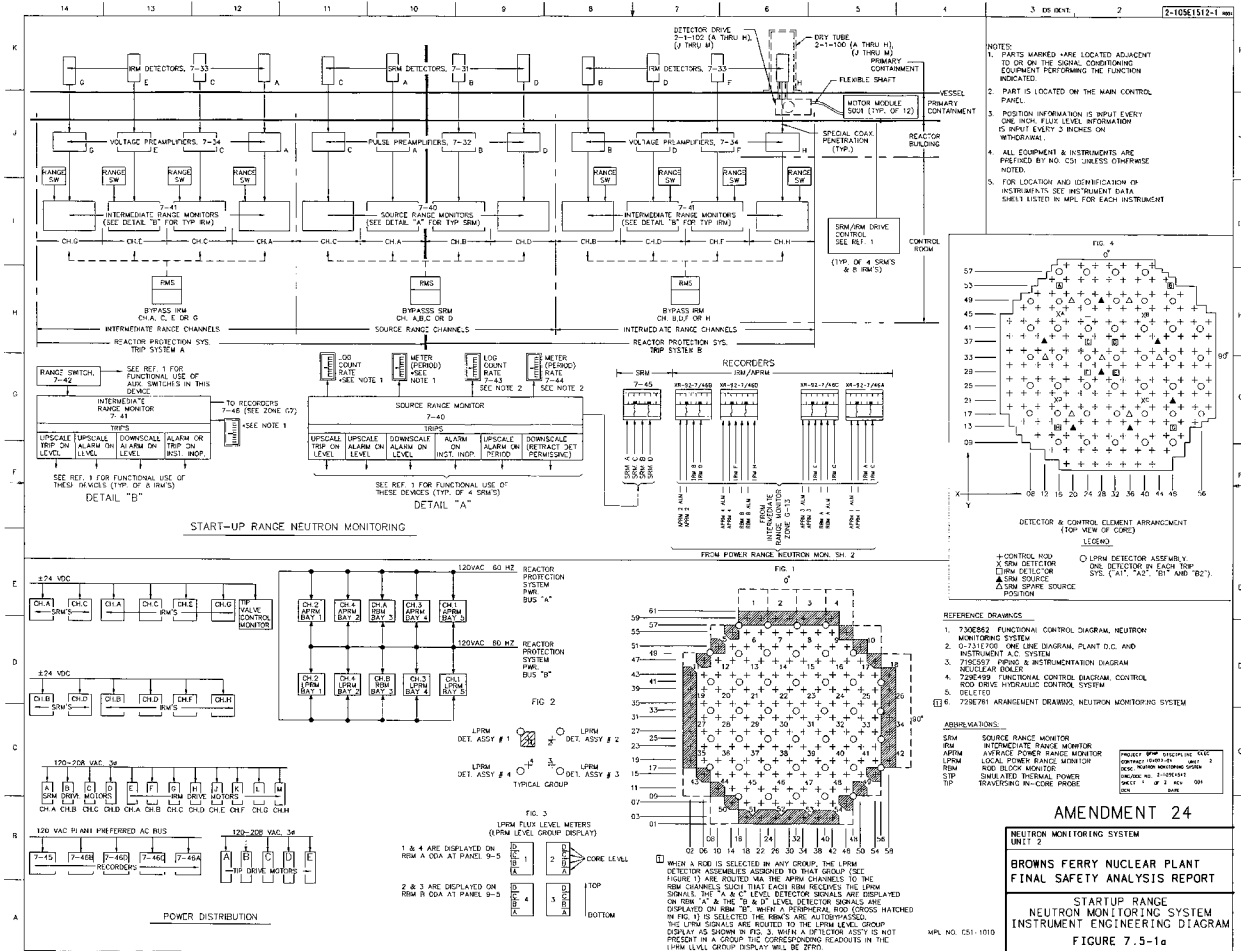


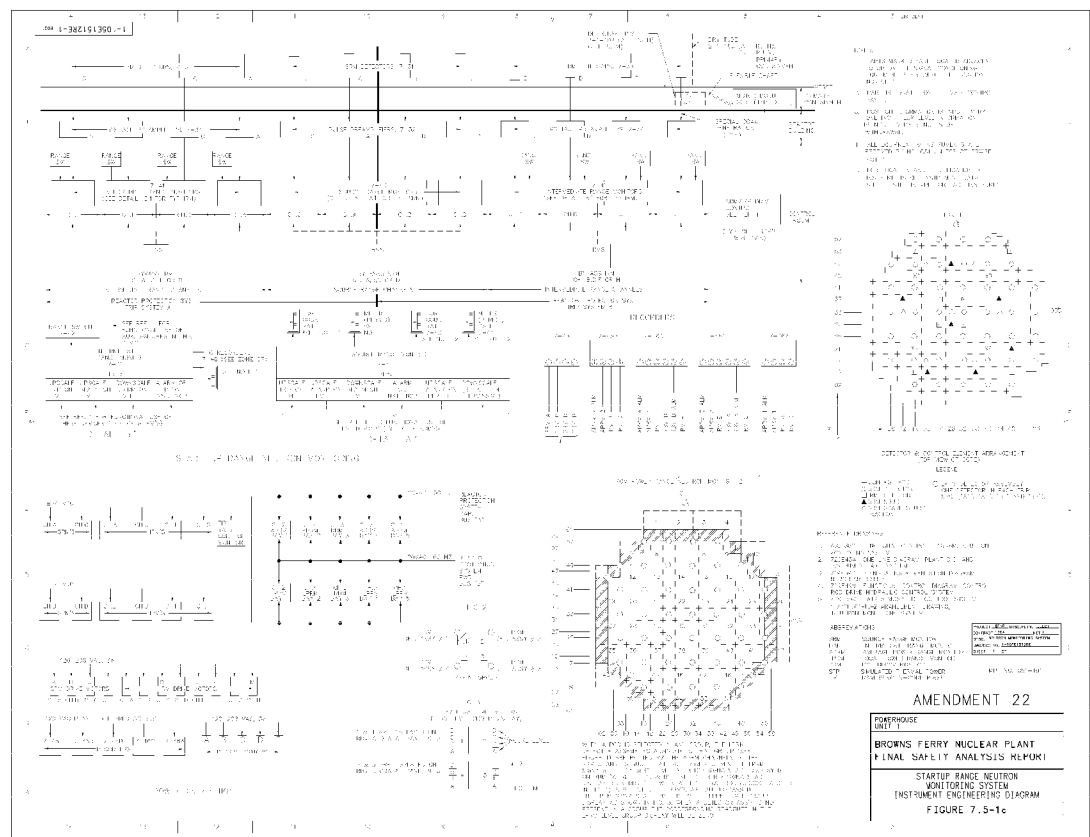
BFN-16

Figure 7.5-1

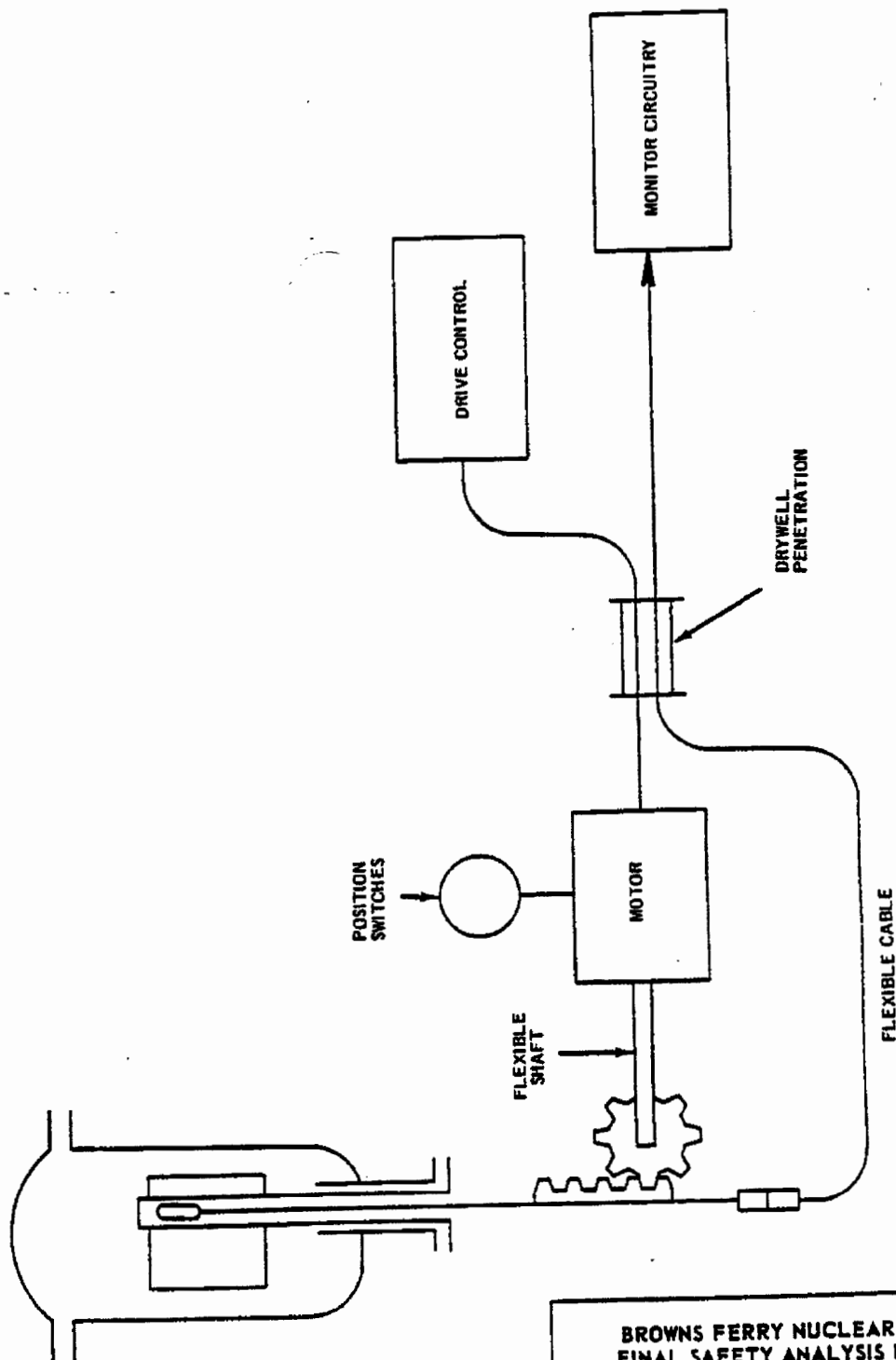
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AMENDMENT 16

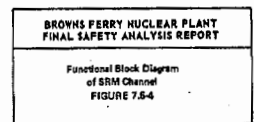
BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

Detector Drive System
FIGURE 7.5-3a

BFN-22

Figures 7.5-3b and 7.5-3c
(Deleted by Amendment 22)

|

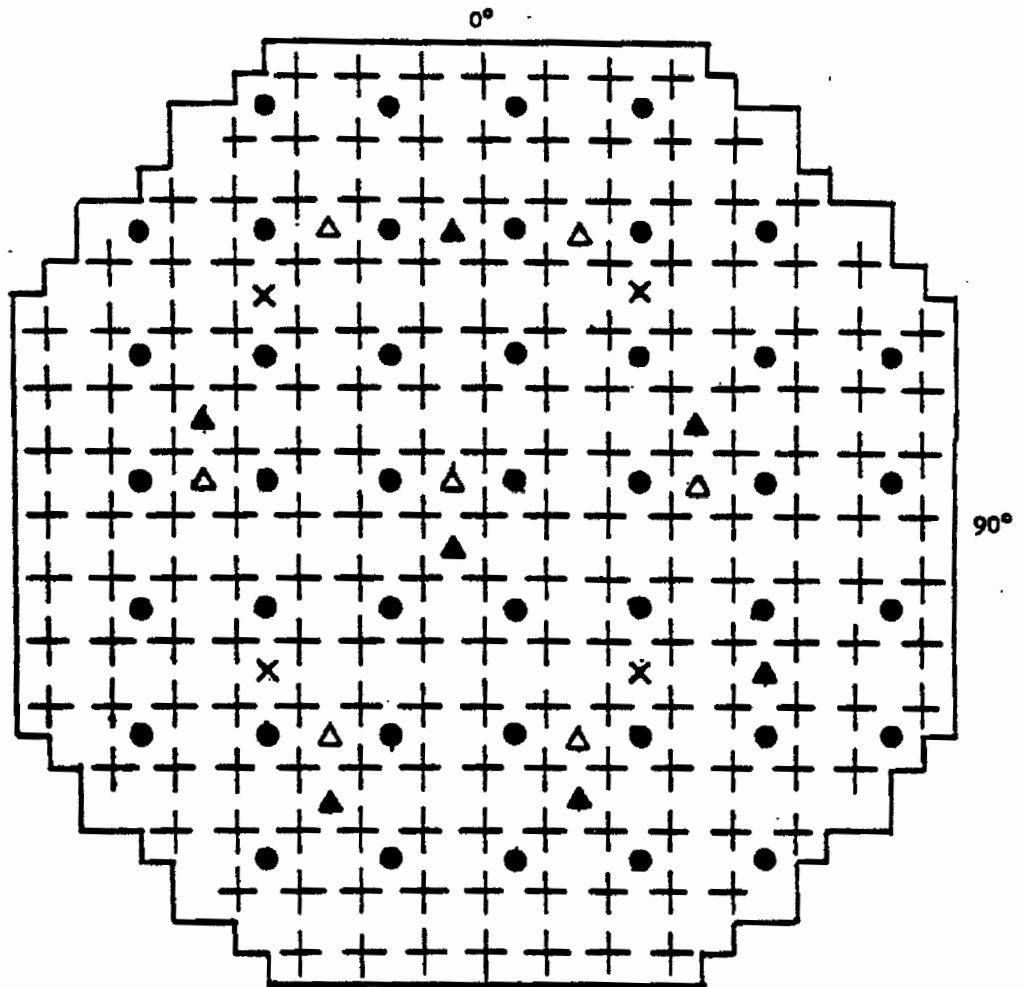


BFN-16

Figure 7.5-5

Deleted by Amendment 9.

CORE TOP VIEW

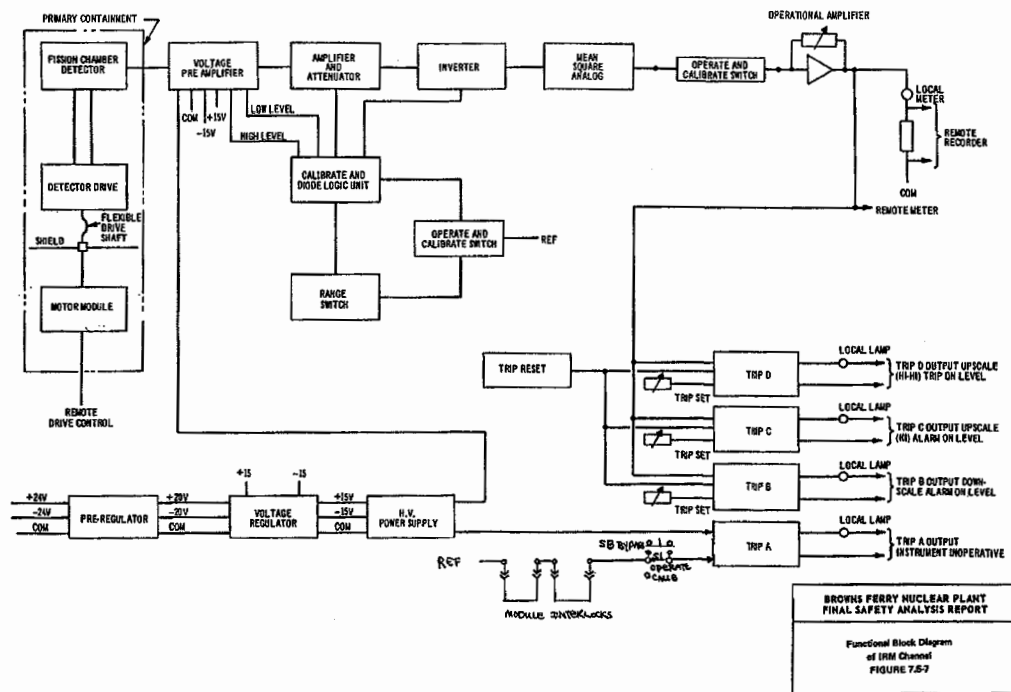


- X SRM SYSTEM DETECTOR LOCATIONS - 4
- DESIGN NEUTRON SOURCE LOCATIONS - 7
- ▲ SPARE NEUTRON SOURCE LOCATIONS - 7

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FINAL SAFETY ANALYSIS REPORT

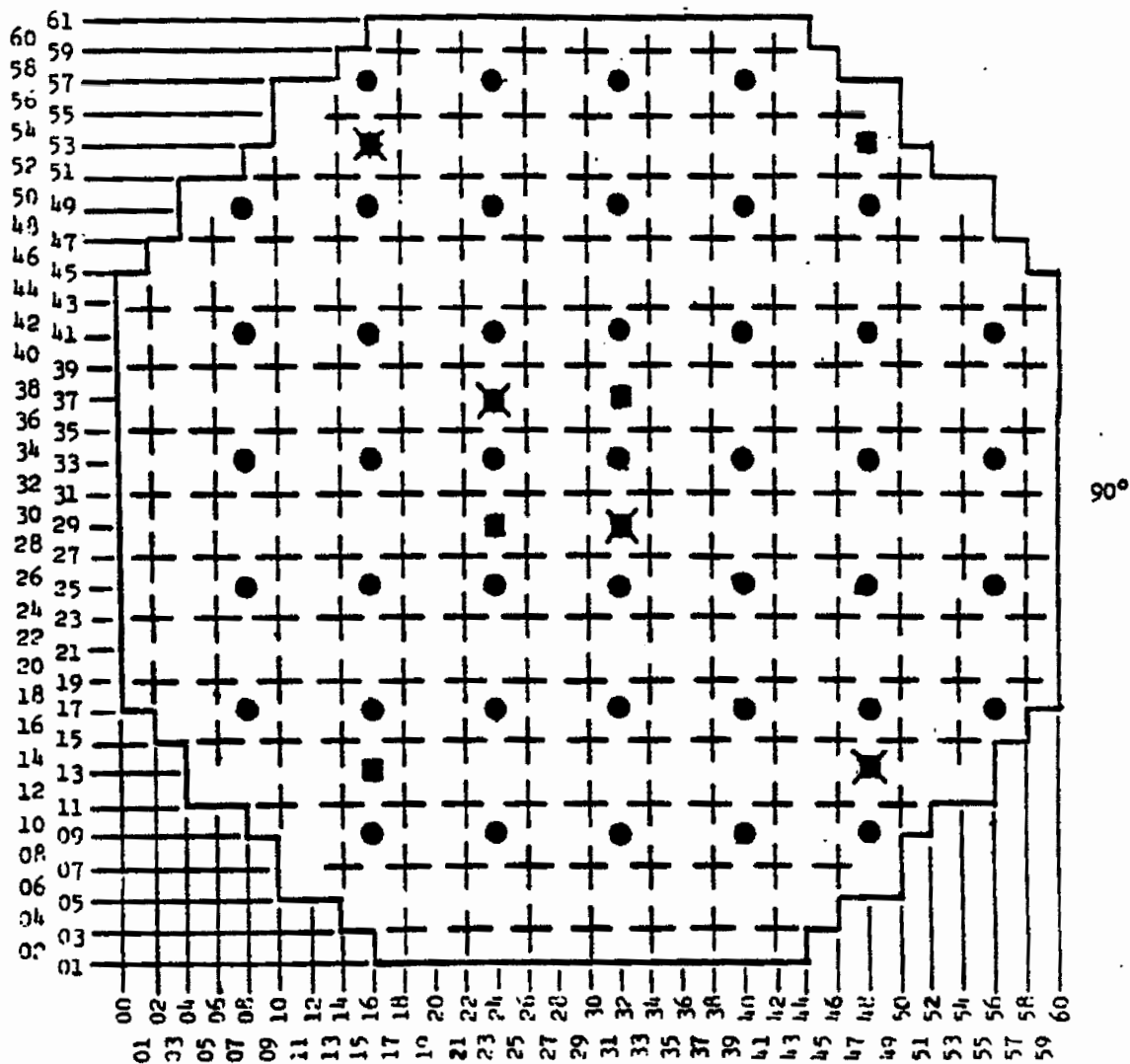
Source Range Monitoring System
Core Locations
FIGURE 7.5-6



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CORE TOP VIEW

0°



INTERMEDIATE RANGE MONITORING CHANNELS - 4
REACTOR PROTECTION SYSTEM TRIP SYSTEM A



INTERMEDIATE RANGE MONITORING CHANNELS - 4
REACTOR PROTECTION SYSTEM TRIP SYSTEM B

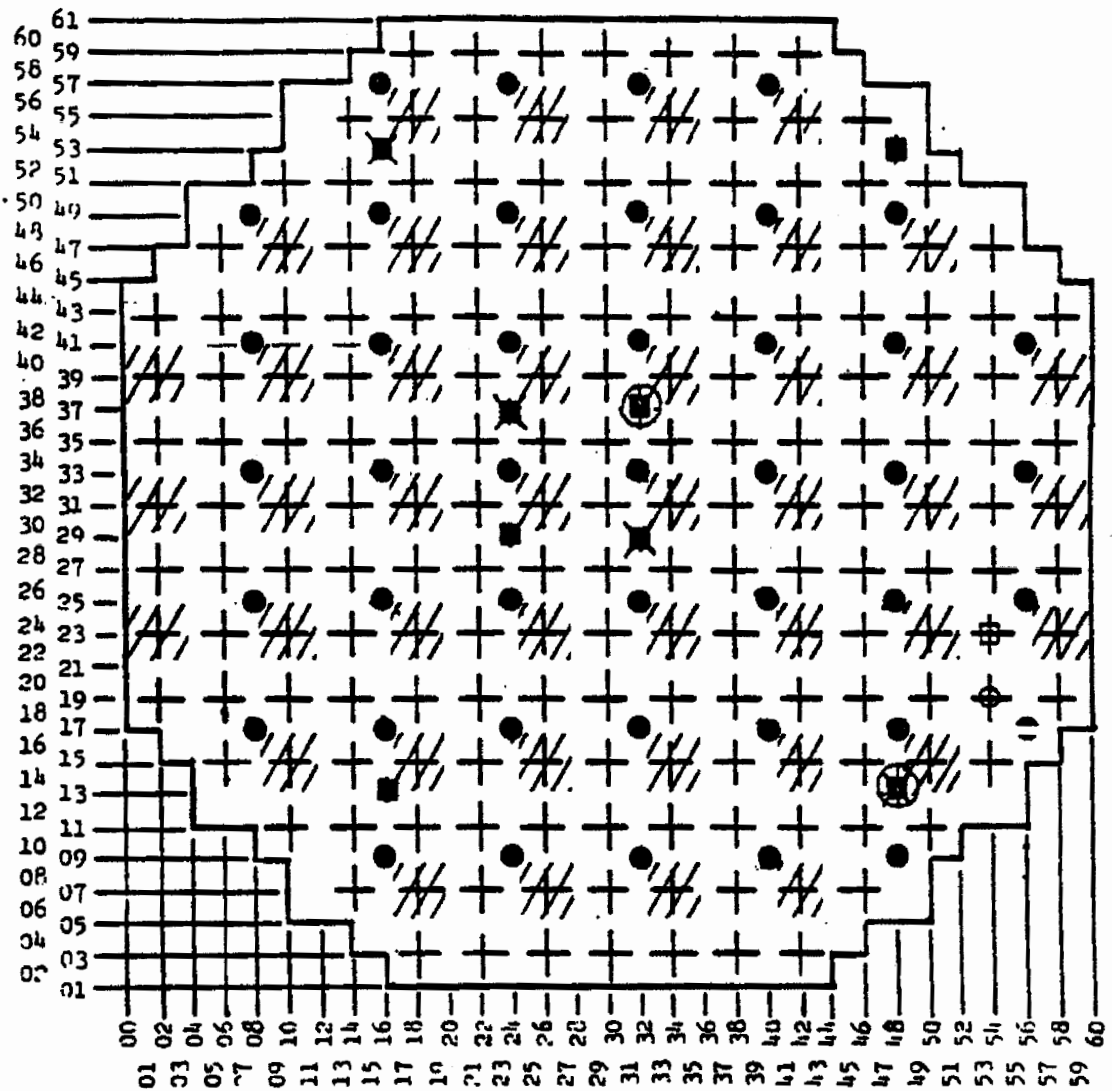
TOTAL IRM CHANNELS - 8

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FINAL SAFETY ANALYSIS REPORT

IRM Locations
FIGURE 7.5-8

CORE TOP VIEW



IRM DETECTOR, TRIP SYSTEM A

IRM DETECTOR, TRIP SYSTEM B

CONTROL ROD WITHDRAWN

NEXT CONTROL ROD WITHDRAWN IN SEQUENCE

CONTROL ROD WITHDRAWN OUT OF SEQUENCE

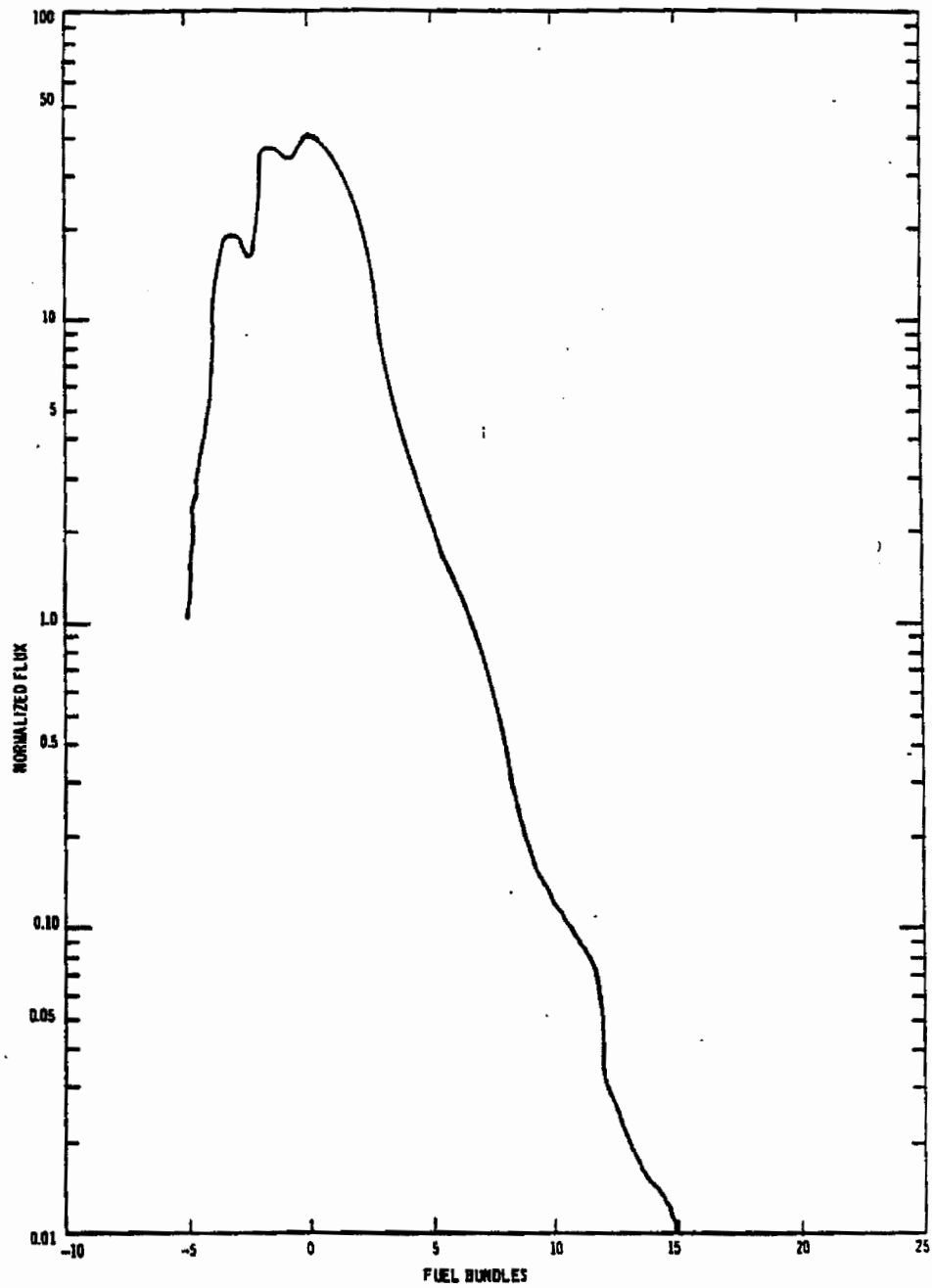
IRM DETECTOR BYPASSED

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

Control Rod Withdrawal Error

FIGURE 7.5-9

AMENDMENT 16



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**BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT**

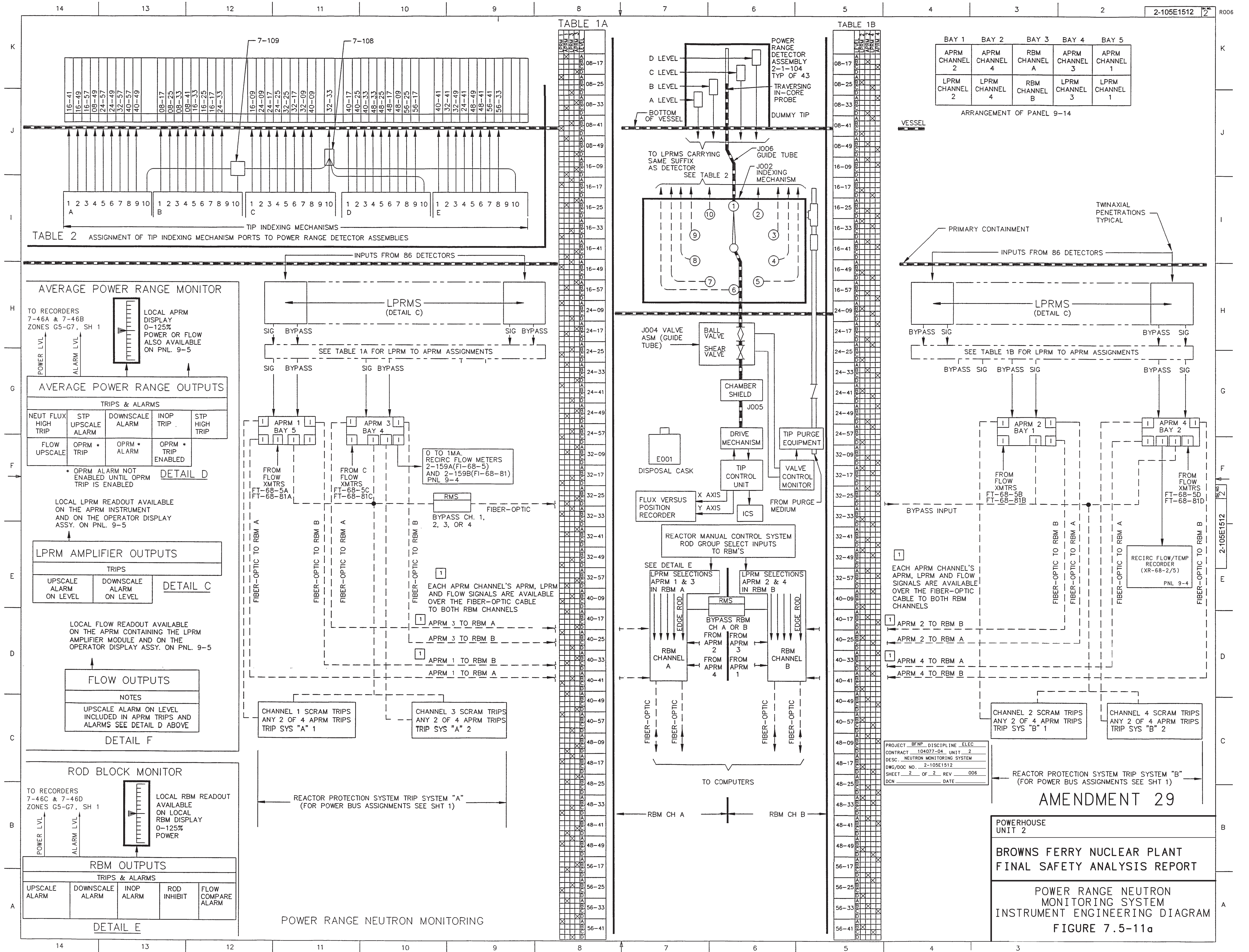
**Normalized Flux Distribution
for Rod Withdrawal Error
FIGURE 7.5-10**

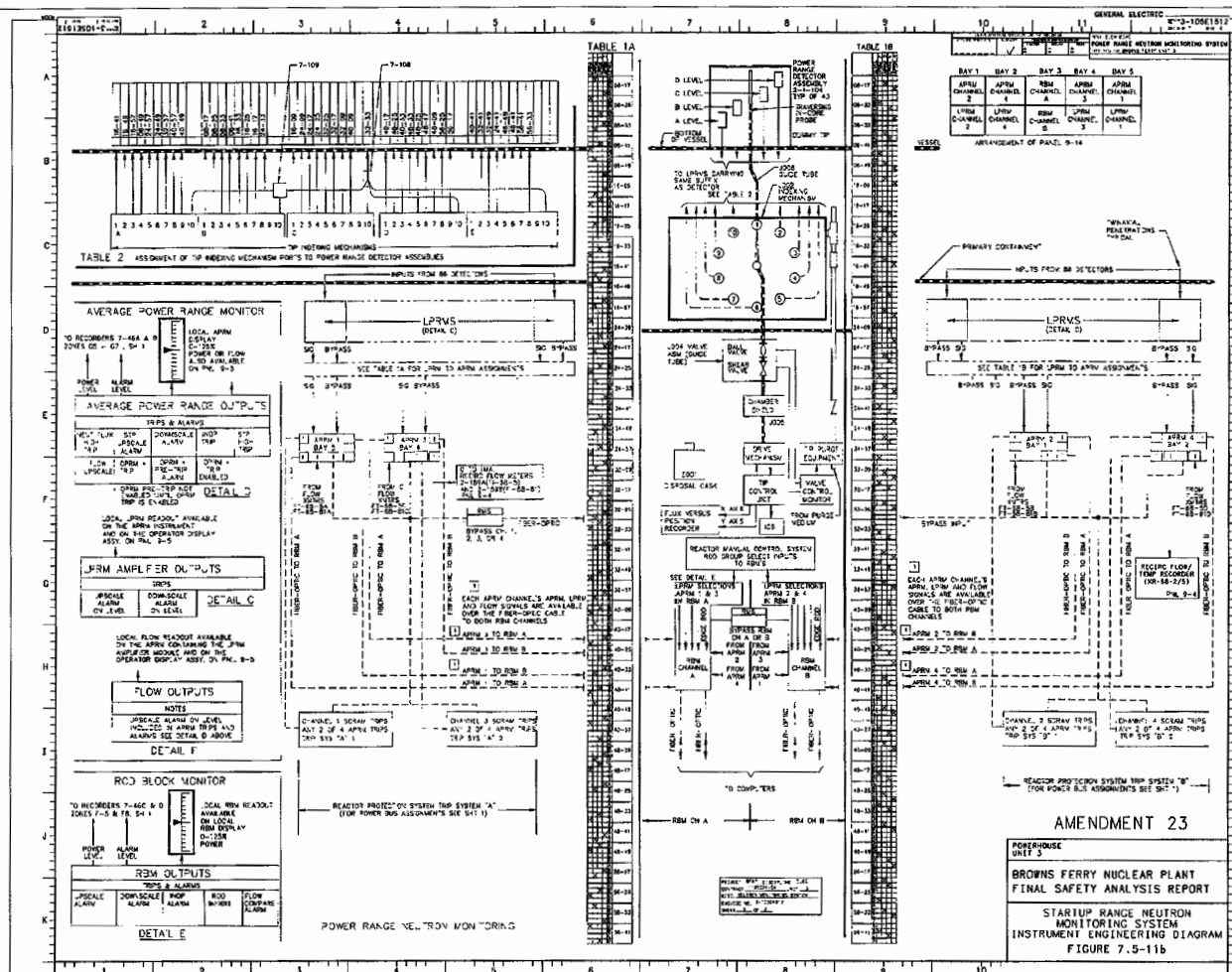
BFN-16

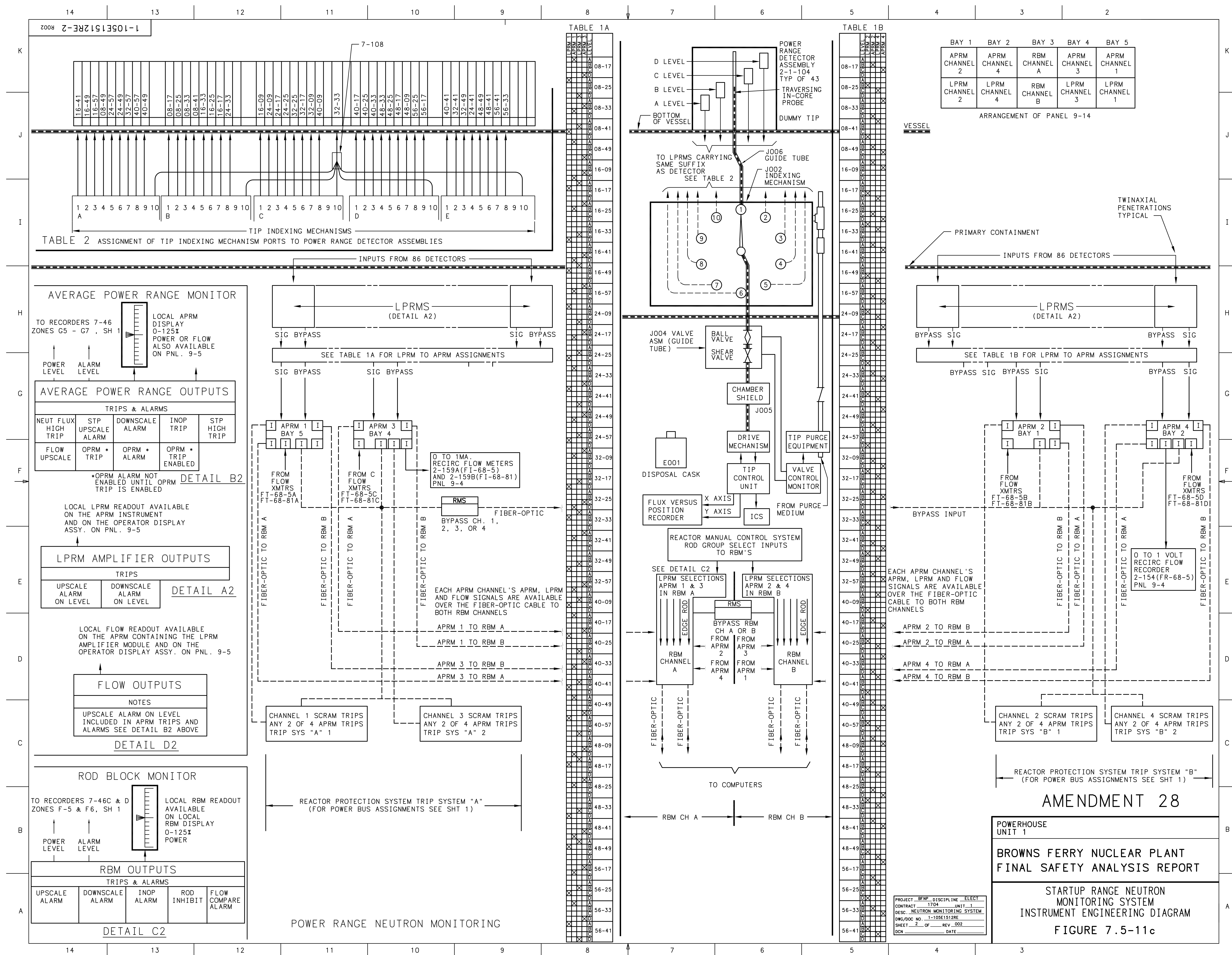
Figure 7.5-11

Deleted by Amendment 16

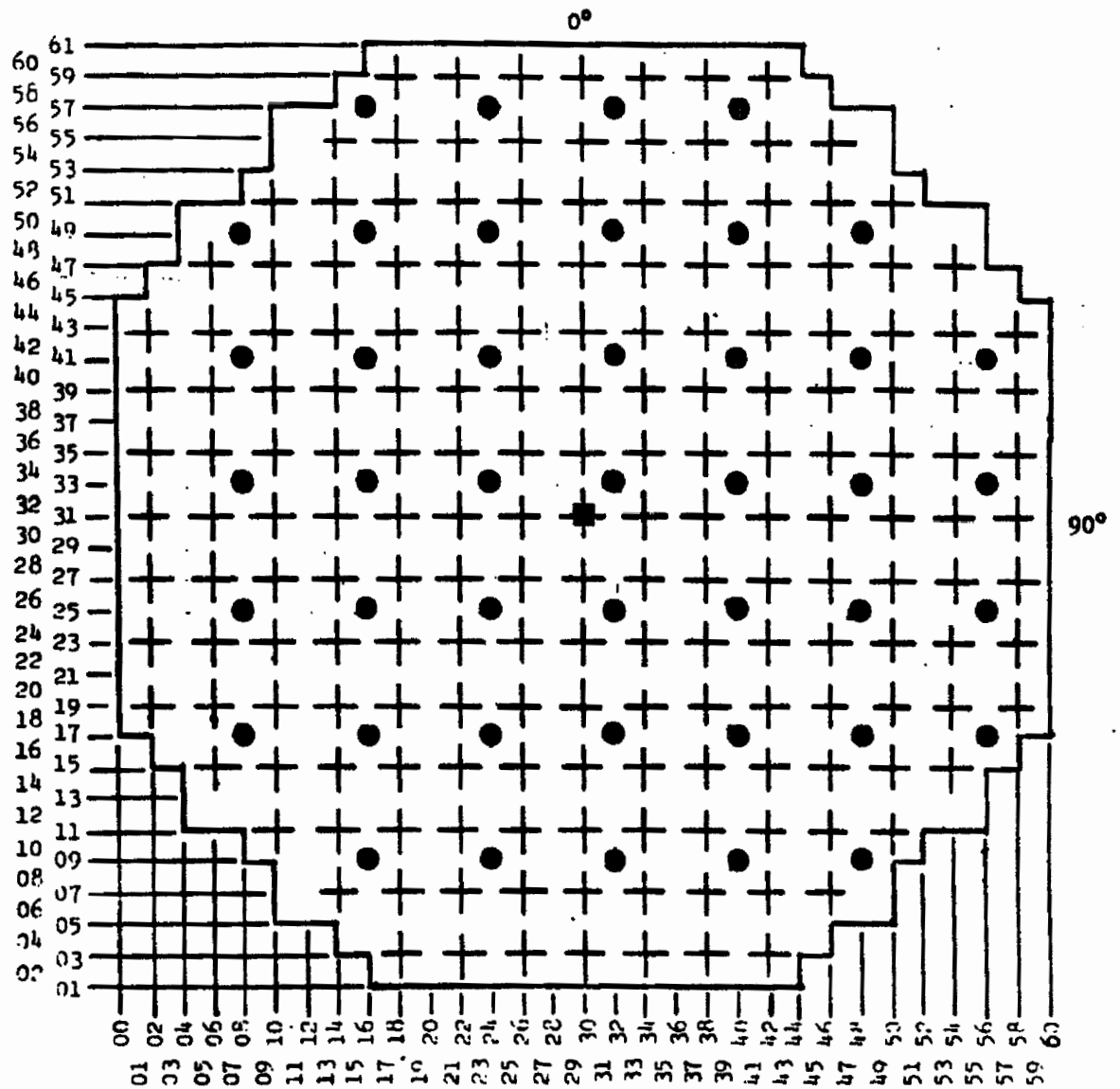
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CORE TOP VIEW

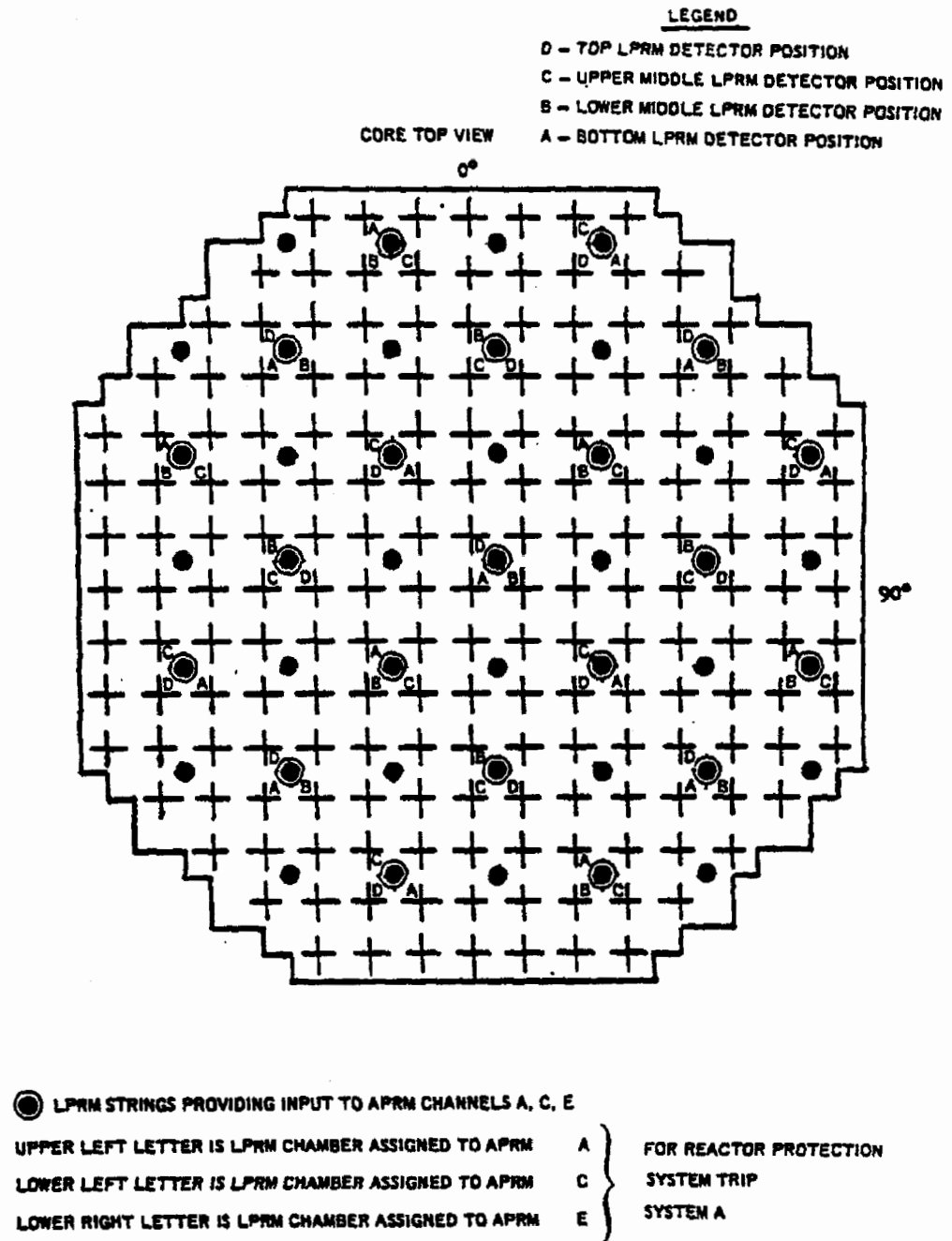


- ✚ CONTROL RODS
- CENTRAL CONTROL ROD
- LPRM ASSEMBLIES

AMENDMENT 16

**BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT**

LPRM Locations
FIGURE 7.5-12



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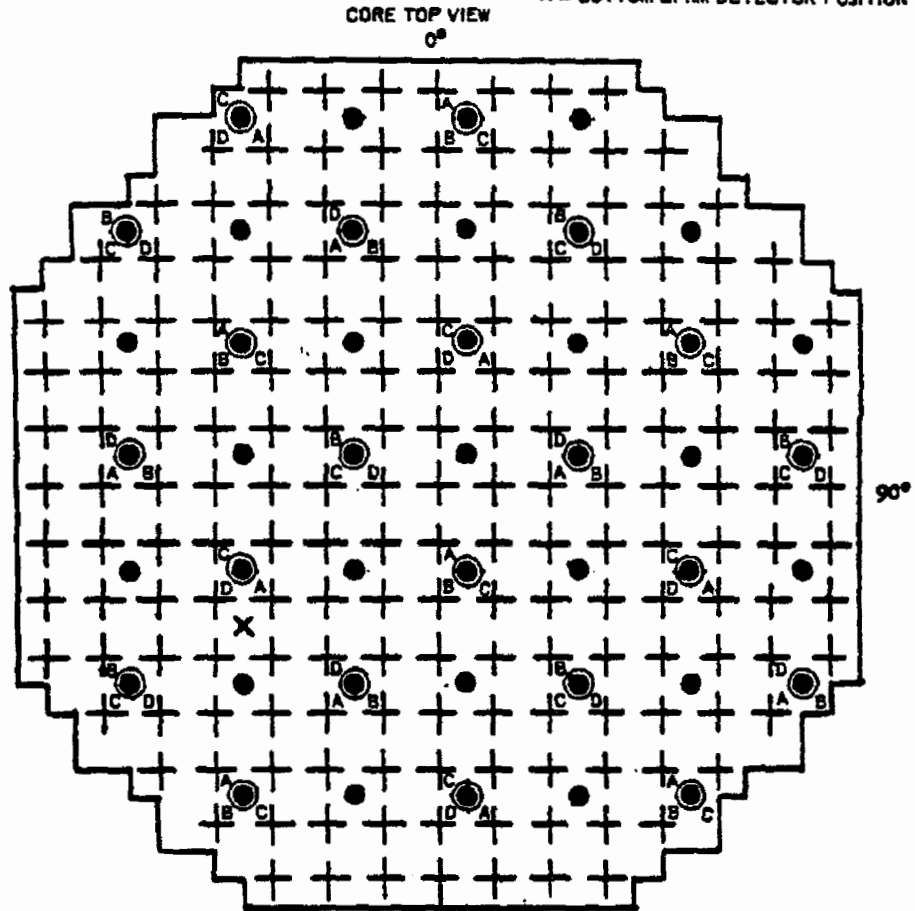
BROWNS FERRY NUCLEAR PLANT FINAL SAFETY ANALYSIS REPORT

Unit 1
 LPRM to APRM Assignment Scheme
 (System A)

FIGURE 7.5-14a

LEGEND

- D - TOP LPRM DETECTOR POSITION
- C - UPPER MIDDLE LPRM DETECTOR POSITION
- B - LOWER MIDDLE LPRM DETECTOR POSITION
- A - BOTTOM LPRM DETECTOR POSITION



● LPRM STRINGS PROVIDING INPUT TO APRM CHANNELS B,D,F

UPPER LEFT LETTER IS LPRM CHAMBER ASSIGNED TO APRM
 LOWER LEFT LETTER IS LPRM CHAMBER ASSIGNED TO APRM
 LOWER RIGHT LETTER IS LPRM CHAMBER ASSIGNED TO APRM

B } FOR REACTOR PROTECTION
 D } SYSTEM TRIP
 F } SYSTEM B

AMENDMENT 17

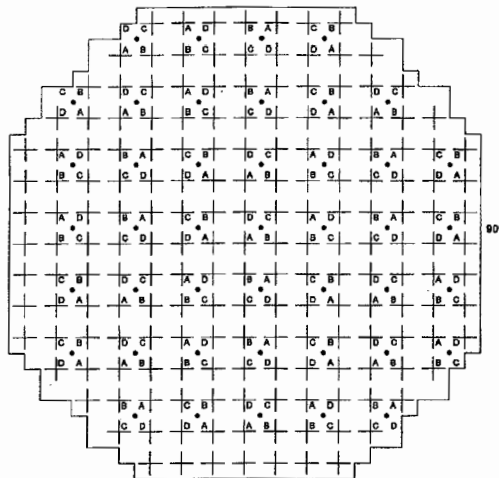
**BROWNS FERRY NUCLEAR PLANT
 FINAL SAFETY ANALYSIS REPORT**

Unit 1
 LPRM to APRM Assignment Scheme
 (System B)
 FIGURE 7.5-14b

CORE TOP VIEW
0°

LEGEND

D - TOP LPRM DETECTOR POSITION
C - UPPER MIDDLE LPRM DETECTOR POSITION
B - LOWER MIDDLE LPRM DETECTOR POSITION
A - BOTTOM LPRM DETECTOR POSITION



NOTE:
LOWER RIGHT LETTER IS LPRM CHAMBER ASSIGNED TO APRM 1.
UPPER RIGHT LETTER IS LPRM CHAMBER ASSIGNED TO APRM 2.
LOWER LEFT LETTER IS LPRM CHAMBER ASSIGNED TO APRM 3.
UPPER LEFT LETTER IS LPRM CHAMBER ASSIGNED TO APRM 4.

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BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT

UNITS 1, 2 AND 3 LPRM TO APRM
ASSIGNMENT SCHEME
FIGURE 7.5-14e

BFN-22

Figure 7.5-15
(Deleted by Amendment 22)

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BFN-22

Figure 7.5-16
(Deleted by Amendment 22)

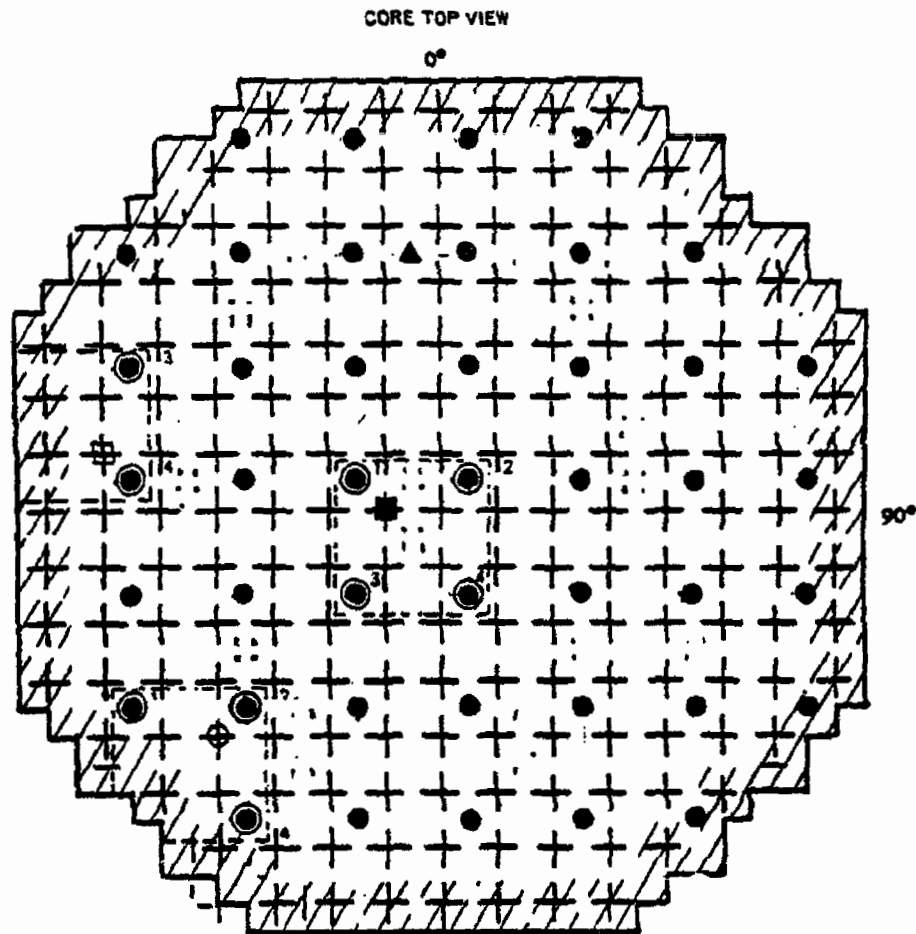
|

BFN-16

Figure 7.5-17

Deleted by Amendment 16

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- LPRM-ASSEMBLY ASSIGNED TO RBM
- ⊞ ROD SELECTION RESULTING IN TWO-ASSEMBLY ASSIGNMENT
- ⊕ ROD SELECTION RESULTING IN THREE-ASSEMBLY ASSIGNMENT
- ⊞ ROD SELECTION RESULTING IN FOUR-ASSEMBLY ASSIGNMENT
- /// RBM AUTOMATICALLY BYPASSED (READING ZEROED)

NOTE: ASSIGNMENT IS AUTOMATICALLY INITIATED UPON ROD SELECTION.

AMENDMENT 16

**BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT**

Units 1, 2 and 3
Assignment of LPRM Assemblies to RBM'S
FIGURE 7.5-17a

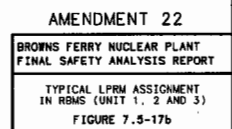
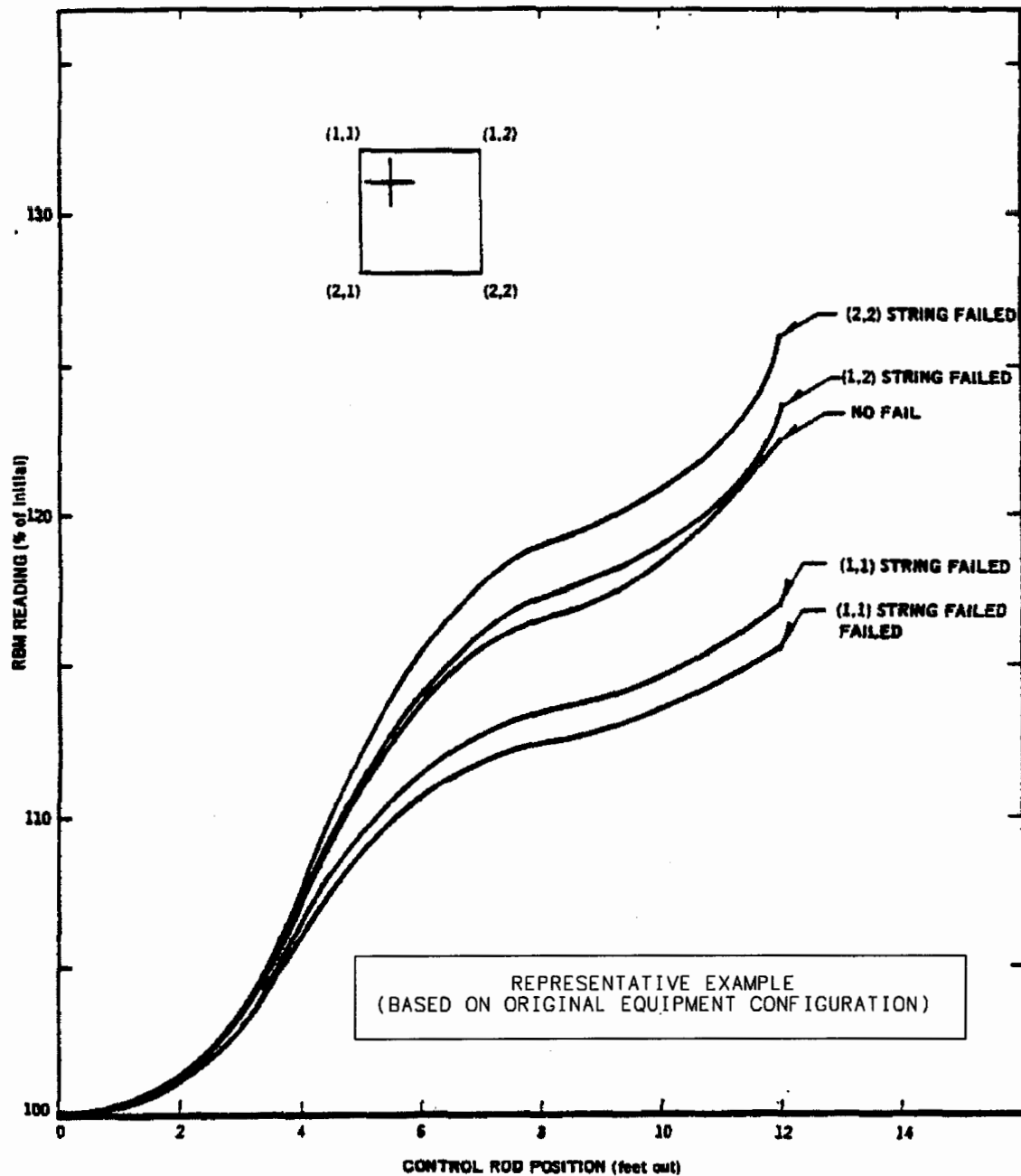


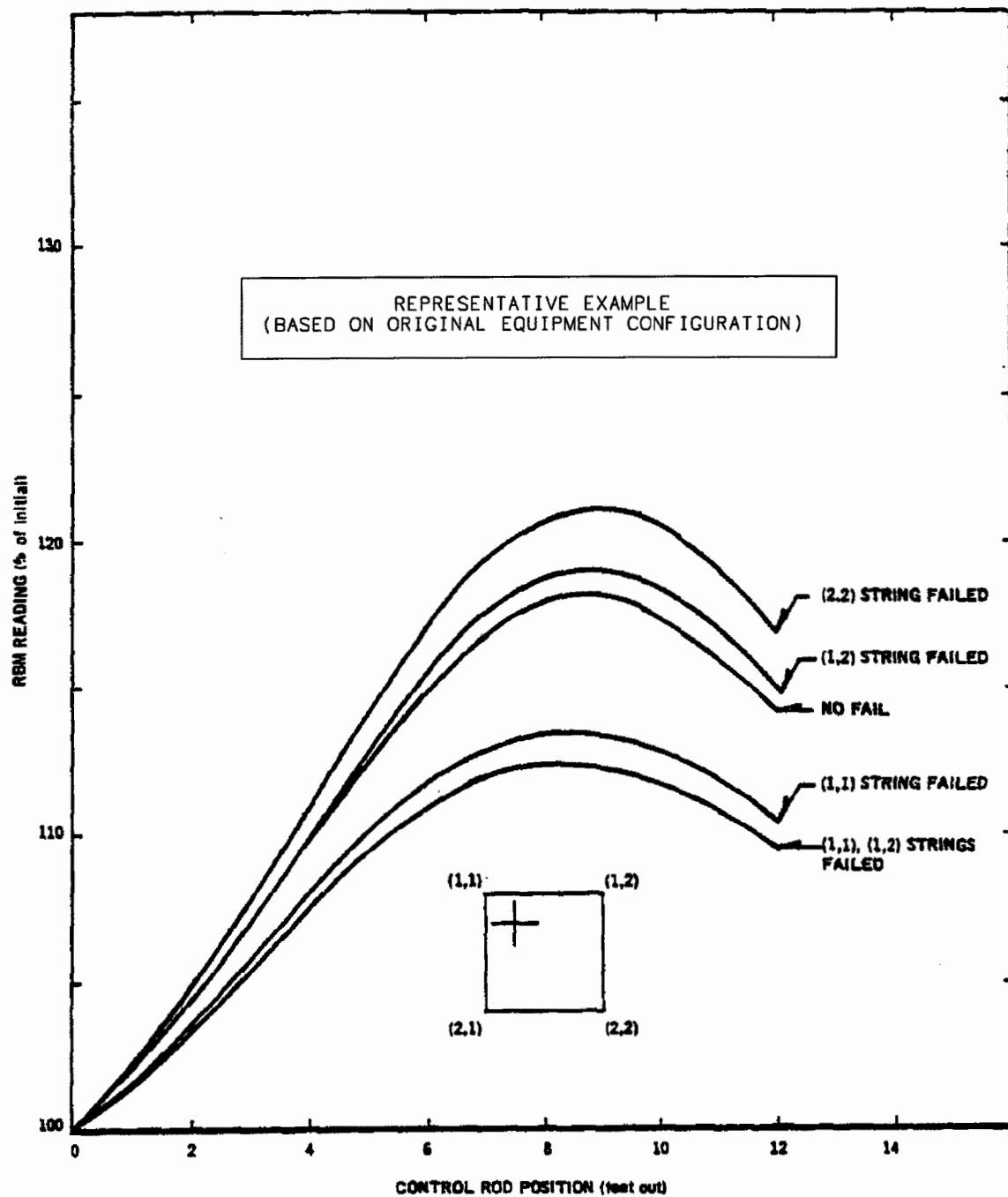
FIGURE 7.5-17b



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**BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT**

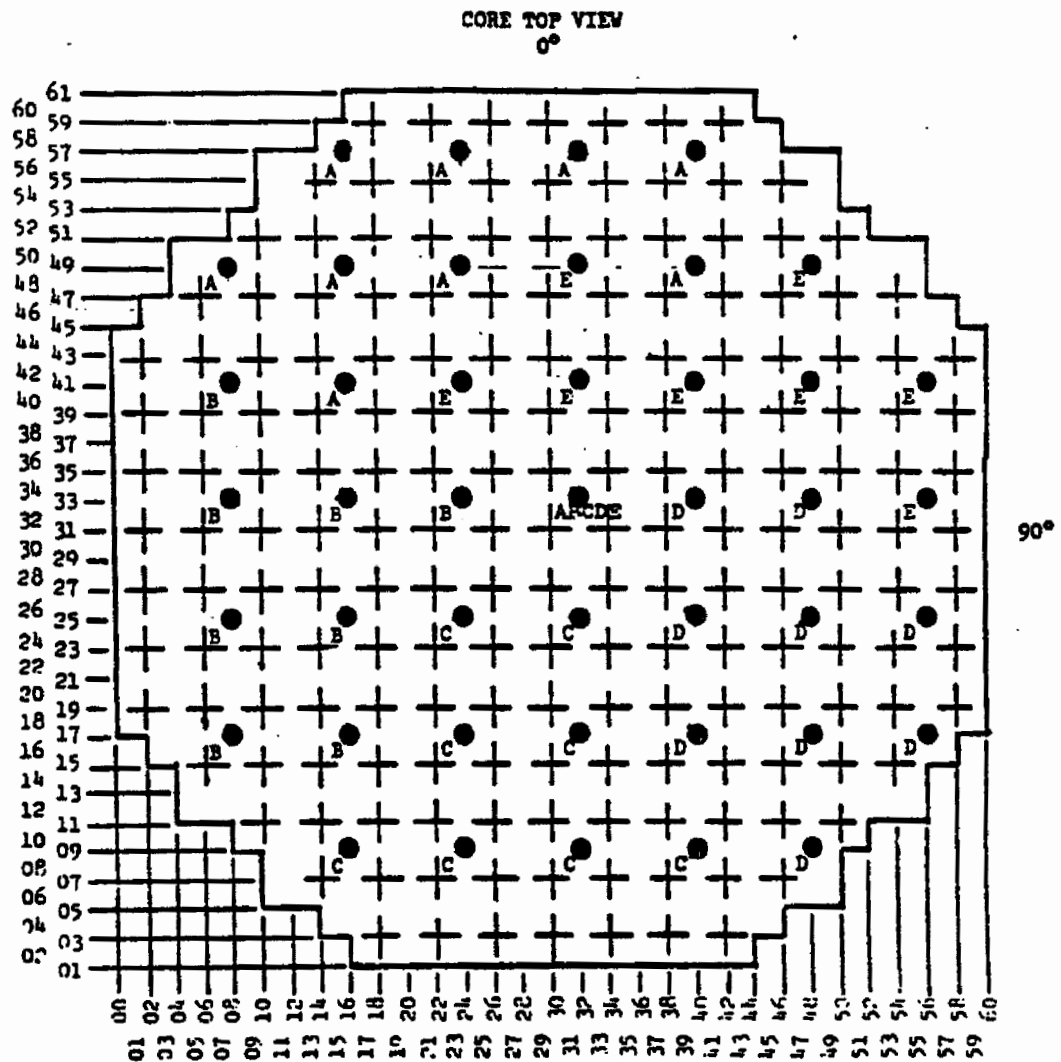
**RBM Channel A + C
Response to Control Rod Motion
FIGURE 7.5-18**



AMENDMENT 16

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RBM Channel B + D
Response to Control Rod Motion
FIGURE 7.5-19

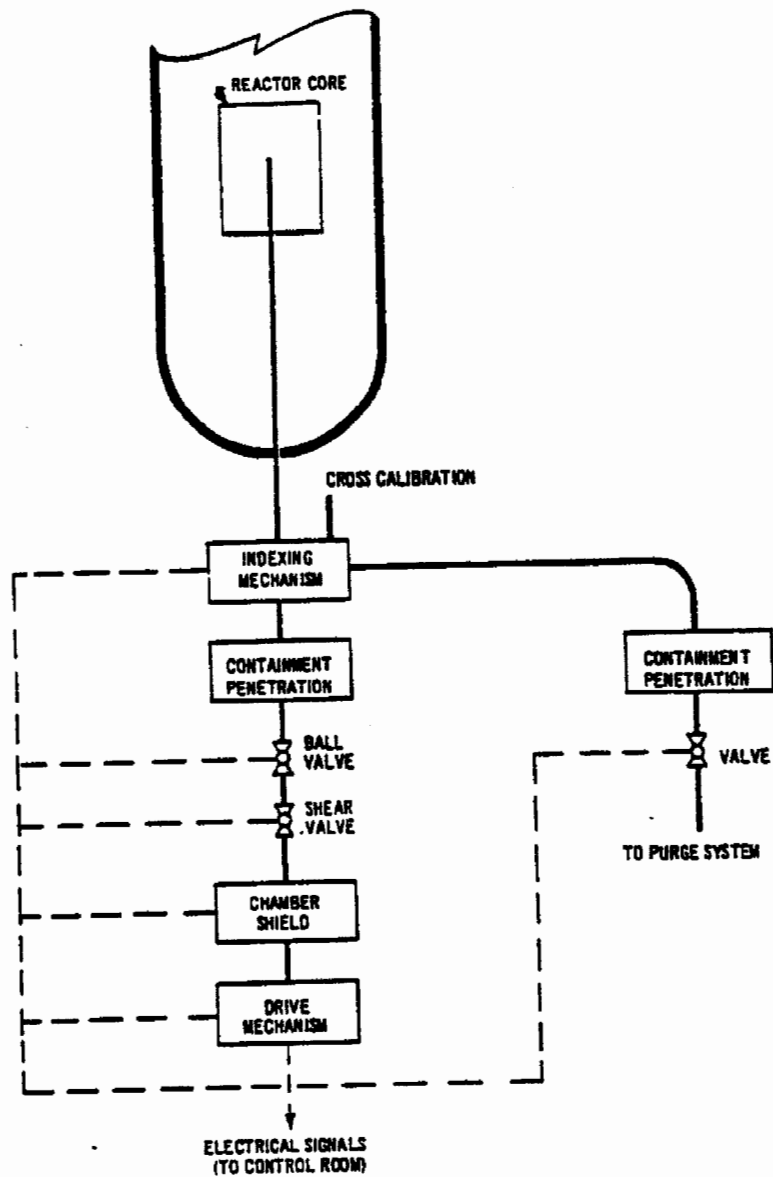


LETTER = TIP MACHINE ASSIGNED TO LPRM STRING

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**BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT**

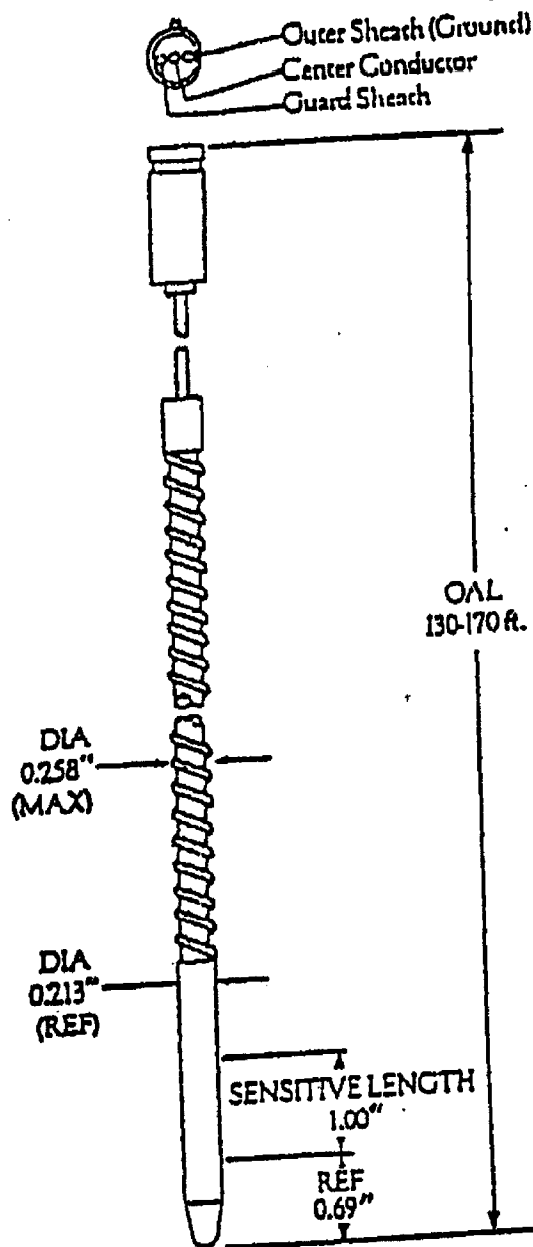
Assignment of LPRM Strings
to TIP Machines
FIGURE 7.5-20



AMENDMENT 16

BROWNS FERRY NUCLEAR PLANT FINAL SAFETY ANALYSIS REPORT

Traversing In-Core Probe Subsystem
Block Diagram
FIGURE 7.5-21



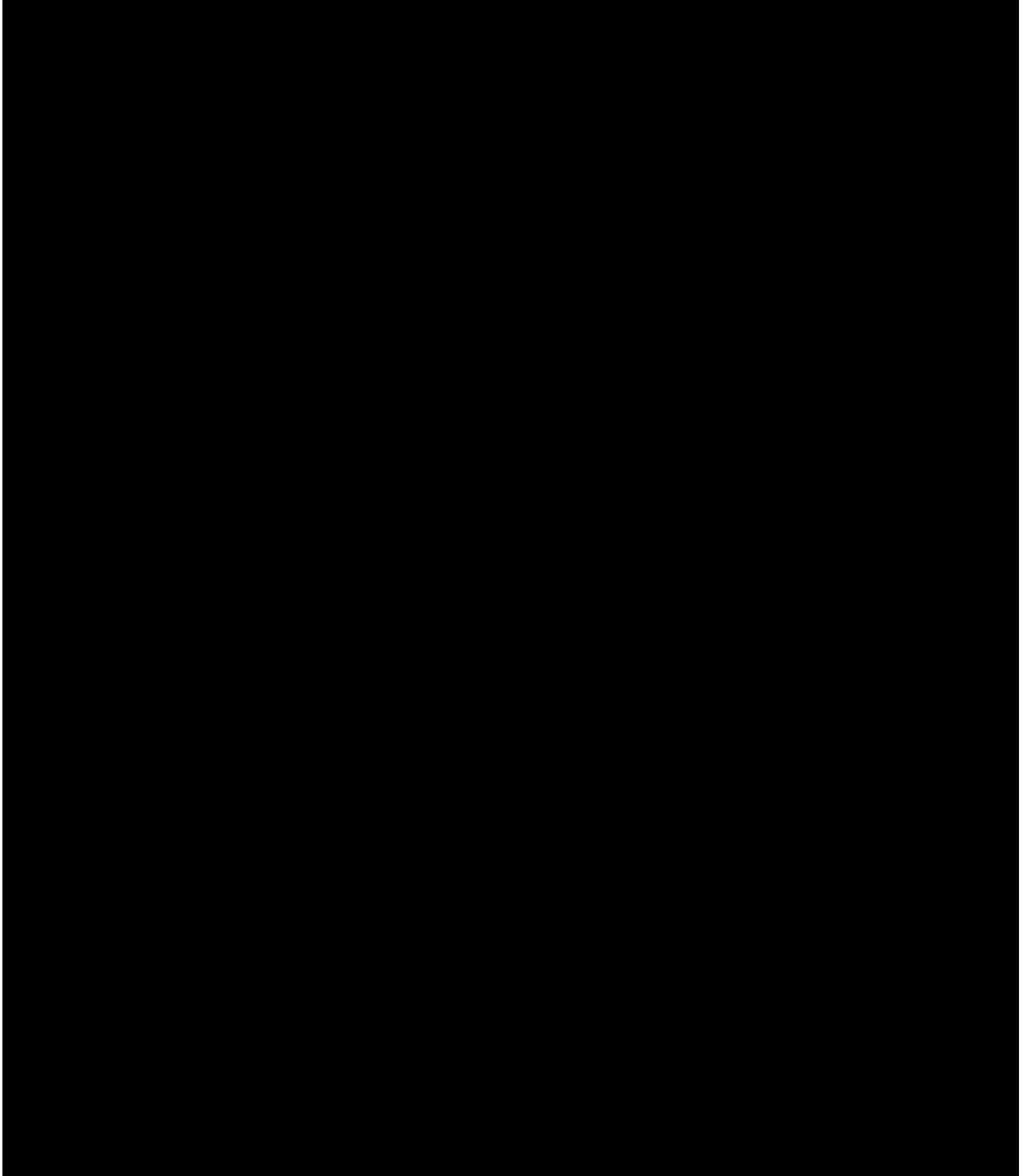
AMENDMENT 16

**BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT**

Traversing In-Core
Probe Assembly
FIGURE 7.5-22

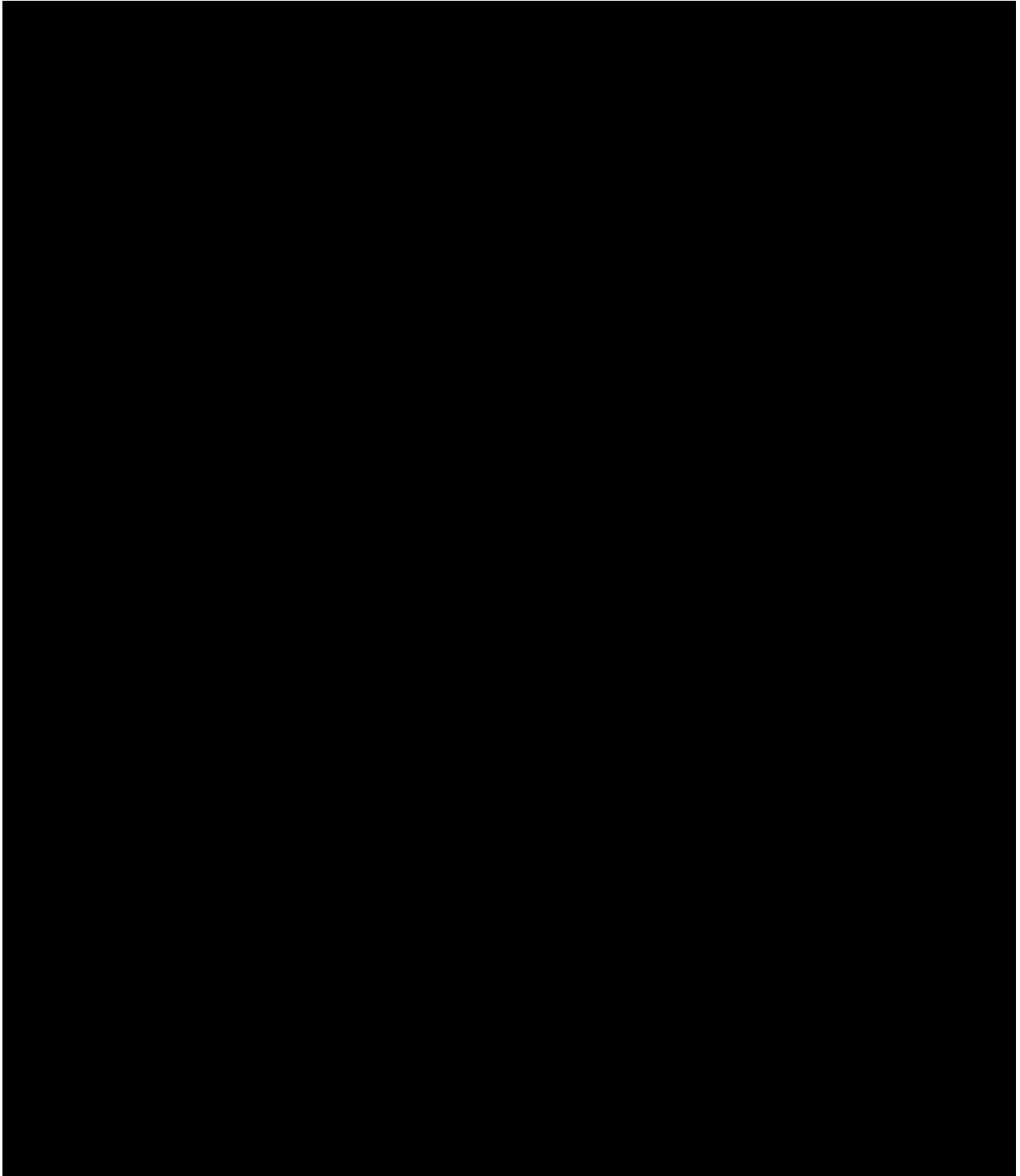
~~Security-Related Information—Withhold Under 10 CFR 2.390~~

Figure 7.5-23a



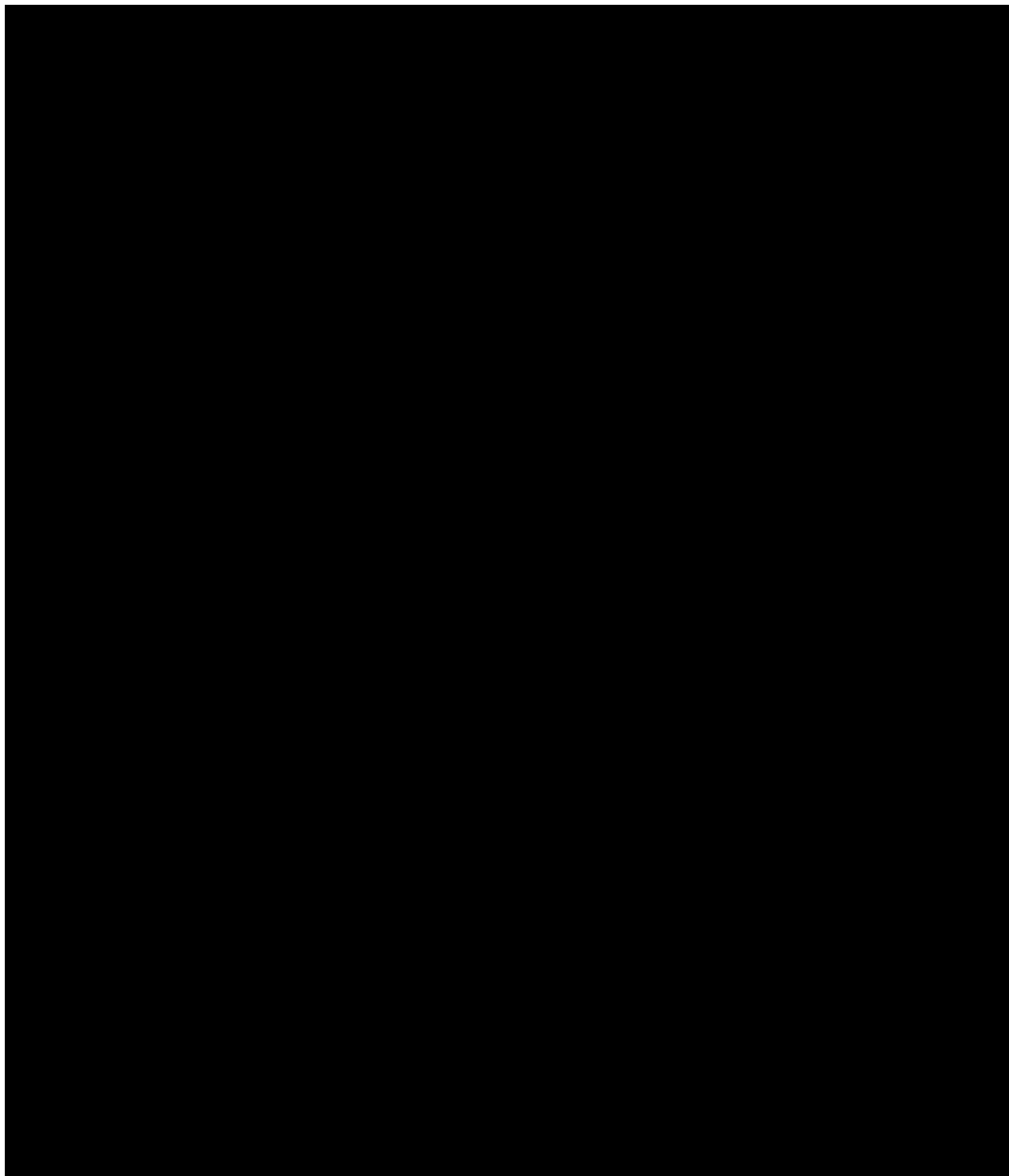
~~Security-Related Information—Withhold Under 10 CFR 2.390~~

Figure 7.5-23b



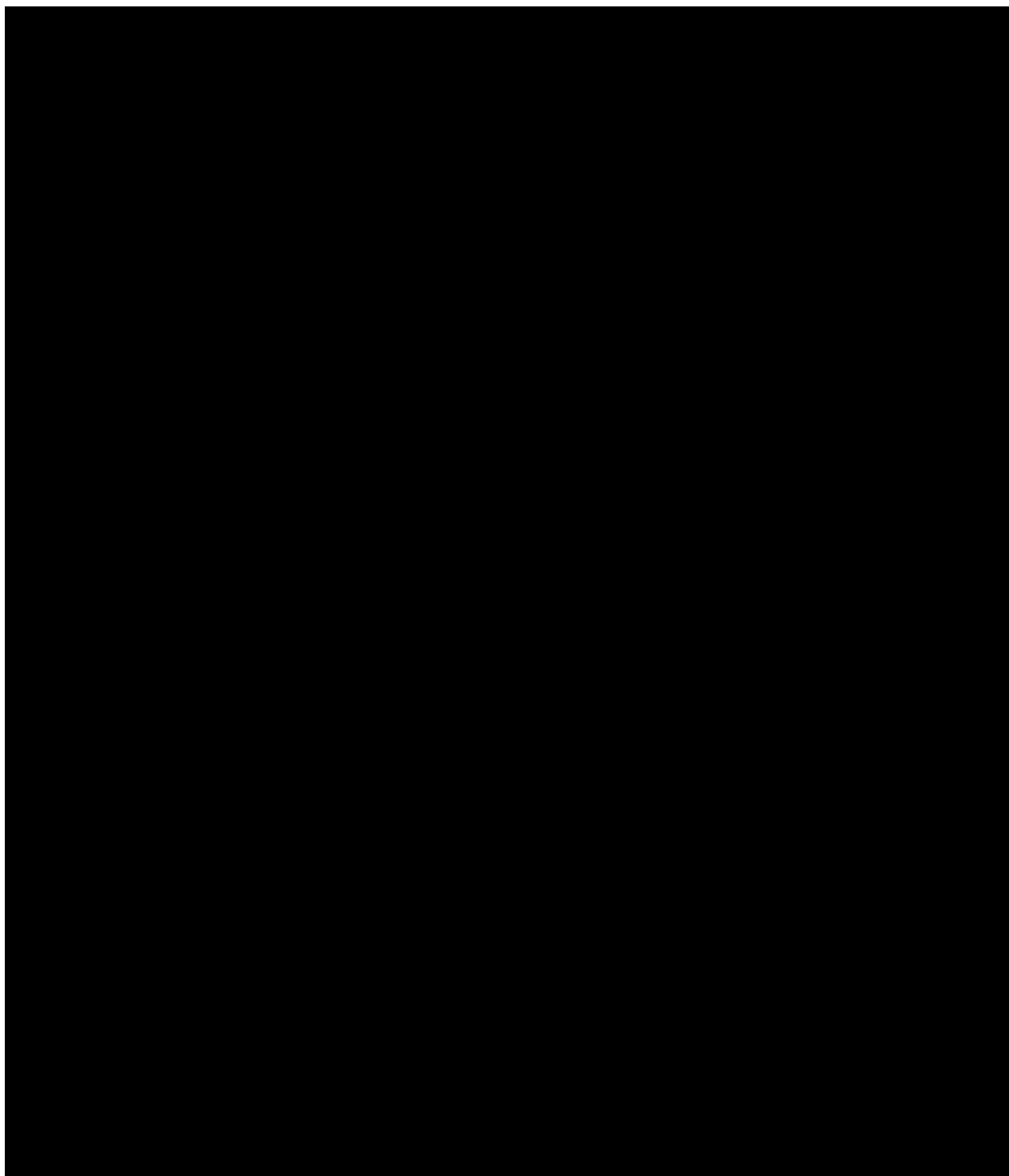
~~Security-Related Information—Withhold Under 10 CFR 2.390~~

Figure 7.5-23c



~~Security-Related Information—Withhold Under 10 CFR 2.390~~

Figure 7.5-23d



BFN-16

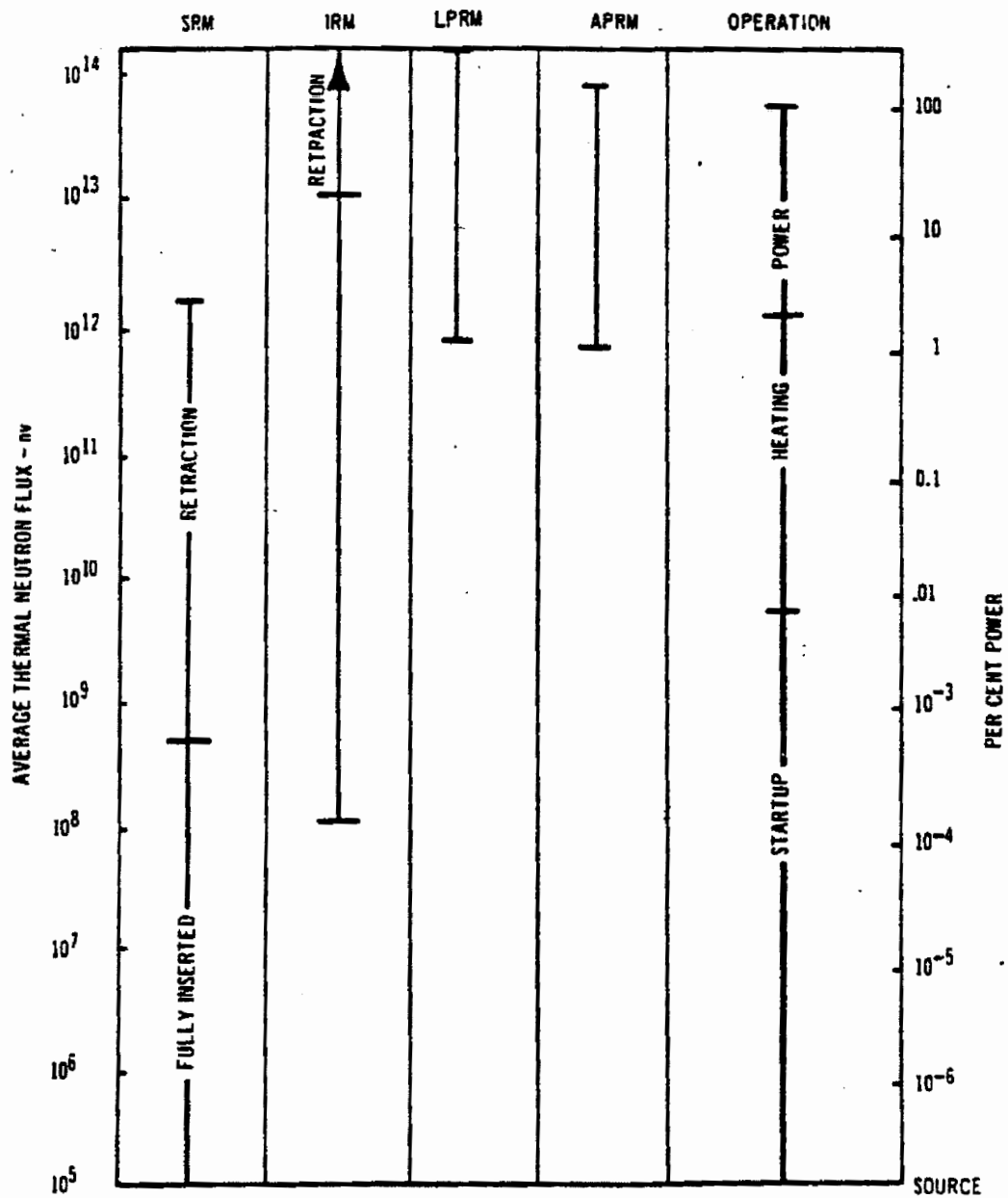
Figure 7.5-24

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BFN-22

Figures 7.5-24a through 7.5-24f
(Deleted by Amendment 22)

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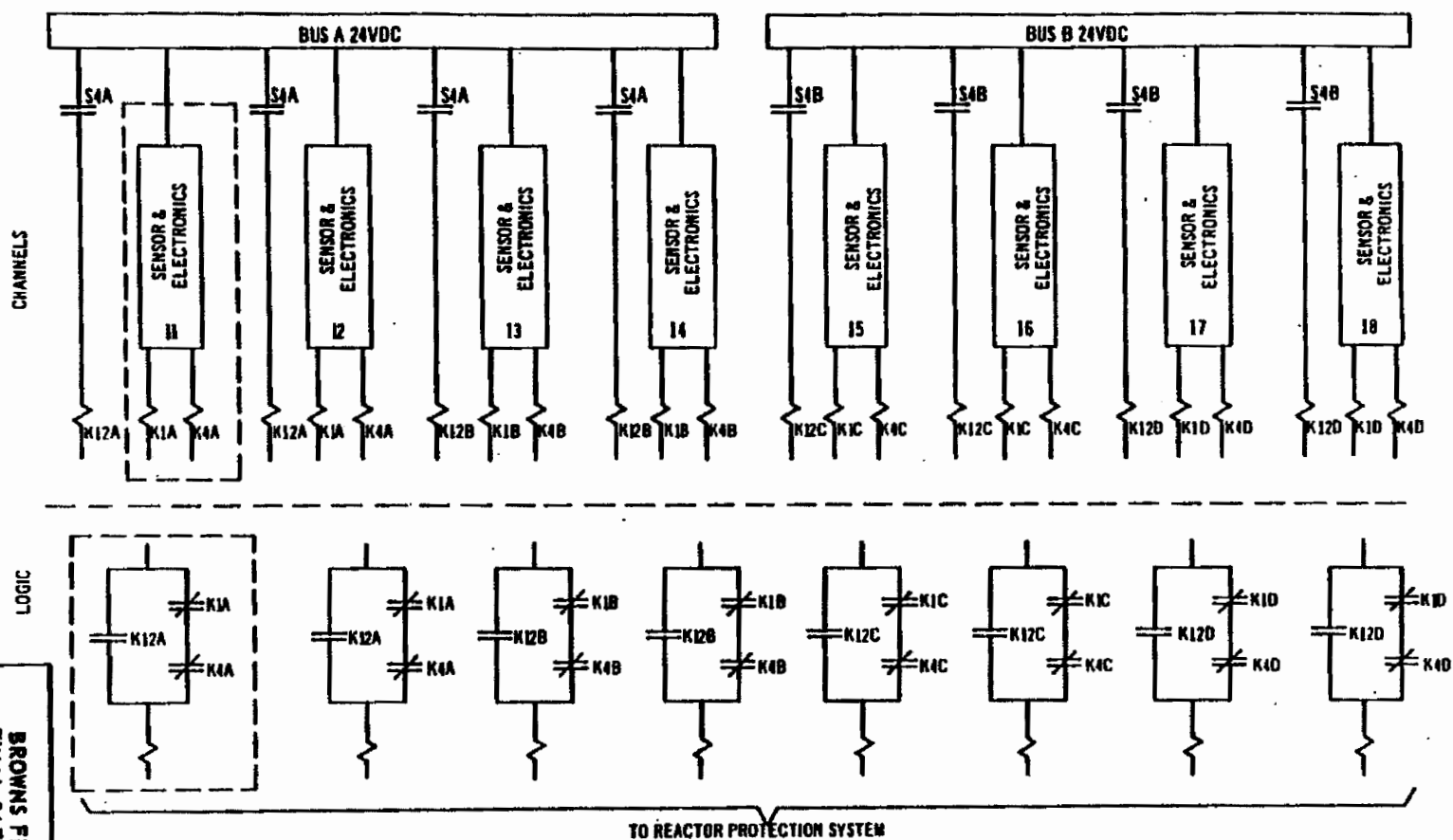


AMENDMENT 16

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FINAL SAFETY ANALYSIS REPORT**

Ranges of Neutron Monitoring System
FIGURE 7.5-25

AMENDMENT 16



LEGEND: K1A, B, C, D - INOPERATIVE TRIP
K4A, B, C, D, - UPSCALE TRIP
S4A, B - BYPASS SWITCH

NOTE: CONTACTS ALSO SHOWN IN NORMAL OPERATION POSITION

BROWNS FERRY NUCLEAR PLANT
FINAL SAFETY ANALYSIS REPORT
Typical IRM Circuit Arrangement
for Reactor Protection System Input
FIGURE 7.5-26

BFN-22

Figure 7.5-27
(Deleted by Amendment 22)

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BFN-22

Figure 7.5-28
(Deleted by Amendment 22)

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