



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

ARIZONA PUBLIC SERVICE COMPANY, ET AL.

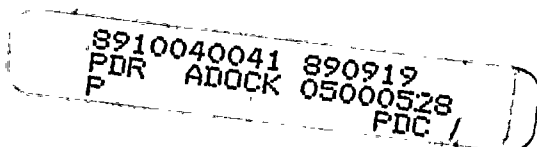
DOCKET NO. STN 50-528

PALO VERDE NUCLEAR GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 44  
License No. NPF-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment, dated January 12, 1989 by the Arizona Public Service Company (APS) on behalf of itself and the Salt River Project Agricultural Improvement and Power District, El Paso Electric Company, Southern California Edison Company, Public Service Company of New Mexico, Los Angeles Department of Water and Power, and Southern California Public Power Authority (licensees), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of Act, and the regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the enclosure to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-41 is hereby amended to read as follows:



THE UNIVERSITY OF CHICAGO  
DEPARTMENT OF CHEMISTRY  
1155 EAST 58TH STREET  
CHICAGO, ILLINOIS 60637

Dear Sirs:

I am pleased to inform you that your application for admission to the Ph.D. program in Chemistry for the fall semester has been accepted. You will be admitted to the program on a full-time basis.

You should report to the Department of Chemistry at the University of Chicago on August 28, 1967. Your advisor, Professor [Name], will meet with you to discuss your research project. You will be assigned a teaching assistant position in the Department of Chemistry.

Your financial aid package for the first year includes a tuition waiver, a stipend, and a health insurance plan. The total amount of aid is \$4,500 per year. You will receive this aid in the form of a check payable to the University of Chicago.

If you have any questions, please contact the Department of Chemistry at the University of Chicago. We look forward to your arrival in Chicago.


Sincerely,  
[Name]

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 44, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. APS shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
George W. Knighton, Director  
Project Directorate V  
Division of Reactor Projects III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Enclosure:  
Changes to the Technical  
Specifications

Date of Issuance: September 19, 1989

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1	2	3	4	5	6	7	8	9	10
10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99
100	101	102	103	104	105	106	107	108	109

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ENCLOSURE TO LICENSE AMENDMENT

AMENDMENT NO. 44 TO FACILITY OPERATING LICENSE NO. NPF-41

DOCKET NO. STN 50-528

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change. Also to be replaced are the following overleaf pages to the amended pages.

<u>Amendment Pages</u>	<u>Overleaf Pages</u>
3/4 1-2a	--
3/4 1-17	--
3/4 1-18	--
3/4 1-20	3/4 1-19
3/4 1-31	--
3/4 1-32	--
3/4 2-4a	--
3/4 2-7	--
3/4 2-7a	--



The following information was obtained from the records of the  
 Department of the Interior, Bureau of Land Management, on  
 the subject of the above-captioned tract.

The tract is situated in the County of [ ] State of [ ]  
 and is bounded as follows:

On the north by [ ]  
 On the east by [ ]  
 On the south by [ ]  
 On the west by [ ]

The area of the tract is [ ] acres, more or less.  
 The tract is owned by [ ]  
 and is subject to the following conditions:

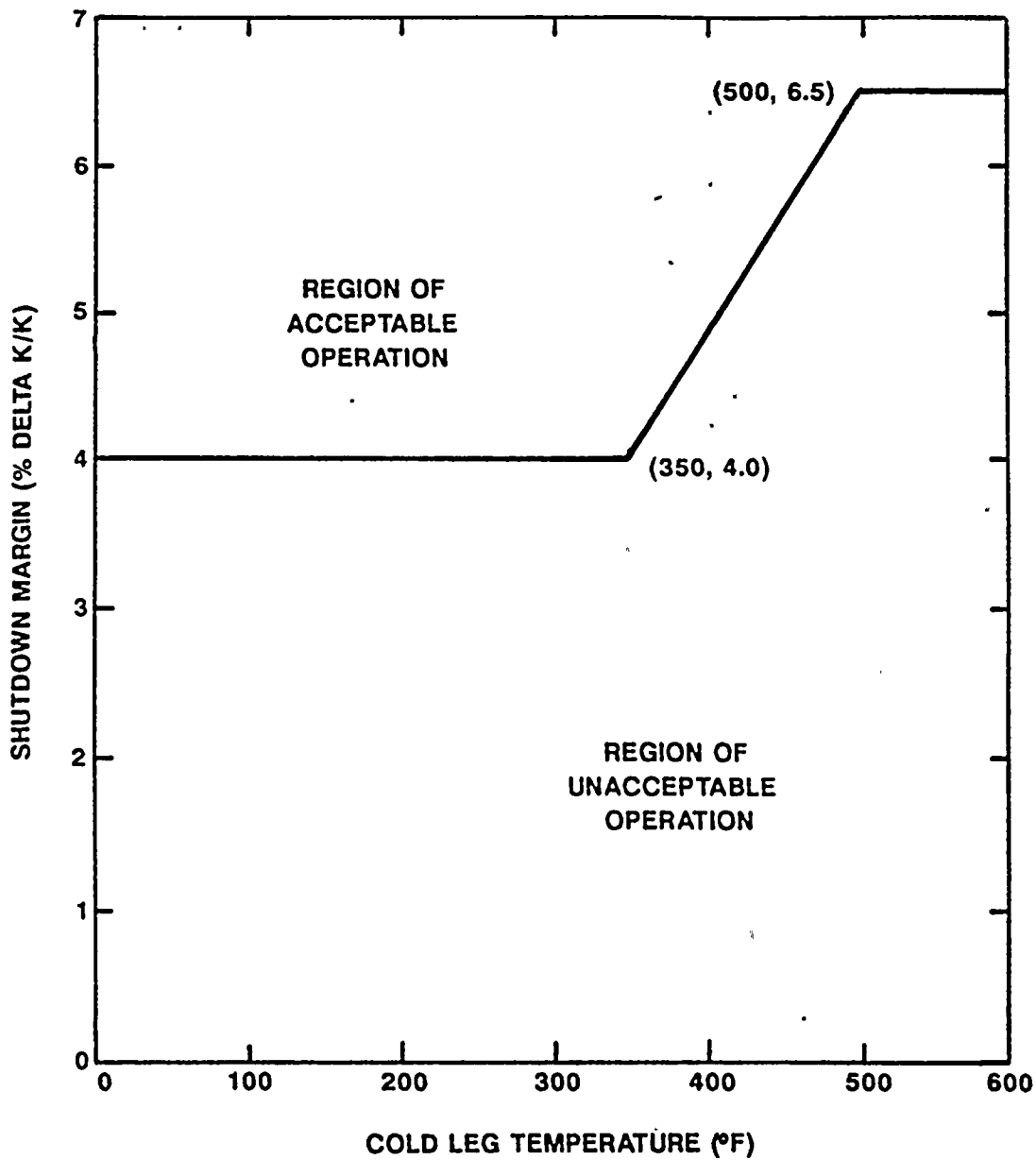


FIGURE 3.1-1A  
SHUTDOWN MARGIN vs. COLD LEG TEMPERATURE

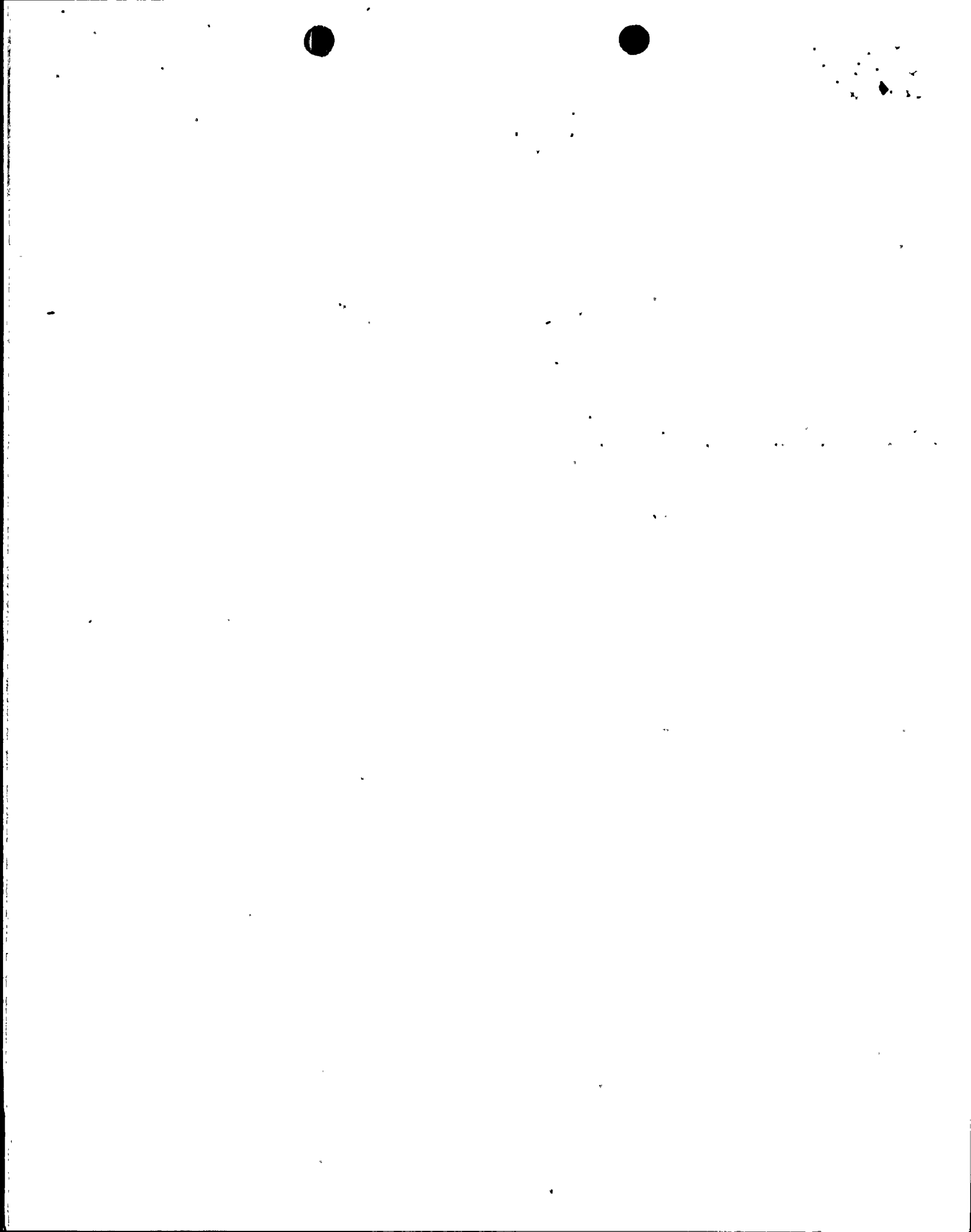




TABLE 3.1-2

REQUIRED MONITORING FREQUENCIES FOR BACKUP BORON DILUTION  
DETECTION AS A FUNCTION OF OPERATING CHARGING PUMPS AND PLANT  
OPERATIONAL MODES FOR  $0.98 > K_{eff} > 0.97$

OPERATIONAL MODE	<u>Number of Operating Charging Pumps</u>			
	0	1	2	3
3	12 hours	2.0 hours	0.5 hours	ONA
4 not on SCS	12 hours	2.5 hours	1 hour	0.5 hours
5 not on SCS	8 hours	2.5 hours	1 hour	0.5 hours
4 & 5 on SCS	8 hours	0.5 hours	ONA	ONA

Notes: SCS = Shutdown Cooling System  
ONA = Operation not allowed

TABLE 3.1-3

REQUIRED MONITORING FREQUENCIES FOR BACKUP BORON DILUTION  
DETECTION AS A FUNCTION OF OPERATING CHARGING PUMPS  
AND PLANT OPERATIONAL MODES FOR  $0.97 > K_{eff} > 0.96$

OPERATIONAL MODE	<u>Number of Operating Charging Pumps</u>			
	0	1	2	3
3	12 hours	3.5 hours	1.5 hours	0.5 hours
4 not on SCS	12 hours	3.5 hours	1.5 hours	1 hour
5 not on SCS	8 hours	3.5 hours	1.5 hours	1 hour
4 & 5 on SCS	8 hours	1 hour	0.5 hours	ONA

Notes: SCS = Shutdown Cooling System  
ONA = Operation not allowed

TABLE 3.1-4

REQUIRED MONITORING FREQUENCIES FOR BACKUP BORON DILUTION  
DETECTION AS A FUNCTION OF OPERATING CHARGING PUMPS  
AND PLANT OPERATIONAL MODES FOR  $0.96 > K_{eff} > 0.95$

OPERATIONAL MODE	Number of Operating Charging Pumps			
	0	1	2	3
3	12 hours	5 hours	2 hours	1 hour
4 not on SCS	12 hours	5 hours	2 hours	1 hour
5 not on SCS	8 hours	5 hours	2 hours	1 hour
4 & 5 on SCS	8 hours	2 hours	0.5 hours	ONA

Notes: SCS = Shutdown Cooling System  
 ONA = Operation not allowed

TABLE 3.1-5

REQUIRED MONITORING FREQUENCIES FOR BACKUP BORON DILUTION  
DETECTION AS A FUNCTION OF OPERATING CHARGING PUMPS  
AND PLANT OPERATIONAL MODES FOR  $K_{eff} < 0.95$

OPERATIONAL MODE	<u>Number of Operating Charging Pumps</u>			
	0	1	2	3
3	12 hours	6 hours	2.5 hours	1.5 hours
4 not on SCS	12 hours	6 hours	3 hours	1.5 hours
5 not on SCS	8 hours	6 hours	3 hours	1.5 hours
4 & 5 on SCS	8 hours	2 hours	1 hour	0.5 hours
6	24 hours	8 hours	4 hours	2 hours

Note: SCS = Shutdown Cooling System

FIGURE 3.1-3  
CEA INSERTION LIMITS vs. THERMAL POWER  
(COLSS IN SERVICE)

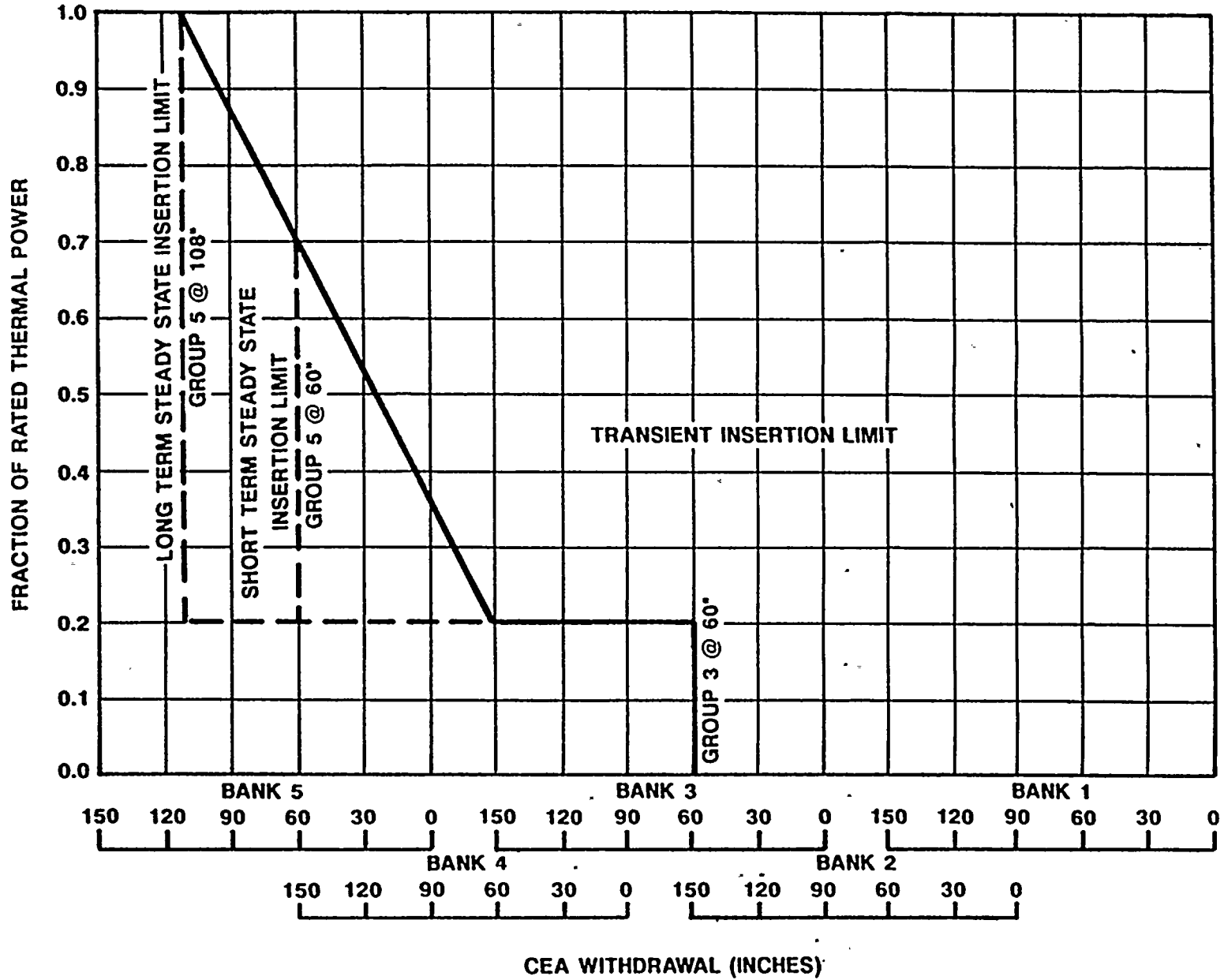
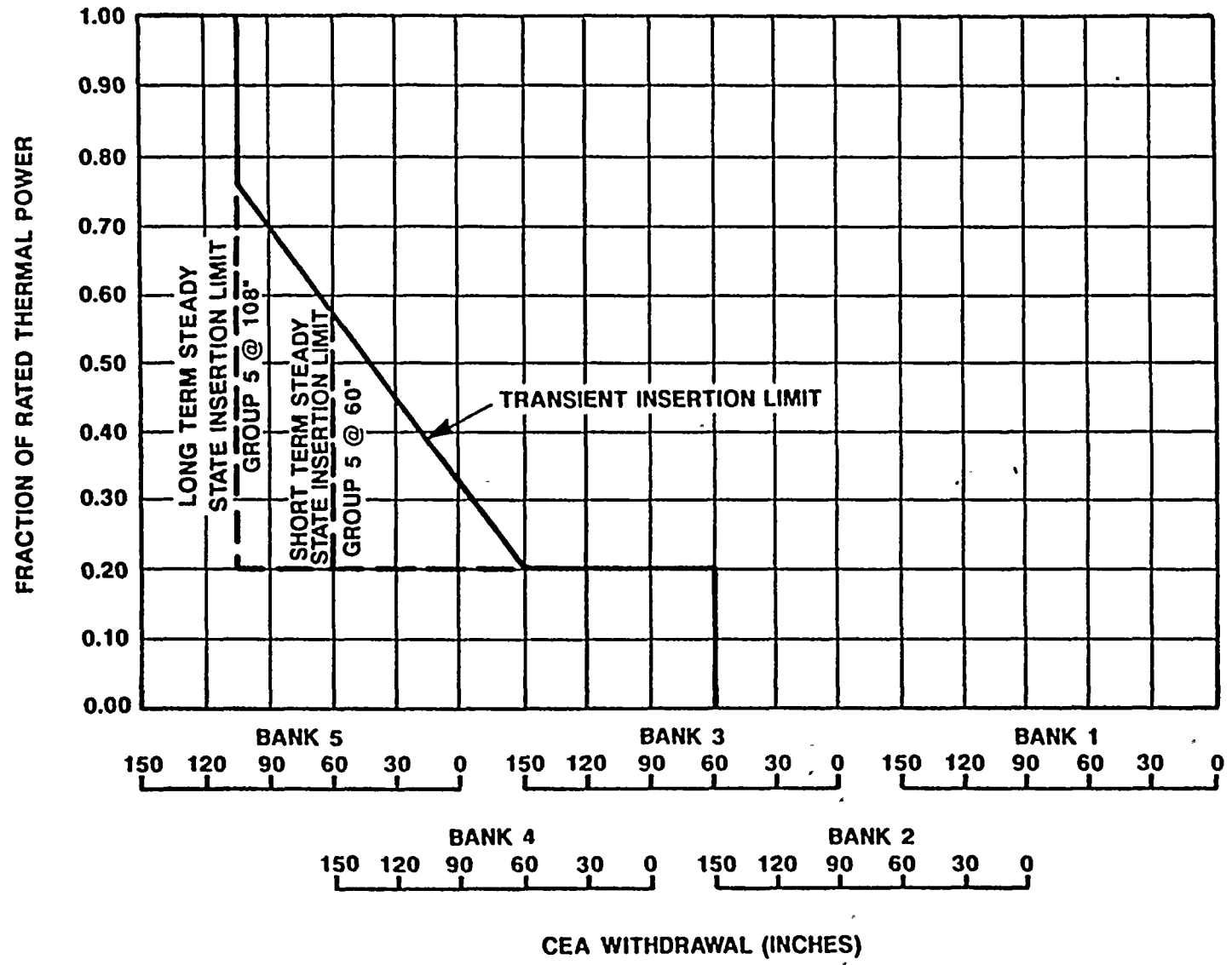


FIGURE 3.1-4  
CEA INSERTION LIMITS vs. THERMAL POWER  
(COLSS OUT OF SERVICE)



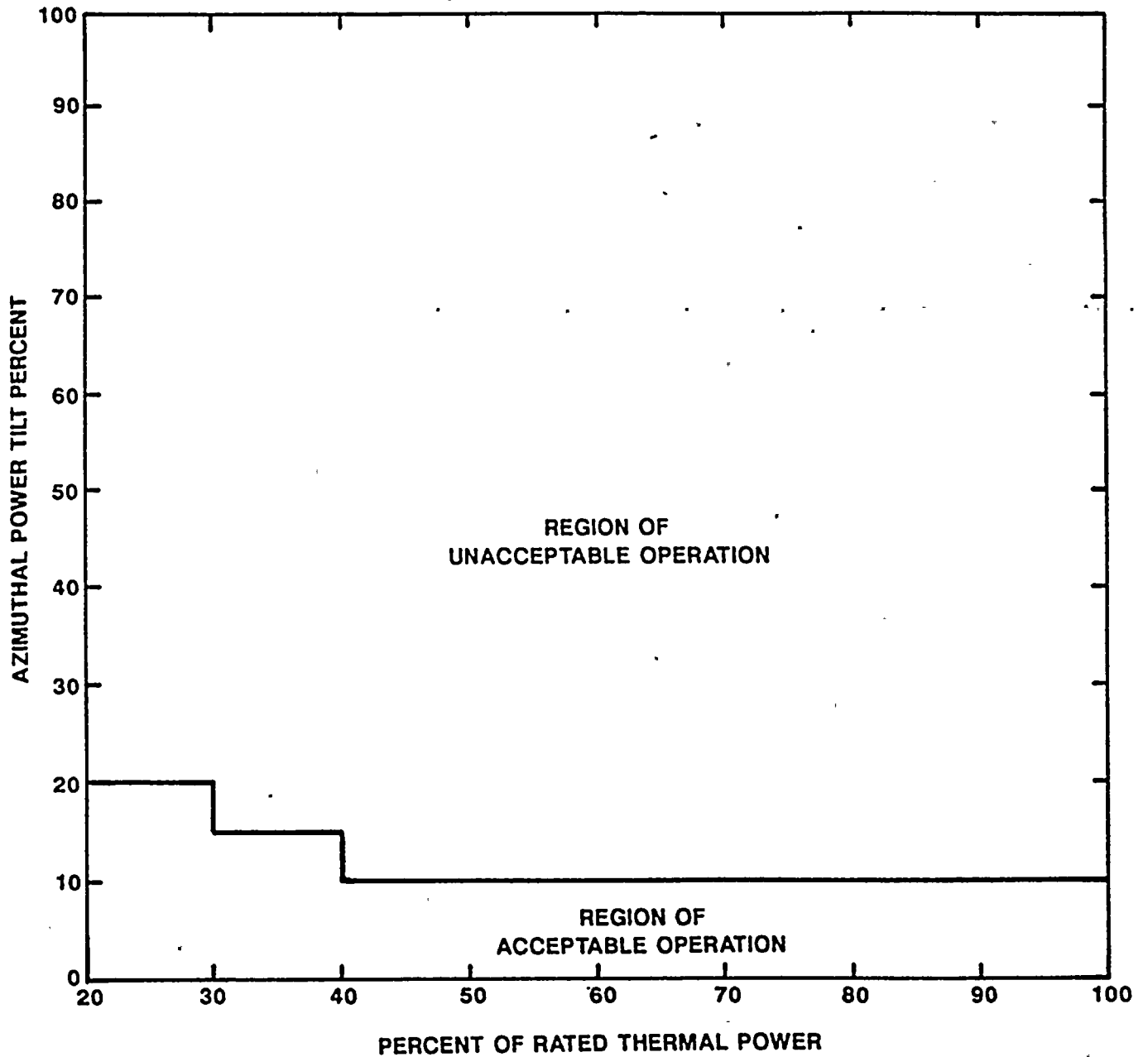
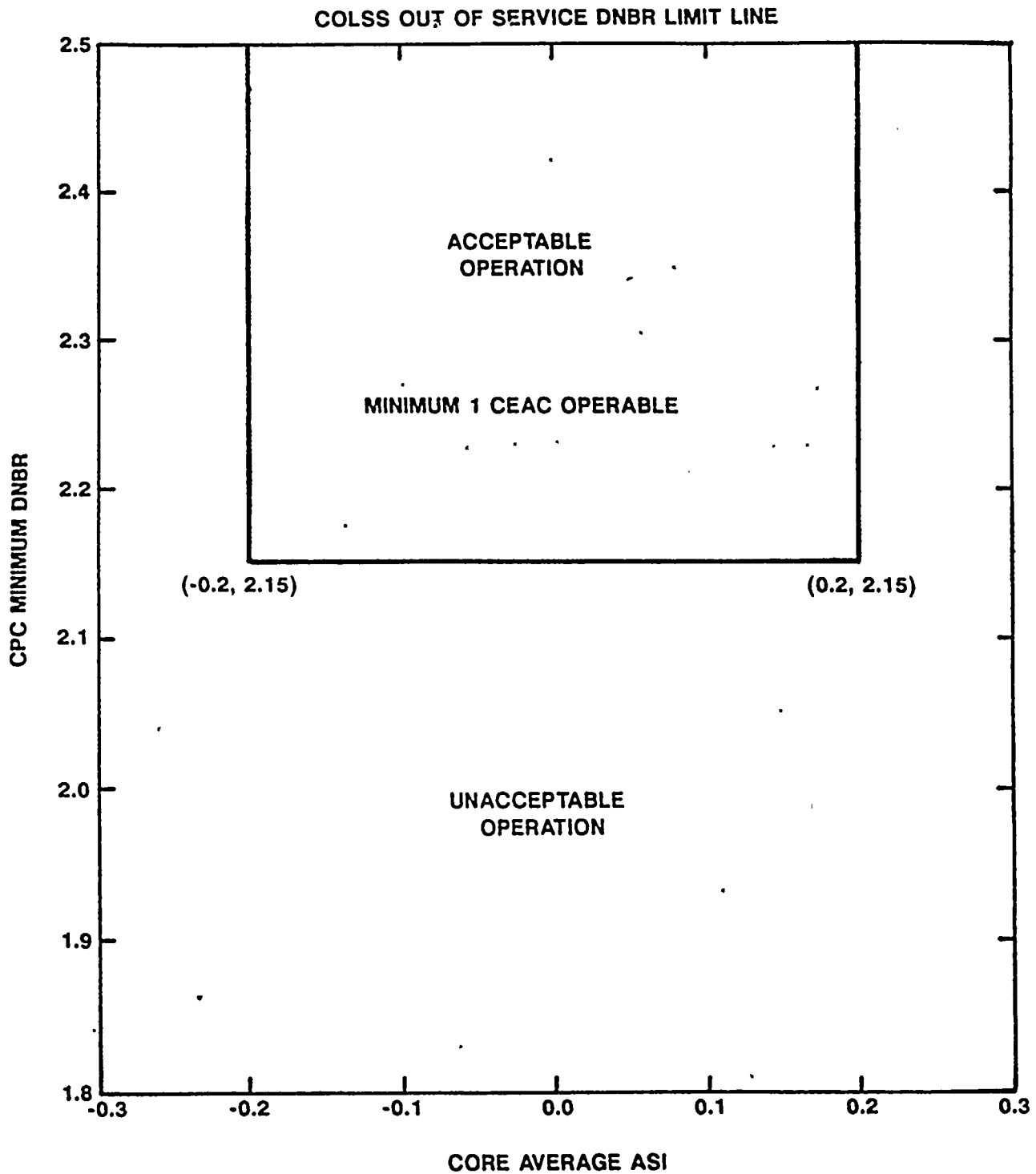


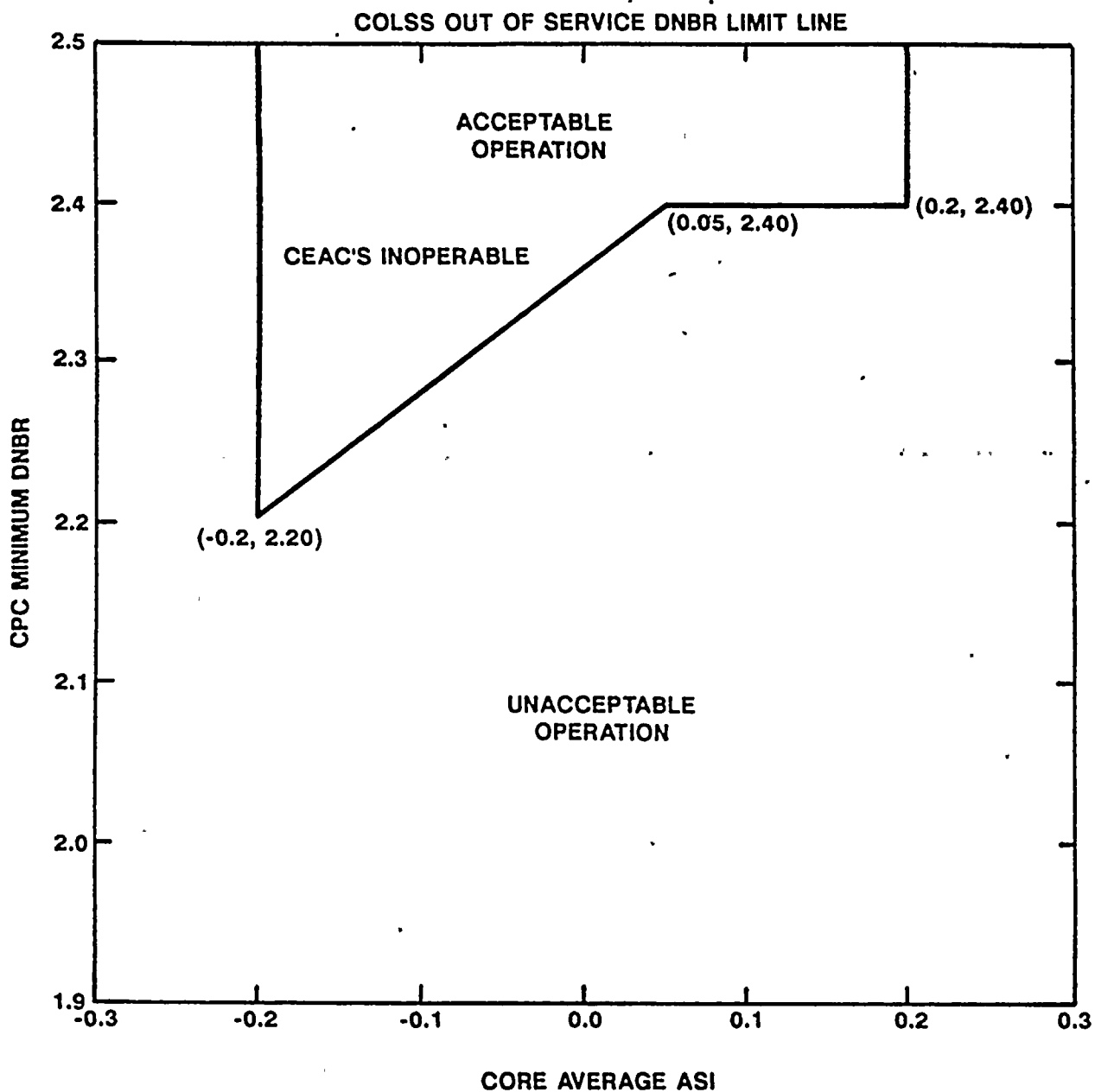
FIGURE 3.2-1A  
 AZIMUTHAL POWER TILT LIMIT vs. THERMAL POWER  
 (COLSS IN SERVICE)







**FIGURE 3.2-2**  
**DNBR MARGIN OPERATING LIMIT BASED ON CORE PROTECTION CALCULATORS**  
**(COLSS OUT OF SERVICE, CEAC'S OPERABLE)**



**FIGURE 3.2-2a**  
**DNBR MARGIN OPERATING LIMIT BASED ON CORE PROTECTION CALCULATORS**  
**(COLSS OUT OF SERVICE, CEAC'S INOPERABLE)**