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SOUTHERN COMPANY
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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Joseph M. Farley Nuclear Plant
Unit 1 Cycle 17 and Unit 2 Cycle 14 Revised Core Operating Limits Report

Ladies and Gentlemen:

In accordance with Technical Specification 5.6.5, Southern Nuclear Operating Company hereby submits revisions to the Core Operating Limits Reports (COLR) for Farley Nuclear Plant Unit 1 Cycle 17 and Unit 2 Cycle 14.

There are no NRC commitments in this submittal.

If you have any questions, please advise.

Respectfully submitted,

D. Morey

Dave Morey

EWC/maf: SeptCOLR.doc

Attachments:
Attachment 1 - Revision 1 FNP Unit 1 Cycle 17 Core Operating Limits Report
Attachment 2 - Revision 4 FNP Unit 2 Cycle 14 Core Operating Limits Report

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cc: Southern Nuclear Operating Company
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U. S. Nuclear Regulatory Commission, Washington, D. C.
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ATTACHMENT 1

REVISION 1 FNP UNIT 1 CYCLE 17 CORE OPERATING LIMITS REPORT

1.0 CORE OPERATING LIMITS REPORT

This Core Operating Limits Report (COLR) for FNP UNIT 1 CYCLE 17 has been prepared in accordance with the requirements of Technical Specification 5.6.5.

The Technical Requirement affected by this report is listed below:

13.1.1 SHUTDOWN MARGIN - MODES 1 and 2 (with $k_{eff} \geq 1$)

The Technical Specifications affected by this report are listed below:

3.1.1 SHUTDOWN MARGIN - MODES 2 (with $k_{eff} < 1$), 3, 4 and 5
3.1.3 Moderator Temperature Coefficient
3.1.5 Shutdown Bank Insertion Limits
3.1.6 Control Bank Insertion Limits
3.2.1 Heat Flux Hot Channel Factor - $F_Q(Z)$
3.2.2 Nuclear Enthalpy Rise Hot Channel Factor - $F_{\Delta H}^N$
3.2.3 Axial Flux Difference
3.9.1 Boron Concentration

2.0 OPERATING LIMITS

The cycle-specific parameter limits for the specifications listed in Section 1.0 are presented in the following subsections. These limits have been developed using NRC-approved methodologies, including those specified in Technical Specification 5.6.5.

2.1 SHUTDOWN MARGIN - MODES 1 AND 2 (with $k_{eff} \geq 1.0$) (Technical Requirement 13.1.1)

2.1.1 The SHUTDOWN MARGIN shall be greater than or equal to 1.77 percent Δk/k.

2.2 SHUTDOWN MARGIN - MODES 2 (with $k_{eff} < 1.0$), 3, 4 and 5 (Specification 3.1.1)

2.2.1 Modes 2 ($k_{eff} < 1.0$), 3 and 4 - The SHUTDOWN MARGIN shall be greater than or equal to 1.77 percent Δk/k.

2.2.2 Mode 5 - The SHUTDOWN MARGIN shall be greater than or equal to 1.0 percent Δk/k.

2.3 Moderator Temperature Coefficient (Specification 3.1.3)

2.3.1 The Moderator Temperature Coefficient (MTC) limits are:

The BOL/ARO/HZP-MTC shall be less than or equal to $+0.7 \times 10^{-4}$ Δk/k/°F for power levels up to 70 percent RTP with a linear ramp to 0 Δk/k/°F at 100 percent RTP.

The EOL/ARO/RTP-MTC shall be less negative than -4.3×10^{-4} Δk/k/°F.

2.3.2 The MTC Surveillance limits are:

The 300 ppm/ARO/RTP-MTC should be less negative than or equal to -3.65×10^{-4} Δk/k/°F.

The 100 ppm/ARO/RTP-MTC should be less negative than -4.0×10^{-4} Δk/k/°F.

where: BOL stands for Beginning of Cycle Life
ARO stands for All Rods Out
HZP stands for Hot Zero THERMAL POWER
EOL stands for End of Cycle Life
RTP stands for RATED THERMAL POWER

2.4 Shutdown Bank Insertion Limits (Specification 3.1.5)

2.4.1 The shutdown banks shall be withdrawn to a position greater than or equal to 225 steps.

2.5 Control Bank Insertion Limits (Specification 3.1.6)

2.5.1 The control rod banks shall be limited in physical insertion as shown in Figure 1.

2.6 Heat Flux Hot Channel Factor - $F_Q(Z)$ (Specification 3.2.1)

2.6.1 $F_Q(Z) \leq \frac{F_Q^{RTP}}{P} * K(Z)$ for P > 0.5

$F_Q(Z) \leq \frac{F_Q^{RTP}}{0.5} * K(Z)$ for P ≤ 0.5

where: $P = \frac{THERMAL\,POWER}{RATED\,THERMAL\,POWER}$

2.6.2 $F_Q^{RTP} = 2.50$

2.6.3 K(Z) is provided in Figure 2.

2.6.4 $F_Q(Z) \leq \frac{F_Q^{RTP} * K(Z)}{P * W(Z)}$ for P > 0.5

$F_Q(Z) \leq \frac{F_Q^{RTP} * K(Z)}{0.5 * W(Z)}$ for P ≤ 0.5

2.6.5 W(Z) values are provided in Figures 4 through 7.

2.6.6 The $F_Q(Z)$ penalty factors are provided in Table 1.

2.7 Nuclear Enthalpy Rise Hot Channel Factor - $F_{\Delta H}^{N}$ (Specification 3.2.2)

2.7.1 $F_{\Delta H}^{N} \leq F_{\Delta H}^{RTP} * \left(1 + PF_{\Delta H} * (1 - P)\right)$

where: $P = \dfrac{THERMAL\,POWER}{RATED\,THERMAL\,POWER}$

2.7.2 $F_{\Delta H}^{RTP} = 1.70$

2.7.3 $PF_{\Delta H} = 0.3$

2.8 Axial Flux Difference (Specification 3.2.3)

2.8.1 The Axial Flux Difference (AFD) acceptable operation limits are provided in Figure 3.

2.9 Boron Concentration (Specification 3.9.1)

2.9.1 The boron concentration shall be greater than or equal to 2000 ppm.[1]

[1] This concentration bounds the condition of $k_{eff} \leq 0.95$ (all rods in less the most reactive rod) and subcriticality (all rods out) over the entire cycle. This concentration includes additional boron to address uncertainties and B^{10} depletion.

Table 1

$F_Q(Z)$ PENALTY FACTOR

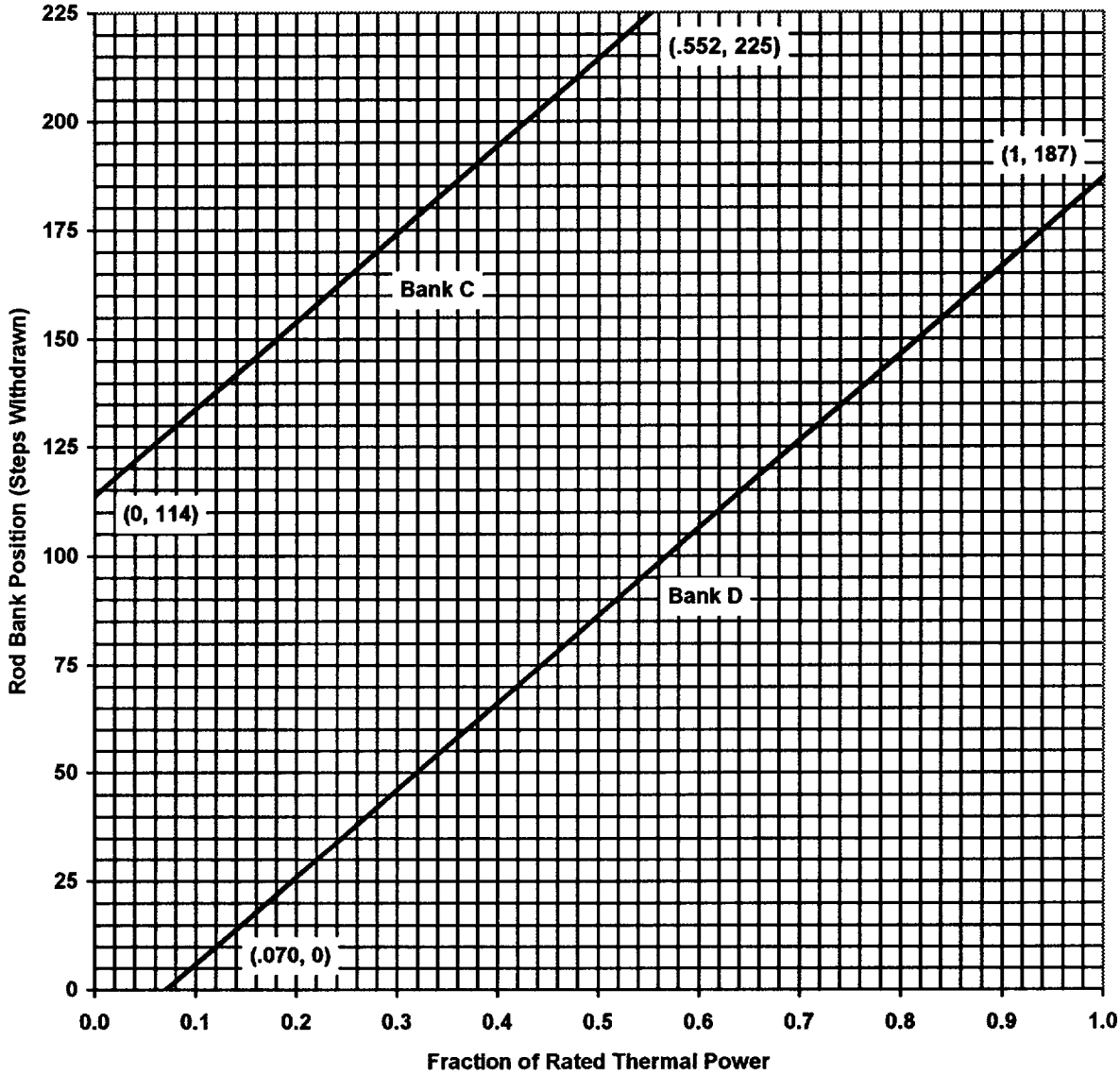
Cycle Burnup (MWD/MTU)	$F_Q(Z)$ Penalty Factor
All Burnups	1.0200

Notes:

1. The Penalty Factor, to be applied to $F_Q(Z)$ in accordance with SR 3.2.1.2, is the maximum factor by which $F_Q(Z)$ is expected to increase over a 39 EFPD interval (surveillance interval of 31 EFPD plus the maximum allowable extension not to exceed 25% of the surveillance interval per SR 3.0.2) starting from the burnup at which the $F_Q(Z)$ was determined.

Figure 1
Rod Bank Insertion Limits versus Rated Thermal Power

Fully Withdrawn – 225 to 231 steps, inclusive



Fully Withdrawn shall be the condition where control rods are at a position within the interval ≥ 225 and ≤ 231 steps withdrawn.

Note: The Rod Bank Insertion Limits are based on the control bank withdrawal sequence A, B, C, D and a control bank tip-to-tip distance of 128 steps.

Figure 2
K(Z) – Normalized $F_Q(Z)$ as a Function of Core Height

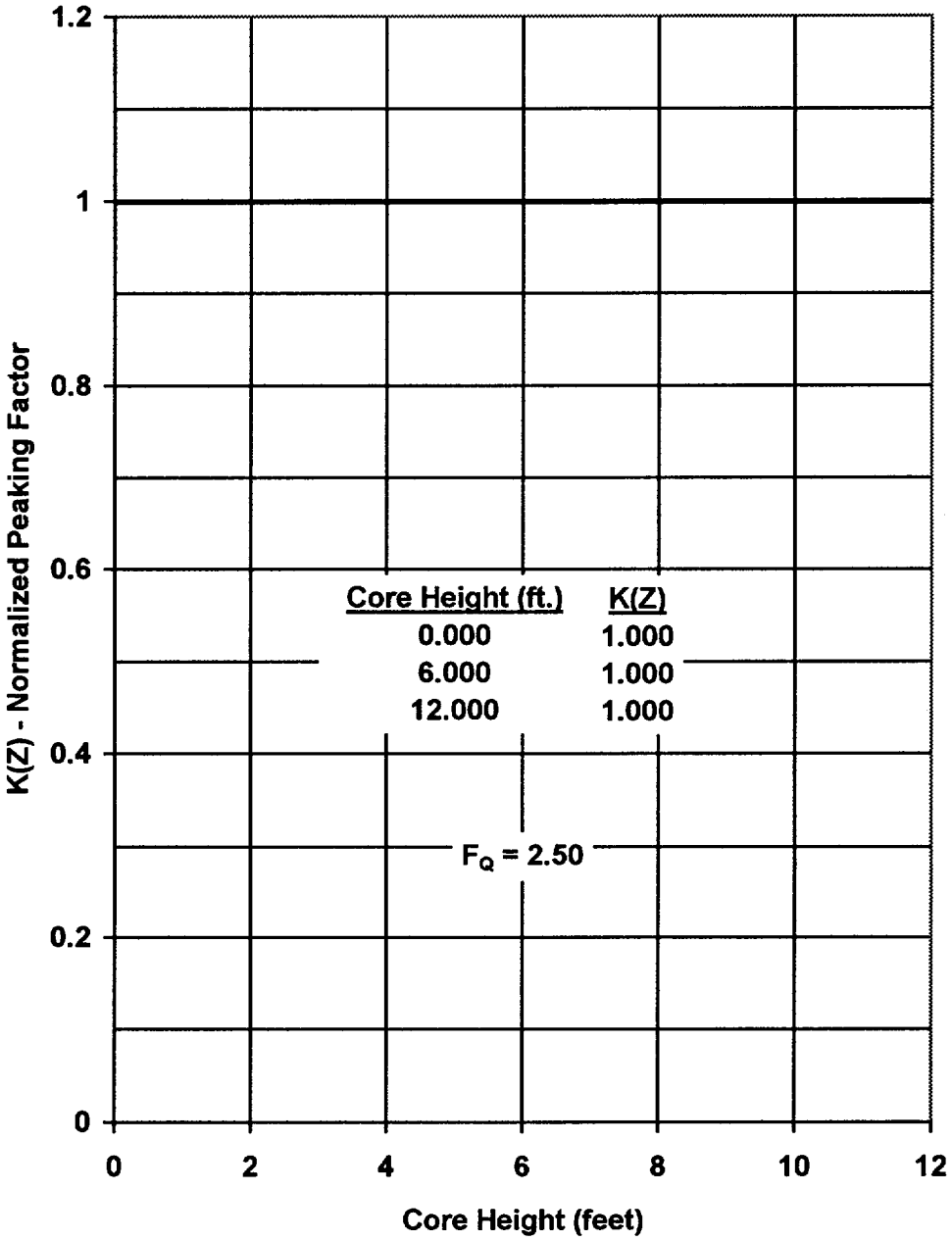


Figure 3
Axial Flux Difference Limits as a Function of Rated Thermal Power for RAOC

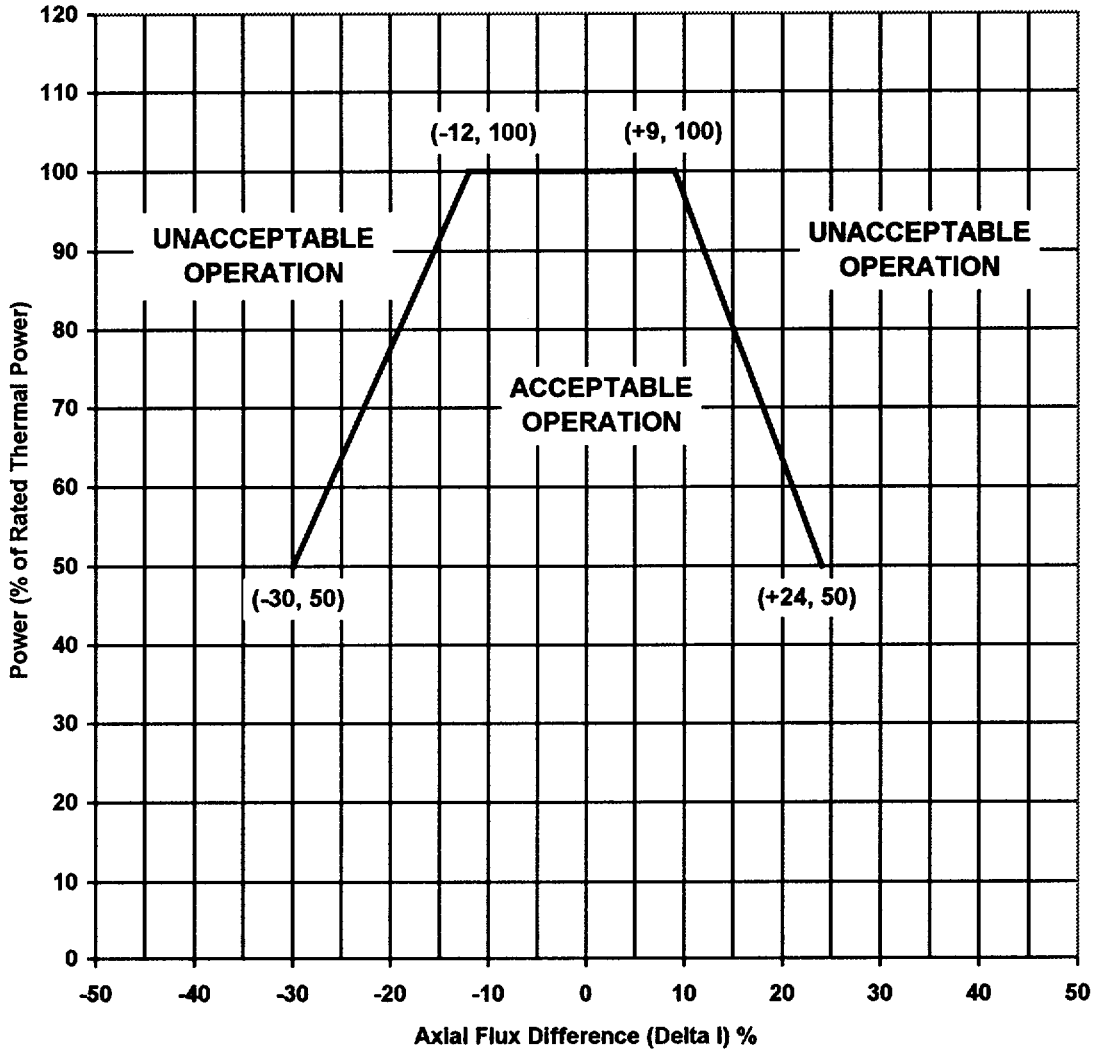
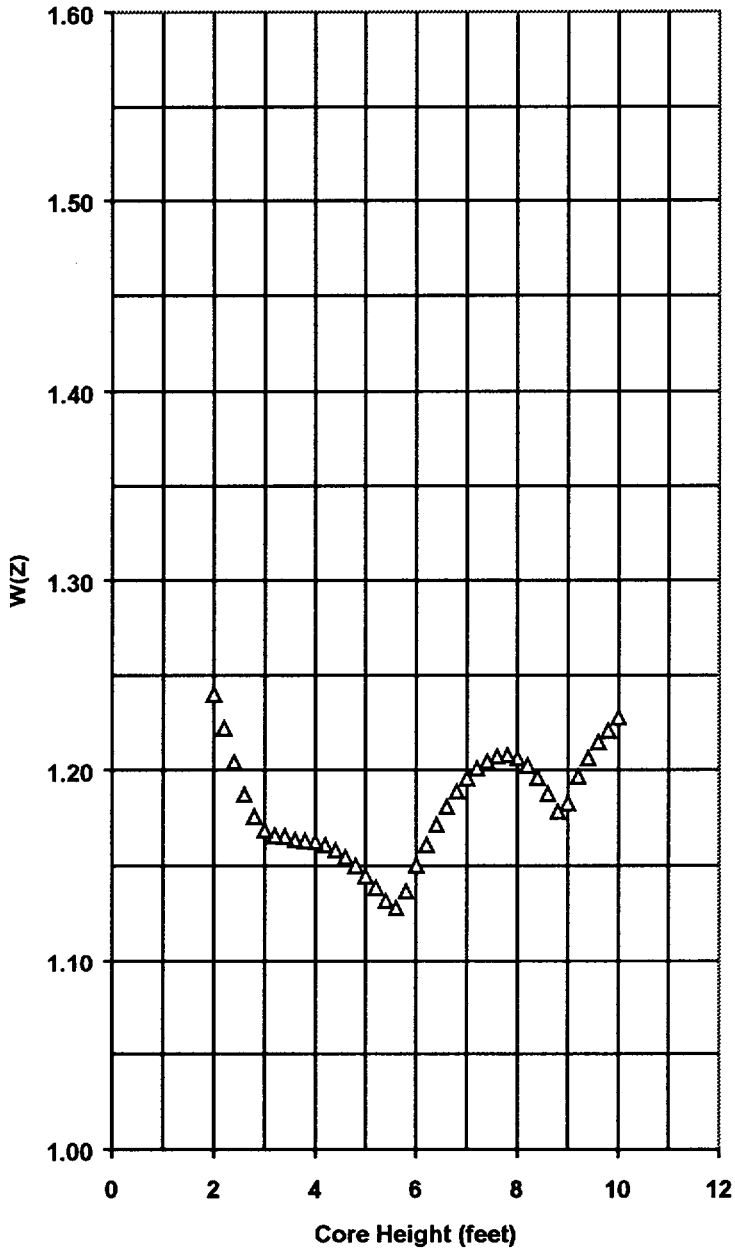


Figure 4
RAOC W(Z) at 150 MWD/MTU

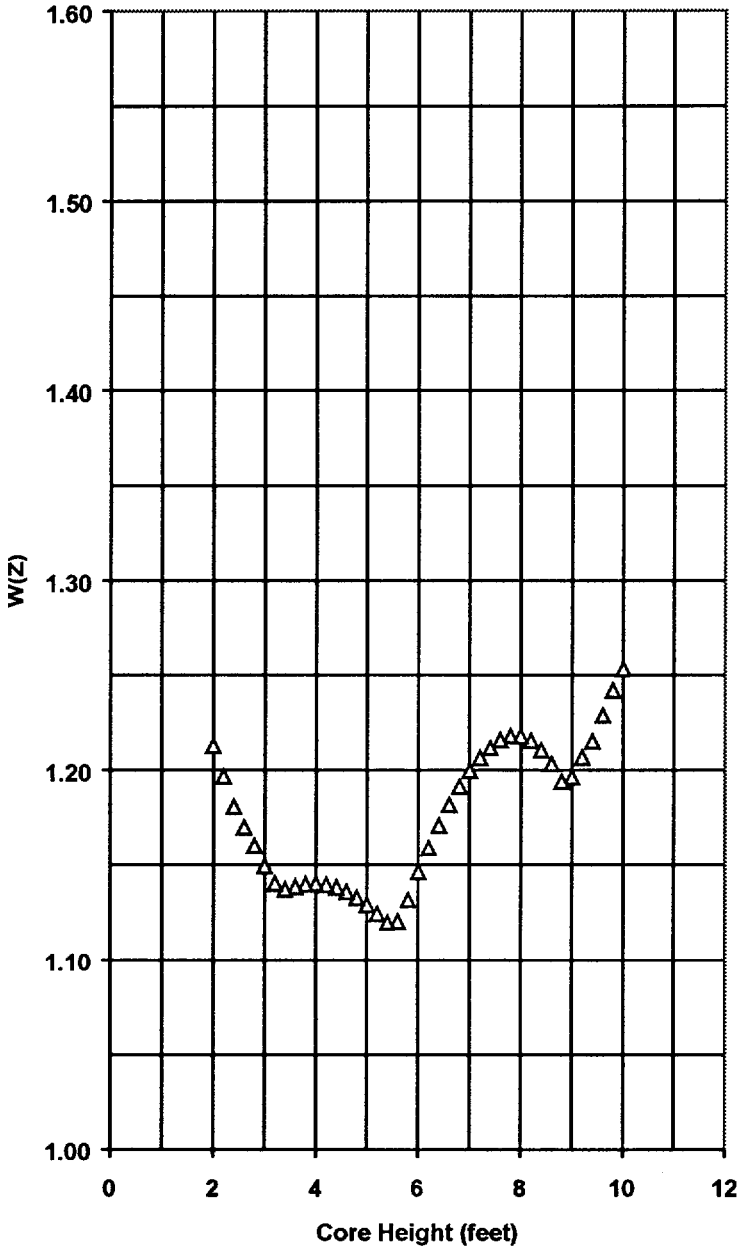


	Axial Point	Elevation (feet)	BOL W(Z)
*	1	12.00	1.0000
*	2	11.80	1.0000
*	3	11.60	1.0000
*	4	11.40	1.0000
*	5	11.20	1.0000
*	6	11.00	1.0000
*	7	10.80	1.0000
*	8	10.60	1.0000
*	9	10.40	1.0000
*	10	10.20	1.0000
	11	10.00	1.2279
	12	9.80	1.2208
	13	9.60	1.2148
	14	9.40	1.2062
	15	9.20	1.1965
	16	9.00	1.1826
	17	8.80	1.1781
	18	8.60	1.1875
	19	8.40	1.1961
	20	8.20	1.2024
	21	8.00	1.2063
	22	7.80	1.2079
	23	7.60	1.2072
	24	7.40	1.2046
	25	7.20	1.2009
	26	7.00	1.1957
	27	6.80	1.1889
	28	6.60	1.1807
	29	6.40	1.1713
	30	6.20	1.1608
	31	6.00	1.1501
	32	5.80	1.1365
	33	5.60	1.1277
	34	5.40	1.1315
	35	5.20	1.1383
	36	5.00	1.1443
	37	4.80	1.1497
	38	4.60	1.1543
	39	4.40	1.1580
	40	4.20	1.1607
	41	4.00	1.1624
	42	3.80	1.1629
	43	3.60	1.1633
	44	3.40	1.1652
	45	3.20	1.1655
	46	3.00	1.1684
	47	2.80	1.1755
	48	2.60	1.1871
	49	2.40	1.2043
	50	2.20	1.2222
	51	2.00	1.2399
*	52	1.80	1.0000
*	53	1.60	1.0000
*	54	1.40	1.0000
*	55	1.20	1.0000
*	56	1.00	1.0000
*	57	0.80	1.0000
*	58	0.60	1.0000
*	59	0.40	1.0000
*	60	0.20	1.0000
*	61	0.00	1.0000

* Top and Bottom 15% Excluded per Technical Specification B3.2.1.

This figure is referred to by Technical Specification B3.2.1.

Figure 5
RAOC W(Z) at 4000 MWD/MTU

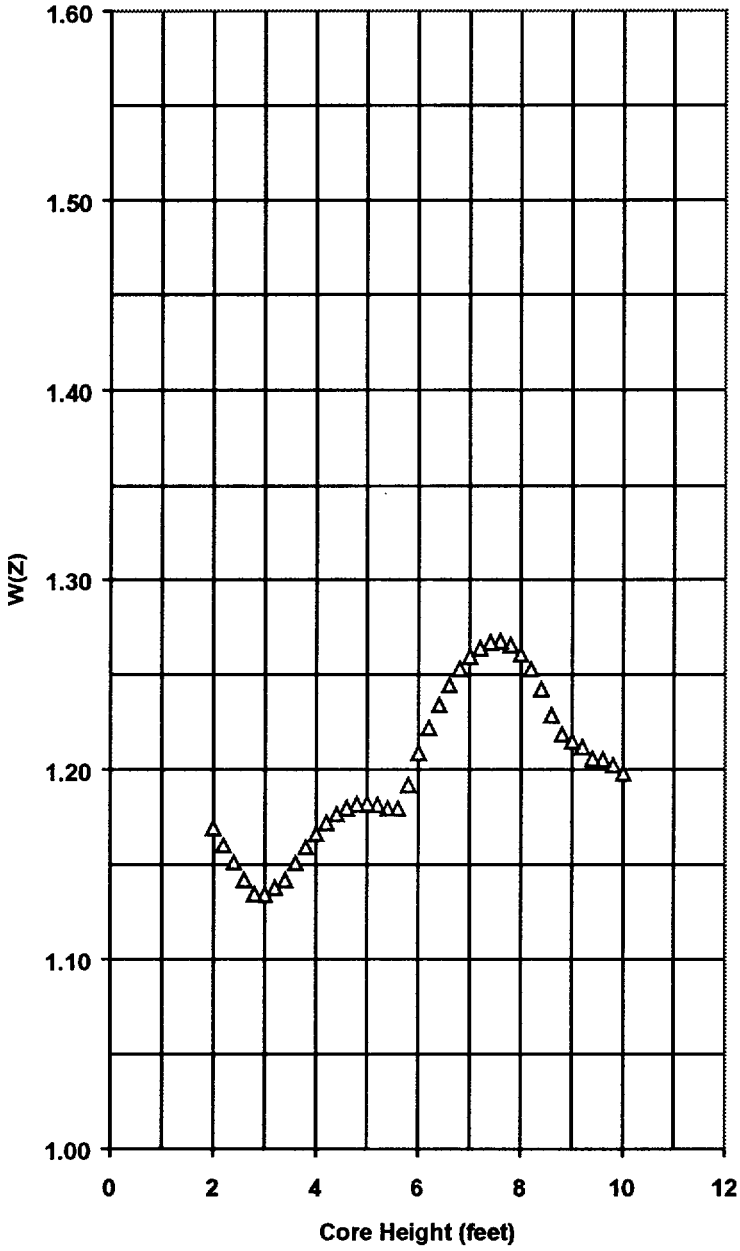


	Axial Point	Elevation (feet)	MOL-1 W(Z)
*	1	12.00	1.0000
*	2	11.80	1.0000
*	3	11.60	1.0000
*	4	11.40	1.0000
*	5	11.20	1.0000
*	6	11.00	1.0000
*	7	10.80	1.0000
*	8	10.60	1.0000
*	9	10.40	1.0000
*	10	10.20	1.0000
	11	10.00	1.2534
	12	9.80	1.2419
	13	9.60	1.2288
	14	9.40	1.2151
	15	9.20	1.2067
	16	9.00	1.1964
	17	8.80	1.1941
	18	8.60	1.2032
	19	8.40	1.2105
	20	8.20	1.2154
	21	8.00	1.2179
	22	7.80	1.2180
	23	7.60	1.2159
	24	7.40	1.2117
	25	7.20	1.2065
	26	7.00	1.1998
	27	6.80	1.1914
	28	6.60	1.1816
	29	6.40	1.1706
	30	6.20	1.1586
	31	6.00	1.1461
	32	5.80	1.1314
	33	5.60	1.1203
	34	5.40	1.1197
	35	5.20	1.1242
	36	5.00	1.1289
	37	4.80	1.1326
	38	4.60	1.1357
	39	4.40	1.1380
	40	4.20	1.1394
	41	4.00	1.1399
	42	3.80	1.1395
	43	3.60	1.1382
	44	3.40	1.1368
	45	3.20	1.1401
	46	3.00	1.1491
	47	2.80	1.1598
	48	2.60	1.1696
	49	2.40	1.1806
	50	2.20	1.1967
	51	2.00	1.2128
*	52	1.80	1.0000
*	53	1.60	1.0000
*	54	1.40	1.0000
*	55	1.20	1.0000
*	56	1.00	1.0000
*	57	0.80	1.0000
*	58	0.60	1.0000
*	59	0.40	1.0000
*	60	0.20	1.0000
*	61	0.00	1.0000

* Top and Bottom 15% Excluded per Technical Specification B3.2.1.

This figure is referred to by Technical Specification B3.2.1.

Figure 6
RAOC W(Z) at 10000 MWD/MTU

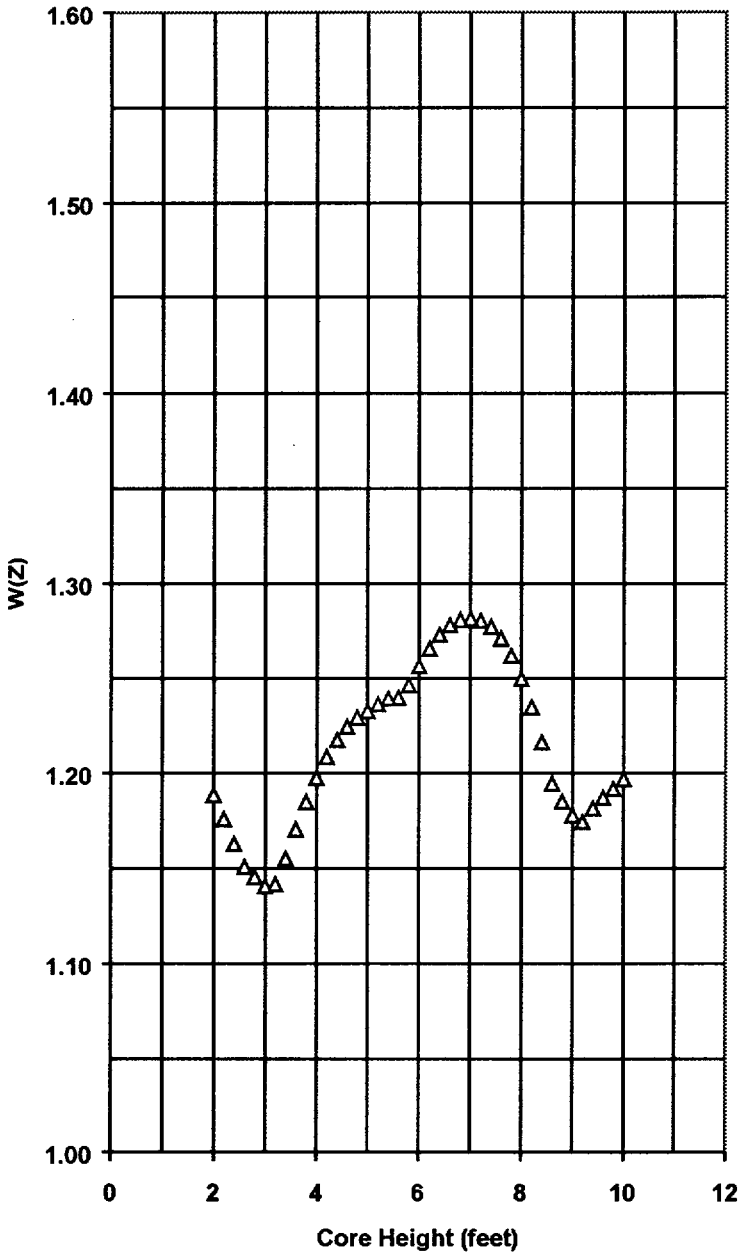


	Axial Point	Elevation (feet)	MOL-2 W(Z)
*	1	12.00	1.0000
*	2	11.80	1.0000
*	3	11.60	1.0000
*	4	11.40	1.0000
*	5	11.20	1.0000
*	6	11.00	1.0000
*	7	10.80	1.0000
*	8	10.60	1.0000
*	9	10.40	1.0000
*	10	10.20	1.0000
	11	10.00	1.1977
	12	9.80	1.2021
	13	9.60	1.2051
	14	9.40	1.2057
	15	9.20	1.2115
	16	9.00	1.2146
	17	8.80	1.2182
	18	8.60	1.2285
	19	8.40	1.2422
	20	8.20	1.2528
	21	8.00	1.2604
	22	7.80	1.2653
	23	7.60	1.2673
	24	7.40	1.2667
	25	7.20	1.2637
	26	7.00	1.2592
	27	6.80	1.2529
	28	6.60	1.2443
	29	6.40	1.2339
	30	6.20	1.2217
	31	6.00	1.2086
	32	5.80	1.1919
	33	5.60	1.1796
	34	5.40	1.1796
	35	5.20	1.1815
	36	5.00	1.1822
	37	4.80	1.1818
	38	4.60	1.1799
	39	4.40	1.1767
	40	4.20	1.1721
	41	4.00	1.1662
	42	3.80	1.1593
	43	3.60	1.1509
	44	3.40	1.1418
	45	3.20	1.1377
	46	3.00	1.1342
	47	2.80	1.1346
	48	2.60	1.1420
	49	2.40	1.1511
	50	2.20	1.1602
	51	2.00	1.1694
*	52	1.80	1.0000
*	53	1.60	1.0000
*	54	1.40	1.0000
*	55	1.20	1.0000
*	56	1.00	1.0000
*	57	0.80	1.0000
*	58	0.60	1.0000
*	59	0.40	1.0000
*	60	0.20	1.0000
*	61	0.00	1.0000

* Top and Bottom 15% Excluded per Technical Specification B3.2.1.

This figure is referred to by Technical Specification B3.2.1.

Figure 7
RAOC W(Z) at 16000 MWD/MTU



	Axial Point	Elevation (feet)	EOL W(Z)
*	1	12.00	1.0000
*	2	11.80	1.0000
*	3	11.60	1.0000
*	4	11.40	1.0000
*	5	11.20	1.0000
*	6	11.00	1.0000
*	7	10.80	1.0000
*	8	10.60	1.0000
*	9	10.40	1.0000
*	10	10.20	1.0000
	11	10.00	1.1971
	12	9.80	1.1919
	13	9.60	1.1871
	14	9.40	1.1817
	15	9.20	1.1744
	16	9.00	1.1779
	17	8.80	1.1851
	18	8.60	1.1947
	19	8.40	1.2164
	20	8.20	1.2348
	21	8.00	1.2497
	22	7.80	1.2619
	23	7.60	1.2709
	24	7.40	1.2770
	25	7.20	1.2802
	26	7.00	1.2814
	27	6.80	1.2807
	28	6.60	1.2778
	29	6.40	1.2728
	30	6.20	1.2657
	31	6.00	1.2564
	32	5.80	1.2464
	33	5.60	1.2399
	34	5.40	1.2393
	35	5.20	1.2364
	36	5.00	1.2329
	37	4.80	1.2295
	38	4.60	1.2247
	39	4.40	1.2177
	40	4.20	1.2087
	41	4.00	1.1977
	42	3.80	1.1850
	43	3.60	1.1706
	44	3.40	1.1551
	45	3.20	1.1416
	46	3.00	1.1406
	47	2.80	1.1455
	48	2.60	1.1507
	49	2.40	1.1630
	50	2.20	1.1760
	51	2.00	1.1887
*	52	1.80	1.0000
*	53	1.60	1.0000
*	54	1.40	1.0000
*	55	1.20	1.0000
*	56	1.00	1.0000
*	57	0.80	1.0000
*	58	0.60	1.0000
*	59	0.40	1.0000
*	60	0.20	1.0000
*	61	0.00	1.0000

* Top and Bottom 15% Excluded per Technical Specification B3.2.1.

This figure is referred to by Technical Specification B3.2.1.

ATTACHMENT 2

REVISION 4 FNP UNIT 2 CYCLE 14 CORE OPERATING LIMITS REPORT

1.0 CORE OPERATING LIMITS REPORT

This Core Operating Limits Report (COLR) for FNP UNIT 2 CYCLE 14 has been prepared in accordance with the requirements of Technical Specification 5.6.5.

The Technical Requirement affected by this report is listed below:

13.1.1 SHUTDOWN MARGIN - MODES 1 and 2 (with $k_{eff} \geq 1$)

The Technical Specifications affected by this report are listed below:

3.1.1 SHUTDOWN MARGIN - MODES 2 (with $k_{eff} < 1$), 3, 4 and 5
3.1.3 Moderator Temperature Coefficient
3.1.5 Shutdown Bank Insertion Limits
3.1.6 Control Bank Insertion Limits
3.2.1 Heat Flux Hot Channel Factor - $F_Q(Z)$
3.2.2 Nuclear Enthalpy Rise Hot Channel Factor - $F_{\Delta H}^N$
3.2.3 Axial Flux Difference
3.9.1 Boron Concentration

2.0 OPERATING LIMITS

The cycle-specific parameter limits for the specifications listed in Section 1.0 are presented in the following subsections. These limits have been developed using NRC-approved methodologies, including those specified in Technical Specification 5.6.5.

2.1 SHUTDOWN MARGIN - MODES 1 AND 2 (with $k_{eff} \geq 1.0$) (Technical Requirement 13.1.1)

2.1.1 The SHUTDOWN MARGIN shall be greater than or equal to 1.77 percent Δk/k.

2.2 SHUTDOWN MARGIN - MODES 2 (with $k_{eff} < 1.0$), 3, 4 and 5 (Specification 3.1.1)

2.2.1 Modes 2 ($k_{eff} < 1.0$), 3 and 4 - The SHUTDOWN MARGIN shall be greater than or equal to 1.77 percent Δk/k.

2.2.2 Mode 5 - The SHUTDOWN MARGIN shall be greater than or equal to 1.0 percent Δk/k.

2.3 Moderator Temperature Coefficient (Specification 3.1.3)

2.3.1 The Moderator Temperature Coefficient (MTC) limits are:

The BOL/ARO/HZP-MTC shall be less than or equal to $+0.7 \times 10^{-4}$ Δk/k/°F for power levels up to 70 percent RTP with a linear ramp to 0 Δk/k/°F at 100 percent RTP.

The EOL/ARO/RTP-MTC shall be less negative than -4.3×10^{-4} Δk/k/°F.

2.3.2 The MTC Surveillance limits are:

The 300 ppm/ARO/RTP-MTC should be less negative than or equal to -3.65×10^{-4} Δk/k/°F.

The 100 ppm/ARO/RTP-MTC should be less negative than -4.0×10^{-4} Δk/k/°F.

where: BOL stands for Beginning of Cycle Life
ARO stands for All Rods Out
HZP stands for Hot Zero THERMAL POWER
EOL stands for End of Cycle Life
RTP stands for RATED THERMAL POWER

2.4 Shutdown Bank Insertion Limits (Specification 3.1.5)

2.4.1 The shutdown banks shall be withdrawn to a position greater than or equal to 225 steps.

2.5 Control Bank Insertion Limits (Specification 3.1.6)

2.5.1 The control rod banks shall be limited in physical insertion as shown in Figure 1.

2.6 Heat Flux Hot Channel Factor - $F_Q(Z)$ (Specification 3.2.1)

2.6.1 $F_Q(Z) \leq \frac{F_Q^{RTP}}{P} * K(Z)$ for P > 0.5

$F_Q(Z) \leq \frac{F_Q^{RTP}}{0.5} * K(Z)$ for P ≤ 0.5

where: $P = \frac{THERMAL\,POWER}{RATED\,THERMAL\,POWER}$

2.6.2 $F_Q^{RTP} = 2.50$

2.6.3 K(Z) is provided in Figure 2.

2.6.4 $F_Q(Z) \leq \frac{F_Q^{RTP} * K(Z)}{P * W(Z)}$ for P > 0.5

$F_Q(Z) \leq \frac{F_Q^{RTP} * K(Z)}{0.5 * W(Z)}$ for P ≤ 0.5

2.6.5 W(Z) values are provided in Figures 4 through 7.

2.6.6 The $F_Q(Z)$ penalty factors are provided in Table 1.

2.7 Nuclear Enthalpy Rise Hot Channel Factor - $F_{\Delta H}^{N}$ (Specification 3.2.2)

2.7.1 $F_{\Delta H}^{N} \leq F_{\Delta H}^{RTP} * \left(1 + PF_{\Delta H} * \left(1 - P\right)\right)$

where: $P = \dfrac{THERMAL\,POWER}{RATED\,THERMAL\,POWER}$

2.7.2 $F_{\Delta H}^{RTP} = 1.70$

2.7.3 $PF_{\Delta H} = 0.3$

2.8 Axial Flux Difference (Specification 3.2.3)

2.8.1 The Axial Flux Difference (AFD) acceptable operation limits are provided in Figure 3.

2.9 Boron Concentration (Specification 3.9.1)

2.9.1 The boron concentration shall be greater than or equal to 2000 ppm.[1]

[1] This concentration bounds the condition of $k_{eff} \leq 0.95$ (all rods in less the most reactive rod) and subcriticality (all rods out) over the entire cycle. This concentration includes additional boron to address uncertainties and B^{10} depletion.

Table 1

$F_Q(Z)$ PENALTY FACTOR

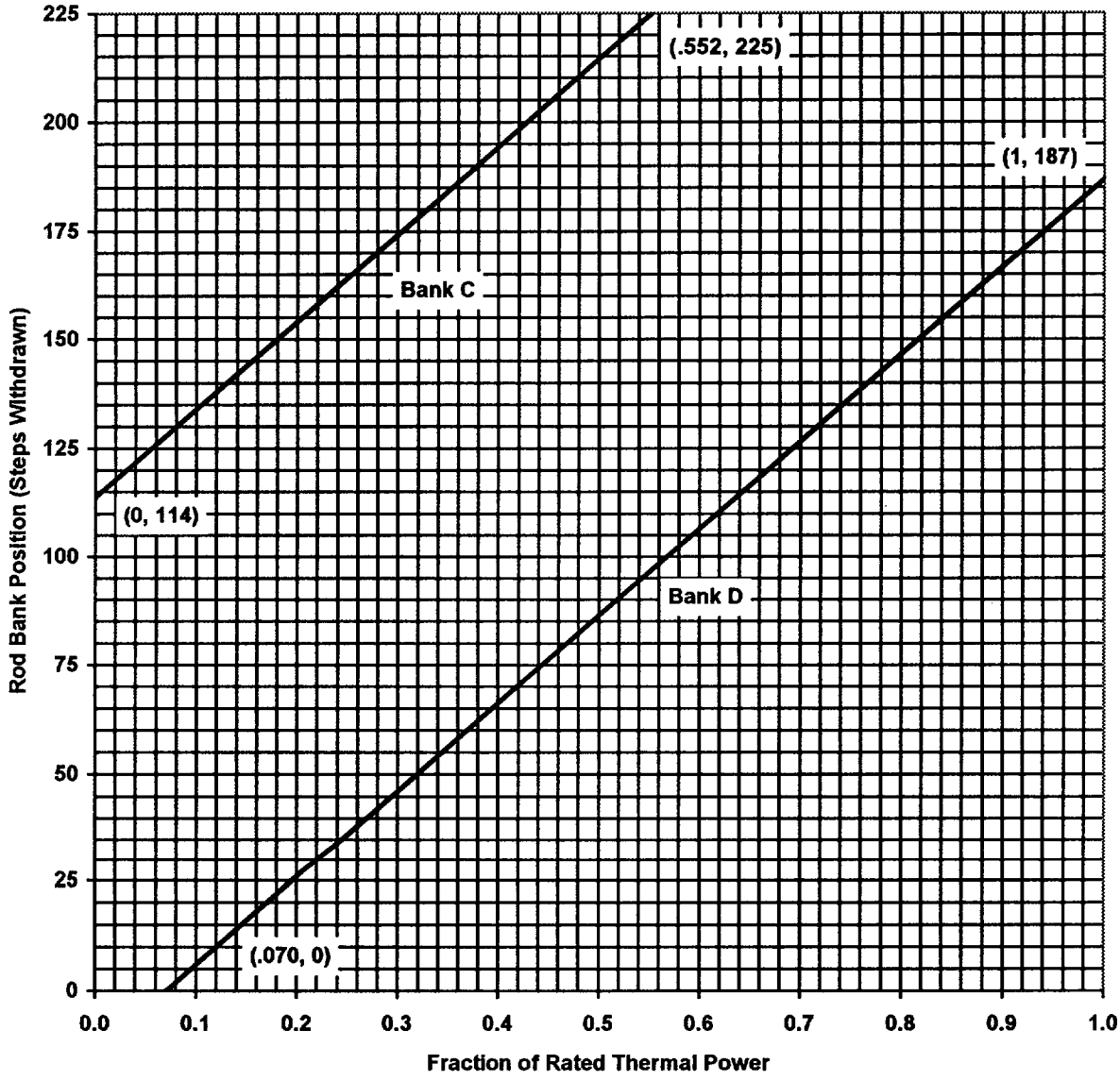
Cycle Burnup (MWD/MTU)	$F_Q(Z)$ Penalty Factor
All Burnups	1.0200

Notes:

1. The Penalty Factor, to be applied to $F_Q(Z)$ in accordance with SR 3.2.1.2, is the maximum factor by which $F_Q(Z)$ is expected to increase over a 39 EFPD interval (surveillance interval of 31 EFPD plus the maximum allowable extension not to exceed 25% of the surveillance interval per SR 3.0.2) starting from the burnup at which the $F_Q(Z)$ was determined.

Figure 1
Rod Bank Insertion Limits versus Rated Thermal Power

Fully Withdrawn – 225 to 231 steps, inclusive



Fully Withdrawn shall be the condition where control rods are at a position within the interval ≥ 225 and ≤ 231 steps withdrawn.

Note: The Rod Bank Insertion Limits are based on the control bank withdrawal sequence A, B, C, D and a control bank tip-to-tip distance of 128 steps.

Figure 2
K(Z) – Normalized $F_Q(Z)$ as a Function of Core Height

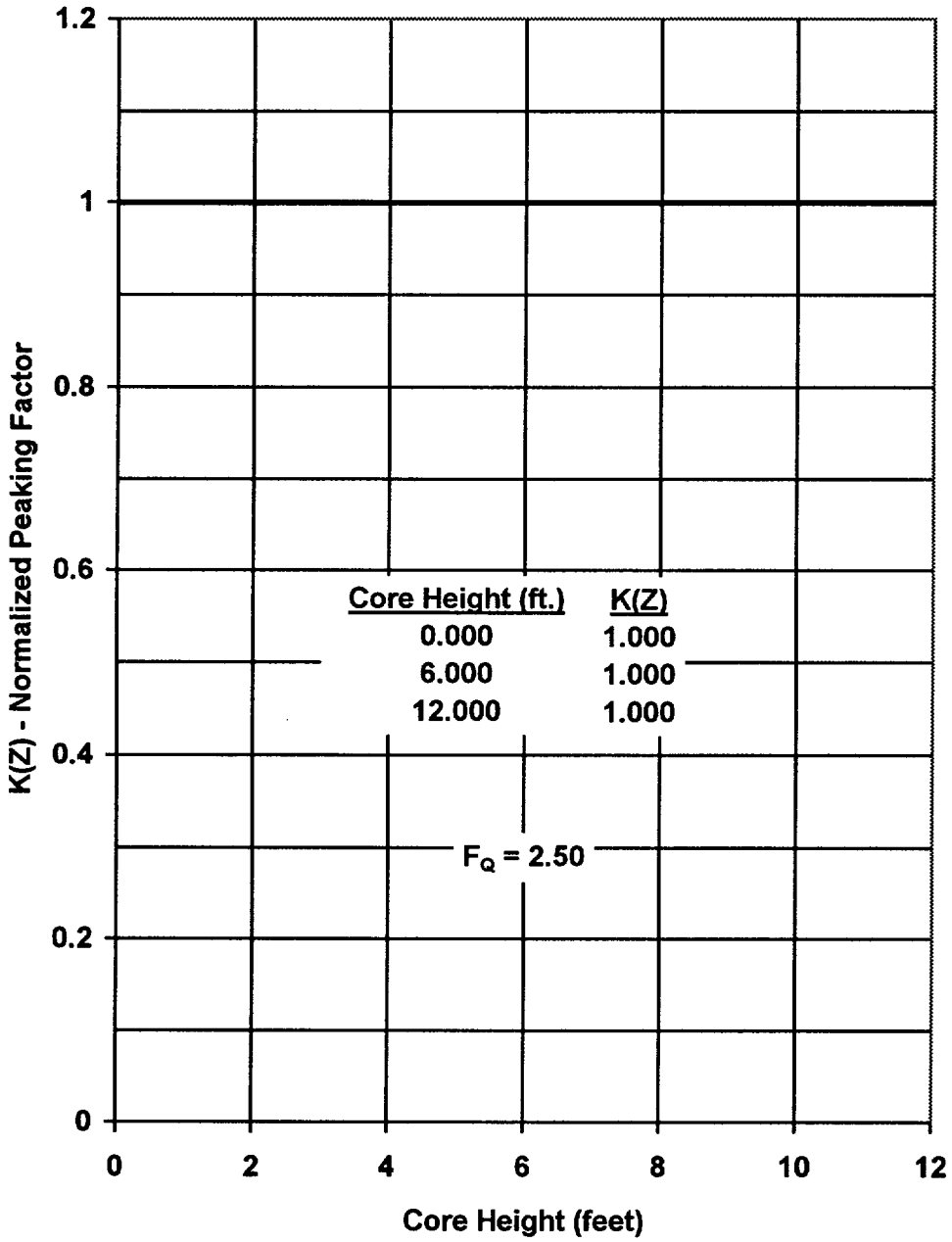


Figure 3
Axial Flux Difference Limits as a Function of Rated Thermal Power for RAOC

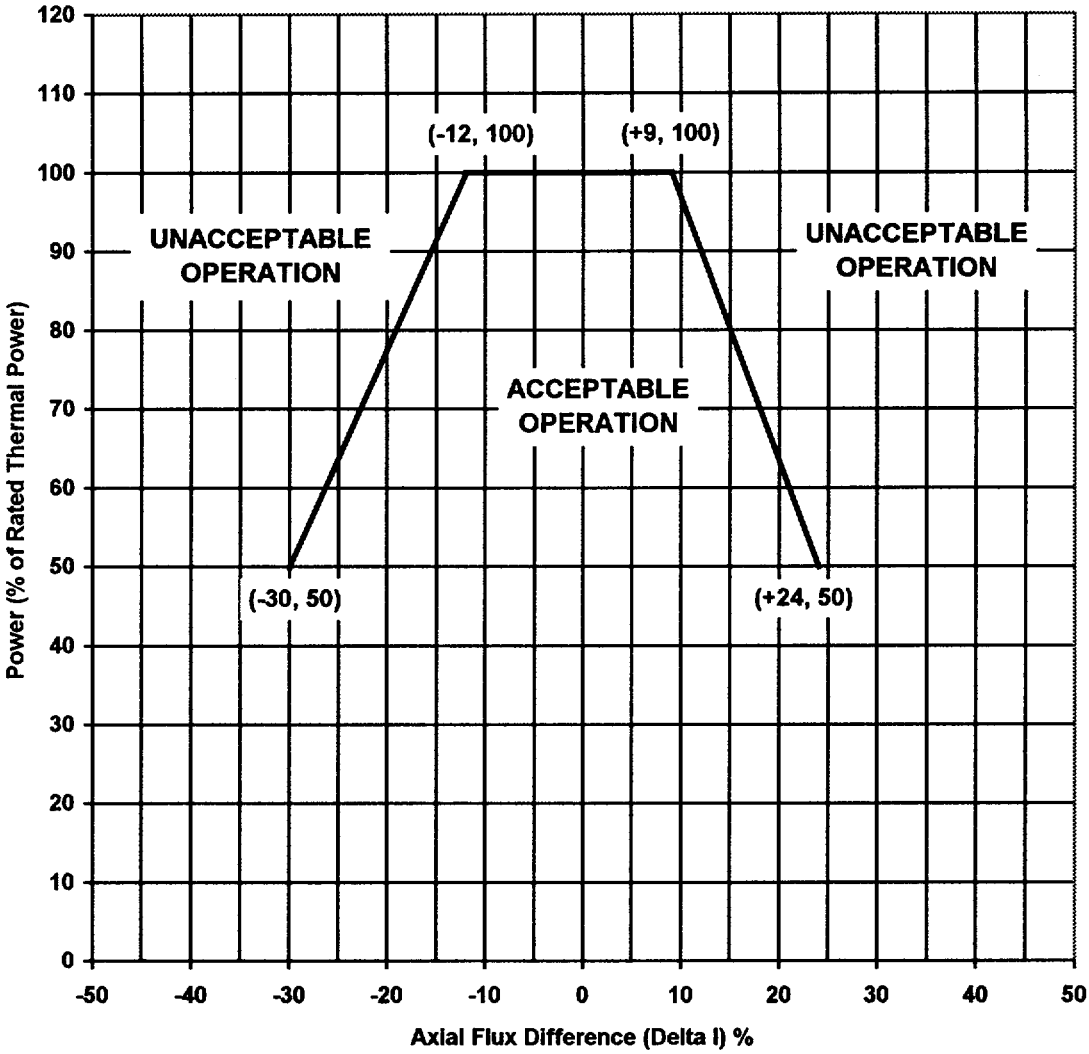
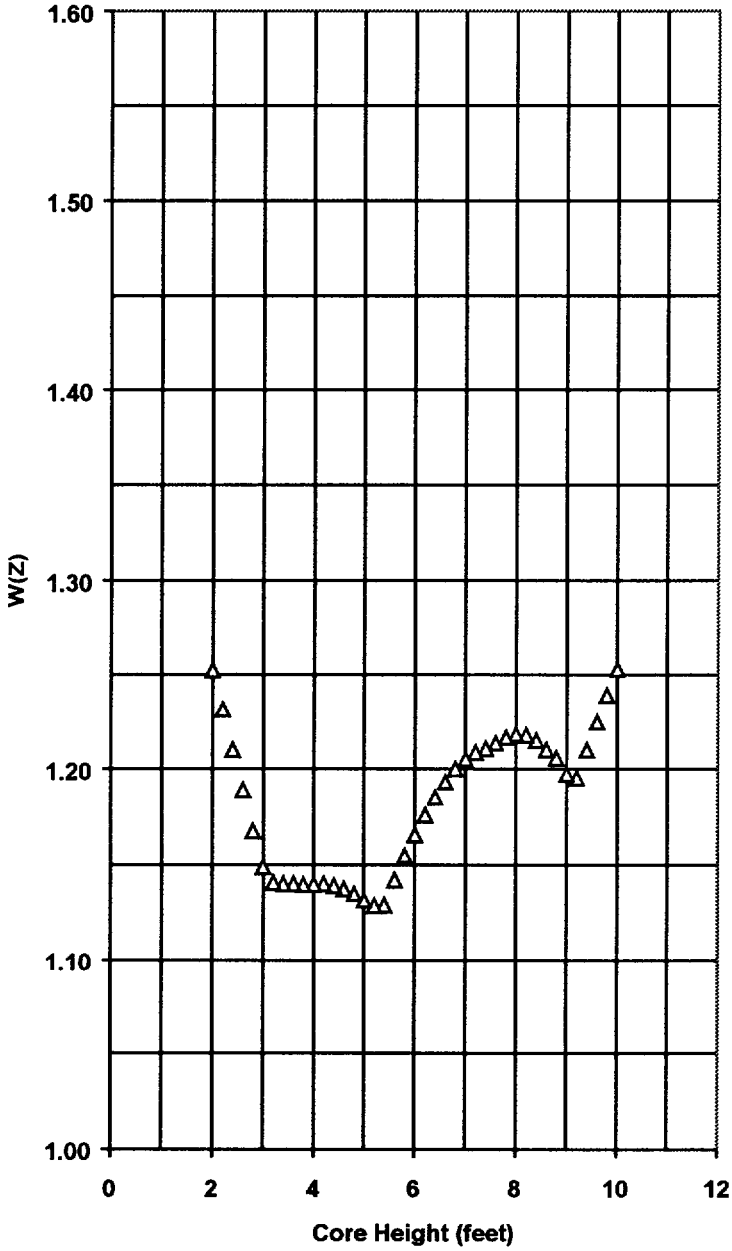


Figure 4
RAOC W(Z) at 150 MWD/MTU

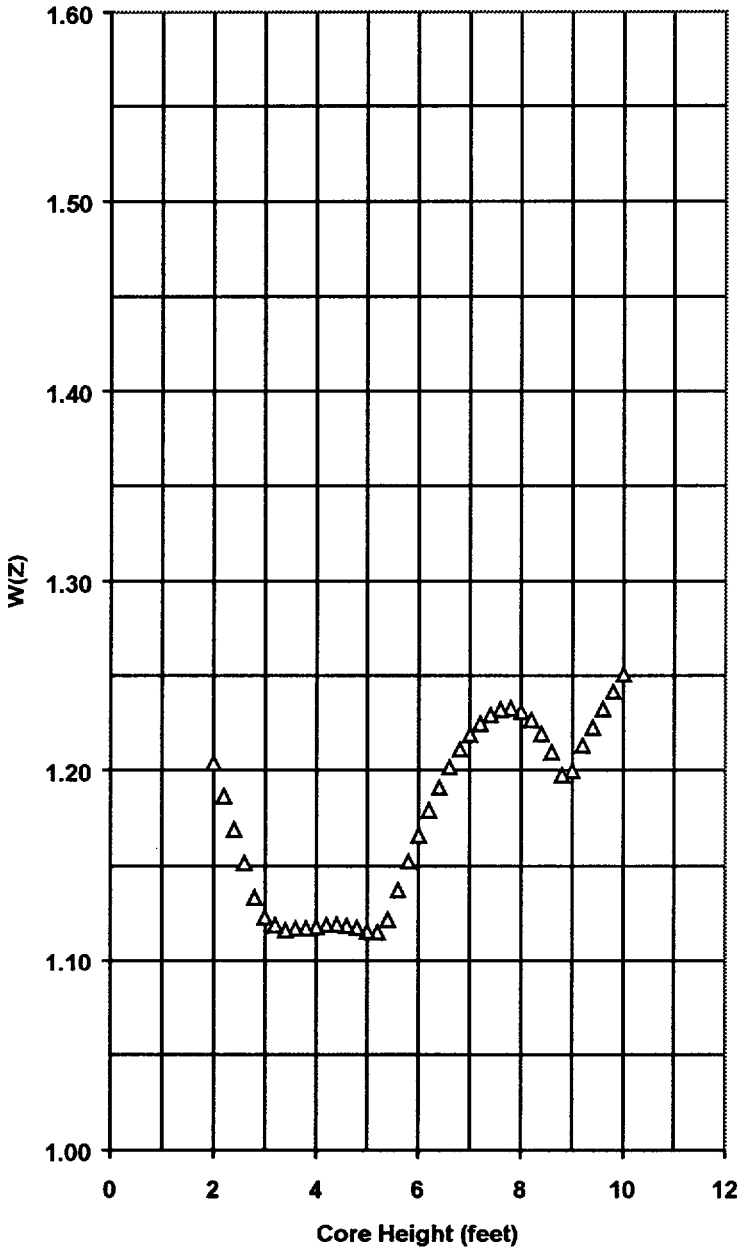


	Axial Point	Elevation (feet)	BOL W(Z)
*	1	12.00	1.0000
*	2	11.80	1.0000
*	3	11.60	1.0000
*	4	11.40	1.0000
*	5	11.20	1.0000
*	6	11.00	1.0000
*	7	10.80	1.0000
*	8	10.60	1.0000
*	9	10.40	1.0000
*	10	10.20	1.0000
	11	10.00	1.2528
	12	9.80	1.2389
	13	9.60	1.2247
	14	9.40	1.2099
	15	9.20	1.1954
	16	9.00	1.1972
	17	8.80	1.2057
	18	8.60	1.2101
	19	8.40	1.2150
	20	8.20	1.2178
	21	8.00	1.2183
	22	7.80	1.2167
	23	7.60	1.2136
	24	7.40	1.2108
	25	7.20	1.2087
	26	7.00	1.2052
	27	6.80	1.2000
	28	6.60	1.1932
	29	6.40	1.1851
	30	6.20	1.1759
	31	6.00	1.1655
	32	5.80	1.1546
	33	5.60	1.1420
	34	5.40	1.1290
	35	5.20	1.1287
	36	5.00	1.1314
	37	4.80	1.1348
	38	4.60	1.1374
	39	4.40	1.1391
	40	4.20	1.1400
	41	4.00	1.1397
	42	3.80	1.1395
	43	3.60	1.1400
	44	3.40	1.1400
	45	3.20	1.1407
	46	3.00	1.1487
	47	2.80	1.1676
	48	2.60	1.1890
	49	2.40	1.2102
	50	2.20	1.2314
	51	2.00	1.2524
*	52	1.80	1.0000
*	53	1.60	1.0000
*	54	1.40	1.0000
*	55	1.20	1.0000
*	56	1.00	1.0000
*	57	0.80	1.0000
*	58	0.60	1.0000
*	59	0.40	1.0000
*	60	0.20	1.0000
*	61	0.00	1.0000

* Top and Bottom 15% Excluded per Technical Specification B3.2.1.

This figure is referred to by Technical Specification B3.2.1.

Figure 5
RAOC W(Z) at 4000 MWD/MTU

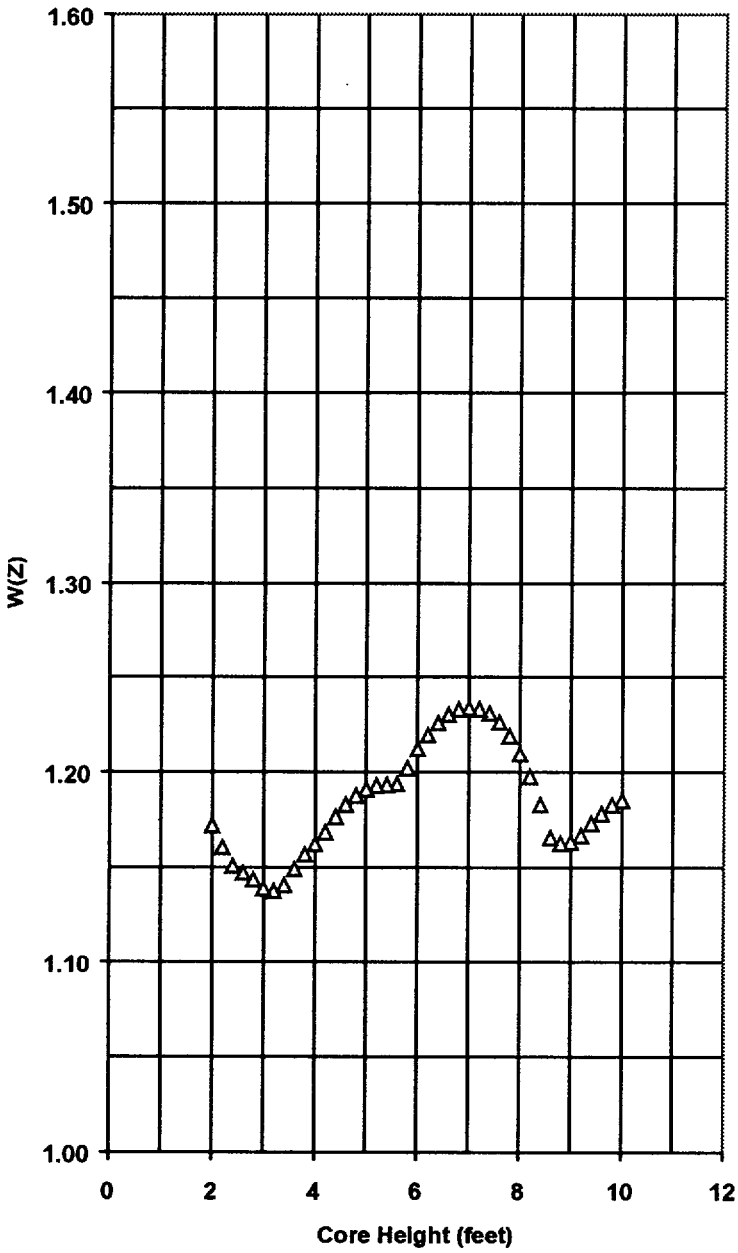


	Axial Point	Elevation (feet)	MOL-1 W(Z)
*	1	12.00	1.0000
*	2	11.80	1.0000
*	3	11.60	1.0000
*	4	11.40	1.0000
*	5	11.20	1.0000
*	6	11.00	1.0000
*	7	10.80	1.0000
*	8	10.60	1.0000
*	9	10.40	1.0000
*	10	10.20	1.0000
	11	10.00	1.2507
	12	9.80	1.2415
	13	9.60	1.2322
	14	9.40	1.2225
	15	9.20	1.2129
	16	9.00	1.1996
	17	8.80	1.1974
	18	8.60	1.2095
	19	8.40	1.2192
	20	8.20	1.2263
	21	8.00	1.2307
	22	7.80	1.2326
	23	7.60	1.2320
	24	7.40	1.2290
	25	7.20	1.2246
	26	7.00	1.2186
	27	6.80	1.2109
	28	6.60	1.2015
	29	6.40	1.1908
	30	6.20	1.1789
	31	6.00	1.1659
	32	5.80	1.1522
	33	5.60	1.1371
	34	5.40	1.1216
	35	5.20	1.1149
	36	5.00	1.1152
	37	4.80	1.1172
	38	4.60	1.1183
	39	4.40	1.1189
	40	4.20	1.1187
	41	4.00	1.1175
	42	3.80	1.1169
	43	3.60	1.1167
	44	3.40	1.1158
	45	3.20	1.1186
	46	3.00	1.1228
	47	2.80	1.1332
	48	2.60	1.1514
	49	2.40	1.1688
	50	2.20	1.1863
	51	2.00	1.2038
*	52	1.80	1.0000
*	53	1.60	1.0000
*	54	1.40	1.0000
*	55	1.20	1.0000
*	56	1.00	1.0000
*	57	0.80	1.0000
*	58	0.60	1.0000
*	59	0.40	1.0000
*	60	0.20	1.0000
*	61	0.00	1.0000

* Top and Bottom 15% Excluded per Technical Specification B3.2.1.

This figure is referred to by Technical Specification B3.2.1.

Figure 6
RAOC W(Z) at 10000 MWD/MTU

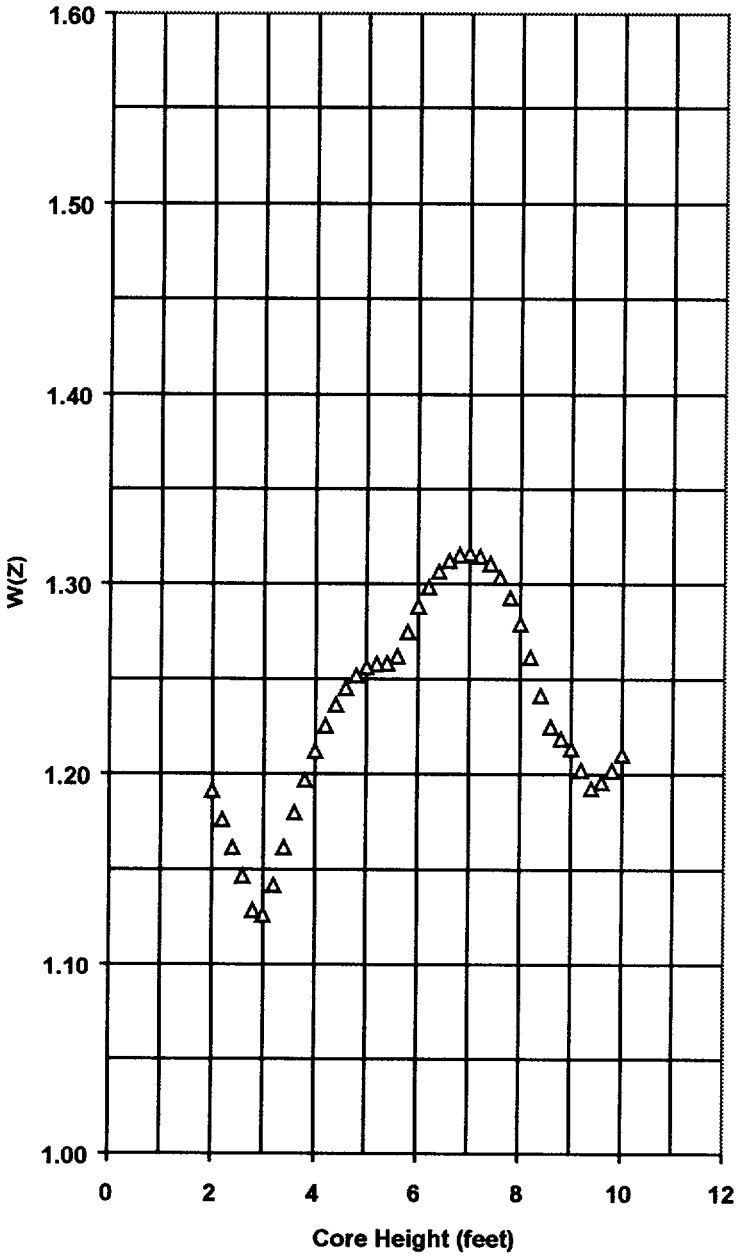


	Axial Point	Elevation (feet)	MOL-2 W(Z)
*	1	12.00	1.0000
*	2	11.80	1.0000
*	3	11.60	1.0000
*	4	11.40	1.0000
*	5	11.20	1.0000
*	6	11.00	1.0000
*	7	10.80	1.0000
*	8	10.60	1.0000
*	9	10.40	1.0000
*	10	10.20	1.0000
	11	10.00	1.1852
	12	9.80	1.1826
	13	9.60	1.1782
	14	9.40	1.1732
	15	9.20	1.1668
	16	9.00	1.1634
	17	8.80	1.1628
	18	8.60	1.1656
	19	8.40	1.1827
	20	8.20	1.1976
	21	8.00	1.2095
	22	7.80	1.2191
	23	7.60	1.2262
	24	7.40	1.2309
	25	7.20	1.2331
	26	7.00	1.2337
	27	6.80	1.2330
	28	6.60	1.2303
	29	6.40	1.2259
	30	6.20	1.2196
	31	6.00	1.2122
	32	5.80	1.2019
	33	5.60	1.1938
	34	5.40	1.1933
	35	5.20	1.1929
	36	5.00	1.1909
	37	4.80	1.1876
	38	4.60	1.1828
	39	4.40	1.1765
	40	4.20	1.1684
	41	4.00	1.1623
	42	3.80	1.1568
	43	3.60	1.1492
	44	3.40	1.1406
	45	3.20	1.1375
	46	3.00	1.1388
	47	2.80	1.1437
	48	2.60	1.1471
	49	2.40	1.1509
	50	2.20	1.1605
	51	2.00	1.1719
*	52	1.80	1.0000
*	53	1.60	1.0000
*	54	1.40	1.0000
*	55	1.20	1.0000
*	56	1.00	1.0000
*	57	0.80	1.0000
*	58	0.60	1.0000
*	59	0.40	1.0000
*	60	0.20	1.0000
*	61	0.00	1.0000

* Top and Bottom 15% Excluded per Technical Specification B3.2.1.

This figure is referred to by Technical Specification B3.2.1.

Figure 7
RAOC W(Z) at 16000 MWD/MTU



	Axial Point	Elevation (feet)	EOL W(Z)
*	1	12.00	1.0000
*	2	11.80	1.0000
*	3	11.60	1.0000
*	4	11.40	1.0000
*	5	11.20	1.0000
*	6	11.00	1.0000
*	7	10.80	1.0000
*	8	10.60	1.0000
*	9	10.40	1.0000
*	10	10.20	1.0000
	11	10.00	1.2102
	12	9.80	1.2021
	13	9.60	1.1959
	14	9.40	1.1926
	15	9.20	1.2022
	16	9.00	1.2135
	17	8.80	1.2188
	18	8.60	1.2249
	19	8.40	1.2415
	20	8.20	1.2615
	21	8.00	1.2789
	22	7.80	1.2926
	23	7.60	1.3032
	24	7.40	1.3104
	25	7.20	1.3143
	26	7.00	1.3158
	27	6.80	1.3151
	28	6.60	1.3120
	29	6.40	1.3063
	30	6.20	1.2981
	31	6.00	1.2881
	32	5.80	1.2746
	33	5.60	1.2619
	34	5.40	1.2583
	35	5.20	1.2579
	36	5.00	1.2561
	37	4.80	1.2518
	38	4.60	1.2453
	39	4.40	1.2365
	40	4.20	1.2254
	41	4.00	1.2121
	42	3.80	1.1968
	43	3.60	1.1798
	44	3.40	1.1615
	45	3.20	1.1417
	46	3.00	1.1262
	47	2.80	1.1284
	48	2.60	1.1465
	49	2.40	1.1614
	50	2.20	1.1762
	51	2.00	1.1912
*	52	1.80	1.0000
*	53	1.60	1.0000
*	54	1.40	1.0000
*	55	1.20	1.0000
*	56	1.00	1.0000
*	57	0.80	1.0000
*	58	0.60	1.0000
*	59	0.40	1.0000
*	60	0.20	1.0000
*	61	0.00	1.0000

* Top and Bottom 15% Excluded per Technical Specification B3.2.1.

This figure is referred to by Technical Specification B3.2.1.