

**GPU Nuclear**

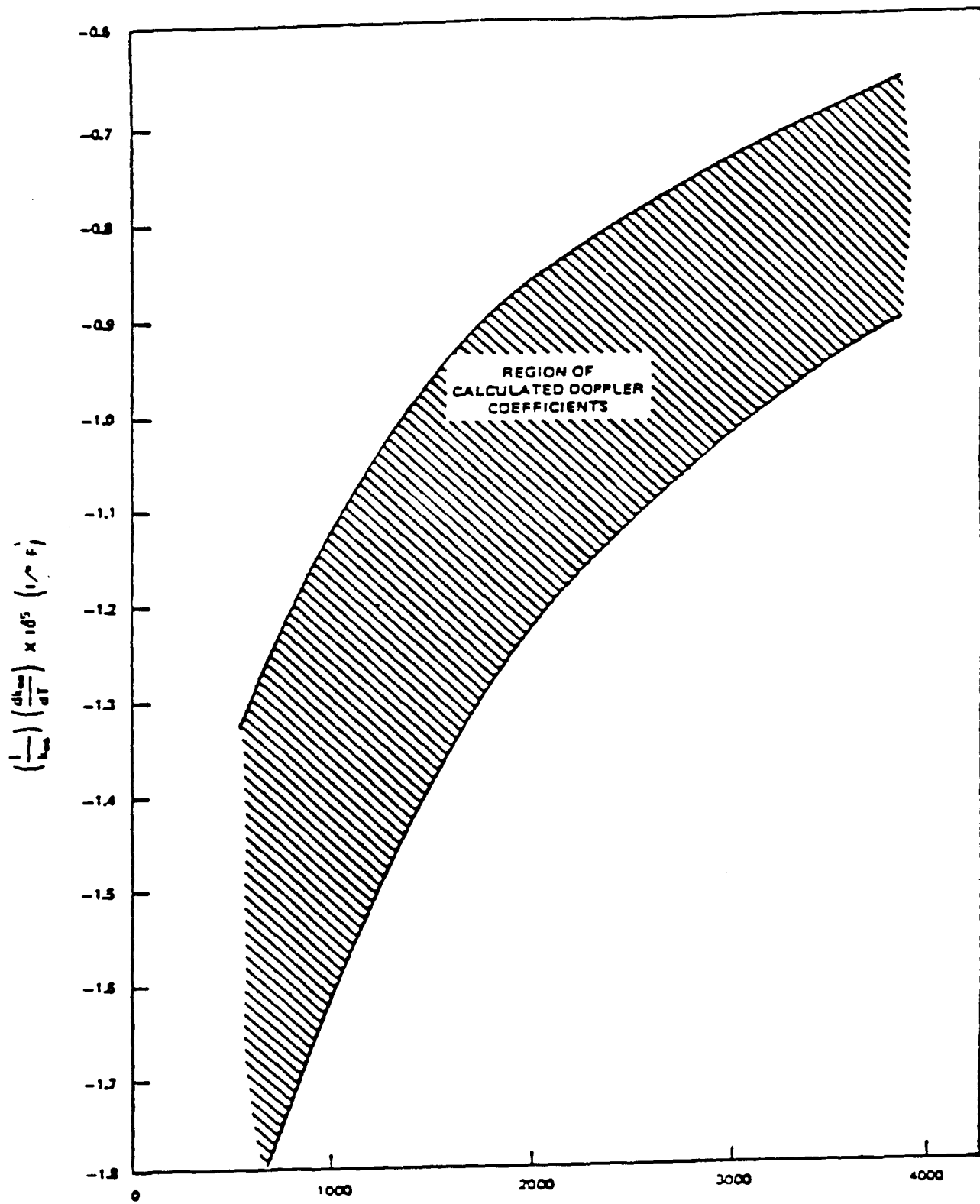
Update - 5

Oyster Creek

12/90

Envelope of Doppler Coefficient Versus  
Temperature, E=200 MWd/t

Fig. 4.3-1



**GPU Nuclear**

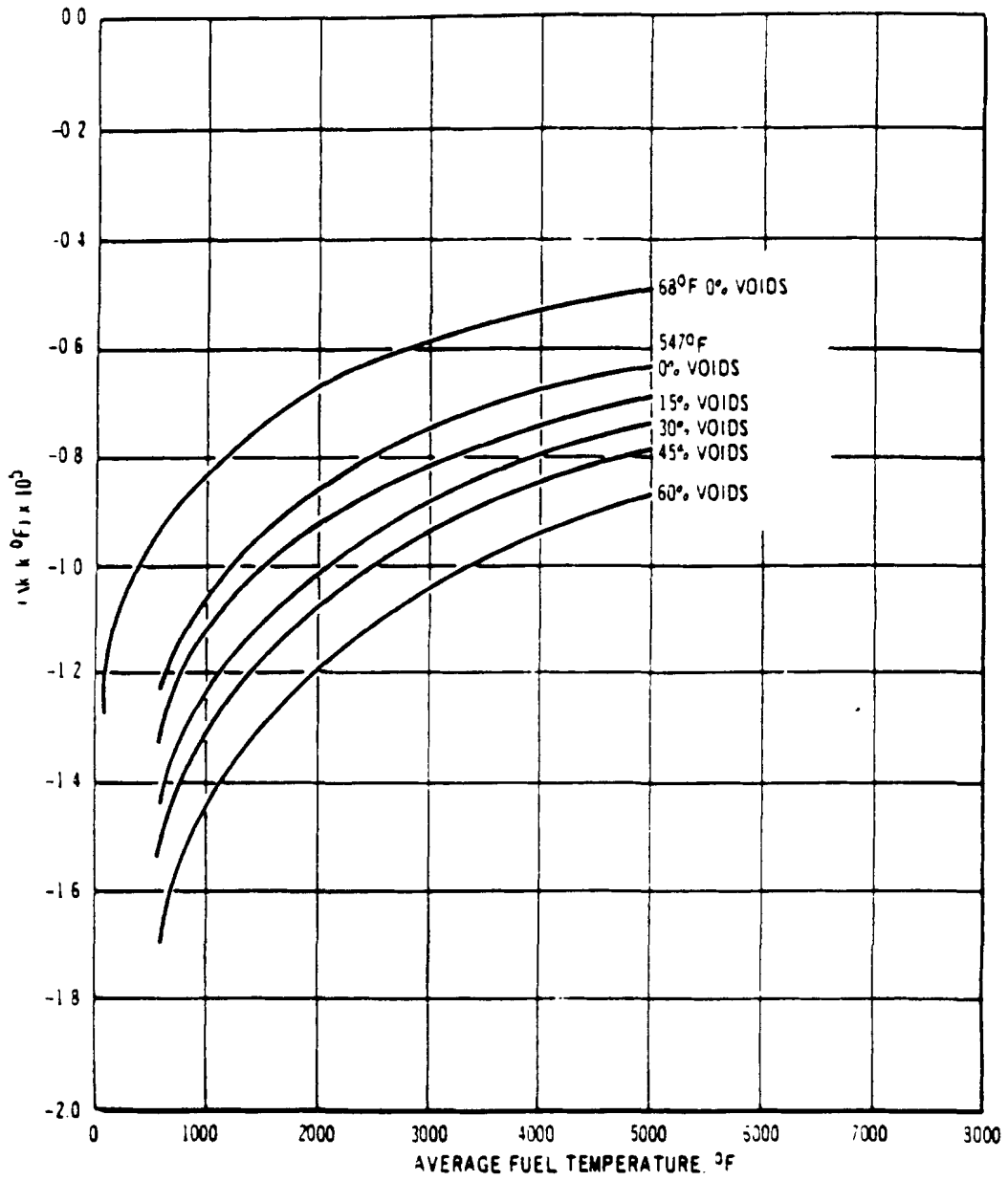
Update - 5

Oyster Creek

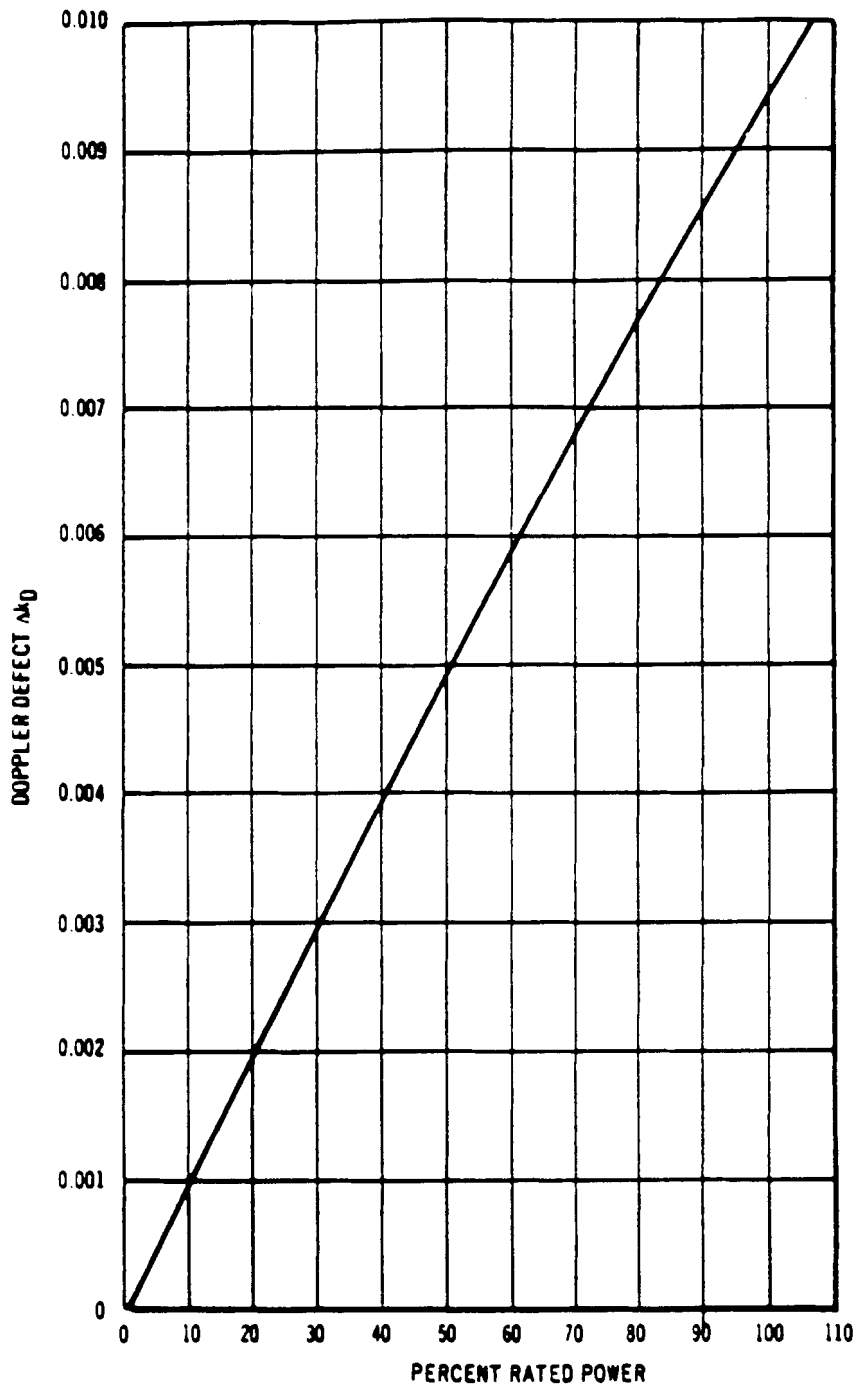
12/90

Envelope of Doppler Coefficient Versus  
Temperature, E=15,000 MWd/t

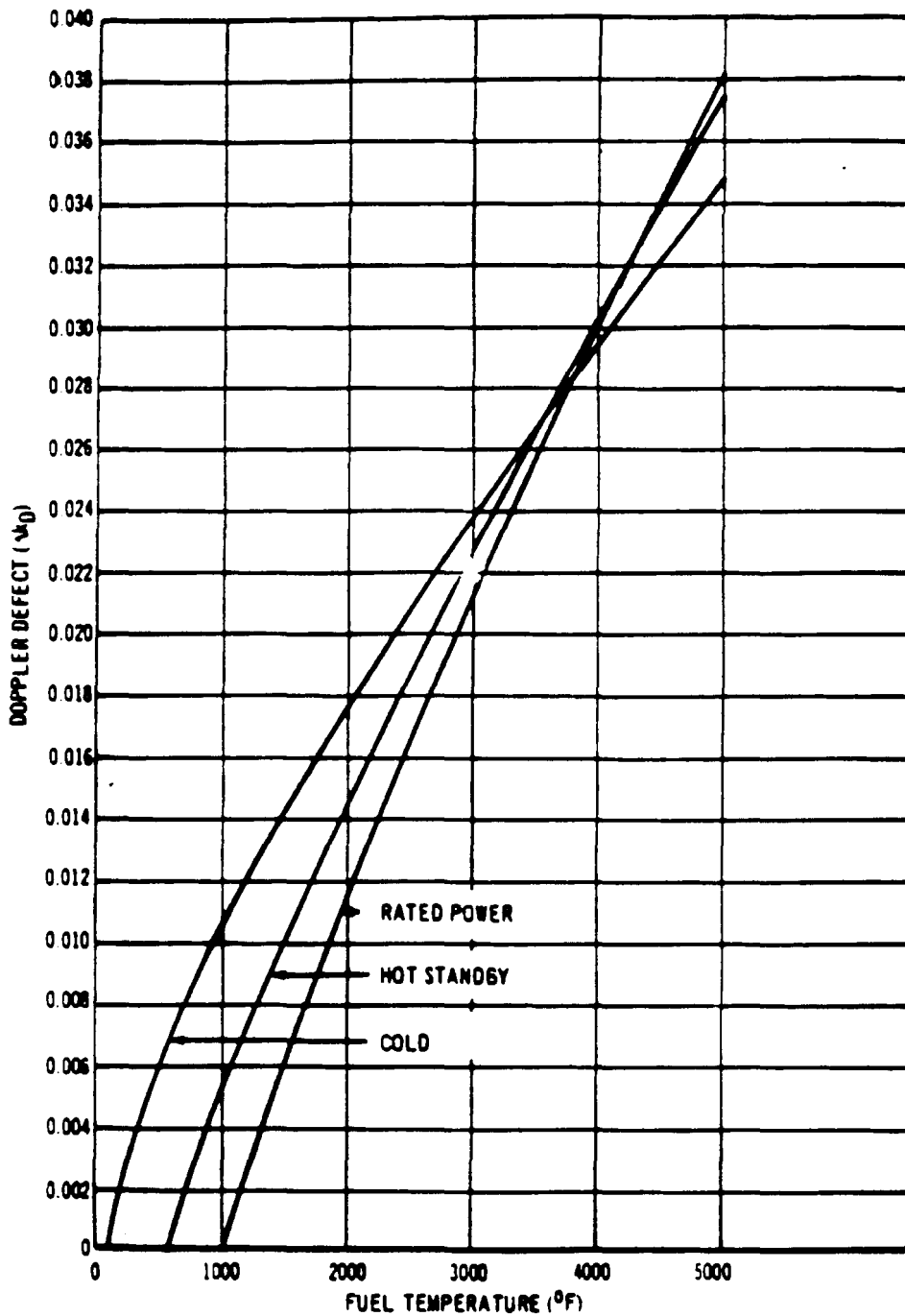
Fig. 4.3-2



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**Oyster Creek** 12/90  
 Doppler Coefficient of Reactivity —  
 Unirradiated Fuel  
 Fig. 4.3-3



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**Oyster Creek** 12/90  
 Core Average Doppler Defect Versus  
 Core Power Level  
 Fig. 4.3-4



**GPU Nuclear**

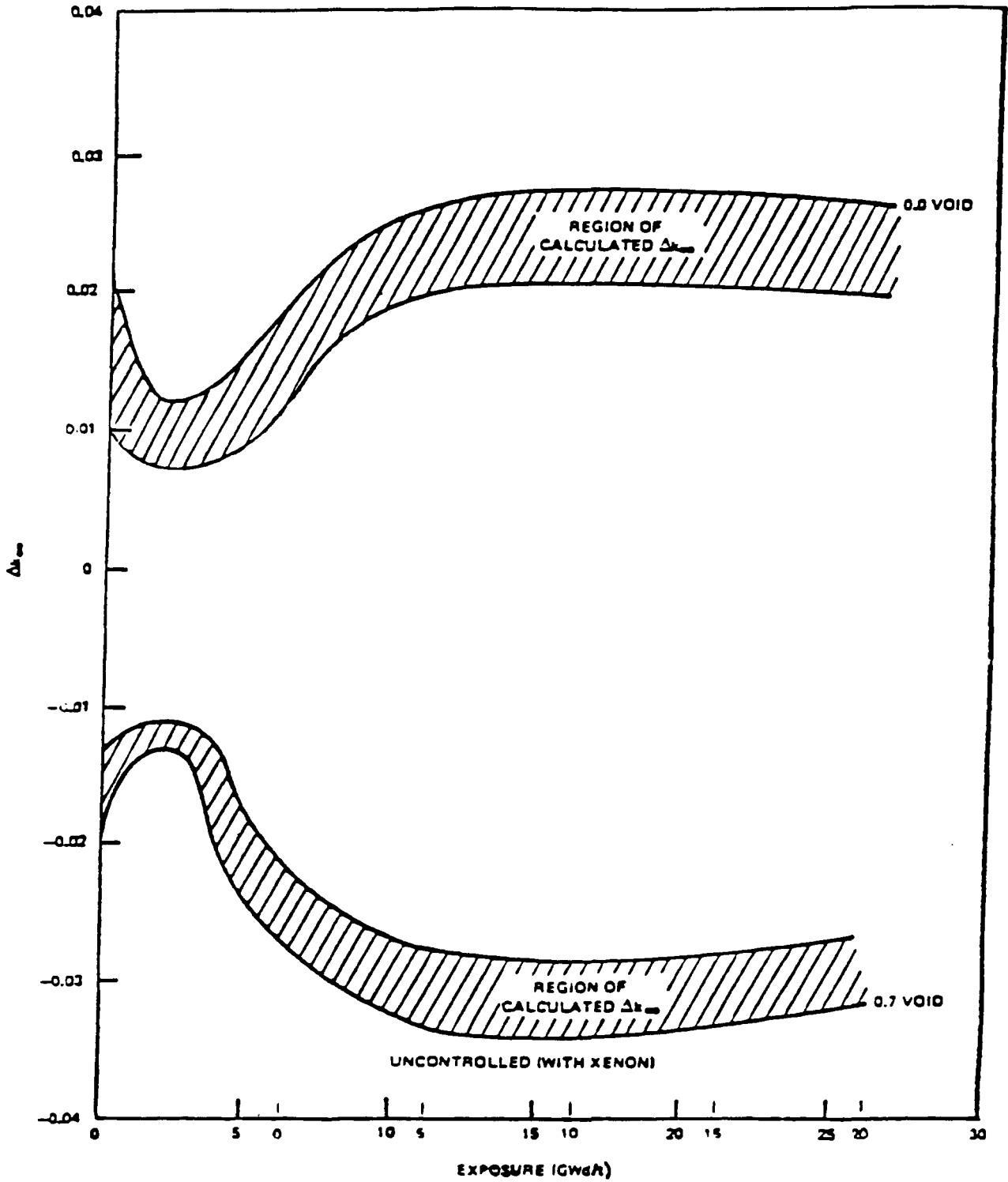
**Oyster Creek**

**Doppler Defect Versus Fuel Temperature**

**Update - 5**

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**Fig. 4.3-5**



**GPU Nuclear**

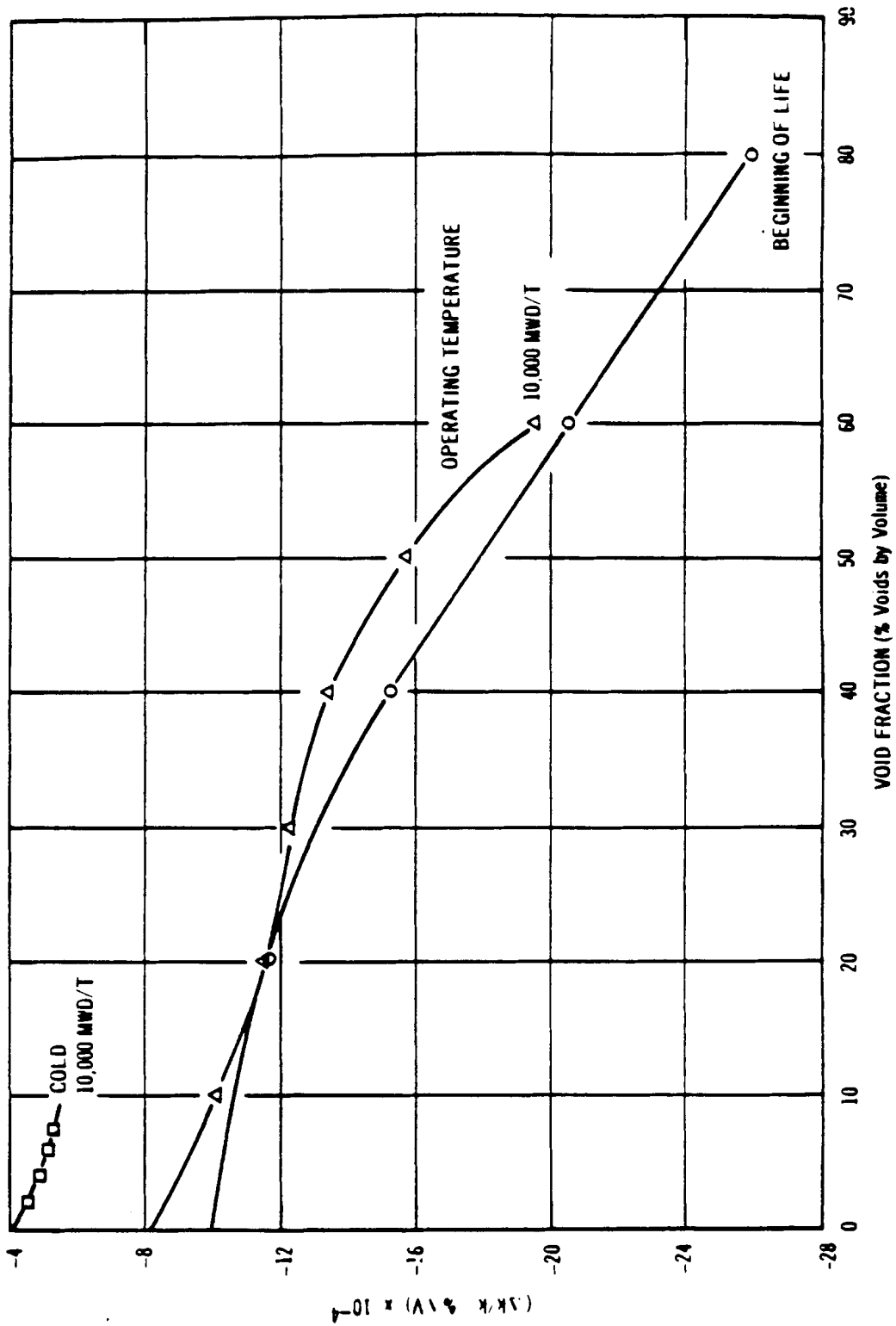
Update - 5

Oyster Creek

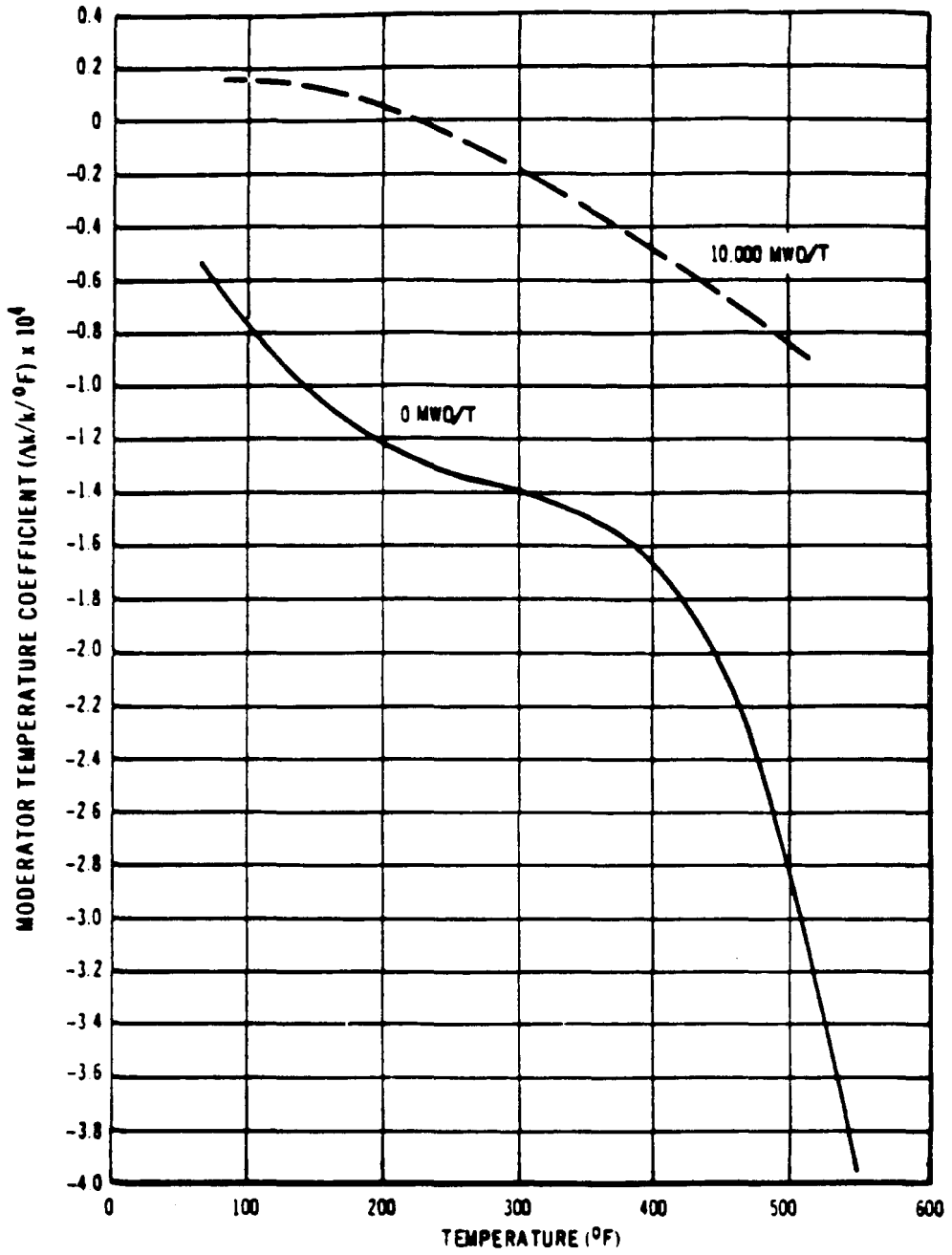
12/90

Envelope of Delta-k - Infinity (From 0.4 Void to Other Voids) Versus Exposure

Fig. 4.3-6



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 Oyster Creek 12/90  
 Moderator Void Coefficients of Reactivity  
 Fig. 4.3-7



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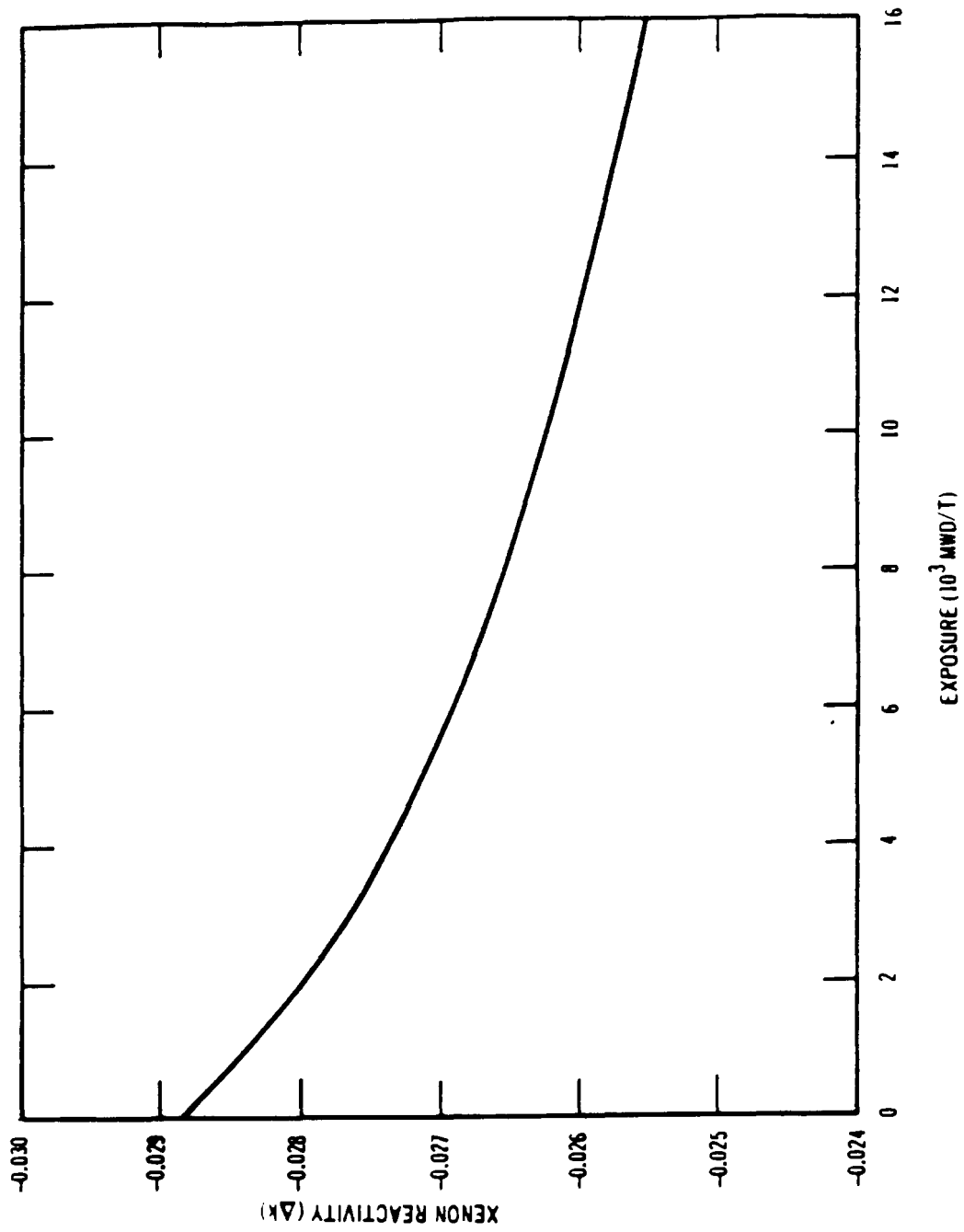
Oyster Creek

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Moderator Temperature Coefficients of Reactivity

Fig. 4.3-8





**GPU Nuclear**

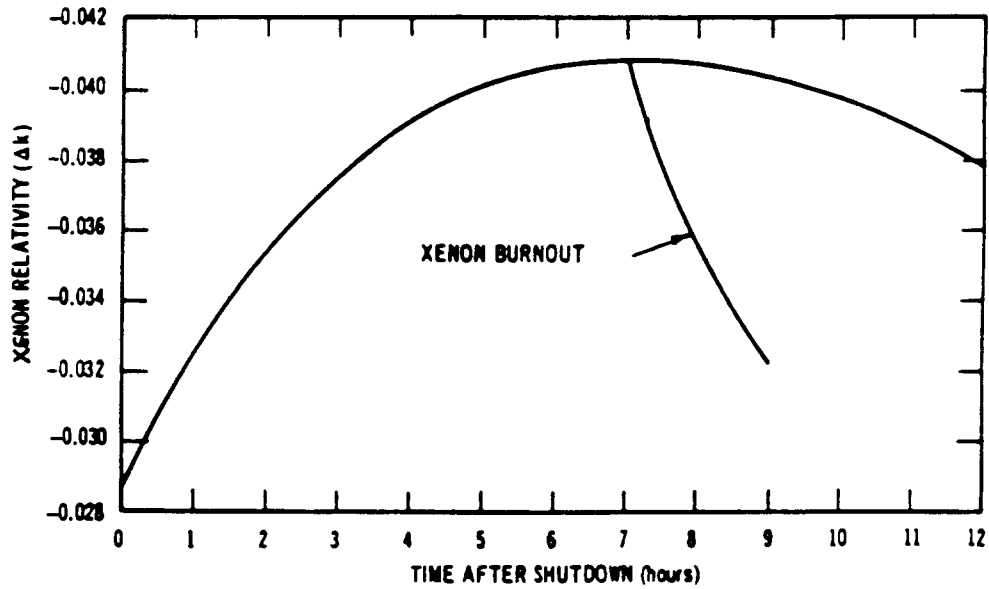
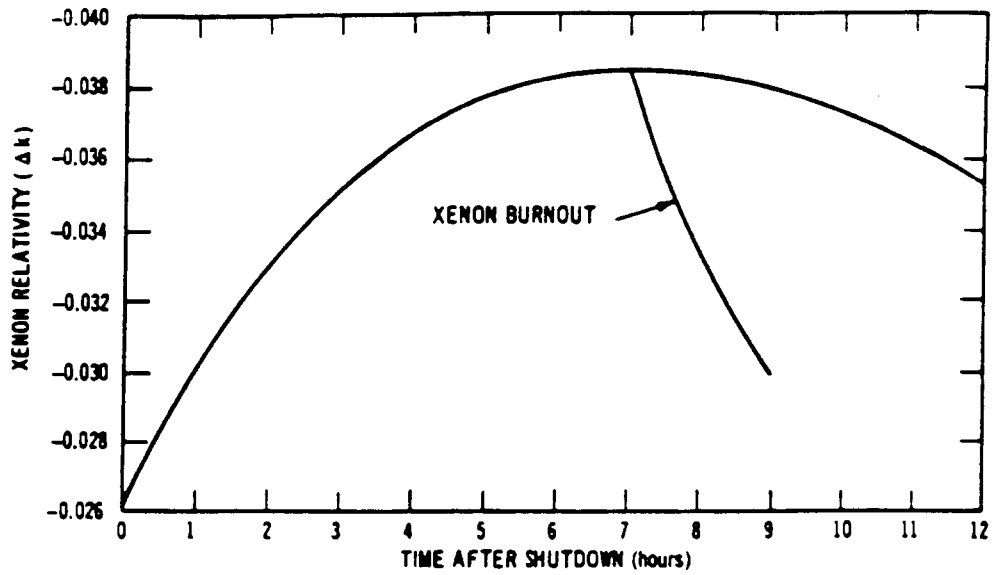
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Oyster Creek

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Xenon Reactivity as a Function of Exposure at  
Rated Power Density with 35 Percent Voids

Fig. 4.3-9



**GPU Nuclear**

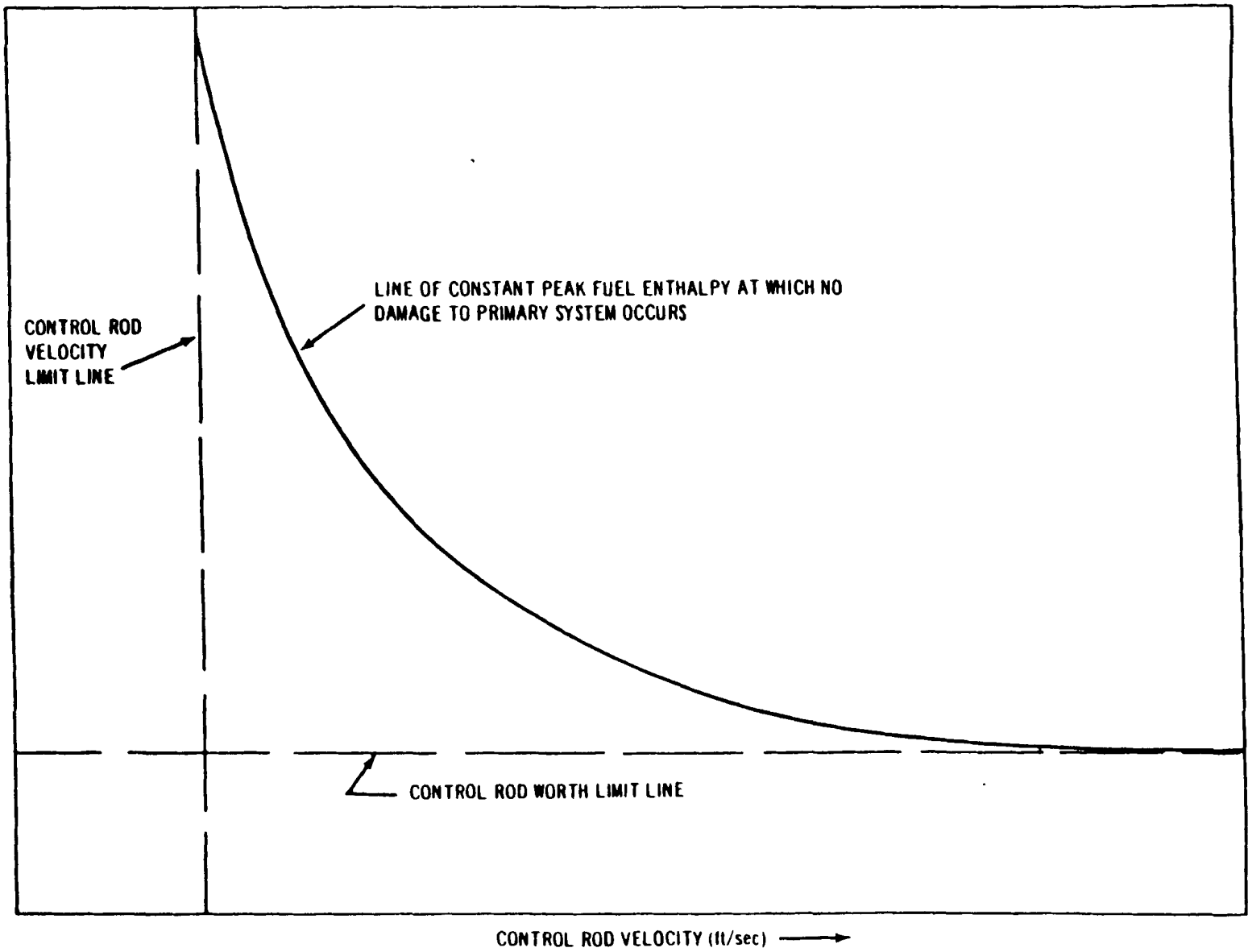
Update - 5

Oyster Creek

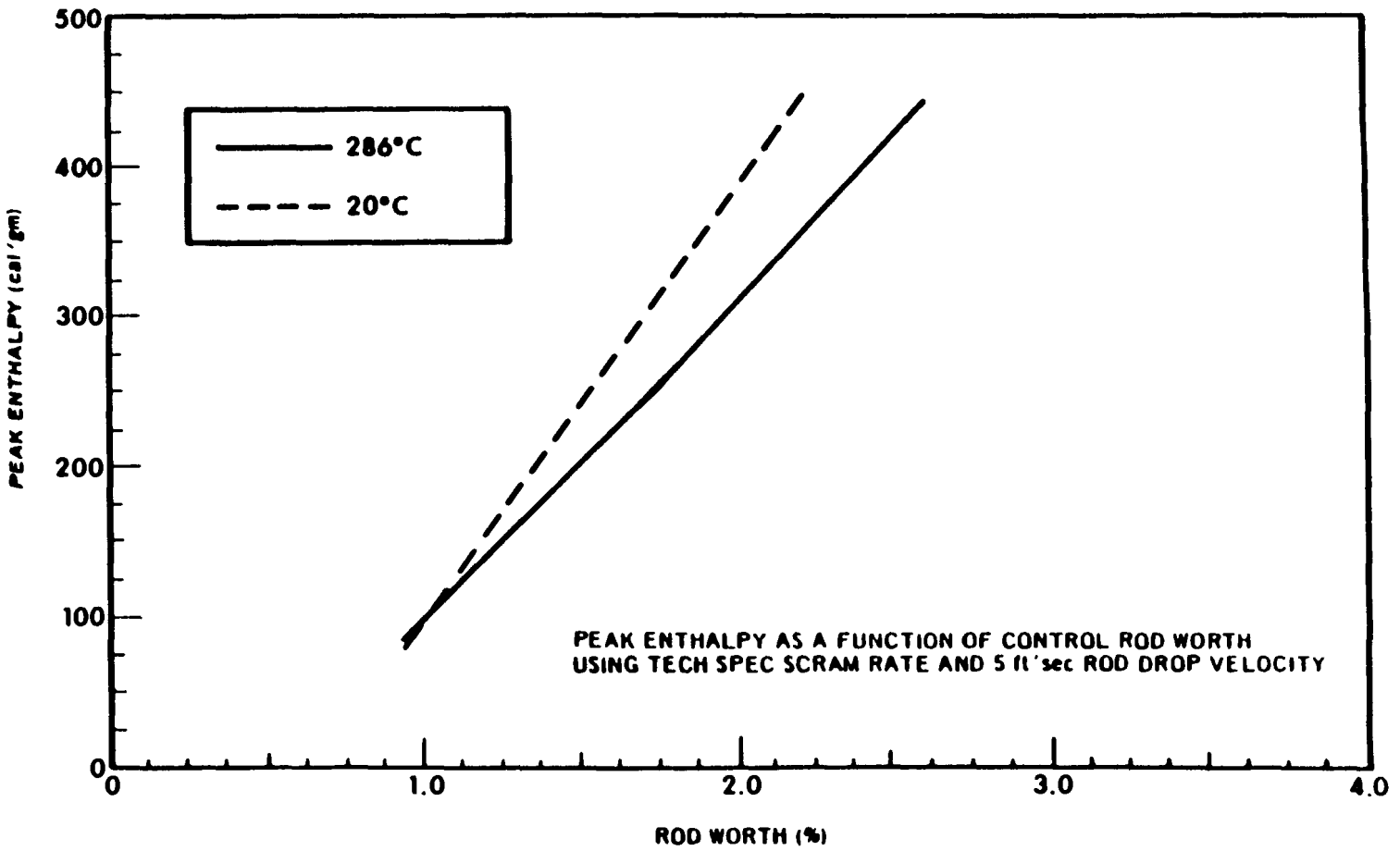
12/90

Xenon Reactivity Buildup After Shutdown and  
Burnout on Return to Full Power from Maximum  
Shutdown Xenon Buildup at EOL and BOL

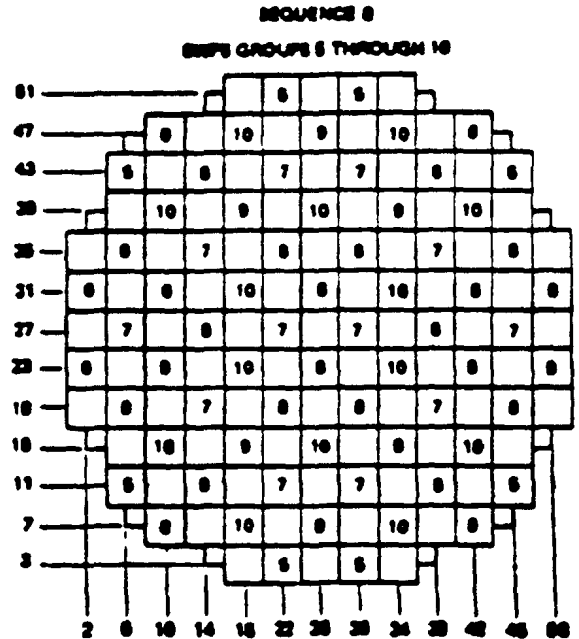
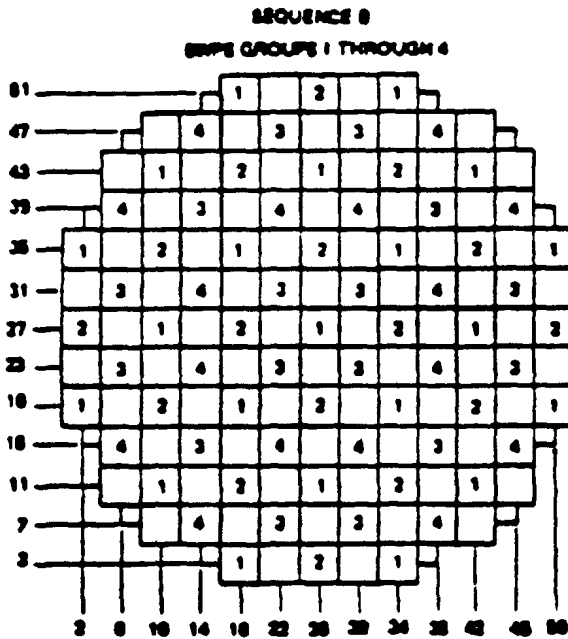
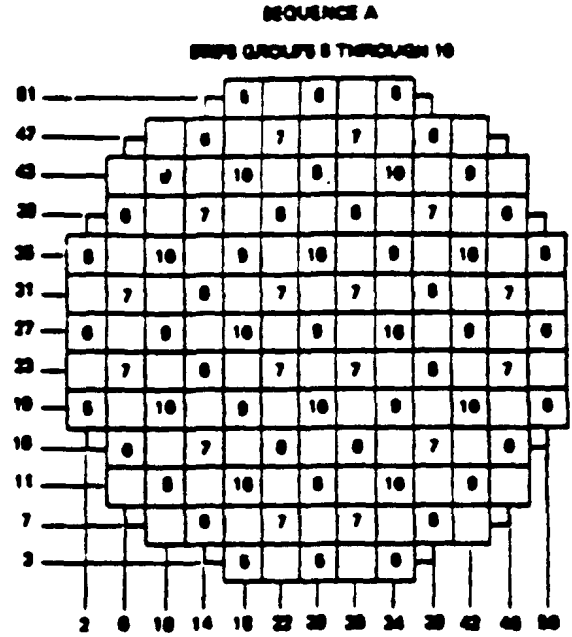
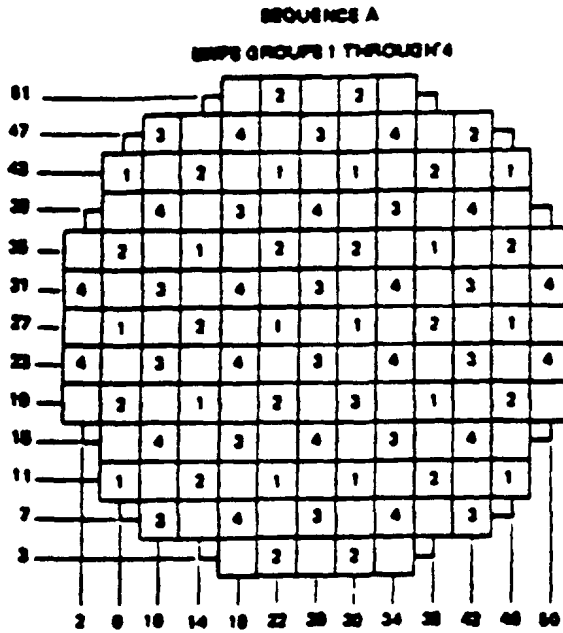
Fig. 4.3-10



**GE Nuclear**  
 Oyster Creek  
 Control Rod Drop Accident Determination  
 of Allowable Rod Worths Versus Rod  
 Drop Velocity  
 Update - 5  
 12/90  
 Fig. 4.3-11



**GP7 Nuclear**  
 Oyster Creek  
 Peak Fuel Enthalpy — Rod Drop  
 Accident at Hot Standby Condition  
 Update - 5  
 12/90  
 Fig. 4.3-12



**NOTE:**

The maximum rod worth is determined by the Rod Drop Analysis, and the RWM is programmed to assure the 280 cal/gm limit is met. These groups may be subdivided to assure compliance with this limit.

**GPU Nuclear**

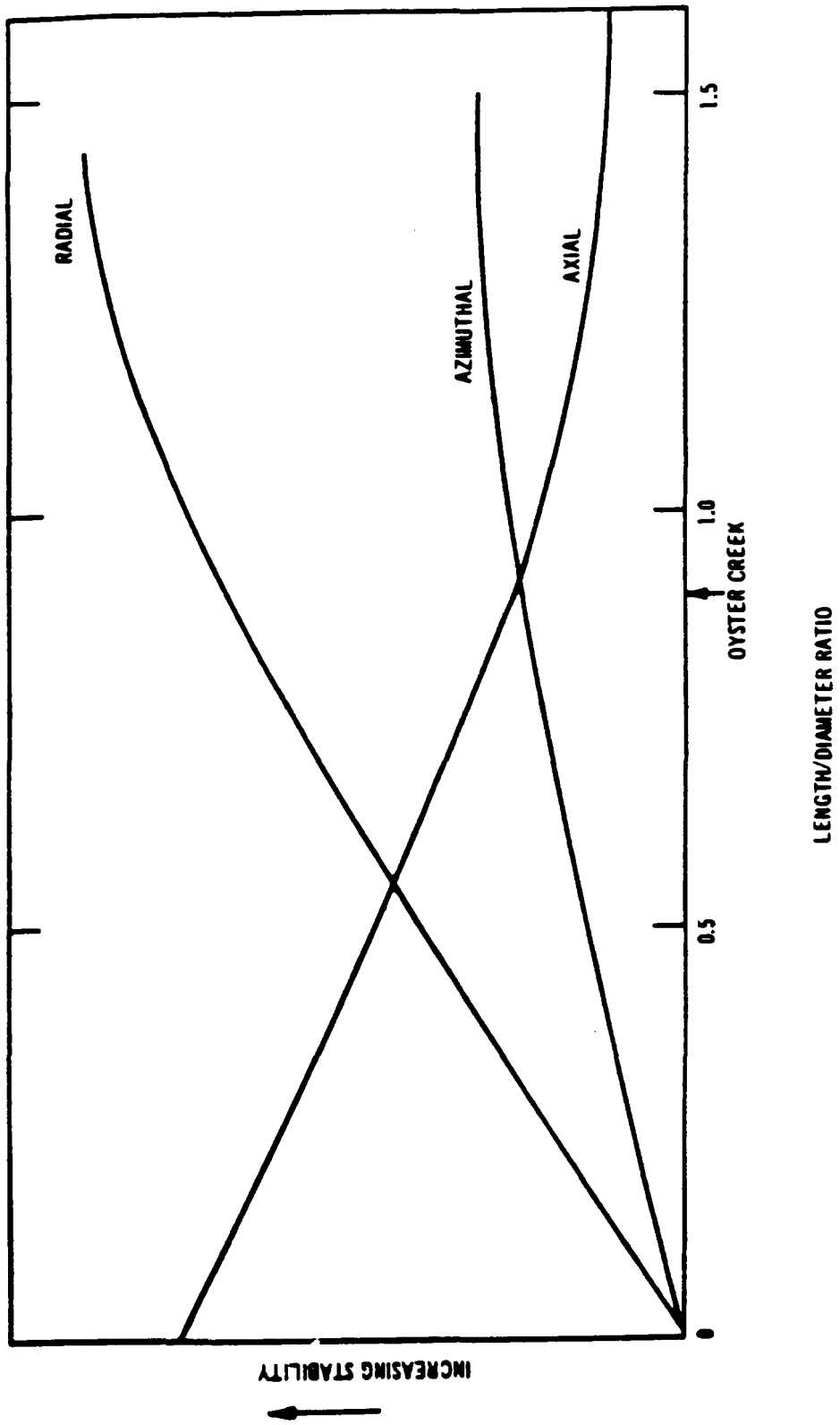
Oyster Creek

Control Rod Withdrawal Sequences

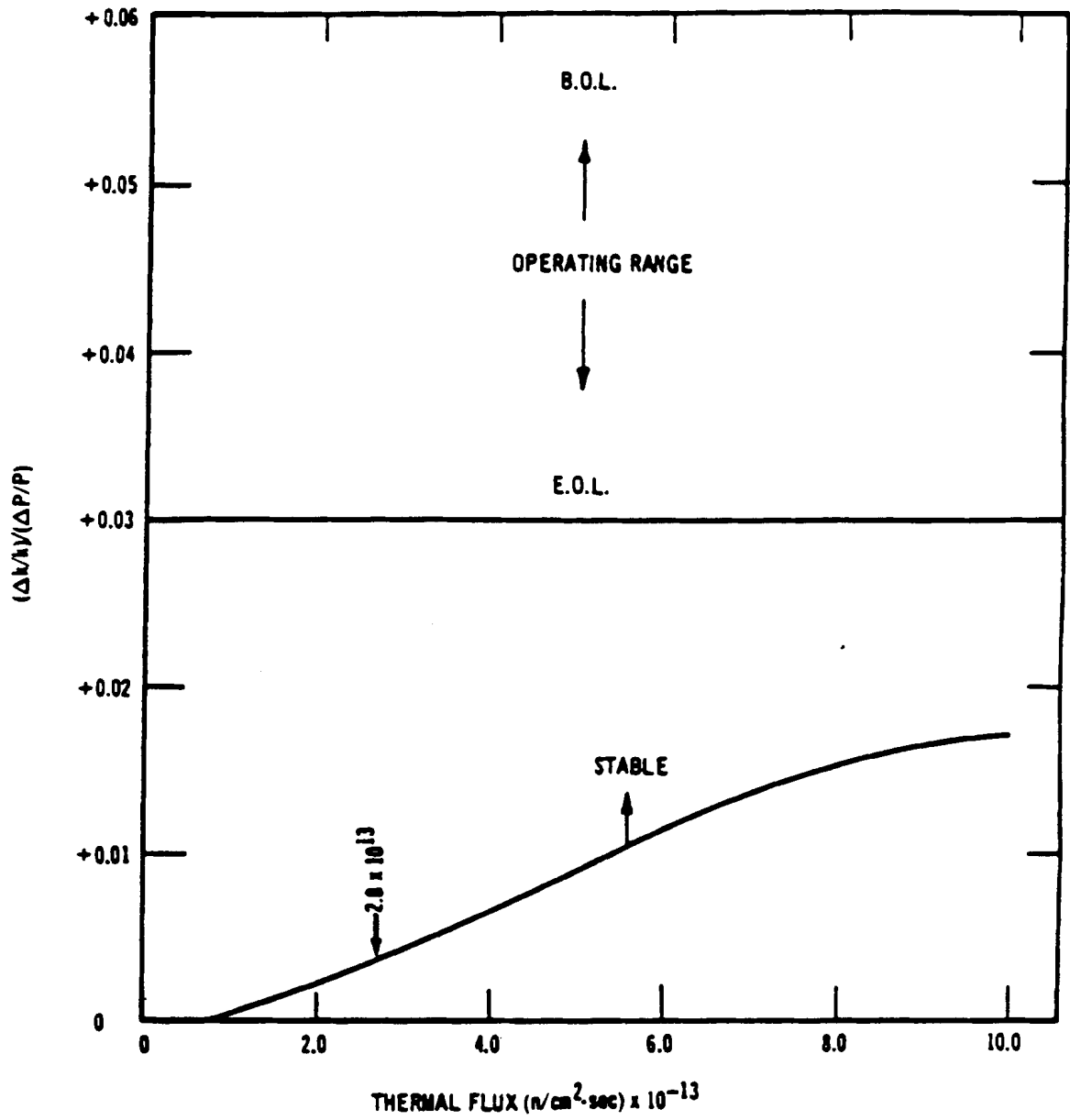
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Fig. 4.3-13



**GPU Nuclear** Update - 5  
**Oyster Creek** 12/90  
 Relative Xenon Stability with No Flux Flattening  
 Fig. 4.3-14



**GPU Nuclear**

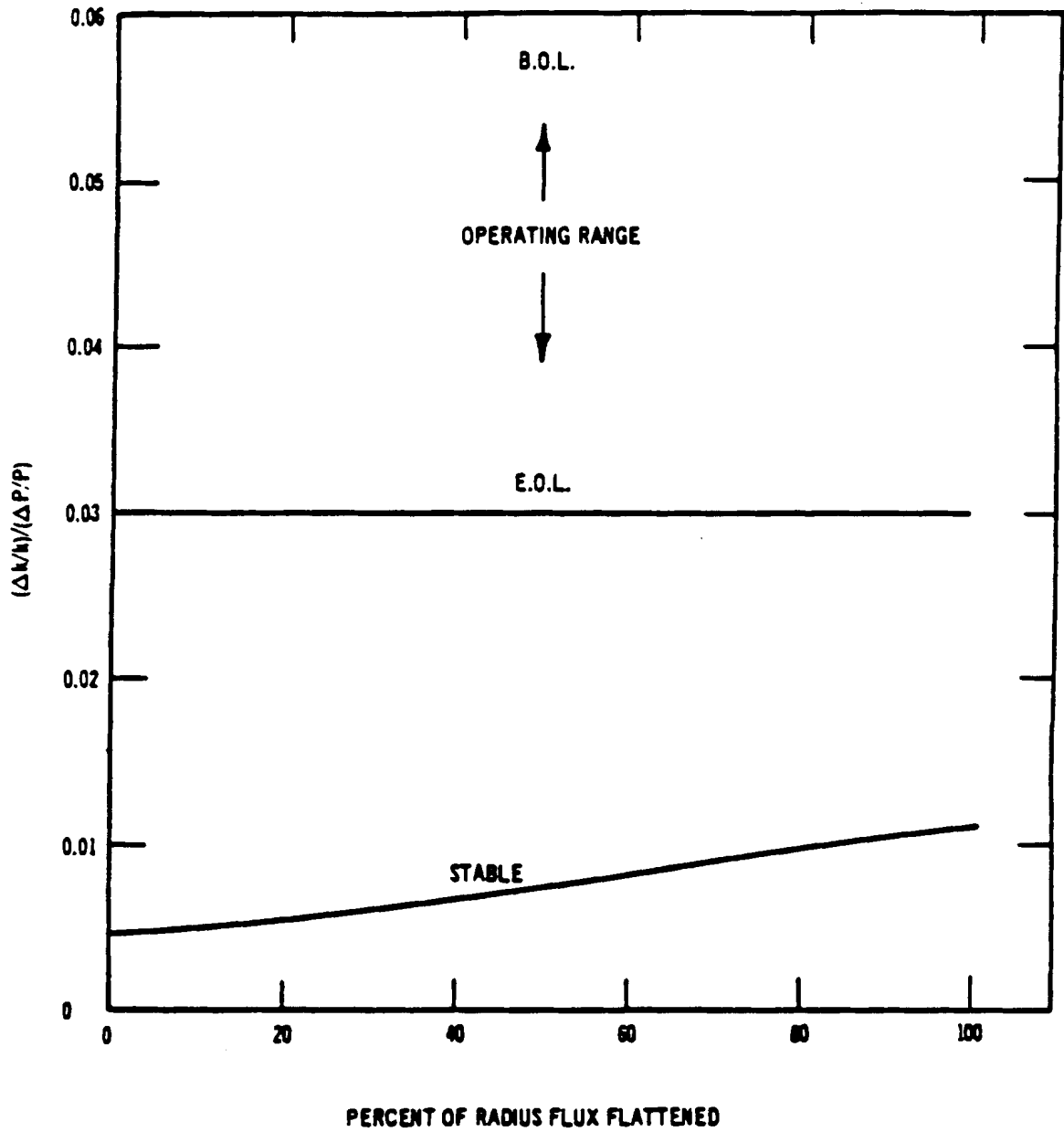
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Oyster Creek

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Effect of Power Density on Axial Xenon  
Stability Including Void Transport

Fig. 4.3-15



**GPU Nuclear**

**Oyster Creek**

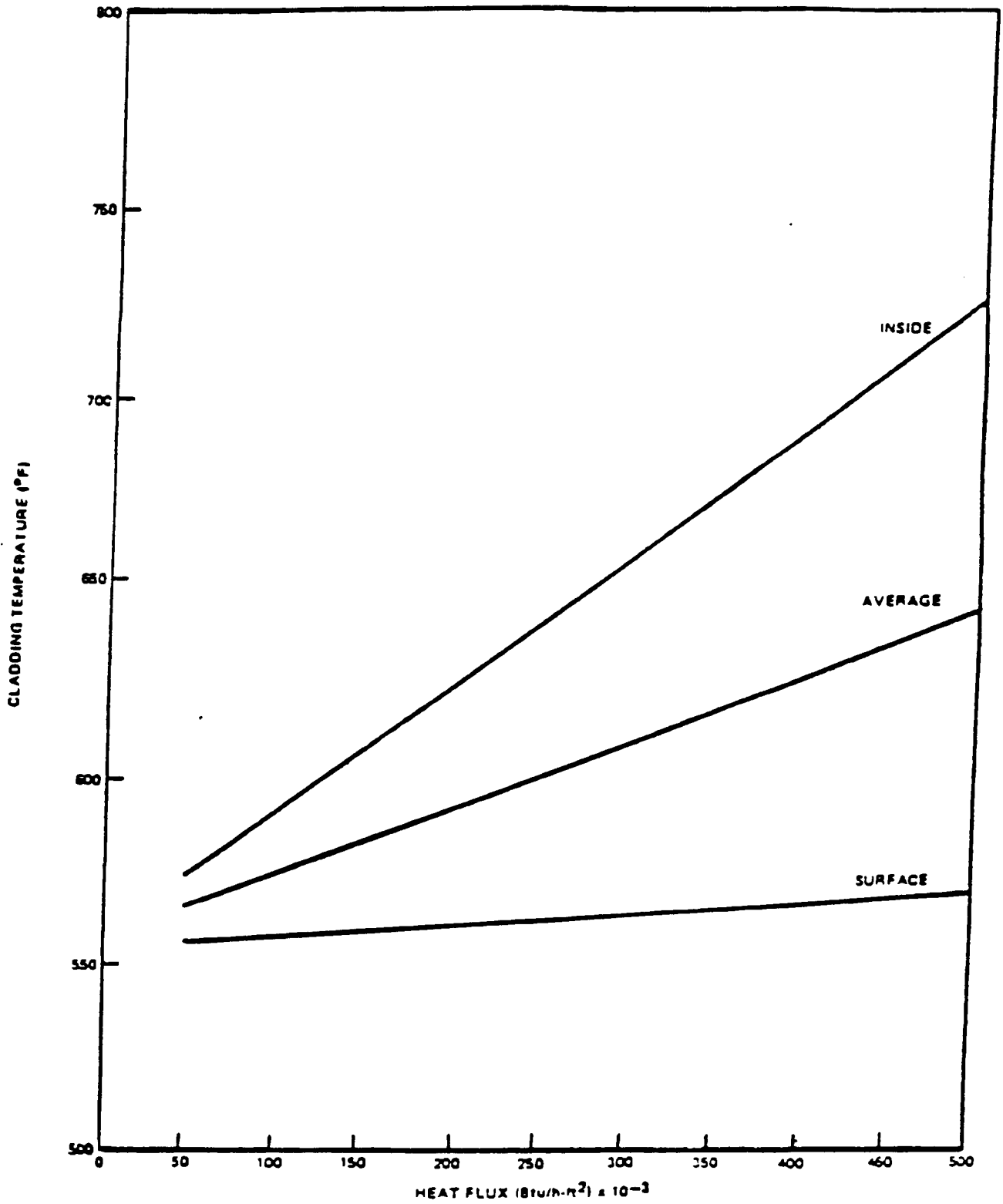
**Azimuthal Xenon Stability**

**Update - 5**

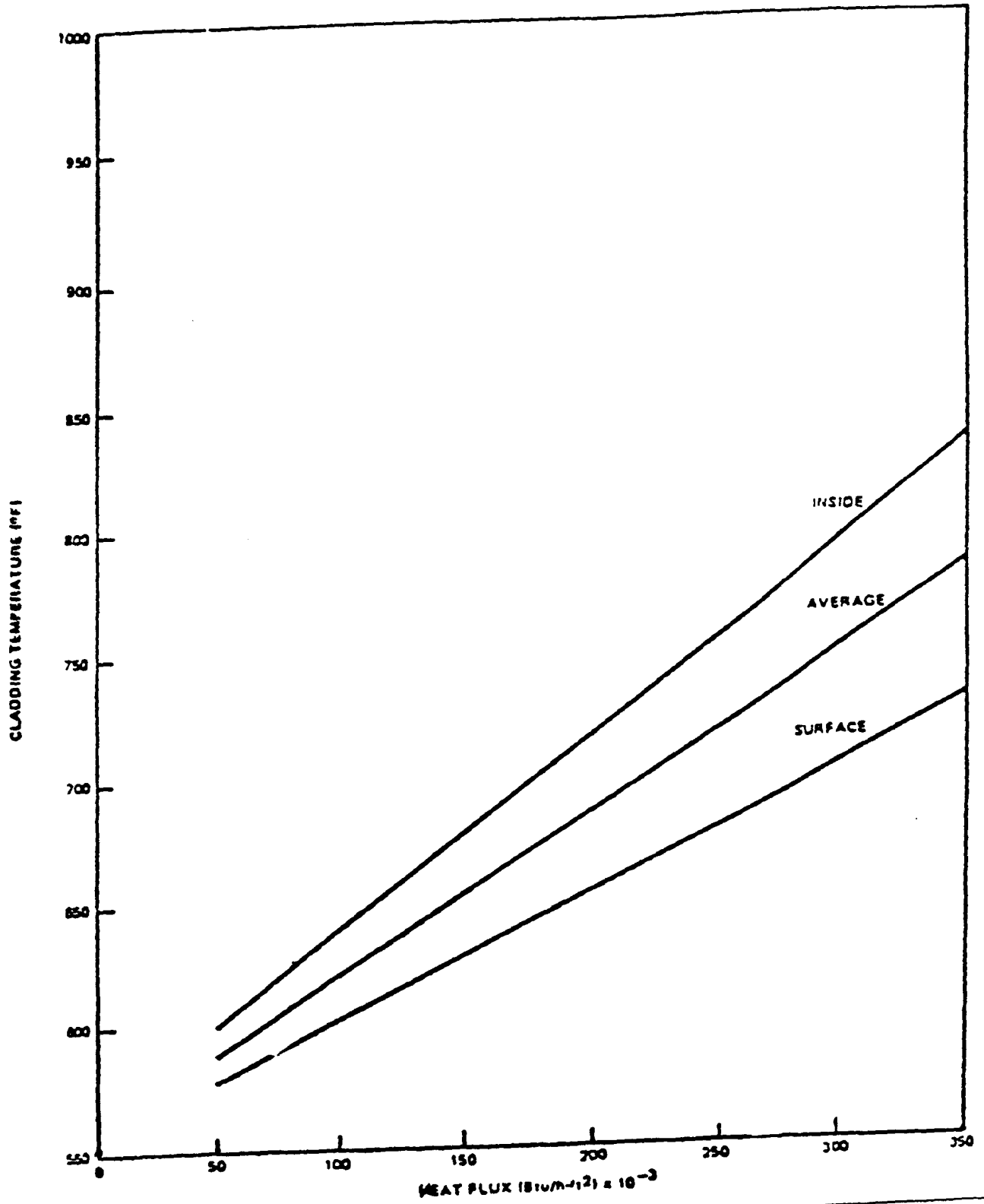
**12/90**

**Fig. 4.3-16**





**GPU Nuclear** Update - 5  
**Oyster Creek** 12/90  
 Cladding Temperature Versus Heat Flux  
 at Beginning of Life (BOL) P8x8R Fuel  
 Fig. 4.4-1



**GPU Nuclear**

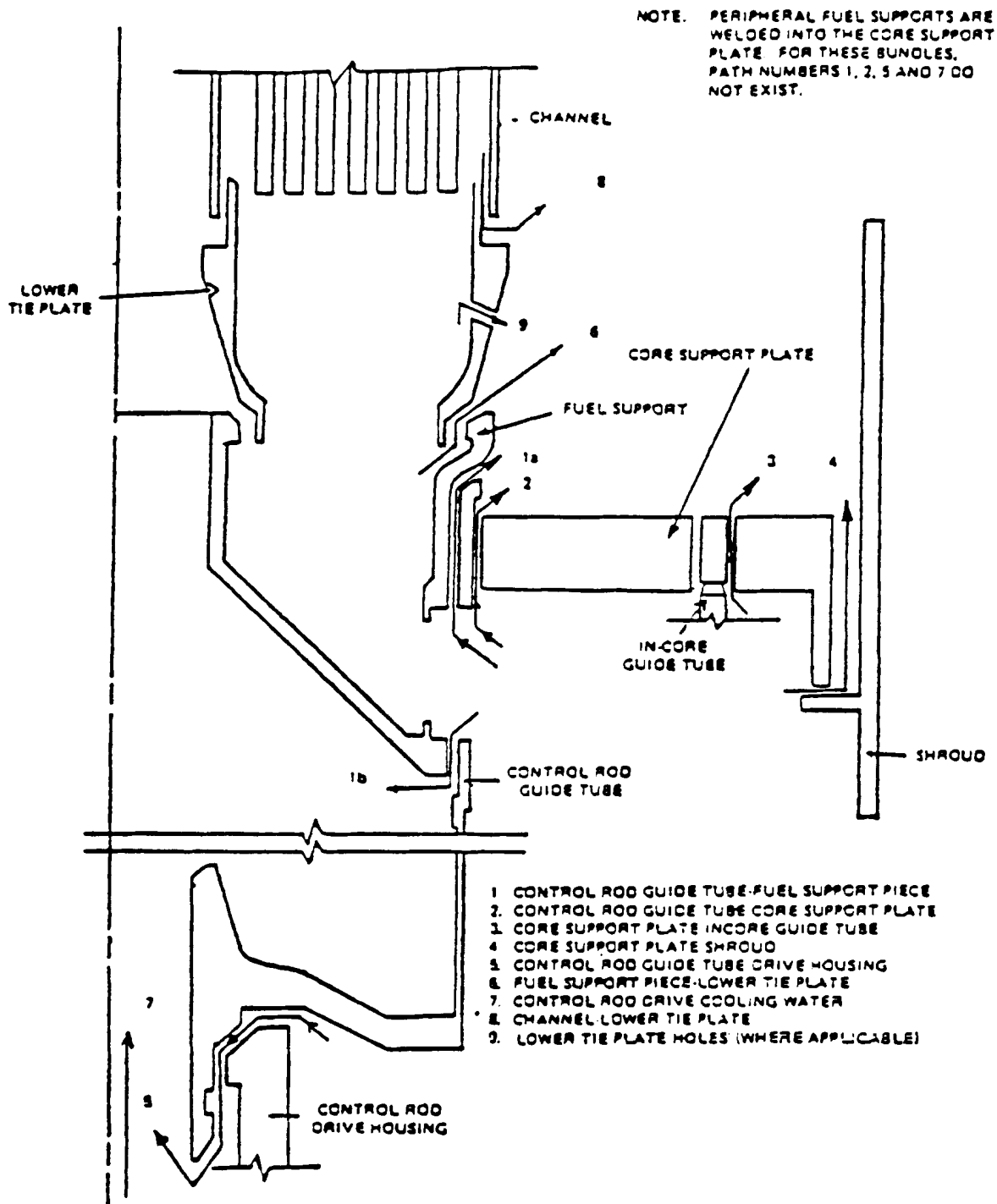
Oyster Creek

Cladding Temperature Versus Heat Flux at  
End of Life (EOL) PBxBR Fuel

Update - 5

12/90

Fig. 4.4-2



**GPU Nuclear**

Update - 5

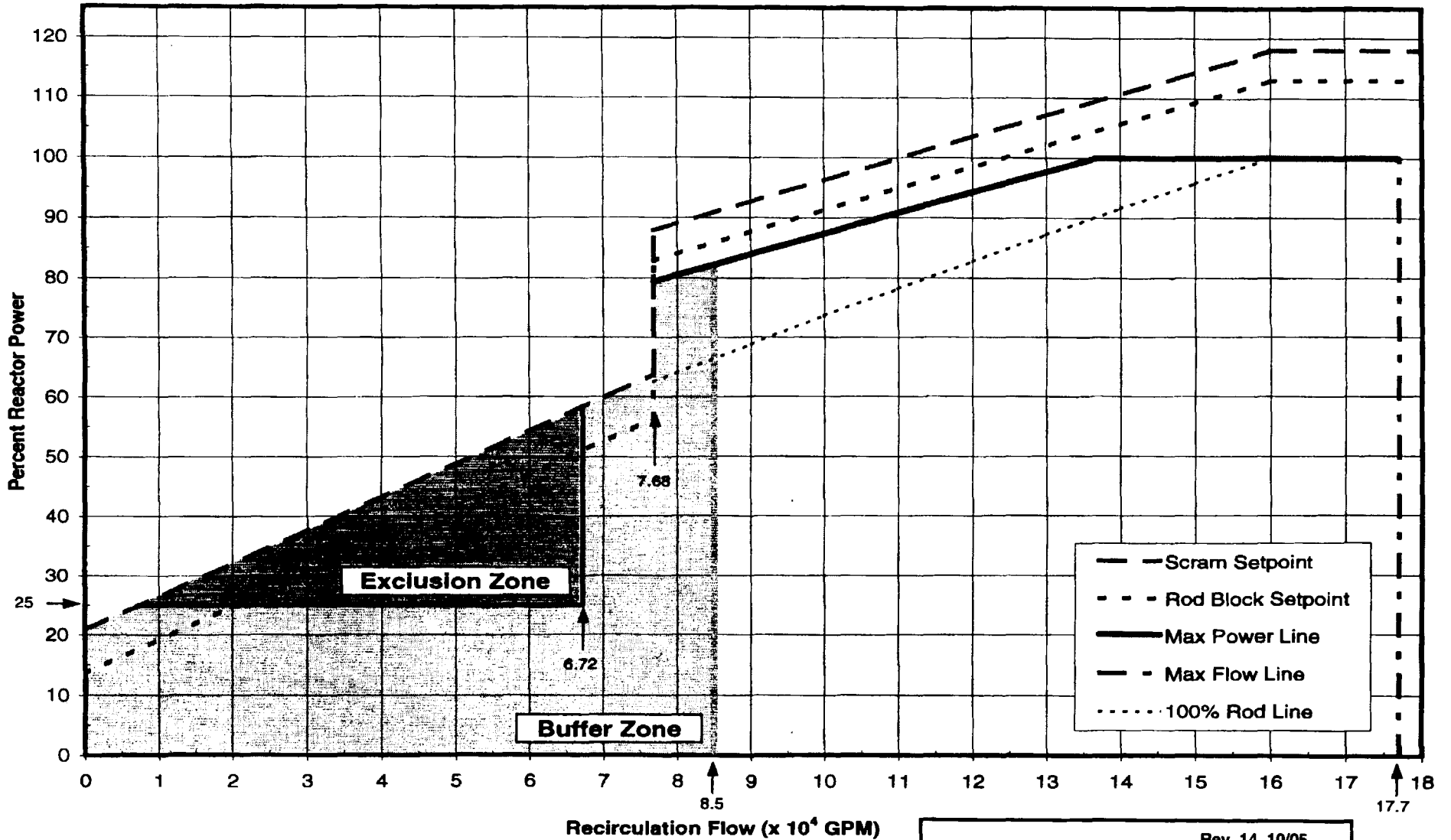
Oyster Creek

12/90

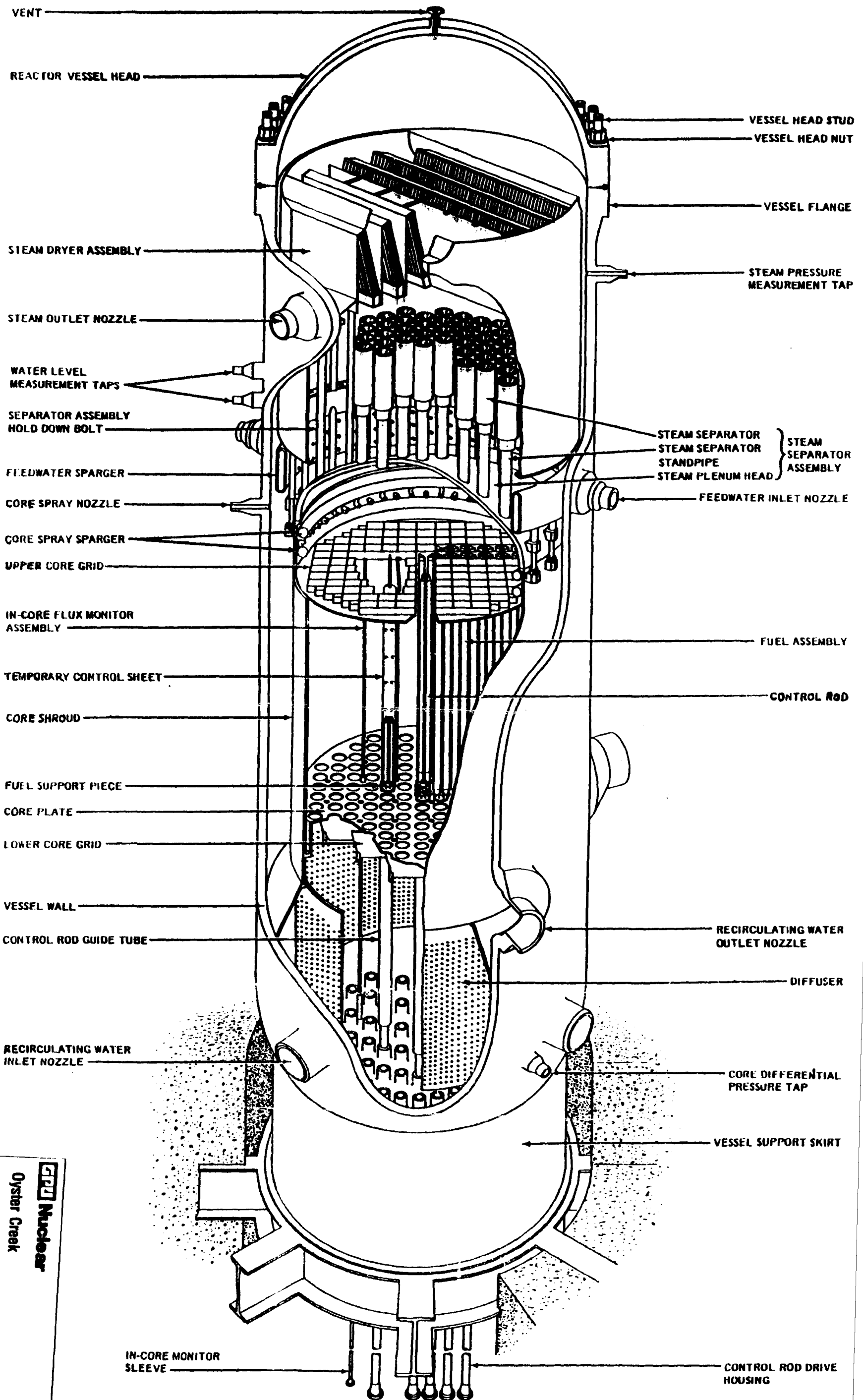
Schematic of Reactor Assembly Showing the Bypass Flow Paths

Fig. 4.4-3

### Oyster Creek Power Operations Curve



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OYSTER CREEK NUCLEAR GENERATING STATION  
**Reactor Power-Flow Relationship**  
FIGURE 4.4-4



**GE Nuclear**

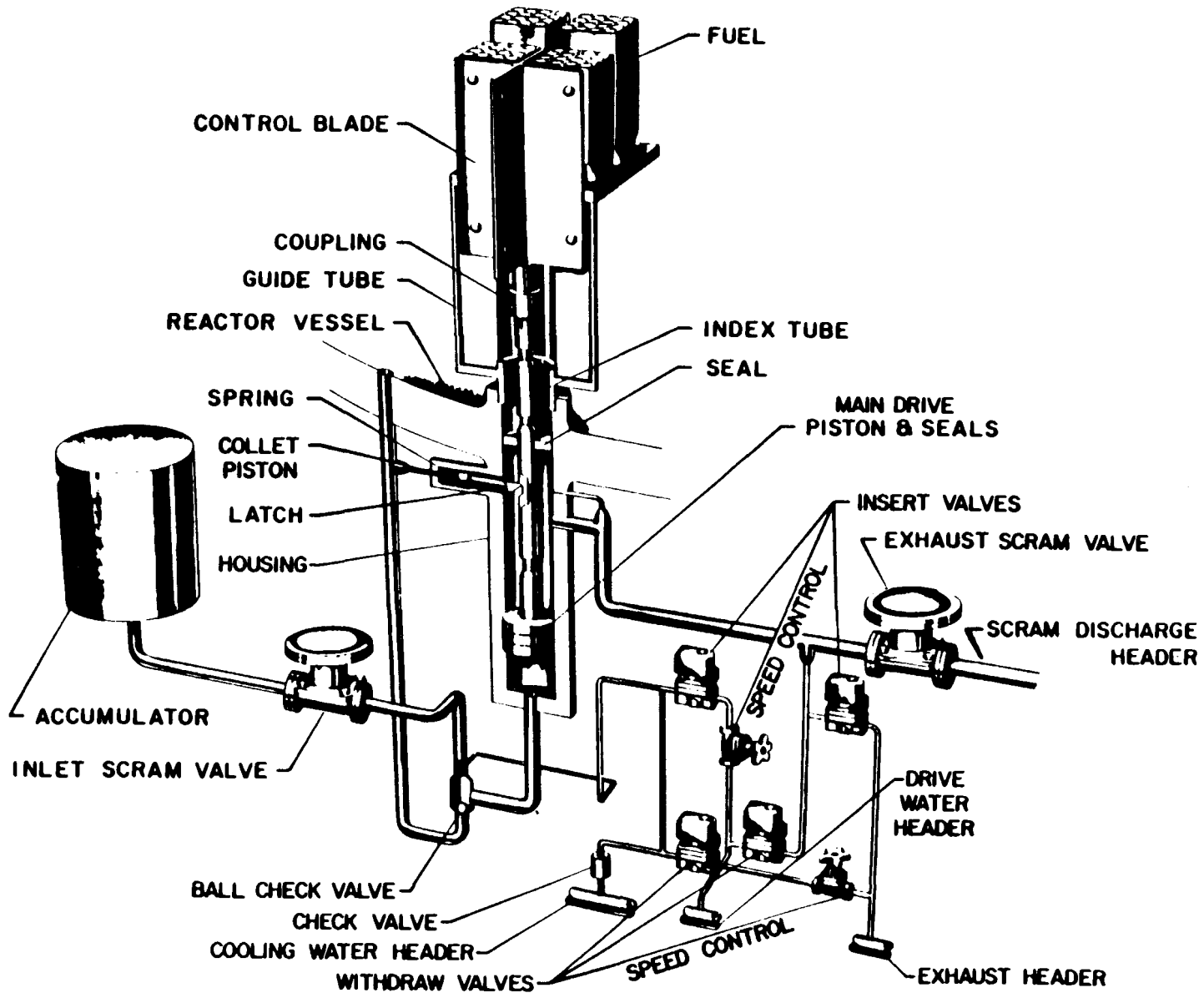
Oyster Creek

Reactor Vessel Isometric

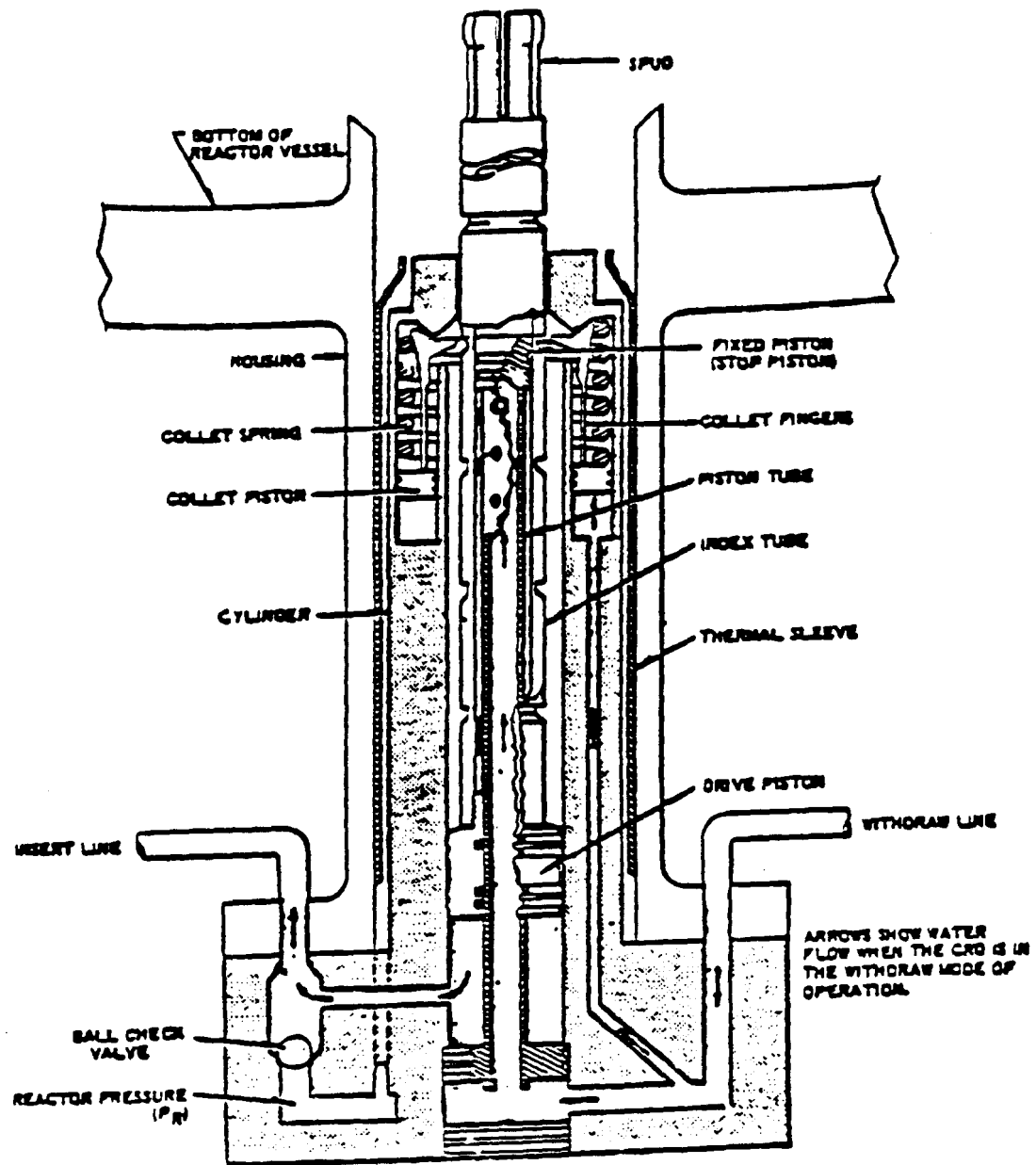
Update - 5

12/90

Fig. 4.5-1



**GE Nuclear**  
 Oyster Creek  
 Control Rod Drive System — Simplified  
 Component Illustration  
 Update - 5  
 12/90  
 Fig. 4.6-1



**GPU Nuclear**

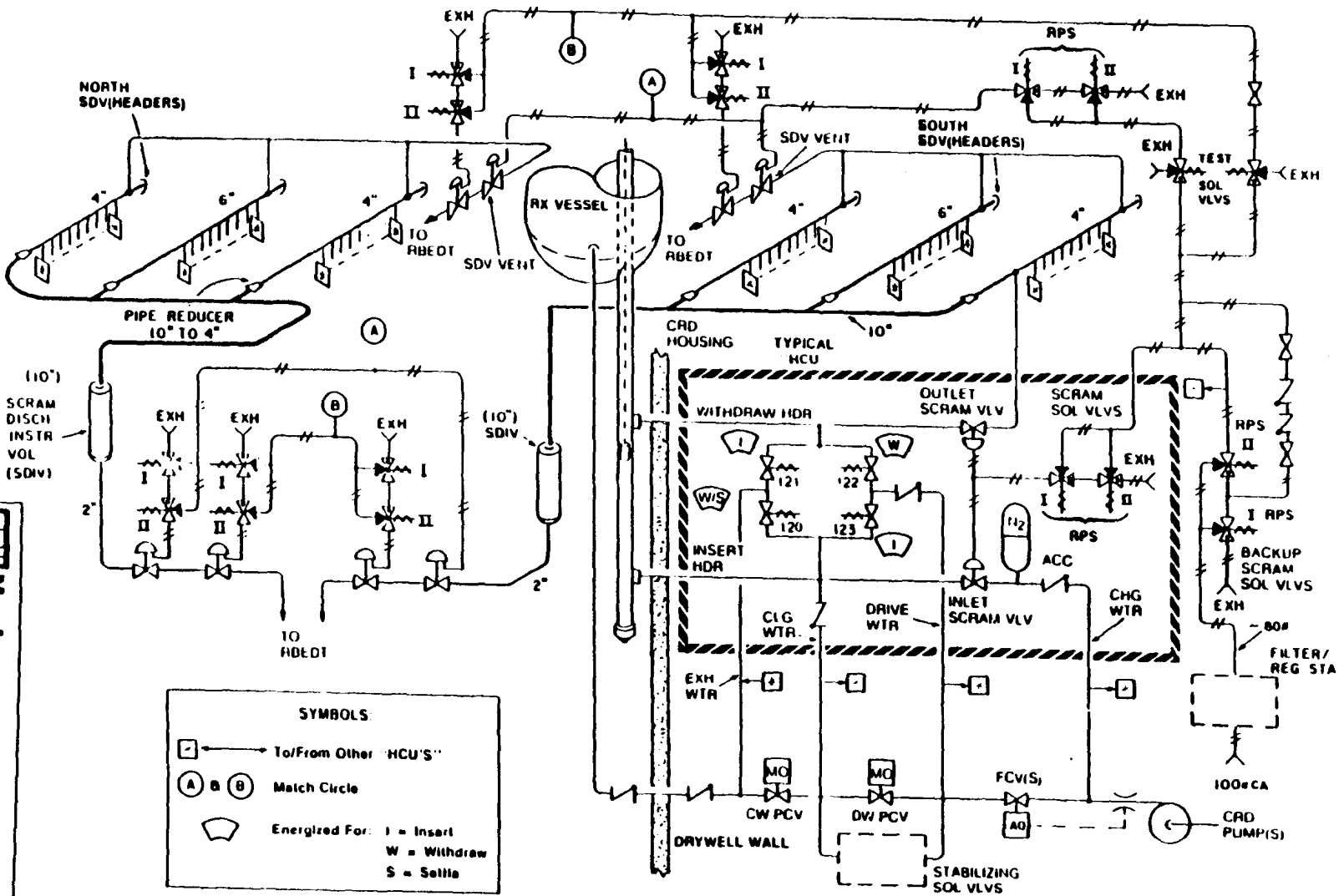
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Oyster Creek

12/90

Control Rod Drive — Cutaway

Fig. 4.6-2



**SYMBOLS**

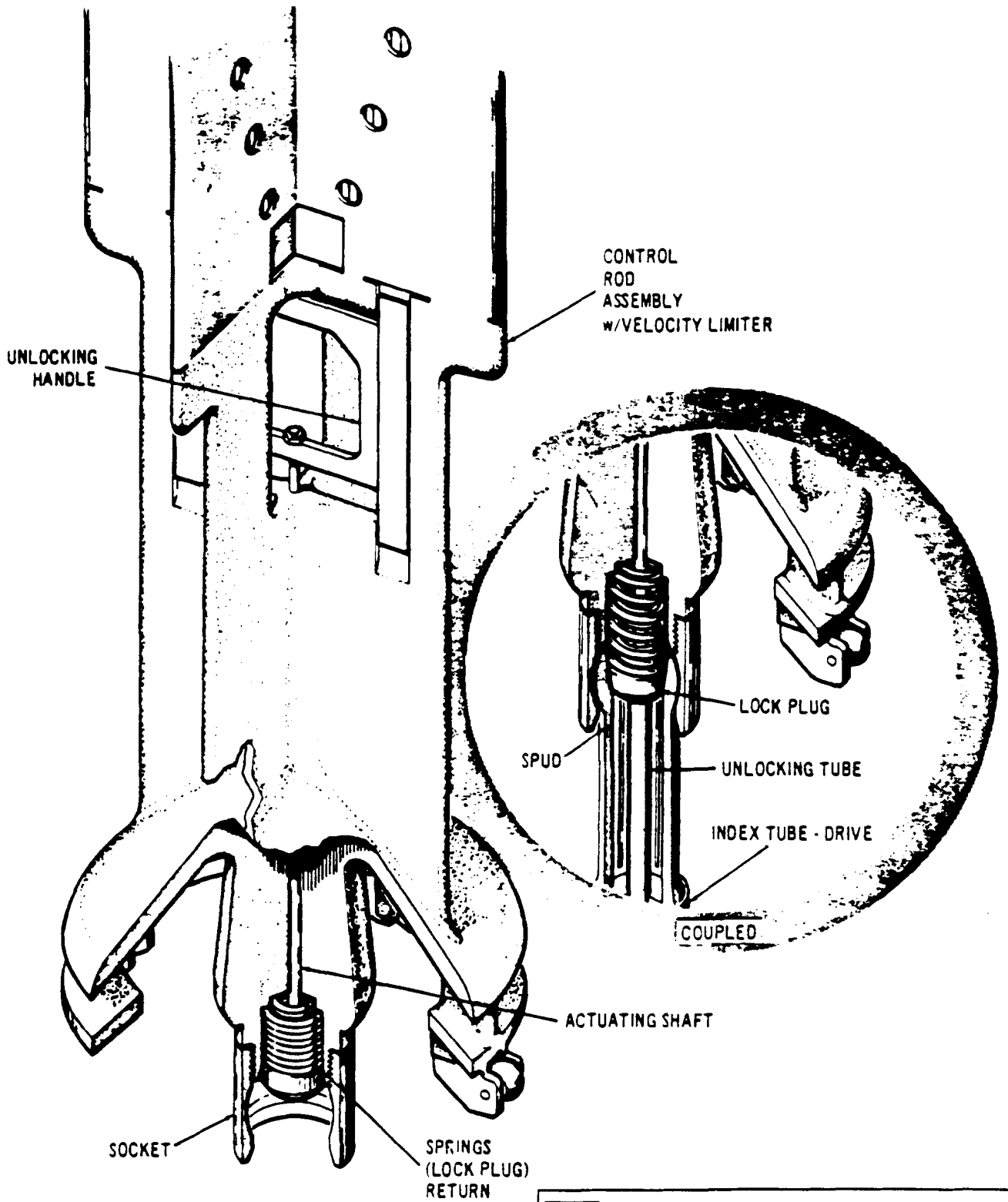
	To/From Other "HCU'S"
	Match Circle
	Energized For: I = Insert W = Withdraw S = Settle

**GP Nuclear**  
**Oyster Creek**  
 Oyster Creek Control Rod Drive Hydraulic Control Units, Scram Discharge Volumes and Scram Air Valving — Simplified Sketch

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 12/90

Fig. 4.6-3





**GPU Nuclear**

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Oyster Creek

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Control-Rod-To-Drive Coupling — Isometric

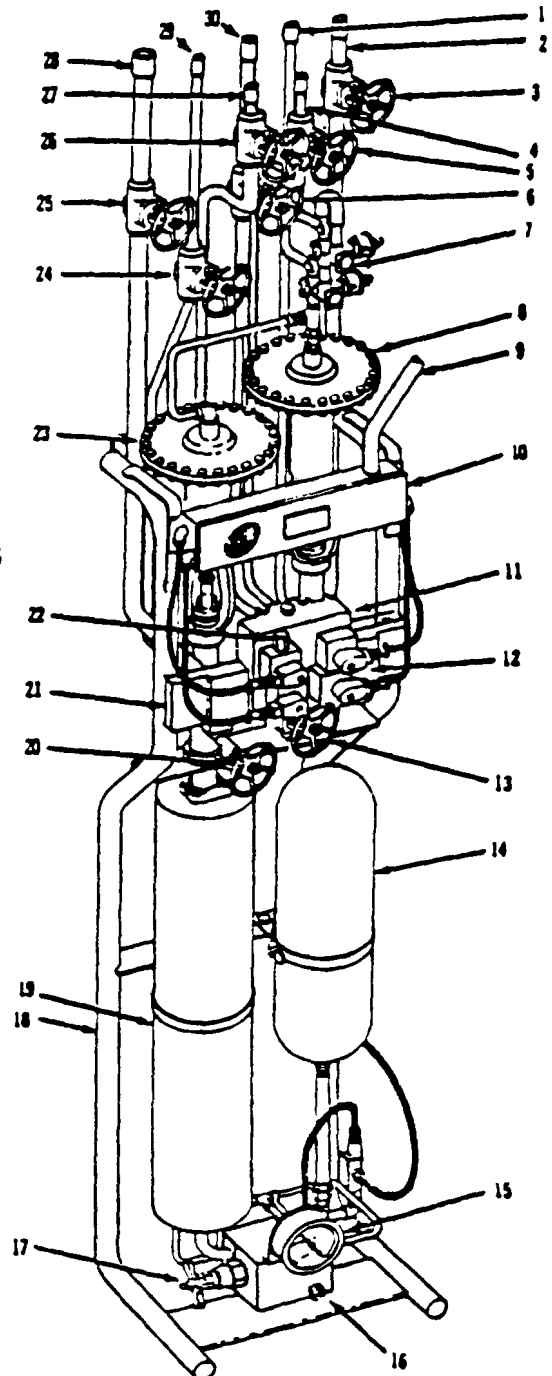
Fig. 4.6-4

**OCNGS UFSAR**

Figure 4.6-5

Deleted

1. ACCUMULATOR CHARGING WATER RISER
2. DRIVE - WITHDRAW RISER
3. ISOLATION VALVE — DRIVE-WITHDRAW RISER (EP 102)
4. DRIVE WATER RISER
5. ISOLATION VALVE — DRIVE WATER RISER (EP 103)
6. ISOLATION VALVE — SCRAM DISCHARGE RISER (EP 108 OR EP 112)
7. SCRAM PILOT VALVE ASSEMBLY (EP 117, 118)
8. OUTLET SCRAM VALVE AND ACTUATOR (EP 127)
9. TYPICAL ELECTRICAL CONNECTION
10. WIRING TROUGH ASSEMBLY
11. MANIFOLD (PART OF PIPING ASSEMBLY)
12. DIRECTIONAL CONTROL VALVES (4 EACH) (EP 120, 121, 122, 123)
13. ISOLATION VALVE — ACCUMULATOR CHARGING WATER RISER (EP 106)
14. SCRAM ACCUMULATOR — NITROGEN CYLINDER (EP 128)
15. ACCUMULATOR GAS PRESSURE INDICATOR (EP 131)
16. ACCUMULATOR INSTRUMENTATION ASSEMBLY
17. NEEDLE VALVE — ACCUMULATOR GAS CHARGING (EP 111)
18. FRAME
19. SCRAM ACCUMULATOR — WATER CYLINDER (EP 125)
20. NEEDLE VALVE — ACCUMULATOR WATER CYLINDER DRAIN (EP 107)
21. COOLING CHECK VALVE (IN MANIFOLD)
22. SPEED CONTROL VALVES (2 EACH)
23. INLET SCRAM VALVE AND ACTUATOR (EP 126)
24. ISOLATION VALVE — COOLING WATER RISER (EP 104)
25. ISOLATION VALVE — DRIVE-INSERT RISER (EP 101)
26. ISOLATION VALVE — EXHAUST WATER RISER (EP 105)
27. EXHAUST WATER RISER
28. DRIVE-INSERT RISER
29. COOLING WATER RISER
30. SCRAM DISCHARGE RISER



**GPU Nuclear**

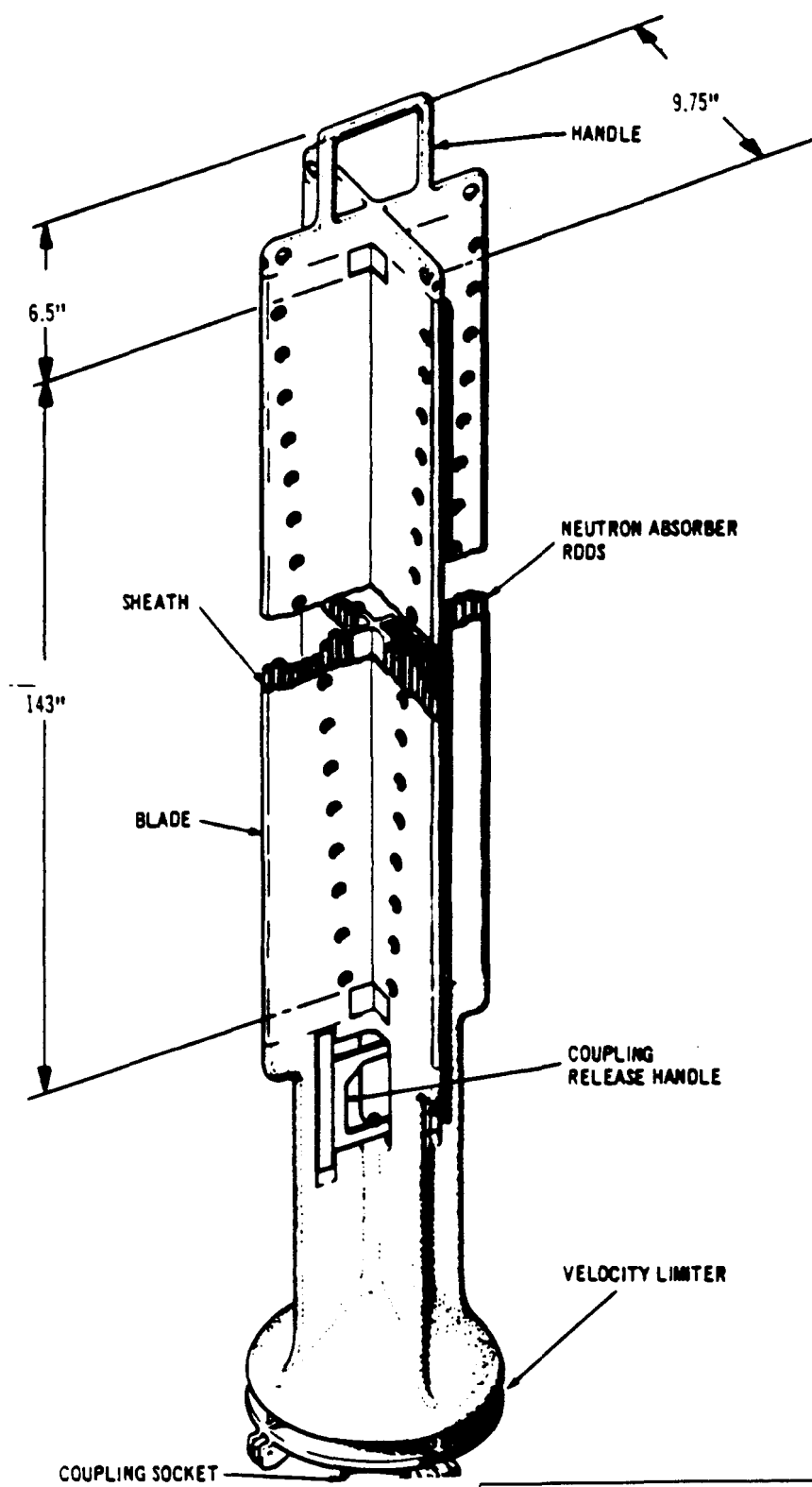
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Oyster Creek

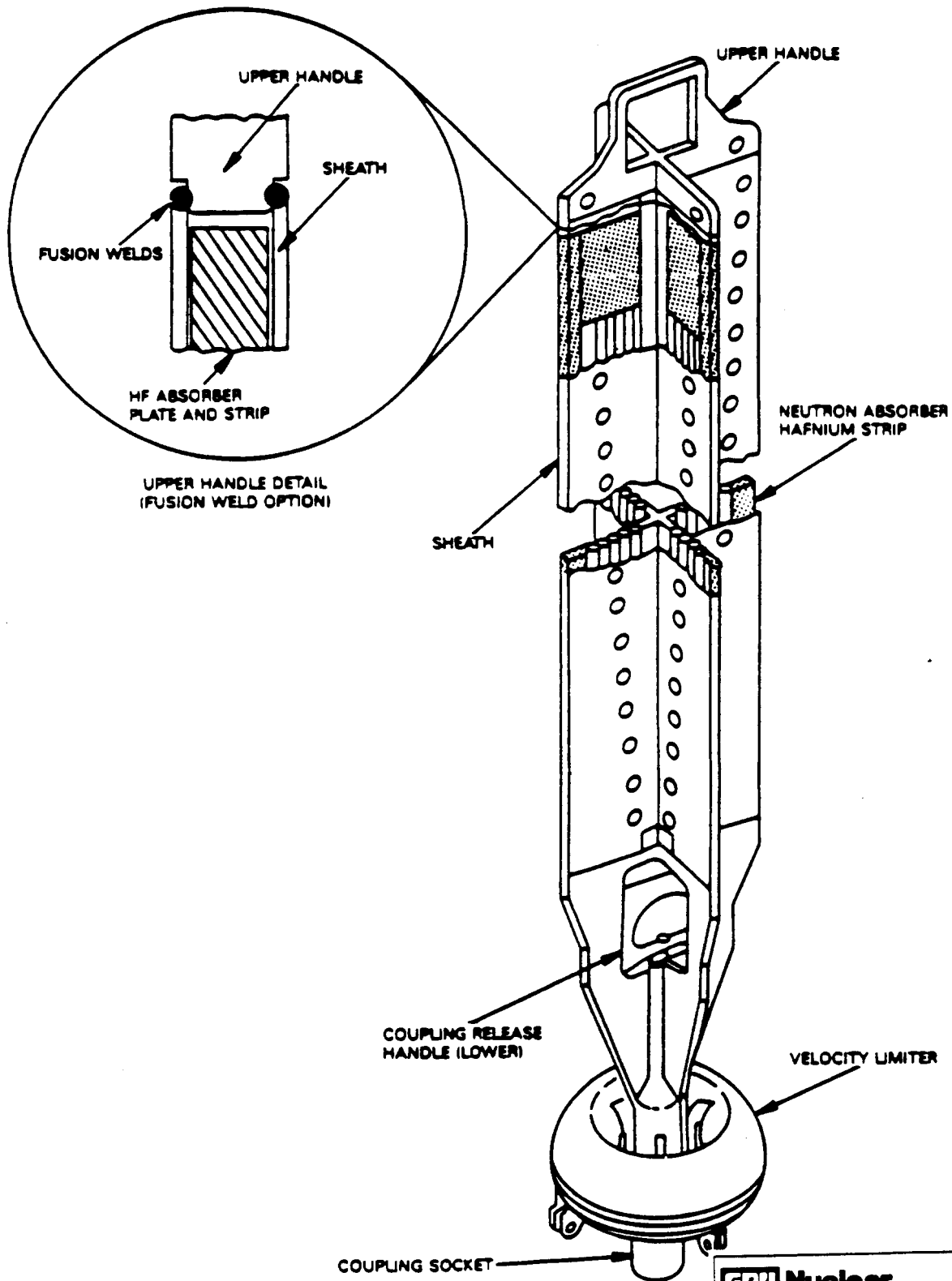
12/90

Control Rod Drive Hydraulic Control  
Unit— Isometric

Fig. 4.6-6



<b>GPU Nuclear</b>	Update - 5
Oyster Creek	12/90
Control Rod — Isometric	
	Fig. 4.6-7



**GPU Nuclear**

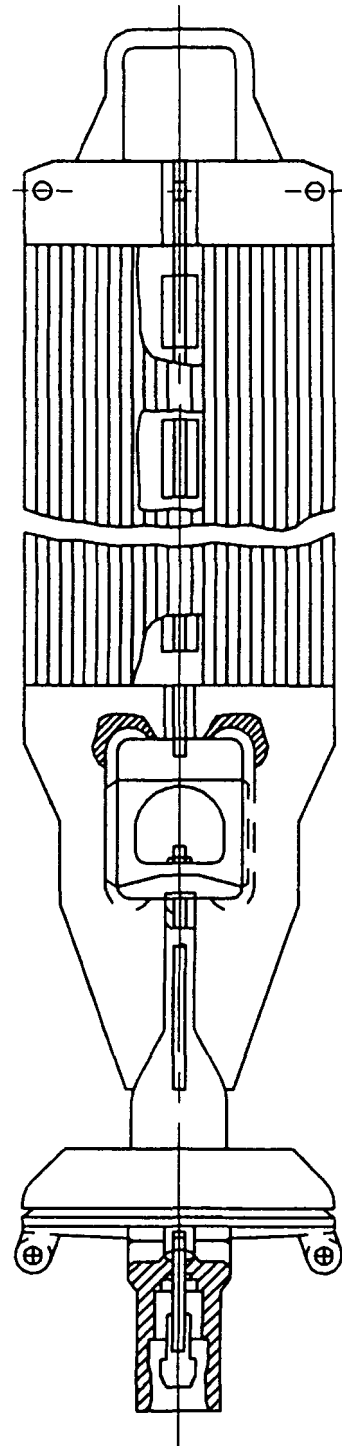
**Oyster Creek**

**Control Rod -- Isometric**

**Update - 5**

**12/90**

**Fig. 4.6-8**



**GPU Nuclear**

Update-8

Oyster Creek

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Illustration of Typical Marathon  
Control Rod (BWR/2-4 D-Lattice)

S3B,SKM,00,0570,001-.0001

Fig.4.6-9