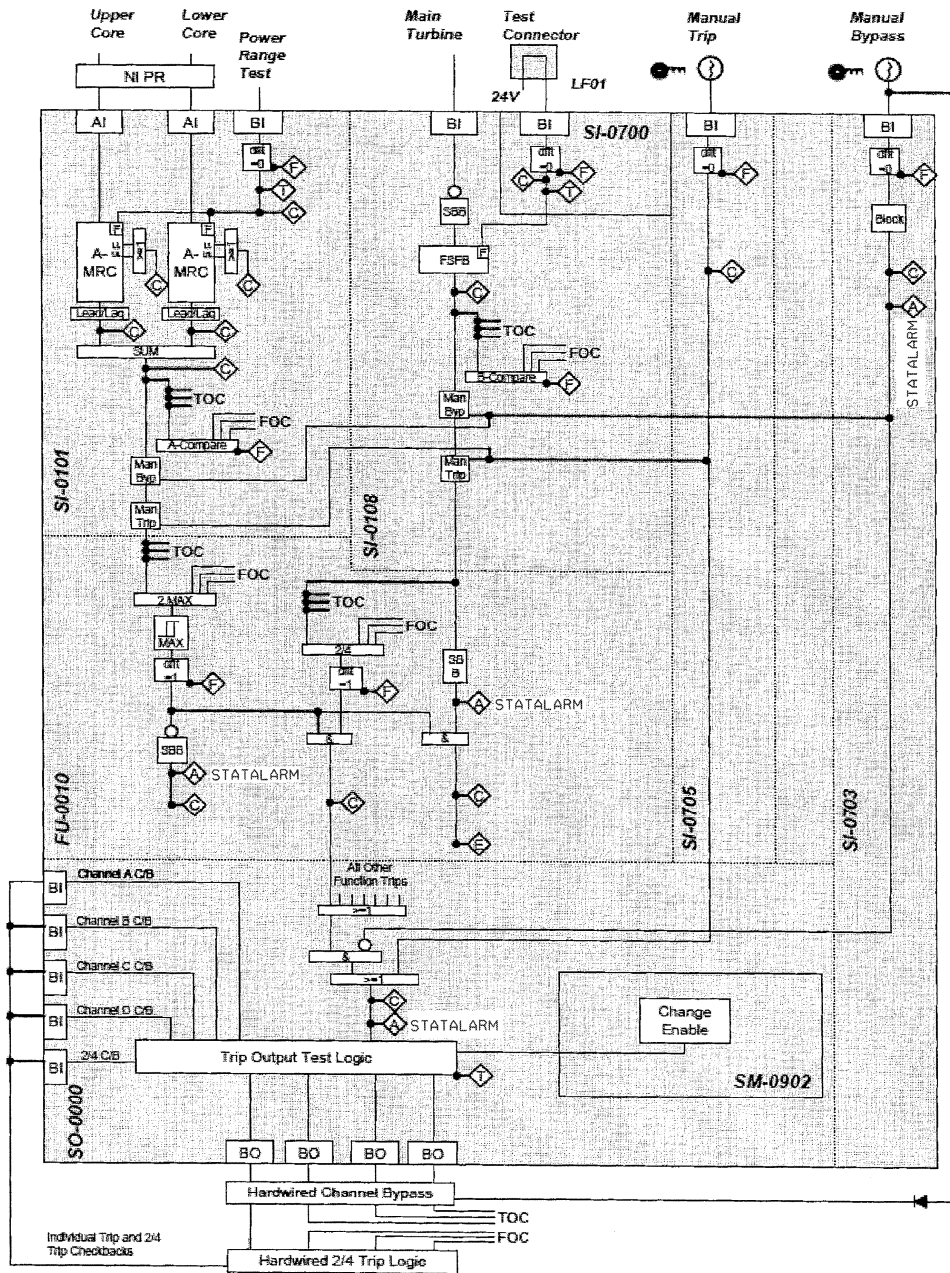
### RPS Trip #8: RB High Pressure Trip



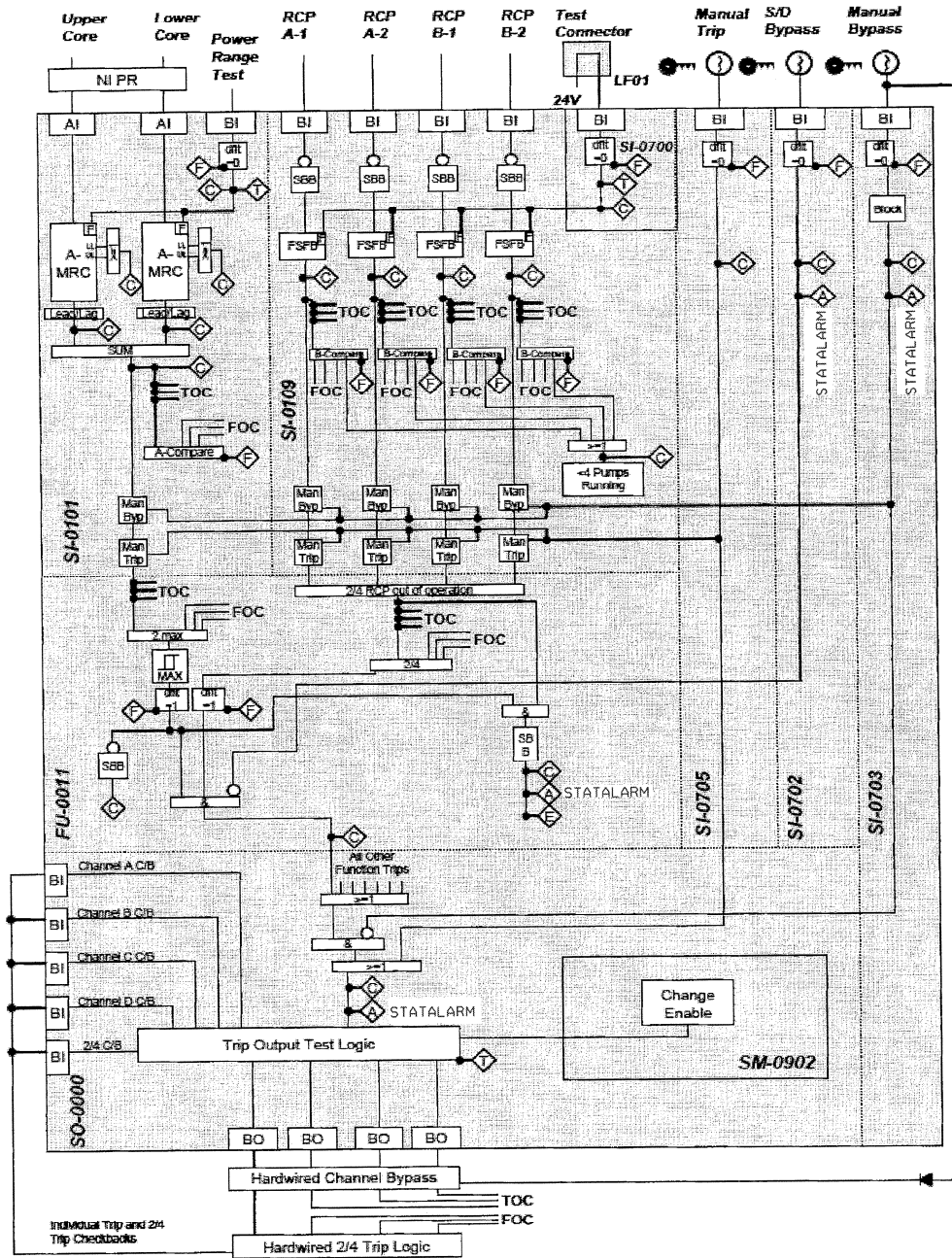
### RPS Trip #9: Loss of Both Main Feedwater Pumps Trip



### RPS Trip #10: Main Turbine Trip



### RPS Trip #11: Reactor Coolant Pump Power/Flux Trip





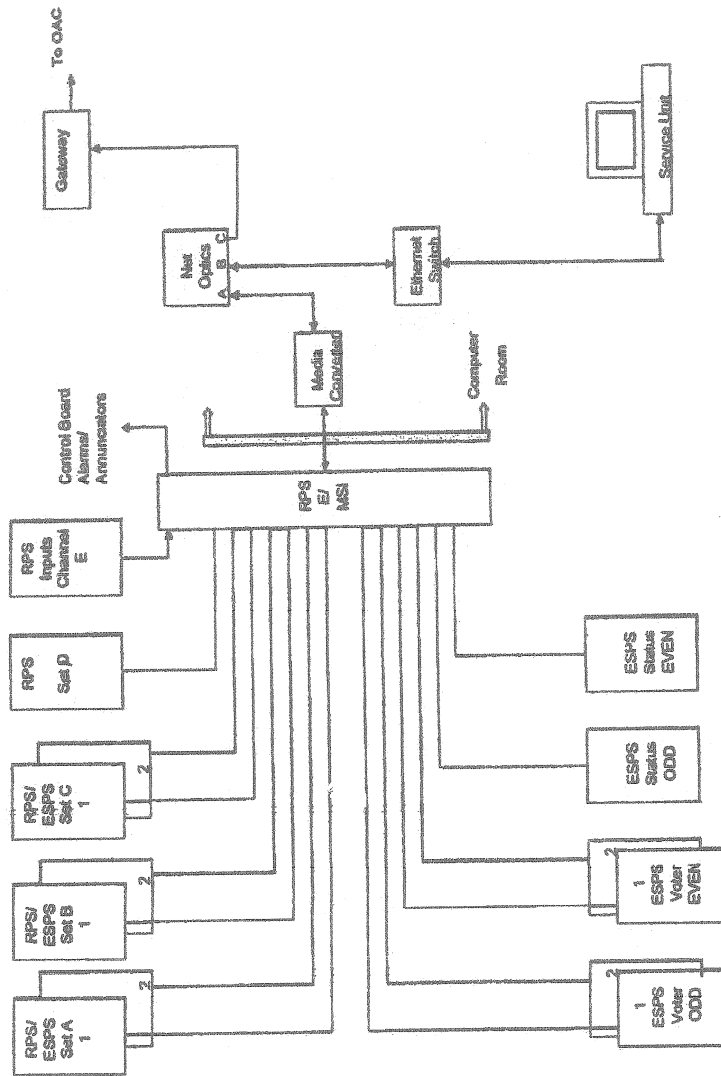


Figure 7-2. Typical Pressure Temperature Boundaries

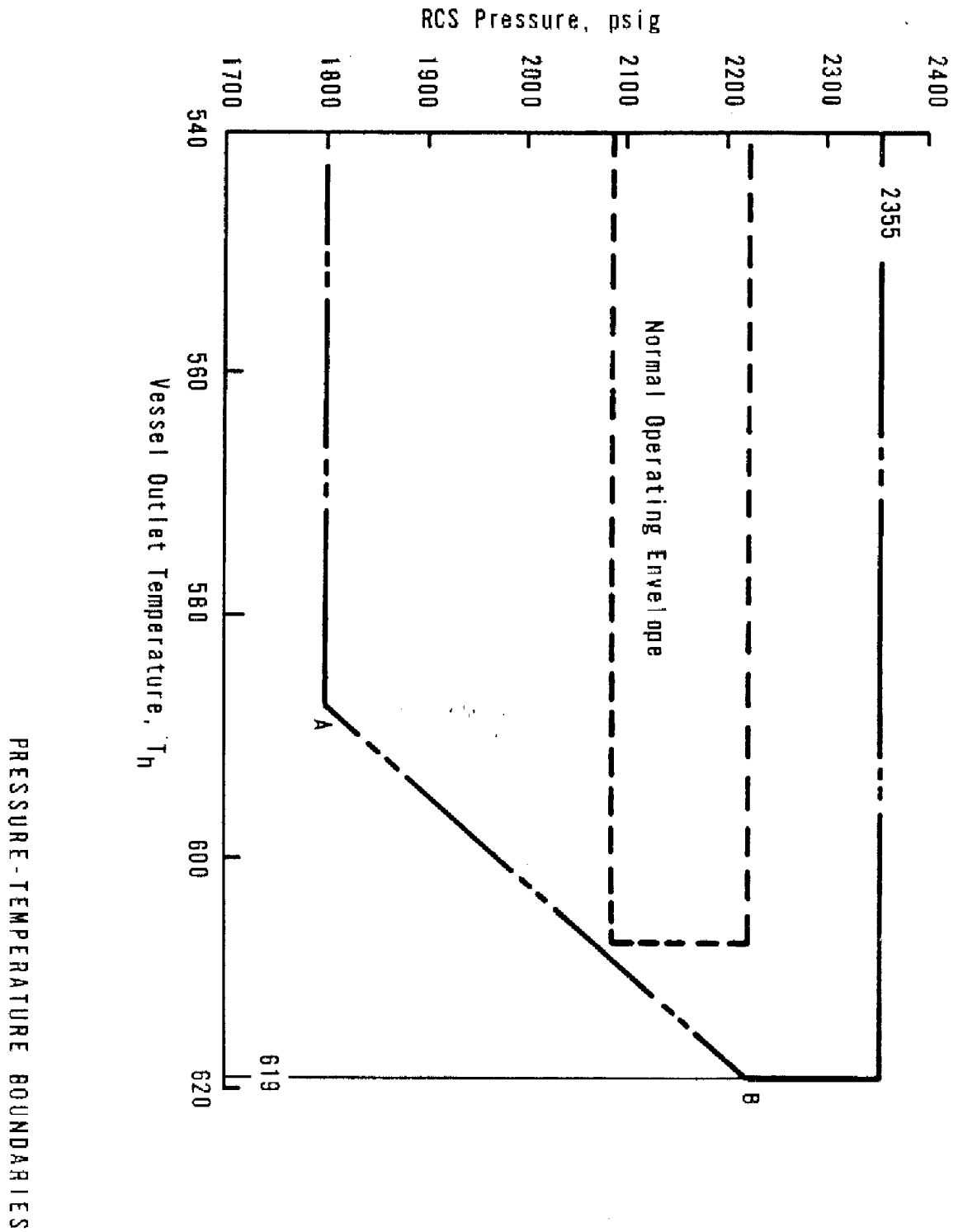


Figure 7-3. Typical Power Imbalance Boundaries

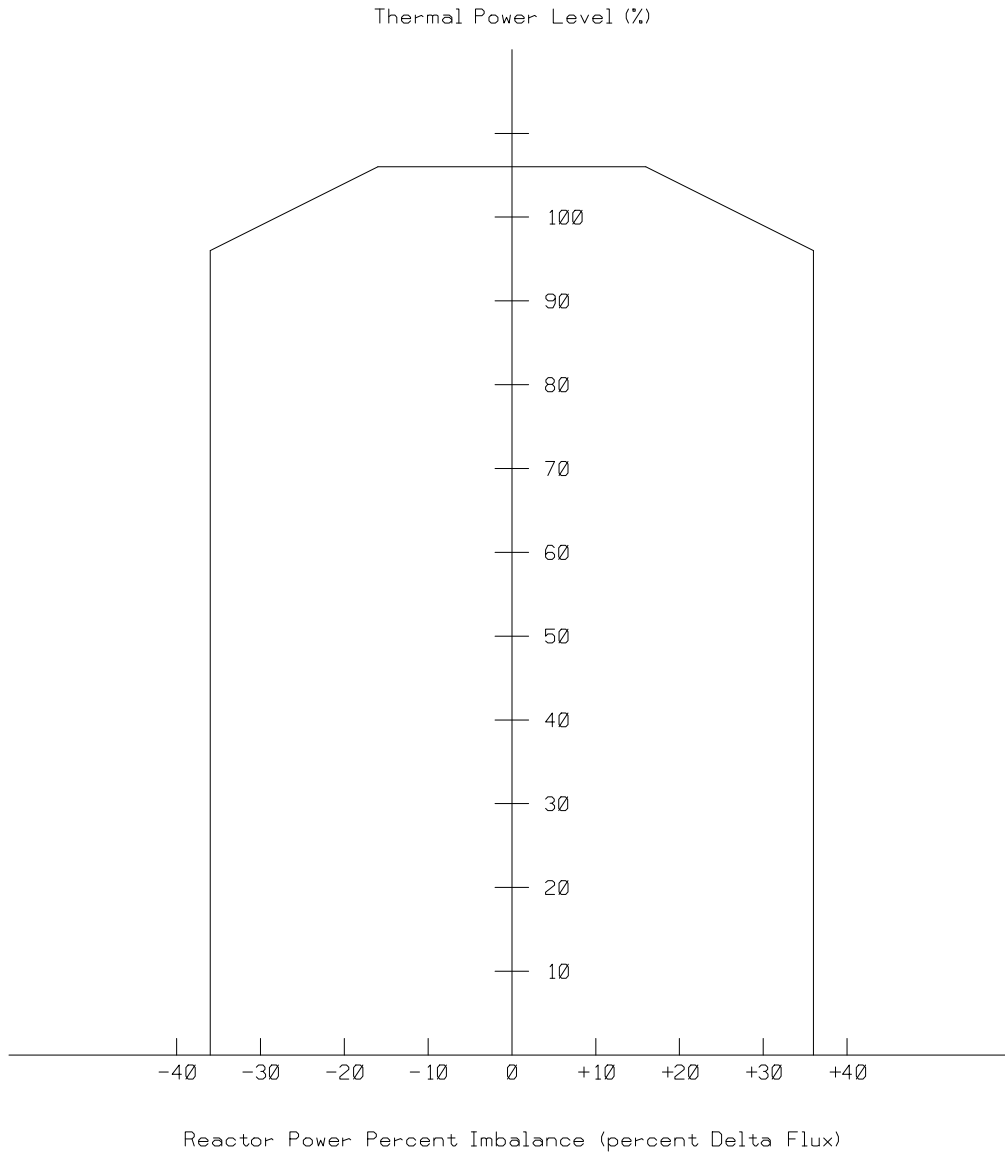
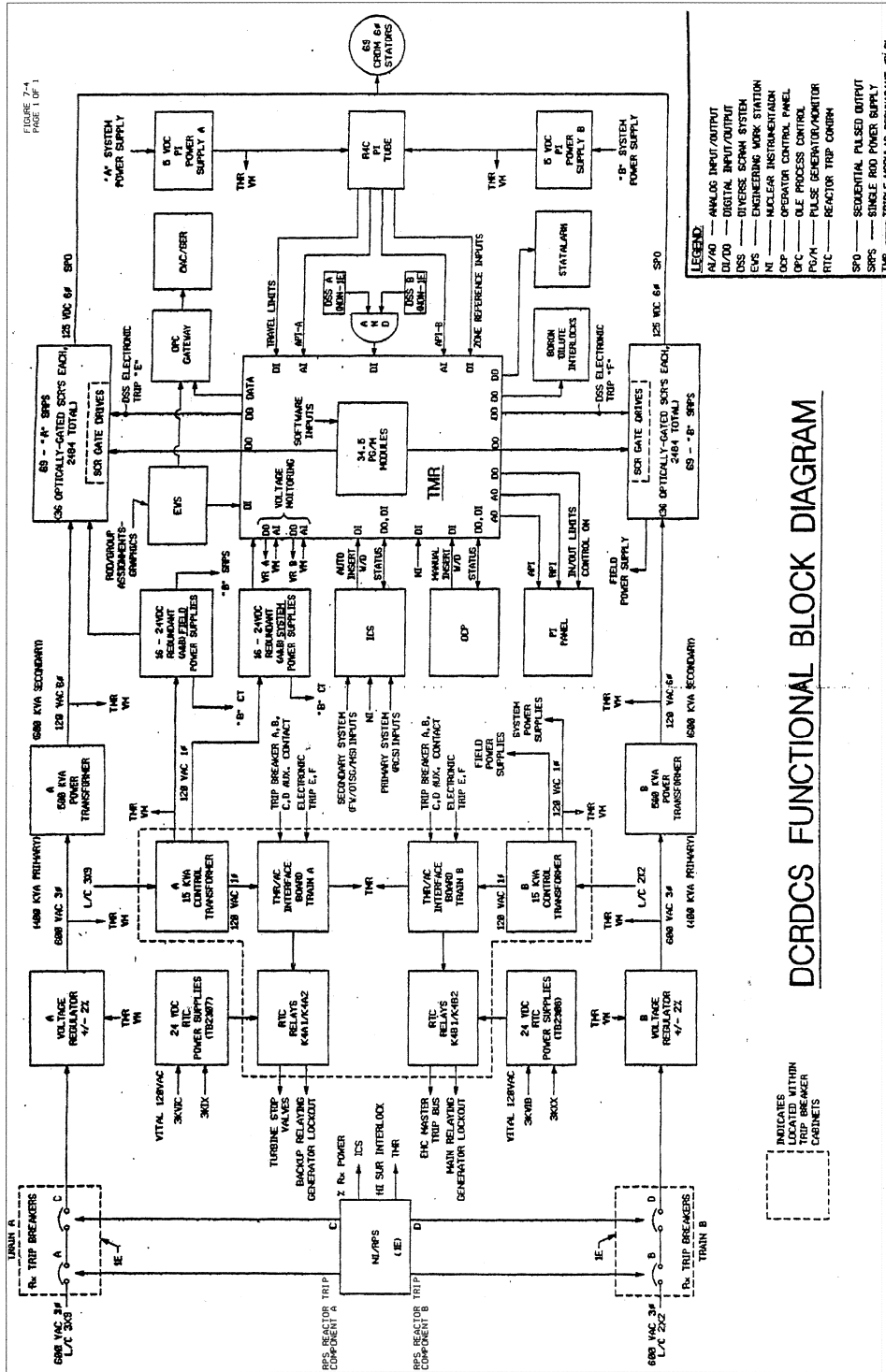
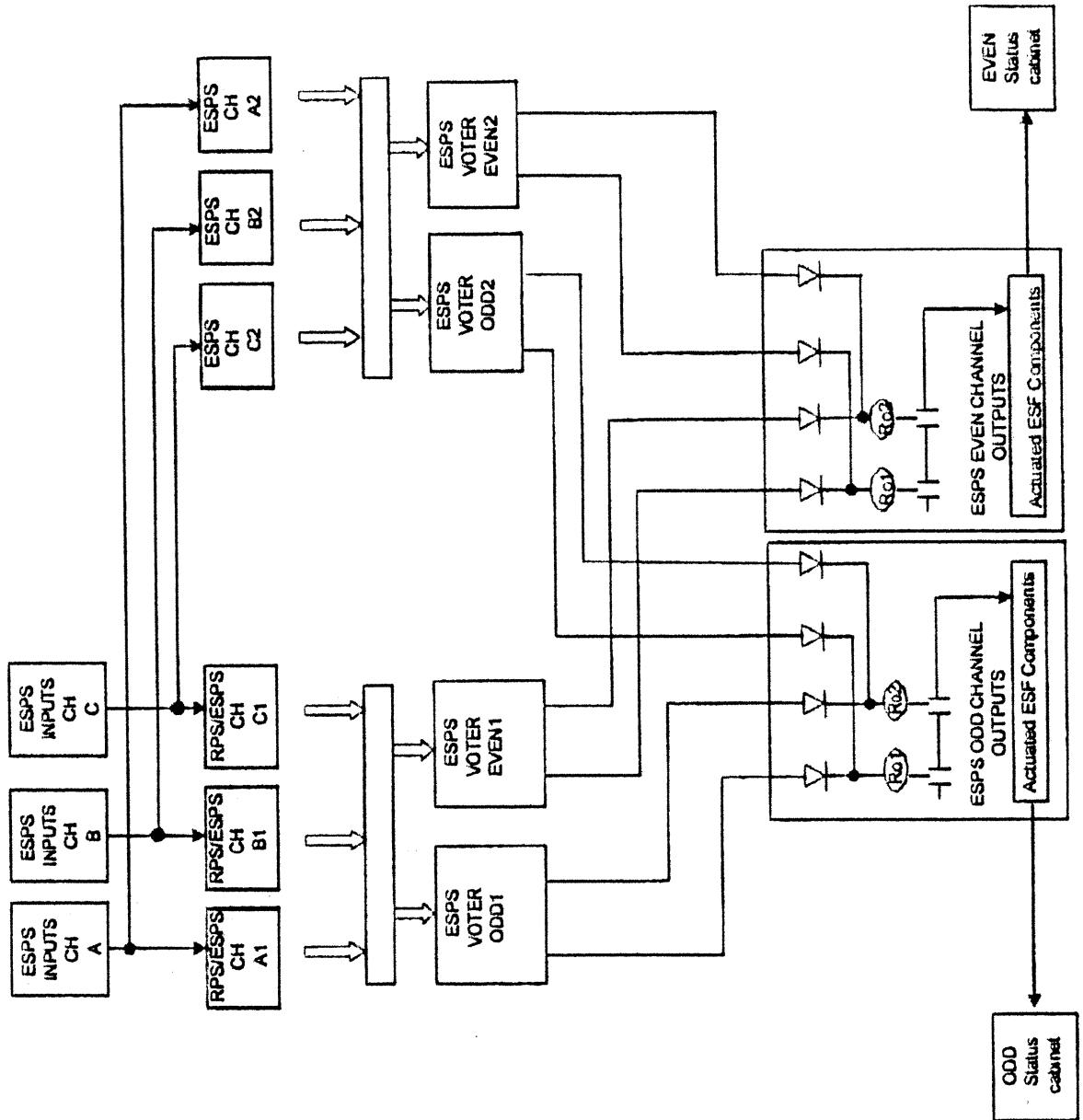


Figure 7-4. Rod Control Drive Controls



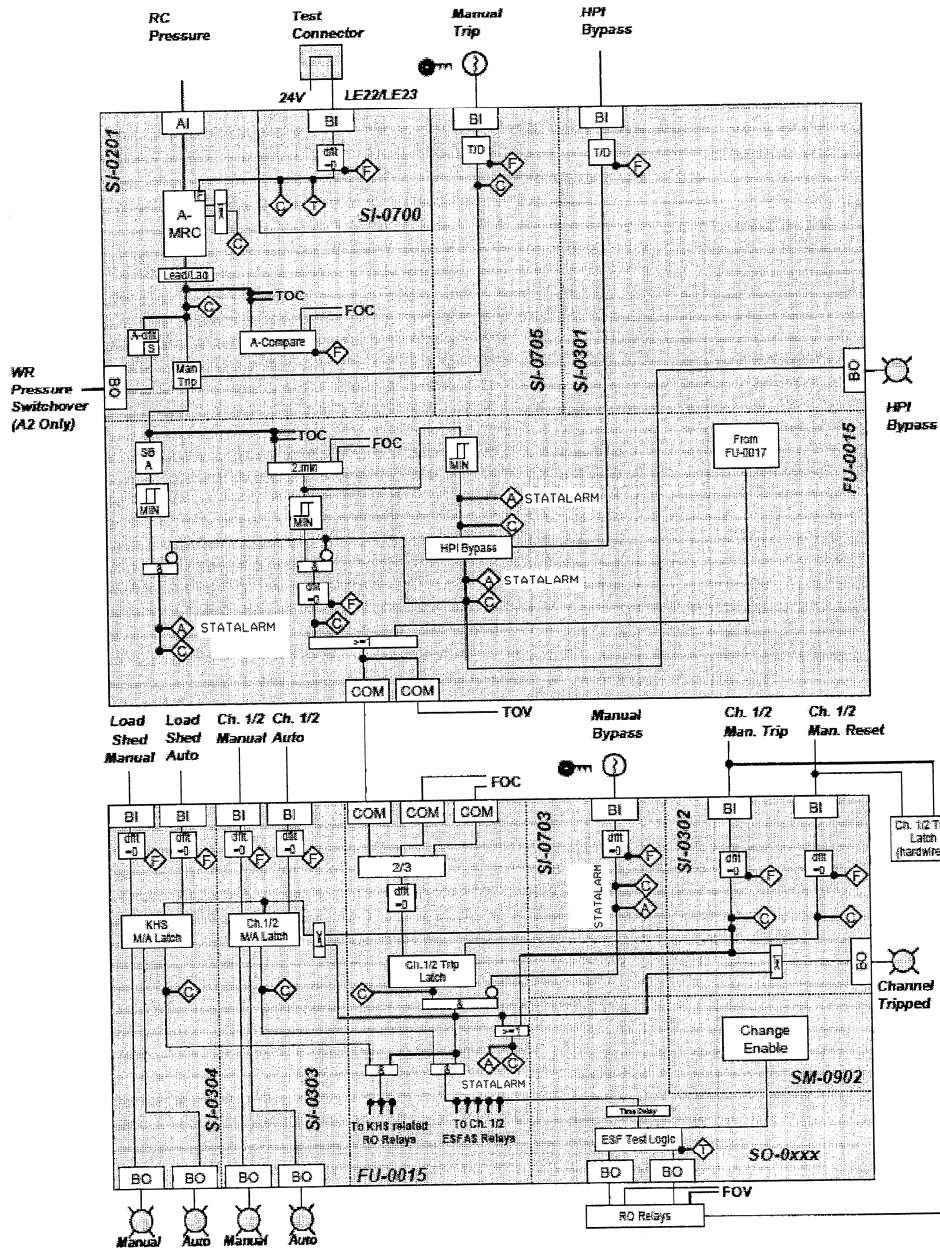
**Figure 7-5. Engineered Safeguards Protection System**

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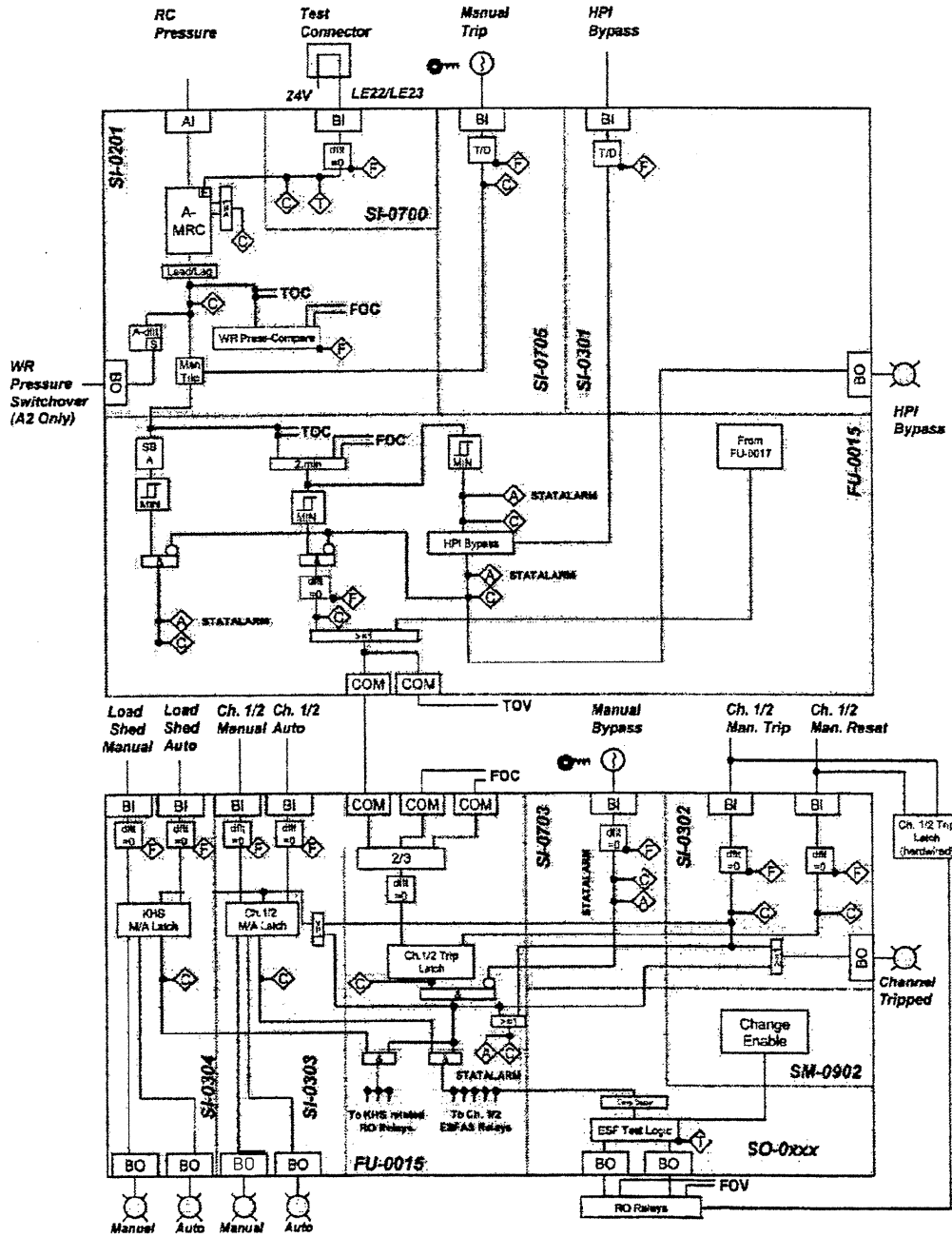


UNIT 1 ONLY

### ESFAS Trip #1: RCS Pressure Low Trip



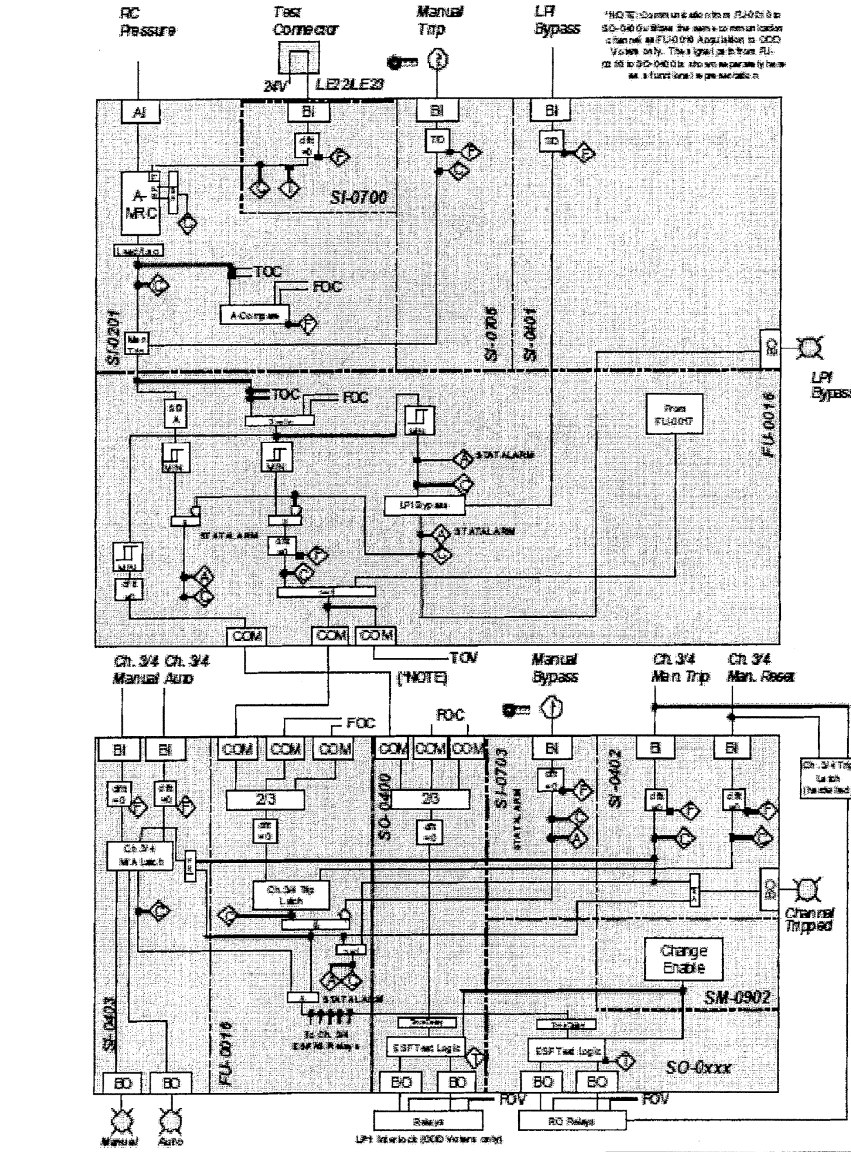
### UNITS 2 & 3 ONLY ESPS Trip #1: RCS Pressure Low Trip



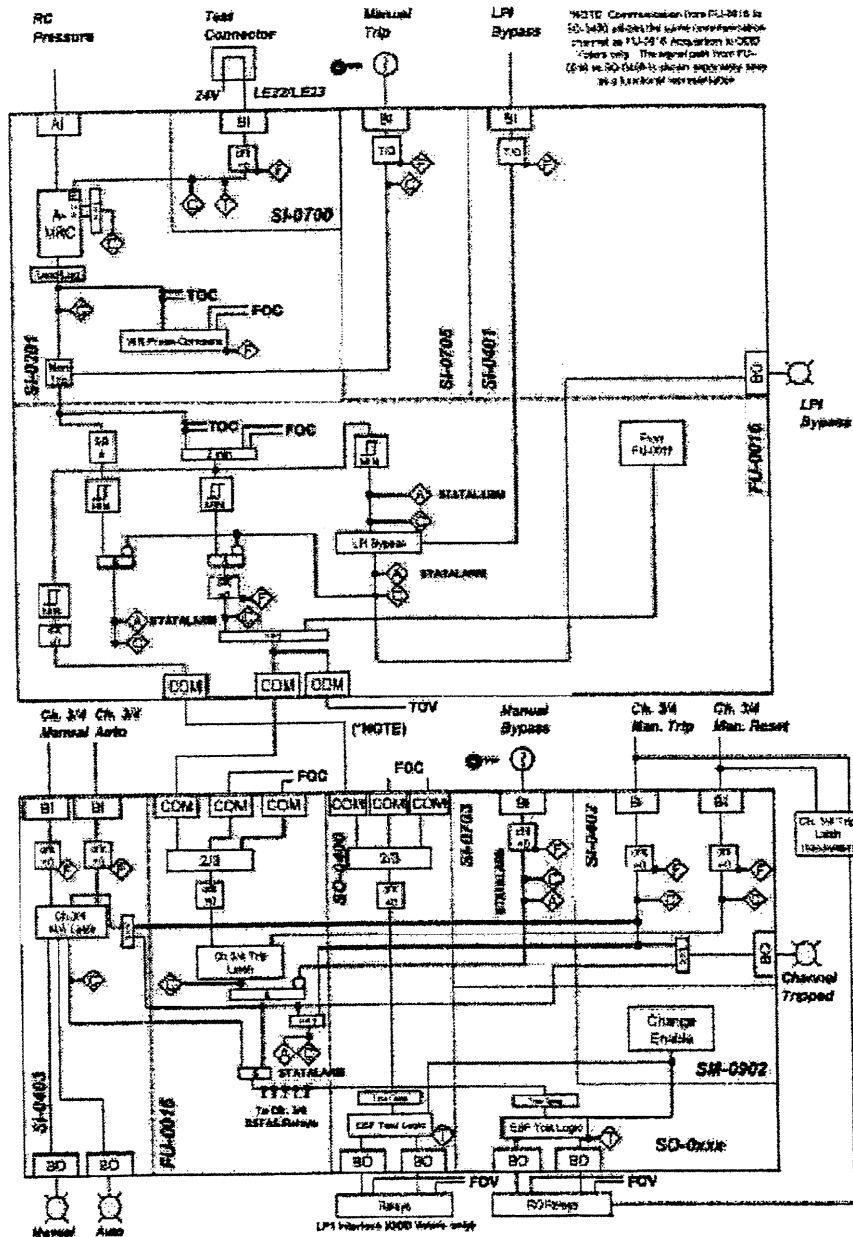


UNIT 1 ONLY

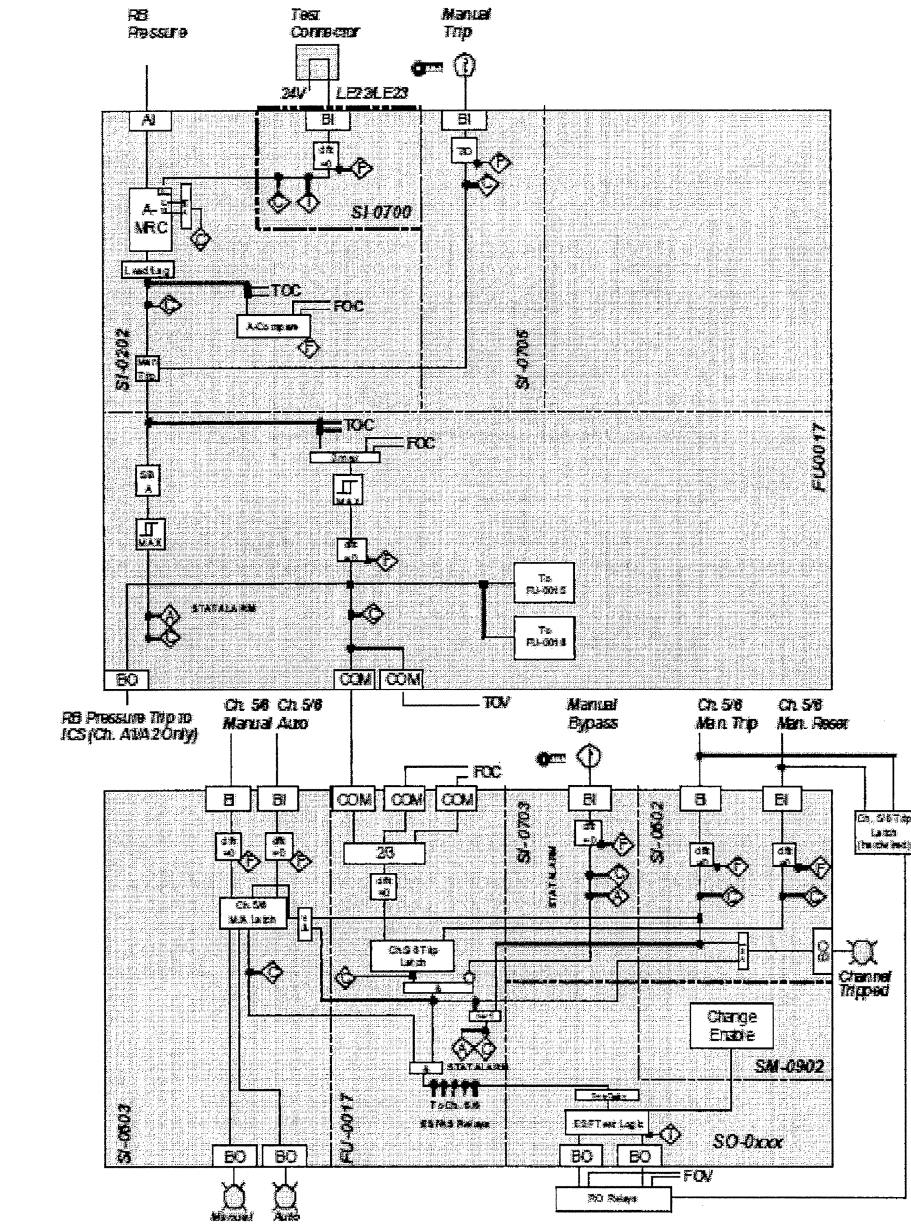
ESPS Trip #2: RCS Pressure Low Low Trip



### UNITS 2 & 3 ONLY ESPS Trip #2: RCS Pressure Low Low Trip



### ESPS Trip #3: Reactor Building Pressure High Trip



### ESPS Trip #4: Reactor Building Pressure High High Trip

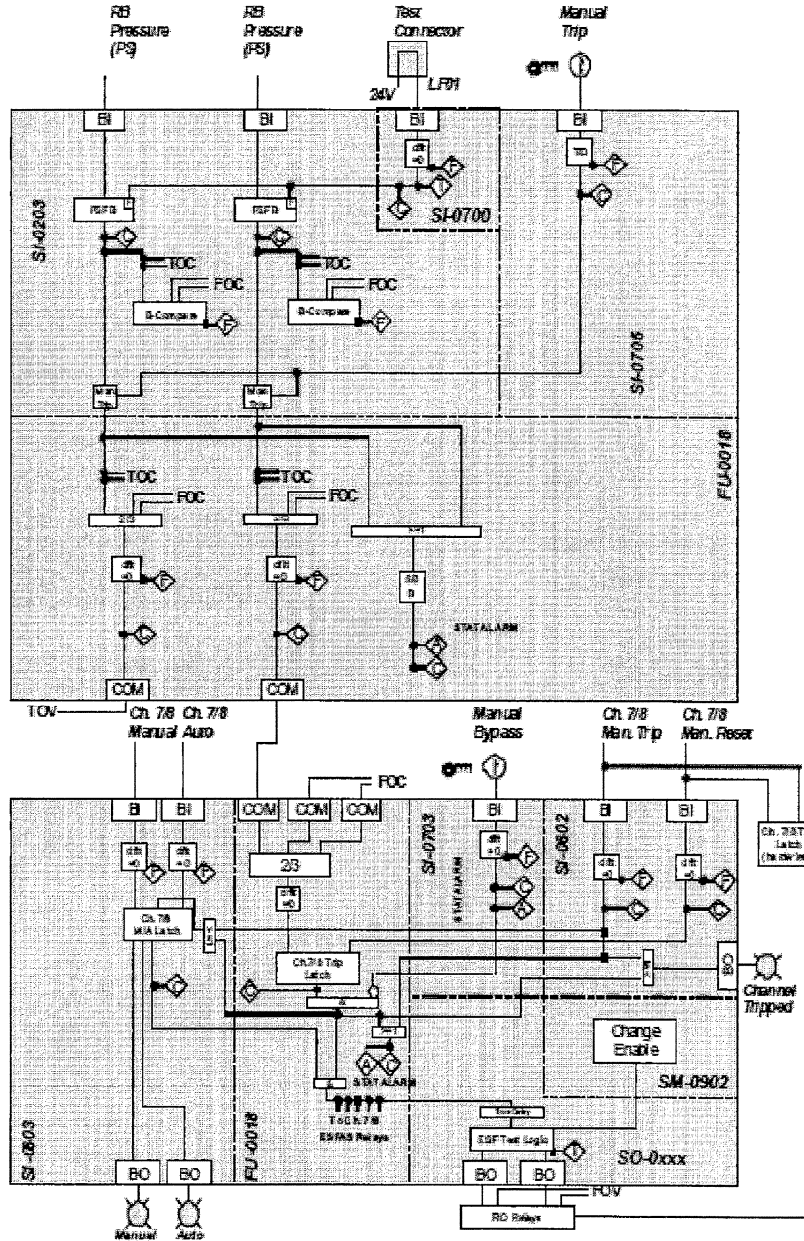


Figure 7-6. Nuclear Instrumentation System

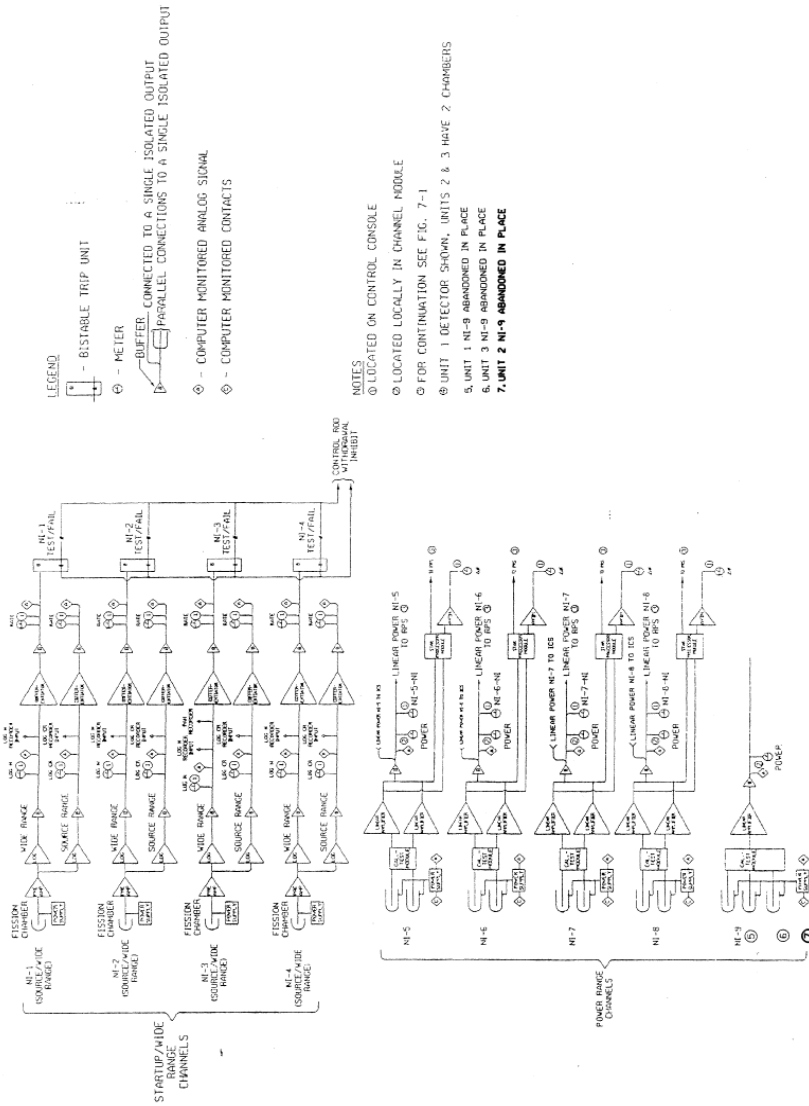


Figure 7-7. Nuclear Instrumentation Flux Range

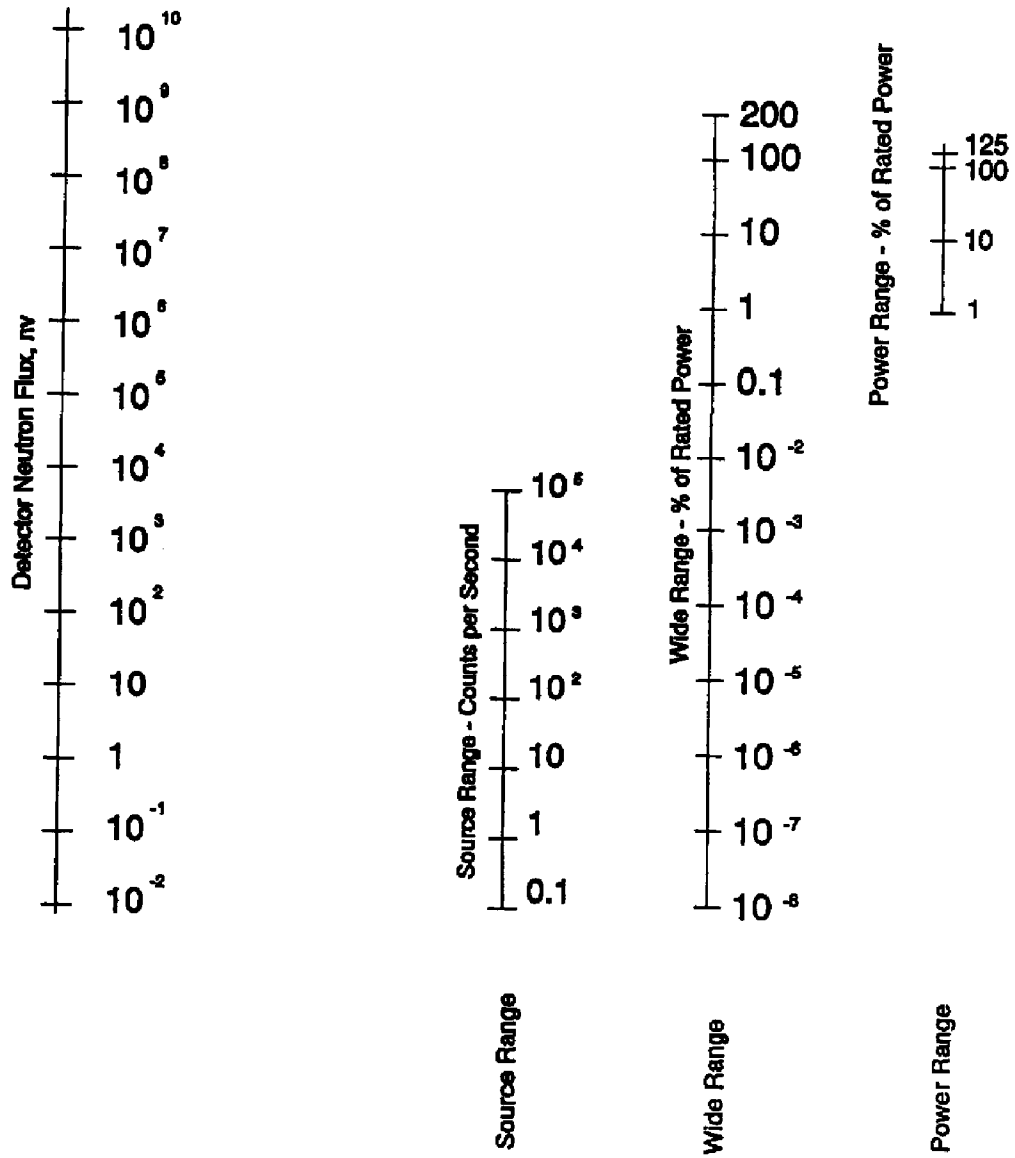


Figure 7-8. Nuclear Instrumentation Detector Locations

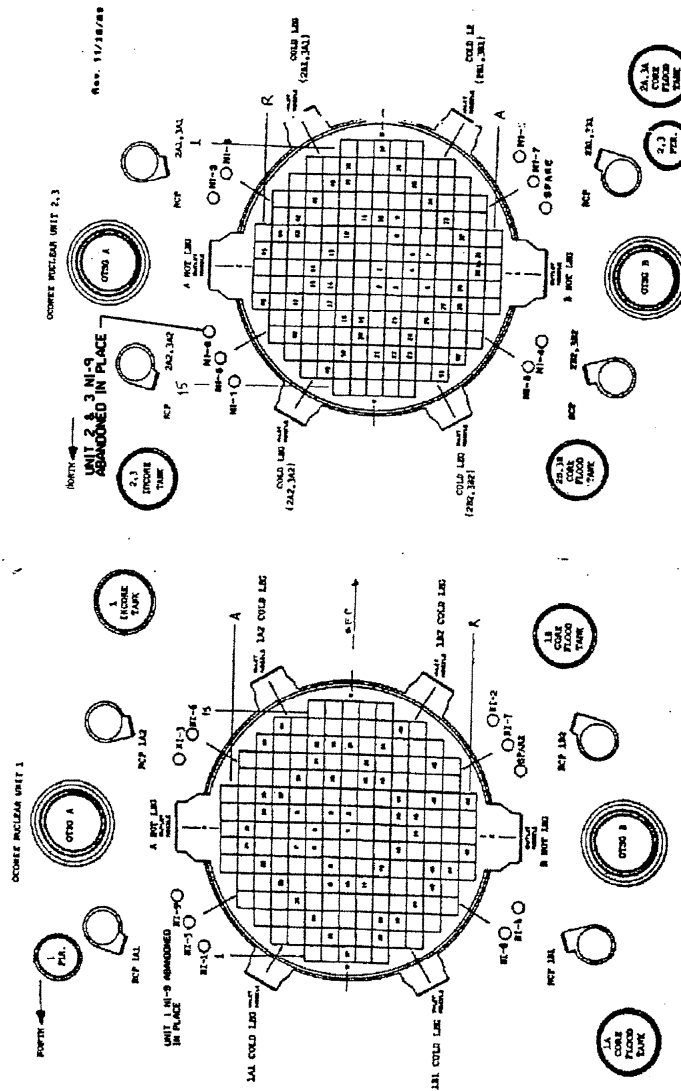


Figure 7-9. Nuclear Instrumentation Detector Locations - (Unit 1)

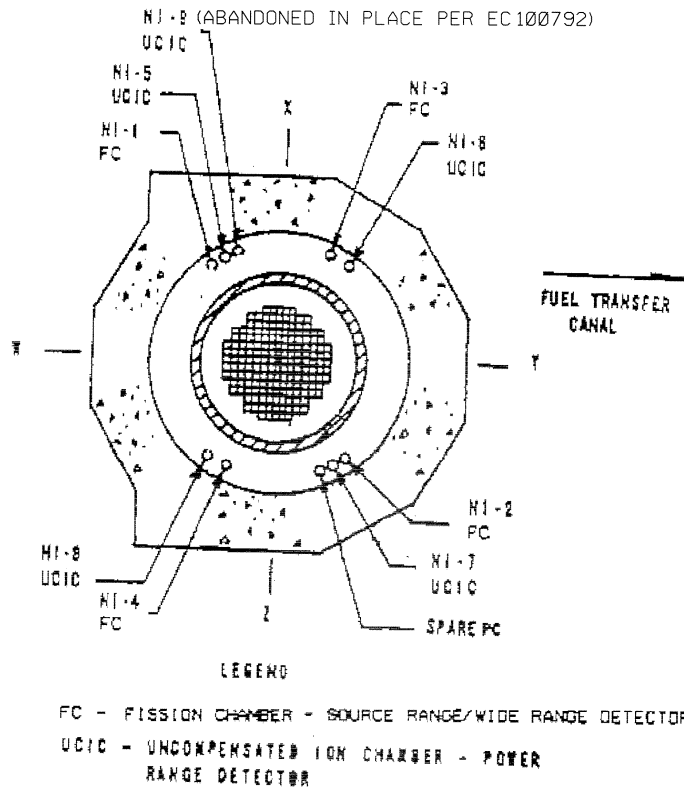




Figure 7-10. Nuclear Instrumentation Detector Locations - (Unit 2 & 3)

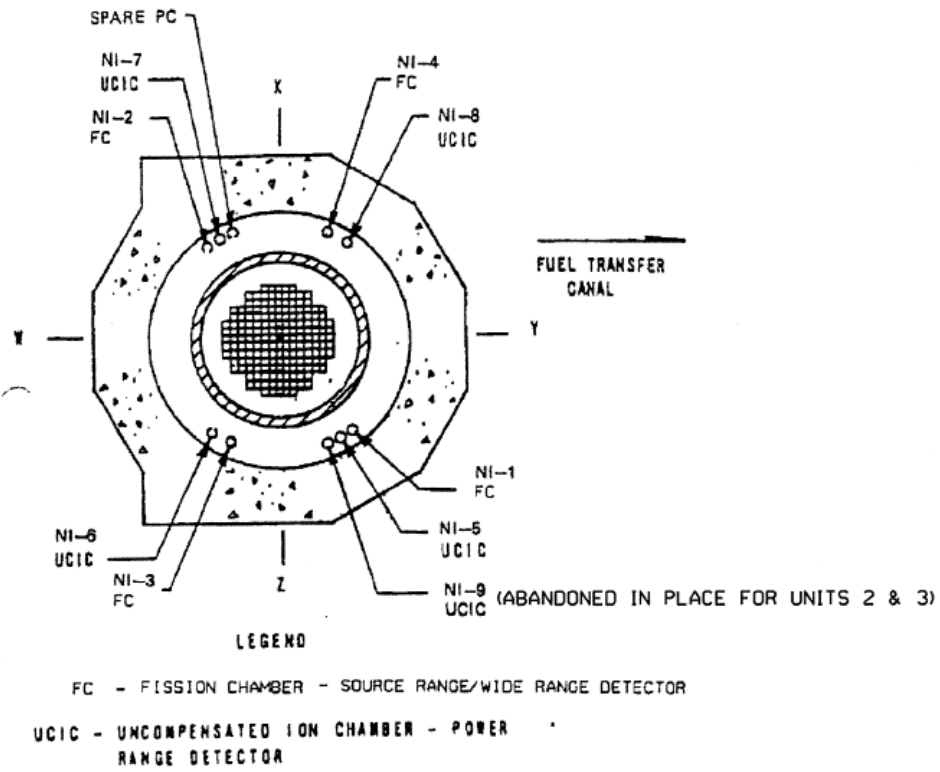


Figure 7-11. Automatic Control Rod Groups - Typical Worth Value Versus Distance Withdrawn

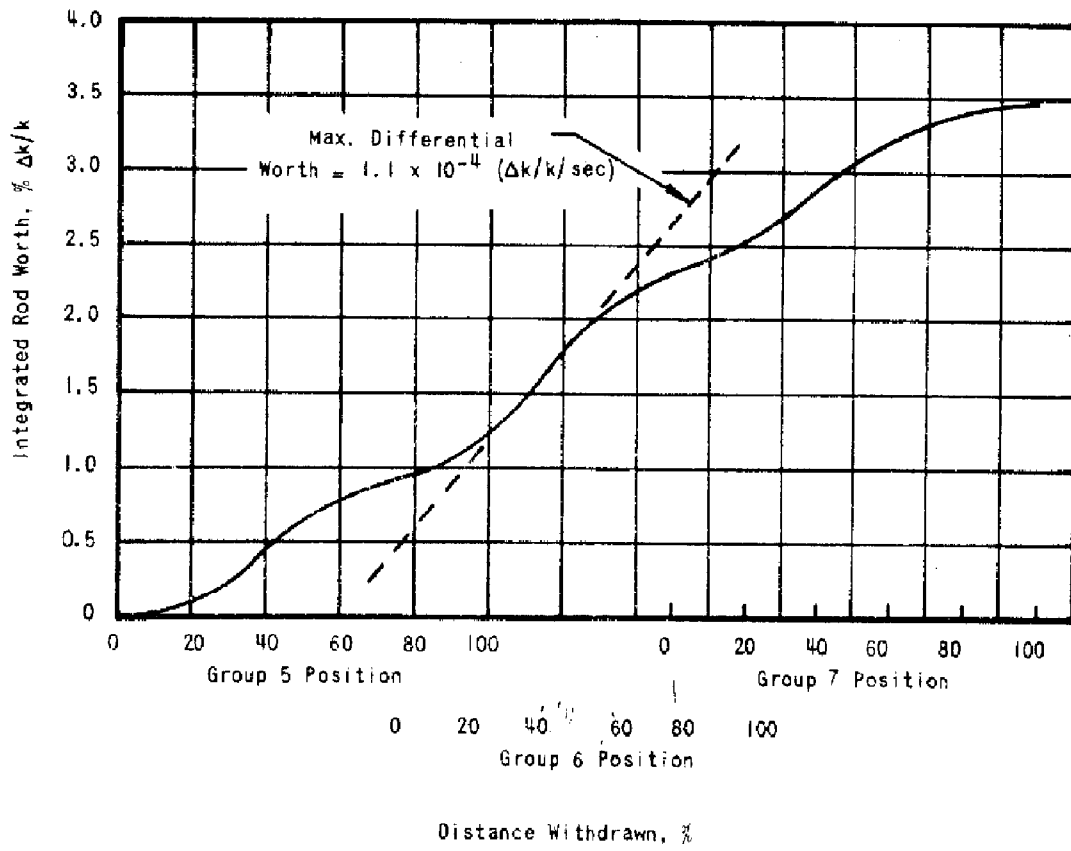


Figure 7-12. Control Rod Drive Logic Diagram

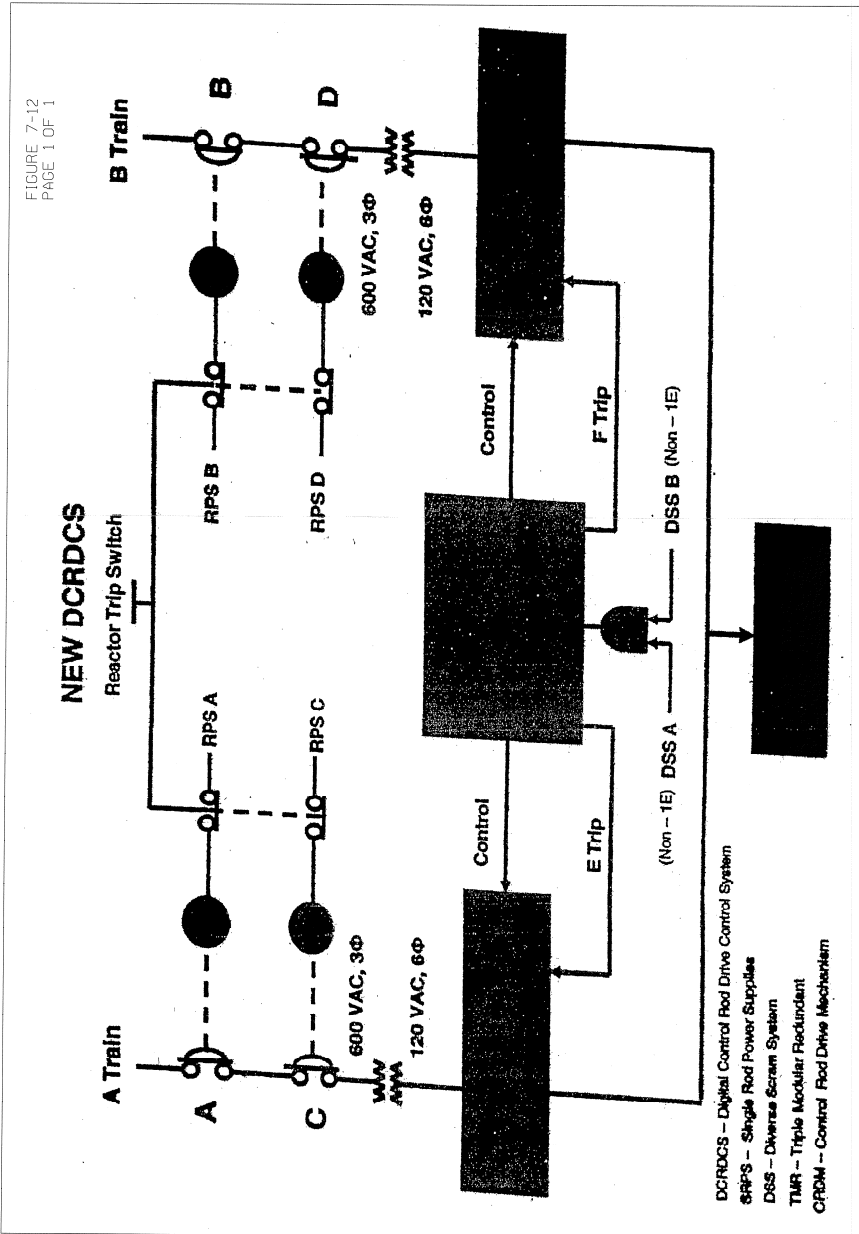


Figure 7-13. Control Rod Electrical Block Diagram

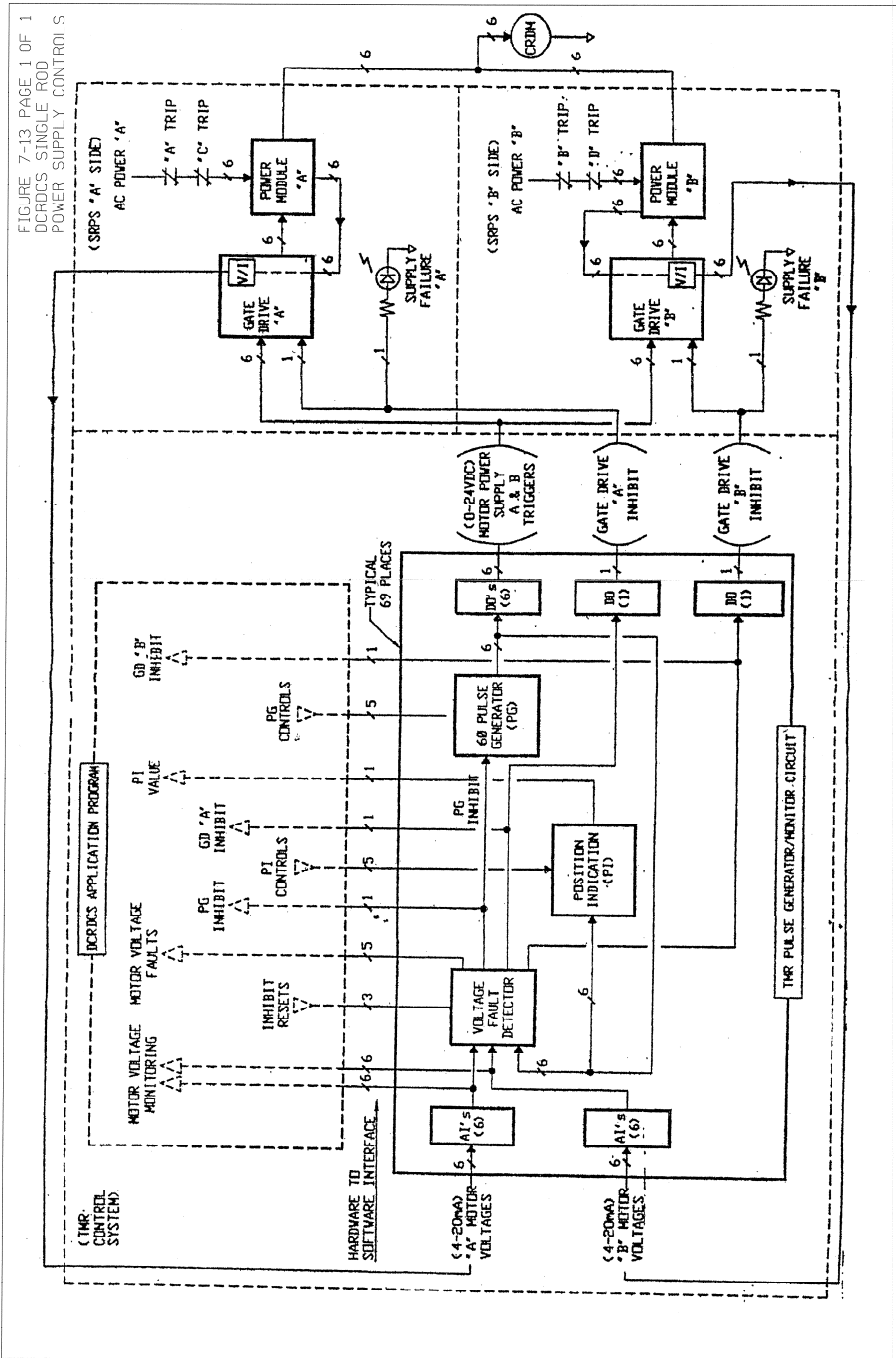
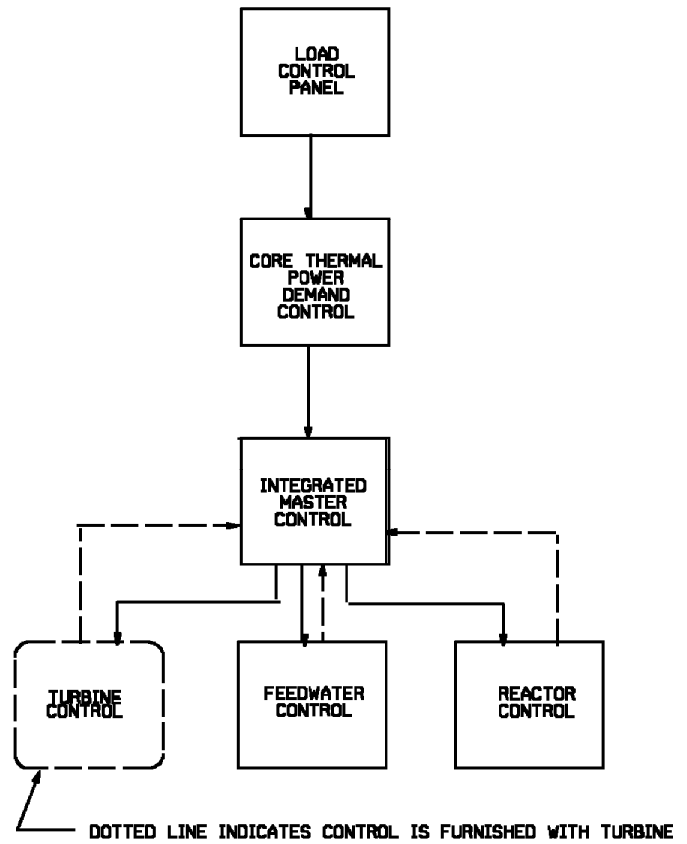


Figure 7-14. Integrated Control System



**NOTES:**

1. TURBINE CONTROL IS FROM THE INTEGRATED MASTER.

Figure 7-15. Core Thermal Power Demand - Integrated Control System

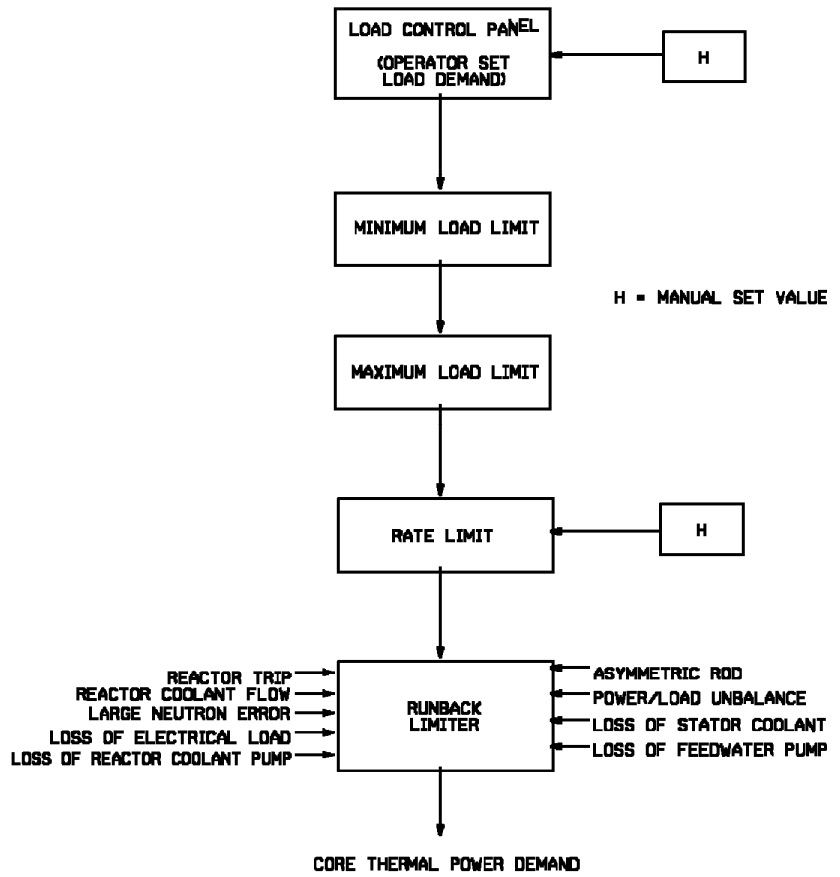


Figure 7-16. Integrated Master - Integrated Control System

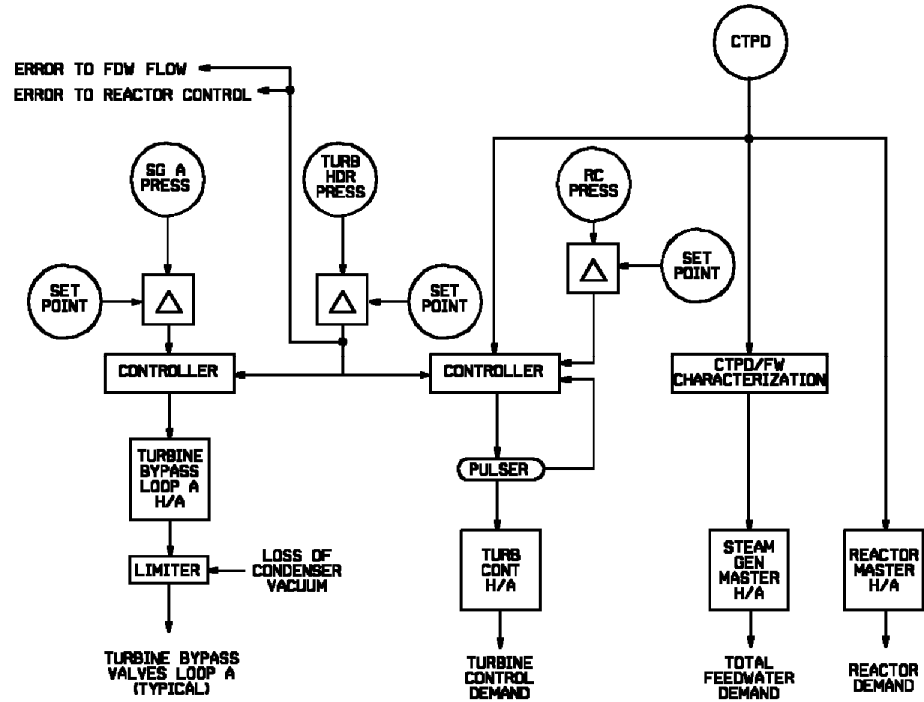


Figure 7-17. Feedwater Control - Integrated Control System

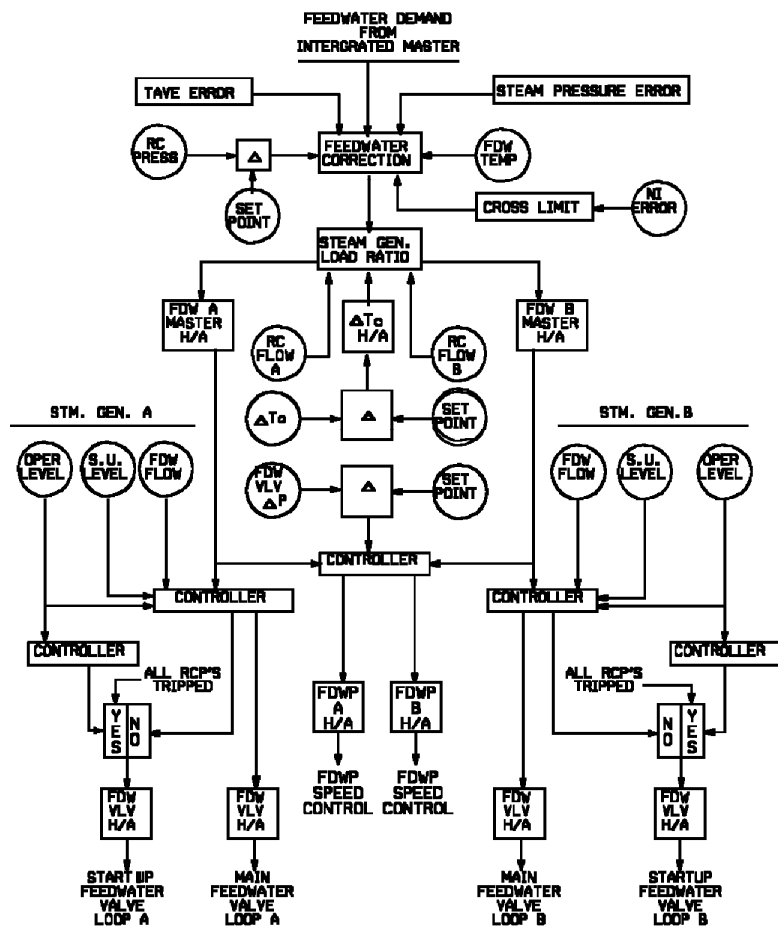




Figure 7-18. Reactor and Steam Temperatures Versus Reactor Power.(Replacement Steam Generator)

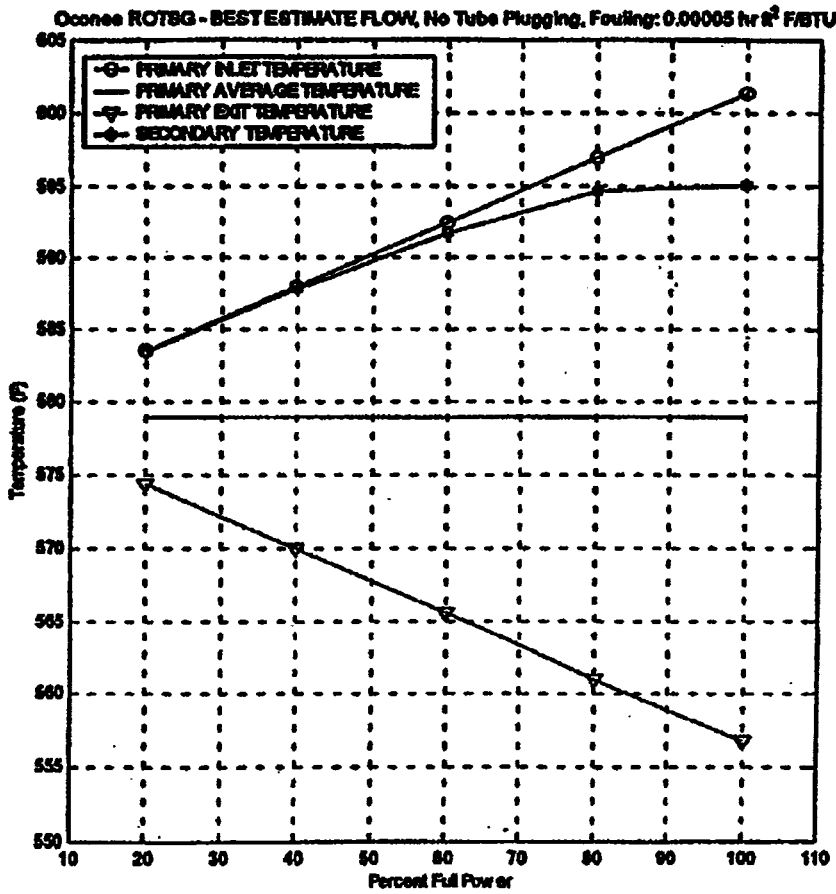


Figure 7-19. Reactor Control - Integrated Control System

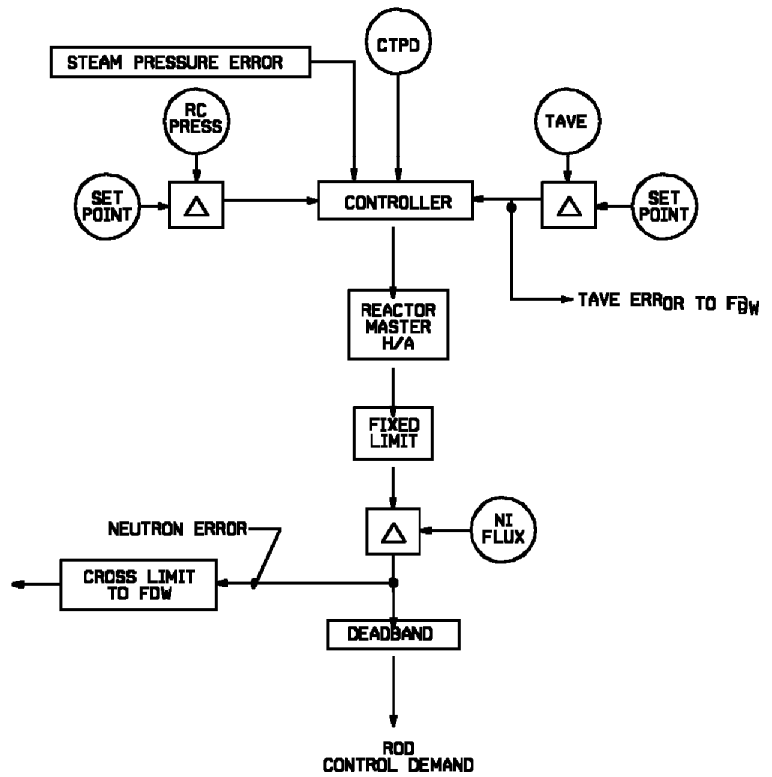


Figure 7-20. Incore Detector Locations

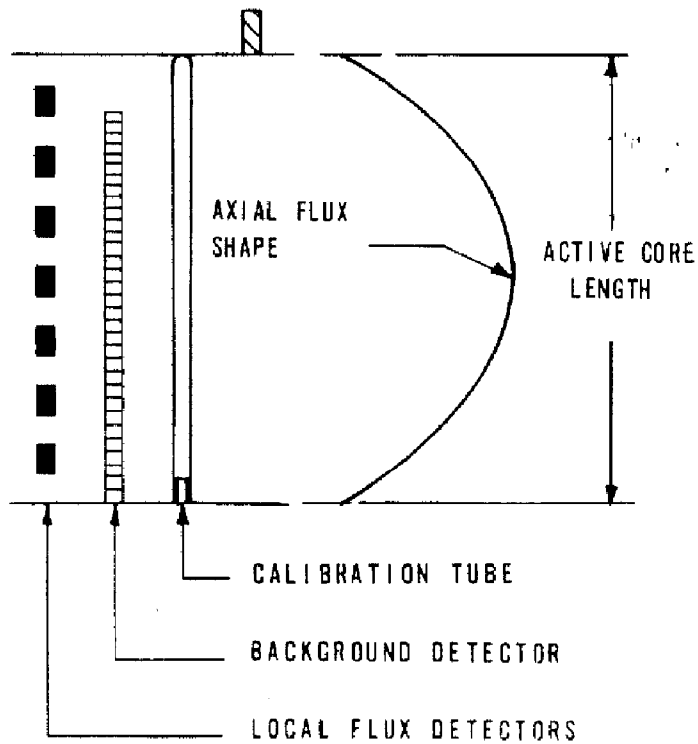
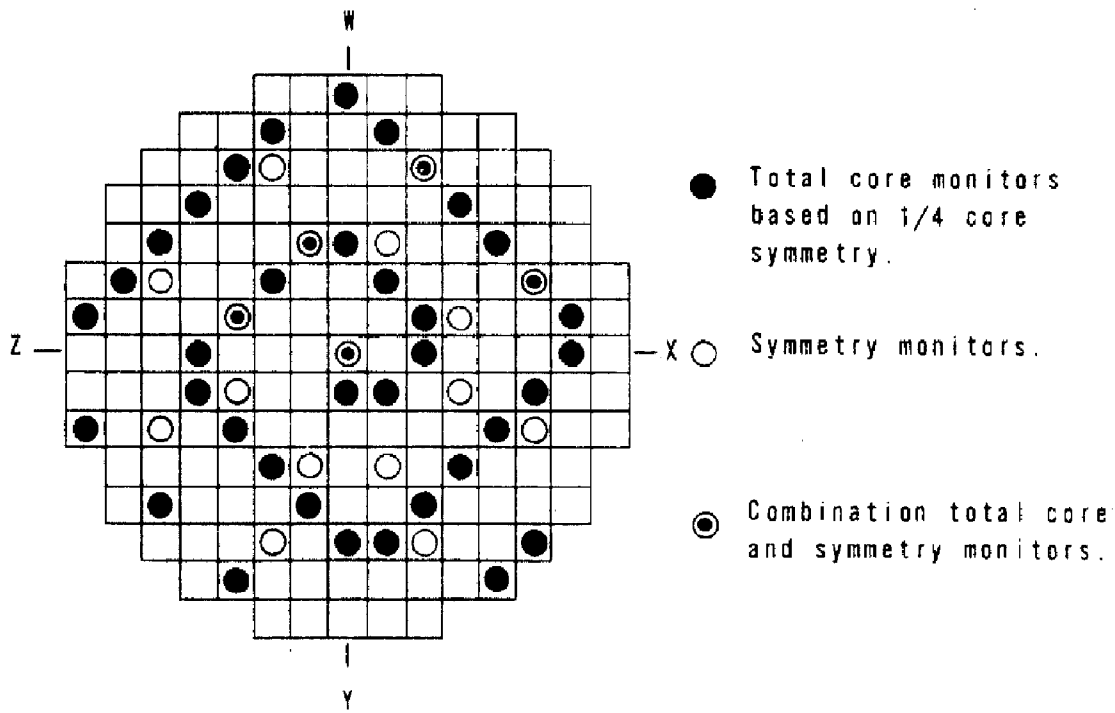
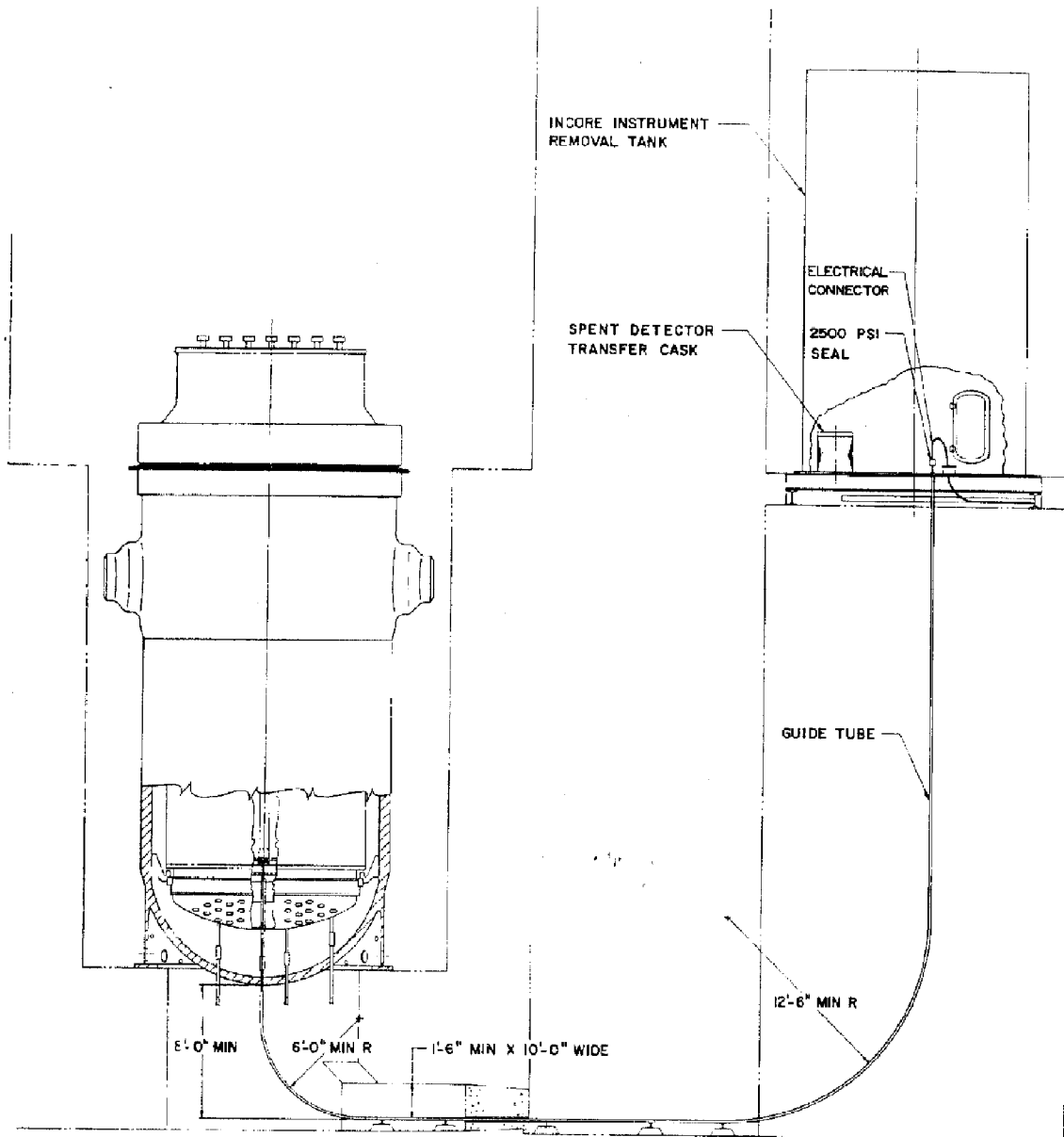


Figure 7-21. Incore Monitoring Channel



**Figure 7-22. Deleted Per 1997 Update**

**Figure 7-23. Deleted Per 1997 Update**

**Figure 7-24. Deleted Per 1997 Update**

**Figure 7-25. Deleted Per 1997 Update**

Figure 7-26. Control Room Layout

