QA: QA

TDR-UDC-NU-000004 REV 01

August 2001

Summary Report of Commercial Reactor Criticality Data for Three Mile Island Unit 1

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Under Contract Number
DE-AC08-01RW12101

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Bechtel SAIC Company, LLC.

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for Three Mile Island Unit 1

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CHANGE HISTORY

<u>Revision</u> <u>Number</u>	<u>Interim</u> <u>Change No.</u>	<u>Date</u>	<u>Description of Change</u>
REV 00		April 1998	Initial issuance
REV 01		August 2001	This document replaces an earlier version of this document (statepoints 59 through 61) of the same title issued under DI B000000000-01717-5705-00069 Rev. 00. Additional statepoints (62 through 74) are included in this revision. Updated burnup and thermal hydraulic information tables for series "D", and "E" fuel have been included.

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ACKNOWLEDGMENT

The author (preparer) would like to express his thanks to Exelon Nuclear for their assistance with gathering and verifying the information used to model the critical statepoint conditions for the Three Mile Island Unit 1 reactor. The author would also like to thank the AmerGen Energy Company for granting permission to publish this information.

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CONTENTS

	Page
ACKNOWLEDGEMENT	vii
ACRONYMS & ABBREVIATIONS.....	xix
1. INTRODUCTION	1-1
1.1 BACKGROUND	1-1
1.2 OBJECTIVE	1-1
1.3 SCOPE	1-1
1.4 QUALITY ASSURANCE.....	1-2
2. REACTOR AND FUEL DESIGN INFORMATION.....	2-1
2.1 FUEL ASSEMBLY AND CORE DATA.....	2-4
2.2 MARK-B4 AND -B4Z FUEL ASSEMBLY	2-6
2.3 MARK-B8 FUEL ASSEMBLY	2-16
2.4 MARK-B9 FUEL ASSEMBLY	2-24
2.5 MARK-B10 FUEL ASSEMBLY	2-33
2.6 CONTROL COMPONENTS.....	2-42
2.6.1 RCCA	2-42
2.6.2 Black APSR.....	2-45
2.6.3 Gray APSR	2-47
2.6.4 BPRA	2-49
3. FUEL CYCLE DESIGN INFORMATION.....	3-1
3.1 FUEL BATCH DATA.....	3-1
3.2 FUEL ASSEMBLY DATA	3-3
4. CORE OPERATIONS AND STATEPOINT INFORMATION	4-1
4.1 CORE FOLLOW DATA	4-1
4.2 CORE FOLLOW-CONTROL ROD HISTORY AND BORON DATA	4-127
4.3 STATEPOINT CRITICAL CONDITIONS AND MEASUREMENTS	4-144
5. CONCLUSIONS.....	5-1
6. REFERENCES	6-1
6.1 DOCUMENTS CITED	6-1
6.2 CODES, STANDARDS, REGULATIONS, AND PROCEDURES.....	6-1
6.3 SOURCE DATA, LISTED BY DATA TRACKING NUMBER	6-1
APPENDIX A - FUEL ROD DATA FOR ASSEMBLIES NJ05YU & NJ070G	A-1

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FIGURES

	Page
2-1. Radial View of the Reactor Vessel and Internals along Core Midplane	2-2
2-2. Fuel Assembly Radial View Layout and Dimensions	2-3
2-3. Mark-B4 Assembly Axial Dimensions by Region	2-11
2-4. Mark-B4Z Assembly Axial Dimensions by Region	2-12
2-5. Mark-B4 & -B4Z Assembly Axial Dimensions for Guide Tubes	2-13
2-6. Mark-B4 & -B4Z Assembly Axial Dimensions for Instrument Tube	2-14
2-7. Mark-B4 & -B4Z Assembly Axial Dimensions for Standard Fuel Rod	2-15
2-8. Mark-B8 Assembly Axial Dimensions by Region	2-20
2-9. Mark-B8 Assembly Axial Dimensions for Guide Tubes	2-21
2-10. Mark-B8 Assembly Axial Dimensions for Instrument Tube	2-22
2-11. Mark-B8 Assembly Axial Dimensions for Standard Fuel Rod	2-23
2-12. Mark-B9 Assembly Axial Dimensions by Region	2-28
2-13. Mark-B9 Assembly Axial Dimensions for Guide Tubes	2-29
2-14. Mark-B9 Assembly Axial Dimensions for Instrument Tube	2-30
2-15. Mark-B9 Assembly Axial Dimensions - Standard Fuel Rod	2-31
2-16. Mark-B9 Assembly Axial Dimensions - Gadolinia Fuel Rod	2-32
2-17. Mark-B10 Assembly Axial Dimensions by Region	2-37
2-18. Mark-B10 Assembly Axial Dimensions for Guide Tubes	2-38
2-19. Mark-B10 Assembly Axial Dimensions for Instrument Tube	2-39
2-20. Mark-B10 Assembly Axial Dimensions for Standard Fuel Rod	2-40
2-21. Mark-B10 Assembly Axial Dimensions for Gadolinia Fuel Rod	2-41
2-22. Mark-B Assembly Axial Dimensions for RCCA 0 % Withdrawn	2-43
2-23. Mark-B Assembly with RCCA, Black, and Gray APSR 100 % Withdrawn	2-44
2-24. Mark-B Assembly Axial Dimensions with Black APSR 0 % Withdrawn	2-46
2-25. Mark-B Assembly Axial Dimensions with Gray APSR 0 % Withdrawn	2-48
2-26. Mark-B Assembly Axial Dimensions for BPRA Inserted	2-50
3-1. One-Eighth Core Loading for TMI-1 (0.0 – 256.0 EFPD), Cycle 1A	3-4
3-2. One-Eighth Core Loading for TMI-1 (256.0 – 466.4 EFPD), Cycle 1B	3-5
3-3. One-Eighth Core Loading for TMI-1, Cycle 2	3-6
3-4. One-Eighth Core Loading for TMI-1, Cycle 3	3-7
3-5. One-Eighth Core Loading for TMI-1, Cycle 4	3-8
3-6. One-Eighth Core Loading for TMI-1, Cycle 5	3-9
3-7. One-Eighth Core Loading for TMI-1, Cycle 6	3-10
3-8. One-Eighth Core Loading for TMI-1, Cycle 7	3-11
3-9. One-Eighth Core Loading for TMI-1, Cycle 8	3-12
3-10. One-Eighth Core Loading for TMI-1, Cycle 9	3-13
3-11. One-Eighth Core Loading for TMI-1, Cycle 10	3-14
3-12. One-Eighth Core Loading for TMI-1, Cycle 11	3-15
3-13. TMI-1, Cycle 1 Fuel Assembly Identification & Location	3-16
3-14. TMI-1, Cycle 2 Fuel Assembly Identification & Location	3-17
3-15. TMI-1, Cycle 3 Fuel Assembly Identification & Location	3-18
3-16. TMI-1, Cycle 4 Fuel Assembly Identification & Location	3-19

FIGURES

	Page
3-17. TMI-1, Cycle 5 Fuel Assembly Identification & Location.....	3-20
3-18. TMI-1, Cycle 6 Fuel Assembly Identification & Location.....	3-21
3-19. TMI-1, Cycle 7 Fuel Assembly Identification & Location.....	3-22
3-20. TMI-1, Cycle 8 Fuel Assembly Identification & Location.....	3-23
3-21. TMI-1, Cycle 9 Fuel Assembly Identification & Location.....	3-24
3-22. TMI-1, Cycle 10 Fuel Assembly Identification & Location.....	3-25
3-23. TMI-1, Cycle 11 Fuel Assembly Identification & Location.....	3-26
 4-1. TMI-1 Active Fuel Length for Statepoint Analysis.....	 4-2
 A-1. TMI-1 Cycle 9 Assembly NJ05YU Location	 A-2
A-2. TMI-1 Cycle 10 Assembly NJ05YU and NJ070G Location	A-3
A-3. TMI-1 Fuel Rod Locations in Assembly NJ05YU	A-4
A-4. TMI-1 Fuel Rod Locations in Assembly NJ070G.....	A-5

TABLES

	Page
2-1. Dimensions from Core Center to Outside Surface of Pressure Vessel	2-1
2-2. Three Mile Island Unit 1 Fuel Assembly/Core Data	2-5
2-3. Mark-B4 & -B4Z Assembly VFs by Region	2-6
2-4. Mark-B4 & -B4Z Assembly VFs with RCCAs 0% Withdrawn	2-7
2-5. Mark-B4 & -B4Z Assembly VFs with RCCAs & APSRs 100% Withdrawn	2-7
2-6. Mark-B4 & -B4Z Assembly VFs with Black APSRs 0 % Withdrawn	2-8
2-7. Mark-B4 & -B4Z Assembly VFs with Gray APSRs 0 % Withdrawn	2-8
2-8. Mark-B4 & -B4Z Assembly VFs with BPRAs Inserted	2-9
2-9. Mark-B4 & -B4Z Fuel Rod VFs by Region	2-9
2-10. Mark-B8 Assembly VFs by Region	2-16
2-11. Mark-B8 Assembly VFs with RCCAs 0% Withdrawn	2-16
2-12. Mark-B8 Assembly VFs with RCCAs & APSRs 100% Withdrawn	2-17
2-13. Mark-B8 Assembly VFs with Gray APSRs 0 % Withdrawn	2-17
2-14. Mark-B8 Assembly VFs with BPRAs Inserted	2-18
2-15. Mark-B8 Fuel Rod VFs by Region	2-18
2-16. Mark-B9 Assembly VFs by Region	2-24
2-17. Mark-B9 Assembly VFs with RCCAs 0% Withdrawn	2-24
2-18. Mark-B9 Assembly VFs with RCCAs & Gray APSRs 100% Withdrawn	2-25
2-19. Mark-B9 Assembly VFs with Gray APSRs 0 % Withdrawn	2-25
2-20. Mark-B9 Assembly VFs with BPRAs Inserted	2-26
2-21. Mark-B9 Standard Fuel Rod VFs by Region	2-26
2-22. Mark-B9 Gadolinia Fuel Rod VFs by Region	2-27
2-23. Mark-B10 Assembly VFs by Region	2-33
2-24. Mark-B10 Assembly VFs with RCCAs 0% Withdrawn	2-33
2-25. Mark-B10 Assembly VFs with RCCAs and Gray APSRs 100% Withdrawn	2-34
2-26. Mark-B10 Assembly VFs with Gray APSRs 0 % Withdrawn	2-34
2-27. Mark-B10 Assembly VFs with BPRAs Inserted	2-35
2-28. Mark-B10 Standard Fuel Rod VFs by Region	2-36
2-29. Mark-B10 Gadolinia Fuel Rod VFs by Region	2-36
3-1. Fuel Assembly/Fuel Rod/Cycle Description for Cycles 1 through 11	3-1
3-2. Statepoint Information for Cycles 1 through 11	3-2
3-3. Fuel Assembly Locations by Cycle	3-28
3-4. TMI-1 FA and Control Component Locations	3-32
4-1. Assembly Axial Nodal Spacing	4-1
4-2. Burnup and TH Feedback Parameters by Axial Node for Assembly B15	4-3
4-3. Burnup and TH Feedback Parameters by Axial Node for Assembly B21	4-4
4-4. Burnup and TH Feedback Parameters by Axial Node for Assembly B21a	4-5
4-5. Burnup and TH Feedback Parameters by Axial Node for Assembly B28	4-6
4-6. Burnup and TH Feedback Parameters by Axial Node for Assembly B29	4-7
4-7. Burnup and TH Feedback Parameters by Axial Node for Assembly C8	4-8
4-8. Burnup and TH Feedback Parameters by Axial Node for Assembly C15	4-9

TABLES

	Page
4-9. Burnup and TH Feedback Parameters by Axial Node for Assembly C15a.....	4-10
4-10. Burnup and TH Feedback Parameters by Axial Node for Assembly C20	4-11
4-11. Burnup and TH Feedback Parameters by Axial Node for Assembly C21	4-12
4-12. Burnup and TH Feedback Parameters by Axial Node for Assembly C25	4-13
4-13. Burnup and TH Feedback Parameters by Axial Node for Assembly C28	4-14
4-14. Burnup and TH Feedback Parameters by Axial Node for Assembly C29	4-15
4-15. Burnup and TH Feedback Parameters by Axial Node for Assembly D8	4-16
4-16. Burnup and TH Feedback Parameters by Axial Node for Assembly D15	4-17
4-17. Burnup and TH Feedback Parameters by Axial Node for Assembly D15a	4-18
4-18. Burnup and TH Feedback Parameters by Axial Node for Assembly D20	4-19
4-19. Burnup and TH Feedback Parameters by Axial Node for Assembly D20a	4-20
4-20. Burnup and TH Feedback Parameters by Axial Node for Assembly D21	4-21
4-21. Burnup and TH Feedback Parameters by Axial Node for Assembly D25	4-22
4-22. Burnup and TH Feedback Parameters by Axial Node for Assembly D25a	4-23
4-23. Burnup and TH Feedback Parameters by Axial Node for Assembly D27	4-24
4-24. Burnup and TH Feedback Parameters by Axial Node for Assembly D27a	4-25
4-25. Burnup and TH Feedback Parameters by Axial Node for Assembly D28	4-26
4-26. Burnup and TH Feedback Parameters by Axial Node for Assembly E8.....	4-27
4-27. Burnup and TH Feedback Parameters by Axial Node for Assembly E15.....	4-28
4-28. Burnup and TH Feedback Parameters by Axial Node for Assembly E20.....	4-30
4-29. Burnup and TH Feedback Parameters by Axial Node for Assembly E20a.....	4-32
4-30. Burnup and TH Feedback Parameters by Axial Node for Assembly E20b.....	4-33
4-31. Burnup and TH Feedback Parameters by Axial Node for Assembly E20c.....	4-35
4-32. Burnup and TH Feedback Parameters by Axial Node for Assembly E21.....	4-36
4-33. Burnup and TH Feedback Parameters by Axial Node for Assembly E25.....	4-38
4-34. Burnup and TH Feedback Parameters by Axial Node for Assembly E27.....	4-39
4-35. Burnup and TH Feedback Parameters by Axial Node for Assembly E28.....	4-40
4-36. Burnup and TH Feedback Parameters by Axial Node for Assembly F2.....	4-42
4-37. Burnup and TH Feedback Parameters by Axial Node for Assembly F4.....	4-43
4-38. Burnup and TH Feedback Parameters by Axial Node for Assembly F6.....	4-44
4-39. Burnup and TH Feedback Parameters by Axial Node for Assembly F10.....	4-45
4-40. Burnup and TH Feedback Parameters by Axial Node for Assembly F12.....	4-46
4-41. Burnup and TH Feedback Parameters by Axial Node for Assembly F14.....	4-48
4-42. Burnup and TH Feedback Parameters by Axial Node for Assembly F14a	4-49
4-43. Burnup and TH Feedback Parameters by Axial Node for Assembly F17.....	4-50
4-44. Burnup and TH Feedback Parameters by Axial Node for Assembly F17a	4-51
4-45. Burnup and TH Feedback Parameters by Axial Node for Assembly F19.....	4-52
4-46. Burnup and TH Feedback Parameters by Axial Node for Assembly F23.....	4-53
4-47. Burnup and TH Feedback Parameters by Axial Node for Assembly F25.....	4-54
4-48. Burnup and TH Feedback Parameters by Axial Node for Assembly F27.....	4-55
4-49. Burnup and TH Feedback Parameters by Axial Node for Assembly G2	4-56
4-50. Burnup and TH Feedback Parameters by Axial Node for Assembly G4	4-57
4-51. Burnup and TH Feedback Parameters by Axial Node for Assembly G6	4-58

TABLES

	Page
4-52. Burnup and TH Feedback Parameters by Axial Node for Assembly G10	4-59
4-53. Burnup and TH Feedback Parameters by Axial Node for Assembly G12	4-60
4-54. Burnup and TH Feedback Parameters by Axial Node for Assembly G12a	4-61
4-55. Burnup and TH Feedback Parameters by Axial Node for Assembly G14	4-62
4-56. Burnup and TH Feedback Parameters by Axial Node for Assembly G17	4-63
4-57. Burnup and TH Feedback Parameters by Axial Node for Assembly G19	4-64
4-58. Burnup and TH Feedback Parameters by Axial Node for Assembly G23	4-65
4-59. Burnup and TH Feedback Parameters by Axial Node for Assembly G25	4-66
4-60. Burnup and TH Feedback Parameters by Axial Node for Assembly G25a	4-67
4-61. Burnup and TH Feedback Parameters by Axial Node for Assembly G27	4-68
4-62. Burnup and TH Feedback Parameters by Axial Node for Assembly G27a	4-69
4-63. Burnup and TH Feedback Parameters by Axial Node for Assembly H6	4-70
4-64. Burnup and TH Feedback Parameters by Axial Node for Assembly H10	4-72
4-65. Burnup and TH Feedback Parameters by Axial Node for Assembly H10a	4-72
4-66. Burnup and TH Feedback Parameters by Axial Node for Assembly H10b	4-74
4-67. Burnup and TH Feedback Parameters by Axial Node for Assembly H12	4-75
4-68. Burnup and TH Feedback Parameters by Axial Node for Assembly H12a	4-77
4-69. Burnup and TH Feedback Parameters by Axial Node for Assembly H14	4-77
4-70. Burnup and TH Feedback Parameters by Axial Node for Assembly H17	4-79
4-71. Burnup and TH Feedback Parameters by Axial Node for Assembly H19	4-79
4-72. Burnup and TH Feedback Parameters by Axial Node for Assembly H20	4-81
4-73. Burnup and TH Feedback Parameters by Axial Node for Assembly H23	4-81
4-74. Burnup and TH Feedback Parameters by Axial Node for Assembly H25	4-83
4-75. Burnup and TH Feedback Parameters by Axial Node for Assembly H25a	4-83
4-76. Burnup and TH Feedback Parameters by Axial Node for Assembly H27	4-84
4-77. Burnup and TH Feedback Parameters by Axial Node for Assembly H27a	4-84
4-78. Burnup and TH Feedback Parameters by Axial Node for Assembly J2.....	4-85
4-79. Burnup and TH Feedback Parameters by Axial Node for Assembly J10.....	4-86
4-80. Burnup and TH Feedback Parameters by Axial Node for Assembly J12.....	4-88
4-81. Burnup and TH Feedback Parameters by Axial Node for Assembly J12a.....	4-89
4-82. Burnup and TH Feedback Parameters by Axial Node for Assembly J14.....	4-90
4-83. Burnup and TH Feedback Parameters by Axial Node for Assembly J17.....	4-91
4-84. Burnup and TH Feedback Parameters by Axial Node for Assembly J17a.....	4-93
4-85. Burnup and TH Feedback Parameters by Axial Node for Assembly J19.....	4-94
4-86. Burnup and TH Feedback Parameters by Axial Node for Assembly J20.....	4-95
4-87. Burnup and TH Feedback Parameters by Axial Node for Assembly J23.....	4-96
4-88. Burnup and TH Feedback Parameters by Axial Node for Assembly J25.....	4-97
4-89. Burnup and TH Feedback Parameters by Axial Node for Assembly J25a.....	4-98
4-90. Burnup and TH Feedback Parameters by Axial Node for Assembly J27.....	4-99
4-91. Burnup and TH Feedback Parameters by Axial Node for Assembly J27a.....	4-100
4-92. Burnup and TH Feedback Parameters by Axial Node for Assembly K2	4-101
4-93. Burnup and TH Feedback Parameters by Axial Node for Assembly K6	4-102
4-94. Burnup and TH Feedback Parameters by Axial Node for Assembly K10	4-104

TABLES

	Page
4-95. Burnup and TH Feedback Parameters by Axial Node for Assembly K10a	4-105
4-96. Burnup and TH Feedback Parameters by Axial Node for Assembly K12	4-107
4-97. Burnup and TH Feedback Parameters by Axial Node for Assembly K14	4-108
4-98. Burnup and TH Feedback Parameters by Axial Node for Assembly K17	4-110
4-99. Burnup and TH Feedback Parameters by Axial Node for Assembly K19	4-111
4-100. Burnup and TH Feedback Parameters by Axial Node for Assembly K19a	4-113
4-101. Burnup and TH Feedback Parameters by Axial Node for Assembly K20	4-114
4-102. Burnup and TH Feedback Parameters by Axial Node for Assembly K23	4-115
4-103. Burnup and TH Feedback Parameters by Axial Node for Assembly K25	4-116
4-104. Burnup and TH Feedback Parameters by Axial Node for Assembly K27	4-118
4-105. Burnup and TH Feedback Parameters by Axial Node for Assembly K27a	4-119
4-106. Burnup and TH Feedback Parameters by Axial Node for Assembly L2.....	4-121
4-107. Burnup and TH Feedback Parameters by Axial Node for Assembly L6.....	4-121
4-108. Burnup and TH Feedback Parameters by Axial Node for Assembly L10	4-122
4-109. Burnup and TH Feedback Parameters by Axial Node for Assembly L12.....	4-122
4-110. Burnup and TH Feedback Parameters by Axial Node for Assembly L14.....	4-123
4-111. Burnup and TH Feedback Parameters by Axial Node for Assembly L17.....	4-123
4-112. Burnup and TH Feedback Parameters by Axial Node for Assembly L19.....	4-124
4-113. Burnup and TH Feedback Parameters by Axial Node for Assembly L20.....	4-124
4-114. Burnup and TH Feedback Parameters by Axial Node for Assembly L23.....	4-125
4-115. Burnup and TH Feedback Parameters by Axial Node for Assembly L27.....	4-125
4-116. Burnup and TH Feedback Parameters by Axial Node for Assembly L28.....	4-126
4-117. Rod Insertion Time by Axial Node for Assembly B15	4-127
4-118. Rod Insertion Time by Axial Node for Assembly B21	4-128
4-119. Rod Insertion Time by Axial Node for Assembly B21a.....	4-128
4-120. Rod Insertion Time by Axial Node for Assembly B29	4-129
4-121. Rod Insertion Time by Axial Node for Assembly C21	4-129
4-122. Rod Insertion Time by Axial Node for Assembly C28	4-130
4-123. Rod Insertion Time by Axial Node for Assembly C29	4-130
4-124. Rod Insertion Time by Axial Node for Assembly D15	4-131
4-125. Rod Insertion Time by Axial Node for Assembly D15a	4-131
4-126. Rod Insertion Time by Axial Node for Assembly D20a	4-132
4-127. Rod Insertion Time by Axial Node for Assembly D21	4-132
4-128. Rod Insertion Time by Axial Node for Assembly D25a	4-133
4-129. Rod Insertion Time by Axial Node for Assembly D28	4-133
4-130. Rod Insertion Time by Axial Node for Assembly F2.....	4-134
4-131. Rod Insertion Time by Axial Node for Assembly F4.....	4-134
4-132. Rod Insertion Time by Axial Node for Assembly F23.....	4-135
4-133. Rod Insertion Time by Axial Node for Assembly G2.....	4-135
4-134. Rod Insertion Time by Axial Node for Assembly G10	4-136
4-135. Rod Insertion Time by Axial Node for Assembly G27a	4-136
4-136. Rod Insertion Time by Axial Node for Assembly H10a	4-137
4-137. Rod Insertion Time by Axial Node for Assembly H10b	4-137

TABLES

	Page
4-138. Rod Insertion Time by Axial Node for Assembly H12	4-138
4-139. Rod Insertion Time by Axial Node for Assembly H23	4-138
4-140. Rod Insertion Time by Axial Node for Assembly H27a	4-139
4-141. Rod Insertion Time by Axial Node for Assembly J20	4-139
4-142. Rod Insertion Time by Axial Node for Assembly J27	4-140
4-143. Rod Insertion Time by Axial Node for Assembly J27a.....	4-140
4-144. Rod Insertion Time by Axial Node for Assembly K6	4-141
4-145. Rod Insertion Time by Axial Node for Assembly K12	4-141
4-146. Rod Insertion Time by Axial Node for Assembly K27	4-142
4-147. All-Rods-Out-Critical-Boron Data for TMI-1	4-143
4-148. Statepoint Data for TMI-1 - Measured Critical Conditions.....	4-145
4-149. Statepoint Data for TMI 1 - Shutdown and Startup Dates.....	4-145
A-1. Assembly & Fuel Rod Uranium Loading (Assemblies NJ05YU & NJ070G)	A-6
A-2. Fuel Rod Geometric & Material Data (Assemblies NJ05YU & NJ070G).....	A-6
A-3. Fuel Pellet Uranium Isotopic (wt %)	A-7
A-4. Fuel Rod Data for Assembly NJ05YU	A-7
A-5. Fuel Rod Data for Assembly NJ070G	A-18

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ACRONYMS AND ABBREVIATIONS

Acronyms

APSR	Axial Power Shaping Rod
ARO CB	all rods out critical boron
BOC	beginning of cycle
BPRA	Burnable Poison Rod Assemblies
CRC	Commercial Reactor Criticality
CRGT	control rod guide tube
DOE	U. S. Department of Energy
DP	datapoint
DTN	Data Tracking Number
EFPD	effective full power days
EOC	end of cycle
FA	fuel assembly
FCF	Framatome Cogema Fuels
ID	inside diameter
NRC	U.S. Nuclear Regulatory Commission
OCRWM	Office of Civilian Radioactive Waste Management
OD	outside diameter
ppmB	parts per million Boron
QARD	Quality Assurance Requirements and Description
RCCA	Rod Cluster Control Assembly
SP	statepoint
TD	Theoretical Density
TH	thermal-hydraulic
TMI-1	Three Mile Island Unit 1
VF	Volume Fraction
WD	withdrawn

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1. INTRODUCTION

The *Summary Report of Commercial Reactor Criticality Data for Three Mile Island Unit 1* contains the detailed information necessary to perform commercial reactor criticality (CRC) analyses for the fuel used in the Three Mile Island Unit 1 (TMI-1) reactor.

1.1 BACKGROUND

The United States Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM) is developing a methodology for criticality analysis to support disposal of commercial spent nuclear fuel in a geologic repository. A topical report on the disposal criticality analysis methodology was submitted to the United States Nuclear Regulatory Commission (NRC) for formal review in March 2001 (YMP 2000). This summary report provides data that was and will be used in analyses that will support the validation of parts of the disposal criticality analysis methodology. This technical report is prepared per Technical Work Plan TWP-EBS-MD-000004, *Technical Work Plan for: Waste Package Design Description for LA* (BSC 2001).

1.2 OBJECTIVE

The objective of the *Summary Report of Commercial Reactor Criticality Data for Three Mile Island Unit 1* is to present the CRC data for the TMI-1 reactor. Results from the CRC evaluations will support the development and validation of the neutronics models used for criticality analyses involving commercial spent nuclear fuel. These models and their validation are discussed in the *Disposal Criticality Analysis Methodology Topical Report* (YMP 2000).

1.3 SCOPE

The scope of this Summary Report is the presentation of data required to perform 16 statepoint (SP) calculations from Cycles 1 through 11 of TMI-1. A statepoint is a point during a reactor startup when criticality is achieved and the measured critical conditions are obtained. Potential statepoints include initial reactor startup for each cycle and during the cycle following reactor shutdown. The only interface for the development of the information in this document is with Framatome ANP, formally Framatome Cogema Fuels (FCF). FCF independently requested and received permission from AmerGen Energy, the owner of TMI-1, to publish the information related to SP measurements that is recorded in this document. All the information contained in this report is documented in Framatome ANP/FCF calculation files (DTN: MO0106SPADEP01.007). The data provided in these references were obtained from various other reports, calculations, and drawings developed under a NRC accepted quality assurance program (Framatome Cogema Fuels 2000), and the data has supported prior licensing submittals. The technical information taken from reference (DTN: MO0106SPADEP01.007) are considered accepted data by the DOE issuance of a concurrence letter (Mellington 1999). The data therefore are considered acceptable for quality affecting activities and for use in analyses affecting procurement, construction, or fabrication.

1.4 QUALITY ASSURANCE

The development of the this report has been subject to the United States Department of Energy OCRWM *Quality Assurance Requirements and Description* (QARD) (DOE 2000) controls. The information, provided in this report, will be used to develop the methodology for evaluation of the potential Monitored Geologic Repository engineered barrier system. A number of classification analyses (e.g., CRWMS M&O 1999) have identified components of the engineered barrier system as items important to radiological safety and waste isolation.

No scientific and engineering software or computational software was used in the development of this report. Electronic management of data was accomplished in accordance with the controls specified in the Technical Work Plan (BSC 2001).

The work that is to be performed to support the License Application using this information will be performed in accordance with the then current versions of the QARD and NRC regulations. All information used for the License Application will be from acceptable sources and will be developed in accordance with the QARD requirements and NRC regulations.

2. REACTOR AND FUEL DESIGN INFORMATION

This section provides general material and geometry data for modeling the Three Mile Island Unit 1 (TMI-1) reactor and core for cycles 1 through 11. Figures 2-1 through 2-26 provide pictorial representations of various components that must be modeled. A radial view of the core and reactor internals is presented in Figure 2-1. There are 177 fuel assemblies in the reactor core region. A radial representation of a single fuel assembly is provided in Figure 2-2. The core liner, core barrel, thermal shield, and pressure vessel cladding are represented as stainless steel 304 (304SS). The pressure vessel is CS533, Type B carbon steel (ASTM A533/A533M-93, *Standard Specification for Pressure Vessel Plates, Alloy Steel, Quenched and Tempered, Manganese-Molybdenum and Manganese-Molybdenum-Nickel*). Table 2-1 provides dimensions from the center of the core (from Assembly 1, Assembly 2, Assembly 3, ..., Assembly 8, core liner, etc. - Figure 2-1) to the outside surface of the pressure vessel.

Table 2-1. Dimensions from Core Center to Outside Surface of Pressure Vessel

Description	Thickness (cm)	Outer Dimensions (cm)
Core Center	-	0.0
½ Fuel Assembly 1	10.84072	10.84072
Water	0.12954	10.97026
Fuel Assembly 2	21.68144	32.65170
Water	0.12954	32.78124
Fuel Assembly 3	21.68144	54.46268
Water	0.12954	54.59222
Fuel Assembly 4	21.68144	76.27366
Water	0.12954	76.40320
Fuel Assembly 5	21.68144	98.08464
Water	0.12954	98.21418
Fuel Assembly 6	21.68144	119.89562
Water	0.12954	120.02516
Fuel Assembly 7	21.68144	141.70660
Water	0.12954	141.83614
Fuel Assembly 8	21.68144	163.51758
Water	0.27442	163.79200
Core Liner	1.905	165.697
Water	13.373	179.070
Core Barrel	5.080	184.150
Water	2.540	186.690
Thermal Shield	5.080	191.770
Water	24.925	216.695
Pressure Vessel Clad	0.478	217.173
Pressure Vessel	21.433	238.606

Figure 2-1. Radial View of the Reactor Vessel and Internals along Core Midplane

Figure 2-2. Fuel Assembly Radial View Layout and Dimensions

2.1 FUEL ASSEMBLY AND CORE DATA

This section provides general material and geometry data for modeling the Babcock & Wilcox Mark-B fuel assemblies. The TMI-1 reactor core contains 177 fuel assemblies. The material and geometric data for the Mark-B4 fuel assembly is representative of the material and geometric data applicable to the Mark-B2 and Mark-B3 fuel assemblies. The data will be used in modeling each fuel assembly type for burnup calculations and the reactor criticality calculations.

Fuel Assembly Design - Babcock & Wilcox / FCF Mark-B Fuel Assemblies - Each fuel assembly consists of 208 fuel rods, 16 guide thimble tubes and 1 instrumentation thimble tube arranged within a supporting structure. The instrumentation thimble is located in the center position. The guide thimbles provide channels for insertion of either a rod cluster control assembly (RCCA), a neutron source assembly, a burnable poison rod assembly (BPRA) or an axial power shaping rod (APSR) assembly. If no component is inserted, the guide tube thimbles are filled with water. The guide tubes are connected to the grids, and the top and bottom nozzles. Figure 2-2 indicates a cross-section of the fuel assembly.

Two hundred and eight fuel rods are mechanically joined in a square array to form a fuel assembly. The fuel rods are supported at intervals along their length by grid assemblies, which maintain the lateral spacing between the rods throughout the design life of the assembly. The grids at the top and the bottom are made of Inconel-718 and the intermediate grids are made of Zircaloy-4. The Mark-B4 fuel assembly is an exception. In the Mark-B4 fuel design, the six intermediate spacer grids are made of Inconel-718. The fuel rods consist of natural or slightly enriched uranium dioxide ceramic cylindrical pellets contained in Zircaloy-4 tubing which is plugged and seal welded at the ends to encapsulate the fuel. All fuel rods are pressurized with helium.

The bottom end fitting (nozzle) is a box-like structure and made of 304SS. The top end fitting (nozzle) assembly functions as an upper structural element of the fuel assembly in addition to providing a protective housing for the RCCA, BPRA or other components. The top end fitting (nozzle) forging is stainless steel.

Table 2-2 summarizes fuel assembly and reactor core data for modeling the TMI-1 reactor for cycles 1 through 11. Additional fuel cycle design, core operations, and reactor criticality statepoint information are provided in Sections 3 and 4.

Table 2-2. Three Mile Island Unit 1 Fuel Assembly/Core Data

Parameter	Mark-B2/-B3 Mark-B4/-B4Z	Mark-B8	Mark-B9	Mark-B10
Fuel Assembly Array size	15 x 15			
Number of Fuel Rod (N_f) / Assy	208			
Number of Guide Tubes (N_{GT}) / Assy	16			
Number of Instrument Tubes (N_{IT}) / Assy	1			
Number of Assemblies in Core	177			
System Pressure – psia	2200 psi / 1.52×10^7 Pa			
Active Fuel Height (H)	360.172 cm	360.172 cm	357.111 cm	357.111 cm
Rod Pitch	1.44272 cm			
Assembly Pitch (P)	21.81098 cm			
Fuel Rod Clad Material	Zircaloy-4			
Fuel Rod Clad OD ^a (OD _C)	1.0922 cm			
Fuel Rod Clad ID ^b (ID _C)	0.95758 cm			
Fuel Pellet OD	0.936244 cm ^c	0.936244 cm	0.9398 cm	0.9398 cm
Fuel Rod End Cap Material	Zircaloy-4			
Guide Tube Material	Zircaloy-4			
Guide Tube OD (OD _{GT})	1.3462 cm			
Guide Tube ID (ID _{GT})	1.26492 cm			
Instrument Tube Material	Zircaloy-4			
Instrument Tube OD (OD _{IT})	1.38193 cm	1.25222 cm	1.25222 cm	1.25222 cm
Instrument Tube ID (ID _{IT})	1.12014 cm			

NOTES: ^a OD = outer diameter^b ID = inner diameter^c Refer to Table 3-1 for fuel pellet OD for an individual fuel batch.

Figure 2-2 provides a radial view of a single fuel assembly indicating the locations of the guide tubes, instrument tube, and fuel rods. A fuel assembly contains six intermediate spacer grids and two Inconel end spacer grids. The upper-end spacer grid is above the active fuel region and the lower-end spacer grid is below the active fuel region. The six intermediate spacer grids are inside the active fuel region.

Figures 2-3 through 2-26 provide axial dimensions, by region, for the Mark-B fuel assemblies. Regions 1 through 4 and 10 through 12 are represented as homogenized regions of stainless steel and water. The volume fractions (VF) for regions 1 through 4 are applicable to the 30 cm directly above the bottom of the upper grid plate and regions 10 through 12 are applicable to the 30 cm directly below the top of the lower grid plate.

Regions 5 through 9 contain various combinations of guide tubes, instrument tube, and fuel rods, as well as other materials (stainless steel, Inconel, Zircaloy, and water). The fraction of guide tubes, instrument tube, and fuel rod assemblies will be represented explicitly in these regions. The other materials will be homogenized within the remaining portions of the regions. The water inside the guide tubes and instrument tube will be represented explicitly within the respective tubes. The volume fractions of other materials, by region, for the Mark-B fuel assemblies are indicated. The fuel assembly volume fractions are provided with and without control components. The Mark-B4 assembly, reported in Section 2.2, represents the dimensions and volume fractions of the Mark-B2, Mark-B3, and Mark-B4 fuel assemblies.

Fuel Rod - Regions 6, 7, and 9 contain various amounts of stainless steel and Zircaloy that are representative of the end caps, spacer, and springs. In addition, these regions contain helium and fission gases, as well as the Zircaloy cladding. Note that these regions of the fuel rod assembly do not contain fuel pellets. Region 8 is the active fuel region and contains fuel pellets, Zircaloy fuel cladding, and helium gas in the gaps. The fuel rod assembly volume fractions for materials in Regions 6 through 9 are provided.

2.2 MARK-B4 AND -B4Z FUEL ASSEMBLY

Figures 2-3 and 2-4 provide region boundaries and axial locations for intermediate spacer grids. The intermediate spacer grid height is 3.81 cm for each of the six grids for the Mark-B4. For the Mark-B4Z fuel assemblies, each of the six intermediate spacer grids is 5.08 cm. Tables 2-3 through 2-8 provides volume fractions for Mark-B4 and -B4Z fuel assemblies with and without control components.

Table 2-3. Mark-B4 & -B4Z Assembly VFs by Region

Region	304SS	Inconel 718	Zircaloy-4	Water
1	0.0578	0.0	0.0	0.9422
2	0.1381	0.0	0.0	0.8619
3	0.2491	0.0	0.0	0.7509
4	0.3418	0.0	0.0	0.6582
5	0.2756	0.0441	0.0081	0.6722
6	0.0	0.0457	0.0069	0.9474
7	0.0	0.0	0.0	1.0
8 / B4	0.0	0.005757609	0.0	0.994242391
8 / B4Z	0.0	0.0	0.008165257	0.991834743
9	0.1656	0.0306	0.0125	0.7913
10	0.2848	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube and guide tubes

Table 2-4. Mark-B4 & -B4Z Assembly VFs with RCCAs 0% Withdrawn

Region	304SS	Inconel 718	Zircaloy-4	Water
1	0.0934	0.0	0.0	0.9066
2	0.1945	0.0	0.0	0.8055
3	0.3481	0.0	0.0	0.6519
4	0.3748	0.0	0.0	0.6252
5	0.2981	0.0441	0.0081	0.6497
6	0.0	0.0457	0.0069	0.9474
7	0.0	0.0	0.0	1.0
8 / B4	0.0	0.005757609	0.0	0.994242391
8 / B4Z	0.0	0.0	0.008165257	0.991834743
9	0.1656	0.0306	0.0125	0.7913
10	0.2848	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes, and control tubes.

Table 2-5. Mark-B4 & -B4Z Assembly VFs with RCCAs & APSRs 100% Withdrawn

Region	304SS	Inconel 718	Zircaloy-4	Ag-In-Cd ^a	Water
1	0.0638	0.0	0.0	0.0262	0.9100
2	0.1442	0.0	0.0	0.0262	0.8296
3	0.2553	0.0	0.0	0.0262	0.7185
4	0.3481	0.0	0.0	0.0262	0.6257
5	0.2820	0.0451	0.0083	Explicit	0.6646
6	0.0	0.0457	0.0069	0.0	0.9474
7	0.0	0.0	0.0	0.0	1.0
8 / B4	0.0	0.005757609	0.0	0.0	0.994242391
8 / B4Z	0.0	0.0	0.008165257	0.0	0.991834743
9	0.1656	0.0306	0.0125	0.0	0.7913
10	0.2848	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.9700

NOTES: All components except fuel rods, instrument tube, guide tubes, and control tubes.

^a For Gray APSR, the material is Inconel 600

Table 2-6. Mark-B4 & -B4Z Assembly VFs with Black APSRs 0 % Withdrawn

Region	304SS	Inconel-718	Zircaloy-4	Water
1	0.1096	0.0	0.0	0.8904
2	0.2212	0.0	0.0	0.7788
3	0.2828	0.0	0.0	0.7172
4	0.3748	0.0	0.0	0.6252
5	0.2960	0.0441	0.0081	0.6518
6	0.0	0.0457	0.0069	0.9474
7	0.0	0.0	0.0	1.0
8 / B4	0.0	0.005757609	0.0	0.994242391
8 / B4Z	0.0	0.0	0.008165257	0.991834743
9	0.1656	0.0306	0.0125	0.7913
10	0.2848	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes, and control tubes.

Table 2-7. Mark-B4 & -B4Z Assembly VFs with Gray APSRs 0 % Withdrawn

Region	304SS	Inconel-718	Zircaloy-4	Water
1	0.1081	0.0	0.0	0.8919
2	0.2212	0.0	0.0	0.7788
3	0.2828	0.0	0.0	0.7172
4	0.3748	0.0	0.0	0.6252
5	0.2959	0.0441	0.0081	0.6519
6	0.0	0.0457	0.0069	0.9474
7	0.0	0.0	0.0	1.0
8 / B4	0.0	0.005757609	0.0	0.994242391
8 / B4Z	0.0	0.0	0.008165257	0.991834743
9	0.1656	0.0306	0.0125	0.7913
10	0.2848	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes, and control tubes.

Table 2-8. Mark-B4 & -B4Z Assembly VFs with BPRAs Inserted

Region	304SS	Inconel 718	Zircaloy-4	Water
1	0.0699	0.0	0.0	0.9301
2	0.1827	0.0	0.0	0.8173
3	0.2937	0.0	0.0069	0.6994
4	0.3890	0.0	0.0120	0.5990
5	0.2874	0.0450	0.0083	0.6593
6	0.0	0.0457	0.0069	0.9474
7	0.0	0.0	0.0	1.0
8 / B4	0.0	0.005757609	0.0	0.994242391
8 / B4Z	0.0	0.0	0.008165257	0.991834743
9	0.1656	0.0306	0.0125	0.7913
10	0.2848	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes, and control tubes.

Mark-B4 and -B4Z Fuel Rods- The 208 fuel rods are contained in regions 6 through 9. Region 8 is modeled explicitly. Regions 6, 7, and 9 contain various amounts of stainless steel and Zircaloy in the fuel rod that are representative of the plenum springs and end caps. In addition, these regions also contain helium and fission gases, as well as the Zircaloy cladding.

Figure 2-7 indicates the axial view of the fuel rod. The B4 and B4Z fuel rods are represented as a cylinder with 1.0922 cm diameter with $Y_{\text{bottom}} = 5.69$ cm and $Y_{\text{top}} = 396.056$ cm, where $Y=0$ is at the bottom of region 9. Table 2-9 provides the Mark-B4 and -B4Z fuel rod volume fractions.

Table 2-9. Mark-B4 & -B4Z Fuel Rod VFs by Region

Region	Stainless Steel	Zircaloy-4	Cladding ^a	Helium
6	0.0	0.3344	0.1940	0.4716
7	0.0810	0.0439	0.2313	0.6438
8	Explicit Idealization Fuel Clad: Zircaloy OD = 1.0922 cm, ID = 0.95758 cm Fuel Pellet: UO_2 OD ^b = 0.936244 cm, 95% Theoretical Density Helium in gaps			
9	0.1230	0.1926	0.2163	0.4681

NOTES: ^a The Zircaloy cladding extends the entire length of the fuel rod but does not include the end caps.

^b Refer to Table 3-1 for fuel pellet OD for an individual fuel batch.

Mark-B4 and -B4Z Guide Tubes- Figure 2-5 indicates an axial view of the guide tubes.

- Material = Zircaloy-4
- 16 guide tubes, OD = 1.3462 cm, ID = 1.26492 cm
- Length = 397.035 cm
- $Y_{\text{bottom}} \approx 6.032$ cm
- $Y_{\text{top}} \approx 403.067$ cm

Mark-B4 and -B4Z Instrument Tube- Figure 2-6 indicates an axial view of the instrument tube.

- Material = Zircaloy-4
- One tube, OD = 1.38193 cm, ID = 1.12014 cm
- Length = 389.890 cm
- $Y_{\text{bottom}} \approx 3.175$ cm
- $Y_{\text{top}} \approx 393.065$ cm

Region 1: 14.12 cm	Upper Plenum	
Region 2: 3.18 cm	CRGT ^a Flange	
Region 3: 7.62 cm	Upper Core Grid	
Region 4: 5.08 cm	Upper Pad	
Region 5: 8.731 cm	Upper End Fitting	
Region 6: 8.573 cm	End Spacer Grid	
Region 7: 14.741 cm	Upper Fuel Plenum	
Region 8: Active Fuel 360.172 cm		38.44 cm
	Intermediate Spacer Grid ^b	53.579 cm
	Intermediate Spacer Grid ^b	53.576 cm
	Intermediate Spacer Grid ^b	53.579 cm
	Intermediate Spacer Grid ^b	53.578 cm
	Intermediate Spacer Grid ^b	53.658 cm
	Intermediate Spacer Grid ^b	53.762 cm
Region 9: 16.723 cm	Lower Fuel Plenum Grid and End Fitting	
Region 10: 5.08 cm	Lower Pad	
Region 11: 12.70 cm	Lower Core Grid	
Region 12: 12.22 cm	Region Between Grid and Plate	

NOTES: ^a Control Rod Guide Tube (CRGT)

^b Intermediate spacer grid height is 3.81 cm

Figure 2-3. Mark-B4 Assembly Axial Dimensions by Region

Region 1: 14.12 cm	Upper Plenum	
Region 2: 3.18 cm	CRGT Flange	
Region 3: 7.62 cm	Upper Core Grid	
Region 4: 5.08 cm	Upper Pad	
Region 5: 8.731 cm	Upper End Fitting	
Region 6: 8.573 cm	End Spacer Grid	
Region 7: 14.741 cm	Upper Fuel Plenum	
Region 8: Active Fuel 360.172 cm		38.679 cm
	Intermediate Spacer Grid	53.576 cm
		53.579 cm
	Intermediate Spacer Grid	53.578 cm
		53.579 cm
	Intermediate Spacer Grid	53.576 cm
		53.605 cm
	Lower Fuel Plenum Grid and End Fitting	
Region 9: 16.723 cm		
Region 10: 5.08 cm	Lower Pad	
Region 11: 12.70 cm	Lower Core Grid	
Region 12: 12.22 cm	Region Between Grid and Plate	

NOTE: Intermediate spacer grid height is 5.08 cm

Figure 2-4. Mark-B4Z Assembly Axial Dimensions by Region

Figure 2-5. Mark-B4 & -B4Z Assembly Axial Dimensions for Guide Tubes

Figure 2-6. Mark-B4 & -B4Z Assembly Axial Dimensions for Instrument Tube

NOTE: Y = 0.0 cm at the bottom of Region 9

Figure 2-7. Mark-B4 & -B4Z Assembly Axial Dimensions for Standard Fuel Rod

2.3 MARK-B8 FUEL ASSEMBLY

Figure 2-8 provides region boundaries and axial locations for intermediate spacer grids. The intermediate spacer grid height is 4.826 cm for each of the six grids. Tables 2-10 through 2-14 provide volume fractions for the Mark-B8 fuel assemblies with and without control components.

Table 2-10. Mark-B8 Assembly VFs by Region

Region	304SS	308SS	316SS	Inconel 718	Zircaloy-4	Water
1	0.0578	0.0	0.0	0.0	0.0	0.9422
2	0.1381	0.0	0.0	0.0	0.0	0.8619
3	0.2491	0.0	0.0	0.0	0.0	0.7509
4	0.3418	0.0	0.0	0.0	0.0	0.6582
5	0.2831	0.0	0.0011	0.0460	0.0067	0.6632
6	0.0095	0.0	0.0	0.0	0.0	0.9905
7	0.0	0.0	0.0	0.0342	0.0007	0.9650
8	0.0	0.0	0.0	0.0	0.0091420	0.9908580
9	0.1675	0.0011	0.0	0.0255	0.0113	0.7947
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, and guide tubes.

Table 2-11. Mark-B8 Assembly VFs with RCCAs 0% Withdrawn

Region	304SS	308SS	316SS	Inconel 718	Zircaloy-4	Water
1	0.0934	0.0	0.0	0.0	0.0	0.9066
2	0.1945	0.0	0.0	0.0	0.0	0.8055
3	0.3481	0.0	0.0	0.0	0.0	0.6519
4	0.3748	0.0	0.0	0.0	0.0	0.6252
5	0.3056	0.0	0.0011	0.0460	0.0067	0.6407
6	0.0095	0.0	0.0	0.0	0.0	0.9905
7	0.0	0.0	0.0	0.0342	0.0007	0.9650
8	0.0	0.0	0.0	0.0	0.0091420	0.9908580
9	0.1675	0.0011	0.0	0.0255	0.0113	0.7947
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, and guide tubes.

Table 2-12. Mark-B8 Assembly VFs with RCCAs & APSRs 100% Withdrawn

Region	304SS	308SS	316SS	Inconel 718	Zircaloy-4	Inconel 600	Water
1	0.0638	0.0	0.0	0.0	0.0	0.0262	0.9100
2	0.1442	0.0	0.0	0.0	0.0	0.0262	0.8296
3	0.2553	0.0	0.0	0.0	0.0	0.0262	0.7185
4	0.3481	0.0	0.0	0.0	0.0	0.0262	0.6257
5	0.2896	0.0	0.0011	0.0470	0.0068	Explicit	0.6554
6	0.0095	0.0	0.0	0.0	0.0	0.0	0.9905
7	0.0	0.0	0.0	0.0342	0.0007	0.0	0.9650
8	0.0	0.0	0.0	0.0	0.0091420	0.0	0.9908580
9	0.1675	0.0011	0.0	0.0255	0.0113	0.0	0.7947
10	0.2848	0.0	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, and guide tubes.

Table 2-13. Mark-B8 Assembly VFs with Gray APSRs 0 % Withdrawn

Region	304SS	308SS	316SS	Inconel 718	Zircaloy-4	Water
1	0.1081	0.0	0.0	0.0	0.0	0.8919
2	0.2212	0.0	0.0	0.0	0.0	0.7788
3	0.2828	0.0	0.0	0.0	0.0	0.7172
4	0.3748	0.0	0.0	0.0	0.0	0.6252
5	0.3033	0.0	0.0011	0.0460	0.0067	0.6430
6	0.0095	0.0	0.0	0.0	0.0	0.9905
7	0.0	0.0	0.0	0.0342	0.0007	0.9650
8	0.0	0.0	0.0	0.0	0.0091420	0.9908580
9	0.1675	0.0011	0.0	0.0255	0.0113	0.7947
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes, and control tubes.

Table 2-14. Mark-B8 Assembly VFs with BPRAs Inserted

Region	304SS	308SS	316SS	Inconel 718	Zircaloy-4	Water
1	0.0699	0.0	0.0	0.0	0.0	0.9301
2	0.1827	0.0	0.0	0.0	0.0	0.8173
3	0.2937	0.0	0.0	0.0	0.0069	0.6994
4	0.3890	0.0	0.0	0.0	0.0120	0.5990
5	0.2950	0.0	0.0011	0.0470	0.0068	0.6500
6	0.0095	0.0	0.0	0.0	0.0	0.9905
7	0.0	0.0	0.0	0.0342	0.0007	0.9650
8	0.0	0.0	0.0	0.0	0.0091420	0.9908580
9	0.1675	0.0011	0.0	0.0255	0.0113	0.7947
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes, and control tubes.

Mark-B8 Fuel Rods: The 208 fuel rods are contained in regions 6 through 9. Region 8 is modeled explicitly. Regions 6, 7 and 9 contain various amounts of stainless steel and Zircaloy in the fuel rod that are representative of the plenum springs and end caps. In addition, these regions also contain helium and fission gases, as well as the Zircaloy cladding.

Standard Mark-B8 Fuel Rods: The Standard B8 fuel rod is represented as a cylinder with 1.0922 cm diameter with $Y_{\text{bottom}} = 4.277$ cm and $Y_{\text{top}} = 395.081$ cm, where $Y=0$ is at the bottom of region 9. Figure 2-11 indicates the axial view of the fuel rod. The fuel rod assembly volume fractions for materials in these regions are provided in Table 2-15.

Table 2-15. Mark-B8 Fuel Rod VFs by Region

Region	302SS	A286 Alloy SS	Zircaloy-4	Helium
6	0.0749	0.0	0.3714	0.5537
7	0.1408	0.0	0.2359	0.6232
8	Explicit Idealization Fuel Clad: Zircaloy OD = 1.0922 cm, ID = 0.95758 cm Fuel Pellet: UO ₂ OD = 0.936244 cm, 95% Theoretical Density Helium in gaps			
9	0.0	0.0677	0.6590	0.2733

Mark-B8 Guide Tubes – (Figure 2-9 indicates an axial view of a guide tube)

Material = Zircaloy-4

16 guide tubes, OD = 1.3462 cm, ID = 1.26492 cm

Length = 398.739 cm

$Y_{\text{bottom}} \approx 3.851 \text{ cm}$

$Y_{\text{top}} \approx 402.590 \text{ cm}$

Mark-B8 Instrument Tube - (Figure 2-10 indicates an axial view of an instrument tube)

Material = Zircaloy-4

One tube, OD = 1.25222 cm, ID = 1.12014 cm

Length = 394.295 cm

$Y_{\text{bottom}} \approx 1.608 \text{ cm}$

$Y_{\text{top}} \approx 395.903 \text{ cm}$

Region 1: 14.12 cm	Upper Plenum	
Region 2: 3.18 cm	CRGT Flange	
Region 3: 7.62 cm	Upper Core Grid	
Region 4: 5.08 cm	Upper Pad	
Region 5: 8.731 cm	Upper End Fitting	
Region 6: 8.573 cm	End Spacer Grid	
Region 7: 14.741 cm	Upper Fuel Plenum	
Region 8: Active Fuel 360.172 cm		38.783 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.499 cm
Region 9: 16.723 cm	Lower Fuel Plenum Grid and End Fitting	
Region 10: 5.08 cm	Lower Pad	
Region 11: 12.70 cm	Lower Core Grid	
Region 12: 12.22 cm	Region Between Grid and Plate	

NOTE: Intermediate spacer grid height is 4.826 cm

Figure 2-8. Mark-B8 Assembly Axial Dimensions by Region

Figure 2-10. Mark-B8 Assembly Axial Dimensions for Instrument Tube

Figure 2-11. Mark-B8 Assembly Axial Dimensions for Standard Fuel Rod

2.4 MARK-B9 FUEL ASSEMBLY

Figure 2-12 provides region boundaries and axial locations for intermediate spacer grids. The intermediate spacer grid height is 4.826 cm for each of the six grids. Tables 2-16 through 2-20 provides volume fractions for Mark-B9 fuel assemblies with and without control components.

Table 2-16. Mark-B9 Assembly VFs by Region

Region	304SS	316SS	Inconel 718	Zircaloy-4	Water
1	0.0578	0.0	0.0	0.0	0.9422
2	0.1381	0.0	0.0	0.0	0.8619
3	0.2491	0.0	0.0	0.0	0.7509
4	0.3418	0.0	0.0	0.0	0.6582
5	0.2795	0.0011	0.0456	0.0068	0.6670
6	0.0070	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0007	0.9650
8	0.0	0.0	0.0	0.0091560	0.9908440
9	0.1655	0.0	0.0242	0.0416	0.7686
10	0.2848	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube and guide tubes.

Table 2-17. Mark-B9 Assembly VFs with RCCAs 0% Withdrawn

Region	304SS	316SS	Inconel 718	Zircaloy-4	Water
1	0.0934	0.0	0.0	0.0	0.9066
2	0.1945	0.0	0.0	0.0	0.8055
3	0.3481	0.0	0.0	0.0	0.6519
4	0.3748	0.0	0.0	0.0	0.6252
5	0.3018	0.0011	0.0456	0.0068	0.6446
6	0.0070	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0007	0.9650
8	0.0	0.0	0.0	0.0091560	0.9908440
9	0.1655	0.0	0.0242	0.0416	0.7686
10	0.2848	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes and control tubes.

Table 2-18. Mark-B9 Assembly VFs with RCCAs & Gray APSRs 100% Withdrawn

Region	304SS	316SS	Inconel 718	Zircaloy-4	Inconel 600	Water
1	0.0638	0.0	0.0	0.0	0.0262	0.9100
2	0.1442	0.0	0.0	0.0	0.0262	0.8296
3	0.2553	0.0	0.0	0.0	0.0262	0.7185
4	0.3481	0.0	0.0	0.0	0.0262	0.6257
5	0.2859	0.0011	0.0467	0.0069	Explicit	0.6594
6	0.0070	0.0	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0007	0.0	0.9650
8	0.0	0.0	0.0	0.0091560	0.0	0.9908440
9	0.1655	0.0	0.0242	0.0416	0.0	0.7686
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes and control tubes.

Table 2-19. Mark-B9 Assembly VFs with Gray APSRs 0 % Withdrawn

Region	304SS	316SS	Inconel 718	Zircaloy-4	Water
1	0.1081	0.0	0.0	0.0	0.8919
2	0.2212	0.0	0.0	0.0	0.7788
3	0.2828	0.0	0.0	0.0	0.7172
4	0.3748	0.0	0.0	0.0	0.6252
5	0.2996	0.0011	0.0456	0.0068	0.6469
6	0.0070	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0007	0.9650
8	0.0	0.0	0.0	0.0091560	0.9908440
9	0.1655	0.0	0.0242	0.0416	0.7686
10	0.2848	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes and control tubes.

Table 2-20. Mark-B9 Assembly VFs with BPRAs Inserted

Region	304SS	316SS	Inconel 718	Zircaloy-4	Water
1	0.0699	0.0	0.0	0.0	0.9301
2	0.1827	0.0	0.0	0.0	0.8173
3	0.2937	0.0	0.0	0.0069	0.6994
4	0.3890	0.0	0.0	0.0120	0.5990
5	0.2913	0.0011	0.0466	0.0069	0.6540
6	0.0070	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0007	0.9650
8	0.0	0.0	0.0	0.0091560	0.9908440
9	0.1655	0.0	0.0242	0.0416	0.7686
10	0.2848	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes and control tubes.

Mark-B9 Fuel Rods: There are 208 fuel rods in each fuel assembly, some of which contain Gadolinia. The assemblies that contain Gadolinia fuel rods consist of 204 standard fuel rods and 4 Gadolinia fuel rods. All fuel rods are contained in regions 6 through 9. Part of region 8 is modeled explicitly. Regions 6, 7, 8 and 9 contain various amounts of stainless steel and Zircaloy in the fuel rod that are representative of the plenum springs and end caps. In addition, these regions also contain helium and fission gases, as well as the Zircaloy cladding.

Standard Mark-B9 Fuel Rods: The Standard B9 fuel rod is represented as a cylinder with 1.0922 cm diameter with $Y_{\text{bottom}} = 4.277$ cm and $Y_{\text{top}} = 395.081$ cm, where $Y=0$ is at the bottom of Region 9. Figure 2-15 indicates the axial view of the fuel rod. The fuel rod assembly volume fractions for materials in these regions are provided in Table 2-21.

Table 2-21. Mark-B9 Standard Fuel Rod VFs by Region

Region	302SS	A286 Alloy	Zircaloy-4	Helium
6	0.0751	0.0	0.3714	0.5535
7	0.1388	0.0	0.2351	0.6261
8	Explicit Idealization from $Y = 16.723$ cm to $Y = 373.834$ cm Fuel Clad: Zircaloy OD = 1.0922 cm, ID = 0.95758 cm Fuel Pellet: UO_2 OD = 0.9398 cm, 95% Theoretical Density Helium in gaps			
	From $Y = 373.834$ cm to $Y = 376.895$ cm ($\Delta Y = 3.061$ cm)			
	0.1366	0.0	0.2314	0.6320
9	0.0	0.0678	0.6587	0.2736

Gadolinia Mark-B9 Fuel Rods: Figure 2-16 indicates the axial view of the fuel rod. The Gadolinia B9 fuel rod is represented as a cylinder with 1.0922 cm diameter with $Y_{\text{bottom}} = 4.460$ cm and $Y_{\text{top}} = 395.643$ cm, where $Y = 0$ is at the bottom of region 9. TMI-1 batches 12C and 12E have 4 Gadolinia rods in each fuel assembly. The Gadolinia rods have 2 wt % Gd_2O_3 and 4.19 wt % ^{235}U in the central 321.185 cm region. The upper and lower 17.963 cm contain a blanket of natural Uranium. The fuel rod assembly volume fractions for materials in these regions of the Gadolinia fuel rod are provided in Table 2-22.

Table 2-22. Mark-B9 Gadolinia Fuel Rod VFs by Region

Region	302SS	A286 Alloy	Zircaloy-4	Helium
6	0.0842	0.0	0.5018	0.4140
7	0.1330	0.0	0.2314	0.6356
8	Explicit Idealization from $Y = 16.723$ cm to $Y = 373.834$ cm Fuel Clad: Zircaloy OD = 1.0922 cm, ID = 0.95758 cm From $Y = 16.723$ cm to $Y=34.686$ cm Natural UO_2 fuel Pellet, OD = 0.9398 cm From $Y=34.686$ cm to $Y=355.871$ cm UO_2 – Gadolinia fuel pellet, OD = 0.9398 cm From $Y=355.871$ cm to $Y=373.834$ cm Natural UO_2 fuel Pellet, OD = 0.9398 cm Fuel Pellets: 95% Theoretical Density Helium in Gaps			
	From $Y = 373.834$ cm to $Y = 376.895$ cm ($\Delta Y = 3.061$)			
	0.1303	0.0	0.2314	0.6383
9	0.0	0.0687	0.6871	0.2442

Mark-B9 Guide Tubes-Figure 2-13 indicates an axial view of a guide tube.

- Material = Zircaloy-4
- 16 guide tubes, OD = 1.3462 cm, ID = 1.26492 cm
- Length = 391.554 cm
- $Y_{\text{bottom}} \approx 9.766$ cm
- $Y_{\text{top}} \approx 401.320$ cm

Mark-B9 Instrument Tube-Figure 2-14 indicates an axial view of an instrument tube.

- Material = Zircaloy-4
- One tube, OD = 1.25222 cm, ID = 1.12014 cm
- Length = 392.925 cm
- $Y_{\text{bottom}} \approx 1.608$ cm
- $Y_{\text{top}} \approx 394.533$ cm

Region 1: 14.12 cm	Upper Plenum	
Region 2: 3.18 cm	CRGT Flange	
Region 3: 7.62 cm	Upper Core Grid	
Region 4: 5.08 cm	Upper Pad	
Region 5: 8.731 cm	Upper End Fitting	
Region 6: 8.573 cm	End Spacer Grid	
Region 7: 14.741 cm	Upper Fuel Plenum	
Region 8: 360.172 cm Active Fuel 357.111 cm		38.783 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.578 cm
	Intermediate Spacer Grid	53.578 cm
		53.499 cm
Region 9: 16.723 cm	Lower Fuel Plenum Grid and End Fitting	
Region 10: 5.08 cm	Lower Pad	
Region 11: 12.70 cm	Lower Core Grid	
Region 12: 12.22 cm	Region Between Grid and Plate	

NOTE: Intermediate spacer grid height is 4.826 cm

Figure 2-12. Mark-B9 Assembly Axial Dimensions by Region

Figure 2-13. Mark-B9 Assembly Axial Dimensions for Guide Tubes

Figure 2-14. Mark-B9 Assembly Axial Dimensions for Instrument Tube

Figure 2-15. Mark-B9 Assembly Axial Dimensions - Standard Fuel Rod

Region 1: Upper Plenum
Region 2: CRGT Flange
Region 3: Upper Core Grid
Region 4: Upper Pad
Region 5: Upper End Fitting
Region 6: End Spacer Grid
Region 7: Upper Fuel Plenum
Region 8: Active Fuel + 3.061 cm
Region 9: Lower Fuel Plenum Grid and End Fitting
Region 10: Lower Pad
Region 11: Lower Core Grid
Region 12: Between Grid and Plate

Figure 2-16. Mark-B9 Assembly Axial Dimensions - Gadolinia Fuel Rod

2.5 MARK-B10 FUEL ASSEMBLY

Figure 2-17 provides region boundaries and axial locations for intermediate spacer grids. The intermediate spacer grid height is 4.826 cm for each of the six grids. Tables 2-23 through 2-27 provide volume fractions for Mark-B10 fuel assemblies with and without control components.

Table 2-23. Mark-B10 Assembly VFs by Region

Region	304SS	316SS	Inconel 718	Inconel X-750	Zircaloy-4	Water
1	0.0578	0.0	0.0	0.0	0.0	0.9422
2	0.1381	0.0	0.0	0.0	0.0	0.8619
3	0.2491	0.0	0.0	0.0	0.0	0.7509
4	0.3418	0.0	0.0	0.0	0.0	0.6582
5	0.2781	0.0011	0.0331	0.0067	0.0076	0.6733
6	0.0070	0.0	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0	0.0007	0.9650
8	0.0	0.0	0.0	0.0	0.0091560	0.9908440
9	0.1655	0.0	0.0242	0.0	0.0420	0.7683
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube and guide tubes.

Table 2-24. Mark-B10 Assembly VFs with RCCAs 0% Withdrawn

Region	304SS	316SS	Inconel 718	Inconel X-750	Zircaloy-4	Water
1	0.0934	0.0	0.0	0.0	0.0	0.9066
2	0.1945	0.0	0.0	0.0	0.0	0.8055
3	0.3481	0.0	0.0	0.0	0.0	0.6519
4	0.3748	0.0	0.0	0.0	0.0	0.6252
5	0.3005	0.0011	0.0331	0.0067	0.0076	0.6509
6	0.0070	0.0	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0	0.0007	0.9650
8	0.0	0.0	0.0	0.0	0.0091560	0.9908440
9	0.1655	0.0	0.0242	0.0	0.0420	0.7683
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes and control tubes.

Table 2-25. Mark-B10 Assembly VFs with RCCAs and Gray APSRs 100% Withdrawn

Region	304SS	316SS	Inconel 718	Inconel X-750	Zircaloy-4	Inconel 600	Water
1	0.0638	0.0	0.0	0.0	0.0	0.0262	0.9100
2	0.1442	0.0	0.0	0.0	0.0	0.0262	0.8296
3	0.2553	0.0	0.0	0.0	0.0	0.0262	0.7185
4	0.3481	0.0	0.0	0.0	0.0	0.0262	0.6257
5	0.2845	0.0011	0.0339	0.0069	0.0078	Explicit	0.6658
6	0.0070	0.0	0.0	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0	0.0007	0.0	0.9650
8	0.0	0.0	0.0	0.0	0.0091560	0.0	0.9908440
9	0.1655	0.0	0.0242	0.0	0.0420	0.0	0.7683
10	0.2848	0.0	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes and control tubes.

Table 2-26. Mark-B10 Assembly VFs with Gray APSRs 0 % Withdrawn

Region	304SS	316SS	Inconel 718	Inconel X-750	Zircaloy-4	Water
1	0.1081	0.0	0.0	0.0	0.0	0.8919
2	0.2212	0.0	0.0	0.0	0.0	0.7788
3	0.2828	0.0	0.0	0.0	0.0	0.7172
4	0.3748	0.0	0.0	0.0	0.0	0.6252
5	0.2983	0.0011	0.0331	0.0067	0.0076	0.6532
6	0.0070	0.0	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0	0.0007	0.9650
8	0.0	0.0	0.0	0.0	0.0091560	0.9908440
9	0.1655	0.0	0.0242	0.0	0.0420	0.7683
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes and control tubes.

Table 2-27. Mark-B10 Assembly VFs with BPRAs Inserted

Region	304SS	316SS	Inconel 718	Inconel X-750	Zircaloy-4	Water
1	0.0699	0.0	0.0	0.0	0.0	0.9301
2	0.1827	0.0	0.0	0.0	0.0	0.8173
3	0.2937	0.0	0.0	0.0	0.0069	0.6994
4	0.3890	0.0	0.0	0.0	0.0120	0.5990
5	0.2899	0.0011	0.0338	0.0069	0.0078	0.6604
6	0.0070	0.0	0.0	0.0	0.0	0.9930
7	0.0	0.0	0.0342	0.0	0.0007	0.9650
8	0.0	0.0	0.0	0.0	0.0091560	0.9908440
9	0.1655	0.0	0.0242	0.0	0.0420	0.7683
10	0.2848	0.0	0.0	0.0	0.0	0.7152
11	0.2400	0.0	0.0	0.0	0.0	0.7600
12	0.0300	0.0	0.0	0.0	0.0	0.9700

NOTE: All components except fuel rods, instrument tube, guide tubes and control tubes.

Standard Mark-B10 Fuel Rods-There are 208 fuel rods in the fuel assembly. In assemblies that contain Gadolinia rods, there are either 200 or 204 standard fuel rods. The fuel rods are contained in regions 6 through 9. Part of region 8 is modeled explicitly. Regions 6, 7, 8 and 9 contain various amounts of stainless steel and Zircaloy in the fuel rod that are representative of the plenum springs and end caps. In addition, these regions contain helium and fission gases, as well as the Zircaloy cladding.

The Standard B10 fuel rod is represented as a cylinder with 1.0922 cm diameter with $Y_{\text{bottom}} = 4.277$ cm and $Y_{\text{top}} = 395.081$ cm, where $Y=0$ is at the bottom on region 9. Figure 2-22 indicates the axial view of the fuel rod. The fuel rod assembly volume fractions for materials in these regions for the Standard Mark B10 are presented in Table 2-28.

Gadolinia Mark-B10 Fuel Rods: The Gadolinia B10 fuel rod is represented as a cylinder with 1.0922 cm diameter with $Y_{\text{bottom}} = 4.460$ cm and $Y_{\text{top}} = 395.643$ cm. TMI-1 batches 13C and 13E have 4 Gadolinia fuel rods each, and fuel batch 13F has 8 Gadolinia rods per assembly. The Gadolinia rods have 2 wt % Gd_2O_3 and 4.19 wt % ^{235}U in the central 321.185 cm and natural uranium in the upper and lower 17.963 cm blanket regions. Figure 2-23 indicates the axial view of the fuel rod. The fuel rod assembly volume fractions for materials in these regions of the Gadolinia Mark B10 assembly are presented in Table 2-29.

Table 2-28. Mark-B10 Standard Fuel Rod VFs by Region

Region	302SS	A286 Alloy	Zircaloy-4	Helium
6	0.0751	0.0	0.3714	0.5535
7	0.1388	0.0	0.2351	0.6261
8	Explicit Idealization from Y = 16.723 cm to Y = 373.834 cm Fuel Clad: Zircaloy OD = 1.0922 cm, ID = 0.95758 cm Fuel Pellet: UO ₂ OD = 0.9398 cm, 95% Theoretical Density Helium in gaps			
	From Y = 373.834 cm to Y = 376.895 cm ($\Delta Y = 3.061$ cm)			
	0.1366	0.0	0.2314	0.6320
9	0.0	0.0678	0.6587	0.2736

Table 2-29. Mark-B10 Gadolinia Fuel Rod VFs by Region

Region	302SS	A286 Alloy	Zircaloy-4	Helium
6	0.0842	0.0	0.5018	0.4140
7	0.1330	0.0	0.2314	0.6356
8	Explicit Idealization from Y = 16.723 cm to Y = 373.834 cm Fuel Clad: Zircaloy OD = 1.0922 cm, ID = 0.95758 cm From Y = 16.723 cm to Y=34.686 cm, fuel pellet with Natural UO ₂ , OD = 0.9398 cm From Y=34.686 cm to Y=355.871 cm UO ₂ – Gadolinia fuel pellet, OD = 0.9398 cm From Y=355.871 cm to Y=373.834 cm, fuel pellet with Natural UO ₂ , OD = 0.9398 cm Fuel Pellets: 95% Theoretical Density Helium in Gaps			
	From Y = 373.834 cm to Y = 376.895 cm ($\Delta Y = 3.061$ cm)			
	0.1303	0.0	0.2314	0.6383
9	0.0	0.0687	0.6871	0.2442

Mark-B10 Guide Tubes- Figure 2-20 indicates an axial view of the guide tubes.

- Material = Zircaloy-4
- 16 guide tubes, OD = 1.3462 cm, ID = 1.26492 cm
- Length = 392.049 cm
- $Y_{\text{bottom}} \approx 9.766$ cm
- $Y_{\text{top}} \approx 401.815$ cm

Mark-B10 Instrument Tube- Figure 2-21 provides an axial view of the instrument tube.

- Material = Zircaloy-4
- One tube, OD = 1.25222 cm, ID = 1.12014 cm
- Length = 392.925 cm
- $Y_{\text{bottom}} \approx 1.608$ cm
- $Y_{\text{top}} \approx 394.533$ cm

Region 1: 14.12 cm	Upper Plenum	
Region 2: 3.18 cm	CRGT Flange	
Region 3: 7.62 cm	Upper Core Grid	
Region 4: 5.08 cm	Upper Pad	
Region 5: 8.731 cm	Upper End Fitting	
Region 6: 8.573 cm	End Spacer Grid	
Region 7: 14.741 cm	Upper Fuel Plenum	
Active Fuel 357.111 cm Region 8: 360.172 cm		38.783 cm
	Intermediate Spacer Grid	53.578 cm
		53.578 cm
	Intermediate Spacer Grid	53.578 cm
		53.578 cm
	Intermediate Spacer Grid	53.578 cm
		53.578 cm
	Intermediate Spacer Grid	53.578 cm
		53.578 cm
	Intermediate Spacer Grid	53.499 cm
Region 9: 16.723 cm	Lower Fuel Plenum Grid and End Fitting	
Region 10: 5.08 cm	Lower Pad	
Region 11: 12.70 cm	Lower Core Grid	
Region 12: 12.22 cm	Region Between Grid and Plate	

NOTE: Intermediate spacer grid height is 4.826 cm

Figure 2-17. Mark-B10 Assembly Axial Dimensions by Region

Figure 2-18. Mark-B10 Assembly Axial Dimensions for Guide Tubes

Figure 2-19. Mark-B10 Assembly Axial Dimensions for Instrument Tube

Figure 2-21. Mark-B10 Assembly Axial Dimensions for Gadolinia Fuel Rod

2.6 CONTROL COMPONENTS

Figures 2-22 through 2-26 provide axial dimensions for RCCAs with rods at 0% and 100% withdrawn, for black APSRs, for gray APSRs, and for BPRAs. Geometric, material and volumetric data for each item is included.

2.6.1 RCCA

RCCA Volume Fractions- The rods are represented explicitly in the active fuel, upper fuel plenum, and end spacer grid regions, and to the ends of the control rod cladding in the upper end-fitting region. The remainders of the materials are homogenized in regions 1 through 5. The volume fractions of these materials (including non-RCCA materials) for RCCAs with rods at 0% withdrawn are provided in Tables 2-4, 2-11, 2-17, and 2-24.

For rods 100% withdrawn, the cladding and absorber material inside the cladding are represented explicitly through region 5 (upper end fitting). This extends beyond the guide tubes. Materials for the remaining regions are homogenized. The volume fractions of these materials (including non-RCCA materials) with rods 100% withdrawn are given in Tables 2-5, 2-12, 2-18, and 2-25.

Figures 2-22 (0 % withdrawn) and 2-23 (100 % withdrawn) provide axial dimensions for control rods.

RCCA Materials and Volume Fractions

- Lower end plug – 304SS
- Cladding – 304SS
- Absorber - Ag-In-Cd
- Spring spacer – 304SS, volume fraction of spacer spring/plug inside of clad = 0.3090 304SS and 0.6910 Gas
- Upper plug and spider assembly – 304SS

RCCA

● Number of rods per assembly	16
● Pellet Material	Ag-In-Cd
● Percent of Pellet Materials	Ag (79.8%), In (15.0%), Cd (5.0%)
● Pellet Density	10.17 g/cc
● Pellet OD	0.99568 cm
● Clad Material	304SS
● Clad OD	1.11760 cm
● Clad ID	1.01092 cm

Figure 2-22. Mark-B Assembly Axial Dimensions for RCCA 0 % Withdrawn

Figure 2-23. Mark-B Assembly with RCCA, Black, and Gray APSR 100 % Withdrawn

2.6.2 Black APSR

Black APSR Volume Fraction-The rods and other materials inside the cladding are represented explicitly in the active fuel, upper fuel plenum, end spacer grid regions, and to the ends of the APSR cladding in the upper end-fitting region. The remainders of the materials are homogenized in regions 1 through 5. Table 2-6 provides the volume fractions of these materials (including non-APSR materials) for black APSRs with rods at 0% withdrawn. Figure 2-24 provides the axial dimensions for black APSRs. Black APSRs at 100% withdrawn should be treated the same as RCCAs that are 100% withdrawn (Figure 2-23).

Black APSR Materials

- Lower end plug – 304SS
- Cladding – 304SS
- Absorber - Ag-In-Cd
- Spacer - Zircaloy (annular design), volume = 0.3818 cm^3 for each of 16 rods (for a total of 6.11 cm^3)
- Intermediate plug – 304SS, volume = 1.0094 cm^3 for each of 16 rods (for a total of 16.15 cm^3)
- Upper end plug & spider assembly – 304SS

Black APSRs and RCCAs

• Pellet Material	Ag-In-Cd
• Fraction of Pellet Materials	Ag (79.8%), In (15.0%), Cd (5.0%)
• Pellet Density	10.17 g/cc
• Pellet OD	0.99568 cm
• Clad Material	304SS
• Clad OD	1.11760 cm
• Clad ID	1.01092 cm

Figure 2-24. Mark-B Assembly Axial Dimensions with Black APSR 0 % Withdrawn

2.6.3 Gray APSR

Gray APSR Volume Fractions-The rods and other materials inside the cladding are represented explicitly in the active fuel, upper fuel plenum, end spacer grid regions, and to the ends of the APSR cladding in the upper end-fitting region. The remainders of the materials are homogenized in regions 1 through 5. The volume fractions for these materials (including non-APSR materials) for gray APSRs with rods at 0% withdrawn are provided in Tables 2-7, 2-13, 2-19, and 2-26. Figure 2-25 provides the axial dimensions for gray APSRs. Gray APSRs at 100% withdrawn should be treated the same as RCCAs that are 100% withdrawn (Figure 2-23).

Gray APSR Materials

- Lower end plug – 304SS
- Cladding – 304SS
- Gray Neutron Absorber - Inconel 600
- Intermediate plug – 304SS volume = 1.4191 cm^3 for each rod
- Upper end plug & spider assembly – 304SS

Gray APSRs

• Number of rods per assembly	16
• Rod Material	Inconel 600, density 8.3 g/cm^3
• Rod OD	0.95250 cm
• Clad material	304SS
• Clad OD	1.11760 cm
• Clad ID	0.98044 cm

Figure 2-25. Mark-B Assembly Axial Dimensions with Gray APSR 0 % Withdrawn

2.6.4 BPRA

BPRA Volume Fractions-The burnable absorber and other materials inside the cladding are represented explicitly through region 5 (upper end fitting). This extends beyond the guide tubes. Materials for the remaining regions are homogenized. The volume fractions of these materials (including non-BPRA materials) are provided in Tables 2-8, 2-14, 2-20, and 2-27. Figure 2-26 provides the axial dimensions for BPRAs.

BPRA Materials and Volume

• Upper End Plug	Zircaloy-4
• Lower End Plug	Zircaloy-4
• Clad (Tubing)	Zircaloy-4
• Clad OD	1.0922 cm
• Clad ID	0.9144 cm
• Spring	304SS
• Burnable Poison Pellets	B ₄ C in an alumina (Al ₂ O ₃) matrix
• Pellet Density	3.7 g/cc
• Pellet OD	0.8636 cm
• Coupling Spider	304SS

Volume Fraction of Spring Inside the Clad

• 304SS Spring	0.2090
• Helium Gas	0.7910

BPRAs-The number of burnable poison rods per lump burnable poison cluster is 16.

Figure 2-26. Mark-B Assembly Axial Dimensions for BPRA Inserted

3. FUEL CYCLE DESIGN INFORMATION

This section provides fuel assembly design data for Cycles 1 through 11 of the Three Mile Island Unit 1 (TMI-1) reactor. Material and geometry data for the fuel assembly components along with cycle length data is presented in Section 3.1. The fuel assembly locations for each cycle, fuel enrichments, burnable absorber enrichments, and control rod bank locations are presented in Section 3.2.

3.1 FUEL BATCH DATA

Material and geometry data for each fuel batch in cycles 1 through 11 are given in Table 3-1. This includes the cycle in which the fuel was first loaded, the fuel assembly type, the enrichment, the kilograms of uranium in each fuel assembly batch, the diameter of the fuel pellets, and the type of fuel assembly grid material. The axial dimensions of the Mk-B2, Mk-B3, and Mk-B4 fuel assemblies are represented by the Mark-B4 fuel assembly design shown in Figure 2-3. The type of axial power shaping rods (APSRs) used in each cycle is provided along with information concerning the use of burnable poison rods and the mode of operation (operated with regulating control rod banks inserted). The radial dimensions of the fuel clad, instrument tube, and guide tube are presented in Table 2-2. Material and radial dimensions of the RCCAs, the black and gray APSRs, and the BPRAs are provided in Section 2.6. This data should be used in modeling each fuel assembly type for burnup calculations and the reactor criticality calculations for the statepoints (SPs) defined in Table 3-2.

Table 3-1. Fuel Assembly/Fuel Rod/Cycle Description for Cycles 1 through 11

Cycle	Fresh Fuel Batch	Assembly Type	Wt% ^{235}U	% TD	KgU/ Assembly	Fuel Pellet OD (cm)	Fuel Assembly Grid Material	APSRs Black/ Gray	Burnable Poison Cycle	Rodded Cycle
1	1	Mk-B2	2.06	92.5	463.63	0.93980	Inconel 718	Black	Yes	Yes
	2	Mk-B3	2.75	92.5	463.63	0.93980	Inconel 718	Black	Yes	Yes
	3	Mk-B3	3.05	92.5	463.63	0.93980	Inconel 718	Black	Yes	Yes
2	4	Mk-B4	2.64	93.5	468.63	0.939038	Inconel 718	Black	No	Yes
3	5	Mk-B4	2.85	94.0	463.63	0.93853	Inconel 718	Black	No	Yes
4	6	Mk-B4	2.85	94.0	463.63	0.93853	Inconel 718	Black	No	No
5	7	Mk-B4	2.85	94.0	463.63	0.93853	Inconel 718	Black	No	No
6	8A	Mk-B4	2.95	95.0	463.63	0.936244	Inconel 718	Gray	Yes	No
	8B,C,D	Mk-B4	2.85	94.0	463.6	0.93853	Inconel 718	Gray	Yes	No
7	9A	Mk-B4	2.85	95.0	463.63	0.936244	Inconel 718	Gray	Yes	No
	9B	Mk-B4	2.95	95.0	463.6	0.936244	Inconel 718	Gray	Yes	No
	9C	Mk-B4Z	3.63	95.0	463.6	0.936244	Zircaloy-4	Gray	Yes	No
8	10A	Mk-B4	2.85	95.0	463.63	0.936244	Inconel 718	Gray	Yes	No
	10B	Mk-B4Z	3.63	95.0	463.63	0.936244	Zircaloy-4	Gray	Yes	No
	10B	Mk-B8	3.63	95.0	463.63	0.936244	Zircaloy-4	Gray	Yes	No
	10C	Mk-B4	2.85	95.0	463.63	0.936244	Inconel 718	Gray	Yes	No
	10D	Mk-B8	3.63	95.0	463.63	0.936244	Zircaloy-4	Gray	Yes	No
	10E	Mk-B8	3.63	95.0	463.63	0.936244	Zircaloy-4	Gray	Yes	No

Table 3-1. Fuel Assembly/Fuel Rod/Cycle Description for Cycles 1 through 11 (Cont.)

Cycle	Fresh Fuel Batch	Assembly Type	Wt% ^{235}U	% TD	KgU/ Assy.	Fuel Pellet OD (cm)	Assembly Grid Material	APSRs Black/ Gray	Burnable Poison Cycle	Rodded Cycle
9	11A	Mk-B8	3.63	95.0	463.605	0.936244	Zircaloy-4	Gray	Yes	No
	11B	W-LTA	3.90	95.0	463.605	0.929386	Zircaloy-4	Gray	Yes	No
	11C	Mk-B8V	4.00	95.0	463.605	0.936244	Zircaloy-4	Gray	Yes	No
	11D	Mk-B8	3.63	95.0	463.63	0.936244	Zircaloy-4	Gray	Yes	No
	11E	Mk-B8	4.00	95.0	463.605	0.936244	Zircaloy-4	Gray	Yes	No
10	12A	Mk-B8V	4.00	95.0	463.60	0.936244	Zircaloy-4	Gray	Yes	No
	12B	Mk-B9	4.65	95.0	463.66	0.939800	Zircaloy-4	Gray	Yes	No
	12C	Mk-B9Gd	4.65 ^a	95.0	463.45	0.939800	Zircaloy-4	Gray	Yes	No
	12D	Mk-B9	4.75	95.0	463.66	0.939800	Zircaloy-4	Gray	Yes	No
	12E	Mk-B9Gd	4.75 ^a	95.0	463.45	0.939800	Zircaloy-4	Gray	Yes	No
11	13A	Mk-B8V	4.00	95.0	463.60	0.936244	Zircaloy-4	Gray	Yes	No
	13B	Mk-B10	4.23	95.0	463.66	0.939800	Zircaloy-4	Gray	Yes	No
	13C	Mk-B10Gd	4.23 ^b	95.0	463.45	0.939800	Zircaloy-4	Gray	Yes	No
	13D	W-LTA	4.25	95.0	457.02	0.929386	Zircaloy-4	Gray	Yes	No
	13E	Mk-B10Gd	4.55 ^b	95.0	463.45	0.939800	Zircaloy-4	Gray	Yes	No
	13F	Mk-B10Gd	4.55 ^c	95.0	463.23	0.939800	Zircaloy-4	Gray	Yes	No

NOTES: ^a The fuel assemblies have 4 gadolinia rods with 2.0 wt % Gd_2O_3 and 4.19 wt % ^{235}U

^b The fuel assemblies have 4 Gadolinia rods with 2.0 wt % Gd_2O_3 and 3.59 wt % ^{235}U

^c The fuel assemblies have 8 Gadolinia rods with 2.0 wt % Gd_2O_3 and 3.59 wt % ^{235}U

The length of each fuel cycle, expressed as effective-full-power-days (EFPD), is provided in Table 3-2. The time during each cycle where SP criticality data was measured is indicated.

Table 3-2. Statepoint Information for Cycles 1 through 11

Cycle	Full Power (MWt)	End-of-Cycle EFPD	Statepoint Number	Measurement EFPD
1	2535	466.4	SP59	0.0
5	2535	302.4	SP60	0.0
			SP61	114.4
6	2535	421.2	SP62	0.0
			SP63	69.1
7	2568	474.7	SP64	0.0
			SP65	30.0
			SP66	107.8
8	2568	508.8	SP67	0.0
9	2568	639.4	SP68	0.0
10	2568	660.3	SP69	0.0
			SP70	27.0
			SP71	143.0
			SP72	209.0
11	2568	683.0	SP73	0.0
			SP74	615.0

3.2 FUEL ASSEMBLY DATA

The fuel assembly loading for each cycle is presented in Figures 3-1 through 3-12. The figures are representative of a one-eighth core, where the fuel assembly at the center of the core is in location H8. The data on the figures indicate the location of the fuel assemblies in the current cycle, the location in a previous cycle (if applicable), the cycle that the fuel was first inserted, and the fuel batch number for each fuel assembly. The enrichment of ^{235}U (by batch), the locations of BPRA's, the weight percent of B_4C in each BPRA, and the location of the various control rod banks are also indicated.

Each fuel assembly is given a unique alphanumeric designation that is used in tracking the assembly through its entire period of operation. This includes both the times that each fuel assembly was in the reactor during reactor operation (i.e., producing power) and the time spent in a non-power producing mode (e.g., in the reactor during shutdown or in the spent fuel pool).

Starting with the letter "A" for Cycle 1, each subsequent cycle is assigned a unique letter designation ("B" for Cycle 2, "C" for Cycle 3, etc. to "L" for Cycle 11). Each of the one-eighth core locations is assigned a unique number. Since the TMI-1 reactor contains 177 fuel assemblies, the one-eighth core symmetry reduces the number of assemblies to 29. The locations in the figure are numbered 1 through 29. Starting at the center of the core, H8 is location number 1. Location numbers 2 through 8 are assigned to H9 through H15. Proceeding from left to right (then down), K9 becomes location 9, K15 becomes location 15, L10 becomes location 16, M11 becomes location 22, etc., to O13 becomes location 29.

Using this nomenclature, the assemblies in Cycle 1 are labeled A1 (for H8) through A29 (for O13). For subsequent cycles, a complete set of labels is not required since a combination of burned and fresh fuel is used.

Figures 3-13 through 3-23 were constructed by applying this nomenclature to the fuel assembly location data given in Figures 3-1 through 3-12. These figures also provide additional data that is needed for modeling fuel cycles. It is observed in examining Figures 3-13 through 3-23 that a further designation is assigned to the fuel assembly identification. For example, in Cycle 7 (Figure 3-19), assemblies G12 and G12a are in position K12. In the next cycle (Figure 3-20), assembly G12 is in position H10 and assembly G12a is in position M11. The assemblies take on different fuel cycle paths.

	8	9	10	11	12	13	14	15
H	CRG 7 2	1.43 BPRA 2	CRG 2 1	1.26 BPRA 2	CRG 6 1	1.26 BPRA 2	CRG 4 3	3
K		CRG 5 1	1.43 BPRA 2	CRG 1 1	1.26 BPRA 2	CRG 3 1	1.43 BPRA 2	3
L			CRG 2 1	1.09 BPRA 2	CRG 8 1	1.26 BPRA 2	CRG 7 3	3
M				CRG 6 1	1.09 BPRA 2	CRG 5 1	3	
N					CRG 4 1	1.26 BPRA 3	3	
O						3

Previous Fuel Assembly (FA) Position, Row (R), Column (C) – Normalized to 1/8 Core Control Component – Control Rod Group #, or wt % B₄C in BPRA Fuel Batch (B)

The difference between Cycle 1A and Cycle 1B is the location of the RCCAs.

Cycle	Batch/FA	wt % ²³⁵ U	# FA
1	1 / MK-B2	2.06	56
	2 / MK-B3	2.75	61
	3 / MK-B3	3.05	60
			177

BPRA	Position
1.09 wt % B ₄ C	L11, M12
1.26 wt % B ₄ C	H11, H13, K12, L13, N13
1.43 wt % B ₄ C	H9, K10, K14

Banks 1 – 4 Safety	H10, H14, K11, K13, L10, N12
Bank 5 Regulating	K9, M13
Bank 6 Regulating	H12, M11
Bank 7 Regulating	H8, L14
Bank 8 (Black APSR)	L12

Figure 3-1. One-Eighth Core Loading for TMI-1 (0.0 – 256.0 EFPD), Cycle 1A

The difference between Cycle 1A and Cycle 1B is the location of the RCCAs.

Cycle	Batch/FA	wt % ²³⁵ U	# FA
1	1 / MK-B2	2.06	56
	2 / MK-B3	2.75	61
	3 / MK-B3	3.05	60
			177

BPRA	Position
1.09 wt % B ₄ C	L11, M12
1.26 wt % B ₄ C	H11,H13,K12,L13,N13
1.43 wt % B ₄ C	H9, K10, K14

Banks 1 – 4 Safety	H10, K11, K13, L10, L14
Bank 5 Regulating	K9, M13
Bank 6 Regulating	H12, M11
Bank 7 Regulating	H8, H14, N12
Bank 8 (Black APSR)	L12

Figure 3-2. One-Eighth Core Loading for TMI-1 (256.0 – 466.4 EFPD), Cycle 1B

	8	9	10	11	12	13	14	15
H	H8 CRG 4 2	H9 2	H13 CRG 6 2	K12 2	N13 CRG 3 3	H14 3	H15 CRG 5 3	4
K		N13 CRG 3 3	L14 3	K14 CRG 1 2	4	M12 CRG 7 2	K10 2	4
L			K12 CRG 5 2	L11 2	M14 CRG 8 3	L13 2	CRG 4 4	4
M				O13 CRG 3 3	K15 3	L15 CRG 2 3	4	
N					H11 CRG 6 2	N14 3	4	
O						4

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
2	2 / MK-B3	2.75	61
	3 / MK-B3	3.05	60
	4 / MK-B4	2.64	56
			177

No BPRAs

Banks 1 – 4 Safety H8, H12, K9, K11, L14, M11, M13
Bank 5 Regulating H14, L10
Bank 6 Regulating H10, N12
Bank 7 Transient K13
Bank 8 (Black APSR) L12

Figure 3-3. One-Eighth Core Loading for TMI-1, Cycle 2

	8	9	10	11	12	13	14	15
H	L12(Cy1) CRG 2 1	H15 4	H12 CRG 3 3	L14 4	H14 CRG 6 3	L14 4	M11(Cy1) CRG 7 1	5
K		H13 CRG 4 3	L12 3	K10 CRG 1 3	L15 4	K12 CRG 5 4	M14 4	5
L			M11 CRG 6 3	M12 3	K15 CRG 8 4	K13(Cy1) 1	CRG 2 5	5
M				O13 CRG 4 4	N14 4	M13 CRG 3 3	5	
N					K9 CRG 7 3	N13 3	5	
O						5

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
3	1 / MK-B2	2.06	13
	3 / MK-B3	3.05	60
	4 / MK-B4	2.64	56
	5 / MK-B4	2.85	48
			177

No BPRAs

Banks 1 – 4 Safety H8, H10, K9, K11, L14, M11, M13
Bank 5 Regulating K13
Bank 6 Regulating H12, L10
Bank 7 Transient H14, N12
Bank 8 (Black APSR) L12

Figure 3-4. One-Eighth Core Loading for TMI-1, Cycle 3

	8	9	10	11	12	13	14	15
H	L12(Cy1) CRG 3 1	H9 4	K15 CRG 5 5	M13(Cy1) 1	H15 CRG 5 5	L12(Cy1) 1	M11 CRG 7 4	6
K		K15 CRG 4 5	H11 4	L14 CRG 2 5	L12 4	N14 CRG 6 5	K13 4	6
L			O13 CRG 7 5	M12 4	L15 CRG 8 5	L13(Cy2) 2	CRG 3 6	6
M				N12(Cy1) CRG 5 1	M14 5	K14 CRG 1 4	6	
N					K12 CRG 7 4	6	6	
O						K12 4		

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
4	1 / MK-B2	2.06	13
	2 / MK-B3	2.75	8
	4 / MK-B4	2.64	56
	5 / MK-B4	2.85	48
	6 / MK-B4	2.85	52
			177

No BPRAs

Banks 1 – 4 Safety H8, K9, K11, L14, M13
Bank 5 Regulating H10, H12, M11
Bank 6 Regulating K13
Bank 7 Transient H14, L10, N12
Bank 8 (Black APSR) L12

Figure 3-5. One-Eighth Core Loading for TMI-1, Cycle 4

Cycle	Batch/FA	wt % ²³⁵ U	# FA
5	4 / MK-B4	2.64	25
	5 / MK-B4	2.85	48
	6 / MK-B4	2.85	52
	7 / MK-B4	2.85	52
			177

No BPRAs

Banks 1 – 4 Safety H8, K9, K11, L14, M13
 Bank 5 Regulating H10, H12, M11
 Bank 6 Regulating K13
 Bank 7 Transient H14, L10, N12
 Bank 8 (Black APSR) L12

Figure 3-6. One-Eighth Core Loading for TMI-1, Cycle 5

	8	9	10	11	12	13	14	15
H	M13 CRG 4 6B	1.03 BPRA 8A	K09 CRG 2 6B	1.03 BPRA 8B	K13 CRG 7 6B	0.8 BPRA 8B	M13 CRG 6 6B	H12 6B
K		L10 CRG 2 6B	1.03 BPRA 8B	L12 CRG 4 6B	1.03 BPRA 8B	M14 CRG 5 7	0.2 BPRA 8B	L14 7
L			H14 CRG 6 6B	1.03 BPRA 8A	K11 CRG 8 6B	0.8 BPRA 8B	K15 CRG 1 7	N13 7
M				H10 CRG 5 6B	0.8 BPRA 8B	N14 CRG 3 7	8B	
N					K13 CRG 7 6B	0.2 BPRA 8B	L15 7	
O						H15 7		

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
6	6 / MK-B4	2.85	49
	7 / MK-B4	2.85	52
	8A / MK-B4	2.95	12
	8B / MK-B4	2.85	64
			177

BPRA	Position
0.2 wt % B ₄ C	K14, N13
0.8 wt % B ₄ C	H13, L13, M12
1.3 wt % B ₄ C	H9, H11, K10, K12, L11

Banks 1 – 4 Safety	H8, H10, K9, K11, L14, M13
Bank 5 Regulating	K13, M11
Bank 6 Regulating	H14, L10
Bank 7 Regulating	H12, N12
Bank 8 (Gray –APSR)	L12

Figure 3-7. One-Eighth Core Loading for TMI-1, Cycle 6

	8	9	10	11	12	13	14	15
H	K15 CRG 4 7	1.0 BPRA 9B	K14 CRG 2 8B	1.0 BPRA 9A	H11 CRG 7 8B	1.312 BPRA 9C	013 CRG 6 7	K15 7
K		H13 CRG 2 8B	0.8 BPRA 9A	M14 CRG 4 8B	0.5 BPRA 9A	L15 CRG 5 7	0.2 BPRA 9C	K10 8B
L			L11 CRG 6 8AB	0.8 BPRA 9A	M12 CRG 8 8B	1.312 BPRA 9C	N13 CRG 1 8B	K12 8B
M				K14 CRG 5 8B	0.2 BPRA 9A	N14 CRG 3 7	9C	
N					H9 CRG 7 8A	0.2 BPRA 9C	L13 8B	
O						L11 8A		

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
7	7 / MK-B4	2.85	25
	8A / MK-B4	2.95	12
	8B / MK-B4	2.85	64
	9A / MK-B4	2.85	36
	9B / MK-B4	2.95	4
	9C / MK-B4Z	3.63	36
			177

BPRA	Position
0.2 wt % B ₄ C	K14, M12, N13
0.5 wt % B ₄ C	K12,
0.8 wt % B ₄ C	K10, L11
1.0 wt % B ₄ C	H9, H11
1.312 wt % B ₄ C	H13, L13

Banks 1 – 4 Safety	H8, H10, K9, K11, L14, M13
Bank 5 Regulating	K13, M11
Bank 6 Regulating	H14, L10
Bank 7 Regulating	H12, N12
Bank 8 (Gray –APSR)	L12

Figure 3-8. One-Eighth Core Loading for TMI-1, Cycle 7

	8	9	10	11	12	13	14	15
H	K15 (Cy6) CRG 4 7	M14 9C	K12 CRG 2 9A	0.5 BPRA 10A	H9 CRG 7 9B	1.7 BPRA 10B	N13 CRG 6 9C	N14 8C
K		H13 CRG 2 9C	1.303 BPRA 10B	M12 CRG 4 9A	1.7 BPRA 10B	L13 CRG 5 9C	0.5 BPRA 10B	L15 8C
L			H11 CRG 6 9A	1.7 BPRA 10B	K10 CRG 8 9A	1.7 BPRA 10B	CRG 1 10A	L11 9A
M				K12 CRG 5 9A	1.7 BPRA 10B	K14 CRG 3 9C	10B	
N					N13 CRG 7 9C	0.5 BPRA 10B	L14(Cy6) 7C	
O						M14 9C

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
8	6 / MK-B4	2.85	1
	7 / MK-B4	2.85	9
	8B / MK-B4	2.85	12
	9A / MK-B4	2.85	35
	9B / MK-B4	2.95	4
	9C / MK-B4Z	3.63	36
	10A / MK-B4	2.85	12
	10B / MK-B4Z,B8	3.63	68
			177

BPRA Position
0.5 wt % B₄C H11, K14, N13
1.303 wt % B₄C K10
1.7 wt % B₄C H13, K12, L11, L13,M12

Banks 1 – 4 Safety H8, H10, K9, K11, L14, M13
Bank 5 Regulating K13, M11
Bank 6 Regulating H14, L10
Bank 7 Regulating H12, N12
Bank 8 (Gray –APSR) L12

Figure 3-9. One-Eighth Core Loading for TMI-1, Cycle 8

	8	9	10	11	12	13	14	15
H	K15(Cy6) CRG 4 7	1.7 BPRA 11A	N13 CRG 2 10B	M14 10B	K12 CRG 7 10B	1.1 BPRA 11B	H13 CRG 6 10B	N14 7
K		M14 CRG 2 10B	1.7 BPRA 11A	L11 CRG 4 10B	1.7 BPRA 11C	L13 CRG 5 10B	0.8 BPRA 11C	K15 8B
L			K12 CRG 6 10B	2.1 BPRA 11C	M12 CRG 8 10B	2.1 BPRA 11C	CRG 1 11A	M13(Cy6) 7
M				K10 CRG 5 10B	2.1 BPRA 11C	K14 CRG 3 10B	11C	
N					N13 CRG 7 10B	0.0 BPRA 11C	L14 10A	
O						K10 10B		

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
9	7 / MK-B4	2.85	13
	8B / MK-B4	2.85	8
	10A / MK-B4	2.85	8
	10B / MK-B4Z	3.63	68
	11A / MK-B8	3.63	20
	11B / W-LTA	3.90	4
	11C / MK-B8V	4.00	56
			177

BPRA	Position
0.0 wt % B ₄ C	N13
0.8 wt % B ₄ C	K14
1.1 wt % B ₄ C	H13
1.7 wt % B ₄ C	H9, K10, K12
2.1 wt % B ₄ C	L11, L13, M12

Banks 1 – 4 Safety	H8, H10, K9, K11, L14, M13
Bank 5 Regulating	K13, M11
Bank 6 Regulating	H14, L10
Bank 7 Regulating	H12, N12
Bank 8 (Gray –APSR)	L12

Figure 3-10. One-Eighth Core Loading for TMI-1, Cycle 9

	8	9	10	11	12	13	14	15
H	O13 CRG 7 10B	2.0 BPRA 12B	L11 CRG 2 11C	M14 11C	N13 CRG 7 11C	2.0 BPRA 12C	M14 CRG 6 11C	H12 10B
K		H9 CRG 2 11A	2.0 BPRA 12B	L13 CRG 4 11C	2.1 BPRA 12C	K14 CRG 5 11C	0.2 BPRA 12E	K13 10B
L			K12 CRG 6 11C	2.0 BPRA 12B	L14 CRG 8 11A	2.1 BPRA 12C	CRG 1 12A	L12 10B
M				K12 CRG 5 11C	2.0 BPRA 12B	M12 CRG 3 11C	12D	
N					N13 CRG 7 11C	0.0 BPRA 12D	K10 11A	
O						L11 11C		

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
10	10B / MK-B8	3.63	21
	11A / MK-B8	3.63	20
	11C / MK-B8V	4.00	56
	12A / MK-B8V	4.00	8
	12B / MK-B9	4.65	28
	12C / MK-B9Gd	4.65	20
	12D / MK-B9	4.75	16
	12E / MK-B9Gd	4.75	8
			177

BPRA	Position
0.0 wt % B ₄ C	N13
0.2 wt % B ₄ C	K14
2.0 wt % B ₄ C	H9, H13, K10, L11, M12
2.1 wt % B ₄ C	K12, L13

Banks 1 – 4 Safety H10, K9, K11, L14, M13
Bank 5 Regulating K13, M11
Bank 6 Regulating H14, L10
Bank 7 Regulating H8, H12, N12
Bank 8 (Gray –APSR) L12

Figure 3-11. One-Eighth Core Loading for TMI-1, Cycle 10

	8	9	10	11	12	13	14	15
H	O13(Cy9) CRG 7 10B	2.0 BPRA 13A	K10 CRG 2 12B	N13 12D	H13 CRG 7 12C	2.3 BPRA 13D	H9 CRG 6 12B	O13 11C
K		L13 CRG 2 12C	3.5 BPRA 13B	K14 CRG 4 12E	3.5 BPRA 13C	M12 CRG 5 12B	13F	N14 11A
L			L13 CRG 6 12C	3.5 BPRA 13B	K12 CRG 8 12C	3.5 BPRA 13E	CRG 1 13A	M13(Cy9) 10B
M				K10 CRG 5 12B	3.5 BPRA 13B	M14 CRG 3 12D	L11 12B	
N					N13 CRG 7 12D	13G	13F	
O						H14(Cy9) 10E		

Previous FA Position, Row (R), Column (C) – Normalized to 1/8 Core
Control Component – Control Rod Group #, or wt % B₄C in BPRA
Fuel Batch (B)

Cycle	Batch/FA	wt % ²³⁵ U	# FA
11	10B / MK-B8	3.63	13
	11A / MK-B8	3.63	8
	11C / MK-B8V	4.00	4
	12B / MK-B9	4.65	28
	12C / MK-B9Gd	4.65	20
	12D / MK-B9	4.75	16
	12E / MK-B9Gd	4.75	8

Cycle	Batch/FA	wt % ²³⁵ U	# FA
11	13A / MK-B8V	4.00	12
	13B / MK-B10	4.23	24
	13C / MK-B10Gd	4.23	8
	13D / W-LTA	4.25	4
	13E / MK-B10Gd	4.55	8
	13F / MK-B10Gd	4.55	16
	13G / MK-B10	4.00	8
			177

Banks 1 – 4 Safety H10, K9, K11, L14, M13
Bank 5 Regulating K13, M11
Bank 6 Regulating H14, L10
Bank 7 Regulating H8, H12, N12
Bank 8 (Gray –APSR) L12

BPRA Position
2.0 wt % B₄C H9
2.3 wt % B₄C H13
3.5 wt % B₄C K10, K12, L11, L13, M12

Figure 3-12. One-Eighth Core Loading for TMI-1, Cycle 11

	8	9	10	11	12	13	14	15
H	A1	A2	A3	A4	A5	A6	A7	A8
K		A9	A10	A11	A12	A13	A14	A15
L			A16	A17	A18	A19	A20	A21
M				A22	A23	A24	A25	
N					A26	A27	A28	
O						A29		

A Cycle 1
B Cycle 2
C Cycle 3
D Cycle 4
E Cycle 5
F Cycle 6
G Cycle 7
H Cycle 8
J Cycle 9
K Cycle 10
L Cycle 11

Figure 3-13. TMI-1, Cycle 1 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	A1	A2	A6	A12	A27	A7	A8	B8
K		A27a	A20	A14	B12	A23	A10	B15
L			A12a	A17	A25	A19	B20 & B20a	B21 & B21a
M				A29	A15	A21	B25	
N					A4	A28	B28	
O						B29		

A Cycle 1
B Cycle 2
 C Cycle 3
 D Cycle 4
 E Cycle 5
 F Cycle 6
 G Cycle 7
 H Cycle 8
 J Cycle 9
 K Cycle 10
 L Cycle 11

Figure 3-14. TMI-1, Cycle 2 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	A18	B8	A27	B20	A8	B20a	A22	C8
K		A7	A25	A20	B21 & B21a	B12	B25	C15 & C15a
L			A29	A15	B15	A13	C20	C21
M				B29	B28	A21	C25	
N					A27a	A28	C28	
O						C29		

A Cycle 1
 B Cycle 2
C Cycle 3
 D Cycle 4
 E Cycle 5
 F Cycle 6
 G Cycle 7
 H Cycle 8
 J Cycle 9
 K Cycle 10
 L Cycle 11

Figure 3-15. TMI-1, Cycle 3 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	A18a	B8	C15	A24	C8	A18b	B29	D8
K		C15a	B20 & B20a	C20	B15	C28	B12	D15 & D15a
L			C29	B28	C21	A19	D20 & D20a	D21
M				A26	C25	B25	D25 & D25a	
N					B21	D27 & D27a	D28	
O						B21a		

A Cycle 1
 B Cycle 2
 C Cycle 3
D Cycle 4
 E Cycle 5
 F Cycle 6
 G Cycle 7
 H Cycle 8
 J Cycle 9
 K Cycle 10
 L Cycle 11

Figure 3-16. TMI-1, Cycle 4 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	B21	C15	D8	B29	D20	C8	D20a	E8
K		D25	C20	D28	C25	D15 & D15a	B15	E15
L			D25a	C21	D21	B28	E20 E20a E20b E20c	E21
M				C15a	C28	D27 & D27a	E25	
N					B21a	E27	E28	
O						C29		

A Cycle 1
 B Cycle 2
 C Cycle 3
 D Cycle 4
E Cycle 5
 F Cycle 6
 G Cycle 7
 H Cycle 8
 J Cycle 9
 K Cycle 10
 L Cycle 11

Figure 3-17. TMI-1, Cycle 5 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	D27a	F2	D25	F4	D15	F6	D27	D20
K		D25a	F10	D21	F12	E25	F14 & F14a	E20 E20a E20b E20c
L			D20a	F17 & F17a	D28	F19	E15	E27
M				D8	F23	E28	F25	
N					D15a	F27	E21	
O						E8		

A Cycle 1
 B Cycle 2
 C Cycle 3
 D Cycle 4
 E Cycle 5
F Cycle 6
 G Cycle 7
 H Cycle 8
 J Cycle 9
 K Cycle 10
 L Cycle 11

Figure 3-18. TMI-1, Cycle 6 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	E20a	G2	F14	G4	F4	G6	E8	E20
K		F6	G10	F25	G12 & G12a	E27	G14	F10
L			F17a	G17	F23	G19	F27	F12
M				F14a	G23	E21	G25 & G25a	
N					F2	G27 & G27a	F19	
O						F17		

A Cycle 1
 B Cycle 2
 C Cycle 3
 D Cycle 4
 E Cycle 5
 F Cycle 6
G Cycle 7
 H Cycle 8
 J Cycle 9
 K Cycle 10
 L Cycle 11

Notes: One G17 assembly was removed at end of Cycle 7
 Four F19 assemblies were removed at end of Cycle 7

Figure 3-19. TMI-1, Cycle 7 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	E20b	G25	G12	H4	G2	H6	G27	F19
K		G6	H10 H10a H10b	G23	H12 & H12a	G19	H14	F12
L			G4	H17	G10	H19	H20	G17 (7Assy) D27a (1Assy)
M				G12a	H23	G14	H25 & H25a	
N					G27a	H27 & H27a	E15	
O						G25a		

A Cycle 1
 C Cycle 3
 D Cycle 4
 E Cycle 5
 F Cycle 6
 G Cycle 7
H Cycle 8
 J Cycle 9
 K Cycle 10
 L Cycle 11

Figure 3-20. TMI-1, Cycle 8 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	E20c	J2	H27	H25a	H12	J6	H6	E15
K		H25	J10	H17	J12 & J12a	H19	J14	F12
L			H12a	J17 & J17a	H23	J19	J20	E28
M				H10	J23	H14	J25 & J25a	
N					H27a	J27 & J27a	H20	
O						H10a & H10b		

A Cycle 1
 B Cycle 2
 C Cycle 3
 D Cycle 4
 E Cycle 5
 F Cycle 6
 G Cycle 7
 H Cycle 8
J Cycle 9
 K Cycle 10
 L Cycle 11

Figure 3-21. TMI-1, Cycle 9 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	H10a	K2	J17a	J25a	J27	K6	J25	H12
K		J2	K10 & K10a	J19	K12	J14	K14	H19
L			J12a	K17	J20	K19 & K19a	K20	H23
M				J12	K23	J23	K25	
N					J27a	K27 & K27a	J10	
O						J17		

A Cycle 1
 B Cycle 2
 C Cycle 3
 D Cycle 4
 E Cycle 5
 F Cycle 6
 G Cycle 7
 H Cycle 8
 J Cycle 9
K Cycle 10
 L Cycle 11

Figure 3-22. TMI-1, Cycle 10 Fuel Assembly Identification & Location

	8	9	10	11	12	13	14	15
H	H10b	L2	K10a	K27a	K6	L6	K2	J17
K		K19	L10	K14	L12	K23	L14	J10
L			K19a	L17	K12	L19	L20	H14
M				K10	L23	K25	K17	
N					K27	L27	L28	
O						H6		

A Cycle 1
 B Cycle 2
 C Cycle 3
 D Cycle 4
 E Cycle 5
 F Cycle 6
 G Cycle 7
 H Cycle 8
 J Cycle 9
 K Cycle 10
 L **Cycle 11**

Figure 3-23. TMI-1, Cycle 11 Fuel Assembly Identification & Location

To aid in the burnup calculations, and thus the generation of isotopic data for the SP calculations, the information provided in Figures 3-1 through 3-23 was reduced to two tables. Table 3-3 traces each fuel assembly (and subsequent split by shuffling symmetric components to more than one location, if applicable) by assembly identification and cycle from the time the assembly was first inserted in the reactor to the time it was discharged (or remained past cycle 11). The coordinates given in the figures (e.g., H8, K12) indicate the location of each assembly in each cycle.

Table 3-4 is a repeat of portions of Table 3-3 where control rod bank indicators (e.g., CR7 for bank 7, CR8 for bank 8 or APSRs) are given for those assemblies that contained control rods during cycle operation. Control rod banks 1 through 4 are for safety and are withdrawn during operation. Control rod bank 5 is also withdrawn during operation.

Control rod insertion must be modeled in the burnup calculations for those assemblies and axial locations where rods are inserted. Additional data for rod insertion time by axial node is given in Section 4. The wt % of B_4C in the burnable poison rod assembly is provided by assembly and by cycle.

Table 3-3. Fuel Assembly Locations by Cycle

Assembly Number	Batch Number	Cycle 1A	Cycle 1B	Cycle 2	Cycle3	Cycle 4	Cycle 5
Cycle 1							
A1	2	H-08	H-08	H-08			
A2	2	H-09	H-09	H-09			
A3	1	H-10	H-10				
A4	2	H-11	H-11	N-12			
A5	1	H-12	H-12				
A6	2	H-13	H-13	H-10			
A7	3	H-14	H-14	H-13	K-09		
A8	3	H-15	H-15	H-14	H-12		
A9	1	K-09	K-09				
A10	2	K-10	K-10	K-14			
A11	1	K-11	K-11				
A12	2	K-12	K-12	H-11			
A12a	2	K-12	K-12	L-10			
A13	1	K-13	K-13		L-13		
A14	2	K-14	K-14	K-11			
A15	3	K-15	K-15	M-12	L-11		
A16	1	L-10	L-10				
A17	2	L-11	L-11	L-11			
A18	1	L-12	L-12		H-08		
A18a	1	L-12	L-12			H-08	
A18b	1	L-12	L-12			H-13	
A19	2	L-13	L-13	L-13		L-13	
A20	3	L-14	L-14	K-10	K-11		
A21	3	L-15	L-15	M-13	M-13		
A22	1	M-11	M-11		H-14		
A23	2	M-12	M-12	K-13			
A24	1	M-13	M-13			H-11	
A25	3	M-14	M-14	L-12	K-10		
A26	1	N-12	N-12			M-11	
A27	3	N-13	N-13	H-12	H-10		
A27a	3	N-13	N-13	K-09	N-12		
A28	3	N-14	N-14	N-13	N-13		
A29	3	O-13	O-13	M-11	L-10		
Cycle 2							
B8	4			H-15	H-09	H-09	
B12	4			K-12	K-13	K-14	
B15	4			K-15	L-12	K-12	K-14
B20	4			L-14	H-11	K-10	
B20a	4			L-14	H-13	K-10	
B21	4			L-15	K-12	N-12	H-08
B21a	4			L-15	K-12	O-13	N-12
B25	4			M-14	K-14	M-13	
B28	4			N-14	M-12	L-11	L-13
B29	4			O-13	M-11	H-14	H-11

Table 3-3. Fuel Assembly Locations by Cycle (Cont.)

Assembly Number	Batch Number	Cycle3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9
Cycle 3								
C8	5	H-15	H-12	H-13				
C15	5	K-15	H-10	H-09				
C15a	5	K-15	K-09	M-11				
C20	5	L-14	K-11	K-10				
C21	5	L-15	L-12	L-11				
C25	5	M-14	M-12	K-12				
C28	5	N-14	K-13	M-12				
C29	5	O-13	L-10	O-13				
Cycle 4								
D8	6		H-15	H-10	M-11			
D15	6		K-15	K-13	H-12			
D15a	6		K-15	K-13	N-12			
D20	6		L-14	H-12	H-15			
D20a	6		L-14	H-14	L-10			
D21	6		L-15	L-12	K-11			
D25	6		M-14	K-09	H-10			
D25a	6		M-14	L-10	K-09			
D27	6		N-13	M-13	H-14			
D27a	6		N-13	M-13	H-08		L-15(1 assy)	
D28	6		N-14	K-11	L-12			
Cycle 5								
E8	7			H-15	O-13	H-14		
E15	7			K-15	L-14		N-14	H-15
E20	7			L-14	K-15	H-15		
E20a	7			L-14	K-15	H-08		
E20b	7			L-14	K-15		H-08	
E20c	7			L-14	K-15			H-08
E21	7			L-15	N-14	M-13		
E25	7			M-14	K-13			
E27	7			N-13	L-15	K-13		
E28	7			N-14	M-13			L-15
Cycle 6								
F2	8A				H-09	N-12		
F4	8B				H-11	H-12		
F6	8B				H-13	K-09		
F10	8B				K-10	K-15		
F12	8B				K-12	L-15	K-15	K-15
F14	8B				K-14	H-10		
F14a	8B				K-14	M-11		
F17	8A				L-11	O-13		
F17a	8A				L-11	L-10		
F19	8B				L-13	N-14	H-15	
F23	8B				M-12	L-12		
F25	8B				M-14	K-11		
F27	8B				N-13	L-14		

Table 3-3. Fuel Assembly Locations by Cycle (Cont.)

Assembly Number	Batch Number	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11
Cycle 7						
G2	9B	H-09	H-12			
G4	9A	H-11	L-10			
G6	9C	H-13	K-09			
G10	9A	K-10	L-12			
G12	9A	K-12	H-10			
G12a	9A	K-12	M-11			
G14	9C	K-14	M-13			
G17	9A	L-11	L-15(7 assy)			
G19	9C	L-13	K-13			
G23	9A	M-12	K-11			
G25	9C	M-14	H-09			
G25a	9C	M-14	O-13			
G27	9C	N-13	H-14			
G27a	9C	N-13	N-12			
Cycle 8						
H4	10A		H-11			
H6	10B		H-13	H-14		O-13
H10	10B		K-10	M-11		
H10a	10B		K-10	O-13	H-08	
H10b	10B		K-10	O-13		H-08
H12	10B		K-12	H-12	H-15	
H12a	10B		K-12	L-10		
H14	10B		K-14	M-13		L-15
H17	10B		L-11	K-11		
H19	10B		L-13	K-13	K-15	
H20	10A		L-14	N-14		
H23	10B		M-12	L-12	L-15	
H25	10B		M-14	K-09		
H25a	10B		M-14	H-11		
H27	10B		N-13	H-10		
H27a	10B		N-13	N-12		
Cycle 9						
J2	11A			H-09	K-09	
J6	11B			H-13		
J10	11A			K-10	N-14	K-15
J12	11C			K-12	M-11	
J12a	11C			K-12	L-10	
J14	11C			K-14	K-13	
J17	11C			L-11	O-13	H-15
J17a	11C			L-11	H-10	
J19	11C			L-13	K-11	
J20	11A			L-14	L-12	
J23	11C			M-12	M-13	
J25	11C			M-14	H-14	
J25a	11C			M-14	H-11	
J27	11C			N-13	H-12	
J27a	11C			N-13	N-12	

Table 3-3. Fuel Assembly Locations by Cycle (Cont.)

Assembly Number	Batch Number	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11
Cycle 10						
K2	12B				H-09	H-14
K6	12C				H-13	H-12
K10	12B				K-10	M-11
K10a	12B				K-10	H-10
K12	12C				K-12	L-12
K14	12E				K-14	K-11
K17	12B				L-11	M-14
K19	12C				L-13	K-09
K19a	12C				L-13	L-10
K20	12A				L-14	
K23	12B				M-12	K-13
K25	12D				M-14	M-13
K27	12D				N-13	N-12
K27a	12D				N-13	H-11
Cycle 11						
L2	13A					H-09
L6	13D					H-13
L10	13B					K-10
L12	13C					K-12
L14	13F					K-14
L17	13B					L-11
L19	13E					L-13
L20	13A					L-14
L23	13B					M-12
L27	13G					N-13
L28	13F					N-14

Table 3-4. TMI-1 FA and Control Component Locations

Assembly Number	Batch Number	Cycle 1A	Cycle 1B	Cycle 2	Cycle3	Cycle 4	Cycle 5
Cycle 1							
A1	2	H-08/CR-7	H-08/CR-7	H-08			
A2	2	H-09/1.43 BPRA	H-09/1.43 BPRA	H-09			
A3	1	H-10	H-10				
A4	2	H-11/1.26 BPRA	H-11/1.26 BPRA	N-12/CR-6			
A5	1	H-12/CR-6	H-12/CR-6				
A6	2	H-13/1.26 BPRA	H-13/1.26 BPRA	H-10/CR-6			
A7	3	H-14	H-14/CR-7	H-13	K-09		
A8	3	H-15	H-15	H-14/CR-5	H-12/CR-6		
A9	1	K-09/CR-5	K-09/CR-5				
A10	2	K-10/1.43 BPRA	K-10/1.43 BPRA	K-14			
A11	1	K-11	K-11				
A12	2	K-12/1.26 BPRA	K-12/1.26 BPRA	H-11			
A12a	2	K-12/1.26 BPRA	K-12/1.26 BPRA	L-10/CR-5			
A13	1	K-13	K-13		L-13		
A14	2	K-14/1.43 BPRA	K-14/1.43 BPRA	K-11			
A15	3	K-15	K-15	M-12	L-11		
A16	1	L-10	L-10				
A17	2	L-11/1.09 BPRA	L-11/1.09 BPRA	L-11			
A18	1	L-12/CR-8	L-12/CR-8		H-08		
A18a	1	L-12/CR-8	L-12/CR-8			H-08	
A18b	1	L-12/CR-8	L-12/CR-8			H-13	
A19	2	L-13/1.26 BPRA	L-13/1.26 BPRA	L-13		L-13	
A20	3	L-14/CR-7	L-14	K-10	K-11		
A21	3	L-15	L-15	M-13	M-13		
A22	1	M-11/CR-6	M-11/CR-6		H-14/CR-7		
A23	2	M-12/1.09 BPRA	M-12/1.09 BPRA	K-13/CR-7			
A24	1	M-13/CR-5	M-13/CR-5			H-11	
A25	3	M-14	M-14	L-12/CR-8	K-10		
A26	1	N-12	N-12/CR-7			M-11/CR-5	
A27	3	N-13/1.26 BPRA	N-13/1.26 BPRA	H-12	H-10		
A27a	3	N-13/1.26 BPRA	N-13/1.26 BPRA	K-09	N-12/CR-7		
A28	3	N-14	N-14	N-13	N-13		
A29	3	O-13	O-13	M-11	L-10/CR-6		
Cycle 2							
B8	4			H-15	H-09	H-09	
B12	4			K-12	K-13/CR-5	K-14	
B15	4			K-15	L-12/CR-8 ^a	K-12	K-14
B20	4			L-14	H-11	K-10	
B20a	4			L-14	H-13	K-10	
B21	4			L-15	K-12	N-12/CR-7 ^a	H-08
B21a	4					O-13	N-12/CR-7 ^a
B25	4			M-14	K-14	M-13	
B28	4			N-14	M-12	L-11	L-13
B29	4			O-13	M-11	H-14/CR-7 ^a	H-11

Table 3-4. TMI-1 FA and Control Component Locations (Cont.)

Assembly Number	Batch Number	Cycle 3	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8	Cycle 9
Cycle 3								
C8	5	H-15	H-12/CR-5	H-13				
C15	5	K-15	H-10/CR-5	H-09				
C15a	5	K-15	K-09	M-11/CR-5				
C20	5	L-14	K-11	K-10				
C21	5	L-15	L-12/CR-8 ^a	L-11				
C25	5	M-14	M-12	K-12				
C28	5	N-14	K-13/CR-6 ^a	M-12				
C29	5	O-13	L-10/CR-7 ^a	O-13				
Cycle 4								
D8	6		H-15	H-10/CR-5	M-11/CR-5			
D15	6		K-15	K-13/CR-6	H-12/CR-7 ^a			
D15a	6		K-15	K-13	N-12/CR-7 ^a			
D20	6		L-14	H-12/CR-5	H-15			
D20a	6		L-14	H-14/CR-7 ^a	L-10/CR-6			
D21	6		L-15	L-12/CR-8 ^a	K-11			
D25	6		M-14	K-09	H-10			
D25a	6		M-14	L-10/CR-7 ^a	K-09			
D27	6		N-13	M-13	H-14/CR-6			
D27a	6		N-13	M-13	H-08			
D28	6		N-14	K-11	L-12/CR-8 ^a			
Cycle 5								
E8	7			H-15	O-13	H-14/CR-6		
E15	7			K-15	L-14		N-14	H-15
E20	7			L-14	K-15	H-15		
E20a	7			L-14	K-15	H-08		
E20b	7			L-14	K-15		H-08	
E20c	7			L-14	K-15			H-08
E21	7			L-15	N-14	M-13		
E25	7			M-14	K-13/CR-5			
E27	7			N-13	L-15	K-13/CR-5		
E28	7			N-14	M-13			L-15
Cycle 6								
F2	8A				H-09/1.03 BPRA	N-12/CR-7 ^a		
F4	8B				H-11/1.03 BPRA	H-12/CR-7 ^a		
F6	8B				H-13/0.8 BPRA	K-09		
F10	8B				K-10/1.03 BPRA	K-15		
F12	8B				K-12/1.03 BPRA	L-15	K-15	K-15
F14	8B				K-14/0.2 BPRA	H-10		
F14a	8B				K-14/0.2 BPRA	M-11/CR-5		
F17	8A				L-11/1.03 BPRA	O-13		
F17a	8A				L-11/1.03 BPRA	L-10/CR-6		
F19	8B				L-13/0.8 BPRA	N-14	H-15	
F23	8B				M-12/0.8 BPRA	L-12/CR-8 ^a		
F25	8B				M-14	K-11		
F27	8B				N-13/0.2 BPRA	L-14		

Table 3-4. TMI-1 FA and Control Component Locations (Cont.)

Assembly Number	Batch Number	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11
Cycle 7						
G2	9B	H-09/1.0 BPRA	H-12/CR-7 ^a			
G4	9A	H-11/1.0 BPRA	L-10/CR-6			
G6	9C	H-13/1.312 BPRA	K-09			
G10	9A	K-10/0.8 BPRA	L-12/CR-8 ^a			
G12	9A	K-12/0.5 BPRA	H-10			
G12a	9A	K-12/0.5 BPRA	M-11/CR-5			
G14	9C	K-14/0.2 BPRA	M-13			
G17	9A	L-11/0.8 BPRA	L-15			
G19	9C	L-13/1.312 BPRA	K-13/CR-5			
G23	9A	M-12/0.2 BPRA	K-11			
G25	9C	M-14	H-09			
G25a	9C	M-14	O-13			
G27	9C	N-13/0.2 BPRA	H-14/CR-6			
G27a	9C	N-13/0.2 BPRA	N-12/CR-7 ^a			
Cycle 8						
H4	10A		H-11/0.5 BPRA			
H6	10B		H-13/1.7 BPRA	H-14/CR-6		O-13
H10	10B		K-10/1.303 BPRA	M-11/CR-5		
H10a	10B		K-10/1.303 BPRA	O-13	H-08/CR-7 ^a	
H10b	10B		K-10/1.303 BPRA	O-13		H-08/CR-7 ^a
H12	10B		K-12/1.7 BPRA	H-12/CR-7 ^a	H-15	
H12a	10B		K-12/1.7 BPRA	L-10/CR-6		
H14	10B		K-14/0.5 BPRA	M-13		L-15
H17	10B		L-11/1.7 BPRA	K-11		
H19	10B		L-13/1.7 BPRA	K-13/CR-5	K-15	
H20	10A		L-14	N-14		
H23	10B		M-12/1.7 BPRA	L-12/CR-8 ^a	L-15	
H25	10B		M-14	K-09		
H25a	10B		M-14	H-11		
H27	10B		N-13/0.5 BPRA	H-10		
H27a	10B		N-13/0.5 BPRA	N-12/CR-7 ^a		
Cycle 9						
J2	11A			H-09/1.7 BPRA	K-09	
J6	11B			H-13/1.1 BPRA		
J10	11A			K-10/1.7 BPRA	N-14	K-15
J12	11C			K-12/1.7 BPRA	M-11/CR-5	
J12a	11C			K-12/1.7 BPRA	L-10	
J14	11C			K-14/0.8 BPRA	K-13/CR-5	
J17	11C			L-11/2.1 BPRA	O-13	H-15
J17a	11C			L-11/2.1 BPRA	H-10	
J19	11C			L-13/2.1 BPRA	K-11	
J20	11A			L-14	L-12/CR-8 ^a	
J23	11C			M-12/2.1 BPRA	M-13	
J25	11C			M-14	H-14/CR-6	
J25a	11C			M-14	H-11	
J27	11C			N-13/0.0 BPRA	H-12/CR-7 ^a	
J27a	11C			N-13/0.0 BPRA	N-12/CR-7 ^a	

Table 3-4. TMI-1 FA and Control Component Locations (Cont.)

Assembly Number	Batch Number	Cycle 7	Cycle 8	Cycle 9	Cycle 10	Cycle 11
Cycle 10						
K2	12B				H-09/2.0 BPRA	H-14/CR-6
K6	12C				H-13/2.0 BPRA	H-12/CR-7 ^a
K10	12B				K-10/2.0 BPRA	M-11/CR-5
K10a	12B				K-10/2.0 BPRA	H-10
K12	12C				K-12/2.1 BPRA	L-12/CR-8 ^a
K14	12E				K-14/0.2 BPRA	K-11
K17	12B				L-11/2.0 BPRA	M-14
K19	12C				L-13/2.1 BPRA	K-09
K19a	12C				L-13/2.1 BPRA	L-10/CR-6
K20	12A				L-14	
K23	12B				M-12/2.0 BPRA	K-13/CR-5
K25	12D				M-14	M-13
K27	12D				N-13/0.0 BPRA	N-12/CR-7 ^a
K27a	12D				N-13/0.0 BPRA	H-11
Cycle 11						
L2	13A					H-09/2.0 BPRA
L6	13D					H-13/2.3 BPRA
L10	13B					K-10/3.5 BPRA
L12	13C					K-12/3.5 BPRA
L14	13F					K-14
L17	13B					L-11/3.5 BPRA
L19	13E					L-13/3.5 BPRA
L20	13A					L-14
L23	13B					M-12/3.5 BPRA
L27	13G					N-13
L28	13F					N-14

NOTE: ^a The rod history is provided in Section 4.

INTENTIONALLY LEFT

4. CORE OPERATIONS AND STATEPOINT INFORMATION

This section provides core operations data for the burnup calculations that are required to generate isotopic concentrations for the statepoint evaluations. The measured critical conditions for the statepoints (SPs) evaluated are also contained in this section.

4.1 CORE FOLLOW DATA

The use of commercial reactor criticality data for model validation requires detailed knowledge of how the reactor was operated for the lifetime of every fuel assembly contributing to the criticality database. This is necessary to adequately model the conditions for burnup calculations at each axial location of each fuel assembly represented in the reactor core for each SP evaluation. Thus, core follow calculations based on core operation data are used to provide local conditions as a function of time to be used for all burnup calculations performed in support of the SP evaluations. In addition, measured global data such as rod insertions and boron letdown data are also provided.

The core follow calculations provide three-dimensional thermal-hydraulic (TH) feedback and burnup data. Tables 4-2 through 4-116 provide axial burnup profiles for each assembly at each SP along with axial fuel temperature and moderator specific volume distributions to be used in the burnup calculations between SPs. Fuel assembly nodal burnup values are provided at a given SP or datapoint (DP). The fuel temperature and the moderator specific volume are obtained from approximately half way to the previous SP (or DP) at full power. The data in Tables 4-2 through 4-116 is given by axial node location. Starting from the top of the reactor core (node 1) the nodal spacing is as indicated in Table 4-1. Active fuel and fuel assemblies modeled in the depletion and statepoint analysis are provided in Figure 4-1. Note that Cycles 1 through 4 are modeled with an active fuel height of 360.4515 cm, Cycles 5 through 9 are modeled with an active fuel height of 360.172 cm, and Cycles 10 and 11 are modeled with an active fuel height of 357.111 cm.

Table 4-1. Assembly Axial Nodal Spacing

Axial Node	Node Spacing (cm)		
	Cycles 1 - 4	Cycles 5 - 9	Cycles 10 - 11
1 (top)	20.2057	20.0660	17.4780
2	20.0025	20.0025	20.0025
3	20.0025	20.0025	20.0025
4	20.0025	20.0025	20.0025
5	20.0025	20.0025	20.0025
6	20.0025	20.0025	20.0025
7	20.0025	20.0025	20.0025
8	20.0025	20.0025	20.0025
9	20.0025	20.0025	20.0025
10	20.0025	20.0025	20.0025
11	20.0025	20.0025	20.0025

Table 4-1. Assembly Axial Nodal Spacing (Cont.)

Axial Node	Node Spacing (cm)		
	Cycles 1 - 4	Cycles 5 - 9	Cycles 10 - 11
12	20.0025	20.0025	20.0025
13	20.0025	20.0025	20.0025
14	20.0025	20.0025	20.0025
15	20.0025	20.0025	20.0025
16	20.0025	20.0025	20.0025
17	20.0025	20.0025	20.0025
18 (bottom)	22.2057	20.0660	19.5940
Active Fuel Height	360.4515	360.172	357.111

Figure 4-1. TMI-1 Active Fuel Length for Statepoint Analysis

The following information applies to Tables 4-2 through 4-116:

- Burnup is measured in GWd/MTU.
- T-Fuel is Fuel Temperature measured in °F.
- Spec. Vol. is Moderator Specific Volume measured in ft³/lbm.

Table 4-2. Burnup and TH Feedback Parameters by Axial Node for Assembly B15

Axial Node	Datapoint (257.0 Cy2)			Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	EOC ^a Cy2	131.6 Cy2	131.6 Cy2	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3
1	2.757	846.7	0.0238	5.870	1091.7	0.0249	9.365	1079.5	0.0248
2	4.585	994.7	0.0238	9.542	1289.3	0.0248	14.670	1221.1	0.0247
3	5.563	1065.0	0.0237	11.485	1375.3	0.0246	17.246	1267.1	0.0245
4	6.003	1094.2	0.0236	12.368	1399.8	0.0244	18.303	1272.3	0.0243
5	6.184	1104.6	0.0235	12.731	1401.0	0.0242	18.697	1266.7	0.0241
6	6.253	1107.6	0.0234	12.849	1393.3	0.0240	18.819	1260.8	0.0239
7	6.276	1107.9	0.0233	12.814	1379.6	0.0238	18.775	1256.1	0.0238
8	6.276	1107.3	0.0232	12.609	1345.5	0.0236	18.449	1244.9	0.0236
9	6.264	1106.1	0.0231	11.814	1225.0	0.0234	16.972	1189.1	0.0234
10	6.249	1104.8	0.0230	10.002	1060.4	0.0233	13.893	1040.0	0.0233
11	6.247	1104.3	0.0229	9.694	1033.9	0.0232	13.262	1014.8	0.0232
12	6.266	1105.0	0.0228	9.740	1037.4	0.0231	13.302	1014.4	0.0231
13	6.300	1106.4	0.0227	10.007	1069.2	0.0230	13.771	1032.8	0.0230
14	6.323	1106.8	0.0226	11.147	1233.9	0.0229	15.957	1136.6	0.0229
15	6.279	1102.1	0.0225	12.458	1363.5	0.0228	18.348	1246.9	0.0228
16	6.014	1080.9	0.0225	12.293	1370.6	0.0226	18.288	1264.0	0.0226
17	5.150	1014.8	0.0224	10.694	1300.2	0.0225	16.170	1228.5	0.0225
18	3.125	849.5	0.0223	6.669	1085.3	0.0224	10.419	1072.4	0.0224

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC ^b Cy 5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	11.740	970.0	0.0247	14.84	983.3	0.0246	16.242	810.3	0.0229
2	18.319	1090.7	0.0246	22.77	1068.7	0.0245	24.968	879.8	0.0228
3	21.518	1131.1	0.0244	26.493	1089.2	0.0244	29.145	900.6	0.0228
4	22.846	1143.8	0.0243	27.957	1086.9	0.0242	30.836	905.3	0.0227
5	23.343	1145.5	0.0241	28.464	1079.5	0.0241	31.439	904.5	0.0226
6	23.474	1141.9	0.0239	28.584	1073.0	0.0239	31.589	899.8	0.0225
7	23.368	1135.2	0.0238	28.476	1069.2	0.0238	31.484	894.7	0.0224
8	22.910	1123.3	0.0236	28.015	1067.3	0.0236	31.039	895.3	0.0224
9	21.377	1122.0	0.0235	26.485	1073.4	0.0235	29.614	916.2	0.0223
10	18.528	1162.7	0.0233	23.714	1098.9	0.0233	27.073	962.5	0.0222
11	18.032	1170.5	0.0232	23.188	1100.9	0.0232	26.627	980.7	0.0221
12	18.221	1172.5	0.0230	23.381	1100.8	0.0231	26.828	986.4	0.0220
13	18.821	1172.9	0.0229	24.012	1100.7	0.0229	27.399	979.2	0.0219
14	20.861	1142.2	0.0228	26.018	1085.4	0.0228	29.187	942.2	0.0218
15	22.834	1085.8	0.0226	27.874	1061.1	0.0227	30.765	898.0	0.0218
16	22.357	1046.3	0.0225	27.254	1050.6	0.0225	29.908	871.8	0.0217
17	19.610	995.9	0.0224	24.028	1024.2	0.0224	26.304	843.0	0.0216
18	12.643	883.1	0.0223	15.712	934.8	0.0223	17.211	776.2	0.0216

NOTES: ^a EOC = End of cycle
^b BOC = Beginning of cycle

Table 4-3. Burnup and TH Feedback Parameters by Axial Node for Assembly B21

Axial Node	Datapoint (257.0 Cy2)			Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	EOC Cy2	131.6 Cy2	131.6 Cy2	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3
1	2.237	797.4	0.0236	5.158	1084.4	0.0254	8.567	1073.8	0.0252
2	3.781	923.6	0.0235	8.540	1297.0	0.0253	13.644	1224.0	0.0251
3	4.643	988.8	0.0235	10.511	1399.7	0.0251	16.320	1283.3	0.0249
4	5.054	1017.0	0.0234	11.472	1429.5	0.0248	17.472	1293.3	0.0247
5	5.235	1027.7	0.0233	11.883	1431.8	0.0246	17.912	1288.7	0.0245
6	5.310	1031.3	0.0232	12.037	1425.6	0.0244	18.068	1283.1	0.0243
7	5.336	1031.9	0.0231	12.053	1414.6	0.0242	18.081	1278.8	0.0241
8	5.334	1031.3	0.0230	11.943	1396.0	0.0240	17.928	1273.0	0.0239
9	5.315	1029.7	0.0230	11.653	1361.1	0.0238	17.494	1258.2	0.0237
10	5.289	1027.6	0.0229	11.268	1325.5	0.0236	16.914	1235.9	0.0235
11	5.272	1026.1	0.0228	11.106	1314.8	0.0234	16.671	1226.3	0.0234
12	5.279	1026.0	0.0227	11.151	1323.4	0.0233	16.739	1227.0	0.0232
13	5.305	1027.0	0.0227	11.347	1348.5	0.0231	17.048	1236.4	0.0231
14	5.327	1027.7	0.0226	11.676	1387.6	0.0229	17.602	1257.6	0.0229
15	5.285	1023.5	0.0225	11.874	1409.4	0.0228	17.985	1278.5	0.0228
16	5.033	1003.8	0.0224	11.469	1397.2	0.0226	17.517	1280.0	0.0226
17	4.253	942.6	0.0224	9.880	1320.9	0.0225	15.379	1240.2	0.0225
18	2.533	798.9	0.0223	6.117	1095.6	0.0224	9.876	1080.6	0.0224

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy 5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	9.976	841.0	0.0246	12.029	889.9	0.0246	14.202	922.7	0.0230
2	16.638	1057.0	0.0245	20.726	1051.2	0.0245	23.749	976.5	0.0229
3	20.312	1124.1	0.0244	25.144	1083.8	0.0243	28.438	973.4	0.0228
4	21.909	1144.0	0.0242	26.931	1083.8	0.0242	30.288	959.2	0.0227
5	22.525	1150.5	0.0240	27.594	1078.5	0.0240	30.942	944.5	0.0226
6	22.729	1150.2	0.0239	27.809	1073.4	0.0239	31.123	931.9	0.0225
7	22.710	1144.7	0.0237	27.796	1069.9	0.0237	31.076	923.0	0.0224
8	22.469	1134.9	0.0236	27.552	1067.5	0.0236	30.813	919.8	0.0224
9	21.945	1124.1	0.0234	26.999	1066.0	0.0234	30.265	923.8	0.0223
10	21.327	1116.8	0.0233	26.329	1064.8	0.0233	29.612	932.0	0.0222
11	21.095	1110.7	0.0231	26.046	1062.5	0.0232	29.324	936.9	0.0221
12	21.208	1106.2	0.0230	26.136	1060.5	0.0230	29.378	936.4	0.0220
13	21.561	1103.0	0.0229	26.502	1060.1	0.0229	29.682	930.2	0.0219
14	22.084	1095.2	0.0227	27.061	1060.1	0.0228	30.156	919.0	0.0219
15	22.300	1077.1	0.0226	27.285	1059.0	0.0227	30.288	907.7	0.0218
16	21.494	1047.2	0.0225	26.361	1053.0	0.0225	29.247	899.2	0.0217
17	18.730	995.3	0.0224	23.104	1025.7	0.0224	25.714	884.1	0.0216
18	12.000	874.7	0.0223	14.990	929.7	0.0223	16.813	821.7	0.0216

Table 4-4. Burnup and TH Feedback Parameters by Axial Node for Assembly B21a

Axial Node	Datapoint (257.0 Cy2)			Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	EOC Cy2	131.6 Cy2	131.6 Cy2	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3
1	2.237	797.4	0.0236	5.158	1084.4	0.0254	8.567	1073.8	0.0252
2	3.781	923.6	0.0235	8.540	1297.0	0.0253	13.644	1224.0	0.0251
3	4.643	988.8	0.0235	10.511	1399.7	0.0251	16.320	1283.3	0.0249
4	5.054	1017.0	0.0234	11.472	1429.5	0.0248	17.472	1293.3	0.0247
5	5.235	1027.7	0.0233	11.883	1431.8	0.0246	17.912	1288.7	0.0245
6	5.310	1031.3	0.0232	12.037	1425.6	0.0244	18.068	1283.1	0.0243
7	5.336	1031.9	0.0231	12.053	1414.6	0.0242	18.081	1278.8	0.0241
8	5.334	1031.3	0.0230	11.943	1396.0	0.0240	17.928	1273.0	0.0239
9	5.315	1029.7	0.0230	11.653	1361.1	0.0238	17.494	1258.2	0.0237
10	5.289	1027.6	0.0229	11.268	1325.5	0.0236	16.914	1235.9	0.0235
11	5.272	1026.1	0.0228	11.106	1314.8	0.0234	16.671	1226.3	0.0234
12	5.279	1026.0	0.0227	11.151	1323.4	0.0233	16.739	1227.0	0.0232
13	5.305	1027.0	0.0227	11.347	1348.5	0.0231	17.048	1236.4	0.0231
14	5.327	1027.7	0.0226	11.676	1387.6	0.0229	17.602	1257.6	0.0229
15	5.285	1023.5	0.0225	11.874	1409.4	0.0228	17.985	1278.5	0.0228
16	5.033	1003.8	0.0224	11.469	1397.2	0.0226	17.517	1280.0	0.0226
17	4.253	942.6	0.0224	9.880	1320.9	0.0225	15.379	1240.2	0.0225
18	2.533	798.9	0.0223	6.117	1095.6	0.0224	9.876	1080.6	0.0224

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy 5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	9.550	756.3	0.0234	10.976	782.0	0.0235	12.189	832.6	0.0231
2	15.297	832.5	0.0234	17.527	850.5	0.0234	19.792	979.3	0.0230
3	18.381	869.0	0.0233	20.998	869.9	0.0234	24.170	1009.8	0.0229
4	19.753	884.1	0.0232	22.507	872.4	0.0233	26.019	1012.2	0.0228
5	20.298	889.7	0.0232	23.091	870.4	0.0232	26.710	1006.4	0.0227
6	20.491	890.4	0.0231	23.295	867.7	0.0231	26.925	995.4	0.0226
7	20.504	888.5	0.0230	23.313	865.9	0.0231	26.892	980.7	0.0225
8	20.333	885.5	0.0229	23.150	865.4	0.0230	26.650	968.6	0.0225
9	19.887	883.6	0.0229	22.713	867.0	0.0229	26.159	968.2	0.0224
10	19.310	883.1	0.0228	22.144	869.8	0.0228	25.592	980.1	0.0223
11	19.075	881.0	0.0227	21.905	870.5	0.0228	25.390	995.7	0.0222
12	19.147	877.5	0.0227	21.969	869.5	0.0227	25.511	1011.0	0.0221
13	19.444	872.1	0.0226	22.258	867.4	0.0226	25.844	1019.7	0.0220
14	19.942	862.5	0.0225	22.741	863.7	0.0226	26.312	1014.7	0.0219
15	20.210	848.2	0.0225	22.970	858.9	0.0225	26.446	999.1	0.0218
16	19.542	828.1	0.0224	22.190	851.5	0.0224	25.466	977.3	0.0217
17	17.047	793.8	0.0224	19.361	831.0	0.0224	22.209	939.4	0.0216
18	10.897	724.1	0.0223	12.413	764.2	0.0223	14.290	844.2	0.0216

Table 4-5. Burnup and TH Feedback Parameters by Axial Node for Assembly B28

Axial Node	Datapoint (257.0 Cy2)			Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	EOC Cy2	131.6 Cy2	131.6 Cy2	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3
1	2.423	813.7	0.0237	5.230	1048.0	0.0249	8.376	1050.4	0.0249
2	4.091	946.4	0.0237	8.553	1231.6	0.0248	13.187	1181.3	0.0247
3	5.082	1017.6	0.0236	10.377	1306.8	0.0246	15.596	1224.8	0.0246
4	5.638	1054.6	0.0235	11.285	1326.9	0.0244	16.686	1228.1	0.0244
5	5.935	1072.4	0.0234	11.707	1324.9	0.0242	17.179	1221.1	0.0242
6	6.073	1079.8	0.0233	11.866	1315.1	0.0240	17.370	1214.4	0.0240
7	6.126	1082.0	0.0232	11.864	1300.0	0.0239	17.373	1209.3	0.0239
8	6.129	1081.6	0.0231	11.705	1272.9	0.0237	17.159	1201.5	0.0237
9	6.099	1079.4	0.0231	11.326	1228.6	0.0235	16.606	1182.7	0.0236
10	6.051	1076.1	0.0230	10.828	1183.7	0.0234	15.870	1155.0	0.0234
11	6.013	1073.2	0.0229	10.575	1166.0	0.0233	15.505	1142.3	0.0233
12	6.007	1072.2	0.0228	10.583	1172.7	0.0232	15.533	1143.6	0.0232
13	6.033	1073.1	0.0227	10.817	1203.1	0.0230	15.913	1158.0	0.0230
14	6.061	1074.4	0.0226	11.278	1260.9	0.0229	16.690	1192.0	0.0229
15	6.013	1070.8	0.0225	11.727	1318.6	0.0227	17.499	1235.3	0.0228
16	5.718	1049.8	0.0225	11.634	1343.5	0.0226	17.528	1257.5	0.0226
17	4.836	984.4	0.0224	10.182	1286.9	0.0225	15.610	1227.7	0.0225
18	2.901	828.8	0.0223	6.337	1076.4	0.0223	10.049	1071.5	0.0224

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy 5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	10.742	976.7	0.0247	13.826	989.8	0.0246	15.701	876.0	0.0230
2	16.951	1122.0	0.0246	21.527	1090.8	0.0245	24.348	953.3	0.0230
3	20.111	1175.6	0.0244	25.290	1115.9	0.0244	28.550	973.5	0.0229
4	21.531	1188.2	0.0243	26.852	1112.8	0.0242	30.304	974.6	0.0228
5	22.139	1187.7	0.0241	27.461	1103.5	0.0240	30.984	967.9	0.0227
6	22.335	1182.2	0.0239	27.638	1095.7	0.0239	31.152	956.2	0.0226
7	22.255	1173.3	0.0237	27.548	1090.8	0.0237	30.980	936.4	0.0225
8	21.859	1156.2	0.0236	27.122	1086.0	0.0236	30.411	913.7	0.0224
9	21.089	1131.2	0.0234	26.225	1076.1	0.0234	29.405	914.1	0.0223
10	20.262	1116.5	0.0233	25.193	1064.0	0.0233	28.379	931.9	0.0222
11	19.916	1110.2	0.0232	24.732	1057.5	0.0232	27.984	952.5	0.0222
12	20.031	1106.8	0.0230	24.809	1054.6	0.0230	28.165	976.1	0.0221
13	20.541	1108.8	0.0229	25.351	1055.6	0.0229	28.812	993.3	0.0220
14	21.377	1112.9	0.0228	26.315	1063.2	0.0228	29.792	984.8	0.0219
15	22.014	1094.0	0.0226	27.043	1065.9	0.0227	30.409	961.4	0.0218
16	21.671	1058.4	0.0225	26.603	1057.9	0.0225	29.751	935.2	0.0217
17	19.136	1008.4	0.0224	23.605	1031.7	0.0224	26.338	900.8	0.0216
18	12.338	892.7	0.0223	15.454	941.3	0.0223	17.276	822.6	0.0216

Table 4-6. Burnup and TH Feedback Parameters by Axial Node for Assembly B29

Axial Node	Datapoint (257.0 Cy2)			Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	EOC Cy2	131.6 Cy2	131.6 Cy2	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3
1	2.490	820.8	0.0239	5.521	1088.1	0.0252	8.927	1075.1	0.0251
2	4.195	955.5	0.0238	9.033	1285.6	0.0250	14.048	1215.4	0.0249
3	5.278	1033.1	0.0237	11.056	1367.8	0.0248	16.687	1260.6	0.0247
4	5.985	1079.8	0.0236	12.161	1386.3	0.0246	17.941	1261.0	0.0245
5	6.387	1104.5	0.0235	12.696	1379.9	0.0244	18.493	1251.1	0.0243
6	6.564	1114.1	0.0234	12.890	1367.7	0.0242	18.685	1242.9	0.0242
7	6.624	1116.6	0.0233	12.892	1350.2	0.0240	18.674	1237.2	0.0240
8	6.628	1116.1	0.0232	12.731	1322.5	0.0238	18.453	1229.7	0.0238
9	6.596	1113.8	0.0231	12.375	1282.2	0.0237	17.946	1214.2	0.0236
10	6.548	1110.6	0.0230	11.944	1244.3	0.0235	17.330	1193.5	0.0235
11	6.510	1107.7	0.0229	11.714	1229.3	0.0234	17.008	1183.0	0.0233
12	6.505	1106.7	0.0228	11.732	1237.4	0.0232	17.050	1184.1	0.0232
13	6.532	1107.6	0.0227	11.964	1267.2	0.0231	17.419	1196.3	0.0231
14	6.559	1108.7	0.0226	12.362	1315.6	0.0229	18.071	1221.2	0.0229
15	6.509	1105.1	0.0226	12.674	1356.8	0.0228	18.629	1249.1	0.0228
16	6.207	1084.5	0.0225	12.417	1363.4	0.0226	18.405	1260.9	0.0226
17	5.286	1019.1	0.0224	10.837	1299.7	0.0225	16.340	1229.5	0.0225
18	3.209	854.2	0.0223	6.783	1087.7	0.0224	10.565	1074.9	0.0224

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy 5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	10.033	788.9	0.0241	11.754	844.1	0.0242	14.040	947.2	0.0232
2	16.385	961.4	0.0241	19.833	987.9	0.0242	23.105	1018.0	0.0231
3	19.79	1014.5	0.0240	23.880	1017.2	0.0240	27.519	1025.8	0.0230
4	21.372	1027.9	0.0238	25.623	1016.7	0.0239	29.375	1014.7	0.0229
5	22.05	1031.3	0.0237	26.338	1011.4	0.0238	30.097	999.2	0.0228
6	22.288	1031.0	0.0236	26.584	1006.8	0.0237	30.304	983.3	0.0227
7	22.293	1029.7	0.0235	26.604	1004.7	0.0235	30.260	968.3	0.0226
8	22.089	1029.9	0.0234	26.432	1006.0	0.0234	30.026	958.6	0.0225
9	21.639	1035.1	0.0232	26.040	1011.7	0.0233	29.603	959.6	0.0224
10	21.13	1045.0	0.0231	25.610	1020.6	0.0232	29.180	969.3	0.0223
11	20.943	1054.9	0.0230	25.505	1028.4	0.0231	29.091	979.8	0.0222
12	21.094	1059.9	0.0229	25.720	1032.9	0.0230	29.314	987.2	0.0221
13	21.462	1053.2	0.0228	26.097	1031.2	0.0228	29.678	988.2	0.0220
14	21.966	1032.0	0.0227	26.541	1022.6	0.0227	30.075	980.7	0.0219
15	22.24	999.2	0.0226	26.684	1009.0	0.0226	30.135	968.7	0.0218
16	21.607	958.4	0.0225	25.801	990.3	0.0225	29.114	956.2	0.0217
17	18.958	906.2	0.0224	22.625	957.9	0.0224	25.595	932.4	0.0217
18	12.214	808.7	0.0223	14.691	871.7	0.0223	16.729	854.6	0.0216

Table 4-7. Burnup and TH Feedback Parameters by Axial Node for Assembly C8

Axial Node	Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)			Datapoint (126.6 Cy4)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3	126.6 Cy4	71.2 Cy4	71.2 Cy4
1	1.448	841.6	0.0240	3.243	888.1	0.0241	5.837	1069.4	0.0251
2	2.482	998.5	0.0239	5.364	1034.0	0.0240	9.455	1242.4	0.0250
3	3.110	1083.9	0.0239	6.549	1094.6	0.0239	11.389	1313.1	0.0248
4	3.452	1125.2	0.0238	7.174	1115.2	0.0238	12.335	1335.4	0.0246
5	3.633	1143.3	0.0236	7.537	1120.4	0.0237	12.814	1336.8	0.0244
6	3.722	1149.3	0.0235	7.741	1121.2	0.0236	13.035	1331.2	0.0242
7	3.761	1149.2	0.0234	7.853	1121.4	0.0235	13.108	1322.4	0.0240
8	3.772	1146.8	0.0233	7.92	1122.1	0.0234	13.118	1311.3	0.0238
9	3.771	1144.7	0.0232	7.972	1123.4	0.0233	13.168	1302.8	0.0236
10	3.776	1145.1	0.0231	8.028	1125.4	0.0232	13.327	1302.2	0.0235
11	3.803	1149.7	0.0230	8.106	1128.3	0.0231	13.565	1306.7	0.0233
12	3.855	1158.8	0.0229	8.208	1132.5	0.0230	13.829	1312.5	0.0231
13	3.930	1171.6	0.0228	8.332	1139.4	0.0229	14.013	1311.7	0.0230
14	4.033	1189.3	0.0227	8.504	1153.5	0.0227	14.047	1295.4	0.0228
15	4.173	1213.2	0.0226	8.746	1177.0	0.0226	13.942	1257.8	0.0227
16	4.200	1219.3	0.0225	8.741	1185.2	0.0225	13.418	1201.3	0.0225
17	3.631	1138.4	0.0224	7.626	1134.0	0.0224	11.520	1120.8	0.0224
18	2.161	920.5	0.0223	4.683	958.9	0.0223	7.126	961.2	0.0223

Axial Node	Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	9.231	1068.6	0.0250	11.220	930.2	0.0233
2	14.442	1201.0	0.0249	17.528	1050.0	0.0232
3	17.009	1239.6	0.0247	20.648	1082.1	0.0231
4	18.120	1239.3	0.0245	21.990	1083.8	0.0230
5	18.610	1229.6	0.0243	22.552	1074.8	0.0228
6	18.817	1220.7	0.0241	22.754	1061.7	0.0227
7	18.887	1215.0	0.0240	22.779	1047.8	0.0226
8	18.904	1211.3	0.0238	22.744	1037.7	0.0225
9	18.966	1209.1	0.0236	22.781	1036.9	0.0224
10	19.141	1208.1	0.0235	22.967	1044.1	0.0223
11	19.408	1208.7	0.0233	23.253	1053.6	0.0222
12	19.716	1210.8	0.0232	23.573	1061.2	0.0221
13	19.928	1212.5	0.0230	23.772	1063.6	0.0220
14	19.948	1211.6	0.0229	23.736	1057.5	0.0219
15	19.760	1205.0	0.0227	23.435	1043.2	0.0218
16	19.014	1188.9	0.0226	22.492	1022.6	0.0217
17	16.515	1147.6	0.0224	19.576	986.3	0.0217
18	10.509	1008.9	0.0223	12.542	877.0	0.0216

Table 4-8. Burnup and TH Feedback Parameters by Axial Node for Assembly C15

Axial Node	Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)			Datapoint (126.6 Cy4)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3	126.6 Cy4	71.2 Cy4	71.2 Cy4
1	1.575	863.7	0.0242	3.506	909.0	0.0242	6.223	1080.1	0.0251
2	2.714	1033.8	0.0241	5.815	1060.6	0.0242	10.072	1253.6	0.0250
3	3.412	1126.1	0.0240	7.108	1124.5	0.0240	12.134	1325.5	0.0248
4	3.795	1172.0	0.0239	7.772	1145.4	0.0239	13.132	1346.5	0.0246
5	3.997	1191.2	0.0238	8.130	1150.8	0.0238	13.616	1347.1	0.0244
6	4.098	1197.5	0.0236	8.330	1151.8	0.0237	13.841	1340.6	0.0242
7	4.143	1197.6	0.0235	8.443	1152.3	0.0236	13.933	1331.7	0.0240
8	4.155	1195.0	0.0234	8.510	1153.2	0.0234	13.962	1321.2	0.0238
9	4.151	1192.4	0.0233	8.557	1154.7	0.0233	13.981	1310.6	0.0236
10	4.153	1192.5	0.0232	8.608	1156.7	0.0232	14.028	1301.2	0.0235
11	4.178	1197.1	0.0231	8.682	1159.4	0.0231	14.117	1293.2	0.0233
12	4.232	1206.7	0.0230	8.785	1163.4	0.0230	14.229	1285.5	0.0231
13	4.313	1220.3	0.0228	8.912	1169.6	0.0229	14.318	1275.5	0.0230
14	4.406	1236.3	0.0227	9.058	1180.0	0.0228	14.342	1259.8	0.0228
15	4.471	1248.7	0.0226	9.158	1192.0	0.0226	14.213	1234.8	0.0227
16	4.342	1233.3	0.0225	8.909	1188.2	0.0225	13.587	1196.4	0.0225
17	3.673	1141.5	0.0224	7.662	1132.9	0.0224	11.649	1128.8	0.0224
18	2.164	920.3	0.0223	4.672	956.7	0.0223	7.211	972.8	0.0223

Axial Node	Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	9.667	1068.9	0.0250	12.060	977.9	0.0234
2	15.112	1199.7	0.0249	18.668	1091.3	0.0233
3	17.801	1235.2	0.0247	21.810	1111.7	0.0231
4	18.956	1233.3	0.0245	23.103	1104.3	0.0230
5	19.445	1223.0	0.0243	23.606	1090.0	0.0229
6	19.648	1213.5	0.0241	23.779	1075.4	0.0228
7	19.723	1206.8	0.0239	23.815	1063.8	0.0227
8	19.743	1202.3	0.0238	23.804	1057.0	0.0226
9	19.751	1198.7	0.0236	23.795	1055.9	0.0225
10	19.780	1195.4	0.0235	23.816	1058.5	0.0223
11	19.852	1192.7	0.0233	23.872	1061.9	0.0222
12	19.953	1190.9	0.0232	23.942	1063.3	0.0221
13	20.040	1190.2	0.0230	23.981	1061.6	0.0220
14	20.063	1190.1	0.0229	23.941	1056.5	0.0219
15	19.906	1188.8	0.0227	23.701	1048.6	0.0218
16	19.140	1181.9	0.0226	22.790	1036.6	0.0217
17	16.673	1148.5	0.0225	19.940	1006.9	0.0217
18	10.647	1013.2	0.0223	12.850	898.8	0.0216

Table 4-9. Burnup and TH Feedback Parameters by Axial Node for Assembly C15a

Axial Node	Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)			Datapoint (126.6 Cy4)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3	126.6 Cy4	71.2 Cy4	71.2 Cy4
1	1.575	863.7	0.0242	3.506	909.0	0.0242	6.192	1076.3	0.0252
2	2.714	1033.8	0.0241	5.815	1060.6	0.0242	10.051	1252.2	0.0250
3	3.412	1126.1	0.0240	7.108	1124.5	0.0240	12.138	1326.5	0.0248
4	3.795	1172.0	0.0239	7.772	1145.4	0.0239	13.153	1348.5	0.0246
5	3.997	1191.2	0.0238	8.130	1150.8	0.0238	13.646	1349.1	0.0244
6	4.098	1197.5	0.0236	8.330	1151.8	0.0237	13.880	1343.2	0.0242
7	4.143	1197.6	0.0235	8.443	1152.3	0.0236	13.980	1335.0	0.0240
8	4.155	1195.0	0.0234	8.510	1153.2	0.0234	14.016	1325.5	0.0238
9	4.151	1192.4	0.0233	8.557	1154.7	0.0233	14.037	1315.2	0.0236
10	4.153	1192.5	0.0232	8.608	1156.7	0.0232	14.079	1305.8	0.0235
11	4.178	1197.1	0.0231	8.682	1159.4	0.0231	14.165	1298.1	0.0233
12	4.232	1206.7	0.0230	8.785	1163.4	0.0230	14.276	1291.0	0.0231
13	4.313	1220.3	0.0228	8.912	1169.6	0.0229	14.363	1280.9	0.0230
14	4.406	1236.3	0.0227	9.058	1180.0	0.0228	14.387	1264.9	0.0228
15	4.471	1248.7	0.0226	9.158	1192.0	0.0226	14.258	1239.7	0.0227
16	4.342	1233.3	0.0225	8.909	1188.2	0.0225	13.627	1200.7	0.0225
17	3.673	1141.5	0.0224	7.662	1132.9	0.0224	11.680	1132.1	0.0224
18	2.164	920.3	0.0223	4.672	956.7	0.0223	7.229	975.1	0.0223

Axial Node	Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	9.598	1065.8	0.0250	11.717	952.1	0.0233
2	15.067	1197.8	0.0249	18.318	1069.7	0.0232
3	17.797	1234.5	0.0247	21.603	1097.8	0.0231
4	18.976	1233.0	0.0245	23.013	1095.6	0.0230
5	19.478	1222.9	0.0243	23.572	1082.8	0.0228
6	19.690	1213.6	0.0241	23.739	1062.8	0.0227
7	19.774	1206.9	0.0240	23.689	1032.8	0.0226
8	19.801	1202.4	0.0238	23.522	1001.1	0.0225
9	19.810	1198.9	0.0236	23.379	991.0	0.0224
10	19.839	1196.0	0.0235	23.374	1001.1	0.0223
11	19.917	1194.0	0.0233	23.502	1021.1	0.0222
12	20.031	1193.1	0.0232	23.732	1049.1	0.0222
13	20.123	1192.9	0.0230	23.955	1073.3	0.0220
14	20.147	1193.0	0.0229	24.032	1075.7	0.0219
15	19.988	1191.5	0.0227	23.819	1063.0	0.0218
16	19.211	1184.1	0.0226	22.882	1044.7	0.0217
17	16.726	1150.2	0.0225	19.992	1010.0	0.0217
18	10.679	1014.4	0.0223	12.875	900.0	0.0216

Table 4-10. Burnup and TH Feedback Parameters by Axial Node for Assembly C20

Axial Node	Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)			Datapoint (126.6 Cy4)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3	126.6 Cy4	71.2 Cy4	71.2 Cy4
1	2.479	1018.8	0.0252	5.378	1054.9	0.0252	7.982	1043.9	0.0250
2	4.171	1248.0	0.0251	8.673	1228.4	0.0250	12.752	1198.4	0.0248
3	5.166	1367.3	0.0249	10.420	1297.0	0.0248	15.249	1265.0	0.0247
4	5.688	1422.1	0.0247	11.250	1317.4	0.0247	16.405	1283.3	0.0245
5	5.952	1443.3	0.0245	11.654	1321.0	0.0245	16.927	1283.4	0.0243
6	6.078	1448.2	0.0243	11.865	1320.7	0.0243	17.148	1277.0	0.0241
7	6.123	1445.0	0.0241	11.972	1320.7	0.0241	17.199	1267.1	0.0239
8	6.104	1436.6	0.0239	12.001	1320.9	0.0239	17.123	1252.4	0.0237
9	6.038	1426.0	0.0238	11.966	1320.5	0.0237	16.996	1235.1	0.0236
10	5.970	1418.7	0.0236	11.924	1319.8	0.0236	16.945	1223.3	0.0234
11	5.963	1421.4	0.0234	11.959	1321.3	0.0234	17.026	1216.4	0.0232
12	6.038	1434.7	0.0233	12.097	1325.7	0.0232	17.227	1211.1	0.0231
13	6.180	1455.9	0.0231	12.319	1333.1	0.0231	17.487	1206.8	0.0229
14	6.344	1477.2	0.0229	12.567	1342.8	0.0229	17.668	1199.4	0.0228
15	6.412	1486.7	0.0228	12.667	1349.9	0.0228	17.542	1178.4	0.0227
16	6.156	1459.0	0.0226	12.240	1342.1	0.0226	16.732	1143.6	0.0225
17	5.204	1341.2	0.0224	10.577	1280.7	0.0225	14.402	1082.2	0.0224
18	3.110	1062.3	0.0223	6.581	1080.1	0.0224	9.037	942.7	0.0223

Axial Node	Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	11.333	1038.5	0.0249	13.590	963.6	0.0234
2	17.654	1160.8	0.0247	21.094	1073.0	0.0233
3	20.766	1188.1	0.0246	24.770	1099.1	0.0232
4	22.073	1183.6	0.0244	26.283	1093.8	0.0231
5	22.598	1173.6	0.0242	26.845	1079.5	0.0229
6	22.798	1164.9	0.0240	27.014	1063.5	0.0228
7	22.836	1158.9	0.0239	26.998	1048.9	0.0227
8	22.745	1153.9	0.0237	26.859	1040.2	0.0226
9	22.568	1147.5	0.0236	26.666	1041.2	0.0225
10	22.437	1140.2	0.0234	26.545	1049.2	0.0224
11	22.460	1135.0	0.0233	26.578	1058.3	0.0223
12	22.634	1131.9	0.0231	26.747	1064.6	0.0222
13	22.898	1131.3	0.0230	26.979	1064.6	0.0221
14	23.113	1133.7	0.0228	27.131	1057.4	0.0220
15	22.999	1135.3	0.0227	26.927	1047.2	0.0218
16	22.077	1130.8	0.0226	25.853	1034.1	0.0218
17	19.250	1105.8	0.0224	22.631	1002.4	0.0217
18	12.383	986.2	0.0223	14.671	902.3	0.0216

Table 4-11. Burnup and TH Feedback Parameters by Axial Node for Assembly C21

Axial Node	Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)			Datapoint (126.6 Cy4)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3	126.6 Cy4	71.2 Cy4	71.2 Cy4
1	1.352	823.2	0.0239	3.012	864.3	0.0239	5.665	1076.3	0.0248
2	2.352	973.5	0.0238	5.044	1002.5	0.0239	9.271	1261.5	0.0246
3	2.971	1057.7	0.0237	6.186	1060.8	0.0238	11.234	1341.9	0.0245
4	3.309	1098.6	0.0236	6.757	1081.3	0.0237	12.180	1369.6	0.0243
5	3.484	1116.1	0.0235	7.043	1086.8	0.0236	12.613	1373.8	0.0241
6	3.568	1121.5	0.0234	7.191	1087.8	0.0235	12.777	1369.7	0.0239
7	3.601	1120.9	0.0233	7.271	1088.0	0.0234	12.713	1360.1	0.0237
8	3.603	1117.4	0.0232	7.310	1088.4	0.0233	12.156	1322.5	0.0235
9	3.587	1113.5	0.0231	7.327	1089.1	0.0232	10.975	1142.0	0.0234
10	3.574	1111.8	0.0230	7.344	1090.1	0.0231	10.496	1048.7	0.0232
11	3.583	1114.6	0.0229	7.386	1091.8	0.0230	10.526	1033.7	0.0231
12	3.623	1122.4	0.0228	7.460	1094.7	0.0229	10.798	1032.8	0.0231
13	3.688	1133.8	0.0227	7.560	1099.3	0.0228	11.576	1063.1	0.0230
14	3.752	1145.1	0.0227	7.652	1105.1	0.0227	12.749	1255.4	0.0228
15	3.752	1147.1	0.0226	7.641	1108.4	0.0226	12.832	1274.7	0.0227
16	3.554	1120.9	0.0225	7.292	1096.7	0.0225	12.103	1237.4	0.0226
17	2.940	1033.8	0.0224	6.165	1041.5	0.0224	10.222	1159.9	0.0224
18	1.700	847.2	0.0223	3.696	883.7	0.0223	6.236	986.5	0.0223

Axial Node	Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	9.126	1074.4	0.0247	11.368	980.5	0.0235
2	14.390	1212.5	0.0246	17.874	1112.1	0.0234
3	17.026	1253.5	0.0244	21.137	1144.5	0.0233
4	18.160	1254.5	0.0242	22.519	1141.7	0.0231
5	18.621	1246.0	0.0240	23.036	1127.5	0.0230
6	18.782	1238.2	0.0239	23.150	1107.1	0.0229
7	18.720	1233.3	0.0237	22.958	1077.4	0.0228
8	18.106	1225.9	0.0235	22.177	1049.9	0.0227
9	16.278	1153.4	0.0234	20.319	1069.1	0.0226
10	14.321	1025.7	0.0233	18.499	1117.9	0.0224
11	14.107	1004.4	0.0232	18.370	1147.4	0.0223
12	14.351	1001.1	0.0231	18.744	1181.1	0.0222
13	15.241	1010.7	0.0230	19.738	1198.4	0.0221
14	17.449	1123.4	0.0229	21.822	1156.0	0.0220
15	18.503	1206.2	0.0227	22.703	1118.2	0.0219
16	17.815	1215.3	0.0226	21.836	1098.0	0.0218
17	15.389	1177.9	0.0225	18.962	1059.8	0.0217
18	9.736	1032.2	0.0223	12.114	932.8	0.0216

Table 4-12. Burnup and TH Feedback Parameters by Axial Node for Assembly C25

Axial Node	Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)			Datapoint (126.6 Cy4)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3	126.6 Cy4	71.2 Cy4	71.2 Cy4
1	1.917	919.0	0.0243	4.210	963.1	0.0244	6.635	1033.5	0.0250
2	3.231	1109.4	0.0243	6.832	1122.7	0.0243	10.798	1213.4	0.0249
3	3.980	1203.9	0.0241	8.187	1182.6	0.0242	13.026	1297.9	0.0247
4	4.350	1244.2	0.0240	8.794	1199.6	0.0241	14.052	1328.5	0.0245
5	4.520	1257.9	0.0239	9.063	1202.0	0.0239	14.493	1336.7	0.0243
6	4.588	1259.0	0.0237	9.185	1200.9	0.0238	14.650	1335.1	0.0241
7	4.596	1253.5	0.0236	9.232	1199.8	0.0237	14.612	1325.8	0.0239
8	4.557	1243.8	0.0235	9.219	1199.0	0.0235	14.371	1301.2	0.0237
9	4.482	1232.1	0.0233	9.158	1197.6	0.0234	14.006	1257.6	0.0235
10	4.408	1223.4	0.0232	9.094	1196.3	0.0233	13.762	1222.9	0.0234
11	4.380	1222.7	0.0231	9.090	1196.8	0.0231	13.744	1207.3	0.0232
12	4.419	1231.3	0.0230	9.171	1200.1	0.0230	13.931	1204.0	0.0231
13	4.517	1247.7	0.0229	9.326	1206.6	0.0229	14.288	1215.7	0.0230
14	4.635	1266.3	0.0227	9.506	1215.5	0.0228	14.638	1239.6	0.0228
15	4.683	1274.4	0.0226	9.572	1221.9	0.0227	14.617	1235.8	0.0227
16	4.493	1249.6	0.0225	9.236	1212.3	0.0225	13.909	1199.6	0.0225
17	3.794	1155.4	0.0224	7.957	1155.3	0.0224	11.897	1124.9	0.0224
18	2.260	934.3	0.0223	4.910	977.3	0.0223	7.383	965.0	0.0223

Axial Node	Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	9.861	1042.7	0.0249	12.191	969.0	0.0234
2	15.696	1179.9	0.0248	19.194	1080.6	0.0233
3	18.645	1221.3	0.0246	22.632	1104.6	0.0231
4	19.879	1223.0	0.0244	24.045	1102.2	0.0230
5	20.361	1215.7	0.0242	24.568	1090.2	0.0229
6	20.522	1209.0	0.0241	24.688	1072.4	0.0228
7	20.487	1204.5	0.0239	24.535	1045.8	0.0227
8	20.210	1198.3	0.0237	24.075	1015.7	0.0226
9	19.664	1181.4	0.0236	23.379	1010.9	0.0225
10	19.130	1158.2	0.0234	22.820	1025.0	0.0224
11	18.954	1145.8	0.0233	22.695	1045.1	0.0223
12	19.105	1142.4	0.0231	22.953	1071.8	0.0222
13	19.534	1148.0	0.0230	23.508	1093.8	0.0221
14	20.104	1167.2	0.0229	24.130	1091.4	0.0220
15	20.277	1184.2	0.0227	24.242	1076.2	0.0219
16	19.511	1184.5	0.0226	23.306	1057.5	0.0218
17	16.953	1150.3	0.0225	20.320	1021.0	0.0217
18	10.811	1011.2	0.0223	13.058	907.0	0.0216

Table 4-13. Burnup and TH Feedback Parameters by Axial Node for Assembly C28

Axial Node	Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)			Datapoint (126.6 Cy4)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3	126.6 Cy4	71.2 Cy4	71.2 Cy4
1	1.178	788.1	0.0234	2.653	832.7	0.0236	4.906	1036.1	0.0250
2	1.985	910.6	0.0234	4.336	954.0	0.0236	8.081	1216.3	0.0249
3	2.427	972.9	0.0233	5.184	1002.4	0.0235	9.716	1297.5	0.0247
4	2.629	997.7	0.0233	5.543	1016.5	0.0234	10.441	1329.2	0.0245
5	2.710	1004.5	0.0232	5.686	1017.9	0.0233	10.744	1339.4	0.0243
6	2.732	1003.1	0.0231	5.741	1016.2	0.0232	10.848	1340.2	0.0241
7	2.721	997.5	0.0230	5.751	1014.4	0.0232	10.834	1335.7	0.0240
8	2.685	989.5	0.0230	5.728	1012.8	0.0231	10.739	1325.1	0.0238
9	2.634	980.9	0.0229	5.685	1011.2	0.0230	10.644	1311.6	0.0236
10	2.586	974.4	0.0228	5.644	1010.1	0.0229	10.659	1306.7	0.0235
11	2.565	972.9	0.0228	5.635	1010.4	0.0228	10.805	1312.2	0.0233
12	2.580	977.5	0.0227	5.674	1013.2	0.0228	11.033	1321.4	0.0231
13	2.631	987.4	0.0226	5.759	1018.8	0.0227	11.239	1327.1	0.0230
14	2.700	999.6	0.0226	5.866	1026.8	0.0226	11.298	1322.4	0.0228
15	2.742	1007.1	0.0225	5.924	1033.4	0.0225	11.075	1293.8	0.0227
16	2.655	994.4	0.0224	5.746	1026.7	0.0225	10.386	1238.1	0.0225
17	2.261	934.8	0.0224	4.960	979.6	0.0224	8.771	1145.5	0.0224
18	1.352	792.5	0.0223	3.044	840.8	0.0223	5.379	962.6	0.0223

Axial Node	Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	8.052	1053.0	0.0250	10.121	957.9	0.0234
2	12.832	1190.4	0.0248	16.077	1088.7	0.0233
3	15.148	1238.0	0.0247	19.016	1129.6	0.0231
4	16.084	1245.4	0.0245	20.234	1134.4	0.0230
5	16.436	1241.3	0.0243	20.681	1126.2	0.0229
6	16.554	1236.3	0.0241	20.780	1109.2	0.0228
7	16.557	1233.3	0.0240	20.657	1079.3	0.0227
8	16.475	1231.0	0.0238	20.353	1041.8	0.0226
9	16.360	1226.9	0.0236	20.030	1029.0	0.0225
10	16.340	1222.9	0.0235	19.938	1036.7	0.0224
11	16.504	1224.1	0.0233	20.139	1054.9	0.0223
12	16.796	1228.9	0.0232	20.560	1084.7	0.0222
13	17.065	1234.4	0.0230	21.005	1114.6	0.0221
14	17.180	1240.5	0.0229	21.231	1121.5	0.0220
15	16.945	1241.7	0.0227	20.968	1112.2	0.0219
16	16.047	1227.5	0.0226	19.892	1093.4	0.0218
17	13.777	1175.1	0.0224	17.150	1049.1	0.0217
18	8.703	1022.4	0.0223	10.912	916.0	0.0216

Table 4-14. Burnup and TH Feedback Parameters by Axial Node for Assembly C29

Axial Node	Datapoint (142.8 Cy3)			Datapoint (287.5 Cy3)			Datapoint (126.6 Cy4)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	142.8 Cy3	69.0 Cy3	69.0 Cy3	EOC Cy3	209.4 Cy3	209.4 Cy3	126.6 Cy4	71.2 Cy4	71.2 Cy4
1	1.133	779.1	0.0233	2.577	827.6	0.0235	4.385	952.6	0.0254
2	1.872	891.5	0.0233	4.148	944.4	0.0235	8.006	1281.8	0.0252
3	2.250	946.1	0.0232	4.899	989.6	0.0234	10.044	1397.1	0.0250
4	2.405	965.3	0.0232	5.199	1000.7	0.0233	10.886	1425.1	0.0248
5	2.453	968.0	0.0231	5.315	1000.1	0.0233	11.195	1430.4	0.0246
6	2.455	964.2	0.0230	5.355	997.0	0.0232	11.280	1428.0	0.0243
7	2.432	957.3	0.0230	5.351	994.2	0.0231	11.243	1421.3	0.0241
8	2.389	948.2	0.0229	5.319	991.8	0.0230	11.127	1410.2	0.0239
9	2.334	938.7	0.0228	5.268	989.5	0.0230	10.992	1395.9	0.0237
10	2.283	931.5	0.0228	5.222	987.9	0.0229	10.914	1383.3	0.0235
11	2.258	929.3	0.0227	5.207	988.0	0.0228	10.923	1373.5	0.0234
12	2.269	933.3	0.0227	5.241	990.9	0.0228	11.004	1367.1	0.0232
13	2.320	943.5	0.0226	5.329	997.8	0.0227	11.116	1362.5	0.0230
14	2.407	959.1	0.0226	5.477	1010.7	0.0226	11.191	1353.4	0.0229
15	2.514	977.1	0.0225	5.656	1027.2	0.0225	11.131	1328.1	0.0227
16	2.542	981.4	0.0224	5.662	1031.2	0.0225	10.696	1279.9	0.0226
17	2.250	935.5	0.0224	5.024	991.0	0.0224	9.264	1193.1	0.0224
18	1.387	798.5	0.0223	3.157	852.4	0.0223	5.808	1006.0	0.0223

Axial Node	Statepoint 60 (0.0 Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	6.905	1001.6	0.0252	7.875	759.1	0.0225
2	13.037	1227.0	0.0250	14.601	823.7	0.0224
3	15.979	1286.7	0.0248	17.897	850.1	0.0224
4	17.029	1290.0	0.0246	19.144	859.6	0.0223
5	17.371	1283.4	0.0244	19.579	860.8	0.0223
6	17.454	1276.7	0.0242	19.693	857.7	0.0222
7	17.419	1272.4	0.0241	19.655	852.9	0.0222
8	17.300	1269.1	0.0239	19.520	849.6	0.0221
9	17.129	1264.3	0.0237	19.336	850.1	0.0220
10	16.985	1258.3	0.0235	19.193	854.7	0.0220
11	16.938	1253.7	0.0234	19.159	861.3	0.0219
12	16.993	1251.7	0.0232	19.230	867.4	0.0219
13	17.115	1252.9	0.0230	19.357	870.2	0.0218
14	17.227	1256.6	0.0229	19.444	867.3	0.0218
15	17.169	1257.4	0.0227	19.308	856.9	0.0217
16	16.584	1246.6	0.0226	18.557	836.9	0.0217
17	14.560	1199.9	0.0225	16.205	799.8	0.0216
18	9.384	1045.2	0.0224	10.399	721.6	0.0216

Table 4-15. Burnup and TH Feedback Parameters by Axial Node for Assembly D8

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.174	831.5	0.0240	2.954	897.4	0.0241	5.595	1098.7	0.0238
2	2.128	1002.9	0.0239	5.144	1055.8	0.0240	9.237	1279.5	0.0237
3	2.756	1099.1	0.0238	6.436	1121.2	0.0239	11.153	1330.1	0.0235
4	3.093	1144.5	0.0237	7.040	1140.2	0.0238	11.969	1330.2	0.0234
5	3.256	1164.6	0.0236	7.304	1142.9	0.0237	12.272	1314.2	0.0232
6	3.332	1172.2	0.0235	7.424	1141.7	0.0236	12.362	1294.9	0.0231
7	3.368	1174.9	0.0234	7.493	1140.7	0.0235	12.378	1277.6	0.0229
8	3.397	1176.0	0.0233	7.557	1141.0	0.0233	12.394	1266.4	0.0228
9	3.441	1178.1	0.0232	7.644	1142.8	0.0232	12.454	1264.3	0.0227
10	3.509	1182.1	0.0231	7.759	1145.8	0.0231	12.563	1270.0	0.0225
11	3.586	1186.8	0.0229	7.881	1149.4	0.0230	12.686	1279.0	0.0224
12	3.639	1188.8	0.0228	7.969	1152.7	0.0229	12.767	1287.0	0.0223
13	3.629	1184.1	0.0227	7.973	1154.9	0.0228	12.749	1291.0	0.0221
14	3.524	1168.7	0.0226	7.849	1154.9	0.0227	12.580	1290.0	0.0220
15	3.300	1137.8	0.0225	7.541	1148.9	0.0226	12.195	1284.2	0.0219
16	2.924	1082.4	0.0224	6.927	1127.1	0.0225	11.399	1266.2	0.0218
17	2.310	987.1	0.0224	5.709	1060.6	0.0224	9.646	1205.0	0.0217
18	1.315	814.3	0.0223	3.400	890.4	0.0223	5.928	1018.8	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	7.799	1064.1	0.0237	10.020	965.2	0.0236	11.170	881.0	0.0235
2	12.478	1205.4	0.0236	15.617	1063.5	0.0235	17.396	990.3	0.0234
3	14.754	1247.1	0.0234	18.170	1085.4	0.0234	20.305	1046.5	0.0233
4	15.642	1249.2	0.0233	19.101	1089.4	0.0232	21.453	1085.7	0.0232
5	15.931	1242.3	0.0232	19.395	1097.3	0.0231	21.881	1110.6	0.0231
6	15.992	1235.1	0.0230	19.486	1114.9	0.0230	22.064	1127.1	0.0229
7	15.983	1229.0	0.0229	19.540	1142.5	0.0229	22.191	1139.5	0.0228
8	15.981	1223.1	0.0227	19.625	1176.5	0.0228	22.331	1148.4	0.0227
9	16.031	1217.3	0.0226	19.764	1209.1	0.0226	22.504	1152.4	0.0225
10	16.140	1211.7	0.0225	19.936	1230.3	0.0225	22.683	1150.8	0.0224
11	16.268	1206.9	0.0224	20.081	1233.4	0.0224	22.815	1144.7	0.0223
12	16.365	1203.9	0.0222	20.150	1218.3	0.0222	22.858	1136.7	0.0222
13	16.374	1204.3	0.0221	20.107	1191.8	0.0221	22.778	1128.0	0.0221
14	16.242	1208.5	0.0220	19.928	1163.9	0.0220	22.530	1115.4	0.0219
15	15.891	1215.0	0.0219	19.549	1142.5	0.0219	22.030	1093.6	0.0218
16	15.065	1215.2	0.0218	18.678	1127.7	0.0218	20.959	1059.2	0.0217
17	13.006	1177.2	0.0217	16.358	1097.7	0.0217	18.305	1005.5	0.0217
18	8.206	1023.7	0.0216	10.557	973.4	0.0216	11.836	885.5	0.0216

Table 4-16. Burnup and TH Feedback Parameters by Axial Node for Assembly D15

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.231	840.2	0.0240	3.065	898.3	0.0241	5.274	1026.8	0.0235
2	2.170	1006.1	0.0239	5.198	1052.1	0.0240	8.700	1195.4	0.0234
3	2.773	1098.6	0.0238	6.431	1116.0	0.0239	10.561	1251.9	0.0233
4	3.104	1144.4	0.0237	7.026	1136.0	0.0238	11.419	1261.9	0.0232
5	3.269	1165.3	0.0236	7.294	1139.2	0.0237	11.775	1254.4	0.0230
6	3.345	1173.6	0.0235	7.416	1138.2	0.0236	11.890	1238.2	0.0229
7	3.379	1176.1	0.0234	7.483	1137.2	0.0235	11.885	1214.9	0.0228
8	3.401	1176.4	0.0233	7.538	1137.3	0.0233	11.834	1192.7	0.0227
9	3.435	1177.0	0.0232	7.607	1138.4	0.0232	11.835	1189.3	0.0226
10	3.490	1179.2	0.0230	7.698	1140.6	0.0231	11.941	1203.5	0.0225
11	3.556	1182.3	0.0229	7.798	1143.3	0.0230	12.104	1225.2	0.0223
12	3.604	1183.6	0.0228	7.876	1146.2	0.0229	12.261	1249.8	0.0222
13	3.599	1179.6	0.0227	7.888	1148.7	0.0228	12.336	1266.8	0.0221
14	3.506	1165.9	0.0226	7.786	1149.5	0.0227	12.219	1264.9	0.0220
15	3.296	1136.7	0.0225	7.505	1144.8	0.0226	11.822	1247.8	0.0219
16	2.928	1082.5	0.0224	6.909	1124.0	0.0225	10.982	1216.9	0.0218
17	2.312	986.9	0.0224	5.691	1057.2	0.0224	9.208	1149.3	0.0217
18	1.311	813.4	0.0223	3.377	887.6	0.0223	5.600	971.4	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	7.248	1021.3	0.0236	9.295	943.0	0.0236	10.069	786.6	0.0235
2	11.672	1162.3	0.0235	14.627	1044.1	0.0235	16.151	897.7	0.0234
3	13.928	1211.2	0.0233	17.193	1072.8	0.0234	19.320	1045.1	0.0233
4	14.898	1220.6	0.0232	18.236	1080.8	0.0233	20.630	1100.6	0.0232
5	15.269	1218.6	0.0231	18.633	1091.2	0.0232	21.175	1128.6	0.0231
6	15.373	1214.3	0.0229	18.781	1112.0	0.0230	21.425	1147.4	0.0230
7	15.336	1208.2	0.0228	18.822	1146.2	0.0229	21.552	1162.9	0.0228
8	15.229	1197.2	0.0227	18.820	1193.4	0.0228	21.629	1177.0	0.0227
9	15.176	1183.9	0.0226	18.884	1243.1	0.0227	21.750	1186.3	0.0226
10	15.280	1177.2	0.0224	19.087	1275.5	0.0225	21.968	1185.7	0.0224
11	15.470	1175.2	0.0223	19.314	1281.1	0.0224	22.170	1176.7	0.0223
12	15.679	1177.4	0.0222	19.496	1260.5	0.0222	22.294	1161.7	0.0222
13	15.836	1186.0	0.0221	19.589	1221.6	0.0221	22.301	1142.6	0.0221
14	15.790	1195.7	0.0220	19.468	1178.5	0.0220	22.074	1121.7	0.0219
15	15.410	1200.2	0.0219	19.024	1146.3	0.0219	21.496	1097.9	0.0218
16	14.500	1194.1	0.0218	18.031	1124.9	0.0218	20.309	1064.8	0.0217
17	12.387	1150.4	0.0217	15.629	1089.4	0.0217	17.579	1012.9	0.0217
18	7.725	999.2	0.0216	9.973	964.1	0.0216	11.256	890.3	0.0216

Table 4-17. Burnup and TH Feedback Parameters by Axial Node for Assembly D15a

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.231	840.2	0.0240	3.065	898.3	0.0241	5.274	1026.8	0.0235
2	2.170	1006.1	0.0239	5.198	1052.1	0.0240	8.700	1195.4	0.0234
3	2.773	1098.6	0.0238	6.431	1116.0	0.0239	10.561	1251.9	0.0233
4	3.104	1144.4	0.0237	7.026	1136.0	0.0238	11.419	1261.9	0.0232
5	3.269	1165.3	0.0236	7.294	1139.2	0.0237	11.775	1254.4	0.0230
6	3.345	1173.6	0.0235	7.416	1138.2	0.0236	11.890	1238.2	0.0229
7	3.379	1176.1	0.0234	7.483	1137.2	0.0235	11.885	1214.9	0.0228
8	3.401	1176.4	0.0233	7.538	1137.3	0.0233	11.834	1192.7	0.0227
9	3.435	1177.0	0.0232	7.607	1138.4	0.0232	11.835	1189.3	0.0226
10	3.490	1179.2	0.0230	7.698	1140.6	0.0231	11.941	1203.5	0.0225
11	3.556	1182.3	0.0229	7.798	1143.3	0.0230	12.104	1225.2	0.0223
12	3.604	1183.6	0.0228	7.876	1146.2	0.0229	12.261	1249.8	0.0222
13	3.599	1179.6	0.0227	7.888	1148.7	0.0228	12.336	1266.8	0.0221
14	3.506	1165.9	0.0226	7.786	1149.5	0.0227	12.219	1264.9	0.0220
15	3.296	1136.7	0.0225	7.505	1144.8	0.0226	11.822	1247.8	0.0219
16	2.928	1082.5	0.0224	6.909	1124.0	0.0225	10.982	1216.9	0.0218
17	2.312	986.9	0.0224	5.691	1057.2	0.0224	9.208	1149.3	0.0217
18	1.311	813.4	0.0223	3.377	887.6	0.0223	5.600	971.4	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	7.248	1021.3	0.0236	9.298	943.0	0.0236	9.979	760.4	0.0234
2	11.672	1162.3	0.0235	14.631	1044.1	0.0235	16.032	868.8	0.0233
3	13.928	1211.2	0.0233	17.198	1072.8	0.0234	19.201	1013.7	0.0232
4	14.898	1220.6	0.0232	18.241	1080.8	0.0233	20.528	1071.6	0.0231
5	15.269	1218.6	0.0231	18.638	1091.2	0.0232	21.084	1101.3	0.0230
6	15.373	1214.3	0.0229	18.786	1112.0	0.0230	21.334	1119.6	0.0229
7	15.336	1208.2	0.0228	18.828	1146.2	0.0229	21.445	1131.8	0.0228
8	15.229	1197.2	0.0227	18.826	1193.4	0.0228	21.491	1139.9	0.0226
9	15.176	1183.9	0.0226	18.889	1243.1	0.0227	21.579	1142.9	0.0225
10	15.280	1177.2	0.0224	19.092	1275.5	0.0225	21.783	1139.8	0.0224
11	15.470	1175.2	0.0223	19.320	1281.1	0.0224	21.995	1133.0	0.0223
12	15.679	1177.4	0.0222	19.502	1260.5	0.0222	22.151	1124.6	0.0222
13	15.836	1186.0	0.0221	19.596	1221.6	0.0221	22.205	1114.7	0.0220
14	15.790	1195.7	0.0220	19.475	1178.5	0.0220	22.017	1102.1	0.0219
15	15.410	1200.2	0.0219	19.031	1146.3	0.0219	21.457	1082.2	0.0218
16	14.500	1194.1	0.0218	18.038	1124.9	0.0218	20.260	1047.8	0.0217
17	12.387	1150.4	0.0217	15.635	1089.4	0.0217	17.497	989.4	0.0216
18	7.725	999.2	0.0216	9.978	964.1	0.0216	11.159	862.2	0.0216

Table 4-18. Burnup and TH Feedback Parameters by Axial Node for Assembly D20

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.994	988.4	0.0249	4.762	1036.2	0.0249	7.217	1043.0	0.0236
2	3.381	1207.7	0.0248	7.746	1210.6	0.0248	11.512	1191.4	0.0235
3	4.211	1322.1	0.0246	9.350	1277.0	0.0246	13.674	1238.0	0.0233
4	4.649	1377.1	0.0245	10.095	1295.1	0.0244	14.613	1239.2	0.0232
5	4.866	1401.6	0.0243	10.426	1296.3	0.0243	14.982	1225.2	0.0230
6	4.957	1411.0	0.0241	10.572	1293.8	0.0241	15.091	1205.5	0.0229
7	4.975	1411.9	0.0239	10.632	1292.0	0.0239	15.067	1183.1	0.0228
8	4.953	1406.4	0.0237	10.641	1290.6	0.0238	14.980	1165.1	0.0227
9	4.935	1398.0	0.0236	10.632	1288.7	0.0236	14.908	1161.5	0.0226
10	4.964	1392.8	0.0234	10.656	1287.1	0.0234	14.926	1171.6	0.0224
11	5.044	1392.8	0.0233	10.742	1287.6	0.0233	15.045	1188.5	0.0223
12	5.138	1395.6	0.0231	10.865	1290.7	0.0231	15.216	1205.8	0.0222
13	5.193	1397.0	0.0229	10.965	1296.3	0.0230	15.348	1216.1	0.0221
14	5.137	1389.9	0.0228	10.956	1303.3	0.0228	15.322	1214.2	0.0220
15	4.901	1362.0	0.0227	10.704	1305.3	0.0227	14.989	1203.2	0.0219
16	4.417	1299.3	0.0225	9.994	1288.0	0.0226	14.094	1182.3	0.0218
17	3.546	1177.7	0.0224	8.384	1217.9	0.0224	11.992	1126.0	0.0217
18	2.051	942.6	0.0223	5.101	1021.7	0.0223	7.443	972.6	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	9.325	1025.6	0.0236	11.466	939.2	0.0235	11.922	686.3	0.0222
2	14.590	1154.0	0.0234	17.598	1029.6	0.0235	18.309	730.4	0.0222
3	17.090	1188.5	0.0233	20.361	1046.9	0.0233	21.205	750.3	0.0222
4	18.099	1189.1	0.0232	21.413	1050.1	0.0232	22.335	762.5	0.0221
5	18.459	1182.5	0.0230	21.783	1058.2	0.0231	22.753	770.7	0.0221
6	18.539	1175.6	0.0229	21.898	1077.0	0.0230	22.899	776.2	0.0220
7	18.478	1168.5	0.0228	21.910	1108.8	0.0229	22.932	779.7	0.0220
8	18.342	1159.5	0.0227	21.879	1151.7	0.0228	22.914	781.5	0.0219
9	18.228	1149.7	0.0225	21.877	1196.3	0.0226	22.915	781.4	0.0219
10	18.232	1142.6	0.0224	21.967	1226.6	0.0225	22.997	779.0	0.0219
11	18.363	1138.4	0.0223	22.123	1231.2	0.0224	23.139	774.7	0.0218
12	18.568	1137.5	0.0222	22.290	1210.9	0.0222	23.285	769.2	0.0218
13	18.757	1140.9	0.0221	22.404	1172.6	0.0221	23.372	762.9	0.0217
14	18.788	1147.0	0.0220	22.359	1132.4	0.0220	23.294	755.9	0.0217
15	18.490	1153.0	0.0219	22.007	1102.6	0.0219	22.895	747.5	0.0217
16	17.560	1153.6	0.0218	21.018	1084.8	0.0218	21.836	735.5	0.0216
17	15.172	1123.6	0.0217	18.383	1060.0	0.0217	19.076	715.6	0.0216
18	9.617	987.0	0.0216	11.888	949.7	0.0216	12.333	670.6	0.0216

Table 4-19. Burnup and TH Feedback Parameters by Axial Node for Assembly D20a

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.994	988.4	0.0249	4.762	1036.2	0.0249	5.949	892.6	0.0233
2	3.381	1207.7	0.0248	7.746	1210.6	0.0248	10.092	1064.8	0.0232
3	4.211	1322.1	0.0246	9.350	1277.0	0.0246	12.635	1117.8	0.0231
4	4.649	1377.1	0.0245	10.095	1295.1	0.0244	13.748	1131.4	0.0230
5	4.866	1401.6	0.0243	10.426	1296.3	0.0243	14.208	1129.7	0.0229
6	4.957	1411.0	0.0241	10.572	1293.8	0.0241	14.393	1122.7	0.0228
7	4.975	1411.9	0.0239	10.632	1292.0	0.0239	14.458	1115.4	0.0226
8	4.953	1406.4	0.0237	10.641	1290.6	0.0238	14.482	1113.9	0.0225
9	4.935	1398.0	0.0236	10.632	1288.7	0.0236	14.530	1123.2	0.0224
10	4.964	1392.8	0.0234	10.656	1287.1	0.0234	14.641	1140.3	0.0223
11	5.044	1392.8	0.0233	10.742	1287.6	0.0233	14.786	1155.0	0.0222
12	5.138	1395.6	0.0231	10.865	1290.7	0.0231	14.916	1162.1	0.0221
13	5.193	1397.0	0.0229	10.965	1296.3	0.0230	14.961	1158.8	0.0220
14	5.137	1389.9	0.0228	10.956	1303.3	0.0228	14.824	1143.4	0.0219
15	4.901	1362.0	0.0227	10.704	1305.3	0.0227	14.383	1119.6	0.0218
16	4.417	1299.3	0.0225	9.994	1288.0	0.0226	13.406	1087.1	0.0217
17	3.546	1177.7	0.0224	8.384	1217.9	0.0224	11.288	1025.3	0.0216
18	2.051	942.6	0.0223	5.101	1021.7	0.0223	6.923	885.7	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	7.062	831.9	0.0233	8.381	802.7	0.0233	9.624	917.3	0.0234
2	12.501	1035.8	0.0233	15.038	969.2	0.0232	16.852	1006.1	0.0233
3	15.552	1110.5	0.0232	18.482	1011.7	0.0231	20.562	1036.3	0.0232
4	16.803	1124.0	0.0230	19.820	1020.0	0.0230	22.065	1061.3	0.0231
5	17.298	1124.6	0.0229	20.349	1028.6	0.0229	22.705	1080.4	0.0230
6	17.489	1122.4	0.0228	20.578	1043.8	0.0228	23.019	1095.1	0.0229
7	17.555	1120.3	0.0227	20.709	1067.2	0.0227	23.223	1107.7	0.0227
8	17.590	1119.7	0.0226	20.834	1096.9	0.0226	23.418	1119.0	0.0226
9	17.676	1122.2	0.0225	21.030	1127.8	0.0225	23.664	1125.9	0.0225
10	17.842	1126.3	0.0224	21.294	1150.4	0.0224	23.939	1124.4	0.0224
11	18.028	1127.3	0.0223	21.518	1155.5	0.0223	24.136	1115.5	0.0222
12	18.178	1125.3	0.0221	21.650	1143.0	0.0222	24.211	1101.3	0.0221
13	18.227	1121.8	0.0220	21.644	1119.0	0.0220	24.121	1083.5	0.0220
14	18.069	1116.5	0.0219	21.412	1091.4	0.0219	23.788	1064.2	0.0219
15	17.583	1110.3	0.0218	20.855	1069.0	0.0218	23.111	1042.7	0.0218
16	16.501	1099.3	0.0217	19.683	1052.5	0.0217	21.772	1014.6	0.0217
17	14.050	1058.4	0.0217	16.949	1022.4	0.0217	18.759	973.9	0.0216
18	8.752	927.2	0.0216	10.745	909.3	0.0216	11.957	869.5	0.0216

Table 4-20. Burnup and TH Feedback Parameters by Axial Node for Assembly D21

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.059	802.2	0.0237	2.619	847.7	0.0238	5.124	1078.7	0.0235
2	1.861	942.9	0.0236	4.432	982.7	0.0237	8.396	1270.4	0.0234
3	2.369	1024.2	0.0236	5.468	1039.9	0.0236	10.123	1335.9	0.0232
4	2.649	1064.2	0.0235	5.975	1058.8	0.0235	10.907	1345.5	0.0231
5	2.791	1082.8	0.0234	6.206	1062.8	0.0234	11.216	1333.4	0.0230
6	2.855	1090.2	0.0233	6.309	1062.3	0.0233	11.256	1308.2	0.0228
7	2.878	1091.8	0.0232	6.357	1061.3	0.0233	10.971	1242.7	0.0227
8	2.883	1090.4	0.0231	6.383	1060.7	0.0232	10.200	1023.0	0.0226
9	2.892	1088.2	0.0230	6.408	1060.6	0.0231	9.303	994.0	0.0225
10	2.917	1087.1	0.0229	6.445	1061.0	0.0230	9.167	1002.9	0.0224
11	2.956	1087.3	0.0228	6.497	1062.1	0.0229	9.292	1032.3	0.0224
12	2.990	1087.5	0.0227	6.547	1064.2	0.0228	9.839	1156.3	0.0223
13	2.992	1084.9	0.0227	6.566	1066.8	0.0227	10.689	1326.8	0.0222
14	2.932	1075.4	0.0226	6.510	1068.7	0.0226	11.257	1347.3	0.0220
15	2.774	1052.7	0.0225	6.308	1065.5	0.0225	11.101	1335.0	0.0219
16	2.472	1007.9	0.0224	5.821	1046.2	0.0225	10.397	1305.4	0.0218
17	1.944	923.1	0.0224	4.774	986.5	0.0224	8.748	1229.2	0.0217
18	1.087	773.6	0.0223	2.794	835.4	0.0223	5.304	1025.3	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	7.296	1059.0	0.0235	9.484	966.2	0.0239	10.641	888.3	0.0235
2	11.643	1212.6	0.0234	14.776	1068.9	0.0238	16.548	997.5	0.0234
3	13.780	1263.3	0.0232	17.226	1097.6	0.0236	19.333	1051.8	0.0233
4	14.674	1272.3	0.0231	18.188	1106.1	0.0235	20.498	1088.0	0.0232
5	14.990	1269.2	0.0229	18.531	1118.5	0.0234	20.968	1112.1	0.0231
6	15.005	1263.9	0.0228	18.598	1144.8	0.0233	21.133	1130.5	0.0230
7	14.635	1255.4	0.0227	18.324	1195.5	0.0231	20.961	1152.0	0.0229
8	13.424	1201.1	0.0225	17.159	1290.8	0.0230	19.950	1192.0	0.0227
9	11.588	1022.3	0.0224	15.184	1413.0	0.0228	18.173	1251.3	0.0226
10	11.318	993.1	0.0224	15.020	1470.0	0.0227	18.053	1259.8	0.0224
11	11.450	989.3	0.0223	15.196	1480.3	0.0225	18.205	1251.0	0.0223
12	12.104	997.7	0.0222	15.796	1437.7	0.0223	18.717	1224.3	0.0222
13	13.687	1103.0	0.0221	17.468	1335.5	0.0221	20.197	1166.3	0.0220
14	14.942	1222.5	0.0220	18.809	1239.1	0.0220	21.338	1113.7	0.0219
15	14.934	1249.4	0.0219	18.753	1188.6	0.0219	21.130	1082.5	0.0218
16	14.191	1247.9	0.0218	17.928	1161.2	0.0218	20.115	1048.2	0.0217
17	12.197	1204.0	0.0217	15.638	1122.5	0.0217	17.517	998.3	0.0216
18	7.615	1037.2	0.0216	10.008	989.2	0.0216	11.253	881.4	0.0216

Table 4-21. Burnup and TH Feedback Parameters by Axial Node for Assembly D25

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.643	918.3	0.0244	3.945	963.6	0.0244	6.492	1075.9	0.0237
2	2.826	1114.4	0.0243	6.511	1128.7	0.0243	10.459	1242.7	0.0236
3	3.550	1218.8	0.0242	7.920	1191.2	0.0242	12.483	1290.9	0.0234
4	3.938	1268.7	0.0241	8.583	1208.7	0.0241	13.355	1289.2	0.0233
5	4.129	1290.7	0.0239	8.876	1210.2	0.0239	13.684	1273.2	0.0231
6	4.205	1298.6	0.0238	8.998	1208.0	0.0238	13.778	1255.4	0.0230
7	4.212	1298.2	0.0236	9.035	1206.0	0.0236	13.773	1240.9	0.0229
8	4.180	1291.6	0.0235	9.020	1204.1	0.0235	13.726	1233.3	0.0227
9	4.142	1281.7	0.0233	8.978	1201.5	0.0234	13.675	1234.4	0.0226
10	4.135	1273.3	0.0232	8.949	1198.9	0.0232	13.652	1241.7	0.0225
11	4.167	1269.1	0.0231	8.968	1198.0	0.0231	13.672	1250.3	0.0224
12	4.220	1268.6	0.0230	9.029	1199.6	0.0230	13.716	1255.9	0.0222
13	4.256	1268.7	0.0228	9.098	1204.1	0.0229	13.743	1256.0	0.0221
14	4.218	1263.3	0.0227	9.101	1210.0	0.0228	13.683	1250.9	0.0220
15	4.041	1241.6	0.0226	8.916	1211.6	0.0226	13.408	1242.3	0.0219
16	3.653	1189.9	0.0225	8.338	1195.6	0.0225	12.651	1224.4	0.0218
17	2.926	1083.8	0.0224	6.968	1131.8	0.0224	10.777	1168.4	0.0217
18	1.676	877.0	0.0223	4.187	948.5	0.0223	6.654	1000.1	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	8.624	1038.9	0.0236	10.779	946.1	0.0235	11.935	881.7	0.0233
2	13.603	1175.2	0.0235	16.656	1042.8	0.0234	18.379	976.6	0.0232
3	15.984	1215.0	0.0234	19.309	1063.2	0.0233	21.311	1016.3	0.0232
4	16.922	1215.8	0.0232	20.284	1066.0	0.0232	22.455	1044.5	0.0230
5	17.233	1208.2	0.0231	20.595	1072.4	0.0231	22.881	1065.7	0.0229
6	17.299	1201.0	0.0230	20.684	1087.8	0.0230	23.059	1082.2	0.0228
7	17.273	1195.7	0.0228	20.714	1112.1	0.0228	23.167	1096.5	0.0227
8	17.217	1192.1	0.0227	20.739	1142.1	0.0227	23.264	1109.3	0.0226
9	17.168	1189.7	0.0226	20.774	1171.4	0.0226	23.356	1118.5	0.0225
10	17.155	1187.4	0.0225	20.823	1191.4	0.0225	23.423	1119.9	0.0223
11	17.186	1184.6	0.0223	20.874	1195.6	0.0223	23.448	1112.8	0.0222
12	17.241	1181.6	0.0222	20.906	1183.3	0.0222	23.416	1098.2	0.0221
13	17.283	1179.7	0.0221	20.900	1160.0	0.0221	23.313	1077.7	0.0220
14	17.245	1180.2	0.0220	20.813	1134.3	0.0220	23.111	1053.9	0.0219
15	16.990	1183.2	0.0219	20.529	1114.0	0.0219	22.695	1027.9	0.0218
16	16.201	1182.4	0.0218	19.695	1100.3	0.0218	21.689	996.5	0.0217
17	14.038	1148.9	0.0217	17.289	1074.5	0.0217	19.010	953.4	0.0216
18	8.879	1005.5	0.0216	11.174	959.2	0.0216	12.326	853.3	0.0216

Table 4-22. Burnup and TH Feedback Parameters by Axial Node for Assembly D25a

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.643	918.3	0.0244	3.947	963.6	0.0244	5.675	1031.7	0.0238
2	2.826	1114.4	0.0243	6.515	1128.7	0.0243	9.812	1255.0	0.0237
3	3.550	1218.8	0.0242	7.924	1191.2	0.0242	12.407	1308.8	0.0235
4	3.938	1268.7	0.0241	8.589	1208.7	0.0241	13.450	1307.2	0.0234
5	4.129	1290.7	0.0239	8.882	1210.2	0.0239	13.812	1290.4	0.0232
6	4.205	1298.6	0.0238	9.004	1208.0	0.0238	13.898	1268.4	0.0231
7	4.212	1298.2	0.0236	9.041	1206.0	0.0236	13.854	1245.0	0.0229
8	4.180	1291.6	0.0235	9.027	1204.1	0.0235	13.763	1229.0	0.0228
9	4.142	1281.7	0.0233	8.985	1201.5	0.0234	13.706	1231.6	0.0227
10	4.135	1273.3	0.0232	8.958	1198.9	0.0232	13.726	1249.7	0.0225
11	4.167	1269.1	0.0231	8.977	1198.0	0.0231	13.807	1272.4	0.0224
12	4.220	1268.6	0.0230	9.039	1199.6	0.0230	13.922	1292.9	0.0223
13	4.256	1268.7	0.0228	9.106	1204.1	0.0229	14.000	1302.1	0.0222
14	4.218	1263.3	0.0227	9.109	1210.0	0.0228	13.937	1294.6	0.0220
15	4.041	1241.6	0.0226	8.922	1211.6	0.0226	13.634	1278.7	0.0219
16	3.653	1189.9	0.0225	8.343	1195.6	0.0225	12.851	1255.4	0.0218
17	2.926	1083.8	0.0224	6.972	1131.8	0.0224	10.942	1193.9	0.0217
18	1.676	877.0	0.0223	4.189	948.5	0.0223	6.753	1016.2	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	7.136	911.4	0.0237	8.758	853.1	0.0236	9.993	913.2	0.0233
2	12.848	1151.6	0.0236	15.853	1033.1	0.0235	17.624	993.0	0.0232
3	15.976	1226.2	0.0234	19.357	1069.6	0.0234	21.359	1016.9	0.0231
4	17.107	1230.5	0.0233	20.533	1073.5	0.0233	22.683	1039.1	0.0230
5	17.459	1224.3	0.0232	20.896	1082.6	0.0232	23.151	1057.8	0.0229
6	17.515	1217.5	0.0230	20.989	1103.0	0.0231	23.328	1073.1	0.0228
7	17.436	1211.0	0.0229	20.993	1137.6	0.0230	23.401	1086.0	0.0227
8	17.310	1203.9	0.0227	20.989	1185.4	0.0228	23.456	1096.4	0.0226
9	17.236	1197.8	0.0226	21.058	1236.8	0.0227	23.564	1101.9	0.0224
10	17.269	1194.7	0.0225	21.206	1271.2	0.0225	23.717	1100.2	0.0223
11	17.375	1192.6	0.0224	21.351	1278.4	0.0224	23.831	1091.6	0.0222
12	17.528	1192.4	0.0223	21.464	1257.5	0.0222	23.883	1077.1	0.0221
13	17.654	1194.9	0.0221	21.500	1217.3	0.0221	23.833	1058.5	0.0220
14	17.630	1198.2	0.0220	21.372	1171.1	0.0220	23.603	1037.6	0.0219
15	17.348	1202.2	0.0219	21.019	1136.6	0.0219	23.129	1013.9	0.0218
16	16.530	1201.7	0.0218	20.136	1116.3	0.0218	22.082	984.2	0.0217
17	14.320	1167.6	0.0217	17.668	1088.0	0.0217	19.352	943.2	0.0216
18	9.057	1018.7	0.0216	11.420	969.4	0.0216	12.551	847.0	0.0216

Table 4-23. Burnup and TH Feedback Parameters by Axial Node for Assembly D27

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.849	963.9	0.0248	4.422	1018.6	0.0248	6.507	993.7	0.0236
2	3.256	1193.5	0.0247	7.445	1196.0	0.0247	10.831	1150.7	0.0235
3	4.155	1315.8	0.0246	9.156	1262.0	0.0245	13.238	1212.8	0.0234
4	4.631	1372.3	0.0244	9.941	1278.2	0.0244	14.359	1230.8	0.0232
5	4.857	1396.4	0.0242	10.277	1278.1	0.0242	14.834	1229.1	0.0231
6	4.943	1404.7	0.0240	10.413	1275.1	0.0240	14.993	1216.9	0.0229
7	4.944	1403.5	0.0239	10.449	1272.8	0.0239	14.968	1196.2	0.0228
8	4.895	1395.0	0.0237	10.423	1271.0	0.0237	14.828	1174.9	0.0227
9	4.840	1382.4	0.0235	10.364	1268.7	0.0235	14.672	1169.4	0.0226
10	4.818	1371.0	0.0234	10.316	1266.0	0.0234	14.607	1180.8	0.0225
11	4.841	1364.0	0.0232	10.314	1264.5	0.0233	14.660	1202.7	0.0224
12	4.892	1361.3	0.0231	10.360	1265.5	0.0231	14.809	1230.1	0.0222
13	4.929	1360.7	0.0229	10.426	1269.8	0.0230	14.978	1251.3	0.0221
14	4.892	1355.5	0.0228	10.434	1276.3	0.0228	15.017	1254.2	0.0220
15	4.708	1334.0	0.0226	10.255	1279.5	0.0227	14.739	1238.5	0.0219
16	4.295	1280.8	0.0225	9.665	1265.8	0.0226	13.863	1202.3	0.0218
17	3.492	1168.8	0.0224	8.189	1201.4	0.0224	11.743	1122.8	0.0217
18	2.042	940.4	0.0223	5.024	1011.8	0.0223	7.223	950.6	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	8.387	989.3	0.0236	10.344	917.1	0.0235	11.237	809.9	0.0230
2	13.715	1126.3	0.0235	16.576	1015.8	0.0235	17.974	896.7	0.0229
3	16.548	1175.6	0.0233	19.737	1041.0	0.0234	21.410	935.4	0.0228
4	17.810	1186.5	0.0232	21.089	1048.2	0.0233	22.926	960.4	0.0228
5	18.322	1186.4	0.0231	21.638	1058.6	0.0231	23.579	977.3	0.0227
6	18.480	1183.6	0.0229	21.848	1079.0	0.0230	23.858	988.9	0.0226
7	18.430	1178.7	0.0228	21.880	1112.3	0.0229	23.940	997.2	0.0225
8	18.230	1168.5	0.0227	21.786	1157.9	0.0228	23.881	1003.5	0.0224
9	18.006	1154.8	0.0226	21.668	1206.1	0.0226	23.783	1006.8	0.0223
10	17.917	1146.8	0.0224	21.666	1238.4	0.0225	23.779	1005.4	0.0222
11	17.993	1145.0	0.0223	21.776	1245.1	0.0224	23.870	999.6	0.0221
12	18.206	1148.7	0.0222	21.967	1225.8	0.0222	24.024	990.0	0.0220
13	18.479	1159.1	0.0221	22.186	1187.6	0.0221	24.191	977.5	0.0219
14	18.615	1171.0	0.0220	22.264	1146.5	0.0220	24.200	962.6	0.0218
15	18.371	1176.7	0.0219	21.965	1114.9	0.0219	23.804	944.7	0.0218
16	17.410	1169.2	0.0218	20.910	1092.6	0.0218	22.601	920.2	0.0217
17	14.909	1123.7	0.0217	18.094	1059.3	0.0217	19.528	881.5	0.0216
18	9.309	973.5	0.0216	11.496	938.7	0.0216	12.421	792.1	0.0216

Table 4-24. Burnup and TH Feedback Parameters by Axial Node for Assembly D27a

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.849	963.9	0.0248	4.422	1018.6	0.0248	6.507	993.7	0.0236
2	3.256	1193.5	0.0247	7.445	1196.0	0.0247	10.831	1150.7	0.0235
3	4.155	1315.8	0.0246	9.156	1262.0	0.0245	13.238	1212.8	0.0234
4	4.631	1372.3	0.0244	9.941	1278.2	0.0244	14.359	1230.8	0.0232
5	4.857	1396.4	0.0242	10.277	1278.1	0.0242	14.834	1229.1	0.0231
6	4.943	1404.7	0.0240	10.413	1275.1	0.0240	14.993	1216.9	0.0229
7	4.944	1403.5	0.0239	10.449	1272.8	0.0239	14.968	1196.2	0.0228
8	4.895	1395.0	0.0237	10.423	1271.0	0.0237	14.828	1174.9	0.0227
9	4.840	1382.4	0.0235	10.364	1268.7	0.0235	14.672	1169.4	0.0226
10	4.818	1371.0	0.0234	10.316	1266.0	0.0234	14.607	1180.8	0.0225
11	4.841	1364.0	0.0232	10.314	1264.5	0.0233	14.660	1202.7	0.0224
12	4.892	1361.3	0.0231	10.360	1265.5	0.0231	14.809	1230.1	0.0222
13	4.929	1360.7	0.0229	10.426	1269.8	0.0230	14.978	1251.3	0.0221
14	4.892	1355.5	0.0228	10.434	1276.3	0.0228	15.017	1254.2	0.0220
15	4.708	1334.0	0.0226	10.255	1279.5	0.0227	14.739	1238.5	0.0219
16	4.295	1280.8	0.0225	9.665	1265.8	0.0226	13.863	1202.3	0.0218
17	3.492	1168.8	0.0224	8.189	1201.4	0.0224	11.743	1122.8	0.0217
18	2.042	940.4	0.0223	5.024	1011.8	0.0223	7.223	950.6	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	8.387	989.3	0.0236	10.351	917.1	0.0235	11.548	894.7	0.0232
2	13.715	1126.3	0.0235	16.590	1015.8	0.0235	18.342	984.5	0.0232
3	16.548	1175.6	0.0233	19.757	1041.0	0.0234	21.747	1011.9	0.0231
4	17.810	1186.5	0.0232	21.114	1048.2	0.0233	23.238	1030.6	0.0230
5	18.322	1186.4	0.0231	21.666	1058.6	0.0231	23.885	1045.7	0.0229
6	18.480	1183.6	0.0229	21.878	1079.0	0.0230	24.171	1058.5	0.0228
7	18.430	1178.7	0.0228	21.913	1112.3	0.0229	24.269	1069.8	0.0226
8	18.230	1168.5	0.0227	21.822	1157.9	0.0228	24.231	1079.6	0.0225
9	18.006	1154.8	0.0226	21.710	1206.1	0.0226	24.153	1085.6	0.0224
10	17.917	1146.8	0.0224	21.714	1238.4	0.0225	24.161	1084.7	0.0223
11	17.993	1145.0	0.0223	21.830	1245.1	0.0224	24.245	1076.2	0.0222
12	18.206	1148.7	0.0222	22.023	1225.8	0.0222	24.376	1061.2	0.0221
13	18.479	1159.1	0.0221	22.241	1187.6	0.0221	24.509	1041.2	0.0220
14	18.615	1171.0	0.0220	22.315	1146.5	0.0220	24.481	1019.1	0.0219
15	18.371	1176.7	0.0219	22.010	1114.9	0.0219	24.059	995.7	0.0218
16	17.410	1169.2	0.0218	20.951	1092.6	0.0218	22.846	969.0	0.0217
17	14.909	1123.7	0.0217	18.129	1059.3	0.0217	19.779	933.1	0.0216
18	9.309	973.5	0.0216	11.518	938.7	0.0216	12.633	842.8	0.0216

Table 4-25. Burnup and TH Feedback Parameters by Axial Node for Assembly D28

Axial Node	Datapoint (126.6 Cy4)			Statepoint 60 (BOC Cy5)			Statepoint 61 (114.4 Cy5)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	126.6 Cy4	71.2 Cy4	71.2 Cy4	BOC Cy5	203.4 Cy4	203.4 Cy4	114.4 Cy5	58.2 Cy5	58.2 Cy5
1	1.106	810.9	0.0237	2.693	851.7	0.0238	5.281	1099.8	0.0238
2	1.946	957.2	0.0237	4.553	986.1	0.0237	8.623	1292.4	0.0237
3	2.479	1041.1	0.0236	5.612	1042.4	0.0236	10.368	1353.2	0.0235
4	2.772	1082.2	0.0235	6.122	1059.3	0.0235	11.130	1356.7	0.0234
5	2.915	1100.3	0.0234	6.346	1061.8	0.0234	11.409	1341.6	0.0232
6	2.972	1106.4	0.0233	6.436	1060.4	0.0233	11.457	1318.8	0.0231
7	2.977	1105.8	0.0232	6.461	1058.7	0.0232	11.381	1290.5	0.0229
8	2.956	1101.0	0.0231	6.451	1057.2	0.0231	11.244	1265.2	0.0228
9	2.931	1093.9	0.0230	6.425	1055.6	0.0231	11.137	1261.5	0.0227
10	2.921	1087.4	0.0229	6.405	1054.2	0.0230	11.121	1277.2	0.0226
11	2.931	1083.2	0.0228	6.405	1053.5	0.0229	11.179	1301.9	0.0224
12	2.952	1081.0	0.0227	6.426	1054.5	0.0228	11.286	1329.4	0.0223
13	2.961	1079.1	0.0227	6.449	1057.0	0.0227	11.379	1347.2	0.0222
14	2.923	1073.0	0.0226	6.427	1059.9	0.0226	11.357	1346.5	0.0220
15	2.796	1055.2	0.0225	6.279	1059.0	0.0225	11.122	1333.8	0.0219
16	2.523	1014.9	0.0224	5.853	1043.4	0.0225	10.482	1308.6	0.0218
17	2.009	932.6	0.0224	4.851	986.6	0.0224	8.900	1236.3	0.0217
18	1.135	781.6	0.0223	2.866	838.2	0.0223	5.446	1033.9	0.0216

Axial Node	Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)			Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	7.473	1066.0	0.0237	9.684	967.3	0.0237	10.837	883.7	0.0235
2	11.893	1218.4	0.0236	15.052	1071.3	0.0236	16.843	996.6	0.0234
3	14.036	1267.5	0.0235	17.498	1098.9	0.0235	19.649	1055.0	0.0233
4	14.886	1273.5	0.0233	18.403	1105.7	0.0234	20.746	1093.1	0.0232
5	15.159	1268.3	0.0232	18.690	1116.4	0.0233	21.075	1099.9	0.0230
6	15.179	1262.0	0.0230	18.753	1139.3	0.0231	21.205	1107.4	0.0229
7	15.061	1255.0	0.0229	18.721	1178.0	0.0230	21.245	1120.0	0.0228
8	14.861	1243.6	0.0228	18.640	1232.1	0.0229	21.226	1131.7	0.0227
9	14.691	1229.6	0.0226	18.601	1287.2	0.0227	21.231	1139.2	0.0226
10	14.661	1221.8	0.0225	18.677	1323.4	0.0226	21.321	1139.6	0.0224
11	14.739	1219.2	0.0224	18.793	1330.9	0.0224	21.429	1134.1	0.0223
12	14.898	1221.5	0.0223	18.916	1308.6	0.0223	21.564	1127.0	0.0222
13	15.081	1230.8	0.0221	19.020	1265.2	0.0221	21.766	1140.2	0.0221
14	15.143	1241.9	0.0220	18.996	1217.1	0.0220	21.708	1143.6	0.0220
15	14.952	1249.2	0.0219	18.742	1179.8	0.0219	21.324	1120.4	0.0218
16	14.272	1246.5	0.0218	17.991	1155.8	0.0218	20.358	1082.2	0.0217
17	12.361	1203.9	0.0217	15.797	1119.3	0.0217	17.805	1023.0	0.0217
18	7.780	1039.8	0.0216	10.181	988.1	0.0216	11.489	894.8	0.0216

Table 4-26. Burnup and TH Feedback Parameters by Axial Node for Assembly E8

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.052	841.9	0.0229	2.117	855.1	0.0230	3.324	832.1	0.0230
2	1.955	1005.5	0.0228	3.856	1019.9	0.0229	5.889	959.4	0.0229
3	2.561	1091.3	0.0228	4.902	1104.8	0.0229	7.307	1014.8	0.0229
4	2.892	1126.1	0.0227	5.408	1136.0	0.0228	7.942	1036.4	0.0228
5	3.046	1136.8	0.0226	5.625	1145.6	0.0227	8.212	1051.1	0.0227
6	3.112	1137.6	0.0225	5.716	1148.3	0.0226	8.347	1069.1	0.0226
7	3.146	1136.6	0.0224	5.765	1149.4	0.0225	8.453	1092.2	0.0225
8	3.184	1140.2	0.0224	5.826	1151.5	0.0224	8.588	1119.2	0.0224
9	3.248	1151.7	0.0223	5.933	1155.9	0.0223	8.779	1146.1	0.0223
10	3.329	1168.7	0.0222	6.065	1161.6	0.0222	8.986	1166.1	0.0222
11	3.385	1183.7	0.0221	6.162	1165.3	0.0221	9.122	1172.8	0.0221
12	3.393	1191.4	0.0220	6.195	1166.3	0.0220	9.153	1165.6	0.0220
13	3.343	1188.3	0.0219	6.150	1164.5	0.0220	9.078	1148.2	0.0220
14	3.224	1171.9	0.0218	6.009	1158.9	0.0219	8.887	1126.1	0.0219
15	3.033	1141.9	0.0218	5.758	1147.1	0.0218	8.571	1103.4	0.0218
16	2.736	1090.3	0.0217	5.311	1119.8	0.0217	8.003	1076.4	0.0217
17	2.205	994.6	0.0216	4.395	1045.3	0.0216	6.746	1019.1	0.0216
18	1.265	811.5	0.0216	2.593	864.4	0.0216	4.081	867.4	0.0216

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	3.805	726.6	0.0225	4.631	751.8	0.0225	5.964	783.7	0.0225
2	6.753	811.1	0.0225	8.190	836.2	0.0224	10.387	861.1	0.0224
3	8.426	870.4	0.0224	10.216	879.8	0.0224	12.805	892.2	0.0224
4	9.222	907.7	0.0224	11.194	899.8	0.0223	13.916	898.9	0.0223
5	9.590	930.6	0.0223	11.648	907.8	0.0223	14.390	895.9	0.0223
6	9.784	944.1	0.0223	11.881	909.5	0.0222	14.606	890.2	0.0222
7	9.927	951.7	0.0222	12.039	908.3	0.0221	14.738	884.3	0.0221
8	10.083	954.9	0.0221	12.198	905.4	0.0221	14.872	878.8	0.0221
9	10.281	954.4	0.0221	12.392	901.4	0.0220	15.044	873.7	0.0220
10	10.485	951.2	0.0220	12.588	897.3	0.0220	15.226	869.6	0.0220
11	10.611	947.1	0.0219	12.708	894.2	0.0219	15.346	867.5	0.0219
12	10.628	942.8	0.0219	12.724	892.5	0.0219	15.377	867.7	0.0219
13	10.531	937.7	0.0218	12.625	891.8	0.0218	15.307	870.0	0.0218
14	10.301	929.7	0.0218	12.382	890.4	0.0218	15.097	873.6	0.0218
15	9.915	914.6	0.0217	11.945	884.8	0.0217	14.668	875.8	0.0217
16	9.217	886.0	0.0216	11.112	868.2	0.0216	13.754	870.3	0.0217
17	7.729	835.3	0.0216	9.318	829.6	0.0216	11.642	842.3	0.0216
18	4.661	733.6	0.0216	5.628	739.1	0.0216	7.120	761.0	0.0216

Table 4-26. Burnup and TH Feedback Parameters by Axial Node for Assembly E8 (Cont.)

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	7.101	821.2	0.0225	7.484	850.3	0.0229	8.528	857.2	0.0229
2	12.155	889.3	0.0225	12.770	938.5	0.0228	14.425	944.9	0.0228
3	14.796	909.2	0.0224	15.533	984.2	0.0228	17.488	986.2	0.0228
4	15.945	905.9	0.0224	16.754	1009.3	0.0227	18.870	1006.1	0.0227
5	16.400	897.7	0.0223	17.255	1025.3	0.0226	19.464	1017.5	0.0226
6	16.586	889.9	0.0222	17.472	1035.3	0.0225	19.734	1023.5	0.0225
7	16.694	883.5	0.0222	17.597	1040.4	0.0224	19.889	1025.6	0.0224
8	16.808	878.3	0.0221	17.722	1041.5	0.0224	20.025	1024.6	0.0223
9	16.967	873.7	0.0221	17.882	1039.1	0.0223	20.185	1020.9	0.0223
10	17.142	870.1	0.0220	18.055	1034.6	0.0222	20.350	1016.0	0.0222
11	17.263	868.1	0.0220	18.171	1029.2	0.0221	20.456	1010.9	0.0221
12	17.308	868.2	0.0219	18.206	1022.7	0.0220	20.476	1005.4	0.0220
13	17.265	870.9	0.0218	18.146	1013.8	0.0219	20.389	998.3	0.0219
14	17.092	875.9	0.0218	17.946	1001.0	0.0219	20.140	988.2	0.0219
15	16.698	881.9	0.0217	17.509	981.9	0.0218	19.616	972.7	0.0218
16	15.774	884.0	0.0217	16.516	953.4	0.0217	18.469	948.2	0.0217
17	13.487	866.5	0.0216	14.111	905.4	0.0217	15.776	904.3	0.0217
18	8.365	789.4	0.0216	8.761	802.1	0.0216	9.829	802.9	0.0216

Table 4-27. Burnup and TH Feedback Parameters by Axial Node for Assembly E15

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.078	833.7	0.0228	2.156	857.6	0.0229	3.361	833.4	0.0229
2	1.948	989.1	0.0228	3.806	1011.0	0.0229	5.782	950.6	0.0229
3	2.494	1071.5	0.0227	4.753	1088.2	0.0228	7.072	1001.8	0.0228
4	2.794	1106.2	0.0226	5.220	1118.6	0.0227	7.665	1022.7	0.0227
5	2.939	1117.4	0.0226	5.427	1128.4	0.0226	7.926	1037.4	0.0227
6	3.003	1118.3	0.0225	5.515	1131.2	0.0226	8.058	1055.4	0.0226
7	3.033	1117.0	0.0224	5.560	1132.2	0.0225	8.159	1079.1	0.0225
8	3.066	1119.9	0.0223	5.615	1134.0	0.0224	8.287	1106.4	0.0224
9	3.128	1131.6	0.0222	5.717	1138.4	0.0223	8.475	1133.9	0.0223
10	3.209	1149.3	0.0222	5.850	1144.3	0.0222	8.686	1154.5	0.0222
11	3.267	1164.8	0.0221	5.950	1148.1	0.0221	8.825	1161.5	0.0221
12	3.280	1173.2	0.0220	5.988	1149.3	0.0220	8.861	1154.0	0.0220
13	3.235	1170.9	0.0219	5.950	1147.8	0.0219	8.792	1136.1	0.0219
14	3.119	1154.8	0.0218	5.811	1142.1	0.0219	8.600	1113.1	0.0219
15	2.930	1124.1	0.0217	5.559	1129.9	0.0218	8.277	1089.6	0.0218
16	2.634	1072.1	0.0217	5.113	1102.0	0.0217	7.706	1061.8	0.0217
17	2.114	977.8	0.0216	4.213	1027.4	0.0216	6.470	1004.1	0.0216
18	1.209	800.2	0.0216	2.477	851.2	0.0216	3.900	854.9	0.0216

Table 4-27. Burnup and TH Feedback Parameters by Axial Node for Assembly E15 (Cont.)

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	4.291	882.6	0.0233	5.841	907.8	0.0232	8.239	939.8	0.0231
2	7.363	1019.2	0.0232	9.911	1028.7	0.0231	13.645	1042.0	0.0231
3	9.028	1094.4	0.0231	12.081	1086.1	0.0230	16.345	1078.8	0.0230
4	9.848	1140.9	0.0230	13.150	1110.7	0.0229	17.574	1082.1	0.0228
5	10.250	1171.2	0.0229	13.672	1119.9	0.0228	18.111	1074.9	0.0227
6	10.474	1190.4	0.0228	13.953	1121.5	0.0227	18.359	1065.5	0.0226
7	10.636	1202.3	0.0227	14.143	1119.7	0.0226	18.508	1056.5	0.0225
8	10.802	1208.4	0.0226	14.319	1115.9	0.0225	18.649	1048.4	0.0224
9	11.005	1208.7	0.0224	14.522	1110.5	0.0224	18.822	1041.0	0.0223
10	11.213	1204.5	0.0223	14.722	1104.6	0.0223	19.005	1035.1	0.0223
11	11.338	1198.4	0.0222	14.841	1100.1	0.0222	19.129	1032.2	0.0222
12	11.353	1191.8	0.0221	14.857	1097.9	0.0221	19.176	1032.9	0.0221
13	11.249	1184.1	0.0220	14.755	1097.5	0.0220	19.130	1037.1	0.0220
14	10.996	1172.5	0.0219	14.488	1096.5	0.0219	18.925	1043.6	0.0219
15	10.563	1150.2	0.0218	13.982	1089.4	0.0218	18.449	1049.3	0.0218
16	9.788	1107.6	0.0217	13.004	1066.6	0.0217	17.371	1046.2	0.0217
17	8.180	1030.1	0.0216	10.914	1009.5	0.0216	14.810	1012.0	0.0216
18	4.926	867.5	0.0216	6.626	870.2	0.0216	9.189	891.8	0.0216

Axial Node	Statepoint 67 (BOC Cy8)			Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy8	376.2 Cy6	376.2 Cy6	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8
1	10.162	965.5	0.0232	11.193	681.9	0.0222	12.438	704.6	0.0222
2	16.485	1051.3	0.0231	18.158	721.6	0.0222	20.074	741.3	0.0222
3	19.468	1067.2	0.0230	21.493	742.6	0.0222	23.687	753.2	0.0222
4	20.731	1058.5	0.0229	22.957	754.2	0.0221	25.252	755.1	0.0221
5	21.229	1045.7	0.0228	23.570	760.6	0.0221	25.890	753.5	0.0221
6	21.430	1034.4	0.0227	23.837	764.0	0.0220	26.151	750.9	0.0220
7	21.542	1025.5	0.0226	23.986	765.3	0.0220	26.287	748.1	0.0220
8	21.656	1018.4	0.0225	24.119	765.1	0.0220	26.405	745.4	0.0220
9	21.811	1012.4	0.0224	24.279	763.8	0.0219	26.553	742.8	0.0219
10	21.986	1007.5	0.0223	24.451	761.8	0.0219	26.717	740.5	0.0219
11	22.115	1005.0	0.0222	24.572	759.4	0.0219	26.836	739.0	0.0219
12	22.188	1005.5	0.0221	24.629	756.8	0.0218	26.898	738.3	0.0218
13	22.188	1009.5	0.0220	24.601	753.5	0.0218	26.881	738.3	0.0218
14	22.046	1017.0	0.0219	24.409	748.9	0.0218	26.697	738.6	0.0218
15	21.636	1026.6	0.0218	23.907	741.9	0.0217	26.182	738.5	0.0217
16	20.565	1033.6	0.0217	22.669	730.7	0.0217	24.871	736.0	0.0217
17	17.774	1019.2	0.0217	19.559	711.2	0.0217	21.522	725.2	0.0217
18	11.248	916.8	0.0216	12.385	666.6	0.0217	13.700	684.9	0.0217

Table 4-27. Burnup and TH Feedback Parameters by Axial Node for Assembly E15 (Cont.)

Axial Node	Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	BOC Cy9	426.1 Cy8	426.1 Cy8
1	13.988	731.3	0.0223
2	22.329	760.5	0.0222
3	26.160	763.0	0.0222
4	27.754	757.5	0.0221
5	28.362	751.4	0.0221
6	28.588	746.4	0.0221
7	28.694	742.6	0.0220
8	28.792	739.5	0.0220
9	28.926	737.0	0.0220
10	29.083	734.9	0.0219
11	29.205	733.6	0.0219
12	29.280	733.2	0.0219
13	29.288	734.0	0.0218
14	29.140	736.1	0.0218
15	28.664	739.6	0.0218
16	27.352	743.4	0.0217
17	23.832	741.3	0.0217
18	15.337	707.7	0.0217

Table 4-28. Burnup and TH Feedback Parameters by Axial Node for Assembly E20

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.783	983.9	0.0236	3.443	1008.0	0.0236	5.207	948.4	0.0235
2	3.093	1190.5	0.0235	5.813	1187.7	0.0235	8.568	1070.6	0.0235
3	3.832	1294.6	0.0233	7.042	1268.8	0.0234	10.194	1117.7	0.0234
4	4.212	1336.2	0.0232	7.615	1298.3	0.0232	10.905	1137.0	0.0232
5	4.390	1347.1	0.0231	7.863	1307.3	0.0231	11.215	1154.0	0.0231
6	4.456	1343.2	0.0230	7.951	1309.3	0.0230	11.364	1178.6	0.0230
7	4.459	1333.5	0.0228	7.959	1308.8	0.0228	11.457	1214.3	0.0229
8	4.448	1327.4	0.0227	7.949	1306.7	0.0227	11.557	1259.5	0.0228
9	4.474	1335.6	0.0226	7.991	1305.6	0.0226	11.722	1305.9	0.0226
10	4.549	1357.4	0.0225	8.108	1307.8	0.0225	11.947	1336.1	0.0225
11	4.632	1383.3	0.0223	8.243	1311.0	0.0223	12.134	1344.7	0.0224
12	4.695	1405.4	0.0222	8.358	1314.7	0.0222	12.242	1330.8	0.0222
13	4.703	1414.3	0.0221	8.415	1319.0	0.0221	12.250	1301.0	0.0221
14	4.613	1403.0	0.0220	8.344	1320.1	0.0220	12.109	1263.4	0.0220
15	4.403	1369.7	0.0219	8.096	1313.1	0.0219	11.777	1228.3	0.0219
16	4.016	1306.5	0.0217	7.547	1286.0	0.0218	11.087	1194.2	0.0218
17	3.275	1183.5	0.0217	6.325	1203.3	0.0217	9.461	1133.3	0.0217
18	1.909	938.9	0.0216	3.805	989.5	0.0216	5.847	969.4	0.0216

Table 4-28. Burnup and TH Feedback Parameters by Axial Node for Assembly E20 (Cont.)

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	5.707	727.7	0.0224	6.559	745.0	0.0223	7.928	774.6	0.0224
2	9.398	789.8	0.0223	10.774	804.9	0.0223	12.885	833.0	0.0223
3	11.203	824.9	0.0223	12.826	834.7	0.0223	15.214	853.6	0.0223
4	12.017	846.6	0.0222	13.756	846.5	0.0222	16.219	855.1	0.0222
5	12.390	860.1	0.0222	14.182	850.5	0.0222	16.645	850.8	0.0222
6	12.579	868.4	0.0221	14.395	850.7	0.0221	16.834	845.1	0.0221
7	12.698	873.2	0.0221	14.523	849.2	0.0221	16.934	839.6	0.0221
8	12.811	875.3	0.0220	14.636	846.7	0.0220	17.022	834.6	0.0220
9	12.979	874.3	0.0220	14.797	843.1	0.0220	17.160	830.0	0.0220
10	13.196	870.7	0.0219	15.001	838.7	0.0219	17.346	825.7	0.0219
11	13.367	865.5	0.0219	15.158	834.6	0.0219	17.493	822.6	0.0219
12	13.453	859.5	0.0218	15.232	831.2	0.0218	17.570	821.3	0.0218
13	13.435	852.8	0.0218	15.200	828.6	0.0218	17.553	821.9	0.0218
14	13.257	844.6	0.0217	15.003	825.9	0.0217	17.377	824.0	0.0217
15	12.870	832.6	0.0217	14.574	821.1	0.0217	16.957	826.0	0.0217
16	12.087	812.4	0.0216	13.692	809.1	0.0216	16.019	823.2	0.0216
17	10.291	776.0	0.0216	11.665	779.8	0.0216	13.745	803.3	0.0216
18	6.356	705.7	0.0216	7.222	713.2	0.0216	8.596	737.1	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	9.082	806.7	0.0225	9.266	692.6	0.0222	9.774	697.3	0.0222
2	14.587	862.5	0.0224	14.880	734.0	0.0221	15.679	738.7	0.0221
3	17.076	873.8	0.0224	17.423	754.0	0.0221	18.359	757.3	0.0221
4	18.095	868.4	0.0223	18.474	764.8	0.0221	19.478	766.2	0.0221
5	18.495	860.2	0.0222	18.893	771.5	0.0220	19.936	771.0	0.0220
6	18.652	852.9	0.0222	19.062	775.4	0.0220	20.127	773.2	0.0220
7	18.727	847.0	0.0221	19.144	777.2	0.0220	20.218	773.6	0.0220
8	18.796	842.3	0.0221	19.216	777.1	0.0219	20.292	772.5	0.0219
9	18.920	838.1	0.0220	19.340	775.3	0.0219	20.411	770.2	0.0219
10	19.095	834.2	0.0220	19.512	772.3	0.0219	20.575	767.0	0.0219
11	19.239	831.5	0.0219	19.651	768.7	0.0218	20.705	763.6	0.0218
12	19.322	830.6	0.0219	19.728	764.7	0.0218	20.770	760.0	0.0218
13	19.324	831.8	0.0218	19.720	759.7	0.0218	20.747	755.8	0.0218
14	19.179	835.5	0.0218	19.562	753.2	0.0217	20.564	750.5	0.0217
15	18.792	840.9	0.0217	19.156	744.3	0.0217	20.117	743.1	0.0217
16	17.854	844.4	0.0217	18.188	731.5	0.0217	19.079	731.9	0.0217
17	15.443	833.5	0.0216	15.724	710.5	0.0216	16.484	712.2	0.0216
18	9.770	767.9	0.0216	9.948	665.1	0.0216	10.435	667.2	0.0216

Table 4-29. Burnup and TH Feedback Parameters by Axial Node for Assembly E20a

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.783	983.9	0.0236	3.443	1008.0	0.0236	5.207	948.4	0.0235
2	3.093	1190.5	0.0235	5.813	1187.7	0.0235	8.568	1070.6	0.0235
3	3.832	1294.6	0.0233	7.042	1268.8	0.0234	10.194	1117.7	0.0234
4	4.212	1336.2	0.0232	7.615	1298.3	0.0232	10.905	1137.0	0.0232
5	4.390	1347.1	0.0231	7.863	1307.3	0.0231	11.215	1154.0	0.0231
6	4.456	1343.2	0.0230	7.951	1309.3	0.0230	11.364	1178.6	0.0230
7	4.459	1333.5	0.0228	7.959	1308.8	0.0228	11.457	1214.3	0.0229
8	4.448	1327.4	0.0227	7.949	1306.7	0.0227	11.557	1259.5	0.0228
9	4.474	1335.6	0.0226	7.991	1305.6	0.0226	11.722	1305.9	0.0226
10	4.549	1357.4	0.0225	8.108	1307.8	0.0225	11.947	1336.1	0.0225
11	4.632	1383.3	0.0223	8.243	1311.0	0.0223	12.134	1344.7	0.0224
12	4.695	1405.4	0.0222	8.358	1314.7	0.0222	12.242	1330.8	0.0222
13	4.703	1414.3	0.0221	8.415	1319.0	0.0221	12.250	1301.0	0.0221
14	4.613	1403.0	0.0220	8.344	1320.1	0.0220	12.109	1263.4	0.0220
15	4.403	1369.7	0.0219	8.096	1313.1	0.0219	11.777	1228.3	0.0219
16	4.016	1306.5	0.0217	7.547	1286.0	0.0218	11.087	1194.2	0.0218
17	3.275	1183.5	0.0217	6.325	1203.3	0.0217	9.461	1133.3	0.0217
18	1.909	938.9	0.0216	3.805	989.5	0.0216	5.847	969.4	0.0216

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	5.707	727.7	0.0224	6.559	745.0	0.0223	7.928	774.6	0.0224
2	9.398	789.8	0.0223	10.774	804.9	0.0223	12.885	833.0	0.0223
3	11.203	824.9	0.0223	12.826	834.7	0.0223	15.214	853.6	0.0223
4	12.017	846.6	0.0222	13.756	846.5	0.0222	16.219	855.1	0.0222
5	12.390	860.1	0.0222	14.182	850.5	0.0222	16.645	850.8	0.0222
6	12.579	868.4	0.0221	14.395	850.7	0.0221	16.834	845.1	0.0221
7	12.698	873.2	0.0221	14.523	849.2	0.0221	16.934	839.6	0.0221
8	12.811	875.3	0.0220	14.636	846.7	0.0220	17.022	834.6	0.0220
9	12.979	874.3	0.0220	14.797	843.1	0.0220	17.160	830.0	0.0220
10	13.196	870.7	0.0219	15.001	838.7	0.0219	17.346	825.7	0.0219
11	13.367	865.5	0.0219	15.158	834.6	0.0219	17.493	822.6	0.0219
12	13.453	859.5	0.0218	15.232	831.2	0.0218	17.570	821.3	0.0218
13	13.435	852.8	0.0218	15.200	828.6	0.0218	17.553	821.9	0.0218
14	13.257	844.6	0.0217	15.003	825.9	0.0217	17.377	824.0	0.0217
15	12.870	832.6	0.0217	14.574	821.1	0.0217	16.957	826.0	0.0217
16	12.087	812.4	0.0216	13.692	809.1	0.0216	16.019	823.2	0.0216
17	10.291	776.0	0.0216	11.665	779.8	0.0216	13.745	803.3	0.0216
18	6.356	705.7	0.0216	7.222	713.2	0.0216	8.596	737.1	0.0216

Table 4-29. Burnup and TH Feedback Parameters by Axial Node for Assembly E20a (Cont.)

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	9.074	806.7	0.0225	9.612	947.5	0.0234	11.106	959.9	0.0235
2	14.574	862.5	0.0224	15.407	1054.3	0.0233	17.709	1068.2	0.0234
3	17.061	873.8	0.0224	18.047	1107.9	0.0232	20.753	1119.5	0.0233
4	18.081	868.4	0.0223	19.159	1140.7	0.0231	22.098	1149.4	0.0232
5	18.481	860.2	0.0222	19.621	1162.5	0.0230	22.701	1168.8	0.0230
6	18.639	852.9	0.0222	19.820	1176.3	0.0229	22.983	1179.7	0.0229
7	18.715	847.0	0.0221	19.920	1183.5	0.0227	23.130	1184.3	0.0228
8	18.785	842.3	0.0221	20.003	1185.2	0.0226	23.233	1184.2	0.0226
9	18.910	838.1	0.0220	20.130	1181.7	0.0225	23.359	1180.0	0.0225
10	19.087	834.2	0.0220	20.299	1173.9	0.0224	23.512	1172.5	0.0224
11	19.231	831.5	0.0219	20.429	1164.0	0.0223	23.614	1163.3	0.0223
12	19.313	830.6	0.0219	20.490	1151.1	0.0222	23.633	1152.0	0.0222
13	19.315	831.8	0.0218	20.459	1134.3	0.0220	23.540	1137.6	0.0221
14	19.169	835.5	0.0218	20.269	1112.4	0.0219	23.257	1118.7	0.0220
15	18.782	840.9	0.0217	19.817	1084.0	0.0218	22.661	1092.3	0.0219
16	17.845	844.4	0.0217	18.785	1045.4	0.0218	21.397	1054.6	0.0218
17	15.434	833.5	0.0216	16.227	988.6	0.0217	18.447	1000.3	0.0217
18	9.764	767.9	0.0216	10.278	866.6	0.0216	11.725	878.4	0.0216

Table 4-30. Burnup and TH Feedback Parameters by Axial Node for Assembly E20b

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.783	983.9	0.0236	3.443	1008.0	0.0236	5.207	948.4	0.0235
2	3.093	1190.5	0.0235	5.813	1187.7	0.0235	8.568	1070.6	0.0235
3	3.832	1294.6	0.0233	7.042	1268.8	0.0234	10.194	1117.7	0.0234
4	4.212	1336.2	0.0232	7.615	1298.3	0.0232	10.905	1137.0	0.0232
5	4.390	1347.1	0.0231	7.863	1307.3	0.0231	11.215	1154.0	0.0231
6	4.456	1343.2	0.0230	7.951	1309.3	0.0230	11.364	1178.6	0.0230
7	4.459	1333.5	0.0228	7.959	1308.8	0.0228	11.457	1214.3	0.0229
8	4.448	1327.4	0.0227	7.949	1306.7	0.0227	11.557	1259.5	0.0228
9	4.474	1335.6	0.0226	7.991	1305.6	0.0226	11.722	1305.9	0.0226
10	4.549	1357.4	0.0225	8.108	1307.8	0.0225	11.947	1336.1	0.0225
11	4.632	1383.3	0.0223	8.243	1311.0	0.0223	12.134	1344.7	0.0224
12	4.695	1405.4	0.0222	8.358	1314.7	0.0222	12.242	1330.8	0.0222
13	4.703	1414.3	0.0221	8.415	1319.0	0.0221	12.250	1301.0	0.0221
14	4.613	1403.0	0.0220	8.344	1320.1	0.0220	12.109	1263.4	0.0220
15	4.403	1369.7	0.0219	8.096	1313.1	0.0219	11.777	1228.3	0.0219
16	4.016	1306.5	0.0217	7.547	1286.0	0.0218	11.087	1194.2	0.0218
17	3.275	1183.5	0.0217	6.325	1203.3	0.0217	9.461	1133.3	0.0217
18	1.909	938.9	0.0216	3.805	989.5	0.0216	5.847	969.4	0.0216

Table 4-30. Burnup and TH Feedback Parameters by Axial Node for Assembly E20b (Cont.)

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	5.707	727.7	0.0224	6.559	745.0	0.0223	7.928	774.6	0.0224
2	9.398	789.8	0.0223	10.774	804.9	0.0223	12.885	833.0	0.0223
3	11.203	824.9	0.0223	12.826	834.7	0.0223	15.214	853.6	0.0223
4	12.017	846.6	0.0222	13.756	846.5	0.0222	16.219	855.1	0.0222
5	12.390	860.1	0.0222	14.182	850.5	0.0222	16.645	850.8	0.0222
6	12.579	868.4	0.0221	14.395	850.7	0.0221	16.834	845.1	0.0221
7	12.698	873.2	0.0221	14.523	849.2	0.0221	16.934	839.6	0.0221
8	12.811	875.3	0.0220	14.636	846.7	0.0220	17.022	834.6	0.0220
9	12.979	874.3	0.0220	14.797	843.1	0.0220	17.160	830.0	0.0220
10	13.196	870.7	0.0219	15.001	838.7	0.0219	17.346	825.7	0.0219
11	13.367	865.5	0.0219	15.158	834.6	0.0219	17.493	822.6	0.0219
12	13.453	859.5	0.0218	15.232	831.2	0.0218	17.570	821.3	0.0218
13	13.435	852.8	0.0218	15.200	828.6	0.0218	17.553	821.9	0.0218
14	13.257	844.6	0.0217	15.003	825.9	0.0217	17.377	824.0	0.0217
15	12.870	832.6	0.0217	14.574	821.1	0.0217	16.957	826.0	0.0217
16	12.087	812.4	0.0216	13.692	809.1	0.0216	16.019	823.2	0.0216
17	10.291	776.0	0.0216	11.665	779.8	0.0216	13.745	803.3	0.0216
18	6.356	705.7	0.0216	7.222	713.2	0.0216	8.596	737.1	0.0216

Axial Node	Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy8	376.2 Cy6	376.2 Cy6
1	9.074	806.7	0.0225
2	14.574	862.5	0.0224
3	17.061	873.8	0.0224
4	18.081	868.4	0.0223
5	18.481	860.2	0.0222
6	18.639	852.9	0.0222
7	18.715	847.0	0.0221
8	18.785	842.3	0.0221
9	18.910	838.1	0.0220
10	19.087	834.2	0.0220
11	19.231	831.5	0.0219
12	19.313	830.6	0.0219
13	19.315	831.8	0.0218
14	19.169	835.5	0.0218
15	18.782	840.9	0.0217
16	17.845	844.4	0.0217
17	15.434	833.5	0.0216
18	9.764	767.9	0.0216

Table 4-31. Burnup and TH Feedback Parameters by Axial Node for Assembly E20c

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.783	983.9	0.0236	3.443	1008.0	0.0236	5.207	948.4	0.0235
2	3.093	1190.5	0.0235	5.813	1187.7	0.0235	8.568	1070.6	0.0235
3	3.832	1294.6	0.0233	7.042	1268.8	0.0234	10.194	1117.7	0.0234
4	4.212	1336.2	0.0232	7.615	1298.3	0.0232	10.905	1137.0	0.0232
5	4.390	1347.1	0.0231	7.863	1307.3	0.0231	11.215	1154.0	0.0231
6	4.456	1343.2	0.0230	7.951	1309.3	0.0230	11.364	1178.6	0.0230
7	4.459	1333.5	0.0228	7.959	1308.8	0.0228	11.457	1214.3	0.0229
8	4.448	1327.4	0.0227	7.949	1306.7	0.0227	11.557	1259.5	0.0228
9	4.474	1335.6	0.0226	7.991	1305.6	0.0226	11.722	1305.9	0.0226
10	4.549	1357.4	0.0225	8.108	1307.8	0.0225	11.947	1336.1	0.0225
11	4.632	1383.3	0.0223	8.243	1311.0	0.0223	12.134	1344.7	0.0224
12	4.695	1405.4	0.0222	8.358	1314.7	0.0222	12.242	1330.8	0.0222
13	4.703	1414.3	0.0221	8.415	1319.0	0.0221	12.250	1301.0	0.0221
14	4.613	1403.0	0.0220	8.344	1320.1	0.0220	12.109	1263.4	0.0220
15	4.403	1369.7	0.0219	8.096	1313.1	0.0219	11.777	1228.3	0.0219
16	4.016	1306.5	0.0217	7.547	1286.0	0.0218	11.087	1194.2	0.0218
17	3.275	1183.5	0.0217	6.325	1203.3	0.0217	9.461	1133.3	0.0217
18	1.909	938.9	0.0216	3.805	989.5	0.0216	5.847	969.4	0.0216

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	5.707	727.7	0.0224	6.559	745.0	0.0223	7.928	774.6	0.0224
2	9.398	789.8	0.0223	10.774	804.9	0.0223	12.885	833.0	0.0223
3	11.203	824.9	0.0223	12.826	834.7	0.0223	15.214	853.6	0.0223
4	12.017	846.6	0.0222	13.756	846.5	0.0222	16.219	855.1	0.0222
5	12.390	860.1	0.0222	14.182	850.5	0.0222	16.645	850.8	0.0222
6	12.579	868.4	0.0221	14.395	850.7	0.0221	16.834	845.1	0.0221
7	12.698	873.2	0.0221	14.523	849.2	0.0221	16.934	839.6	0.0221
8	12.811	875.3	0.0220	14.636	846.7	0.0220	17.022	834.6	0.0220
9	12.979	874.3	0.0220	14.797	843.1	0.0220	17.160	830.0	0.0220
10	13.196	870.7	0.0219	15.001	838.7	0.0219	17.346	825.7	0.0219
11	13.367	865.5	0.0219	15.158	834.6	0.0219	17.493	822.6	0.0219
12	13.453	859.5	0.0218	15.232	831.2	0.0218	17.570	821.3	0.0218
13	13.435	852.8	0.0218	15.200	828.6	0.0218	17.553	821.9	0.0218
14	13.257	844.6	0.0217	15.003	825.9	0.0217	17.377	824.0	0.0217
15	12.870	832.6	0.0217	14.574	821.1	0.0217	16.957	826.0	0.0217
16	12.087	812.4	0.0216	13.692	809.1	0.0216	16.019	823.2	0.0216
17	10.291	776.0	0.0216	11.665	779.8	0.0216	13.745	803.3	0.0216
18	6.356	705.7	0.0216	7.222	713.2	0.0216	8.596	737.1	0.0216

Table 4-31. Burnup and TH Feedback Parameters by Axial Node for Assembly E20c (Cont.)

Axial Node	Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy9	376.2 Cy6	376.2 Cy6
1	9.074	806.7	0.0225
2	14.574	862.5	0.0224
3	17.061	873.8	0.0224
4	18.081	868.4	0.0223
5	18.481	860.2	0.0222
6	18.639	852.9	0.0222
7	18.715	847.0	0.0221
8	18.785	842.3	0.0221
9	18.910	838.1	0.0220
10	19.087	834.2	0.0220
11	19.231	831.5	0.0219
12	19.313	830.6	0.0219
13	19.315	831.8	0.0218
14	19.169	835.5	0.0218
15	18.782	840.9	0.0217
16	17.845	844.4	0.0217
17	15.434	833.5	0.0216
18	9.764	767.9	0.0216

Table 4-32. Burnup and TH Feedback Parameters by Axial Node for Assembly E21

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	0.929	785.8	0.0226	1.842	812.8	0.0227	2.852	792.1	0.0227
2	1.673	917.4	0.0226	3.238	943.5	0.0227	4.895	892.4	0.0226
3	2.123	991.4	0.0225	4.019	1009.3	0.0226	5.962	938.0	0.0226
4	2.369	1023.2	0.0225	4.406	1035.4	0.0225	6.459	957.4	0.0225
5	2.490	1033.6	0.0224	4.581	1044.6	0.0224	6.682	971.0	0.0225
6	2.542	1034.3	0.0223	4.653	1047.2	0.0224	6.793	987.1	0.0224
7	2.561	1032.0	0.0223	4.681	1047.8	0.0223	6.870	1008.5	0.0223
8	2.576	1032.4	0.0222	4.708	1048.2	0.0222	6.957	1034.1	0.0223
9	2.608	1039.4	0.0221	4.761	1050.0	0.0222	7.078	1059.3	0.0222
10	2.657	1052.1	0.0221	4.840	1053.0	0.0221	7.214	1077.3	0.0221
11	2.699	1065.4	0.0220	4.912	1055.5	0.0220	7.314	1083.0	0.0220
12	2.717	1074.4	0.0219	4.954	1057.0	0.0219	7.354	1075.9	0.0220
13	2.696	1075.2	0.0219	4.947	1057.2	0.0219	7.321	1059.2	0.0219
14	2.620	1064.2	0.0218	4.864	1054.3	0.0218	7.198	1038.3	0.0218
15	2.475	1039.5	0.0217	4.675	1044.8	0.0217	6.952	1016.3	0.0217
16	2.222	994.5	0.0217	4.294	1019.0	0.0217	6.459	989.4	0.0217
17	1.765	909.7	0.0216	3.503	952.1	0.0216	5.371	935.7	0.0216
18	0.991	756.4	0.0216	2.023	797.6	0.0216	3.181	801.7	0.0216

Table 4-32. Burnup and TH Feedback Parameters by Axial Node for Assembly E21 (Cont.)

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	3.314	722.3	0.0224	4.098	742.1	0.0224	5.353	771.2	0.0224
2	5.714	805.2	0.0224	7.061	823.2	0.0224	9.105	845.6	0.0224
3	7.009	859.6	0.0224	8.667	864.5	0.0223	11.057	875.8	0.0223
4	7.647	893.1	0.0223	9.466	883.6	0.0223	11.973	881.6	0.0223
5	7.958	913.8	0.0223	9.853	891.2	0.0222	12.379	878.6	0.0222
6	8.123	926.4	0.0222	10.053	892.9	0.0222	12.563	873.1	0.0221
7	8.234	933.7	0.0221	10.179	891.9	0.0221	12.665	867.6	0.0221
8	8.341	937.3	0.0221	10.290	889.6	0.0220	12.754	862.7	0.0220
9	8.470	937.7	0.0220	10.417	886.5	0.0220	12.863	858.3	0.0220
10	8.605	935.6	0.0220	10.547	883.2	0.0219	12.984	854.9	0.0219
11	8.698	932.2	0.0219	10.636	880.5	0.0219	13.074	853.2	0.0219
12	8.724	928.0	0.0219	10.661	878.9	0.0218	13.114	853.3	0.0218
13	8.671	922.7	0.0218	10.605	878.0	0.0218	13.083	855.3	0.0218
14	8.510	914.2	0.0217	10.430	876.2	0.0217	12.936	858.4	0.0217
15	8.197	899.0	0.0217	10.068	870.2	0.0217	12.578	860.3	0.0217
16	7.582	871.4	0.0216	9.325	853.4	0.0216	11.756	855.3	0.0216
17	6.275	819.8	0.0216	7.729	814.6	0.0216	9.858	827.9	0.0216
18	3.705	719.2	0.0216	4.578	724.4	0.0216	5.928	745.9	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	6.412	804.1	0.0225	6.840	891.5	0.0233	7.995	897.4	0.0232
2	10.740	871.9	0.0224	11.457	1010.7	0.0232	13.358	1013.3	0.0231
3	12.895	890.5	0.0224	13.784	1081.0	0.0231	16.097	1076.4	0.0231
4	13.847	888.4	0.0223	14.842	1122.5	0.0230	17.378	1108.5	0.0230
5	14.236	881.0	0.0222	15.297	1147.8	0.0229	17.958	1126.0	0.0228
6	14.393	873.9	0.0222	15.496	1163.7	0.0228	18.231	1135.5	0.0227
7	14.473	868.1	0.0221	15.604	1173.0	0.0227	18.381	1139.8	0.0226
8	14.546	863.5	0.0221	15.693	1177.2	0.0226	18.493	1140.4	0.0225
9	14.645	859.8	0.0220	15.801	1177.6	0.0225	18.610	1138.5	0.0224
10	14.760	856.9	0.0220	15.919	1175.6	0.0223	18.733	1135.3	0.0223
11	14.853	855.3	0.0219	16.012	1173.1	0.0222	18.831	1132.4	0.0222
12	14.906	855.5	0.0219	16.061	1169.2	0.0221	18.880	1129.1	0.0221
13	14.899	857.7	0.0218	16.039	1159.9	0.0220	18.838	1122.4	0.0220
14	14.784	862.0	0.0218	15.891	1142.6	0.0219	18.631	1109.6	0.0219
15	14.456	867.0	0.0217	15.503	1114.9	0.0218	18.130	1088.0	0.0218
16	13.622	868.5	0.0217	14.570	1071.8	0.0218	16.989	1052.6	0.0218
17	11.553	851.2	0.0216	12.336	1001.6	0.0217	14.365	989.9	0.0217
18	7.058	774.1	0.0216	7.539	862.1	0.0216	8.806	858.0	0.0216

Table 4-33. Burnup and TH Feedback Parameters by Axial Node for Assembly E25

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.534	925.4	0.0233	2.959	947.5	0.0233	4.473	897.5	0.0233
2	2.715	1118.9	0.0232	5.093	1119.0	0.0232	7.500	1016.3	0.0232
3	3.404	1219.2	0.0231	6.236	1197.3	0.0231	9.013	1063.7	0.0231
4	3.766	1260.3	0.0230	6.783	1226.0	0.0230	9.691	1083.0	0.0230
5	3.939	1271.9	0.0229	7.022	1235.0	0.0229	9.989	1098.9	0.0229
6	4.003	1269.1	0.0228	7.106	1236.9	0.0228	10.129	1121.5	0.0228
7	4.003	1260.1	0.0227	7.108	1235.9	0.0227	10.207	1153.8	0.0227
8	3.978	1252.8	0.0226	7.076	1232.7	0.0226	10.266	1193.8	0.0226
9	3.966	1255.0	0.0225	7.060	1228.8	0.0225	10.344	1233.5	0.0225
10	3.989	1268.1	0.0224	7.095	1226.7	0.0223	10.453	1260.3	0.0224
11	4.039	1287.6	0.0222	7.176	1227.2	0.0222	10.568	1267.2	0.0223
12	4.096	1307.4	0.0221	7.279	1230.5	0.0221	10.664	1254.1	0.0221
13	4.128	1319.4	0.0220	7.364	1236.0	0.0220	10.713	1226.9	0.0220
14	4.092	1316.1	0.0219	7.367	1240.5	0.0219	10.669	1194.1	0.0219
15	3.942	1291.9	0.0218	7.206	1237.7	0.0218	10.449	1164.1	0.0218
16	3.601	1235.8	0.0217	6.725	1213.6	0.0217	9.842	1133.0	0.0217
17	2.909	1119.5	0.0216	5.586	1135.3	0.0216	8.326	1074.7	0.0216
18	1.663	889.5	0.0216	3.296	931.6	0.0216	5.048	915.4	0.0216

Axial Node	Statepoint 63 (69.1 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6
1	5.657	955.4	0.0238
2	9.471	1098.1	0.0237
3	11.444	1190.8	0.0236
4	12.402	1250.1	0.0235
5	12.871	1286.4	0.0233
6	13.125	1309.8	0.0232
7	13.288	1325.4	0.0230
8	13.412	1335.5	0.0229
9	13.530	1340.6	0.0227
10	13.650	1339.6	0.0226
11	13.751	1333.5	0.0224
12	13.813	1324.0	0.0223
13	13.809	1311.7	0.0221
14	13.677	1294.8	0.0220
15	13.311	1266.5	0.0219
16	12.462	1217.5	0.0218
17	10.520	1131.4	0.0217
18	6.419	958.8	0.0216

Table 4-34. Burnup and TH Feedback Parameters by Axial Node for Assembly E27

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.712	991.0	0.0236	3.301	989.3	0.0236	4.995	929.4	0.0235
2	3.056	1205.5	0.0235	5.747	1179.5	0.0235	8.457	1059.1	0.0234
3	3.885	1312.3	0.0234	7.100	1266.9	0.0234	10.221	1108.8	0.0233
4	4.316	1352.3	0.0232	7.724	1296.3	0.0232	10.975	1127.6	0.0232
5	4.509	1361.5	0.0231	7.980	1304.2	0.0231	11.287	1144.7	0.0231
6	4.571	1355.6	0.0230	8.058	1305.3	0.0230	11.426	1170.4	0.0230
7	4.557	1342.8	0.0228	8.040	1303.3	0.0228	11.493	1208.0	0.0229
8	4.510	1331.8	0.0227	7.975	1298.4	0.0227	11.534	1254.7	0.0228
9	4.473	1331.3	0.0226	7.921	1292.2	0.0226	11.587	1300.3	0.0226
10	4.477	1343.7	0.0225	7.927	1287.9	0.0225	11.675	1329.9	0.0225
11	4.523	1365.1	0.0224	8.001	1287.1	0.0223	11.783	1337.0	0.0223
12	4.591	1388.5	0.0222	8.120	1290.6	0.0222	11.889	1321.6	0.0222
13	4.643	1403.7	0.0221	8.239	1297.7	0.0221	11.964	1290.2	0.0221
14	4.631	1403.8	0.0220	8.285	1305.0	0.0220	11.958	1252.9	0.0220
15	4.498	1383.2	0.0219	8.159	1305.3	0.0219	11.773	1218.8	0.0219
16	4.155	1327.7	0.0218	7.690	1284.2	0.0218	11.183	1185.7	0.0217
17	3.413	1205.5	0.0217	6.488	1205.8	0.0217	9.597	1126.8	0.0217
18	1.996	955.5	0.0216	3.917	993.6	0.0216	5.950	965.9	0.0216

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	5.401	697.4	0.0222	6.093	711.8	0.0222	7.208	737.4	0.0222
2	9.141	750.5	0.0222	10.272	762.9	0.0222	12.010	787.1	0.0222
3	11.057	780.2	0.0222	12.398	787.9	0.0221	14.374	805.3	0.0222
4	11.900	798.6	0.0221	13.341	798.5	0.0221	15.385	807.3	0.0221
5	12.267	810.4	0.0221	13.755	802.1	0.0221	15.801	804.0	0.0221
6	12.440	817.7	0.0220	13.948	802.5	0.0220	15.975	799.3	0.0220
7	12.529	822.0	0.0220	14.044	801.3	0.0220	16.047	794.8	0.0220
8	12.582	824.0	0.0219	14.097	799.4	0.0219	16.079	790.8	0.0219
9	12.637	823.8	0.0219	14.147	796.9	0.0219	16.111	787.4	0.0219
10	12.720	821.6	0.0219	14.221	794.0	0.0218	16.172	784.5	0.0219
11	12.817	818.0	0.0218	14.309	791.1	0.0218	16.255	782.4	0.0218
12	12.908	813.4	0.0218	14.391	788.6	0.0218	16.342	781.6	0.0218
13	12.962	807.8	0.0217	14.437	786.4	0.0217	16.401	781.9	0.0217
14	12.925	800.4	0.0217	14.384	783.7	0.0217	16.364	783.1	0.0217
15	12.692	789.3	0.0217	14.113	778.7	0.0217	16.096	783.7	0.0217
16	12.019	770.8	0.0216	13.351	767.3	0.0216	15.279	779.8	0.0216
17	10.284	738.5	0.0216	11.414	740.9	0.0216	13.121	760.9	0.0216
18	6.364	678.0	0.0216	7.064	683.8	0.0216	8.174	703.9	0.0216

Table 4-34. Burnup and TH Feedback Parameters by Axial Node for Assembly E27 (Cont.)

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	8.155	767.0	0.0223	8.625	907.1	0.0233	9.903	915.4	0.0233
2	13.424	815.4	0.0223	14.180	1014.5	0.0232	16.213	1022.4	0.0232
3	15.929	826.5	0.0222	16.846	1074.1	0.0231	19.276	1076.0	0.0231
4	16.955	822.6	0.0222	17.970	1108.8	0.0230	20.619	1104.6	0.0230
5	17.350	815.8	0.0221	18.426	1130.9	0.0229	21.199	1120.5	0.0229
6	17.498	809.5	0.0221	18.613	1145.0	0.0228	21.460	1129.3	0.0228
7	17.549	804.6	0.0220	18.690	1153.3	0.0227	21.580	1133.5	0.0227
8	17.565	800.8	0.0220	18.722	1157.3	0.0226	21.635	1134.5	0.0226
9	17.586	797.6	0.0219	18.750	1157.8	0.0225	21.674	1133.1	0.0225
10	17.640	795.1	0.0219	18.806	1155.8	0.0224	21.732	1130.1	0.0223
11	17.721	793.2	0.0219	18.885	1152.3	0.0223	21.812	1126.3	0.0222
12	17.814	792.6	0.0218	18.971	1146.5	0.0221	21.891	1121.3	0.0221
13	17.889	793.4	0.0218	19.027	1135.1	0.0220	21.919	1112.3	0.0220
14	17.876	795.9	0.0217	18.979	1116.2	0.0219	21.802	1097.3	0.0219
15	17.632	799.5	0.0217	18.675	1088.7	0.0218	21.377	1074.8	0.0218
16	16.808	800.9	0.0216	17.759	1049.6	0.0218	20.252	1041.1	0.0218
17	14.523	788.7	0.0216	15.322	990.4	0.0217	17.443	987.0	0.0217
18	9.128	730.8	0.0216	9.638	865.4	0.0216	11.009	865.1	0.0216

Table 4-35. Burnup and TH Feedback Parameters by Axial Node for Assembly E28

Axial Node	Statepoint 61 (114.4 Cy5)			Datapoint (206.7 Cy5)			Statepoint 62 (BOC Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	114.4 Cy5	58.2 Cy5	58.2 Cy5	206.7 Cy5	153.5 Cy5	153.5 Cy5	BOC Cy6	252.2 Cy5	252.2 Cy5
1	1.035	811.6	0.0227	2.017	830.2	0.0228	3.077	801.0	0.0227
2	1.867	955.9	0.0227	3.543	966.4	0.0227	5.271	901.9	0.0227
3	2.372	1035.8	0.0226	4.393	1033.9	0.0226	6.408	945.5	0.0226
4	2.645	1068.9	0.0225	4.808	1059.5	0.0226	6.927	963.9	0.0226
5	2.776	1078.8	0.0225	4.989	1067.5	0.0225	7.154	977.9	0.0225
6	2.824	1077.3	0.0224	5.052	1069.1	0.0224	7.257	995.9	0.0224
7	2.826	1071.1	0.0223	5.054	1068.1	0.0223	7.312	1020.5	0.0224
8	2.808	1066.0	0.0222	5.031	1065.5	0.0223	7.351	1049.4	0.0223
9	2.795	1066.6	0.0222	5.013	1062.4	0.0222	7.396	1077.3	0.0222
10	2.800	1074.1	0.0221	5.023	1060.2	0.0221	7.452	1096.5	0.0221
11	2.825	1086.1	0.0220	5.064	1059.9	0.0220	7.513	1101.6	0.0220
12	2.856	1098.5	0.0220	5.124	1061.8	0.0220	7.566	1092.0	0.0220
13	2.874	1106.3	0.0219	5.175	1065.3	0.0219	7.592	1072.0	0.0219
14	2.850	1104.1	0.0218	5.177	1068.0	0.0218	7.561	1048.5	0.0218
15	2.747	1086.8	0.0217	5.062	1064.7	0.0217	7.402	1025.9	0.0217
16	2.503	1044.1	0.0217	4.709	1043.9	0.0217	6.948	999.7	0.0217
17	2.005	953.1	0.0216	3.875	977.6	0.0216	5.821	946.8	0.0216
18	1.130	783.6	0.0216	2.250	817.1	0.0216	3.467	812.7	0.0216

Table 4-35. Burnup and TH Feedback Parameters by Axial Node for Assembly E28 (Cont.)

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	4.168	936.5	0.0238	5.987	970.8	0.0236	8.784	1001.7	0.0235
2	7.151	1100.5	0.0237	10.183	1116.7	0.0235	14.587	1123.6	0.0234
3	8.778	1204.0	0.0236	12.466	1193.6	0.0234	17.549	1170.1	0.0233
4	9.599	1271.5	0.0234	13.621	1228.3	0.0233	18.918	1174.4	0.0232
5	10.011	1312.7	0.0233	14.190	1240.5	0.0231	19.509	1165.6	0.0230
6	10.236	1338.6	0.0231	14.491	1243.4	0.0230	19.776	1154.7	0.0229
7	10.376	1354.2	0.0230	14.676	1242.8	0.0229	19.922	1145.0	0.0228
8	10.475	1364.5	0.0228	14.805	1241.0	0.0227	20.022	1137.3	0.0227
9	10.556	1369.8	0.0227	14.905	1238.4	0.0226	20.105	1131.5	0.0225
10	10.626	1370.2	0.0225	14.986	1235.4	0.0225	20.185	1127.5	0.0224
11	10.684	1366.8	0.0224	15.053	1232.7	0.0223	20.273	1126.0	0.0223
12	10.722	1360.9	0.0223	15.104	1231.3	0.0222	20.375	1127.8	0.0222
13	10.714	1352.5	0.0221	15.111	1231.2	0.0221	20.460	1132.7	0.0221
14	10.608	1337.7	0.0220	14.988	1229.0	0.0220	20.412	1138.7	0.0220
15	10.303	1309.8	0.0219	14.588	1218.6	0.0219	20.041	1143.6	0.0219
16	9.586	1254.7	0.0218	13.613	1189.5	0.0218	18.942	1140.1	0.0218
17	7.987	1152.9	0.0217	11.414	1117.9	0.0217	16.182	1102.2	0.0217
18	4.771	953.4	0.0216	6.911	950.5	0.0216	10.070	962.0	0.0216

Axial Node	Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy9	376.2 Cy6	376.2 Cy6
1	11.003	1023.1	0.0235
2	17.883	1119.7	0.0234
3	21.195	1137.7	0.0233
4	22.607	1127.5	0.0231
5	23.151	1112.3	0.0230
6	23.363	1099.4	0.0229
7	23.469	1089.8	0.0228
8	23.545	1082.9	0.0226
9	23.617	1077.9	0.0225
10	23.698	1074.5	0.0224
11	23.799	1072.8	0.0223
12	23.936	1073.7	0.0222
13	24.079	1077.8	0.0221
14	24.103	1084.8	0.0220
15	23.805	1094.1	0.0219
16	22.716	1101.5	0.0218
17	19.695	1086.7	0.0217
18	12.535	976.9	0.0216

Table 4-36. Burnup and TH Feedback Parameters by Axial Node for Assembly F2

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.271	1022.7	0.0236	3.487	1082.9	0.0238	6.921	1118.9	0.0240
2	1.889	1178.5	0.0235	5.232	1244.7	0.0237	10.368	1270.0	0.0238
3	2.224	1269.8	0.0234	6.149	1333.1	0.0236	12.017	1334.8	0.0237
4	2.422	1324.6	0.0233	6.652	1375.1	0.0234	12.781	1350.2	0.0235
5	2.555	1361.4	0.0231	6.958	1395.8	0.0233	13.157	1348.3	0.0233
6	2.656	1388.9	0.0230	7.170	1406.7	0.0231	13.371	1340.5	0.0232
7	2.740	1411.2	0.0229	7.338	1413.3	0.0230	13.526	1331.9	0.0230
8	2.810	1429.0	0.0227	7.476	1417.8	0.0228	13.657	1324.7	0.0229
9	2.857	1440.4	0.0226	7.573	1419.1	0.0227	13.757	1319.6	0.0227
10	2.870	1442.6	0.0224	7.608	1417.9	0.0225	13.804	1316.7	0.0226
11	2.843	1434.5	0.0223	7.572	1413.9	0.0224	13.792	1316.6	0.0225
12	2.781	1416.8	0.0222	7.471	1407.5	0.0223	13.730	1319.4	0.0223
13	2.689	1391.2	0.0221	7.312	1398.0	0.0221	13.622	1324.0	0.0222
14	2.573	1358.8	0.0219	7.098	1383.4	0.0220	13.457	1328.9	0.0221
15	2.426	1317.4	0.0218	6.794	1359.9	0.0219	13.150	1330.7	0.0219
16	2.215	1257.4	0.0217	6.290	1314.5	0.0218	12.454	1319.1	0.0218
17	1.874	1159.1	0.0217	5.365	1221.1	0.0217	10.840	1254.6	0.0217
18	1.299	985.2	0.0216	3.696	1038.2	0.0216	7.502	1079.0	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	9.527	1111.9	0.0239	9.817	785.4	0.0234	10.612	793.4	0.0233
2	14.150	1235.5	0.0237	14.788	950.4	0.0233	16.541	974.8	0.0232
3	16.194	1273.0	0.0236	17.116	1074.6	0.0232	19.517	1070.8	0.0232
4	17.025	1269.1	0.0234	18.084	1128.4	0.0231	20.770	1110.3	0.0230
5	17.370	1255.5	0.0233	18.505	1156.7	0.0230	21.336	1129.1	0.0229
6	17.533	1241.7	0.0231	18.715	1173.1	0.0229	21.626	1138.2	0.0228
7	17.644	1230.0	0.0230	18.856	1181.7	0.0228	21.809	1141.6	0.0227
8	17.747	1221.0	0.0228	18.976	1185.1	0.0226	21.952	1141.5	0.0226
9	17.835	1214.6	0.0227	19.073	1185.3	0.0225	22.058	1139.6	0.0225
10	17.884	1211.0	0.0226	19.127	1184.4	0.0224	22.119	1137.3	0.0224
11	17.892	1210.5	0.0224	19.136	1182.8	0.0223	22.134	1135.2	0.0223
12	17.869	1213.4	0.0223	19.108	1179.1	0.0222	22.105	1132.1	0.0221
13	17.824	1220.1	0.0222	19.046	1169.5	0.0221	22.019	1125.0	0.0220
14	17.742	1230.5	0.0221	18.925	1150.8	0.0220	21.833	1111.0	0.0219
15	17.515	1242.5	0.0219	18.631	1120.1	0.0219	21.410	1087.4	0.0218
16	16.814	1247.5	0.0218	17.818	1073.1	0.0218	20.365	1049.6	0.0218
17	14.869	1214.5	0.0217	15.687	996.0	0.0217	17.801	983.1	0.0217
18	10.402	1068.9	0.0216	10.891	843.4	0.0216	12.179	840.5	0.0216

Table 4-37. Burnup and TH Feedback Parameters by Axial Node for Assembly F4

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.141	971.5	0.0237	3.134	1038.3	0.0238	6.258	1084.9	0.0239
2	1.784	1136.8	0.0236	4.933	1213.1	0.0237	9.805	1246.3	0.0238
3	2.210	1257.1	0.0235	6.054	1318.8	0.0236	11.768	1319.7	0.0236
4	2.469	1332.7	0.0234	6.679	1369.2	0.0235	12.690	1335.9	0.0235
5	2.629	1378.2	0.0232	7.029	1391.7	0.0233	13.111	1332.7	0.0233
6	2.745	1409.9	0.0231	7.262	1402.8	0.0232	13.342	1324.3	0.0232
7	2.851	1437.6	0.0229	7.469	1411.4	0.0230	13.548	1316.6	0.0230
8	2.963	1466.2	0.0228	7.696	1420.6	0.0229	13.807	1312.4	0.0229
9	3.061	1487.3	0.0226	7.903	1427.9	0.0227	14.064	1310.9	0.0227
10	3.103	1494.4	0.0225	7.997	1429.7	0.0226	14.193	1309.5	0.0226
11	3.084	1488.4	0.0224	7.975	1426.2	0.0224	14.194	1309.0	0.0224
12	3.010	1470.7	0.0222	7.850	1418.1	0.0223	14.088	1309.9	0.0223
13	2.888	1439.8	0.0221	7.627	1405.6	0.0221	13.877	1311.9	0.0222
14	2.741	1400.1	0.0220	7.350	1388.7	0.0220	13.613	1315.0	0.0220
15	2.574	1354.6	0.0219	7.015	1364.1	0.0219	13.261	1316.2	0.0219
16	2.344	1290.3	0.0217	6.484	1318.7	0.0218	12.544	1302.2	0.0218
17	1.973	1184.6	0.0217	5.510	1224.1	0.0217	10.893	1240.0	0.0217
18	1.361	1003.2	0.0216	3.777	1038.7	0.0216	7.508	1067.9	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	8.700	1096.7	0.0238	9.035	821.7	0.0235	9.971	835.0	0.0235
2	13.468	1226.2	0.0237	14.167	992.1	0.0234	16.144	1028.3	0.0234
3	15.874	1266.6	0.0235	16.856	1114.2	0.0233	19.506	1123.5	0.0233
4	16.869	1260.9	0.0234	17.980	1163.7	0.0232	20.919	1161.2	0.0232
5	17.252	1245.6	0.0232	18.433	1189.9	0.0231	21.522	1180.1	0.0231
6	17.430	1231.1	0.0231	18.655	1205.1	0.0229	21.827	1189.5	0.0229
7	17.599	1219.8	0.0229	18.850	1211.7	0.0228	22.064	1192.2	0.0228
8	17.847	1212.0	0.0228	19.110	1211.1	0.0227	22.340	1189.8	0.0227
9	18.113	1206.9	0.0227	19.379	1206.6	0.0226	22.608	1184.6	0.0225
10	18.252	1203.5	0.0225	19.517	1202.0	0.0224	22.743	1179.8	0.0224
11	18.270	1202.3	0.0224	19.531	1198.2	0.0223	22.755	1175.8	0.0223
12	18.191	1204.0	0.0223	19.444	1193.2	0.0222	22.660	1171.5	0.0222
13	18.022	1208.8	0.0222	19.255	1183.8	0.0221	22.439	1163.7	0.0221
14	17.819	1217.3	0.0220	19.013	1165.4	0.0220	22.123	1148.5	0.0220
15	17.539	1228.5	0.0219	18.667	1134.9	0.0219	21.636	1122.7	0.0219
16	16.819	1233.9	0.0218	17.841	1089.4	0.0218	20.568	1083.5	0.0218
17	14.846	1202.5	0.0217	15.697	1018.5	0.0217	17.993	1018.4	0.0217
18	10.350	1059.6	0.0216	10.880	870.2	0.0216	12.325	874.6	0.0216

Table 4-38. Burnup and TH Feedback Parameters by Axial Node for Assembly F6

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.122	963.6	0.0238	3.025	1016.6	0.0238	5.974	1060.9	0.0238
2	1.838	1147.2	0.0237	4.952	1202.1	0.0237	9.646	1221.7	0.0236
3	2.330	1283.0	0.0236	6.180	1311.4	0.0236	11.698	1290.9	0.0235
4	2.633	1368.8	0.0234	6.863	1362.1	0.0234	12.659	1304.2	0.0234
5	2.816	1419.4	0.0233	7.233	1382.8	0.0233	13.081	1299.1	0.0232
6	2.937	1451.7	0.0231	7.454	1390.5	0.0231	13.281	1289.2	0.0231
7	3.027	1473.5	0.0230	7.609	1393.3	0.0230	13.405	1279.6	0.0229
8	3.096	1488.9	0.0228	7.728	1394.1	0.0228	13.505	1271.9	0.0228
9	3.142	1497.5	0.0227	7.809	1393.8	0.0227	13.580	1266.4	0.0227
10	3.157	1499.3	0.0225	7.843	1392.0	0.0225	13.619	1263.1	0.0225
11	3.143	1494.8	0.0224	7.831	1389.1	0.0224	13.628	1262.3	0.0224
12	3.104	1484.8	0.0223	7.783	1385.8	0.0223	13.623	1264.6	0.0223
13	3.039	1469.2	0.0221	7.695	1381.7	0.0221	13.596	1269.7	0.0221
14	2.941	1445.4	0.0220	7.543	1374.7	0.0220	13.507	1276.2	0.0220
15	2.788	1406.1	0.0219	7.264	1357.7	0.0219	13.247	1279.7	0.0219
16	2.534	1337.0	0.0218	6.718	1315.2	0.0218	12.541	1268.1	0.0218
17	2.099	1215.7	0.0217	5.649	1218.6	0.0217	10.819	1210.8	0.0217
18	1.392	1010.7	0.0216	3.750	1024.8	0.0216	7.288	1044.1	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	8.312	1080.9	0.0237	8.863	966.0	0.0236	10.389	977.2	0.0236
2	13.192	1208.7	0.0236	14.066	1089.4	0.0235	16.471	1102.0	0.0235
3	15.675	1246.9	0.0235	16.718	1152.3	0.0234	19.566	1161.2	0.0234
4	16.700	1240.0	0.0233	17.848	1190.3	0.0232	20.951	1193.9	0.0233
5	17.080	1224.6	0.0232	18.297	1215.8	0.0231	21.553	1214.0	0.0231
6	17.226	1210.4	0.0230	18.487	1231.8	0.0230	21.834	1225.6	0.0230
7	17.308	1199.6	0.0229	18.596	1240.2	0.0228	21.994	1230.3	0.0229
8	17.383	1191.7	0.0228	18.686	1242.5	0.0227	22.106	1230.1	0.0227
9	17.449	1186.3	0.0226	18.755	1240.6	0.0226	22.180	1226.9	0.0226
10	17.490	1183.0	0.0225	18.793	1235.9	0.0224	22.211	1221.9	0.0225
11	17.515	1181.9	0.0224	18.808	1228.3	0.0223	22.208	1215.0	0.0223
12	17.543	1183.6	0.0223	18.816	1216.3	0.0222	22.180	1204.9	0.0222
13	17.573	1188.5	0.0221	18.812	1198.1	0.0221	22.113	1189.9	0.0221
14	17.560	1197.1	0.0220	18.749	1172.3	0.0220	21.947	1168.3	0.0220
15	17.376	1208.0	0.0219	18.491	1137.0	0.0219	21.527	1137.4	0.0219
16	16.672	1213.7	0.0218	17.680	1089.3	0.0218	20.455	1094.5	0.0218
17	14.642	1184.3	0.0217	15.480	1018.4	0.0217	17.812	1027.4	0.0217
18	10.025	1046.2	0.0216	10.550	871.9	0.0216	12.022	882.3	0.0216

Table 4-39. Burnup and TH Feedback Parameters by Axial Node for Assembly F10

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.237	1009.3	0.0236	3.388	1070.1	0.0238	6.727	1107.7	0.0239
2	1.855	1166.5	0.0235	5.124	1232.0	0.0237	10.147	1258.4	0.0238
3	2.207	1262.9	0.0234	6.075	1323.0	0.0236	11.838	1323.6	0.0236
4	2.421	1322.6	0.0233	6.607	1366.7	0.0234	12.634	1338.8	0.0235
5	2.563	1362.1	0.0232	6.924	1387.6	0.0233	13.017	1335.7	0.0233
6	2.670	1391.1	0.0230	7.142	1398.3	0.0231	13.235	1327.6	0.0232
7	2.764	1416.0	0.0229	7.329	1405.9	0.0230	13.414	1319.4	0.0230
8	2.857	1439.6	0.0227	7.514	1413.6	0.0228	13.612	1313.9	0.0229
9	2.931	1457.8	0.0226	7.669	1418.6	0.0227	13.794	1310.6	0.0227
10	2.958	1462.9	0.0225	7.735	1418.9	0.0225	13.882	1308.4	0.0226
11	2.936	1455.9	0.0223	7.705	1415.1	0.0224	13.875	1307.9	0.0224
12	2.869	1437.3	0.0222	7.591	1407.8	0.0223	13.789	1309.7	0.0223
13	2.762	1407.9	0.0221	7.400	1396.1	0.0221	13.627	1313.2	0.0222
14	2.631	1372.1	0.0220	7.156	1379.7	0.0220	13.413	1317.8	0.0220
15	2.476	1329.2	0.0218	6.840	1356.0	0.0219	13.088	1319.4	0.0219
16	2.259	1268.0	0.0217	6.330	1311.0	0.0218	12.391	1305.8	0.0218
17	1.907	1167.1	0.0217	5.391	1217.8	0.0217	10.775	1242.8	0.0217
18	1.320	990.7	0.0216	3.706	1035.0	0.0216	7.441	1069.8	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	9.281	1105.7	0.0238	9.465	693.2	0.0222	9.972	697.5	0.0222
2	13.869	1228.9	0.0237	14.172	743.0	0.0222	14.996	747.8	0.0222
3	15.957	1266.4	0.0235	16.322	768.7	0.0221	17.301	771.9	0.0221
4	16.818	1261.7	0.0234	17.218	782.6	0.0221	18.277	783.5	0.0221
5	17.166	1247.4	0.0232	17.587	790.8	0.0221	18.691	789.5	0.0221
6	17.330	1233.2	0.0231	17.765	795.5	0.0220	18.892	792.2	0.0220
7	17.469	1221.7	0.0229	17.912	797.2	0.0220	19.048	792.4	0.0220
8	17.648	1213.3	0.0228	18.093	796.6	0.0220	19.231	790.7	0.0220
9	17.828	1207.5	0.0227	18.273	794.5	0.0219	19.406	788.0	0.0219
10	17.921	1203.8	0.0225	18.364	792.0	0.0219	19.491	785.3	0.0219
11	17.931	1202.9	0.0224	18.370	789.3	0.0218	19.490	782.7	0.0218
12	17.877	1205.1	0.0223	18.311	786.0	0.0218	19.421	779.9	0.0218
13	17.767	1210.7	0.0222	18.191	781.2	0.0218	19.286	776.0	0.0218
14	17.624	1220.1	0.0220	18.034	773.9	0.0217	19.102	770.1	0.0217
15	17.375	1231.7	0.0219	17.762	762.8	0.0217	18.783	760.8	0.0217
16	16.674	1236.8	0.0218	17.026	746.4	0.0217	17.966	746.3	0.0217
17	14.733	1204.6	0.0217	15.025	719.3	0.0216	15.813	720.8	0.0216
18	10.287	1061.0	0.0216	10.464	663.7	0.0216	10.949	665.7	0.0216

Table 4-40. Burnup and TH Feedback Parameters by Axial Node for Assembly F12

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.170	980.1	0.0238	3.174	1040.0	0.0239	6.282	1082.2	0.0239
2	1.862	1155.8	0.0237	5.073	1221.4	0.0238	9.961	1245.7	0.0238
3	2.338	1288.6	0.0236	6.290	1332.4	0.0237	12.039	1318.9	0.0236
4	2.626	1372.1	0.0235	6.961	1384.3	0.0235	12.997	1333.1	0.0235
5	2.792	1419.0	0.0233	7.305	1404.1	0.0233	13.379	1327.1	0.0233
6	2.909	1449.6	0.0232	7.521	1411.8	0.0232	13.574	1316.8	0.0232
7	3.009	1474.5	0.0230	7.703	1416.6	0.0230	13.740	1307.8	0.0230
8	3.102	1494.7	0.0229	7.881	1421.1	0.0229	13.924	1301.8	0.0229
9	3.177	1509.3	0.0227	8.031	1424.6	0.0227	14.098	1298.3	0.0227
10	3.208	1514.4	0.0226	8.102	1424.7	0.0226	14.191	1296.1	0.0226
11	3.199	1510.0	0.0224	8.098	1422.1	0.0224	14.216	1295.9	0.0224
12	3.159	1498.7	0.0223	8.047	1418.1	0.0223	14.219	1299.5	0.0223
13	3.092	1482.5	0.0221	7.955	1413.8	0.0222	14.210	1307.1	0.0222
14	2.983	1458.7	0.0220	7.782	1406.3	0.0220	14.096	1313.2	0.0220
15	2.821	1418.0	0.0219	7.477	1389.2	0.0219	13.798	1315.6	0.0219
16	2.566	1348.2	0.0218	6.912	1344.0	0.0218	13.055	1302.9	0.0218
17	2.141	1229.1	0.0217	5.839	1244.8	0.0217	11.294	1241.4	0.0217
18	1.457	1032.0	0.0216	3.958	1050.2	0.0216	7.720	1068.4	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	8.720	1096.2	0.0238	8.861	663.1	0.0221	9.248	666.5	0.0221
2	13.637	1227.2	0.0237	13.869	700.6	0.0220	14.500	704.4	0.0220
3	16.162	1266.5	0.0235	16.441	719.3	0.0220	17.191	721.9	0.0220
4	17.183	1258.8	0.0234	17.490	729.6	0.0220	18.301	730.5	0.0220
5	17.508	1241.1	0.0232	17.831	736.3	0.0220	18.677	735.4	0.0220
6	17.640	1225.7	0.0231	17.975	740.1	0.0219	18.840	737.7	0.0219
7	17.765	1214.4	0.0229	18.106	741.6	0.0219	18.978	738.0	0.0219
8	17.933	1206.5	0.0228	18.276	741.2	0.0219	19.149	736.7	0.0219
9	18.106	1201.2	0.0227	18.449	739.7	0.0218	19.319	734.7	0.0218
10	18.206	1197.8	0.0225	18.547	737.8	0.0218	19.413	732.6	0.0218
11	18.249	1196.6	0.0224	18.587	735.7	0.0218	19.448	730.5	0.0218
12	18.293	1199.0	0.0223	18.627	732.6	0.0218	19.479	727.8	0.0218
13	18.358	1206.2	0.0222	18.683	727.8	0.0217	19.520	723.7	0.0217
14	18.325	1215.6	0.0221	18.638	721.3	0.0217	19.452	718.4	0.0217
15	18.105	1227.1	0.0219	18.400	712.3	0.0217	19.176	710.8	0.0217
16	17.364	1233.3	0.0218	17.631	699.6	0.0216	18.342	699.5	0.0216
17	15.282	1203.8	0.0217	15.501	678.9	0.0216	16.095	680.0	0.0216
18	10.584	1060.7	0.0216	10.716	637.0	0.0216	11.079	638.5	0.0216

Table 4-40. Burnup and TH Feedback Parameters by Axial Node for Assembly F12 (Cont.)

Axial Node	Datapoint (227.4 Cy7)			Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	227.4 Cy7	164.6 Cy7	164.6 Cy7	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	9.950	683.9	0.0221	10.977	712.0	0.0222	11.952	741.1	0.0222
2	15.610	723.4	0.0221	17.165	751.9	0.0221	18.583	777.9	0.0222
3	18.469	737.2	0.0220	20.200	760.8	0.0221	21.734	781.4	0.0222
4	19.643	741.0	0.0220	21.414	759.7	0.0221	22.953	776.6	0.0221
5	20.042	741.5	0.0220	21.810	756.7	0.0220	23.329	771.8	0.0221
6	20.206	740.1	0.0219	21.957	753.2	0.0220	23.456	767.9	0.0220
7	20.337	737.7	0.0219	22.069	749.6	0.0220	23.549	764.7	0.0220
8	20.496	734.7	0.0219	22.211	746.2	0.0219	23.676	761.9	0.0220
9	20.654	731.9	0.0219	22.356	743.3	0.0219	23.808	759.6	0.0219
10	20.740	729.8	0.0218	22.435	741.4	0.0219	23.879	758.1	0.0219
11	20.770	728.4	0.0218	22.467	740.5	0.0218	23.906	757.3	0.0219
12	20.799	727.3	0.0218	22.504	740.1	0.0218	23.941	757.0	0.0218
13	20.837	726.1	0.0217	22.554	740.3	0.0218	23.994	757.3	0.0218
14	20.760	724.5	0.0217	22.493	741.2	0.0217	23.944	758.9	0.0218
15	20.459	721.6	0.0217	22.199	742.1	0.0217	23.663	761.7	0.0217
16	19.560	715.2	0.0217	21.266	740.7	0.0217	22.723	764.1	0.0217
17	17.147	699.1	0.0216	18.681	729.3	0.0216	20.026	757.7	0.0216
18	11.743	655.1	0.0216	12.758	682.6	0.0216	13.683	711.5	0.0216

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	13.044	682.6	0.0222	14.360	706.0	0.0222	16.010	733.8	0.0223
2	20.292	716.0	0.0222	22.257	736.2	0.0222	24.599	757.1	0.0222
3	23.735	730.2	0.0221	25.934	742.9	0.0221	28.454	756.3	0.0222
4	25.116	738.0	0.0221	27.390	742.8	0.0221	29.918	752.3	0.0222
5	25.590	743.3	0.0221	27.881	741.2	0.0221	30.377	747.5	0.0221
6	25.774	746.1	0.0220	28.059	739.0	0.0220	30.518	743.2	0.0221
7	25.898	747.0	0.0220	28.168	736.3	0.0220	30.597	739.6	0.0220
8	26.038	746.3	0.0220	28.291	733.6	0.0220	30.697	736.6	0.0220
9	26.172	744.8	0.0219	28.411	731.2	0.0219	30.803	734.3	0.0220
10	26.237	743.0	0.0219	28.469	729.4	0.0219	30.855	732.7	0.0219
11	26.251	740.8	0.0219	28.480	728.1	0.0219	30.869	731.7	0.0219
12	26.262	737.7	0.0218	28.490	727.1	0.0218	30.889	731.3	0.0219
13	26.273	733.3	0.0218	28.501	726.1	0.0218	30.917	731.5	0.0218
14	26.162	727.8	0.0218	28.386	725.3	0.0218	30.831	732.7	0.0218
15	25.786	720.5	0.0217	27.991	723.9	0.0217	30.467	734.6	0.0218
16	24.687	710.4	0.0217	26.818	721.1	0.0217	29.290	735.6	0.0217
17	21.699	693.9	0.0217	23.601	711.7	0.0217	25.902	731.8	0.0217
18	14.752	655.4	0.0216	16.026	675.1	0.0217	17.650	700.0	0.0217

Table 4-41. Burnup and TH Feedback Parameters by Axial Node for Assembly F14

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	0.979	918.3	0.0234	2.621	953.8	0.0233	5.171	996.2	0.0233
2	1.659	1101.6	0.0233	4.380	1127.2	0.0233	8.407	1139.0	0.0232
3	2.069	1211.2	0.0233	5.366	1213.1	0.0232	10.015	1193.2	0.0231
4	2.317	1277.4	0.0231	5.903	1251.2	0.0230	10.752	1203.1	0.0230
5	2.472	1318.5	0.0230	6.199	1266.2	0.0229	11.078	1197.4	0.0229
6	2.573	1344.8	0.0229	6.371	1270.6	0.0228	11.224	1187.6	0.0228
7	2.643	1362.4	0.0228	6.480	1270.8	0.0227	11.297	1178.3	0.0227
8	2.690	1373.8	0.0226	6.551	1269.3	0.0226	11.339	1170.8	0.0225
9	2.716	1379.6	0.0225	6.589	1266.9	0.0225	11.359	1165.1	0.0224
10	2.720	1379.8	0.0224	6.596	1264.0	0.0223	11.361	1161.6	0.0223
11	2.707	1375.3	0.0223	6.581	1261.0	0.0222	11.358	1160.4	0.0222
12	2.677	1366.9	0.0222	6.548	1258.6	0.0221	11.358	1162.1	0.0221
13	2.630	1354.2	0.0220	6.490	1256.2	0.0220	11.353	1166.4	0.0220
14	2.553	1334.3	0.0219	6.381	1251.4	0.0219	11.298	1172.1	0.0219
15	2.425	1300.5	0.0218	6.157	1238.0	0.0218	11.091	1175.8	0.0218
16	2.201	1239.9	0.0217	5.693	1203.1	0.0217	10.496	1166.6	0.0217
17	1.799	1128.4	0.0216	4.745	1119.1	0.0216	9.000	1116.2	0.0217
18	1.116	920.8	0.0216	2.989	932.7	0.0216	5.836	965.1	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	7.211	1023.7	0.0234	7.764	980.3	0.0237	9.294	992.3	0.0237
2	11.467	1133.5	0.0233	12.355	1111.6	0.0236	14.791	1125.0	0.0236
3	13.414	1167.2	0.0231	14.487	1189.9	0.0234	17.404	1198.8	0.0235
4	14.204	1164.0	0.0230	15.391	1237.6	0.0233	18.587	1239.9	0.0233
5	14.496	1151.9	0.0229	15.759	1268.2	0.0232	19.120	1263.9	0.0232
6	14.595	1140.1	0.0228	15.907	1286.7	0.0230	19.366	1276.2	0.0231
7	14.632	1130.9	0.0227	15.974	1296.1	0.0229	19.491	1281.6	0.0229
8	14.652	1124.3	0.0226	16.011	1299.8	0.0228	19.556	1282.6	0.0228
9	14.661	1119.7	0.0225	16.027	1299.7	0.0226	19.584	1280.9	0.0226
10	14.663	1116.8	0.0224	16.029	1296.7	0.0225	19.586	1277.2	0.0225
11	14.672	1115.9	0.0223	16.029	1290.5	0.0224	19.574	1271.4	0.0224
12	14.700	1117.3	0.0222	16.039	1279.8	0.0222	19.553	1262.3	0.0222
13	14.741	1121.6	0.0221	16.048	1262.8	0.0221	19.502	1248.2	0.0221
14	14.750	1128.9	0.0220	16.006	1235.7	0.0220	19.356	1226.5	0.0220
15	14.607	1137.9	0.0219	15.785	1196.6	0.0219	18.966	1193.3	0.0219
16	14.006	1140.6	0.0218	15.069	1142.0	0.0218	17.976	1144.9	0.0218
17	12.234	1109.9	0.0217	13.116	1059.7	0.0217	15.552	1067.3	0.0217
18	8.121	988.9	0.0216	8.672	902.7	0.0216	10.205	909.4	0.0216

Table 4-42. Burnup and TH Feedback Parameters by Axial Node for Assembly F14a

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	0.979	918.3	0.0234	2.621	953.8	0.0233	5.171	996.2	0.0233
2	1.659	1101.6	0.0233	4.380	1127.2	0.0233	8.407	1139.0	0.0232
3	2.069	1211.2	0.0233	5.366	1213.1	0.0232	10.015	1193.2	0.0231
4	2.317	1277.4	0.0231	5.903	1251.2	0.0230	10.752	1203.1	0.0230
5	2.472	1318.5	0.0230	6.199	1266.2	0.0229	11.078	1197.4	0.0229
6	2.573	1344.8	0.0229	6.371	1270.6	0.0228	11.224	1187.6	0.0228
7	2.643	1362.4	0.0228	6.480	1270.8	0.0227	11.297	1178.3	0.0227
8	2.690	1373.8	0.0226	6.551	1269.3	0.0226	11.339	1170.8	0.0225
9	2.716	1379.6	0.0225	6.589	1266.9	0.0225	11.359	1165.1	0.0224
10	2.720	1379.8	0.0224	6.596	1264.0	0.0223	11.361	1161.6	0.0223
11	2.707	1375.3	0.0223	6.581	1261.0	0.0222	11.358	1160.4	0.0222
12	2.677	1366.9	0.0222	6.548	1258.6	0.0221	11.358	1162.1	0.0221
13	2.630	1354.2	0.0220	6.490	1256.2	0.0220	11.353	1166.4	0.0220
14	2.553	1334.3	0.0219	6.381	1251.4	0.0219	11.298	1172.1	0.0219
15	2.425	1300.5	0.0218	6.157	1238.0	0.0218	11.091	1175.8	0.0218
16	2.201	1239.9	0.0217	5.693	1203.1	0.0217	10.496	1166.6	0.0217
17	1.799	1128.4	0.0216	4.745	1119.1	0.0216	9.000	1116.2	0.0217
18	1.116	920.8	0.0216	2.989	932.7	0.0216	5.836	965.1	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	7.190	1023.7	0.0234	7.708	955.5	0.0237	9.121	963.4	0.0236
2	11.432	1133.5	0.0233	12.294	1093.7	0.0236	14.607	1100.1	0.0235
3	13.372	1167.2	0.0231	14.437	1179.7	0.0235	17.245	1177.1	0.0234
4	14.159	1164.0	0.0230	15.347	1229.1	0.0233	18.423	1216.2	0.0233
5	14.450	1151.9	0.0229	15.714	1259.6	0.0232	18.941	1237.5	0.0232
6	14.550	1140.1	0.0228	15.863	1278.9	0.0231	19.180	1249.4	0.0230
7	14.588	1130.9	0.0227	15.933	1289.2	0.0229	19.303	1254.7	0.0229
8	14.609	1124.3	0.0226	15.974	1293.9	0.0228	19.373	1256.0	0.0228
9	14.621	1119.7	0.0225	15.997	1295.4	0.0226	19.412	1255.0	0.0226
10	14.624	1116.8	0.0224	16.006	1295.3	0.0225	19.433	1253.5	0.0225
11	14.632	1115.9	0.0223	16.018	1295.0	0.0224	19.459	1252.4	0.0224
12	14.659	1117.3	0.0222	16.044	1292.7	0.0222	19.497	1250.4	0.0222
13	14.698	1121.6	0.0221	16.067	1282.4	0.0221	19.496	1242.3	0.0221
14	14.704	1128.9	0.0220	16.030	1260.5	0.0220	19.380	1225.0	0.0220
15	14.559	1137.9	0.0219	15.808	1223.0	0.0219	19.002	1194.8	0.0219
16	13.959	1140.6	0.0218	15.084	1165.7	0.0218	18.008	1147.4	0.0218
17	12.191	1109.9	0.0217	13.113	1075.1	0.0217	15.549	1066.9	0.0217
18	8.091	988.9	0.0216	8.653	906.1	0.0216	10.161	903.5	0.0216

Table 4-43. Burnup and TH Feedback Parameters by Axial Node for Assembly F17

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.261	1015.0	0.0238	3.418	1071.4	0.0239	6.744	1106.3	0.0239
2	1.926	1182.5	0.0237	5.250	1239.8	0.0238	10.291	1258.9	0.0238
3	2.332	1293.1	0.0236	6.310	1337.7	0.0236	12.123	1325.2	0.0236
4	2.578	1362.5	0.0234	6.898	1384.1	0.0235	12.970	1338.6	0.0235
5	2.727	1403.9	0.0233	7.210	1402.3	0.0233	13.315	1332.7	0.0233
6	2.835	1432.3	0.0231	7.414	1409.7	0.0232	13.498	1322.5	0.0232
7	2.931	1456.8	0.0230	7.592	1415.1	0.0230	13.661	1313.8	0.0230
8	3.023	1479.0	0.0228	7.769	1420.0	0.0229	13.845	1307.8	0.0229
9	3.097	1493.3	0.0227	7.917	1423.6	0.0227	14.018	1304.3	0.0227
10	3.127	1498.1	0.0225	7.987	1423.7	0.0226	14.110	1302.0	0.0226
11	3.118	1493.5	0.0224	7.982	1420.9	0.0224	14.135	1302.0	0.0225
12	3.080	1482.2	0.0223	7.932	1417.0	0.0223	14.143	1306.1	0.0223
13	3.016	1466.5	0.0221	7.846	1412.8	0.0222	14.145	1313.9	0.0222
14	2.911	1442.2	0.0220	7.678	1405.4	0.0220	14.040	1319.5	0.0221
15	2.755	1401.2	0.0219	7.381	1387.9	0.0219	13.749	1321.9	0.0219
16	2.511	1334.2	0.0218	6.833	1342.9	0.0218	13.022	1309.9	0.0218
17	2.107	1220.3	0.0217	5.797	1245.3	0.0217	11.298	1248.0	0.0217
18	1.445	1029.1	0.0216	3.958	1053.1	0.0216	7.770	1074.7	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	9.304	1108.2	0.0238	9.487	695.1	0.0223	9.986	699.7	0.0223
2	14.038	1232.9	0.0237	14.360	755.4	0.0223	15.226	760.4	0.0223
3	16.280	1270.0	0.0236	16.694	795.0	0.0223	17.783	796.1	0.0222
4	17.184	1263.1	0.0234	17.656	818.8	0.0222	18.871	815.2	0.0222
5	17.470	1245.7	0.0232	17.978	833.1	0.0222	19.261	825.4	0.0222
6	17.590	1230.4	0.0231	18.119	841.1	0.0221	19.439	830.2	0.0221
7	17.711	1218.9	0.0230	18.252	844.6	0.0221	19.589	831.5	0.0221
8	17.877	1210.8	0.0228	18.425	845.1	0.0220	19.768	830.4	0.0220
9	18.048	1205.2	0.0227	18.598	844.0	0.0220	19.941	828.2	0.0220
10	18.146	1201.7	0.0226	18.695	842.2	0.0219	20.036	826.0	0.0219
11	18.189	1200.6	0.0224	18.736	839.9	0.0219	20.074	823.6	0.0219
12	18.241	1203.2	0.0223	18.782	835.7	0.0218	20.110	820.1	0.0218
13	18.321	1210.8	0.0222	18.850	828.6	0.0218	20.157	814.3	0.0218
14	18.301	1220.7	0.0221	18.810	818.3	0.0218	20.081	806.3	0.0217
15	18.090	1232.3	0.0219	18.568	803.5	0.0217	19.777	794.3	0.0217
16	17.363	1238.4	0.0218	17.792	781.5	0.0217	18.894	775.6	0.0217
17	15.318	1208.4	0.0217	15.665	746.0	0.0216	16.573	743.5	0.0216
18	10.665	1064.9	0.0216	10.871	679.0	0.0216	11.419	679.0	0.0216

Table 4-44. Burnup and TH Feedback Parameters by Axial Node for Assembly F17a

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.261	1015.0	0.0238	3.418	1071.4	0.0239	6.744	1106.3	0.0239
2	1.926	1182.5	0.0237	5.250	1239.8	0.0238	10.291	1258.9	0.0238
3	2.332	1293.1	0.0236	6.310	1337.7	0.0236	12.123	1325.2	0.0236
4	2.578	1362.5	0.0234	6.898	1384.1	0.0235	12.970	1338.6	0.0235
5	2.727	1403.9	0.0233	7.210	1402.3	0.0233	13.315	1332.7	0.0233
6	2.835	1432.3	0.0231	7.414	1409.7	0.0232	13.498	1322.5	0.0232
7	2.931	1456.8	0.0230	7.592	1415.1	0.0230	13.661	1313.8	0.0230
8	3.023	1479.0	0.0228	7.769	1420.0	0.0229	13.845	1307.8	0.0229
9	3.097	1493.3	0.0227	7.917	1423.6	0.0227	14.018	1304.3	0.0227
10	3.127	1498.1	0.0225	7.987	1423.7	0.0226	14.110	1302.0	0.0226
11	3.118	1493.5	0.0224	7.982	1420.9	0.0224	14.135	1302.0	0.0225
12	3.080	1482.2	0.0223	7.932	1417.0	0.0223	14.143	1306.1	0.0223
13	3.016	1466.5	0.0221	7.846	1412.8	0.0222	14.145	1313.9	0.0222
14	2.911	1442.2	0.0220	7.678	1405.4	0.0220	14.040	1319.5	0.0221
15	2.755	1401.2	0.0219	7.381	1387.9	0.0219	13.749	1321.9	0.0219
16	2.511	1334.2	0.0218	6.833	1342.9	0.0218	13.022	1309.9	0.0218
17	2.107	1220.3	0.0217	5.797	1245.3	0.0217	11.298	1248.0	0.0217
18	1.445	1029.1	0.0216	3.958	1053.1	0.0216	7.770	1074.7	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	9.312	1108.2	0.0238	9.861	955.7	0.0236	11.373	967.1	0.0237
2	14.053	1232.9	0.0237	14.939	1088.4	0.0236	17.353	1098.0	0.0236
3	16.300	1270.0	0.0236	17.370	1158.8	0.0234	20.255	1162.9	0.0234
4	17.206	1263.1	0.0234	18.390	1201.1	0.0233	21.544	1198.3	0.0233
5	17.494	1245.7	0.0232	18.752	1229.5	0.0232	22.066	1220.1	0.0232
6	17.614	1230.4	0.0231	18.920	1246.8	0.0230	22.328	1232.4	0.0230
7	17.735	1218.9	0.0230	19.070	1254.3	0.0229	22.527	1236.5	0.0229
8	17.901	1210.8	0.0228	19.251	1255.2	0.0228	22.729	1235.5	0.0228
9	18.072	1205.2	0.0227	19.427	1252.3	0.0226	22.910	1231.6	0.0226
10	18.170	1201.7	0.0226	19.524	1248.3	0.0225	23.006	1227.2	0.0225
11	18.215	1200.6	0.0224	19.564	1243.2	0.0224	23.040	1222.3	0.0224
12	18.269	1203.2	0.0223	19.605	1234.6	0.0222	23.061	1214.9	0.0222
13	18.351	1210.8	0.0222	19.658	1218.8	0.0221	23.063	1201.9	0.0221
14	18.332	1220.7	0.0221	19.591	1194.3	0.0220	22.901	1181.5	0.0220
15	18.121	1232.3	0.0219	19.304	1159.0	0.0219	22.452	1150.7	0.0219
16	17.391	1238.4	0.0218	18.459	1109.4	0.0218	21.338	1105.9	0.0218
17	15.339	1208.4	0.0217	16.223	1034.2	0.0217	18.635	1036.7	0.0217
18	10.677	1064.9	0.0216	11.226	881.1	0.0216	12.737	887.6	0.0216

Table 4-45. Burnup and TH Feedback Parameters by Axial Node for Assembly F19

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.190	990.6	0.0238	3.177	1033.4	0.0238	6.220	1069.6	0.0237
2	1.923	1178.0	0.0238	5.118	1213.7	0.0237	9.858	1221.7	0.0236
3	2.402	1305.5	0.0236	6.300	1317.0	0.0236	11.809	1285.9	0.0235
4	2.700	1386.4	0.0235	6.963	1365.1	0.0234	12.726	1297.7	0.0233
5	2.878	1434.5	0.0234	7.310	1382.8	0.0233	13.099	1290.8	0.0232
6	2.998	1465.1	0.0232	7.516	1388.0	0.0231	13.275	1280.2	0.0231
7	3.087	1485.7	0.0230	7.663	1389.5	0.0230	13.389	1270.6	0.0229
8	3.153	1498.7	0.0229	7.772	1389.7	0.0228	13.475	1262.9	0.0228
9	3.195	1506.4	0.0227	7.845	1389.0	0.0227	13.539	1257.4	0.0226
10	3.213	1508.6	0.0226	7.882	1387.4	0.0225	13.583	1254.2	0.0225
11	3.211	1506.1	0.0224	7.893	1385.8	0.0224	13.624	1254.3	0.0224
12	3.199	1500.8	0.0223	7.901	1385.8	0.0223	13.703	1259.0	0.0223
13	3.172	1493.8	0.0221	7.903	1387.7	0.0221	13.819	1268.7	0.0221
14	3.097	1478.6	0.0220	7.814	1386.0	0.0220	13.820	1277.0	0.0220
15	2.943	1443.9	0.0219	7.546	1371.9	0.0219	13.575	1280.9	0.0219
16	2.666	1370.2	0.0218	6.962	1328.4	0.0218	12.826	1268.3	0.0218
17	2.186	1237.9	0.0217	5.807	1227.2	0.0217	10.996	1209.6	0.0217
18	1.428	1020.8	0.0216	3.806	1027.2	0.0216	7.332	1041.5	0.0216

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	8.599	1081.1	0.0237	8.768	686.2	0.0222	9.230	689.7	0.0222
2	13.405	1204.4	0.0236	13.696	737.5	0.0222	14.477	740.9	0.0222
3	15.763	1241.5	0.0234	16.128	768.7	0.0222	17.088	769.4	0.0222
4	16.740	1235.1	0.0233	17.152	787.3	0.0221	18.212	784.5	0.0221
5	17.058	1218.5	0.0232	17.499	798.9	0.0221	18.616	793.0	0.0221
6	17.175	1204.1	0.0230	17.634	805.6	0.0221	18.782	797.1	0.0220
7	17.248	1193.6	0.0229	17.718	808.9	0.0220	18.881	798.5	0.0220
8	17.312	1186.1	0.0228	17.787	810.0	0.0220	18.956	798.2	0.0220
9	17.367	1180.9	0.0226	17.844	809.7	0.0219	19.015	797.0	0.0219
10	17.413	1177.8	0.0225	17.891	808.4	0.0219	19.061	795.3	0.0219
11	17.474	1176.9	0.0224	17.949	806.2	0.0219	19.115	793.0	0.0218
12	17.600	1179.5	0.0223	18.069	802.0	0.0218	19.226	789.4	0.0218
13	17.799	1186.8	0.0221	18.257	795.0	0.0218	19.394	783.6	0.0218
14	17.888	1196.0	0.0220	18.328	785.4	0.0217	19.432	775.9	0.0217
15	17.721	1206.9	0.0219	18.135	772.2	0.0217	19.185	765.0	0.0217
16	16.970	1212.5	0.0218	17.341	753.1	0.0217	18.299	748.7	0.0217
17	14.822	1183.1	0.0217	15.124	722.5	0.0216	15.913	720.8	0.0216
18	10.057	1043.9	0.0216	10.235	663.8	0.0216	10.710	664.0	0.0216

Table 4-45. Burnup and TH Feedback Parameters by Axial Node for Assembly F19 (Cont.)

Axial Node	Datapoint (227.4 Cy7)			Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	227.4 Cy7	164.6 Cy7	164.6 Cy7	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	10.046	705.7	0.0222	11.198	731.9	0.0223	12.282	759.3	0.0223
2	15.807	756.7	0.0222	17.595	780.6	0.0222	19.197	802.1	0.0223
3	18.664	778.6	0.0222	20.700	795.0	0.0222	22.460	809.5	0.0223
4	19.892	785.9	0.0221	22.002	795.9	0.0222	23.784	805.9	0.0222
5	20.335	787.5	0.0221	22.452	793.1	0.0221	24.217	801.2	0.0222
6	20.508	786.4	0.0220	22.611	789.4	0.0221	24.355	797.2	0.0221
7	20.602	784.0	0.0220	22.687	785.8	0.0220	24.415	794.2	0.0221
8	20.667	781.3	0.0220	22.738	782.8	0.0220	24.454	792.1	0.0220
9	20.717	778.9	0.0219	22.779	780.5	0.0220	24.487	790.5	0.0220
10	20.757	776.9	0.0219	22.816	778.8	0.0219	24.517	789.5	0.0220
11	20.809	775.5	0.0218	22.872	777.8	0.0219	24.568	788.7	0.0219
12	20.918	774.0	0.0218	22.991	777.1	0.0218	24.684	788.0	0.0219
13	21.082	772.0	0.0218	23.169	776.6	0.0218	24.862	787.5	0.0218
14	21.110	769.8	0.0217	23.215	777.2	0.0218	24.919	788.7	0.0218
15	20.831	766.0	0.0217	22.945	778.3	0.0217	24.664	791.8	0.0217
16	19.857	757.7	0.0217	21.929	776.9	0.0217	23.638	794.8	0.0217
17	17.251	736.9	0.0216	19.111	763.7	0.0216	20.690	788.5	0.0217
18	11.548	680.5	0.0216	12.775	708.3	0.0216	13.863	737.1	0.0216

Table 4-46. Burnup and TH Feedback Parameters by Axial Node for Assembly F23

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	1.134	967.6	0.0238	3.055	1021.1	0.0238	6.025	1063.0	0.0238
2	1.855	1152.2	0.0237	4.996	1206.8	0.0237	9.711	1223.6	0.0237
3	2.357	1290.4	0.0236	6.245	1317.6	0.0236	11.791	1293.1	0.0235
4	2.666	1378.3	0.0235	6.938	1368.9	0.0234	12.756	1305.3	0.0234
5	2.845	1427.8	0.0233	7.291	1387.5	0.0233	13.138	1298.5	0.0232
6	2.964	1458.7	0.0232	7.499	1393.1	0.0231	13.317	1287.9	0.0231
7	3.054	1480.1	0.0230	7.649	1395.0	0.0230	13.435	1278.3	0.0229
8	3.121	1494.0	0.0229	7.762	1395.7	0.0228	13.528	1270.6	0.0228
9	3.165	1502.0	0.0227	7.840	1395.3	0.0227	13.598	1265.2	0.0227
10	3.184	1504.2	0.0226	7.877	1393.8	0.0226	13.643	1262.0	0.0225
11	3.182	1501.6	0.0224	7.888	1392.1	0.0224	13.684	1262.0	0.0224
12	3.171	1496.3	0.0223	7.898	1392.0	0.0223	13.766	1266.9	0.0223
13	3.147	1489.6	0.0221	7.904	1394.0	0.0221	13.888	1276.8	0.0222
14	3.073	1474.7	0.0220	7.817	1392.3	0.0220	13.893	1285.2	0.0220
15	2.922	1440.0	0.0219	7.550	1377.9	0.0219	13.649	1289.0	0.0219
16	2.651	1367.5	0.0218	6.974	1334.3	0.0218	12.906	1276.0	0.0218
17	2.187	1238.8	0.0217	5.843	1234.0	0.0217	11.104	1217.5	0.0217
18	1.444	1026.6	0.0216	3.867	1035.2	0.0216	7.462	1049.1	0.0216

Table 4-46. Burnup and TH Feedback Parameters by Axial Node for Assembly F23 (Cont.)

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	8.370	1081.4	0.0237	8.870	927.1	0.0234	10.230	934.6	0.0234
2	13.263	1209.1	0.0236	14.078	1049.8	0.0233	16.268	1056.3	0.0233
3	15.779	1247.8	0.0235	16.765	1112.1	0.0232	19.372	1112.2	0.0232
4	16.805	1240.4	0.0233	17.860	1124.6	0.0231	20.579	1120.3	0.0231
5	17.130	1223.1	0.0232	18.224	1144.3	0.0230	21.045	1131.9	0.0230
6	17.248	1208.3	0.0230	18.380	1158.9	0.0229	21.274	1140.6	0.0229
7	17.325	1197.5	0.0229	18.483	1166.9	0.0228	21.419	1144.3	0.0228
8	17.394	1189.7	0.0228	18.567	1170.1	0.0227	21.524	1144.2	0.0226
9	17.454	1184.4	0.0226	18.634	1170.2	0.0225	21.600	1142.3	0.0225
10	17.501	1181.1	0.0225	18.684	1169.0	0.0224	21.657	1139.8	0.0224
11	17.561	1180.0	0.0224	18.750	1171.0	0.0223	21.749	1140.5	0.0223
12	17.690	1182.5	0.0223	18.927	1202.3	0.0222	22.098	1166.1	0.0222
13	17.896	1189.9	0.0222	19.162	1199.4	0.0221	22.368	1167.8	0.0221
14	17.989	1199.2	0.0220	19.219	1177.3	0.0220	22.351	1150.8	0.0220
15	17.824	1210.0	0.0219	18.984	1144.0	0.0219	21.972	1123.2	0.0219
16	17.081	1215.8	0.0218	18.130	1097.1	0.0218	20.872	1083.5	0.0218
17	14.965	1186.8	0.0217	15.833	1024.4	0.0217	18.136	1018.7	0.0217
18	10.224	1048.0	0.0216	10.761	873.5	0.0216	12.203	874.7	0.0216

Table 4-47. Burnup and TH Feedback Parameters by Axial Node for Assembly F25

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	0.755	838.5	0.0231	2.021	867.6	0.0230	4.008	906.8	0.0230
2	1.350	1002.1	0.0230	3.538	1024.4	0.0229	6.778	1043.4	0.0229
3	1.722	1106.7	0.0230	4.417	1106.2	0.0228	8.203	1096.0	0.0228
4	1.952	1170.1	0.0229	4.905	1142.4	0.0228	8.877	1107.2	0.0227
5	2.095	1209.0	0.0228	5.174	1156.8	0.0227	9.177	1103.3	0.0226
6	2.186	1232.6	0.0227	5.325	1160.9	0.0226	9.307	1095.3	0.0225
7	2.247	1247.6	0.0226	5.415	1160.7	0.0225	9.367	1087.3	0.0224
8	2.285	1256.8	0.0225	5.469	1158.9	0.0224	9.395	1080.7	0.0224
9	2.307	1261.4	0.0224	5.498	1156.5	0.0223	9.406	1075.8	0.0223
10	2.313	1262.0	0.0223	5.507	1154.0	0.0222	9.411	1072.8	0.0222
11	2.307	1259.6	0.0222	5.505	1152.1	0.0221	9.422	1072.0	0.0221
12	2.291	1254.6	0.0221	5.494	1151.1	0.0220	9.443	1073.8	0.0220
13	2.260	1246.2	0.0220	5.464	1150.4	0.0219	9.461	1077.7	0.0219
14	2.199	1230.7	0.0219	5.382	1147.0	0.0219	9.426	1082.6	0.0219
15	2.085	1201.0	0.0218	5.187	1135.0	0.0218	9.239	1084.8	0.0218
16	1.878	1144.1	0.0217	4.765	1102.4	0.0217	8.690	1074.5	0.0217
17	1.502	1036.0	0.0216	3.898	1022.2	0.0216	7.327	1024.9	0.0216
18	0.856	835.2	0.0216	2.271	843.0	0.0216	4.422	872.1	0.0216

Table 4-47. Burnup and TH Feedback Parameters by Axial Node for Assembly F25 (Cont.)

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	5.630	943.2	0.0230	6.174	990.3	0.0237	7.672	1002.8	0.0237
2	9.281	1052.1	0.0229	10.173	1135.3	0.0236	12.605	1145.8	0.0236
3	11.013	1084.9	0.0228	12.107	1224.2	0.0235	15.050	1229.8	0.0235
4	11.745	1083.5	0.0227	12.961	1277.3	0.0234	16.191	1274.9	0.0234
5	12.022	1073.4	0.0227	13.316	1309.6	0.0232	16.712	1299.0	0.0232
6	12.115	1063.3	0.0226	13.460	1328.2	0.0231	16.955	1311.3	0.0231
7	12.145	1055.4	0.0225	13.522	1338.4	0.0230	17.075	1317.1	0.0230
8	12.154	1049.8	0.0224	13.550	1343.0	0.0228	17.134	1318.5	0.0228
9	12.156	1045.8	0.0223	13.562	1343.9	0.0227	17.162	1317.4	0.0227
10	12.161	1043.5	0.0222	13.570	1342.4	0.0225	17.177	1314.9	0.0225
11	12.183	1042.8	0.0221	13.589	1338.9	0.0224	17.197	1311.2	0.0224
12	12.229	1044.1	0.0220	13.625	1332.1	0.0223	17.224	1305.2	0.0223
13	12.287	1047.8	0.0220	13.658	1317.9	0.0221	17.214	1293.7	0.0221
14	12.304	1053.9	0.0219	13.628	1293.3	0.0220	17.089	1273.9	0.0220
15	12.164	1060.9	0.0218	13.409	1255.5	0.0219	16.705	1242.4	0.0219
16	11.595	1061.7	0.0217	12.720	1196.4	0.0218	15.737	1190.9	0.0218
17	9.968	1030.5	0.0216	10.899	1105.8	0.0217	13.426	1105.6	0.0217
18	6.176	904.2	0.0216	6.755	938.3	0.0216	8.343	941.6	0.0216

Table 4-48. Burnup and TH Feedback Parameters by Axial Node for Assembly F27

Axial Node	Statepoint 63 (69.1 Cy6)			Datapoint (176.7 Cy6)			Datapoint (320.3 Cy6)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	69.1 Cy6	41.5 Cy6	41.5 Cy6	176.7 Cy6	128.8 Cy6	128.8 Cy6	320.3 Cy6	252.5 Cy6	252.5 Cy6
1	0.816	856.4	0.0234	2.198	898.4	0.0233	4.375	942.8	0.0232
2	1.473	1033.3	0.0233	3.910	1077.6	0.0232	7.553	1100.1	0.0231
3	1.940	1167.1	0.0232	5.024	1177.6	0.0231	9.370	1162.4	0.0230
4	2.233	1249.3	0.0231	5.650	1222.6	0.0230	10.237	1175.1	0.0229
5	2.409	1297.4	0.0230	5.986	1240.3	0.0229	10.620	1170.5	0.0228
6	2.520	1326.6	0.0229	6.175	1245.8	0.0228	10.791	1161.5	0.0227
7	2.594	1345.4	0.0227	6.290	1246.2	0.0226	10.875	1152.8	0.0226
8	2.643	1357.2	0.0226	6.363	1244.8	0.0225	10.922	1145.7	0.0225
9	2.671	1363.5	0.0225	6.404	1242.6	0.0224	10.948	1140.5	0.0224
10	2.681	1364.7	0.0224	6.421	1240.1	0.0223	10.963	1137.4	0.0223
11	2.676	1362.3	0.0223	6.422	1238.3	0.0222	10.981	1136.7	0.0222
12	2.659	1357.0	0.0221	6.412	1237.4	0.0221	11.010	1138.7	0.0221
13	2.623	1347.8	0.0220	6.380	1236.8	0.0220	11.034	1143.3	0.0220
14	2.554	1330.0	0.0219	6.287	1233.3	0.0219	10.998	1148.9	0.0219
15	2.423	1296.0	0.0218	6.062	1220.3	0.0218	10.786	1151.9	0.0218
16	2.184	1232.0	0.0217	5.573	1184.3	0.0217	10.155	1141.8	0.0217
17	1.759	1114.5	0.0216	4.587	1098.1	0.0216	8.613	1090.6	0.0216
18	1.070	904.5	0.0216	2.839	911.8	0.0216	5.499	940.1	0.0216

Table 4-48. Burnup and TH Feedback Parameters by Axial Node for Assembly F27 (Cont.)

Axial Node	Statepoint 64 (BOC Cy7)			Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	BOC Cy7	376.2 Cy6	376.2 Cy6	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7
1	6.165	986.0	0.0232	6.520	836.6	0.0229	7.481	842.0	0.0228
2	10.370	1104.5	0.0232	10.954	930.5	0.0228	12.514	933.7	0.0228
3	12.570	1141.3	0.0231	13.279	982.6	0.0227	15.144	982.2	0.0227
4	13.508	1138.8	0.0229	14.292	1012.7	0.0227	16.322	1006.6	0.0226
5	13.866	1127.5	0.0228	14.698	1031.5	0.0226	16.823	1020.2	0.0226
6	13.996	1116.4	0.0227	14.859	1043.4	0.0225	17.040	1027.5	0.0225
7	14.048	1107.8	0.0226	14.931	1050.2	0.0224	17.143	1030.8	0.0224
8	14.075	1101.7	0.0225	14.970	1053.3	0.0223	17.199	1031.3	0.0223
9	14.093	1097.5	0.0224	14.994	1053.8	0.0223	17.229	1030.2	0.0222
10	14.109	1094.9	0.0223	15.011	1052.6	0.0222	17.248	1028.0	0.0222
11	14.141	1094.2	0.0222	15.041	1049.7	0.0221	17.276	1025.1	0.0221
12	14.199	1095.6	0.0221	15.092	1044.2	0.0220	17.317	1020.4	0.0220
13	14.270	1099.7	0.0220	15.146	1034.1	0.0219	17.344	1012.4	0.0219
14	14.294	1106.6	0.0219	15.141	1017.8	0.0219	17.285	999.6	0.0219
15	14.138	1114.6	0.0218	14.937	993.7	0.0218	16.985	979.9	0.0218
16	13.491	1115.8	0.0217	14.214	958.1	0.0217	16.096	949.5	0.0217
17	11.665	1084.6	0.0217	12.262	899.8	0.0217	13.837	896.4	0.0217
18	7.631	965.3	0.0216	7.995	787.5	0.0216	8.970	787.0	0.0216

Table 4-49. Burnup and TH Feedback Parameters by Axial Node for Assembly G2

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft³/lbm)
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.580	1064.2	0.0237	2.188	1086.5	0.0238	4.936	1117.3	0.0239
2	0.893	1249.6	0.0236	3.399	1276.2	0.0237	7.662	1298.9	0.0238
3	1.086	1372.6	0.0235	4.125	1398.5	0.0236	9.161	1394.6	0.0237
4	1.207	1447.6	0.0234	4.562	1468.4	0.0235	9.953	1427.2	0.0235
5	1.285	1493.5	0.0232	4.829	1502.1	0.0233	10.366	1434.5	0.0233
6	1.336	1517.6	0.0231	4.993	1519.8	0.0232	10.581	1432.9	0.0232
7	1.368	1530.6	0.0229	5.091	1528.4	0.0230	10.687	1428.0	0.0230
8	1.385	1536.4	0.0228	5.143	1531.1	0.0228	10.733	1422.6	0.0229
9	1.393	1536.9	0.0227	5.163	1529.8	0.0227	10.746	1418.1	0.0227
10	1.391	1533.2	0.0225	5.160	1525.6	0.0226	10.742	1415.0	0.0226
11	1.381	1525.4	0.0224	5.133	1518.6	0.0224	10.723	1413.5	0.0225
12	1.361	1512.4	0.0222	5.076	1507.8	0.0223	10.679	1413.3	0.0223
13	1.327	1492.3	0.0221	4.975	1491.4	0.0221	10.585	1413.6	0.0222
14	1.274	1460.7	0.0220	4.809	1466.2	0.0220	10.395	1411.6	0.0221
15	1.195	1408.2	0.0219	4.543	1424.8	0.0219	10.017	1401.8	0.0219
16	1.073	1327.2	0.0218	4.108	1349.1	0.0218	9.265	1370.5	0.0218
17	0.882	1199.7	0.0217	3.388	1222.7	0.0217	7.796	1272.6	0.0217
18	0.591	1000.7	0.0216	2.253	1019.2	0.0216	5.205	1070.3	0.0216

Table 4-49. Burnup and TH Feedback Parameters by Axial Node for Assembly G2 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	8.394	1111.5	0.0238	11.195	1080.5	0.0236
2	12.869	1254.5	0.0237	16.909	1190.8	0.0235
3	15.049	1310.6	0.0235	19.452	1211.7	0.0234
4	16.020	1315.6	0.0234	20.444	1201.0	0.0232
5	16.432	1305.5	0.0232	20.794	1186.9	0.0231
6	16.597	1293.2	0.0231	20.896	1175.9	0.0230
7	16.655	1282.8	0.0229	20.908	1168.7	0.0229
8	16.669	1275.1	0.0228	20.893	1164.3	0.0227
9	16.669	1270.0	0.0227	20.877	1161.7	0.0226
10	16.672	1267.3	0.0226	20.871	1160.2	0.0225
11	16.681	1267.2	0.0224	20.879	1159.7	0.0224
12	16.690	1270.0	0.0223	20.898	1160.6	0.0223
13	16.674	1276.2	0.0222	20.911	1164.2	0.0222
14	16.576	1285.2	0.0221	20.866	1171.6	0.0221
15	16.263	1293.2	0.0220	20.621	1183.3	0.0219
16	15.410	1291.5	0.0218	19.779	1194.2	0.0218
17	13.327	1238.9	0.0217	17.401	1177.6	0.0217
18	9.046	1074.0	0.0216	12.003	1052.1	0.0216

Table 4-50. Burnup and TH Feedback Parameters by Axial Node for Assembly G4

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.526	1021.4	0.0237	1.985	1045.2	0.0238	4.500	1081.8	0.0238
2	0.843	1215.4	0.0236	3.205	1245.3	0.0237	7.246	1270.2	0.0237
3	1.062	1354.2	0.0235	4.011	1379.0	0.0236	8.900	1375.4	0.0236
4	1.198	1437.8	0.0234	4.487	1453.2	0.0234	9.759	1414.1	0.0235
5	1.281	1486.6	0.0232	4.762	1489.7	0.0233	10.181	1421.2	0.0233
6	1.333	1512.3	0.0231	4.927	1507.0	0.0231	10.391	1419.1	0.0232
7	1.366	1525.7	0.0230	5.024	1515.3	0.0230	10.493	1414.0	0.0230
8	1.385	1532.1	0.0228	5.079	1518.1	0.0228	10.539	1408.5	0.0229
9	1.394	1533.8	0.0227	5.105	1517.6	0.0227	10.559	1403.9	0.0227
10	1.397	1532.4	0.0225	5.114	1515.0	0.0226	10.570	1401.0	0.0226
11	1.393	1528.2	0.0224	5.109	1510.9	0.0224	10.580	1399.9	0.0224
12	1.381	1519.6	0.0223	5.079	1503.8	0.0223	10.576	1400.7	0.0223
13	1.354	1503.3	0.0221	5.004	1490.7	0.0221	10.524	1402.1	0.0222
14	1.306	1475.3	0.0220	4.855	1468.1	0.0220	10.366	1401.4	0.0221
15	1.227	1424.7	0.0219	4.596	1428.9	0.0219	10.008	1392.7	0.0219
16	1.102	1342.0	0.0218	4.158	1353.4	0.0218	9.264	1361.5	0.0218
17	0.903	1210.0	0.0217	3.421	1225.3	0.0217	7.784	1264.8	0.0217
18	0.602	1006.0	0.0216	2.264	1019.0	0.0216	5.176	1063.7	0.0216

Table 4-50. Burnup and TH Feedback Parameters by Axial Node for Assembly G4 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	7.700	1085.4	0.0237	10.383	1064.5	0.0236
2	12.220	1236.3	0.0236	16.200	1183.3	0.0235
3	14.664	1302.1	0.0235	19.068	1212.9	0.0234
4	15.752	1311.1	0.0234	20.199	1204.5	0.0232
5	16.186	1302.1	0.0232	20.578	1191.0	0.0231
6	16.350	1290.2	0.0231	20.684	1180.4	0.0230
7	16.407	1280.0	0.0229	20.698	1173.4	0.0229
8	16.422	1272.5	0.0228	20.687	1169.2	0.0227
9	16.430	1267.5	0.0227	20.678	1166.6	0.0226
10	16.449	1264.8	0.0225	20.687	1165.0	0.0225
11	16.489	1264.5	0.0224	20.723	1164.3	0.0224
12	16.541	1267.2	0.0223	20.781	1165.0	0.0223
13	16.572	1273.5	0.0222	20.837	1168.3	0.0222
14	16.510	1282.8	0.0221	20.824	1175.3	0.0221
15	16.218	1290.7	0.0219	20.594	1186.5	0.0219
16	15.376	1288.8	0.0218	19.760	1197.1	0.0218
17	13.287	1236.2	0.0217	17.376	1180.6	0.0217
18	8.991	1071.6	0.0216	11.955	1054.1	0.0216

Table 4-51. Burnup and TH Feedback Parameters by Axial Node for Assembly G6

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.535	1003.9	0.0237	1.997	1022.0	0.0237	4.540	1064.1	0.0238
2	0.836	1206.5	0.0236	3.124	1227.5	0.0236	7.058	1257.5	0.0237
3	1.053	1341.8	0.0235	3.897	1354.1	0.0235	8.643	1358.7	0.0236
4	1.187	1422.6	0.0234	4.350	1423.2	0.0234	9.465	1397.7	0.0234
5	1.268	1469.2	0.0232	4.608	1458.8	0.0232	9.866	1406.9	0.0233
6	1.319	1495.0	0.0231	4.763	1476.4	0.0231	10.068	1406.0	0.0231
7	1.352	1509.6	0.0229	4.857	1484.9	0.0229	10.170	1401.7	0.0230
8	1.372	1516.3	0.0228	4.910	1487.6	0.0228	10.220	1396.8	0.0228
9	1.383	1518.4	0.0227	4.938	1487.1	0.0227	10.244	1392.7	0.0227
10	1.386	1517.7	0.0225	4.950	1485.1	0.0225	10.260	1390.1	0.0226
11	1.385	1514.7	0.0224	4.952	1481.9	0.0224	10.280	1389.5	0.0224
12	1.377	1508.3	0.0223	4.935	1476.7	0.0223	10.295	1390.7	0.0223
13	1.355	1495.0	0.0221	4.880	1466.5	0.0221	10.271	1392.6	0.0222
14	1.314	1469.4	0.0220	4.757	1446.5	0.0220	10.152	1392.5	0.0221
15	1.242	1424.8	0.0219	4.531	1410.4	0.0219	9.843	1384.7	0.0219
16	1.123	1347.6	0.0218	4.129	1342.1	0.0218	9.160	1353.4	0.0218
17	0.929	1221.1	0.0217	3.435	1223.0	0.0217	7.772	1262.4	0.0217
18	0.631	1024.3	0.0216	2.328	1028.6	0.0216	5.306	1074.1	0.0216

Table 4-51. Burnup and TH Feedback Parameters by Axial Node for Assembly G6 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	7.896	1086.1	0.0239	10.819	1080.5	0.0238
2	12.103	1254.4	0.0237	16.323	1225.3	0.0237
3	14.512	1325.0	0.0236	19.208	1260.8	0.0236
4	15.600	1337.0	0.0235	20.369	1255.2	0.0234
5	16.040	1330.9	0.0233	20.772	1243.3	0.0233
6	16.218	1321.7	0.0232	20.903	1233.8	0.0231
7	16.291	1313.7	0.0230	20.945	1227.9	0.0230
8	16.325	1307.7	0.0229	20.962	1224.7	0.0229
9	16.348	1303.9	0.0227	20.978	1223.1	0.0227
10	16.382	1302.0	0.0226	21.010	1222.4	0.0226
11	16.441	1302.3	0.0225	21.073	1222.5	0.0225
12	16.524	1305.1	0.0223	21.170	1223.9	0.0224
13	16.596	1310.7	0.0222	21.277	1227.7	0.0222
14	16.582	1318.6	0.0221	21.322	1234.9	0.0221
15	16.341	1325.8	0.0220	21.151	1245.9	0.0220
16	15.549	1321.8	0.0218	20.361	1255.6	0.0219
17	13.530	1271.5	0.0217	18.013	1239.2	0.0217
18	9.379	1104.5	0.0216	12.664	1105.0	0.0216

Table 4-52. Burnup and TH Feedback Parameters by Axial Node for Assembly G10

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.571	1058.1	0.0238	2.150	1079.7	0.0239	4.847	1109.6	0.0239
2	0.900	1254.1	0.0237	3.411	1278.9	0.0238	7.656	1296.1	0.0238
3	1.105	1384.6	0.0236	4.174	1406.8	0.0237	9.209	1393.1	0.0237
4	1.235	1464.3	0.0234	4.633	1478.8	0.0235	10.024	1425.4	0.0235
5	1.318	1510.9	0.0233	4.910	1512.0	0.0233	10.445	1431.9	0.0233
6	1.371	1535.3	0.0231	5.081	1530.0	0.0232	10.661	1429.5	0.0232
7	1.405	1549.1	0.0230	5.182	1538.8	0.0230	10.768	1424.1	0.0230
8	1.425	1555.7	0.0228	5.239	1541.8	0.0229	10.817	1418.5	0.0229
9	1.434	1557.3	0.0227	5.265	1541.2	0.0227	10.837	1413.9	0.0227
10	1.436	1555.3	0.0225	5.272	1538.3	0.0226	10.846	1410.9	0.0226
11	1.430	1549.9	0.0224	5.260	1533.1	0.0224	10.847	1409.8	0.0225
12	1.414	1539.3	0.0223	5.219	1524.5	0.0223	10.827	1410.3	0.0223
13	1.383	1520.7	0.0221	5.130	1509.6	0.0222	10.755	1411.4	0.0222
14	1.331	1490.9	0.0220	4.968	1485.3	0.0220	10.578	1410.5	0.0221
15	1.249	1440.9	0.0219	4.697	1446.0	0.0219	10.205	1401.9	0.0219
16	1.120	1355.7	0.0218	4.245	1369.7	0.0218	9.442	1372.4	0.0218
17	0.915	1219.8	0.0217	3.485	1237.5	0.0217	7.924	1274.9	0.0217
18	0.601	1007.1	0.0216	2.275	1022.3	0.0216	5.211	1067.2	0.0216

Table 4-52. Burnup and TH Feedback Parameters by Axial Node for Assembly G10 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	8.246	1105.2	0.0238	11.024	1077.1	0.0236
2	12.813	1249.0	0.0236	16.837	1186.9	0.0235
3	15.055	1305.8	0.0235	19.445	1208.1	0.0234
4	16.054	1310.8	0.0234	20.469	1197.6	0.0232
5	16.475	1300.6	0.0232	20.831	1183.6	0.0231
6	16.642	1288.1	0.0231	20.936	1172.7	0.0230
7	16.699	1277.6	0.0229	20.950	1165.6	0.0228
8	16.715	1269.9	0.0228	20.938	1161.2	0.0227
9	16.722	1264.7	0.0227	20.927	1158.5	0.0226
10	16.738	1261.9	0.0225	20.933	1156.8	0.0225
11	16.768	1261.5	0.0224	20.959	1156.1	0.0224
12	16.802	1264.1	0.0223	20.999	1156.7	0.0223
13	16.808	1270.1	0.0222	21.029	1159.9	0.0222
14	16.725	1279.3	0.0221	20.995	1166.9	0.0221
15	16.417	1287.7	0.0219	20.751	1178.2	0.0219
16	15.559	1286.2	0.0218	19.902	1189.0	0.0218
17	13.435	1234.8	0.0217	17.488	1173.2	0.0217
18	9.020	1070.1	0.0216	11.959	1049.4	0.0216

Table 4-53. Burnup and TH Feedback Parameters by Axial Node for Assembly G12

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)	Burnup (GWd/MTU)	T-Fuel (°F)	Spec. Vol. (ft ³ /lbm)
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.508	1005.8	0.0237	1.904	1026.4	0.0238	4.319	1064.3	0.0238
2	0.847	1214.4	0.0236	3.181	1238.2	0.0237	7.141	1257.1	0.0237
3	1.070	1354.5	0.0235	3.985	1370.1	0.0236	8.764	1357.7	0.0235
4	1.203	1434.1	0.0234	4.433	1438.4	0.0234	9.557	1393.3	0.0234
5	1.282	1480.4	0.0233	4.687	1473.0	0.0233	9.925	1399.0	0.0232
6	1.333	1506.3	0.0231	4.843	1489.8	0.0231	10.110	1395.9	0.0231
7	1.366	1519.9	0.0230	4.938	1497.6	0.0230	10.205	1390.6	0.0230
8	1.386	1526.6	0.0228	4.992	1500.3	0.0228	10.250	1385.0	0.0228
9	1.396	1528.9	0.0227	5.021	1500.0	0.0227	10.272	1380.4	0.0227
10	1.401	1528.9	0.0225	5.037	1498.5	0.0225	10.292	1377.7	0.0226
11	1.403	1528.7	0.0224	5.055	1497.4	0.0224	10.329	1377.4	0.0224
12	1.403	1527.5	0.0223	5.070	1496.5	0.0223	10.393	1380.4	0.0223
13	1.389	1516.5	0.0221	5.033	1488.4	0.0221	10.417	1385.1	0.0222
14	1.346	1491.2	0.0220	4.905	1468.7	0.0220	10.304	1386.4	0.0221
15	1.269	1445.0	0.0219	4.660	1431.9	0.0219	9.978	1379.5	0.0219
16	1.142	1362.3	0.0218	4.230	1359.8	0.0218	9.270	1349.2	0.0218
17	0.934	1225.9	0.0217	3.480	1231.2	0.0217	7.806	1257.3	0.0217
18	0.601	1002.6	0.0216	2.233	1010.5	0.0216	5.073	1052.9	0.0216

Table 4-53. Burnup and TH Feedback Parameters by Axial Node for Assembly G12 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	7.440	1077.4	0.0237	10.111	1065.1	0.0236
2	12.033	1228.2	0.0236	16.003	1182.8	0.0235
3	14.423	1291.9	0.0235	18.819	1213.3	0.0234
4	15.430	1300.4	0.0233	19.872	1205.5	0.0232
5	15.792	1290.3	0.0232	20.178	1191.7	0.0231
6	15.927	1278.4	0.0230	20.257	1181.3	0.0230
7	15.980	1268.9	0.0229	20.272	1174.8	0.0229
8	15.998	1261.9	0.0228	20.268	1171.0	0.0227
9	16.010	1257.2	0.0227	20.266	1168.7	0.0226
10	16.039	1254.7	0.0225	20.286	1167.3	0.0225
11	16.108	1254.3	0.0224	20.350	1166.8	0.0224
12	16.241	1257.8	0.0223	20.492	1168.3	0.0223
13	16.383	1267.0	0.0222	20.670	1173.3	0.0222
14	16.382	1277.4	0.0221	20.722	1180.9	0.0221
15	16.125	1286.0	0.0219	20.526	1191.9	0.0219
16	15.327	1283.3	0.0218	19.734	1201.8	0.0218
17	13.278	1232.8	0.0217	17.392	1185.1	0.0217
18	8.854	1069.5	0.0216	11.842	1059.7	0.0216

Table 4-54. Burnup and TH Feedback Parameters by Axial Node for Assembly G12a

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.508	1005.8	0.0237	1.904	1026.4	0.0238	4.319	1064.3	0.0238
2	0.847	1214.4	0.0236	3.181	1238.2	0.0237	7.141	1257.1	0.0237
3	1.070	1354.5	0.0235	3.985	1370.1	0.0236	8.764	1357.7	0.0235
4	1.203	1434.1	0.0234	4.433	1438.4	0.0234	9.557	1393.3	0.0234
5	1.282	1480.4	0.0233	4.687	1473.0	0.0233	9.925	1399.0	0.0232
6	1.333	1506.3	0.0231	4.843	1489.8	0.0231	10.110	1395.9	0.0231
7	1.366	1519.9	0.0230	4.938	1497.6	0.0230	10.205	1390.6	0.0230
8	1.386	1526.6	0.0228	4.992	1500.3	0.0228	10.250	1385.0	0.0228
9	1.396	1528.9	0.0227	5.021	1500.0	0.0227	10.272	1380.4	0.0227
10	1.401	1528.9	0.0225	5.037	1498.5	0.0225	10.292	1377.7	0.0226
11	1.403	1528.7	0.0224	5.055	1497.4	0.0224	10.329	1377.4	0.0224
12	1.403	1527.5	0.0223	5.070	1496.5	0.0223	10.393	1380.4	0.0223
13	1.389	1516.5	0.0221	5.033	1488.4	0.0221	10.417	1385.1	0.0222
14	1.346	1491.2	0.0220	4.905	1468.7	0.0220	10.304	1386.4	0.0221
15	1.269	1445.0	0.0219	4.660	1431.9	0.0219	9.978	1379.5	0.0219
16	1.142	1362.3	0.0218	4.230	1359.8	0.0218	9.270	1349.2	0.0218
17	0.934	1225.9	0.0217	3.480	1231.2	0.0217	7.806	1257.3	0.0217
18	0.601	1002.6	0.0216	2.233	1010.5	0.0216	5.073	1052.9	0.0216

Table 4-54. Burnup and TH Feedback Parameters by Axial Node for Assembly G12a (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	7.440	1077.4	0.0237	10.097	1065.1	0.0236
2	12.033	1228.2	0.0236	15.981	1182.8	0.0235
3	14.423	1291.9	0.0235	18.792	1213.3	0.0234
4	15.430	1300.4	0.0233	19.842	1205.5	0.0232
5	15.792	1290.3	0.0232	20.147	1191.7	0.0231
6	15.927	1278.4	0.0230	20.226	1181.3	0.0230
7	15.980	1268.9	0.0229	20.240	1174.8	0.0229
8	15.998	1261.9	0.0228	20.235	1171.0	0.0227
9	16.010	1257.2	0.0227	20.234	1168.7	0.0226
10	16.039	1254.7	0.0225	20.253	1167.3	0.0225
11	16.108	1254.3	0.0224	20.317	1166.8	0.0224
12	16.241	1257.8	0.0223	20.458	1168.3	0.0223
13	16.383	1267.0	0.0222	20.636	1173.3	0.0222
14	16.382	1277.4	0.0221	20.686	1180.9	0.0221
15	16.125	1286.0	0.0219	20.491	1191.9	0.0219
16	15.327	1283.3	0.0218	19.700	1201.8	0.0218
17	13.278	1232.8	0.0217	17.362	1185.1	0.0217
18	8.854	1069.5	0.0216	11.822	1059.7	0.0216

Table 4-55. Burnup and TH Feedback Parameters by Axial Node for Assembly G14

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.455	937.7	0.0233	1.686	948.7	0.0233	3.843	990.0	0.0234
2	0.748	1141.3	0.0233	2.757	1149.9	0.0233	6.171	1175.5	0.0233
3	0.926	1251.2	0.0232	3.377	1252.1	0.0232	7.408	1253.5	0.0232
4	1.033	1314.6	0.0231	3.729	1306.3	0.0231	8.025	1282.5	0.0231
5	1.100	1352.6	0.0230	3.935	1335.3	0.0229	8.334	1290.0	0.0230
6	1.144	1375.7	0.0228	4.060	1350.9	0.0228	8.490	1288.8	0.0228
7	1.172	1389.4	0.0227	4.136	1358.6	0.0227	8.569	1284.7	0.0227
8	1.189	1396.4	0.0226	4.179	1361.4	0.0226	8.605	1280.1	0.0226
9	1.198	1398.9	0.0225	4.200	1361.1	0.0225	8.620	1276.1	0.0225
10	1.200	1398.1	0.0224	4.208	1359.1	0.0224	8.627	1273.5	0.0224
11	1.198	1394.8	0.0223	4.205	1355.7	0.0223	8.635	1272.8	0.0223
12	1.189	1387.9	0.0222	4.186	1350.2	0.0221	8.637	1273.9	0.0222
13	1.170	1374.1	0.0220	4.136	1339.9	0.0220	8.610	1275.7	0.0221
14	1.134	1349.9	0.0219	4.033	1321.4	0.0219	8.507	1275.5	0.0220
15	1.072	1310.0	0.0218	3.845	1289.1	0.0218	8.255	1267.5	0.0219
16	0.969	1243.9	0.0218	3.508	1231.9	0.0218	7.695	1238.9	0.0218
17	0.792	1129.7	0.0217	2.893	1126.8	0.0217	6.495	1160.8	0.0217
18	0.493	922.9	0.0216	1.815	926.2	0.0216	4.159	976.9	0.0216

Table 4-55. Burnup and TH Feedback Parameters by Axial Node for Assembly G14 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	6.781	1031.1	0.0235	9.372	1044.1	0.0235
2	10.598	1183.3	0.0234	14.314	1169.0	0.0234
3	12.437	1233.9	0.0232	16.518	1198.9	0.0233
4	13.232	1242.2	0.0231	17.365	1195.3	0.0232
5	13.562	1236.5	0.0230	17.663	1185.7	0.0230
6	13.695	1228.3	0.0229	17.757	1177.8	0.0229
7	13.747	1221.0	0.0228	17.784	1172.8	0.0228
8	13.768	1215.6	0.0227	17.789	1170.0	0.0227
9	13.780	1212.1	0.0225	17.795	1168.7	0.0226
10	13.800	1210.4	0.0224	17.813	1168.2	0.0225
11	13.838	1210.7	0.0223	17.854	1168.7	0.0224
12	13.893	1213.7	0.0222	17.922	1170.5	0.0223
13	13.939	1219.6	0.0221	17.998	1174.6	0.0221
14	13.921	1227.5	0.0220	18.028	1182.0	0.0220
15	13.721	1234.2	0.0219	17.886	1192.1	0.0219
16	13.070	1229.1	0.0218	17.229	1198.7	0.0218
17	11.336	1180.9	0.0217	15.199	1174.7	0.0217
18	7.486	1028.4	0.0216	10.275	1047.3	0.0216

Table 4-56. Burnup and TH Feedback Parameters by Axial Node for Assembly G17

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.557	1045.3	0.0238	2.082	1063.9	0.0238	4.685	1093.9	0.0238
2	0.889	1243.6	0.0237	3.337	1263.8	0.0237	7.460	1278.0	0.0237
3	1.100	1375.8	0.0236	4.103	1390.9	0.0236	9.006	1373.6	0.0236
4	1.228	1453.3	0.0234	4.543	1459.2	0.0235	9.779	1406.9	0.0234
5	1.308	1499.6	0.0233	4.803	1492.3	0.0233	10.151	1411.0	0.0233
6	1.361	1524.3	0.0232	4.965	1509.0	0.0232	10.342	1407.2	0.0231
7	1.395	1538.4	0.0230	5.065	1517.3	0.0230	10.441	1401.5	0.0230
8	1.416	1545.6	0.0229	5.123	1520.4	0.0229	10.489	1395.9	0.0228
9	1.428	1548.5	0.0227	5.155	1520.4	0.0227	10.515	1391.3	0.0227
10	1.434	1549.0	0.0226	5.176	1519.2	0.0226	10.539	1388.5	0.0226
11	1.437	1549.2	0.0224	5.196	1518.5	0.0224	10.582	1387.9	0.0224
12	1.437	1548.2	0.0223	5.213	1517.6	0.0223	10.648	1390.7	0.0223
13	1.422	1536.5	0.0221	5.173	1509.1	0.0222	10.671	1395.6	0.0222
14	1.377	1509.6	0.0220	5.036	1488.1	0.0220	10.547	1397.1	0.0221
15	1.295	1463.9	0.0219	4.773	1450.6	0.0219	10.199	1390.1	0.0219
16	1.161	1376.4	0.0218	4.316	1375.9	0.0218	9.446	1360.9	0.0218
17	0.944	1234.3	0.0217	3.533	1241.5	0.0217	7.917	1265.0	0.0217
18	0.615	1014.4	0.0216	2.292	1022.8	0.0216	5.184	1059.9	0.0216

Table 4-56. Burnup and TH Feedback Parameters by Axial Node for Assembly G17 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	7.997	1096.3	0.0237	10.760	1075.7	0.0236
2	12.510	1239.1	0.0236	16.527	1186.7	0.0235
3	14.748	1297.1	0.0235	19.144	1209.6	0.0234
4	15.701	1302.3	0.0233	20.127	1199.5	0.0232
5	16.053	1290.7	0.0232	20.419	1184.9	0.0231
6	16.186	1277.8	0.0230	20.493	1174.0	0.0230
7	16.237	1267.6	0.0229	20.504	1167.1	0.0228
8	16.255	1260.2	0.0228	20.497	1163.0	0.0227
9	16.269	1255.2	0.0227	20.495	1160.5	0.0226
10	16.301	1252.3	0.0225	20.516	1158.9	0.0225
11	16.373	1251.7	0.0224	20.582	1158.2	0.0224
12	16.509	1255.1	0.0223	20.724	1159.5	0.0223
13	16.650	1264.2	0.0222	20.898	1164.5	0.0222
14	16.640	1274.8	0.0221	20.939	1172.0	0.0221
15	16.361	1283.8	0.0219	20.721	1183.1	0.0219
16	15.517	1281.8	0.0218	19.884	1193.6	0.0218
17	13.389	1230.9	0.0217	17.464	1177.8	0.0217
18	8.965	1067.5	0.0216	11.920	1053.2	0.0216

Table 4-57. Burnup and TH Feedback Parameters by Axial Node for Assembly G19

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.552	1014.8	0.0237	2.043	1027.6	0.0237	4.612	1064.4	0.0237
2	0.846	1210.5	0.0236	3.129	1222.3	0.0236	7.011	1245.9	0.0236
3	1.044	1332.8	0.0235	3.829	1337.3	0.0235	8.432	1335.9	0.0235
4	1.166	1404.4	0.0233	4.230	1398.6	0.0233	9.151	1369.9	0.0233
5	1.242	1448.0	0.0232	4.467	1431.8	0.0232	9.496	1377.0	0.0232
6	1.292	1475.4	0.0231	4.616	1450.1	0.0230	9.678	1375.0	0.0231
7	1.326	1490.6	0.0229	4.709	1458.9	0.0229	9.778	1370.6	0.0229
8	1.347	1499.0	0.0228	4.767	1462.7	0.0228	9.832	1366.0	0.0228
9	1.360	1502.6	0.0226	4.800	1463.4	0.0226	9.864	1362.2	0.0227
10	1.367	1503.8	0.0225	4.822	1462.8	0.0225	9.893	1360.0	0.0225
11	1.371	1504.9	0.0224	4.846	1462.8	0.0224	9.941	1360.4	0.0224
12	1.374	1505.4	0.0223	4.871	1463.4	0.0223	10.018	1364.4	0.0223
13	1.362	1495.8	0.0221	4.844	1456.7	0.0221	10.058	1370.1	0.0222
14	1.323	1470.9	0.0220	4.730	1437.5	0.0220	9.961	1371.6	0.0220
15	1.250	1426.0	0.0219	4.501	1401.2	0.0219	9.655	1363.3	0.0219
16	1.126	1346.2	0.0218	4.092	1332.2	0.0218	8.968	1330.7	0.0218
17	0.924	1215.7	0.0217	3.383	1211.7	0.0217	7.573	1240.9	0.0217
18	0.621	1015.5	0.0216	2.272	1016.5	0.0216	5.134	1056.8	0.0216

Table 4-57. Burnup and TH Feedback Parameters by Axial Node for Assembly G19 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	8.003	1086.6	0.0238	10.936	1082.9	0.0238
2	12.001	1244.5	0.0237	16.163	1220.0	0.0237
3	14.135	1305.7	0.0235	18.724	1250.1	0.0235
4	15.069	1316.1	0.0234	19.719	1243.5	0.0234
5	15.420	1308.0	0.0232	20.028	1230.8	0.0232
6	15.566	1297.8	0.0231	20.129	1221.3	0.0231
7	15.637	1289.5	0.0230	20.172	1215.6	0.0230
8	15.677	1283.7	0.0228	20.198	1212.7	0.0228
9	15.710	1280.1	0.0227	20.226	1211.2	0.0227
10	15.757	1278.4	0.0226	20.271	1210.7	0.0226
11	15.845	1278.9	0.0224	20.361	1211.0	0.0225
12	16.002	1283.2	0.0223	20.535	1213.3	0.0223
13	16.172	1292.6	0.0222	20.749	1219.3	0.0222
14	16.192	1301.9	0.0221	20.829	1227.3	0.0221
15	15.951	1309.1	0.0220	20.654	1238.2	0.0220
16	15.151	1304.4	0.0218	19.852	1247.5	0.0219
17	13.133	1250.7	0.0217	17.502	1228.8	0.0217
18	9.053	1088.2	0.0216	12.243	1093.6	0.0216

Table 4-58. Burnup and TH Feedback Parameters by Axial Node for Assembly G23

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.487	989.6	0.0238	1.811	1004.7	0.0237	4.079	1035.7	0.0236
2	0.851	1214.6	0.0237	3.144	1227.4	0.0237	6.934	1229.2	0.0235
3	1.093	1363.5	0.0236	3.978	1362.0	0.0235	8.555	1324.9	0.0234
4	1.237	1447.9	0.0235	4.439	1430.2	0.0234	9.337	1357.1	0.0233
5	1.323	1496.1	0.0233	4.699	1464.6	0.0233	9.694	1361.7	0.0232
6	1.379	1522.2	0.0232	4.858	1481.6	0.0231	9.873	1357.7	0.0230
7	1.416	1537.0	0.0230	4.957	1489.2	0.0230	9.967	1351.7	0.0229
8	1.440	1545.1	0.0229	5.017	1492.1	0.0228	10.017	1345.8	0.0228
9	1.454	1549.1	0.0227	5.054	1492.5	0.0227	10.046	1341.2	0.0226
10	1.463	1550.9	0.0226	5.080	1492.0	0.0225	10.076	1338.5	0.0225
11	1.470	1553.0	0.0224	5.111	1492.6	0.0224	10.128	1338.7	0.0224
12	1.475	1554.4	0.0223	5.142	1493.6	0.0223	10.210	1343.0	0.0223
13	1.464	1545.2	0.0222	5.118	1487.6	0.0221	10.254	1349.7	0.0221
14	1.422	1520.5	0.0220	5.000	1469.8	0.0220	10.160	1352.5	0.0220
15	1.340	1476.4	0.0219	4.755	1434.8	0.0219	9.850	1346.1	0.0219
16	1.201	1391.2	0.0218	4.312	1363.5	0.0218	9.150	1316.2	0.0218
17	0.967	1241.6	0.0217	3.513	1230.1	0.0217	7.662	1229.1	0.0217
18	0.592	994.0	0.0216	2.165	994.3	0.0216	4.841	1027.9	0.0216

Table 4-58. Burnup and TH Feedback Parameters by Axial Node for Assembly G23 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	7.022	1054.5	0.0236	9.578	1050.6	0.0235
2	11.584	1200.4	0.0235	15.400	1164.6	0.0234
3	13.935	1260.1	0.0234	18.169	1196.1	0.0233
4	14.918	1268.3	0.0232	19.203	1189.9	0.0232
5	15.265	1258.5	0.0231	19.501	1177.1	0.0231
6	15.395	1247.1	0.0230	19.580	1167.3	0.0229
7	15.449	1238.0	0.0228	19.601	1161.3	0.0228
8	15.474	1231.4	0.0227	19.606	1157.7	0.0227
9	15.495	1226.9	0.0226	19.616	1155.7	0.0226
10	15.534	1224.4	0.0225	19.646	1154.5	0.0225
11	15.615	1223.9	0.0224	19.722	1154.1	0.0224
12	15.765	1227.2	0.0223	19.880	1155.7	0.0223
13	15.925	1236.2	0.0222	20.074	1160.8	0.0222
14	15.939	1246.1	0.0220	20.137	1168.3	0.0220
15	15.696	1254.5	0.0219	19.951	1178.7	0.0219
16	14.914	1251.5	0.0218	19.171	1187.8	0.0218
17	12.869	1203.2	0.0217	16.840	1170.6	0.0217
18	8.419	1048.0	0.0216	11.297	1047.1	0.0216

Table 4-59. Burnup and TH Feedback Parameters by Axial Node for Assembly G25

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.341	845.8	0.0230	1.259	852.9	0.0229	2.870	886.1	0.0229
2	0.590	1022.7	0.0229	2.156	1028.0	0.0229	4.797	1051.7	0.0229
3	0.747	1123.7	0.0229	2.690	1121.6	0.0228	5.848	1123.2	0.0228
4	0.843	1181.6	0.0228	2.996	1170.0	0.0227	6.379	1149.9	0.0227
5	0.903	1216.0	0.0227	3.175	1195.9	0.0226	6.643	1156.9	0.0226
6	0.941	1236.3	0.0226	3.282	1209.1	0.0226	6.772	1155.8	0.0225
7	0.966	1248.2	0.0225	3.345	1215.5	0.0225	6.835	1152.2	0.0225
8	0.981	1254.5	0.0224	3.382	1217.9	0.0224	6.864	1148.2	0.0224
9	0.989	1257.1	0.0223	3.401	1217.8	0.0223	6.877	1144.8	0.0223
10	0.992	1257.2	0.0222	3.410	1216.5	0.0222	6.885	1142.6	0.0222
11	0.992	1255.3	0.0221	3.411	1214.2	0.0221	6.893	1141.8	0.0221
12	0.985	1250.0	0.0220	3.398	1210.1	0.0220	6.896	1142.4	0.0220
13	0.969	1238.6	0.0220	3.356	1201.7	0.0220	6.870	1143.5	0.0220
14	0.938	1217.9	0.0219	3.269	1186.0	0.0219	6.780	1142.7	0.0219
15	0.883	1182.8	0.0218	3.107	1157.9	0.0218	6.561	1135.1	0.0218
16	0.791	1123.4	0.0217	2.816	1107.4	0.0217	6.080	1109.0	0.0217
17	0.633	1018.0	0.0217	2.280	1011.3	0.0217	5.051	1037.8	0.0217
18	0.363	826.1	0.0216	1.322	826.2	0.0216	3.006	863.1	0.0216

Table 4-59. Burnup and TH Feedback Parameters by Axial Node for Assembly G25 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	5.099	929.9	0.0230	7.123	959.7	0.0231
2	8.257	1073.0	0.0229	11.240	1076.6	0.0230
3	9.822	1119.5	0.0229	13.129	1106.4	0.0229
4	10.511	1127.9	0.0228	13.875	1105.9	0.0228
5	10.796	1123.9	0.0227	14.140	1098.7	0.0227
6	10.907	1117.0	0.0226	14.220	1092.2	0.0227
7	10.948	1110.9	0.0225	14.240	1088.0	0.0226
8	10.963	1106.3	0.0224	14.242	1085.6	0.0225
9	10.971	1103.2	0.0223	14.245	1084.5	0.0224
10	10.987	1101.6	0.0222	14.258	1084.2	0.0223
11	11.017	1101.7	0.0222	14.288	1084.6	0.0222
12	11.058	1103.7	0.0221	14.336	1086.1	0.0221
13	11.086	1108.0	0.0220	14.383	1089.5	0.0220
14	11.056	1113.8	0.0219	14.387	1095.4	0.0219
15	10.869	1118.3	0.0218	14.239	1103.2	0.0219
16	10.297	1111.9	0.0218	13.647	1106.3	0.0218
17	8.801	1067.7	0.0217	11.873	1079.4	0.0217
18	5.423	915.4	0.0216	7.504	950.9	0.0216

Table 4-60. Burnup and TH Feedback Parameters by Axial Node for Assembly G25a

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.341	845.8	0.0230	1.259	852.9	0.0229	2.870	886.1	0.0229
2	0.590	1022.7	0.0229	2.156	1028.0	0.0229	4.797	1051.7	0.0229
3	0.747	1123.7	0.0229	2.690	1121.6	0.0228	5.848	1123.2	0.0228
4	0.843	1181.6	0.0228	2.996	1170.0	0.0227	6.379	1149.9	0.0227
5	0.903	1216.0	0.0227	3.175	1195.9	0.0226	6.643	1156.9	0.0226
6	0.941	1236.3	0.0226	3.282	1209.1	0.0226	6.772	1155.8	0.0225
7	0.966	1248.2	0.0225	3.345	1215.5	0.0225	6.835	1152.2	0.0225
8	0.981	1254.5	0.0224	3.382	1217.9	0.0224	6.864	1148.2	0.0224
9	0.989	1257.1	0.0223	3.401	1217.8	0.0223	6.877	1144.8	0.0223
10	0.992	1257.2	0.0222	3.410	1216.5	0.0222	6.885	1142.6	0.0222
11	0.992	1255.3	0.0221	3.411	1214.2	0.0221	6.893	1141.8	0.0221
12	0.985	1250.0	0.0220	3.398	1210.1	0.0220	6.896	1142.4	0.0220
13	0.969	1238.6	0.0220	3.356	1201.7	0.0220	6.870	1143.5	0.0220
14	0.938	1217.9	0.0219	3.269	1186.0	0.0219	6.780	1142.7	0.0219
15	0.883	1182.8	0.0218	3.107	1157.9	0.0218	6.561	1135.1	0.0218
16	0.791	1123.4	0.0217	2.816	1107.4	0.0217	6.080	1109.0	0.0217
17	0.633	1018.0	0.0217	2.280	1011.3	0.0217	5.051	1037.8	0.0217
18	0.363	826.1	0.0216	1.322	826.2	0.0216	3.006	863.1	0.0216

Table 4-60. Burnup and TH Feedback Parameters by Axial Node for Assembly G25a (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	5.099	929.9	0.0230	7.110	959.7	0.0231
2	8.257	1073.0	0.0229	11.220	1076.6	0.0230
3	9.822	1119.5	0.0229	13.106	1106.4	0.0229
4	10.511	1127.9	0.0228	13.850	1105.9	0.0228
5	10.796	1123.9	0.0227	14.114	1098.7	0.0227
6	10.907	1117.0	0.0226	14.195	1092.2	0.0227
7	10.948	1110.9	0.0225	14.214	1088.0	0.0226
8	10.963	1106.3	0.0224	14.216	1085.6	0.0225
9	10.971	1103.2	0.0223	14.219	1084.5	0.0224
10	10.987	1101.6	0.0222	14.232	1084.2	0.0223
11	11.017	1101.7	0.0222	14.262	1084.6	0.0222
12	11.058	1103.7	0.0221	14.309	1086.1	0.0221
13	11.086	1108.0	0.0220	14.356	1089.5	0.0220
14	11.056	1113.8	0.0219	14.359	1095.4	0.0219
15	10.869	1118.3	0.0218	14.211	1103.2	0.0219
16	10.297	1111.9	0.0218	13.620	1106.3	0.0218
17	8.801	1067.7	0.0217	11.849	1079.4	0.0217
18	5.423	915.4	0.0216	7.488	950.9	0.0216

Table 4-61. Burnup and TH Feedback Parameters by Axial Node for Assembly G27

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.379	881.0	0.0233	1.403	891.7	0.0233	3.183	922.5	0.0232
2	0.671	1087.6	0.0233	2.463	1098.5	0.0232	5.459	1114.0	0.0231
3	0.883	1220.8	0.0232	3.187	1218.3	0.0231	6.874	1202.7	0.0231
4	1.016	1299.4	0.0231	3.609	1281.6	0.0230	7.600	1235.8	0.0230
5	1.096	1344.6	0.0230	3.846	1314.5	0.0229	7.948	1244.1	0.0228
6	1.146	1371.3	0.0228	3.985	1331.5	0.0228	8.118	1242.8	0.0227
7	1.178	1386.0	0.0227	4.068	1339.8	0.0227	8.201	1238.5	0.0226
8	1.198	1394.0	0.0226	4.116	1343.2	0.0226	8.241	1233.7	0.0225
9	1.210	1397.8	0.0225	4.144	1343.6	0.0225	8.263	1229.8	0.0224
10	1.216	1398.9	0.0224	4.161	1342.7	0.0223	8.281	1227.4	0.0223
11	1.217	1397.7	0.0223	4.168	1340.8	0.0222	8.300	1226.9	0.0222
12	1.211	1392.5	0.0222	4.158	1336.8	0.0221	8.313	1228.1	0.0221
13	1.193	1379.9	0.0220	4.113	1327.8	0.0220	8.290	1230.1	0.0220
14	1.155	1356.0	0.0219	4.008	1309.8	0.0219	8.188	1230.1	0.0219
15	1.087	1313.9	0.0218	3.810	1276.6	0.0218	7.927	1222.7	0.0219
16	0.972	1241.3	0.0218	3.447	1216.3	0.0218	7.342	1194.8	0.0218
17	0.778	1116.8	0.0217	2.792	1105.1	0.0217	6.108	1118.0	0.0217
18	0.471	905.0	0.0216	1.707	903.0	0.0216	3.829	938.1	0.0216

Table 4-61. Burnup and TH Feedback Parameters by Axial Node for Assembly G27 (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	5.581	959.5	0.0232	7.765	981.6	0.0233
2	9.276	1117.8	0.0232	12.556	1108.2	0.0232
3	11.376	1175.6	0.0231	15.069	1148.2	0.0231
4	12.326	1187.4	0.0230	16.095	1149.1	0.0230
5	12.711	1183.5	0.0229	16.458	1141.2	0.0229
6	12.861	1175.9	0.0228	16.575	1134.0	0.0228
7	12.919	1168.9	0.0226	16.609	1129.3	0.0227
8	12.942	1163.7	0.0225	16.619	1126.7	0.0226
9	12.960	1160.2	0.0224	16.630	1125.5	0.0225
10	12.988	1158.4	0.0224	16.655	1125.0	0.0224
11	13.034	1158.4	0.0223	16.702	1125.4	0.0223
12	13.092	1160.8	0.0222	16.769	1126.9	0.0222
13	13.135	1165.8	0.0221	16.833	1130.5	0.0221
14	13.105	1172.7	0.0220	16.843	1137.0	0.0220
15	12.887	1178.4	0.0219	16.672	1145.9	0.0219
16	12.208	1172.5	0.0218	15.979	1150.9	0.0218
17	10.464	1127.6	0.0217	13.948	1125.9	0.0217
18	6.789	983.5	0.0216	9.280	1007.2	0.0216

Table 4-62. Burnup and TH Feedback Parameters by Axial Node for Assembly G27a

Axial Node	Statepoint 65 (30.0 Cy7)			Statepoint 66 (108.0 Cy7)			Datapoint (227.4 Cy7)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	30.0 Cy7	22.5 Cy7	22.5 Cy7	108.0 Cy7	60.4 Cy7	60.4 Cy7	227.4 Cy7	164.6 Cy7	164.6 Cy7
1	0.379	881.0	0.0233	1.403	891.7	0.0233	3.183	922.5	0.0232
2	0.671	1087.6	0.0233	2.463	1098.5	0.0232	5.459	1114.0	0.0231
3	0.883	1220.8	0.0232	3.187	1218.3	0.0231	6.874	1202.7	0.0231
4	1.016	1299.4	0.0231	3.609	1281.6	0.0230	7.600	1235.8	0.0230
5	1.096	1344.6	0.0230	3.846	1314.5	0.0229	7.948	1244.1	0.0228
6	1.146	1371.3	0.0228	3.985	1331.5	0.0228	8.118	1242.8	0.0227
7	1.178	1386.0	0.0227	4.068	1339.8	0.0227	8.201	1238.5	0.0226
8	1.198	1394.0	0.0226	4.116	1343.2	0.0226	8.241	1233.7	0.0225
9	1.210	1397.8	0.0225	4.144	1343.6	0.0225	8.263	1229.8	0.0224
10	1.216	1398.9	0.0224	4.161	1342.7	0.0223	8.281	1227.4	0.0223
11	1.217	1397.7	0.0223	4.168	1340.8	0.0222	8.300	1226.9	0.0222
12	1.211	1392.5	0.0222	4.158	1336.8	0.0221	8.313	1228.1	0.0221
13	1.193	1379.9	0.0220	4.113	1327.8	0.0220	8.290	1230.1	0.0220
14	1.155	1356.0	0.0219	4.008	1309.8	0.0219	8.188	1230.1	0.0219
15	1.087	1313.9	0.0218	3.810	1276.6	0.0218	7.927	1222.7	0.0219
16	0.972	1241.3	0.0218	3.447	1216.3	0.0218	7.342	1194.8	0.0218
17	0.778	1116.8	0.0217	2.792	1105.1	0.0217	6.108	1118.0	0.0217
18	0.471	905.0	0.0216	1.707	903.0	0.0216	3.829	938.1	0.0216

Table 4-62. Burnup and TH Feedback Parameters by Axial Node for Assembly G27a (Cont.)

Axial Node	Datapoint (367.3 Cy7)			Statepoint 67 (BOC Cy8)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	367.3 Cy7	297.3 Cy7	297.3 Cy7	BOC Cy8	430.3 Cy7	430.3 Cy7
1	5.581	959.5	0.0232	7.760	981.6	0.0233
2	9.276	1117.8	0.0232	12.548	1108.2	0.0232
3	11.376	1175.6	0.0231	15.059	1148.2	0.0231
4	12.326	1187.4	0.0230	16.085	1149.1	0.0230
5	12.711	1183.5	0.0229	16.448	1141.2	0.0229
6	12.861	1175.9	0.0228	16.565	1134.0	0.0228
7	12.919	1168.9	0.0226	16.598	1129.3	0.0227
8	12.942	1163.7	0.0225	16.608	1126.7	0.0226
9	12.960	1160.2	0.0224	16.618	1125.5	0.0225
10	12.988	1158.4	0.0224	16.643	1125.0	0.0224
11	13.034	1158.4	0.0223	16.689	1125.4	0.0223
12	13.092	1160.8	0.0222	16.755	1126.9	0.0222
13	13.135	1165.8	0.0221	16.818	1130.5	0.0221
14	13.105	1172.7	0.0220	16.828	1137.0	0.0220
15	12.887	1178.4	0.0219	16.657	1145.9	0.0219
16	12.208	1172.5	0.0218	15.965	1150.9	0.0218
17	10.464	1127.6	0.0217	13.936	1125.9	0.0217
18	6.789	983.5	0.0216	9.272	1007.2	0.0216

Table 4-63. Burnup and TH Feedback Parameters by Axial Node for Assembly H6

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.333	1010.5	0.0237	7.135	1046.6	0.0237	11.487	1044.1	0.0237
2	5.069	1195.1	0.0236	10.783	1207.6	0.0236	17.119	1184.1	0.0236
3	6.265	1311.9	0.0235	13.018	1283.0	0.0235	20.170	1219.4	0.0234
4	6.965	1377.5	0.0233	14.142	1307.2	0.0233	21.463	1212.7	0.0233
5	7.357	1412.2	0.0232	14.670	1310.9	0.0232	21.952	1198.3	0.0232
6	7.590	1431.0	0.0231	14.932	1306.6	0.0231	22.142	1185.6	0.0230
7	7.737	1441.1	0.0229	15.076	1300.6	0.0229	22.232	1176.3	0.0229
8	7.831	1445.4	0.0228	15.165	1295.2	0.0228	22.296	1169.9	0.0228
9	7.888	1446.3	0.0227	15.228	1291.2	0.0227	22.357	1165.9	0.0227
10	7.917	1444.6	0.0225	15.275	1289.0	0.0226	22.425	1163.8	0.0225
11	7.918	1440.8	0.0224	15.309	1288.7	0.0224	22.503	1163.4	0.0224
12	7.886	1434.2	0.0223	15.324	1290.2	0.0223	22.586	1165.1	0.0223
13	7.805	1423.3	0.0222	15.294	1293.1	0.0222	22.654	1169.7	0.0222
14	7.641	1403.9	0.0220	15.160	1295.3	0.0221	22.648	1177.7	0.0221
15	7.333	1370.4	0.0219	14.799	1291.8	0.0220	22.410	1188.6	0.0220
16	6.762	1311.4	0.0218	13.939	1269.6	0.0219	21.531	1195.6	0.0219
17	5.722	1206.2	0.0217	12.040	1204.1	0.0218	19.049	1170.5	0.0218
18	3.976	1029.1	0.0217	8.408	1047.4	0.0217	13.495	1040.8	0.0217

Table 4-63. Burnup and TH Feedback Parameters by Axial Node for Assembly H6 (Cont.)

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 73 (BOC Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy11	549.2 Cy9	549.2 Cy9
1	14.371	826.0	0.0228	17.898	864.2	0.0229	21.673	902.8	0.0230
2	21.589	914.1	0.0228	26.733	933.3	0.0228	31.738	949.7	0.0229
3	25.408	944.1	0.0227	31.124	943.4	0.0228	37.146	957.4	0.0228
4	27.103	957.5	0.0226	32.975	942.5	0.0227	39.188	948.9	0.0227
5	27.809	963.6	0.0226	33.690	937.2	0.0226	39.875	938.8	0.0227
6	28.111	965.1	0.0225	33.959	931.1	0.0225	40.078	931.1	0.0226
7	28.252	964.0	0.0224	34.063	925.9	0.0224	40.129	925.9	0.0225
8	28.331	961.4	0.0223	34.115	921.7	0.0224	40.145	922.4	0.0224
9	28.383	957.9	0.0222	34.154	918.8	0.0223	40.161	920.0	0.0223
10	28.426	953.8	0.0222	34.197	916.9	0.0222	40.190	918.3	0.0222
11	28.464	949.3	0.0221	34.250	916.0	0.0221	40.237	917.2	0.0222
12	28.488	944.1	0.0220	34.305	916.1	0.0220	40.296	917.0	0.0221
13	28.470	937.6	0.0219	34.327	917.3	0.0220	40.349	918.4	0.0220
14	28.330	928.9	0.0219	34.230	919.1	0.0219	40.320	922.2	0.0219
15	27.878	916.6	0.0218	33.790	920.7	0.0218	39.979	928.8	0.0219
16	26.628	897.9	0.0217	32.424	917.7	0.0218	38.659	935.0	0.0218
17	23.432	864.2	0.0217	28.697	900.9	0.0217	34.562	923.7	0.0217
18	16.308	777.1	0.0216	19.897	826.3	0.0216	24.150	864.6	0.0216

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	22.971	666.1	0.0222	24.528	679.9	0.0222	26.295	698.1	0.0222
2	33.806	697.5	0.0222	36.140	710.0	0.0222	38.645	727.5	0.0222
3	39.649	717.9	0.0221	42.326	724.3	0.0221	45.083	736.3	0.0222
4	41.908	727.4	0.0221	44.695	727.7	0.0221	47.485	735.2	0.0221
5	42.705	731.7	0.0221	45.515	727.4	0.0221	48.282	732.1	0.0221
6	42.967	733.5	0.0220	45.772	726.0	0.0220	48.508	729.2	0.0220
7	43.047	733.8	0.0220	45.842	724.4	0.0220	48.555	726.8	0.0220
8	43.076	733.3	0.0220	45.859	722.8	0.0220	48.558	724.9	0.0220
9	43.094	732.2	0.0219	45.870	721.4	0.0219	48.560	723.4	0.0219
10	43.118	730.8	0.0219	45.890	720.2	0.0219	48.577	722.2	0.0219
11	43.152	729.0	0.0218	45.925	719.2	0.0218	48.614	721.3	0.0219
12	43.192	726.8	0.0218	45.969	718.4	0.0218	48.665	720.6	0.0218
13	43.211	723.9	0.0218	45.995	717.8	0.0218	48.706	720.5	0.0218
14	43.126	719.9	0.0217	45.912	717.0	0.0217	48.645	720.8	0.0218
15	42.691	714.0	0.0217	45.460	715.5	0.0217	48.218	721.5	0.0217
16	41.201	704.6	0.0217	43.899	711.9	0.0217	46.648	721.4	0.0217
17	36.760	687.1	0.0216	39.205	700.3	0.0216	41.786	714.6	0.0216
18	25.591	654.3	0.0216	27.285	668.2	0.0216	29.167	682.5	0.0216

Table 4-64. Burnup and TH Feedback Parameters by Axial Node for Assembly H10

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.784	1061.9	0.0237	7.877	1068.7	0.0237	12.434	1050.2	0.0236
2	5.627	1248.6	0.0236	11.645	1225.7	0.0236	18.098	1178.5	0.0235
3	6.676	1349.8	0.0235	13.570	1287.7	0.0235	20.667	1204.6	0.0234
4	7.241	1402.0	0.0233	14.454	1306.1	0.0233	21.652	1197.3	0.0233
5	7.553	1428.8	0.0232	14.855	1306.7	0.0232	21.999	1184.3	0.0231
6	7.734	1442.6	0.0231	15.043	1301.2	0.0231	22.115	1172.9	0.0230
7	7.843	1448.6	0.0229	15.138	1294.7	0.0229	22.159	1164.6	0.0229
8	7.906	1449.8	0.0228	15.188	1289.1	0.0228	22.186	1159.0	0.0228
9	7.934	1448.2	0.0227	15.215	1285.1	0.0227	22.213	1155.6	0.0226
10	7.934	1444.3	0.0225	15.225	1282.7	0.0225	22.245	1154.0	0.0225
11	7.904	1438.2	0.0224	15.220	1282.1	0.0224	22.282	1154.1	0.0224
12	7.842	1429.0	0.0223	15.194	1283.2	0.0223	22.322	1156.3	0.0223
13	7.735	1415.3	0.0222	15.129	1285.5	0.0222	22.351	1161.0	0.0222
14	7.559	1394.6	0.0220	14.976	1287.3	0.0221	22.320	1168.9	0.0221
15	7.260	1362.0	0.0219	14.629	1284.0	0.0220	22.091	1179.2	0.0220
16	6.718	1305.8	0.0218	13.817	1263.3	0.0219	21.265	1185.6	0.0219
17	5.697	1202.8	0.0217	11.961	1199.9	0.0218	18.852	1161.4	0.0218
18	3.906	1020.6	0.0217	8.259	1041.1	0.0217	13.254	1033.8	0.0217

Table 4-65. Burnup and TH Feedback Parameters by Axial Node for Assembly H10a

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.784	1061.9	0.0237	7.877	1068.7	0.0237	12.430	1050.2	0.0236
2	5.627	1248.6	0.0236	11.645	1225.7	0.0236	18.082	1178.5	0.0235
3	6.676	1349.8	0.0235	13.570	1287.7	0.0235	20.638	1204.6	0.0234
4	7.241	1402.0	0.0233	14.454	1306.1	0.0233	21.615	1197.3	0.0233
5	7.553	1428.8	0.0232	14.855	1306.7	0.0232	21.958	1184.3	0.0231
6	7.734	1442.6	0.0231	15.043	1301.2	0.0231	22.072	1172.9	0.0230
7	7.843	1448.6	0.0229	15.138	1294.7	0.0229	22.114	1164.6	0.0229
8	7.906	1449.8	0.0228	15.188	1289.1	0.0228	22.141	1159.0	0.0228
9	7.934	1448.2	0.0227	15.215	1285.1	0.0227	22.168	1155.6	0.0226
10	7.934	1444.3	0.0225	15.225	1282.7	0.0225	22.199	1154.0	0.0225
11	7.904	1438.2	0.0224	15.220	1282.1	0.0224	22.237	1154.1	0.0224
12	7.842	1429.0	0.0223	15.194	1283.2	0.0223	22.279	1156.3	0.0223
13	7.735	1415.3	0.0222	15.129	1285.5	0.0222	22.311	1161.0	0.0222
14	7.559	1394.6	0.0220	14.976	1287.3	0.0221	22.282	1168.9	0.0221
15	7.260	1362.0	0.0219	14.629	1284.0	0.0220	22.054	1179.2	0.0220
16	6.718	1305.8	0.0218	13.817	1263.3	0.0219	21.229	1185.6	0.0219
17	5.697	1202.8	0.0217	11.961	1199.9	0.0218	18.822	1161.4	0.0218
18	3.906	1020.6	0.0217	8.259	1041.1	0.0217	13.235	1033.8	0.0217

Table 4-65. Burnup and TH Feedback Parameters by Axial Node for Assembly H10a (Cont.)

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	13.884	697.1	0.0223	15.687	721.2	0.0223	17.551	759.3	0.0224
2	20.526	755.8	0.0223	23.328	771.3	0.0223	25.980	799.1	0.0224
3	23.692	784.9	0.0223	26.949	786.5	0.0223	30.497	805.4	0.0223
4	25.006	798.7	0.0222	28.420	788.6	0.0222	32.203	802.6	0.0223
5	25.517	804.2	0.0222	28.959	786.2	0.0222	32.764	797.8	0.0222
6	25.714	805.7	0.0221	29.142	782.8	0.0221	32.917	793.5	0.0222
7	25.795	805.2	0.0221	29.202	779.8	0.0221	32.946	790.3	0.0221
8	25.836	803.8	0.0220	29.226	777.3	0.0220	32.948	788.1	0.0221
9	25.864	802.0	0.0220	29.246	775.5	0.0220	32.952	786.5	0.0220
10	25.887	800.0	0.0219	29.270	774.3	0.0219	32.966	785.4	0.0220
11	25.910	797.9	0.0219	29.302	773.7	0.0219	32.992	784.5	0.0219
12	25.928	795.5	0.0218	29.339	773.7	0.0219	33.029	784.3	0.0219
13	25.917	792.5	0.0218	29.354	774.4	0.0218	33.059	785.0	0.0218
14	25.813	787.9	0.0218	29.273	775.5	0.0218	33.015	787.0	0.0218
15	25.448	780.6	0.0217	28.910	776.5	0.0217	32.702	790.3	0.0218
16	24.372	768.1	0.0217	27.751	775.5	0.0217	31.545	793.2	0.0217
17	21.463	743.6	0.0216	24.497	764.8	0.0217	28.006	790.5	0.0217
18	14.857	685.1	0.0216	16.871	714.4	0.0216	19.337	751.3	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	17.845	787.1	0.0230	19.097	766.5	0.0230	19.880	777.0	0.0230
2	26.522	895.7	0.0229	28.794	874.4	0.0229	30.253	874.4	0.0230
3	31.199	932.4	0.0228	34.247	930.0	0.0229	36.084	939.5	0.0229
4	32.974	956.1	0.0228	36.325	955.6	0.0228	38.294	959.9	0.0228
5	33.575	969.7	0.0227	37.078	968.0	0.0227	39.104	967.3	0.0227
6	33.753	977.6	0.0226	37.345	974.3	0.0226	39.396	969.6	0.0226
7	33.797	981.2	0.0225	37.438	976.6	0.0225	39.501	969.1	0.0225
8	33.807	981.5	0.0224	37.472	976.2	0.0224	39.537	967.3	0.0224
9	33.812	979.0	0.0223	37.481	973.7	0.0223	39.545	964.7	0.0223
10	33.821	974.1	0.0222	37.477	969.5	0.0222	39.538	961.7	0.0222
11	33.837	966.6	0.0221	37.465	963.5	0.0221	39.519	958.2	0.0222
12	33.858	956.5	0.0220	37.439	955.6	0.0220	39.484	954.0	0.0221
13	33.866	943.4	0.0220	37.378	945.3	0.0220	39.407	948.6	0.0220
14	33.791	926.8	0.0219	37.207	932.0	0.0219	39.208	941.2	0.0219
15	33.438	906.1	0.0218	36.716	914.5	0.0218	38.667	930.2	0.0218
16	32.227	879.8	0.0217	35.299	890.7	0.0217	37.159	912.4	0.0218
17	28.603	847.3	0.0217	31.315	853.2	0.0217	32.983	878.2	0.0217
18	19.743	788.2	0.0216	21.605	795.9	0.0216	22.766	814.6	0.0216

Table 4-66. Burnup and TH Feedback Parameters by Axial Node for Assembly H10b

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.784	1061.9	0.0237	7.877	1068.7	0.0237	12.430	1050.2	0.0236
2	5.627	1248.6	0.0236	11.645	1225.7	0.0236	18.082	1178.5	0.0235
3	6.676	1349.8	0.0235	13.570	1287.7	0.0235	20.638	1204.6	0.0234
4	7.241	1402.0	0.0233	14.454	1306.1	0.0233	21.615	1197.3	0.0233
5	7.553	1428.8	0.0232	14.855	1306.7	0.0232	21.958	1184.3	0.0231
6	7.734	1442.6	0.0231	15.043	1301.2	0.0231	22.072	1172.9	0.0230
7	7.843	1448.6	0.0229	15.138	1294.7	0.0229	22.114	1164.6	0.0229
8	7.906	1449.8	0.0228	15.188	1289.1	0.0228	22.141	1159.0	0.0228
9	7.934	1448.2	0.0227	15.215	1285.1	0.0227	22.168	1155.6	0.0226
10	7.934	1444.3	0.0225	15.225	1282.7	0.0225	22.199	1154.0	0.0225
11	7.904	1438.2	0.0224	15.220	1282.1	0.0224	22.237	1154.1	0.0224
12	7.842	1429.0	0.0223	15.194	1283.2	0.0223	22.279	1156.3	0.0223
13	7.735	1415.3	0.0222	15.129	1285.5	0.0222	22.311	1161.0	0.0222
14	7.559	1394.6	0.0220	14.976	1287.3	0.0221	22.282	1168.9	0.0221
15	7.260	1362.0	0.0219	14.629	1284.0	0.0220	22.054	1179.2	0.0220
16	6.718	1305.8	0.0218	13.817	1263.3	0.0219	21.229	1185.6	0.0219
17	5.697	1202.8	0.0217	11.961	1199.9	0.0218	18.822	1161.4	0.0218
18	3.906	1020.6	0.0217	8.259	1041.1	0.0217	13.235	1033.8	0.0217

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 73 (BOC Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy11	549.2 Cy9	549.2 Cy9
1	13.884	697.1	0.0223	15.687	721.2	0.0223	17.551	759.3	0.0224
2	20.526	755.8	0.0223	23.328	771.3	0.0223	25.980	799.1	0.0224
3	23.692	784.9	0.0223	26.949	786.5	0.0223	30.497	805.4	0.0223
4	25.006	798.7	0.0222	28.420	788.6	0.0222	32.203	802.6	0.0223
5	25.517	804.2	0.0222	28.959	786.2	0.0222	32.764	797.8	0.0222
6	25.714	805.7	0.0221	29.142	782.8	0.0221	32.917	793.5	0.0222
7	25.795	805.2	0.0221	29.202	779.8	0.0221	32.946	790.3	0.0221
8	25.836	803.8	0.0220	29.226	777.3	0.0220	32.948	788.1	0.0221
9	25.864	802.0	0.0220	29.246	775.5	0.0220	32.952	786.5	0.0220
10	25.887	800.0	0.0219	29.270	774.3	0.0219	32.966	785.4	0.0220
11	25.910	797.9	0.0219	29.302	773.7	0.0219	32.992	784.5	0.0219
12	25.928	795.5	0.0218	29.339	773.7	0.0219	33.029	784.3	0.0219
13	25.917	792.5	0.0218	29.354	774.4	0.0218	33.059	785.0	0.0218
14	25.813	787.9	0.0218	29.273	775.5	0.0218	33.015	787.0	0.0218
15	25.448	780.6	0.0217	28.910	776.5	0.0217	32.702	790.3	0.0218
16	24.372	768.1	0.0217	27.751	775.5	0.0217	31.545	793.2	0.0217
17	21.463	743.6	0.0216	24.497	764.8	0.0217	28.006	790.5	0.0217
18	14.857	685.1	0.0216	16.871	714.4	0.0216	19.337	751.3	0.0216

Table 4-66. Burnup and TH Feedback Parameters by Axial Node for Assembly H10b (Cont.)

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	20.220	795.6	0.0231	23.190	804.8	0.0231	26.283	813.7	0.0231
2	30.914	907.0	0.0231	36.201	906.2	0.0231	41.462	917.7	0.0230
3	36.732	972.6	0.0230	43.148	968.7	0.0230	49.255	959.1	0.0229
4	38.900	995.4	0.0229	45.604	981.5	0.0229	51.809	958.9	0.0228
5	39.676	1004.8	0.0228	46.452	982.5	0.0228	52.607	952.0	0.0227
6	39.940	1008.4	0.0227	46.723	980.6	0.0227	52.817	945.4	0.0227
7	40.021	1008.7	0.0226	46.793	977.7	0.0226	52.840	940.2	0.0226
8	40.035	1006.5	0.0225	46.793	974.7	0.0225	52.813	936.3	0.0225
9	40.022	1002.8	0.0224	46.772	972.0	0.0224	52.780	933.4	0.0224
10	39.996	997.8	0.0223	46.742	969.6	0.0223	52.752	931.4	0.0223
11	39.961	991.5	0.0222	46.708	967.5	0.0222	52.731	930.1	0.0222
12	39.914	983.9	0.0221	46.665	965.5	0.0221	52.714	929.7	0.0221
13	39.834	974.7	0.0220	46.588	963.6	0.0220	52.679	930.3	0.0220
14	39.647	963.7	0.0219	46.397	961.3	0.0219	52.547	932.2	0.0219
15	39.138	949.8	0.0218	45.847	957.4	0.0219	52.060	935.1	0.0219
16	37.673	930.3	0.0218	44.227	948.3	0.0218	50.439	936.0	0.0218
17	33.519	895.1	0.0217	39.551	921.1	0.0217	45.428	921.4	0.0217
18	23.199	831.0	0.0216	27.546	845.6	0.0216	31.951	841.9	0.0216

Table 4-67. Burnup and TH Feedback Parameters by Axial Node for Assembly H12

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.370	1014.2	0.0236	7.212	1050.4	0.0237	11.597	1046.5	0.0237
2	5.088	1196.4	0.0235	10.849	1212.2	0.0236	17.235	1188.0	0.0236
3	6.256	1310.5	0.0234	13.055	1288.0	0.0235	20.263	1223.9	0.0234
4	6.918	1372.7	0.0233	14.127	1311.7	0.0234	21.496	1216.9	0.0233
5	7.257	1402.3	0.0232	14.574	1313.4	0.0232	21.883	1201.8	0.0232
6	7.456	1418.0	0.0230	14.789	1308.2	0.0231	22.018	1189.0	0.0230
7	7.584	1426.7	0.0229	14.911	1302.1	0.0229	22.085	1179.7	0.0229
8	7.665	1430.5	0.0228	14.985	1296.8	0.0228	22.134	1173.6	0.0228
9	7.711	1430.9	0.0226	15.035	1292.9	0.0227	22.183	1169.7	0.0227
10	7.731	1428.8	0.0225	15.073	1290.7	0.0226	22.243	1167.8	0.0226
11	7.730	1424.6	0.0224	15.109	1290.6	0.0224	22.328	1167.8	0.0224
12	7.721	1419.7	0.0223	15.169	1293.5	0.0223	22.478	1170.7	0.0223
13	7.693	1413.0	0.0222	15.235	1299.9	0.0222	22.681	1177.0	0.0222
14	7.557	1396.1	0.0220	15.145	1303.4	0.0221	22.732	1185.6	0.0221
15	7.257	1363.3	0.0219	14.788	1299.4	0.0220	22.498	1196.4	0.0220
16	6.696	1305.1	0.0218	13.926	1276.0	0.0219	21.607	1202.8	0.0219
17	5.680	1202.0	0.0217	12.037	1208.9	0.0218	19.116	1176.3	0.0218
18	3.968	1028.1	0.0217	8.434	1051.1	0.0217	13.568	1044.9	0.0217

Table 4-67. Burnup and TH Feedback Parameters by Axial Node for Assembly H12 (Cont.)

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	14.442	837.8	0.0234	17.739	855.6	0.0234	20.937	870.8	0.0233
2	22.468	996.3	0.0234	28.291	981.5	0.0233	33.320	967.1	0.0232
3	27.572	1088.4	0.0233	34.968	1046.2	0.0232	42.052	1024.3	0.0231
4	29.547	1116.1	0.0231	37.279	1057.3	0.0231	44.839	1019.9	0.0230
5	30.251	1125.8	0.0230	38.009	1052.9	0.0229	45.531	1008.5	0.0229
6	30.544	1128.1	0.0229	38.258	1045.9	0.0228	45.696	999.4	0.0228
7	30.685	1126.8	0.0228	38.351	1039.4	0.0227	45.720	993.1	0.0227
8	30.758	1123.5	0.0226	38.392	1034.4	0.0226	45.716	988.9	0.0226
9	30.800	1119.2	0.0225	38.420	1030.8	0.0225	45.715	986.0	0.0225
10	30.830	1114.1	0.0224	38.454	1028.7	0.0224	45.731	983.8	0.0224
11	30.864	1108.3	0.0223	38.514	1027.8	0.0223	45.777	982.3	0.0223
12	30.934	1101.1	0.0222	38.626	1028.1	0.0222	45.885	981.6	0.0222
13	31.016	1091.6	0.0221	38.762	1029.4	0.0221	46.043	982.5	0.0221
14	30.893	1080.3	0.0220	38.701	1032.1	0.0220	46.058	986.6	0.0220
15	30.382	1065.0	0.0219	38.223	1034.3	0.0219	45.704	994.5	0.0219
16	29.014	1041.2	0.0218	36.735	1029.6	0.0218	44.295	1003.2	0.0218
17	25.567	996.1	0.0217	32.649	999.2	0.0217	39.816	994.1	0.0217
18	17.782	880.4	0.0216	22.702	908.6	0.0216	28.007	914.8	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	21.071	646.0	0.0220	21.693	650.4	0.0220	22.092	659.6	0.0220
2	33.515	660.8	0.0220	34.412	666.0	0.0220	34.978	675.5	0.0220
3	42.267	664.5	0.0220	43.250	669.6	0.0220	43.859	677.5	0.0220
4	45.068	667.9	0.0219	46.108	672.7	0.0219	46.738	678.6	0.0220
5	45.772	671.3	0.0219	46.855	675.6	0.0219	47.499	679.7	0.0219
6	45.945	673.4	0.0219	47.057	677.3	0.0219	47.707	679.8	0.0219
7	45.974	674.5	0.0219	47.103	677.9	0.0219	47.754	679.2	0.0219
8	45.972	674.6	0.0218	47.109	677.8	0.0218	47.759	678.3	0.0219
9	45.973	673.9	0.0218	47.110	677.0	0.0218	47.759	677.2	0.0218
10	45.987	672.6	0.0218	47.121	675.7	0.0218	47.768	676.0	0.0218
11	46.030	670.6	0.0218	47.155	674.0	0.0218	47.798	674.7	0.0218
12	46.133	667.7	0.0217	47.241	671.5	0.0217	47.880	673.2	0.0217
13	46.283	663.8	0.0217	47.366	668.2	0.0217	47.999	671.2	0.0217
14	46.288	658.9	0.0217	47.337	664.0	0.0217	47.959	668.7	0.0217
15	45.921	652.9	0.0217	46.920	658.7	0.0217	47.525	665.4	0.0217
16	44.494	645.5	0.0216	45.421	651.6	0.0216	45.995	660.2	0.0217
17	39.987	634.9	0.0216	40.792	641.0	0.0216	41.300	650.5	0.0216
18	28.122	614.8	0.0216	28.669	619.4	0.0216	29.020	627.2	0.0216

Table 4-68. Burnup and TH Feedback Parameters by Axial Node for Assembly H12a

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.370	1014.2	0.0236	7.212	1050.4	0.0237	11.596	1046.5	0.0237
2	5.088	1196.4	0.0235	10.849	1212.2	0.0236	17.234	1188.0	0.0236
3	6.256	1310.5	0.0234	13.055	1288.0	0.0235	20.261	1223.9	0.0234
4	6.918	1372.7	0.0233	14.127	1311.7	0.0234	21.493	1216.9	0.0233
5	7.257	1402.3	0.0232	14.574	1313.4	0.0232	21.880	1201.8	0.0232
6	7.456	1418.0	0.0230	14.789	1308.2	0.0231	22.015	1189.0	0.0230
7	7.584	1426.7	0.0229	14.911	1302.1	0.0229	22.082	1179.7	0.0229
8	7.665	1430.5	0.0228	14.985	1296.8	0.0228	22.130	1173.6	0.0228
9	7.711	1430.9	0.0226	15.035	1292.9	0.0227	22.180	1169.7	0.0227
10	7.731	1428.8	0.0225	15.073	1290.7	0.0226	22.240	1167.8	0.0226
11	7.730	1424.6	0.0224	15.109	1290.6	0.0224	22.326	1167.8	0.0224
12	7.721	1419.7	0.0223	15.169	1293.5	0.0223	22.476	1170.7	0.0223
13	7.693	1413.0	0.0222	15.235	1299.9	0.0222	22.680	1177.0	0.0222
14	7.557	1396.1	0.0220	15.145	1303.4	0.0221	22.732	1185.6	0.0221
15	7.257	1363.3	0.0219	14.788	1299.4	0.0220	22.498	1196.4	0.0220
16	6.696	1305.1	0.0218	13.926	1276.0	0.0219	21.607	1202.8	0.0219
17	5.680	1202.0	0.0217	12.037	1208.9	0.0218	19.116	1176.3	0.0218
18	3.968	1028.1	0.0217	8.434	1051.1	0.0217	13.567	1044.9	0.0217

Table 4-69. Burnup and TH Feedback Parameters by Axial Node for Assembly H14

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	2.878	950.8	0.0234	6.176	987.4	0.0234	10.019	999.3	0.0233
2	4.594	1140.6	0.0233	9.650	1142.7	0.0233	15.222	1117.9	0.0232
3	5.613	1241.4	0.0232	11.480	1202.1	0.0232	17.654	1147.0	0.0231
4	6.198	1297.0	0.0231	12.374	1218.6	0.0231	18.655	1142.1	0.0230
5	6.541	1327.7	0.0230	12.811	1219.2	0.0229	19.049	1130.0	0.0229
6	6.749	1344.6	0.0229	13.032	1214.0	0.0228	19.203	1118.9	0.0228
7	6.879	1353.7	0.0228	13.152	1207.8	0.0227	19.273	1110.5	0.0227
8	6.963	1358.1	0.0227	13.224	1202.4	0.0226	19.318	1104.8	0.0226
9	7.014	1359.4	0.0225	13.274	1198.4	0.0225	19.363	1101.1	0.0225
10	7.041	1358.2	0.0224	13.312	1196.1	0.0224	19.415	1099.0	0.0224
11	7.045	1354.9	0.0223	13.341	1195.5	0.0223	19.477	1098.6	0.0223
12	7.019	1349.0	0.0222	13.352	1196.6	0.0222	19.543	1100.0	0.0222
13	6.948	1338.8	0.0221	13.324	1199.0	0.0221	19.596	1103.9	0.0221
14	6.801	1321.3	0.0220	13.206	1201.3	0.0220	19.582	1110.7	0.0220
15	6.521	1290.8	0.0219	12.888	1199.4	0.0219	19.366	1119.6	0.0219
16	5.993	1235.7	0.0218	12.121	1182.6	0.0218	18.579	1124.1	0.0218
17	4.990	1133.4	0.0217	10.367	1125.1	0.0217	16.320	1098.6	0.0218
18	3.211	941.1	0.0217	6.822	972.4	0.0217	11.069	981.5	0.0217

Table 4-69. Burnup and TH Feedback Parameters by Axial Node for Assembly H14 (Cont.)

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 73 (BOC Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy11	549.2 Cy9	549.2 Cy9
1	13.507	888.4	0.0233	17.585	915.4	0.0232	21.873	944.1	0.0233
2	20.725	1003.3	0.0232	26.730	998.8	0.0231	32.513	1002.1	0.0232
3	24.278	1053.3	0.0231	31.082	1022.7	0.0230	38.093	1019.2	0.0231
4	25.888	1077.4	0.0230	32.948	1027.0	0.0229	40.213	1013.2	0.0230
5	26.595	1087.2	0.0229	33.688	1022.2	0.0228	40.939	1002.8	0.0229
6	26.914	1090.1	0.0228	33.978	1015.7	0.0227	41.162	994.4	0.0227
7	27.072	1089.7	0.0227	34.103	1010.1	0.0226	41.235	988.8	0.0226
8	27.162	1087.6	0.0225	34.172	1005.9	0.0225	41.272	985.3	0.0226
9	27.223	1084.6	0.0224	34.229	1003.0	0.0224	41.312	982.9	0.0225
10	27.273	1081.3	0.0223	34.295	1001.4	0.0223	41.368	981.3	0.0224
11	27.321	1077.9	0.0222	34.382	1001.3	0.0222	41.453	980.5	0.0223
12	27.366	1074.7	0.0221	34.491	1003.1	0.0222	41.575	981.0	0.0222
13	27.368	1070.6	0.0220	34.578	1006.5	0.0221	41.704	983.6	0.0221
14	27.222	1062.5	0.0219	34.509	1010.4	0.0220	41.719	988.6	0.0220
15	26.736	1047.7	0.0219	34.047	1012.9	0.0219	41.374	996.5	0.0219
16	25.441	1021.7	0.0218	32.605	1008.7	0.0218	39.983	1003.7	0.0218
17	22.190	974.4	0.0217	28.699	985.7	0.0217	35.643	990.8	0.0217
18	14.825	856.8	0.0216	19.299	896.6	0.0216	24.384	921.9	0.0216

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	22.809	635.0	0.0220	23.993	650.9	0.0220	25.345	665.9	0.0220
2	33.922	652.7	0.0220	35.620	668.9	0.0220	37.463	683.1	0.0220
3	39.728	662.8	0.0219	41.610	675.5	0.0220	43.579	686.2	0.0220
4	41.956	667.3	0.0219	43.883	676.0	0.0219	45.849	683.8	0.0220
5	42.740	669.7	0.0219	44.671	675.1	0.0219	46.609	681.0	0.0219
6	42.996	670.7	0.0219	44.919	673.8	0.0219	46.831	678.6	0.0219
7	43.084	670.9	0.0218	44.997	672.4	0.0219	46.889	676.8	0.0219
8	43.127	670.4	0.0218	45.029	671.2	0.0218	46.909	675.3	0.0219
9	43.164	669.6	0.0218	45.059	670.1	0.0218	46.931	674.1	0.0218
10	43.212	668.4	0.0218	45.102	669.1	0.0218	46.969	673.1	0.0218
11	43.283	666.9	0.0218	45.171	668.3	0.0218	47.036	672.3	0.0218
12	43.386	665.0	0.0217	45.272	667.5	0.0217	47.140	671.6	0.0218
13	43.486	662.6	0.0217	45.373	666.8	0.0217	47.248	671.3	0.0217
14	43.459	659.5	0.0217	45.344	666.0	0.0217	47.232	671.4	0.0217
15	43.050	655.3	0.0217	44.922	664.9	0.0217	46.826	671.8	0.0217
16	41.553	649.2	0.0216	43.378	662.6	0.0217	45.280	671.9	0.0217
17	37.011	638.8	0.0216	38.673	655.3	0.0216	40.467	667.6	0.0216
18	25.305	620.2	0.0216	26.478	635.5	0.0216	27.806	648.1	0.0216

Table 4-70. Burnup and TH Feedback Parameters by Axial Node for Assembly H17

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.583	1037.3	0.0236	7.617	1066.2	0.0237	12.197	1057.4	0.0237
2	5.243	1209.5	0.0235	11.131	1220.5	0.0236	17.646	1192.6	0.0236
3	6.249	1307.8	0.0234	13.054	1287.9	0.0235	20.288	1224.5	0.0234
4	6.817	1361.2	0.0233	13.981	1308.6	0.0233	21.343	1217.9	0.0233
5	7.114	1387.1	0.0231	14.371	1309.6	0.0232	21.668	1203.4	0.0232
6	7.291	1400.8	0.0230	14.559	1304.3	0.0231	21.776	1190.9	0.0230
7	7.405	1408.2	0.0229	14.665	1298.4	0.0229	21.830	1182.0	0.0229
8	7.476	1411.3	0.0227	14.730	1293.2	0.0228	21.870	1176.1	0.0228
9	7.515	1411.2	0.0226	14.772	1289.4	0.0227	21.913	1172.4	0.0227
10	7.529	1408.7	0.0225	14.803	1287.3	0.0226	21.968	1170.7	0.0226
11	7.525	1404.3	0.0224	14.836	1287.3	0.0224	22.052	1171.0	0.0224
12	7.517	1399.4	0.0223	14.899	1290.4	0.0223	22.208	1174.1	0.0223
13	7.495	1393.3	0.0221	14.974	1297.0	0.0222	22.423	1180.6	0.0222
14	7.366	1377.1	0.0220	14.890	1300.3	0.0221	22.482	1189.2	0.0221
15	7.076	1345.2	0.0219	14.539	1295.7	0.0220	22.250	1199.8	0.0220
16	6.534	1288.7	0.0218	13.692	1272.3	0.0219	21.365	1205.4	0.0219
17	5.556	1189.3	0.0217	11.848	1205.0	0.0218	18.908	1177.3	0.0218
18	3.900	1020.3	0.0217	8.327	1048.4	0.0217	13.446	1044.6	0.0217

Table 4-71. Burnup and TH Feedback Parameters by Axial Node for Assembly H19

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.413	1019.0	0.0237	7.286	1051.9	0.0237	11.724	1048.4	0.0236
2	5.132	1200.1	0.0236	10.868	1207.0	0.0236	17.229	1182.1	0.0235
3	6.257	1310.3	0.0235	12.954	1277.0	0.0235	20.053	1214.4	0.0234
4	6.919	1372.6	0.0233	14.003	1298.9	0.0233	21.241	1207.4	0.0233
5	7.282	1404.4	0.0232	14.472	1300.2	0.0232	21.648	1192.3	0.0231
6	7.504	1422.1	0.0231	14.712	1294.9	0.0231	21.809	1179.4	0.0230
7	7.652	1432.3	0.0229	14.856	1288.8	0.0229	21.899	1170.1	0.0229
8	7.751	1437.3	0.0228	14.951	1283.5	0.0228	21.969	1163.7	0.0228
9	7.815	1439.0	0.0227	15.022	1279.7	0.0227	22.039	1159.7	0.0227
10	7.853	1438.4	0.0225	15.082	1277.7	0.0225	22.122	1157.6	0.0225
11	7.873	1436.1	0.0224	15.145	1277.9	0.0224	22.234	1157.4	0.0224
12	7.886	1433.1	0.0223	15.235	1281.3	0.0223	22.415	1160.0	0.0223
13	7.878	1428.5	0.0222	15.331	1288.2	0.0222	22.649	1166.1	0.0222
14	7.751	1413.4	0.0220	15.261	1292.6	0.0221	22.721	1174.5	0.0221
15	7.443	1380.2	0.0219	14.904	1289.5	0.0220	22.487	1185.2	0.0220
16	6.841	1318.5	0.0218	14.001	1266.6	0.0219	21.557	1192.0	0.0219
17	5.742	1207.8	0.0217	12.017	1199.6	0.0218	18.973	1166.4	0.0218
18	3.945	1025.4	0.0217	8.315	1041.9	0.0217	13.339	1035.9	0.0217

Table 4-71. Burnup and TH Feedback Parameters by Axial Node for Assembly H19 (Cont.)

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	15.565	911.0	0.0234	20.029	934.5	0.0234	24.631	952.3	0.0233
2	23.188	1022.8	0.0233	29.706	1018.4	0.0233	35.822	1019.0	0.0232
3	27.121	1070.8	0.0232	34.445	1043.1	0.0232	41.799	1034.7	0.0231
4	28.900	1093.3	0.0231	36.465	1049.5	0.0230	44.063	1025.8	0.0230
5	29.615	1103.0	0.0229	37.207	1045.2	0.0229	44.778	1014.3	0.0229
6	29.936	1105.8	0.0228	37.491	1038.6	0.0228	44.983	1005.2	0.0228
7	30.107	1104.9	0.0227	37.622	1032.6	0.0227	45.051	999.1	0.0227
8	30.209	1102.1	0.0226	37.697	1027.9	0.0226	45.087	995.2	0.0226
9	30.281	1098.1	0.0225	37.760	1024.7	0.0225	45.127	992.4	0.0225
10	30.343	1093.6	0.0224	37.833	1022.7	0.0224	45.185	990.5	0.0224
11	30.417	1088.4	0.0223	37.938	1022.1	0.0223	45.281	989.1	0.0223
12	30.539	1082.1	0.0222	38.111	1022.9	0.0222	45.455	988.8	0.0222
13	30.677	1073.8	0.0221	38.313	1024.7	0.0221	45.688	990.1	0.0221
14	30.586	1063.1	0.0220	38.290	1027.6	0.0220	45.746	994.6	0.0220
15	30.072	1047.4	0.0219	37.801	1029.4	0.0219	45.382	1002.7	0.0219
16	28.646	1022.5	0.0218	36.236	1023.6	0.0218	43.886	1011.1	0.0218
17	25.104	977.3	0.0217	32.032	994.0	0.0217	39.257	1000.5	0.0217
18	17.324	864.9	0.0216	22.106	903.2	0.0216	27.420	919.8	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	24.758	637.8	0.0220	25.341	641.5	0.0220	25.715	649.3	0.0220
2	36.014	659.0	0.0220	36.893	663.6	0.0220	37.445	672.2	0.0220
3	42.025	670.3	0.0220	43.052	674.9	0.0220	43.682	681.9	0.0220
4	44.310	676.4	0.0220	45.417	680.6	0.0220	46.082	685.5	0.0220
5	45.039	680.6	0.0219	46.198	684.3	0.0219	46.879	687.0	0.0220
6	45.253	683.2	0.0219	46.444	686.2	0.0219	47.132	687.2	0.0219
7	45.326	684.4	0.0219	46.536	686.9	0.0219	47.226	686.5	0.0219
8	45.366	684.5	0.0218	46.584	686.7	0.0219	47.274	685.5	0.0219
9	45.406	683.9	0.0218	46.627	685.9	0.0218	47.315	684.4	0.0218
10	45.463	682.5	0.0218	46.681	684.6	0.0218	47.366	683.1	0.0218
11	45.557	680.3	0.0218	46.764	682.7	0.0218	47.447	681.7	0.0218
12	45.725	677.1	0.0217	46.915	679.9	0.0217	47.592	680.0	0.0218
13	45.949	672.6	0.0217	47.110	676.2	0.0217	47.779	677.7	0.0217
14	45.996	667.2	0.0217	47.119	671.7	0.0217	47.778	675.1	0.0217
15	45.617	660.6	0.0217	46.687	665.9	0.0217	47.327	671.6	0.0217
16	44.100	652.3	0.0216	45.090	658.1	0.0216	45.696	666.0	0.0217
17	39.440	640.2	0.0216	40.293	646.1	0.0216	40.826	655.3	0.0216
18	27.541	618.6	0.0216	28.115	623.0	0.0216	28.480	630.8	0.0216

Table 4-72. Burnup and TH Feedback Parameters by Axial Node for Assembly H20

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	2.453	913.2	0.0232	5.288	952.0	0.0232	8.627	973.7	0.0231
2	4.205	1094.9	0.0232	8.768	1094.8	0.0231	13.799	1072.6	0.0231
3	5.200	1195.1	0.0231	10.524	1151.0	0.0230	16.124	1102.1	0.0230
4	5.766	1248.9	0.0230	11.378	1166.7	0.0229	17.083	1098.8	0.0229
5	6.092	1278.0	0.0229	11.789	1166.4	0.0228	17.454	1088.0	0.0228
6	6.287	1293.6	0.0228	11.991	1161.1	0.0227	17.594	1077.8	0.0227
7	6.408	1301.9	0.0227	12.098	1155.1	0.0226	17.655	1070.0	0.0226
8	6.486	1305.8	0.0226	12.164	1149.8	0.0225	17.694	1064.6	0.0225
9	6.535	1307.0	0.0225	12.209	1146.0	0.0224	17.734	1061.2	0.0224
10	6.562	1306.2	0.0224	12.246	1143.8	0.0223	17.782	1059.2	0.0223
11	6.571	1303.6	0.0223	12.278	1143.2	0.0222	17.843	1058.8	0.0222
12	6.557	1299.0	0.0222	12.302	1144.4	0.0221	17.917	1060.1	0.0222
13	6.503	1290.7	0.0221	12.293	1147.0	0.0221	17.982	1063.6	0.0221
14	6.374	1275.3	0.0220	12.193	1149.3	0.0220	17.977	1069.8	0.0220
15	6.108	1246.6	0.0219	11.892	1147.7	0.0219	17.764	1077.6	0.0219
16	5.593	1193.4	0.0218	11.151	1132.4	0.0218	16.994	1080.3	0.0218
17	4.597	1091.6	0.0217	9.442	1077.6	0.0217	14.796	1053.3	0.0217
18	2.722	883.2	0.0217	5.788	915.5	0.0217	9.421	933.7	0.0217

Table 4-73. Burnup and TH Feedback Parameters by Axial Node for Assembly H23

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	3.290	1005.2	0.0237	7.076	1045.7	0.0237	11.430	1046.2	0.0237
2	5.005	1188.4	0.0236	10.706	1208.0	0.0236	17.066	1188.3	0.0236
3	6.200	1305.1	0.0235	12.954	1285.0	0.0235	20.150	1224.9	0.0234
4	6.894	1370.1	0.0233	14.070	1309.1	0.0234	21.432	1217.6	0.0233
5	7.255	1401.7	0.0232	14.545	1310.9	0.0232	21.847	1201.9	0.0232
6	7.471	1418.8	0.0231	14.780	1305.7	0.0231	22.001	1188.6	0.0230
7	7.614	1428.6	0.0229	14.921	1299.6	0.0229	22.086	1179.1	0.0229
8	7.710	1433.8	0.0228	15.013	1294.4	0.0228	22.153	1172.7	0.0228
9	7.772	1435.3	0.0227	15.083	1290.6	0.0227	22.221	1168.6	0.0227
10	7.809	1434.4	0.0225	15.142	1288.6	0.0226	22.304	1166.4	0.0226
11	7.830	1432.1	0.0224	15.207	1288.8	0.0224	22.419	1166.2	0.0224
12	7.846	1429.4	0.0223	15.304	1292.3	0.0223	22.608	1168.8	0.0223
13	7.845	1425.5	0.0222	15.409	1299.4	0.0222	22.854	1174.8	0.0222
14	7.726	1410.8	0.0220	15.348	1303.7	0.0221	22.936	1183.2	0.0221
15	7.429	1378.6	0.0219	15.001	1300.4	0.0220	22.714	1193.9	0.0220
16	6.854	1319.4	0.0218	14.126	1277.3	0.0219	21.815	1200.7	0.0219
17	5.805	1213.7	0.0217	12.203	1210.4	0.0218	19.295	1175.3	0.0218
18	4.045	1035.9	0.0217	8.534	1052.2	0.0217	13.679	1044.9	0.0217

Table 4-73. Burnup and TH Feedback Parameters by Axial Node for Assembly H23 (Cont.)

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	15.591	936.1	0.0234	20.293	950.4	0.0234	25.092	959.5	0.0233
2	23.359	1043.8	0.0233	30.112	1031.7	0.0233	36.398	1025.8	0.0232
3	27.468	1084.5	0.0232	34.975	1054.0	0.0232	42.493	1038.4	0.0231
4	29.187	1097.2	0.0231	36.813	1053.7	0.0230	44.551	1023.4	0.0230
5	29.608	1088.4	0.0230	37.035	1036.0	0.0229	44.614	1000.3	0.0229
6	29.872	1088.3	0.0228	37.235	1027.9	0.0228	44.688	989.8	0.0228
7	30.026	1087.0	0.0227	37.347	1021.9	0.0227	44.739	983.6	0.0227
8	30.120	1083.9	0.0226	37.412	1017.3	0.0226	44.764	979.6	0.0226
9	30.186	1080.0	0.0225	37.469	1014.0	0.0225	44.794	976.8	0.0225
10	30.248	1075.4	0.0224	37.541	1012.2	0.0224	44.848	974.7	0.0224
11	30.339	1071.1	0.0223	37.672	1012.1	0.0223	44.970	973.7	0.0223
12	30.595	1071.5	0.0222	38.089	1018.4	0.0222	45.421	977.9	0.0222
13	31.224	1092.0	0.0221	39.162	1042.8	0.0221	46.732	997.8	0.0221
14	31.207	1084.8	0.0220	39.260	1048.5	0.0220	46.948	1004.7	0.0220
15	30.704	1069.3	0.0219	38.783	1050.2	0.0219	46.597	1012.9	0.0219
16	29.304	1044.3	0.0218	37.233	1043.6	0.0218	45.113	1021.4	0.0218
17	25.821	999.2	0.0217	33.072	1009.3	0.0217	40.512	1010.4	0.0217
18	17.984	885.9	0.0216	23.036	916.6	0.0216	28.528	924.8	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	25.199	626.1	0.0220	25.689	628.6	0.0220	26.000	634.3	0.0220
2	36.567	646.7	0.0220	37.326	649.5	0.0220	37.797	655.6	0.0220
3	42.696	658.4	0.0219	43.601	660.9	0.0220	44.147	665.1	0.0220
4	44.776	665.7	0.0219	45.767	667.5	0.0219	46.350	669.5	0.0219
5	44.858	671.9	0.0219	45.915	673.0	0.0219	46.522	672.9	0.0219
6	44.941	675.0	0.0219	46.032	675.3	0.0219	46.648	673.4	0.0219
7	44.998	676.2	0.0219	46.107	676.0	0.0219	46.724	672.9	0.0219
8	45.026	676.5	0.0218	46.143	675.8	0.0218	46.759	672.0	0.0218
9	45.057	676.0	0.0218	46.177	675.1	0.0218	46.792	671.0	0.0218
10	45.110	674.8	0.0218	46.227	674.0	0.0218	46.840	669.9	0.0218
11	45.229	672.7	0.0218	46.337	672.2	0.0218	46.948	668.6	0.0218
12	45.674	668.8	0.0217	46.759	668.9	0.0217	47.361	666.3	0.0217
13	46.970	661.3	0.0217	48.002	662.3	0.0217	48.583	661.2	0.0217
14	47.175	656.0	0.0217	48.169	657.9	0.0217	48.739	658.6	0.0217
15	46.810	649.9	0.0217	47.756	652.7	0.0217	48.309	655.5	0.0217
16	45.306	641.8	0.0216	46.176	645.4	0.0216	46.698	650.3	0.0216
17	40.673	629.8	0.0216	41.412	633.8	0.0216	41.866	640.3	0.0216
18	28.632	608.4	0.0216	29.114	611.5	0.0216	29.418	617.3	0.0216

Table 4-74. Burnup and TH Feedback Parameters by Axial Node for Assembly H25

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	2.163	857.9	0.0230	4.687	895.4	0.0230	7.708	923.8	0.0230
2	3.679	1032.7	0.0230	7.704	1042.9	0.0229	12.209	1034.4	0.0229
3	4.578	1126.9	0.0229	9.294	1097.9	0.0228	14.328	1062.6	0.0228
4	5.092	1177.4	0.0228	10.073	1113.7	0.0228	15.211	1060.1	0.0227
5	5.387	1204.7	0.0227	10.445	1114.0	0.0227	15.551	1050.2	0.0227
6	5.561	1218.8	0.0226	10.625	1109.1	0.0226	15.676	1040.6	0.0226
7	5.668	1226.2	0.0226	10.719	1103.5	0.0225	15.726	1033.3	0.0225
8	5.736	1229.7	0.0225	10.775	1098.6	0.0224	15.757	1028.3	0.0224
9	5.778	1230.6	0.0224	10.812	1095.0	0.0223	15.787	1025.0	0.0223
10	5.802	1229.8	0.0223	10.842	1092.8	0.0222	15.826	1023.1	0.0223
11	5.810	1227.5	0.0222	10.869	1092.1	0.0222	15.878	1022.7	0.0222
12	5.799	1223.5	0.0221	10.890	1093.2	0.0221	15.944	1023.9	0.0221
13	5.753	1216.3	0.0220	10.883	1095.4	0.0220	16.002	1027.2	0.0220
14	5.640	1202.6	0.0219	10.796	1097.5	0.0219	15.998	1032.8	0.0220
15	5.407	1176.9	0.0218	10.530	1095.7	0.0219	15.809	1039.8	0.0219
16	4.952	1128.4	0.0218	9.874	1081.0	0.0218	15.119	1041.8	0.0218
17	4.063	1033.8	0.0217	8.342	1028.5	0.0217	13.133	1015.5	0.0217
18	2.386	844.2	0.0217	5.073	875.3	0.0217	8.295	899.8	0.0217

Table 4-75. Burnup and TH Feedback Parameters by Axial Node for Assembly H25a

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	2.163	857.9	0.0230	4.687	895.4	0.0230	7.708	923.8	0.0230
2	3.679	1032.7	0.0230	7.704	1042.9	0.0229	12.210	1034.4	0.0229
3	4.578	1126.9	0.0229	9.294	1097.9	0.0228	14.332	1062.6	0.0228
4	5.092	1177.4	0.0228	10.073	1113.7	0.0228	15.216	1060.1	0.0227
5	5.387	1204.7	0.0227	10.445	1114.0	0.0227	15.557	1050.2	0.0227
6	5.561	1218.8	0.0226	10.625	1109.1	0.0226	15.682	1040.6	0.0226
7	5.668	1226.2	0.0226	10.719	1103.5	0.0225	15.732	1033.3	0.0225
8	5.736	1229.7	0.0225	10.775	1098.6	0.0224	15.763	1028.3	0.0224
9	5.778	1230.6	0.0224	10.812	1095.0	0.0223	15.794	1025.0	0.0223
10	5.802	1229.8	0.0223	10.842	1092.8	0.0222	15.833	1023.1	0.0223
11	5.810	1227.5	0.0222	10.869	1092.1	0.0222	15.886	1022.7	0.0222
12	5.799	1223.5	0.0221	10.890	1093.2	0.0221	15.952	1023.9	0.0221
13	5.753	1216.3	0.0220	10.883	1095.4	0.0220	16.011	1027.2	0.0220
14	5.640	1202.6	0.0219	10.796	1097.5	0.0219	16.008	1032.8	0.0220
15	5.407	1176.9	0.0218	10.530	1095.7	0.0219	15.819	1039.8	0.0219
16	4.952	1128.4	0.0218	9.874	1081.0	0.0218	15.128	1041.8	0.0218
17	4.063	1033.8	0.0217	8.342	1028.5	0.0217	13.141	1015.5	0.0217
18	2.386	844.2	0.0217	5.073	875.3	0.0217	8.299	899.8	0.0217

Table 4-76. Burnup and TH Feedback Parameters by Axial Node for Assembly H27

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	2.392	891.7	0.0233	5.214	936.1	0.0232	8.556	961.4	0.0232
2	4.010	1078.2	0.0232	8.540	1099.7	0.0232	13.604	1086.8	0.0231
3	5.129	1191.5	0.0231	10.568	1168.0	0.0231	16.341	1122.9	0.0230
4	5.783	1253.7	0.0230	11.583	1188.2	0.0230	17.510	1119.6	0.0229
5	6.144	1286.1	0.0229	12.052	1189.3	0.0229	17.949	1107.9	0.0228
6	6.355	1303.5	0.0228	12.280	1184.4	0.0228	18.116	1097.0	0.0227
7	6.487	1312.9	0.0227	12.404	1178.5	0.0227	18.193	1088.9	0.0226
8	6.573	1317.7	0.0226	12.482	1173.3	0.0226	18.246	1083.3	0.0225
9	6.630	1319.7	0.0225	12.539	1169.5	0.0225	18.298	1079.6	0.0225
10	6.664	1319.5	0.0224	12.586	1167.3	0.0224	18.358	1077.6	0.0224
11	6.681	1317.6	0.0223	12.630	1166.9	0.0223	18.433	1077.0	0.0223
12	6.675	1313.6	0.0222	12.666	1168.3	0.0222	18.523	1078.4	0.0222
13	6.629	1305.9	0.0221	12.670	1171.2	0.0221	18.606	1082.0	0.0221
14	6.508	1290.9	0.0220	12.583	1173.9	0.0220	18.620	1088.5	0.0220
15	6.252	1262.9	0.0219	12.295	1172.5	0.0219	18.428	1096.7	0.0219
16	5.752	1210.8	0.0218	11.571	1156.7	0.0218	17.682	1100.3	0.0218
17	4.794	1112.6	0.0217	9.899	1101.6	0.0217	15.530	1074.6	0.0217
18	3.087	926.3	0.0217	6.516	953.5	0.0217	10.528	962.6	0.0217

Table 4-77. Burnup and TH Feedback Parameters by Axial Node for Assembly H27a

Axial Node	Datapoint (171.1 Cy8)			Datapoint (338.1 Cy8)			Statepoint 68 (BOC Cy9)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	171.1 Cy8	77.7 Cy8	77.7 Cy8	338.1 Cy8	247.2 Cy8	247.2 Cy8	BOC Cy9	426.1 Cy8	426.1 Cy8
1	2.392	891.7	0.0233	5.214	936.1	0.0232	8.543	961.4	0.0232
2	4.010	1078.2	0.0232	8.540	1099.7	0.0232	13.583	1086.8	0.0231
3	5.129	1191.5	0.0231	10.568	1168.0	0.0231	16.318	1122.9	0.0230
4	5.783	1253.7	0.0230	11.583	1188.2	0.0230	17.487	1119.6	0.0229
5	6.144	1286.1	0.0229	12.052	1189.3	0.0229	17.926	1107.9	0.0228
6	6.355	1303.5	0.0228	12.280	1184.4	0.0228	18.092	1097.0	0.0227
7	6.487	1312.9	0.0227	12.404	1178.5	0.0227	18.169	1088.9	0.0226
8	6.573	1317.7	0.0226	12.482	1173.3	0.0226	18.221	1083.3	0.0225
9	6.630	1319.7	0.0225	12.539	1169.5	0.0225	18.272	1079.6	0.0225
10	6.664	1319.5	0.0224	12.586	1167.3	0.0224	18.332	1077.6	0.0224
11	6.681	1317.6	0.0223	12.630	1166.9	0.0223	18.407	1077.0	0.0223
12	6.675	1313.6	0.0222	12.666	1168.3	0.0222	18.498	1078.4	0.0222
13	6.629	1305.9	0.0221	12.670	1171.2	0.0221	18.581	1082.0	0.0221
14	6.508	1290.9	0.0220	12.583	1173.9	0.0220	18.595	1088.5	0.0220
15	6.252	1262.9	0.0219	12.295	1172.5	0.0219	18.403	1096.7	0.0219
16	5.752	1210.8	0.0218	11.571	1156.7	0.0218	17.658	1100.3	0.0218
17	4.794	1112.6	0.0217	9.899	1101.6	0.0217	15.510	1074.6	0.0217
18	3.087	926.3	0.0217	6.516	953.5	0.0217	10.517	962.6	0.0217

Table 4-78. Burnup and TH Feedback Parameters by Axial Node for Assembly J2

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	5.166	1129.0	0.0239	10.651	1091.5	0.0239	16.165	1061.5	0.0236
2	7.555	1325.4	0.0238	15.514	1246.7	0.0237	23.057	1158.0	0.0235
3	8.905	1427.7	0.0237	17.932	1301.8	0.0236	26.560	1173.8	0.0234
4	9.617	1469.9	0.0235	18.981	1308.5	0.0234	27.753	1162.1	0.0233
5	9.992	1486.2	0.0234	19.412	1301.6	0.0233	28.095	1148.1	0.0231
6	10.192	1491.8	0.0232	19.584	1292.9	0.0231	28.159	1137.5	0.0230
7	10.295	1492.0	0.0230	19.648	1285.4	0.0230	28.147	1130.7	0.0229
8	10.338	1489.5	0.0229	19.668	1280.1	0.0229	28.124	1126.5	0.0227
9	10.338	1485.5	0.0227	19.669	1277.0	0.0227	28.103	1124.0	0.0226
10	10.306	1480.4	0.0226	19.661	1276.1	0.0226	28.090	1122.5	0.0225
11	10.245	1474.6	0.0225	19.649	1277.1	0.0225	28.087	1122.0	0.0224
12	10.153	1467.7	0.0223	19.630	1280.2	0.0223	28.098	1122.8	0.0223
13	10.015	1458.6	0.0222	19.587	1285.5	0.0222	28.120	1126.0	0.0222
14	9.804	1445.4	0.0221	19.469	1292.3	0.0221	28.120	1132.7	0.0221
15	9.450	1423.2	0.0219	19.142	1297.8	0.0220	27.947	1143.6	0.0220
16	8.794	1375.7	0.0218	18.249	1292.4	0.0218	27.115	1154.4	0.0218
17	7.534	1274.0	0.0217	16.008	1241.5	0.0217	24.335	1141.1	0.0217
18	5.261	1082.4	0.0216	11.242	1078.8	0.0216	17.415	1045.1	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	16.587	859.9	0.0232	18.454	857.2	0.0232	19.604	867.1	0.0232
2	23.711	952.1	0.0231	26.571	944.3	0.0231	28.300	946.2	0.0231
3	27.344	994.9	0.0230	30.753	984.4	0.0230	32.772	985.7	0.0230
4	28.612	1019.9	0.0229	32.319	1008.5	0.0229	34.471	1007.1	0.0229
5	29.000	1035.7	0.0228	32.878	1023.6	0.0228	35.092	1016.0	0.0228
6	29.093	1045.2	0.0227	33.072	1031.3	0.0227	35.315	1018.8	0.0227
7	29.100	1049.9	0.0226	33.135	1034.4	0.0226	35.391	1018.5	0.0226
8	29.085	1050.9	0.0225	33.150	1034.3	0.0225	35.409	1016.7	0.0225
9	29.067	1048.7	0.0224	33.139	1032.0	0.0224	35.398	1014.2	0.0224
10	29.050	1043.8	0.0223	33.112	1027.8	0.0223	35.369	1011.2	0.0223
11	29.037	1036.1	0.0222	33.072	1021.7	0.0222	35.325	1007.9	0.0222
12	29.031	1025.2	0.0221	33.020	1013.5	0.0221	35.265	1003.9	0.0221
13	29.029	1010.7	0.0220	32.946	1002.4	0.0220	35.175	998.4	0.0220
14	28.994	991.9	0.0219	32.805	987.5	0.0219	35.005	990.5	0.0219
15	28.775	968.2	0.0218	32.429	967.1	0.0218	34.575	977.8	0.0218
16	27.879	939.1	0.0217	31.290	940.0	0.0218	33.330	956.4	0.0218
17	24.995	900.5	0.0217	27.974	904.7	0.0217	29.785	918.0	0.0217
18	17.850	812.9	0.0216	19.836	820.0	0.0216	21.065	837.8	0.0216

Table 4-79. Burnup and TH Feedback Parameters by Axial Node for Assembly J10

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	5.090	1123.2	0.0239	10.538	1090.2	0.0239	16.088	1064.7	0.0237
2	7.486	1319.9	0.0238	15.401	1245.0	0.0237	22.996	1162.2	0.0235
3	8.862	1423.3	0.0237	17.854	1300.6	0.0236	26.552	1178.6	0.0234
4	9.592	1466.5	0.0235	18.926	1307.8	0.0234	27.782	1167.1	0.0233
5	9.976	1482.7	0.0234	19.371	1301.3	0.0233	28.146	1153.1	0.0231
6	10.182	1488.1	0.0232	19.551	1292.5	0.0231	28.223	1142.5	0.0230
7	10.290	1488.4	0.0230	19.624	1285.1	0.0230	28.223	1135.6	0.0229
8	10.339	1486.1	0.0229	19.653	1279.8	0.0229	28.211	1131.4	0.0228
9	10.349	1482.5	0.0227	19.666	1276.8	0.0227	28.204	1128.8	0.0226
10	10.329	1478.1	0.0226	19.674	1275.9	0.0226	28.207	1127.2	0.0225
11	10.282	1473.0	0.0225	19.679	1277.0	0.0225	28.219	1126.6	0.0224
12	10.203	1466.9	0.0223	19.677	1280.2	0.0223	28.241	1127.3	0.0223
13	10.077	1458.7	0.0222	19.646	1285.3	0.0222	28.268	1130.4	0.0222
14	9.873	1446.1	0.0221	19.536	1291.9	0.0221	28.268	1137.1	0.0221
15	9.522	1424.4	0.0219	19.214	1297.3	0.0220	28.096	1148.0	0.0220
16	8.865	1378.1	0.0218	18.325	1292.0	0.0218	27.268	1158.7	0.0218
17	7.585	1275.9	0.0217	16.067	1241.7	0.0217	24.466	1145.4	0.0217
18	5.272	1082.2	0.0216	11.254	1079.0	0.0216	17.479	1048.8	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	16.239	670.0	0.0222	16.901	669.0	0.0222	17.313	674.1	0.0222
2	23.250	714.0	0.0222	24.347	710.7	0.0222	25.009	713.0	0.0222
3	26.872	735.9	0.0222	28.234	730.2	0.0221	29.028	727.5	0.0221
4	28.142	748.2	0.0221	29.648	740.2	0.0221	30.502	734.3	0.0221
5	28.529	756.0	0.0221	30.118	746.0	0.0221	30.997	737.3	0.0221
6	28.623	760.9	0.0221	30.258	749.1	0.0220	31.146	737.8	0.0220
7	28.632	763.6	0.0220	30.294	750.3	0.0220	31.185	737.2	0.0220
8	28.626	764.7	0.0220	30.302	750.3	0.0220	31.193	736.0	0.0219
9	28.622	764.4	0.0219	30.304	749.5	0.0219	31.193	734.7	0.0219
10	28.624	762.9	0.0219	30.305	748.1	0.0219	31.193	733.5	0.0219
11	28.633	760.3	0.0218	30.307	746.1	0.0218	31.194	732.2	0.0218
12	28.650	756.4	0.0218	30.309	743.3	0.0218	31.194	730.8	0.0218
13	28.667	750.6	0.0218	30.300	739.3	0.0218	31.182	729.1	0.0218
14	28.652	742.5	0.0217	30.241	733.6	0.0217	31.112	726.3	0.0217
15	28.456	731.5	0.0217	29.972	725.3	0.0217	30.820	721.5	0.0217
16	27.592	716.7	0.0217	28.984	713.6	0.0217	29.782	713.1	0.0217
17	24.731	694.9	0.0216	25.893	695.0	0.0216	26.579	698.8	0.0216
18	17.638	651.4	0.0216	18.351	653.6	0.0216	18.785	660.3	0.0216

Table 4-79. Burnup and TH Feedback Parameters by Axial Node for Assembly J10 (Cont.)

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	18.923	688.6	0.0222	21.036	715.4	0.0223	22.236	657.9	0.0221
2	27.474	724.0	0.0222	30.498	744.7	0.0222	32.307	681.7	0.0221
3	31.865	733.9	0.0221	35.186	752.6	0.0222	37.295	694.9	0.0220
4	33.447	736.7	0.0221	36.793	751.3	0.0221	39.048	701.8	0.0220
5	33.956	735.6	0.0221	37.262	747.6	0.0221	39.598	705.4	0.0220
6	34.090	733.4	0.0220	37.354	744.1	0.0221	39.736	707.2	0.0220
7	34.108	731.1	0.0220	37.342	741.4	0.0220	39.748	707.7	0.0219
8	34.098	729.1	0.0219	37.315	739.3	0.0220	39.729	707.4	0.0219
9	34.087	727.4	0.0219	37.295	737.7	0.0219	39.709	706.5	0.0219
10	34.083	726.2	0.0219	37.289	736.5	0.0219	39.694	705.1	0.0218
11	34.086	725.4	0.0218	37.297	735.5	0.0219	39.686	703.3	0.0218
12	34.093	724.9	0.0218	37.316	735.0	0.0218	39.682	700.9	0.0218
13	34.092	724.6	0.0218	37.338	735.1	0.0218	39.667	697.9	0.0217
14	34.031	724.2	0.0217	37.312	735.9	0.0218	39.587	693.7	0.0217
15	33.726	722.8	0.0217	37.049	737.2	0.0217	39.238	687.9	0.0217
16	32.604	718.5	0.0217	35.929	737.4	0.0217	37.978	679.4	0.0217
17	29.100	706.9	0.0216	32.214	729.4	0.0216	33.995	665.1	0.0216
18	20.457	672.8	0.0216	22.668	699.3	0.0216	23.848	639.9	0.0216

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	23.759	678.5	0.0221	25.475	695.4	0.0222
2	34.502	702.5	0.0221	36.850	718.1	0.0221
3	39.741	712.5	0.0221	42.260	723.4	0.0221
4	41.561	714.0	0.0220	44.081	721.0	0.0221
5	42.121	713.2	0.0220	44.609	717.8	0.0220
6	42.252	711.8	0.0220	44.710	715.0	0.0220
7	42.254	710.3	0.0219	44.690	712.9	0.0220
8	42.226	708.9	0.0219	44.648	711.1	0.0219
9	42.198	707.7	0.0219	44.612	709.8	0.0219
10	42.179	706.6	0.0219	44.590	708.7	0.0219
11	42.171	705.7	0.0218	44.582	707.8	0.0218
12	42.168	704.9	0.0218	44.585	707.3	0.0218
13	42.156	704.2	0.0218	44.585	707.1	0.0218
14	42.075	703.3	0.0217	44.524	707.4	0.0217
15	41.711	701.9	0.0217	44.182	708.0	0.0217
16	40.388	698.6	0.0217	42.858	708.0	0.0217
17	36.184	687.9	0.0216	38.510	701.8	0.0216
18	25.363	660.5	0.0216	27.058	675.1	0.0216

Table 4-80. Burnup and TH Feedback Parameters by Axial Node for Assembly J12

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	4.532	1078.3	0.0238	9.644	1073.6	0.0238	15.116	1066.1	0.0238
2	6.872	1275.7	0.0237	14.455	1230.4	0.0237	22.078	1176.3	0.0236
3	8.412	1390.6	0.0236	17.238	1298.1	0.0236	26.155	1200.4	0.0235
4	9.230	1443.3	0.0235	18.472	1310.4	0.0234	27.654	1191.4	0.0233
5	9.617	1459.1	0.0233	18.921	1303.9	0.0233	28.042	1176.8	0.0232
6	9.821	1464.2	0.0232	19.100	1295.5	0.0231	28.125	1165.9	0.0231
7	9.933	1464.6	0.0230	19.181	1288.3	0.0230	28.142	1159.0	0.0229
8	9.988	1462.6	0.0229	19.222	1283.2	0.0229	28.149	1155.0	0.0228
9	10.007	1459.4	0.0227	19.247	1280.4	0.0227	28.161	1152.6	0.0227
10	9.999	1455.7	0.0226	19.273	1279.7	0.0226	28.184	1151.2	0.0226
11	9.976	1451.9	0.0224	19.313	1280.9	0.0225	28.232	1150.8	0.0224
12	9.949	1448.7	0.0223	19.392	1284.7	0.0223	28.341	1152.4	0.0223
13	9.901	1445.0	0.0222	19.487	1291.6	0.0222	28.511	1157.4	0.0222
14	9.736	1434.9	0.0220	19.437	1298.7	0.0221	28.578	1165.2	0.0221
15	9.395	1414.1	0.0219	19.126	1303.8	0.0220	28.421	1176.7	0.0220
16	8.738	1365.9	0.0218	18.232	1297.9	0.0218	27.582	1187.5	0.0219
17	7.463	1264.6	0.0217	15.974	1247.4	0.0217	24.744	1172.2	0.0217
18	5.181	1074.1	0.0216	11.211	1085.6	0.0216	17.724	1071.2	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	15.589	901.5	0.0234	17.661	895.4	0.0234	18.930	901.8	0.0234
2	22.811	1005.9	0.0233	25.990	993.2	0.0233	27.893	989.3	0.0233
3	27.035	1051.8	0.0232	30.818	1035.2	0.0232	33.031	1028.4	0.0232
4	28.617	1077.7	0.0231	32.724	1060.1	0.0231	35.072	1048.8	0.0231
5	29.057	1094.8	0.0230	33.346	1075.8	0.0230	35.752	1056.3	0.0230
6	29.175	1105.8	0.0229	33.573	1083.9	0.0229	36.004	1058.1	0.0228
7	29.215	1112.2	0.0228	33.683	1087.8	0.0227	36.126	1057.3	0.0227
8	29.235	1114.8	0.0226	33.744	1088.6	0.0226	36.192	1055.3	0.0226
9	29.254	1114.1	0.0225	33.782	1087.1	0.0225	36.233	1052.9	0.0225
10	29.278	1110.6	0.0224	33.810	1084.0	0.0224	36.262	1050.4	0.0224
11	29.321	1104.7	0.0223	33.844	1079.5	0.0223	36.300	1048.3	0.0223
12	29.420	1096.4	0.0222	33.924	1074.0	0.0222	36.387	1046.6	0.0222
13	29.573	1084.1	0.0221	34.037	1065.9	0.0221	36.501	1044.1	0.0221
14	29.607	1065.3	0.0220	33.979	1052.3	0.0220	36.426	1038.1	0.0220
15	29.397	1038.1	0.0219	33.598	1030.1	0.0219	35.992	1025.8	0.0219
16	28.480	1002.5	0.0218	32.397	996.3	0.0218	34.675	1002.6	0.0218
17	25.515	954.5	0.0217	28.927	952.3	0.0217	30.949	955.7	0.0217
18	18.231	852.0	0.0216	20.504	855.1	0.0216	21.879	866.6	0.0216

Table 4-81. Burnup and TH Feedback Parameters by Axial Node for Assembly J12a

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	4.532	1078.3	0.0238	9.644	1073.6	0.0238	15.071	1066.1	0.0238
2	6.872	1275.7	0.0237	14.455	1230.4	0.0237	21.997	1176.3	0.0236
3	8.412	1390.6	0.0236	17.238	1298.1	0.0236	26.040	1200.4	0.0235
4	9.230	1443.3	0.0235	18.472	1310.4	0.0234	27.518	1191.4	0.0233
5	9.617	1459.1	0.0233	18.921	1303.9	0.0233	27.894	1176.8	0.0232
6	9.821	1464.2	0.0232	19.100	1295.5	0.0231	27.970	1165.9	0.0231
7	9.933	1464.6	0.0230	19.181	1288.3	0.0230	27.984	1159.0	0.0229
8	9.988	1462.6	0.0229	19.222	1283.2	0.0229	27.988	1155.0	0.0228
9	10.007	1459.4	0.0227	19.247	1280.4	0.0227	27.997	1152.6	0.0227
10	9.999	1455.7	0.0226	19.273	1279.7	0.0226	28.019	1151.2	0.0226
11	9.976	1451.9	0.0224	19.313	1280.9	0.0225	28.066	1150.8	0.0224
12	9.949	1448.7	0.0223	19.392	1284.7	0.0223	28.176	1152.4	0.0223
13	9.901	1445.0	0.0222	19.487	1291.6	0.0222	28.351	1157.4	0.0222
14	9.736	1434.9	0.0220	19.437	1298.7	0.0221	28.421	1165.2	0.0221
15	9.395	1414.1	0.0219	19.126	1303.8	0.0220	28.265	1176.7	0.0220
16	8.738	1365.9	0.0218	18.232	1297.9	0.0218	27.432	1187.5	0.0219
17	7.463	1264.6	0.0217	15.974	1247.4	0.0217	24.613	1172.2	0.0217
18	5.181	1074.1	0.0216	11.211	1085.6	0.0216	17.638	1071.2	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	15.554	904.5	0.0234	17.686	901.7	0.0234	18.988	909.3	0.0234
2	22.737	1006.6	0.0233	25.968	997.4	0.0233	27.900	995.2	0.0233
3	26.917	1049.2	0.0232	30.713	1035.6	0.0232	32.939	1031.2	0.0232
4	28.472	1073.6	0.0231	32.568	1058.2	0.0231	34.923	1050.7	0.0231
5	28.898	1090.4	0.0230	33.173	1073.9	0.0230	35.589	1058.9	0.0230
6	29.007	1101.0	0.0229	33.391	1082.1	0.0228	35.836	1061.3	0.0228
7	29.042	1106.5	0.0227	33.490	1085.6	0.0227	35.948	1060.7	0.0227
8	29.057	1108.1	0.0226	33.541	1085.9	0.0226	36.003	1058.7	0.0226
9	29.071	1106.3	0.0225	33.569	1083.8	0.0225	36.032	1056.1	0.0225
10	29.091	1101.7	0.0224	33.584	1079.8	0.0224	36.047	1053.2	0.0224
11	29.129	1094.1	0.0223	33.602	1074.1	0.0223	36.064	1050.2	0.0223
12	29.224	1083.0	0.0222	33.657	1066.1	0.0222	36.115	1046.5	0.0222
13	29.374	1067.3	0.0220	33.739	1054.8	0.0221	36.185	1041.3	0.0221
14	29.409	1047.1	0.0219	33.666	1039.4	0.0220	36.086	1033.6	0.0220
15	29.202	1021.0	0.0219	33.291	1017.5	0.0219	35.656	1020.7	0.0219
16	28.296	988.0	0.0218	32.117	985.6	0.0218	34.368	998.0	0.0218
17	25.359	943.3	0.0217	28.697	944.6	0.0217	30.698	952.8	0.0217
18	18.130	844.5	0.0216	20.357	849.8	0.0216	21.719	864.6	0.0216

Table 4-82. Burnup and TH Feedback Parameters by Axial Node for Assembly J14

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	3.368	950.4	0.0232	7.431	990.8	0.0233	12.069	1016.5	0.0234
2	5.285	1128.6	0.0232	11.385	1128.6	0.0232	17.899	1124.8	0.0233
3	6.409	1217.5	0.0231	13.408	1178.4	0.0231	20.939	1142.3	0.0232
4	7.026	1260.9	0.0230	14.329	1188.3	0.0230	22.042	1134.3	0.0231
5	7.357	1280.3	0.0229	14.725	1184.9	0.0229	22.399	1123.1	0.0229
6	7.535	1287.8	0.0227	14.892	1178.4	0.0228	22.496	1114.4	0.0228
7	7.628	1289.6	0.0226	14.962	1172.5	0.0227	22.516	1108.8	0.0227
8	7.673	1288.5	0.0225	14.993	1168.3	0.0226	22.522	1105.6	0.0226
9	7.688	1286.1	0.0224	15.012	1165.9	0.0225	22.533	1103.8	0.0225
10	7.683	1283.1	0.0223	15.031	1165.3	0.0224	22.554	1102.9	0.0224
11	7.662	1279.7	0.0222	15.054	1166.5	0.0223	22.588	1102.8	0.0223
12	7.619	1275.3	0.0221	15.075	1169.6	0.0222	22.636	1104.1	0.0222
13	7.538	1268.7	0.0220	15.071	1174.6	0.0221	22.688	1107.4	0.0221
14	7.384	1256.9	0.0219	14.990	1180.6	0.0220	22.705	1114.1	0.0220
15	7.095	1234.6	0.0218	14.711	1184.2	0.0219	22.549	1124.1	0.0219
16	6.541	1190.3	0.0218	13.944	1175.5	0.0218	21.798	1132.4	0.0218
17	5.475	1101.7	0.0217	12.049	1126.0	0.0217	19.352	1118.2	0.0217
18	3.586	926.6	0.0216	8.094	985.5	0.0216	13.414	1011.5	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	12.521	903.6	0.0235	14.540	904.5	0.0235	15.801	919.2	0.0235
2	18.608	1020.5	0.0234	21.752	1017.2	0.0234	23.681	1023.6	0.0234
3	21.807	1079.8	0.0233	25.637	1076.2	0.0233	27.934	1073.7	0.0233
4	23.006	1115.7	0.0232	27.230	1110.7	0.0232	29.701	1097.5	0.0232
5	23.423	1138.4	0.0230	27.875	1130.4	0.0231	30.426	1108.1	0.0231
6	23.559	1152.9	0.0229	28.154	1141.7	0.0229	30.742	1111.6	0.0229
7	23.607	1161.8	0.0228	28.293	1148.0	0.0228	30.901	1111.9	0.0228
8	23.631	1166.3	0.0227	28.375	1150.7	0.0227	30.995	1110.7	0.0227
9	23.650	1167.1	0.0225	28.430	1150.7	0.0226	31.057	1109.0	0.0226
10	23.674	1164.7	0.0224	28.468	1148.7	0.0224	31.103	1107.3	0.0225
11	23.705	1159.4	0.0223	28.498	1144.9	0.0223	31.141	1105.9	0.0223
12	23.743	1151.2	0.0222	28.519	1139.3	0.0222	31.171	1104.9	0.0222
13	23.776	1138.6	0.0221	28.507	1130.6	0.0221	31.164	1103.0	0.0221
14	23.758	1118.5	0.0220	28.387	1115.5	0.0220	31.027	1097.6	0.0220
15	23.547	1089.0	0.0219	27.985	1091.5	0.0219	30.569	1085.3	0.0219
16	22.711	1048.6	0.0218	26.825	1055.8	0.0218	29.275	1060.7	0.0218
17	20.130	992.7	0.0217	23.666	1001.0	0.0217	25.816	1015.4	0.0217
18	13.923	875.0	0.0216	16.252	885.9	0.0216	17.689	905.1	0.0216

Table 4-83. Burnup and TH Feedback Parameters by Axial Node for Assembly J17

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	4.992	1115.7	0.0239	10.492	1098.1	0.0239	16.297	1083.8	0.0238
2	7.252	1301.9	0.0238	15.161	1251.0	0.0238	23.098	1187.7	0.0237
3	8.603	1403.2	0.0236	17.634	1311.5	0.0236	26.765	1209.4	0.0235
4	9.329	1449.4	0.0235	18.737	1320.6	0.0235	28.082	1198.9	0.0234
5	9.691	1464.0	0.0233	19.161	1314.6	0.0233	28.438	1183.9	0.0232
6	9.888	1468.7	0.0232	19.335	1306.4	0.0232	28.516	1172.7	0.0231
7	9.998	1469.0	0.0230	19.417	1299.5	0.0230	28.532	1165.8	0.0230
8	10.052	1467.0	0.0229	19.459	1294.7	0.0229	28.540	1161.6	0.0228
9	10.071	1463.8	0.0227	19.487	1291.9	0.0228	28.555	1159.2	0.0227
10	10.065	1460.1	0.0226	19.517	1291.1	0.0226	28.583	1157.8	0.0226
11	10.046	1456.6	0.0224	19.566	1292.5	0.0225	28.641	1157.3	0.0225
12	10.028	1453.8	0.0223	19.662	1296.7	0.0224	28.768	1159.0	0.0223
13	9.989	1450.6	0.0222	19.776	1303.9	0.0222	28.959	1164.1	0.0222
14	9.831	1440.7	0.0221	19.735	1311.1	0.0221	29.037	1172.0	0.0221
15	9.490	1419.9	0.0219	19.415	1315.7	0.0220	28.872	1183.8	0.0220
16	8.831	1373.0	0.0218	18.495	1308.1	0.0219	27.998	1194.5	0.0219
17	7.576	1273.4	0.0217	16.229	1257.2	0.0217	25.123	1177.8	0.0217
18	5.361	1088.9	0.0216	11.550	1095.2	0.0216	18.158	1074.0	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	16.473	690.5	0.0224	17.231	686.0	0.0223	17.701	690.1	0.0223
2	23.399	744.7	0.0223	24.675	736.8	0.0223	25.442	736.6	0.0223
3	27.148	771.3	0.0223	28.756	760.8	0.0223	29.687	754.7	0.0222
4	28.514	786.1	0.0222	30.302	772.9	0.0222	31.304	763.8	0.0222
5	28.900	795.6	0.0222	30.787	780.2	0.0222	31.818	767.4	0.0221
6	28.996	801.5	0.0221	30.939	784.0	0.0221	31.981	768.0	0.0221
7	29.025	804.7	0.0221	30.999	785.4	0.0221	32.044	767.1	0.0220
8	29.040	805.9	0.0220	31.030	785.4	0.0220	32.075	765.8	0.0220
9	29.058	805.5	0.0220	31.055	784.4	0.0220	32.098	764.2	0.0220
10	29.086	803.8	0.0219	31.082	782.6	0.0219	32.124	762.7	0.0219
11	29.141	800.5	0.0219	31.129	780.1	0.0219	32.169	761.1	0.0219
12	29.261	795.3	0.0218	31.230	776.5	0.0218	32.267	759.3	0.0218
13	29.440	787.7	0.0218	31.376	771.3	0.0218	32.408	756.9	0.0218
14	29.499	777.7	0.0218	31.385	764.4	0.0218	32.404	753.6	0.0218
15	29.306	764.6	0.0217	31.108	754.3	0.0217	32.102	748.0	0.0217
16	28.391	747.1	0.0217	30.050	740.2	0.0217	30.990	737.9	0.0217
17	25.445	722.1	0.0216	26.837	719.7	0.0216	27.649	721.4	0.0216
18	18.352	670.4	0.0216	19.211	671.6	0.0216	19.729	677.9	0.0216

Table 4-83. Burnup and TH Feedback Parameters by Axial Node for Assembly J17 (Cont.)

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	19.538	706.5	0.0223	21.931	734.2	0.0224	23.181	660.0	0.0221
2	28.292	748.4	0.0223	31.754	768.4	0.0223	33.615	683.5	0.0221
3	32.991	761.7	0.0222	36.814	780.7	0.0223	38.955	695.8	0.0220
4	34.737	765.1	0.0222	38.591	779.3	0.0222	40.865	701.6	0.0220
5	35.266	763.8	0.0221	39.074	774.9	0.0222	41.426	704.9	0.0220
6	35.410	761.2	0.0221	39.171	770.9	0.0221	41.566	706.6	0.0220
7	35.449	758.5	0.0220	39.176	767.8	0.0221	41.593	707.0	0.0219
8	35.460	756.1	0.0220	39.167	765.4	0.0220	41.592	706.5	0.0219
9	35.470	754.2	0.0220	39.167	763.5	0.0220	41.589	705.5	0.0219
10	35.491	752.7	0.0219	39.186	762.0	0.0220	41.597	703.9	0.0218
11	35.537	751.7	0.0219	39.237	760.9	0.0219	41.629	701.9	0.0218
12	35.642	750.9	0.0218	39.354	760.1	0.0219	41.716	699.2	0.0218
13	35.792	750.3	0.0218	39.525	759.8	0.0218	41.843	695.6	0.0217
14	35.797	749.7	0.0218	39.570	760.7	0.0218	41.830	691.2	0.0217
15	35.483	748.3	0.0217	39.306	762.5	0.0217	41.481	685.5	0.0217
16	34.282	743.4	0.0217	38.117	763.3	0.0217	40.160	677.6	0.0217
17	30.608	729.2	0.0216	34.221	754.4	0.0217	36.011	664.3	0.0216
18	21.708	691.2	0.0216	24.298	719.3	0.0216	25.499	638.9	0.0216

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	24.774	681.6	0.0221	26.574	699.1	0.0222
2	35.882	705.9	0.0221	38.315	722.5	0.0222
3	41.457	714.5	0.0221	44.045	726.3	0.0221
4	43.422	715.2	0.0221	45.999	723.1	0.0221
5	43.989	714.2	0.0220	46.530	719.6	0.0220
6	44.121	712.7	0.0220	46.630	716.7	0.0220
7	44.136	711.1	0.0220	46.621	714.4	0.0220
8	44.123	709.6	0.0219	46.593	712.6	0.0219
9	44.112	708.2	0.0219	46.572	711.1	0.0219
10	44.113	707.0	0.0219	46.568	709.9	0.0219
11	44.142	705.9	0.0218	46.596	708.9	0.0218
12	44.225	704.7	0.0218	46.681	708.0	0.0218
13	44.348	703.5	0.0218	46.809	707.3	0.0218
14	44.330	702.4	0.0217	46.808	707.4	0.0217
15	43.966	701.0	0.0217	46.468	708.0	0.0217
16	42.588	698.0	0.0217	45.093	708.4	0.0217
17	38.229	688.2	0.0216	40.602	703.0	0.0216
18	27.051	659.8	0.0216	28.797	674.6	0.0216

Table 4-84. Burnup and TH Feedback Parameters by Axial Node for Assembly J17a

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	4.992	1115.7	0.0239	10.492	1098.1	0.0239	16.268	1083.8	0.0238
2	7.252	1301.9	0.0238	15.161	1251.0	0.0238	23.050	1187.7	0.0237
3	8.603	1403.2	0.0236	17.634	1311.5	0.0236	26.699	1209.4	0.0235
4	9.329	1449.4	0.0235	18.737	1320.6	0.0235	28.006	1198.9	0.0234
5	9.691	1464.0	0.0233	19.161	1314.6	0.0233	28.355	1183.9	0.0232
6	9.888	1468.7	0.0232	19.335	1306.4	0.0232	28.429	1172.7	0.0231
7	9.998	1469.0	0.0230	19.417	1299.5	0.0230	28.444	1165.8	0.0230
8	10.052	1467.0	0.0229	19.459	1294.7	0.0229	28.450	1161.6	0.0228
9	10.071	1463.8	0.0227	19.487	1291.9	0.0228	28.463	1159.2	0.0227
10	10.065	1460.1	0.0226	19.517	1291.1	0.0226	28.490	1157.8	0.0226
11	10.046	1456.6	0.0224	19.566	1292.5	0.0225	28.547	1157.3	0.0225
12	10.028	1453.8	0.0223	19.662	1296.7	0.0224	28.675	1159.0	0.0223
13	9.989	1450.6	0.0222	19.776	1303.9	0.0222	28.868	1164.1	0.0222
14	9.831	1440.7	0.0221	19.735	1311.1	0.0221	28.948	1172.0	0.0221
15	9.490	1419.9	0.0219	19.415	1315.7	0.0220	28.783	1183.8	0.0220
16	8.831	1373.0	0.0218	18.495	1308.1	0.0219	27.912	1194.5	0.0219
17	7.576	1273.4	0.0217	16.229	1257.2	0.0217	25.047	1177.8	0.0217
18	5.361	1088.9	0.0216	11.550	1095.2	0.0216	18.107	1074.0	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	16.710	872.3	0.0232	18.665	869.6	0.0232	19.867	878.7	0.0232
2	23.734	969.4	0.0232	26.726	960.6	0.0232	28.525	960.6	0.0232
3	27.517	1012.2	0.0231	31.057	999.5	0.0231	33.143	999.4	0.0231
4	28.897	1035.9	0.0230	32.727	1023.3	0.0230	34.938	1018.9	0.0230
5	29.293	1051.6	0.0229	33.292	1038.0	0.0229	35.562	1027.0	0.0229
6	29.396	1061.0	0.0227	33.496	1045.5	0.0227	35.793	1029.2	0.0227
7	29.429	1065.6	0.0226	33.586	1048.3	0.0226	35.893	1028.5	0.0226
8	29.445	1066.2	0.0225	33.629	1048.0	0.0225	35.939	1026.3	0.0225
9	29.460	1063.7	0.0224	33.651	1045.3	0.0224	35.960	1023.3	0.0224
10	29.482	1058.2	0.0223	33.662	1040.8	0.0223	35.967	1020.0	0.0223
11	29.529	1049.7	0.0222	33.679	1034.2	0.0222	35.978	1016.2	0.0222
12	29.638	1037.1	0.0221	33.735	1024.9	0.0221	36.023	1011.3	0.0221
13	29.804	1020.2	0.0220	33.820	1012.4	0.0220	36.089	1004.6	0.0220
14	29.849	1000.1	0.0219	33.753	996.7	0.0219	35.992	996.2	0.0219
15	29.637	976.0	0.0218	33.384	976.3	0.0218	35.570	983.9	0.0219
16	28.701	947.3	0.0218	32.209	947.7	0.0218	34.293	963.5	0.0218
17	25.729	908.1	0.0217	28.798	910.8	0.0217	30.653	922.2	0.0217
18	18.553	816.9	0.0216	20.593	823.6	0.0216	21.851	840.5	0.0216

Table 4-85. Burnup and TH Feedback Parameters by Axial Node for Assembly J19

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	4.343	1055.4	0.0237	9.346	1066.3	0.0237	14.873	1073.1	0.0238
2	6.463	1234.9	0.0236	13.735	1210.3	0.0236	21.370	1184.8	0.0236
3	7.812	1337.8	0.0235	16.190	1273.2	0.0235	25.025	1204.9	0.0235
4	8.563	1388.2	0.0233	17.332	1286.9	0.0234	26.419	1196.7	0.0234
5	8.945	1408.8	0.0232	17.787	1282.5	0.0232	26.832	1183.0	0.0232
6	9.154	1416.7	0.0230	17.987	1274.9	0.0231	26.951	1172.7	0.0231
7	9.276	1418.9	0.0229	18.088	1268.4	0.0229	27.001	1166.4	0.0229
8	9.342	1418.1	0.0228	18.149	1263.9	0.0228	27.037	1162.8	0.0228
9	9.374	1416.0	0.0226	18.195	1261.6	0.0227	27.079	1160.8	0.0227
10	9.384	1413.4	0.0225	18.244	1261.4	0.0226	27.135	1159.8	0.0226
11	9.383	1411.0	0.0224	18.314	1263.5	0.0224	27.220	1159.7	0.0224
12	9.384	1409.6	0.0223	18.430	1269.0	0.0223	27.376	1161.7	0.0223
13	9.365	1407.8	0.0221	18.565	1277.1	0.0222	27.596	1167.1	0.0222
14	9.220	1397.9	0.0220	18.535	1284.5	0.0221	27.690	1175.2	0.0221
15	8.879	1373.1	0.0219	18.211	1288.7	0.0220	27.515	1186.9	0.0220
16	8.202	1321.6	0.0218	17.265	1279.8	0.0218	26.598	1196.7	0.0219
17	6.931	1220.3	0.0217	14.994	1222.0	0.0217	23.690	1178.4	0.0217
18	4.807	1042.0	0.0216	10.532	1068.1	0.0216	16.950	1072.3	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	15.328	889.8	0.0233	17.342	886.6	0.0233	18.584	896.4	0.0233
2	22.077	994.0	0.0232	25.169	985.3	0.0232	27.039	986.4	0.0232
3	25.871	1039.7	0.0231	29.550	1028.5	0.0231	31.727	1022.9	0.0231
4	27.341	1063.6	0.0230	31.325	1050.1	0.0230	33.634	1043.3	0.0230
5	27.800	1078.6	0.0229	31.956	1062.6	0.0229	34.322	1050.8	0.0229
6	27.950	1087.8	0.0228	32.208	1069.5	0.0228	34.599	1052.6	0.0228
7	28.019	1092.6	0.0227	32.338	1072.5	0.0227	34.739	1051.6	0.0227
8	28.066	1093.6	0.0226	32.418	1072.4	0.0226	34.822	1049.2	0.0226
9	28.111	1091.3	0.0225	32.474	1070.0	0.0225	34.878	1046.3	0.0225
10	28.164	1086.2	0.0223	32.520	1065.7	0.0224	34.922	1043.1	0.0224
11	28.241	1078.4	0.0222	32.575	1059.7	0.0222	34.975	1039.8	0.0223
12	28.381	1067.3	0.0221	32.676	1051.7	0.0221	35.072	1036.1	0.0222
13	28.578	1052.0	0.0220	32.808	1040.9	0.0220	35.194	1031.2	0.0221
14	28.638	1032.5	0.0219	32.765	1025.9	0.0219	35.126	1023.7	0.0220
15	28.415	1007.7	0.0218	32.381	1004.9	0.0219	34.689	1011.5	0.0219
16	27.431	977.6	0.0218	31.143	977.9	0.0218	33.346	990.4	0.0218
17	24.412	936.2	0.0217	27.662	940.1	0.0217	29.625	951.3	0.0217
18	17.425	838.4	0.0216	19.591	845.5	0.0216	20.922	861.9	0.0216

Table 4-86. Burnup and TH Feedback Parameters by Axial Node for Assembly J20

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	3.303	944.8	0.0233	7.247	980.0	0.0233	11.706	1006.4	0.0234
2	5.503	1145.6	0.0232	11.586	1122.2	0.0232	17.948	1112.9	0.0233
3	6.745	1241.3	0.0232	13.734	1171.1	0.0231	21.132	1129.9	0.0231
4	7.421	1286.9	0.0230	14.714	1180.7	0.0230	22.308	1122.7	0.0230
5	7.784	1307.1	0.0229	15.143	1177.1	0.0229	22.708	1111.8	0.0229
6	7.981	1314.7	0.0228	15.328	1170.6	0.0228	22.831	1103.2	0.0228
7	8.089	1316.6	0.0227	15.415	1164.8	0.0227	22.872	1097.8	0.0227
8	8.148	1315.9	0.0226	15.463	1160.8	0.0226	22.899	1094.6	0.0226
9	8.177	1314.1	0.0225	15.500	1158.5	0.0225	22.929	1092.8	0.0225
10	8.186	1311.9	0.0224	15.538	1158.1	0.0224	22.971	1091.9	0.0224
11	8.182	1309.6	0.0223	15.584	1159.5	0.0223	23.029	1091.7	0.0223
12	8.158	1307.0	0.0222	15.634	1162.9	0.0222	23.106	1092.8	0.0222
13	8.096	1302.2	0.0220	15.661	1168.2	0.0221	23.189	1096.0	0.0221
14	7.950	1292.0	0.0219	15.598	1174.4	0.0220	23.222	1102.4	0.0220
15	7.644	1269.9	0.0219	15.310	1178.4	0.0219	23.054	1112.2	0.0219
16	7.035	1223.6	0.0218	14.492	1170.3	0.0218	22.249	1120.5	0.0218
17	5.826	1126.8	0.0217	12.438	1122.3	0.0217	19.630	1105.7	0.0217
18	3.479	914.6	0.0216	7.762	966.2	0.0216	12.781	991.7	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	12.156	899.1	0.0233	14.147	897.7	0.0233	15.376	909.0	0.0233
2	18.638	1005.1	0.0232	21.670	998.4	0.0232	23.509	1000.4	0.0232
3	21.961	1053.7	0.0231	25.582	1045.6	0.0231	27.732	1039.4	0.0231
4	23.207	1075.9	0.0230	27.115	1067.7	0.0230	29.380	1052.4	0.0230
5	23.621	1074.8	0.0229	27.560	1064.2	0.0229	29.811	1044.8	0.0229
6	23.770	1083.0	0.0228	27.798	1069.7	0.0228	30.067	1044.8	0.0228
7	23.832	1088.8	0.0227	27.925	1073.3	0.0227	30.206	1044.0	0.0227
8	23.871	1091.1	0.0226	28.003	1074.0	0.0226	30.289	1042.1	0.0226
9	23.908	1090.3	0.0225	28.059	1072.7	0.0225	30.347	1039.7	0.0225
10	23.950	1087.0	0.0224	28.104	1069.6	0.0224	30.395	1037.4	0.0224
11	24.004	1081.9	0.0223	28.152	1065.5	0.0223	30.449	1035.7	0.0223
12	24.084	1080.8	0.0222	28.252	1063.9	0.0222	30.584	1039.2	0.0222
13	24.211	1100.2	0.0221	28.592	1085.8	0.0221	31.052	1062.1	0.0221
14	24.219	1085.2	0.0220	28.541	1075.5	0.0220	30.998	1059.3	0.0220
15	24.000	1058.3	0.0219	28.152	1054.1	0.0219	30.556	1047.7	0.0219
16	23.119	1022.6	0.0218	26.984	1023.3	0.0218	29.269	1025.7	0.0218
17	20.379	975.7	0.0217	23.744	978.5	0.0217	25.769	988.4	0.0217
18	13.285	875.5	0.0216	15.566	882.4	0.0216	16.959	898.7	0.0216

Table 4-87. Burnup and TH Feedback Parameters by Axial Node for Assembly J23

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	4.294	1053.3	0.0237	9.215	1061.3	0.0238	14.627	1064.2	0.0238
2	6.446	1237.8	0.0236	13.695	1210.1	0.0237	21.260	1180.8	0.0237
3	7.919	1348.4	0.0235	16.404	1280.9	0.0235	25.297	1207.3	0.0235
4	8.731	1401.2	0.0234	17.660	1297.5	0.0234	26.866	1200.7	0.0234
5	9.119	1421.4	0.0232	18.130	1293.3	0.0233	27.301	1186.9	0.0232
6	9.325	1428.1	0.0231	18.324	1285.5	0.0231	27.412	1176.3	0.0231
7	9.443	1429.3	0.0229	18.420	1278.8	0.0230	27.452	1169.7	0.0230
8	9.507	1428.0	0.0228	18.475	1274.2	0.0228	27.480	1165.8	0.0228
9	9.537	1425.5	0.0227	18.517	1271.7	0.0227	27.514	1163.5	0.0227
10	9.546	1422.7	0.0225	18.564	1271.3	0.0226	27.563	1162.3	0.0226
11	9.548	1420.3	0.0224	18.637	1273.3	0.0225	27.647	1162.0	0.0225
12	9.557	1419.2	0.0223	18.765	1278.3	0.0223	27.809	1163.8	0.0223
13	9.548	1417.9	0.0222	18.916	1285.9	0.0222	28.040	1169.0	0.0222
14	9.411	1409.2	0.0220	18.898	1293.0	0.0221	28.143	1177.0	0.0221
15	9.078	1386.4	0.0219	18.583	1297.1	0.0220	27.978	1188.7	0.0220
16	8.418	1336.6	0.0218	17.660	1288.8	0.0218	27.090	1198.8	0.0219
17	7.172	1238.2	0.0217	15.429	1233.7	0.0217	24.238	1180.9	0.0217
18	5.037	1060.3	0.0216	10.938	1078.5	0.0216	17.470	1076.0	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	15.028	855.7	0.0233	16.781	850.2	0.0232	17.860	857.5	0.0232
2	21.908	961.2	0.0232	24.700	948.5	0.0232	26.374	944.9	0.0231
3	26.096	1011.2	0.0231	29.500	993.2	0.0231	31.480	979.3	0.0230
4	27.755	1040.3	0.0230	31.494	1017.3	0.0230	33.609	1000.2	0.0229
5	28.246	1060.0	0.0229	32.179	1033.1	0.0229	34.353	1008.1	0.0228
6	28.394	1072.8	0.0228	32.444	1041.9	0.0228	34.644	1010.1	0.0227
7	28.460	1080.4	0.0227	32.583	1046.3	0.0226	34.793	1009.4	0.0226
8	28.504	1084.0	0.0226	32.671	1047.7	0.0225	34.886	1007.5	0.0225
9	28.546	1084.2	0.0225	32.737	1046.9	0.0224	34.955	1005.3	0.0224
10	28.598	1081.6	0.0223	32.796	1044.4	0.0223	35.016	1003.1	0.0223
11	28.677	1076.1	0.0222	32.870	1040.5	0.0222	35.093	1001.0	0.0222
12	28.829	1067.1	0.0221	32.999	1034.6	0.0221	35.225	998.9	0.0221
13	29.040	1053.4	0.0220	33.162	1025.8	0.0220	35.387	995.7	0.0220
14	29.109	1033.9	0.0219	33.137	1012.2	0.0219	35.344	990.0	0.0219
15	28.890	1006.5	0.0218	32.750	990.6	0.0218	34.909	978.9	0.0218
16	27.920	969.6	0.0218	31.493	958.2	0.0218	33.541	956.8	0.0218
17	24.934	916.9	0.0217	27.980	912.8	0.0217	29.772	913.4	0.0217
18	17.908	812.8	0.0216	19.862	815.5	0.0216	21.040	826.2	0.0216

Table 4-88. Burnup and TH Feedback Parameters by Axial Node for Assembly J25

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	2.676	874.3	0.0230	5.904	912.2	0.0230	9.644	951.8	0.0231
2	4.549	1051.9	0.0229	9.611	1047.3	0.0229	15.039	1054.2	0.0230
3	5.632	1140.2	0.0229	11.487	1092.3	0.0228	17.846	1074.9	0.0229
4	6.220	1181.6	0.0228	12.344	1102.0	0.0228	18.892	1069.5	0.0228
5	6.532	1199.4	0.0227	12.713	1099.2	0.0227	19.243	1060.3	0.0227
6	6.698	1205.7	0.0226	12.867	1093.4	0.0226	19.342	1052.8	0.0226
7	6.786	1207.0	0.0225	12.933	1088.2	0.0225	19.367	1047.8	0.0225
8	6.832	1206.0	0.0224	12.967	1084.4	0.0224	19.378	1044.9	0.0225
9	6.854	1204.2	0.0223	12.991	1082.2	0.0223	19.393	1043.2	0.0224
10	6.859	1202.1	0.0222	13.016	1081.6	0.0222	19.418	1042.3	0.0223
11	6.853	1200.0	0.0221	13.047	1082.5	0.0222	19.456	1042.1	0.0222
12	6.832	1197.5	0.0221	13.082	1085.1	0.0221	19.510	1042.9	0.0221
13	6.777	1193.3	0.0220	13.096	1089.3	0.0220	19.568	1045.7	0.0220
14	6.651	1184.3	0.0219	13.035	1094.3	0.0219	19.583	1051.3	0.0219
15	6.392	1165.1	0.0218	12.783	1097.3	0.0218	19.425	1059.5	0.0219
16	5.873	1124.2	0.0217	12.081	1089.2	0.0218	18.716	1065.3	0.0218
17	4.830	1036.6	0.0217	10.306	1045.0	0.0217	16.421	1048.2	0.0217
18	2.834	849.3	0.0216	6.329	900.7	0.0216	10.528	938.2	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	9.999	839.3	0.0230	11.606	844.4	0.0230	12.620	861.0	0.0231
2	15.598	938.7	0.0229	18.107	942.4	0.0230	19.659	954.6	0.0230
3	18.525	986.8	0.0229	21.553	988.9	0.0229	23.384	992.3	0.0229
4	19.643	1014.9	0.0228	22.965	1014.8	0.0228	24.925	1008.5	0.0228
5	20.041	1033.3	0.0227	23.542	1030.4	0.0227	25.564	1015.3	0.0227
6	20.172	1045.3	0.0226	23.785	1039.7	0.0226	25.837	1017.5	0.0226
7	20.218	1052.5	0.0225	23.903	1044.7	0.0225	25.969	1017.3	0.0225
8	20.242	1056.0	0.0224	23.971	1046.7	0.0224	26.045	1016.0	0.0224
9	20.264	1056.3	0.0223	24.018	1046.4	0.0223	26.096	1014.2	0.0224
10	20.290	1053.9	0.0222	24.052	1044.3	0.0222	26.134	1012.4	0.0223
11	20.324	1048.7	0.0221	24.078	1040.5	0.0222	26.164	1010.6	0.0222
12	20.366	1040.3	0.0220	24.095	1034.4	0.0221	26.181	1008.5	0.0221
13	20.405	1027.8	0.0220	24.081	1025.3	0.0220	26.162	1005.3	0.0220
14	20.391	1010.1	0.0219	23.974	1011.7	0.0219	26.037	1000.0	0.0219
15	20.189	986.0	0.0218	23.618	992.1	0.0218	25.634	990.1	0.0218
16	19.414	953.6	0.0217	22.588	963.6	0.0217	24.497	972.3	0.0218
17	17.011	906.6	0.0217	19.728	918.9	0.0217	21.397	936.6	0.0217
18	10.912	810.2	0.0216	12.692	822.3	0.0216	13.805	843.2	0.0216

Table 4-89. Burnup and TH Feedback Parameters by Axial Node for Assembly J25a

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	2.676	874.3	0.0230	5.904	912.2	0.0230	9.645	951.8	0.0231
2	4.549	1051.9	0.0229	9.611	1047.3	0.0229	15.042	1054.2	0.0230
3	5.632	1140.2	0.0229	11.487	1092.3	0.0228	17.851	1074.9	0.0229
4	6.220	1181.6	0.0228	12.344	1102.0	0.0228	18.899	1069.5	0.0228
5	6.532	1199.4	0.0227	12.713	1099.2	0.0227	19.252	1060.3	0.0227
6	6.698	1205.7	0.0226	12.867	1093.4	0.0226	19.351	1052.8	0.0226
7	6.786	1207.0	0.0225	12.933	1088.2	0.0225	19.376	1047.8	0.0225
8	6.832	1206.0	0.0224	12.967	1084.4	0.0224	19.388	1044.9	0.0225
9	6.854	1204.2	0.0223	12.991	1082.2	0.0223	19.404	1043.2	0.0224
10	6.859	1202.1	0.0222	13.016	1081.6	0.0222	19.429	1042.3	0.0223
11	6.853	1200.0	0.0221	13.047	1082.5	0.0222	19.468	1042.1	0.0222
12	6.832	1197.5	0.0221	13.082	1085.1	0.0221	19.522	1042.9	0.0221
13	6.777	1193.3	0.0220	13.096	1089.3	0.0220	19.580	1045.7	0.0220
14	6.651	1184.3	0.0219	13.035	1094.3	0.0219	19.596	1051.3	0.0219
15	6.392	1165.1	0.0218	12.783	1097.3	0.0218	19.439	1059.5	0.0219
16	5.873	1124.2	0.0217	12.081	1089.2	0.0218	18.729	1065.3	0.0218
17	4.830	1036.6	0.0217	10.306	1045.0	0.0217	16.432	1048.2	0.0217
18	2.834	849.3	0.0216	6.329	900.7	0.0216	10.536	938.2	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	10.093	917.8	0.0234	12.064	909.0	0.0234	13.286	918.9	0.0234
2	15.753	1045.8	0.0233	18.843	1030.7	0.0233	20.718	1028.4	0.0233
3	18.713	1102.5	0.0232	22.444	1085.2	0.0232	24.651	1072.6	0.0232
4	19.842	1130.6	0.0231	23.900	1110.9	0.0231	26.246	1089.2	0.0231
5	20.243	1147.6	0.0230	24.481	1124.9	0.0230	26.887	1095.0	0.0229
6	20.373	1158.2	0.0228	24.719	1132.4	0.0228	27.151	1096.3	0.0228
7	20.419	1164.0	0.0227	24.829	1135.6	0.0227	27.272	1095.2	0.0227
8	20.442	1165.7	0.0226	24.887	1135.8	0.0226	27.333	1092.8	0.0226
9	20.462	1163.9	0.0225	24.919	1133.6	0.0225	27.366	1089.9	0.0225
10	20.484	1158.9	0.0224	24.936	1129.4	0.0224	27.381	1086.8	0.0224
11	20.514	1150.8	0.0223	24.943	1123.2	0.0223	27.386	1083.6	0.0223
12	20.552	1139.2	0.0221	24.938	1114.8	0.0222	27.376	1079.9	0.0222
13	20.586	1123.4	0.0220	24.903	1103.3	0.0221	27.329	1075.1	0.0221
14	20.566	1102.7	0.0219	24.777	1087.9	0.0220	27.178	1068.1	0.0220
15	20.360	1076.4	0.0219	24.410	1067.3	0.0219	26.761	1057.1	0.0219
16	19.583	1043.4	0.0218	23.380	1039.8	0.0218	25.628	1039.6	0.0218
17	17.169	994.0	0.0217	20.488	995.7	0.0217	22.488	1004.8	0.0217
18	11.019	877.7	0.0216	13.226	884.8	0.0216	14.585	903.9	0.0216

Table 4-90. Burnup and TH Feedback Parameters by Axial Node for Assembly J27

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	2.895	905.3	0.0232	6.354	937.7	0.0232	10.314	969.2	0.0232
2	5.044	1108.5	0.0232	10.580	1084.8	0.0231	16.369	1079.7	0.0232
3	6.449	1215.6	0.0231	13.003	1139.4	0.0230	19.942	1106.1	0.0231
4	7.214	1264.8	0.0230	14.126	1153.1	0.0229	21.341	1101.6	0.0230
5	7.598	1284.7	0.0229	14.584	1150.3	0.0228	21.791	1091.4	0.0229
6	7.796	1291.6	0.0228	14.770	1143.9	0.0227	21.918	1083.1	0.0227
7	7.903	1292.9	0.0227	14.853	1138.1	0.0226	21.955	1077.7	0.0226
8	7.961	1291.8	0.0226	14.897	1133.9	0.0225	21.975	1074.4	0.0226
9	7.990	1289.8	0.0224	14.930	1131.4	0.0224	21.998	1072.5	0.0225
10	8.001	1287.6	0.0223	14.963	1130.7	0.0223	22.031	1071.4	0.0224
11	7.999	1285.5	0.0222	15.004	1131.6	0.0222	22.078	1070.9	0.0223
12	7.979	1283.1	0.0221	15.048	1134.4	0.0221	22.142	1071.6	0.0222
13	7.921	1279.0	0.0220	15.070	1139.0	0.0221	22.211	1074.4	0.0221
14	7.785	1269.9	0.0219	15.009	1144.7	0.0220	22.236	1080.2	0.0220
15	7.500	1250.2	0.0218	14.744	1148.5	0.0219	22.080	1089.3	0.0219
16	6.927	1208.0	0.0218	13.989	1141.3	0.0218	21.338	1097.4	0.0218
17	5.757	1116.1	0.0217	12.053	1097.6	0.0217	18.893	1084.7	0.0217
18	3.547	919.0	0.0216	7.783	961.2	0.0216	12.752	987.1	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	10.667	865.8	0.0234	12.173	837.5	0.0235	13.119	850.5	0.0235
2	17.032	1038.1	0.0234	19.826	1009.3	0.0234	21.627	1007.4	0.0234
3	20.814	1096.0	0.0233	24.626	1084.6	0.0233	26.925	1080.5	0.0233
4	22.307	1124.4	0.0231	26.531	1115.4	0.0232	29.007	1102.3	0.0232
5	22.811	1142.5	0.0230	27.244	1131.6	0.0230	29.793	1110.4	0.0231
6	22.973	1154.2	0.0229	27.534	1141.0	0.0229	30.115	1112.7	0.0229
7	23.033	1161.1	0.0228	27.673	1145.6	0.0228	30.270	1112.2	0.0228
8	23.067	1163.8	0.0226	27.754	1147.0	0.0227	30.359	1110.3	0.0227
9	23.097	1163.0	0.0225	27.808	1145.8	0.0225	30.417	1107.9	0.0226
10	23.129	1159.1	0.0224	27.845	1142.5	0.0224	30.458	1105.4	0.0224
11	23.170	1152.3	0.0223	27.873	1137.4	0.0223	30.490	1103.0	0.0223
12	23.221	1142.3	0.0222	27.894	1130.2	0.0222	30.514	1100.6	0.0222
13	23.268	1128.1	0.0221	27.883	1119.9	0.0221	30.498	1097.2	0.0221
14	23.258	1107.8	0.0220	27.766	1104.4	0.0220	30.361	1090.8	0.0220
15	23.051	1080.3	0.0219	27.381	1081.8	0.0219	29.920	1079.0	0.0219
16	22.233	1044.5	0.0218	26.272	1049.8	0.0218	28.690	1057.4	0.0218
17	19.665	994.2	0.0217	23.181	1001.8	0.0217	25.321	1016.6	0.0217
18	13.266	882.4	0.0216	15.620	892.9	0.0216	17.074	912.8	0.0216

Table 4-91. Burnup and TH Feedback Parameters by Axial Node for Assembly J27a

Axial Node	Datapoint (214.0 Cy9)			Datapoint (425.0 Cy9)			Statepoint 69 (BOC Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	214.0 Cy9	109.3 Cy9	109.3 Cy9	425.0 Cy9	328.7 Cy9	328.7 Cy9	BOC Cy10	549.2 Cy9	549.2 Cy9
1	2.895	905.3	0.0232	6.354	937.7	0.0232	10.316	969.2	0.0232
2	5.044	1108.5	0.0232	10.580	1084.8	0.0231	16.375	1079.7	0.0232
3	6.449	1215.6	0.0231	13.003	1139.4	0.0230	19.956	1106.1	0.0231
4	7.214	1264.8	0.0230	14.126	1153.1	0.0229	21.360	1101.6	0.0230
5	7.598	1284.7	0.0229	14.584	1150.3	0.0228	21.812	1091.4	0.0229
6	7.796	1291.6	0.0228	14.770	1143.9	0.0227	21.940	1083.1	0.0227
7	7.903	1292.9	0.0227	14.853	1138.1	0.0226	21.978	1077.7	0.0226
8	7.961	1291.8	0.0226	14.897	1133.9	0.0225	21.999	1074.4	0.0226
9	7.990	1289.8	0.0224	14.930	1131.4	0.0224	22.023	1072.5	0.0225
10	8.001	1287.6	0.0223	14.963	1130.7	0.0223	22.057	1071.4	0.0224
11	7.999	1285.5	0.0222	15.004	1131.6	0.0222	22.105	1070.9	0.0223
12	7.979	1283.1	0.0221	15.048	1134.4	0.0221	22.170	1071.6	0.0222
13	7.921	1279.0	0.0220	15.070	1139.0	0.0221	22.239	1074.4	0.0221
14	7.785	1269.9	0.0219	15.009	1144.7	0.0220	22.264	1080.2	0.0220
15	7.500	1250.2	0.0218	14.744	1148.5	0.0219	22.109	1089.3	0.0219
16	6.927	1208.0	0.0218	13.989	1141.3	0.0218	21.366	1097.4	0.0218
17	5.757	1116.1	0.0217	12.053	1097.6	0.0217	18.917	1084.7	0.0217
18	3.547	919.0	0.0216	7.783	961.2	0.0216	12.768	987.1	0.0216

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	10.642	847.5	0.0235	11.992	812.5	0.0234	12.823	816.9	0.0233
2	17.020	1025.0	0.0234	19.629	982.7	0.0233	21.258	966.2	0.0232
3	20.826	1093.1	0.0233	24.451	1059.9	0.0232	26.547	1034.1	0.0231
4	22.339	1128.0	0.0232	26.385	1091.4	0.0231	28.643	1053.2	0.0230
5	22.854	1150.2	0.0231	27.114	1107.6	0.0230	29.435	1059.6	0.0229
6	23.025	1164.7	0.0229	27.410	1116.5	0.0229	29.758	1060.7	0.0228
7	23.091	1173.6	0.0228	27.555	1120.8	0.0227	29.915	1059.5	0.0227
8	23.130	1178.1	0.0227	27.643	1122.2	0.0226	30.008	1057.3	0.0226
9	23.164	1179.1	0.0226	27.705	1121.3	0.0225	30.073	1054.9	0.0225
10	23.202	1176.8	0.0224	27.753	1118.8	0.0224	30.124	1052.6	0.0224
11	23.247	1171.6	0.0223	27.795	1114.8	0.0223	30.171	1050.6	0.0223
12	23.301	1163.1	0.0222	27.831	1109.1	0.0222	30.212	1048.9	0.0222
13	23.351	1149.6	0.0221	27.835	1100.5	0.0221	30.216	1046.4	0.0221
14	23.340	1129.0	0.0220	27.729	1086.8	0.0220	30.096	1041.3	0.0220
15	23.126	1098.8	0.0219	27.343	1065.3	0.0219	29.661	1031.2	0.0219
16	22.293	1056.1	0.0218	26.206	1032.4	0.0218	28.410	1011.4	0.0218
17	19.694	992.4	0.0217	23.039	979.5	0.0217	24.974	972.4	0.0217
18	13.258	865.6	0.0216	15.417	864.6	0.0216	16.702	872.8	0.0216

Table 4-92. Burnup and TH Feedback Parameters by Axial Node for Assembly K2

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.506	1043.7	0.0236	2.724	1035.8	0.0237	4.096	1049.0	0.0237
2	0.764	1238.0	0.0235	4.116	1224.1	0.0236	6.174	1220.1	0.0236
3	0.950	1364.4	0.0234	5.112	1344.1	0.0235	7.613	1321.4	0.0235
4	1.057	1432.4	0.0233	5.669	1405.3	0.0233	8.384	1365.9	0.0234
5	1.121	1469.8	0.0232	5.979	1436.1	0.0232	8.793	1383.6	0.0232
6	1.160	1490.7	0.0230	6.162	1451.1	0.0230	9.024	1389.1	0.0231
7	1.185	1500.7	0.0229	6.272	1457.0	0.0229	9.157	1389.4	0.0229
8	1.199	1504.0	0.0227	6.333	1458.1	0.0228	9.230	1387.7	0.0228
9	1.204	1502.6	0.0226	6.358	1456.3	0.0226	9.261	1385.4	0.0227
10	1.201	1497.2	0.0225	6.353	1452.2	0.0225	9.259	1383.0	0.0225
11	1.191	1487.7	0.0223	6.318	1445.6	0.0224	9.224	1380.4	0.0224
12	1.172	1472.8	0.0222	6.248	1436.1	0.0222	9.150	1377.2	0.0223
13	1.143	1450.7	0.0221	6.137	1421.7	0.0221	9.023	1372.7	0.0222
14	1.103	1419.9	0.0220	5.968	1399.8	0.0220	8.821	1364.8	0.0220
15	1.045	1377.2	0.0219	5.710	1366.8	0.0219	8.491	1347.8	0.0219
16	0.957	1313.2	0.0218	5.282	1312.7	0.0218	7.906	1310.5	0.0218
17	0.813	1207.5	0.0217	4.517	1215.3	0.0217	6.800	1228.8	0.0217
18	0.574	1032.4	0.0216	3.191	1043.4	0.0216	4.812	1065.0	0.0216

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	9.329	1073.0	0.0239	15.551	1074.4	0.0239	18.682	834.3	0.0230
2	13.896	1227.6	0.0238	22.720	1197.4	0.0238	27.476	910.3	0.0230
3	16.721	1307.0	0.0236	26.646	1234.1	0.0236	32.243	940.0	0.0229
4	18.007	1328.0	0.0235	28.126	1232.6	0.0235	34.147	960.6	0.0228
5	18.574	1328.2	0.0233	28.637	1221.7	0.0233	34.893	972.9	0.0227
6	18.839	1323.8	0.0232	28.822	1211.6	0.0232	35.208	979.0	0.0226
7	18.974	1318.9	0.0230	28.905	1204.2	0.0230	35.364	981.2	0.0225
8	19.049	1315.0	0.0229	28.965	1199.3	0.0229	35.458	981.1	0.0224
9	19.097	1312.4	0.0227	29.026	1196.4	0.0228	35.528	979.2	0.0223
10	19.128	1311.4	0.0226	29.095	1194.8	0.0226	35.585	976.1	0.0222
11	19.143	1311.7	0.0225	29.169	1194.7	0.0225	35.631	971.8	0.0221
12	19.132	1313.4	0.0223	29.244	1196.3	0.0224	35.656	966.1	0.0221
13	19.072	1315.9	0.0222	29.305	1200.4	0.0222	35.638	958.3	0.0220
14	18.917	1318.1	0.0221	29.311	1207.7	0.0221	35.516	947.4	0.0219
15	18.545	1316.7	0.0220	29.111	1217.3	0.0220	35.105	931.4	0.0218
16	17.643	1302.5	0.0218	28.227	1222.1	0.0219	33.854	906.2	0.0217
17	15.492	1241.7	0.0217	25.383	1195.5	0.0217	30.277	870.1	0.0217
18	11.062	1086.4	0.0216	18.453	1084.6	0.0216	21.671	791.2	0.0216

Table 4-92. Burnup and TH Feedback Parameters by Axial Node for Assembly K2 (Cont.)

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	22.405	861.0	0.0230	26.337	872.1	0.0230
2	32.854	920.7	0.0230	38.216	929.2	0.0229
3	38.289	951.9	0.0229	44.081	945.8	0.0228
4	40.393	958.7	0.0228	46.214	941.7	0.0228
5	41.182	957.9	0.0227	46.944	934.4	0.0227
6	41.492	954.8	0.0226	47.193	927.9	0.0226
7	41.631	951.4	0.0225	47.289	922.9	0.0225
8	41.712	948.2	0.0224	47.345	919.1	0.0224
9	41.775	945.6	0.0223	47.398	916.3	0.0223
10	41.835	943.5	0.0223	47.459	914.2	0.0222
11	41.893	942.0	0.0222	47.528	912.7	0.0222
12	41.937	941.0	0.0221	47.596	912.1	0.0221
13	41.941	940.3	0.0220	47.641	912.7	0.0220
14	41.837	939.5	0.0219	47.597	914.7	0.0219
15	41.408	937.2	0.0218	47.238	917.8	0.0218
16	40.014	928.8	0.0218	45.855	919.0	0.0218
17	35.878	898.1	0.0217	41.395	903.3	0.0217
18	25.537	821.4	0.0216	29.571	828.2	0.0216

Table 4-93. Burnup and TH Feedback Parameters by Axial Node for Assembly K6

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.497	1039.0	0.0237	2.703	1037.7	0.0238	4.089	1057.7	0.0239
2	0.751	1231.5	0.0236	4.120	1231.4	0.0237	6.243	1241.7	0.0238
3	0.946	1364.2	0.0235	5.206	1364.2	0.0236	7.831	1356.9	0.0237
4	1.064	1439.3	0.0234	5.845	1436.1	0.0235	8.721	1407.0	0.0235
5	1.136	1482.6	0.0232	6.213	1471.4	0.0233	9.206	1422.8	0.0234
6	1.183	1506.7	0.0231	6.441	1487.9	0.0232	9.491	1427.6	0.0232
7	1.214	1519.7	0.0230	6.589	1496.9	0.0230	9.670	1427.9	0.0231
8	1.235	1526.7	0.0228	6.686	1501.3	0.0229	9.786	1426.7	0.0229
9	1.246	1529.0	0.0227	6.745	1502.5	0.0227	9.860	1425.2	0.0228
10	1.250	1527.3	0.0225	6.773	1501.2	0.0226	9.902	1424.0	0.0226
11	1.247	1521.8	0.0224	6.774	1497.8	0.0224	9.917	1423.5	0.0225
12	1.235	1512.0	0.0223	6.743	1491.8	0.0223	9.899	1423.2	0.0223
13	1.213	1496.1	0.0221	6.664	1481.5	0.0222	9.823	1422.2	0.0222
14	1.175	1470.0	0.0220	6.503	1463.5	0.0220	9.642	1417.6	0.0221
15	1.112	1425.1	0.0219	6.214	1432.7	0.0219	9.281	1404.3	0.0219
16	1.014	1352.7	0.0218	5.708	1370.8	0.0218	8.593	1371.0	0.0218
17	0.854	1236.3	0.0217	4.828	1258.2	0.0217	7.310	1278.4	0.0217
18	0.607	1056.1	0.0216	3.399	1071.7	0.0216	5.129	1092.4	0.0216

Table 4-93. Burnup and TH Feedback Parameters by Axial Node for Assembly K6 (Cont.)

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	9.325	1073.6	0.0239	15.460	1066.7	0.0238	18.502	837.5	0.0235
2	14.119	1237.5	0.0238	22.919	1191.1	0.0237	28.567	977.4	0.0234
3	17.153	1318.0	0.0237	27.010	1224.4	0.0236	34.206	1048.2	0.0233
4	18.543	1333.0	0.0235	28.534	1219.0	0.0234	36.305	1078.5	0.0232
5	19.148	1329.3	0.0233	29.044	1205.7	0.0233	37.084	1091.4	0.0230
6	19.435	1321.9	0.0232	29.227	1194.3	0.0231	37.409	1096.8	0.0229
7	19.594	1314.9	0.0230	29.323	1186.1	0.0230	37.578	1098.2	0.0228
8	19.701	1309.5	0.0229	29.404	1180.6	0.0229	37.689	1096.8	0.0227
9	19.786	1305.9	0.0228	29.492	1176.9	0.0227	37.776	1093.5	0.0225
10	19.863	1304.2	0.0226	29.595	1174.4	0.0226	37.854	1088.8	0.0224
11	19.938	1304.4	0.0225	29.717	1173.1	0.0225	37.934	1083.0	0.0223
12	20.006	1306.5	0.0224	29.861	1173.5	0.0223	38.019	1076.1	0.0222
13	20.034	1310.3	0.0222	30.003	1176.5	0.0222	38.073	1067.4	0.0221
14	19.945	1314.8	0.0221	30.075	1183.3	0.0221	38.003	1055.3	0.0220
15	19.590	1317.0	0.0220	29.909	1193.8	0.0220	37.605	1038.1	0.0219
16	18.618	1306.9	0.0218	29.003	1201.8	0.0219	36.312	1012.5	0.0218
17	16.260	1251.3	0.0217	26.026	1180.6	0.0217	32.557	969.0	0.0217
18	11.463	1086.5	0.0216	18.716	1071.1	0.0216	23.189	876.5	0.0216

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	21.940	848.5	0.0234	25.517	857.4	0.0234
2	34.666	965.3	0.0233	40.716	976.9	0.0233
3	41.605	1038.1	0.0232	48.623	1024.6	0.0232
4	44.027	1052.2	0.0231	51.161	1024.9	0.0231
5	44.874	1052.3	0.0230	51.955	1017.3	0.0229
6	45.198	1049.1	0.0229	52.209	1009.9	0.0228
7	45.348	1045.2	0.0228	52.309	1004.0	0.0227
8	45.442	1041.4	0.0226	52.373	999.4	0.0226
9	45.519	1038.0	0.0225	52.436	995.9	0.0225
10	45.596	1035.3	0.0224	52.514	993.3	0.0224
11	45.687	1033.2	0.0223	52.620	991.6	0.0223
12	45.795	1031.7	0.0222	52.760	990.9	0.0222
13	45.878	1030.6	0.0221	52.896	991.5	0.0221
14	45.823	1029.1	0.0220	52.914	993.6	0.0220
15	45.398	1025.7	0.0219	52.563	996.8	0.0219
16	43.945	1016.3	0.0218	51.116	997.7	0.0218
17	39.601	985.6	0.0217	46.403	981.2	0.0217
18	28.208	888.2	0.0216	33.278	885.4	0.0216

Table 4-94. Burnup and TH Feedback Parameters by Axial Node for Assembly K10

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.547	1074.0	0.0237	2.955	1070.6	0.0238	4.429	1078.5	0.0238
2	0.812	1269.3	0.0236	4.391	1256.9	0.0237	6.561	1247.7	0.0237
3	0.995	1396.7	0.0235	5.352	1373.3	0.0235	7.946	1343.3	0.0236
4	1.101	1465.4	0.0234	5.888	1432.7	0.0234	8.684	1384.6	0.0234
5	1.165	1502.2	0.0232	6.196	1461.5	0.0233	9.087	1399.0	0.0233
6	1.206	1520.5	0.0231	6.382	1473.8	0.0231	9.318	1402.3	0.0231
7	1.232	1530.1	0.0229	6.496	1479.3	0.0230	9.454	1401.8	0.0230
8	1.248	1533.9	0.0228	6.561	1480.6	0.0228	9.532	1399.8	0.0228
9	1.254	1533.1	0.0227	6.591	1479.1	0.0227	9.569	1397.4	0.0227
10	1.253	1528.3	0.0225	6.591	1475.2	0.0225	9.573	1395.0	0.0226
11	1.243	1519.4	0.0224	6.562	1469.1	0.0224	9.546	1392.7	0.0224
12	1.226	1505.9	0.0223	6.500	1460.2	0.0223	9.482	1390.0	0.0223
13	1.198	1486.7	0.0221	6.393	1447.4	0.0221	9.363	1386.1	0.0222
14	1.157	1458.2	0.0220	6.226	1428.6	0.0220	9.165	1379.3	0.0220
15	1.097	1414.6	0.0219	5.963	1396.8	0.0219	8.832	1365.2	0.0219
16	1.006	1347.7	0.0218	5.520	1341.3	0.0218	8.231	1329.6	0.0218
17	0.853	1236.2	0.0217	4.718	1239.9	0.0217	7.077	1246.2	0.0217
18	0.600	1051.6	0.0216	3.322	1059.9	0.0216	4.993	1077.0	0.0216

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft³/lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	9.955	1090.4	0.0239	16.430	1086.9	0.0239	20.703	922.6	0.0235
2	14.550	1241.1	0.0238	23.525	1199.6	0.0238	29.806	1011.9	0.0234
3	17.229	1314.2	0.0236	27.176	1231.3	0.0236	34.489	1054.5	0.0233
4	18.430	1330.7	0.0235	28.519	1227.1	0.0235	36.348	1081.3	0.0232
5	18.963	1329.4	0.0233	28.975	1215.2	0.0233	37.062	1093.1	0.0231
6	19.212	1323.9	0.0232	29.132	1204.5	0.0232	37.359	1098.1	0.0229
7	19.339	1318.2	0.0230	29.201	1196.9	0.0230	37.509	1099.5	0.0228
8	19.412	1313.8	0.0229	29.252	1191.7	0.0229	37.600	1098.6	0.0227
9	19.459	1310.8	0.0228	29.308	1188.4	0.0227	37.667	1096.0	0.0226
10	19.493	1309.5	0.0226	29.373	1186.5	0.0226	37.724	1092.3	0.0224
11	19.516	1309.7	0.0225	29.447	1185.9	0.0225	37.783	1088.3	0.0223
12	19.515	1311.3	0.0223	29.525	1187.0	0.0224	37.849	1084.5	0.0222
13	19.468	1313.9	0.0222	29.592	1190.6	0.0222	37.889	1079.9	0.0221
14	19.325	1316.5	0.0221	29.605	1197.6	0.0221	37.796	1070.5	0.0220
15	18.963	1316.0	0.0220	29.417	1207.3	0.0220	37.383	1054.2	0.0219
16	18.063	1303.2	0.0218	28.553	1213.1	0.0219	36.115	1028.1	0.0218
17	15.872	1245.2	0.0217	25.705	1188.7	0.0217	32.475	984.7	0.0217
18	11.314	1088.8	0.0216	18.680	1080.3	0.0216	23.374	890.7	0.0216

Table 4-94. Burnup and TH Feedback Parameters by Axial Node for Assembly K10 (Cont.)

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	25.404	924.0	0.0235	30.277	929.0	0.0235
2	36.424	1002.2	0.0234	43.020	1013.6	0.0234
3	41.939	1042.3	0.0233	49.167	1040.3	0.0232
4	44.088	1053.9	0.0231	51.433	1040.4	0.0231
5	44.875	1054.5	0.0230	52.175	1033.5	0.0230
6	45.176	1051.8	0.0229	52.414	1026.4	0.0229
7	45.316	1048.4	0.0228	52.510	1020.9	0.0228
8	45.398	1045.2	0.0227	52.570	1016.8	0.0227
9	45.463	1042.4	0.0225	52.629	1013.7	0.0225
10	45.529	1040.2	0.0224	52.706	1011.7	0.0224
11	45.616	1039.2	0.0223	52.821	1010.6	0.0223
12	45.735	1039.6	0.0222	52.997	1011.3	0.0222
13	45.842	1040.8	0.0221	53.187	1013.7	0.0221
14	45.785	1040.4	0.0220	53.221	1016.9	0.0220
15	45.339	1036.5	0.0219	52.850	1020.0	0.0219
16	43.886	1025.4	0.0218	51.375	1019.2	0.0218
17	39.633	992.9	0.0217	46.697	998.9	0.0217
18	28.536	896.1	0.0216	33.815	899.5	0.0216

Table 4-95. Burnup and TH Feedback Parameters by Axial Node for Assembly K10a

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.547	1074.0	0.0237	2.955	1070.6	0.0238	4.429	1078.5	0.0238
2	0.812	1269.3	0.0236	4.391	1256.9	0.0237	6.561	1247.7	0.0237
3	0.995	1396.7	0.0235	5.352	1373.3	0.0235	7.946	1343.3	0.0236
4	1.101	1465.4	0.0234	5.888	1432.7	0.0234	8.684	1384.6	0.0234
5	1.165	1502.2	0.0232	6.196	1461.5	0.0233	9.087	1399.0	0.0233
6	1.206	1520.5	0.0231	6.382	1473.8	0.0231	9.318	1402.3	0.0231
7	1.232	1530.1	0.0229	6.496	1479.3	0.0230	9.454	1401.8	0.0230
8	1.248	1533.9	0.0228	6.561	1480.6	0.0228	9.532	1399.8	0.0228
9	1.254	1533.1	0.0227	6.591	1479.1	0.0227	9.569	1397.4	0.0227
10	1.253	1528.3	0.0225	6.591	1475.2	0.0225	9.573	1395.0	0.0226
11	1.243	1519.4	0.0224	6.562	1469.1	0.0224	9.546	1392.7	0.0224
12	1.226	1505.9	0.0223	6.500	1460.2	0.0223	9.482	1390.0	0.0223
13	1.198	1486.7	0.0221	6.393	1447.4	0.0221	9.363	1386.1	0.0222
14	1.157	1458.2	0.0220	6.226	1428.6	0.0220	9.165	1379.3	0.0220
15	1.097	1414.6	0.0219	5.963	1396.8	0.0219	8.832	1365.2	0.0219
16	1.006	1347.7	0.0218	5.520	1341.3	0.0218	8.231	1329.6	0.0218
17	0.853	1236.2	0.0217	4.718	1239.9	0.0217	7.077	1246.2	0.0217
18	0.600	1051.6	0.0216	3.322	1059.9	0.0216	4.993	1077.0	0.0216

Table 4-95. Burnup and TH Feedback Parameters by Axial Node for Assembly K10a (Cont.)

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	9.955	1090.4	0.0239	16.469	1086.9	0.0239	21.007	942.1	0.0236
2	14.550	1241.1	0.0238	23.582	1199.6	0.0238	30.253	1036.8	0.0235
3	17.229	1314.2	0.0236	27.238	1231.3	0.0236	34.952	1080.3	0.0234
4	18.430	1330.7	0.0235	28.579	1227.1	0.0235	36.797	1105.7	0.0232
5	18.963	1329.4	0.0233	29.033	1215.2	0.0233	37.516	1117.5	0.0231
6	19.212	1323.9	0.0232	29.189	1204.5	0.0232	37.814	1122.3	0.0230
7	19.339	1318.2	0.0230	29.259	1196.9	0.0230	37.954	1122.9	0.0228
8	19.412	1313.8	0.0229	29.312	1191.7	0.0229	38.031	1120.9	0.0227
9	19.459	1310.8	0.0228	29.368	1188.4	0.0227	38.080	1117.0	0.0226
10	19.493	1309.5	0.0226	29.435	1186.5	0.0226	38.113	1111.6	0.0225
11	19.516	1309.7	0.0225	29.512	1185.9	0.0225	38.134	1105.0	0.0223
12	19.515	1311.3	0.0223	29.596	1187.0	0.0224	38.138	1097.0	0.0222
13	19.468	1313.9	0.0222	29.671	1190.6	0.0222	38.102	1087.2	0.0221
14	19.325	1316.5	0.0221	29.689	1197.6	0.0221	37.966	1074.9	0.0220
15	18.963	1316.0	0.0220	29.502	1207.3	0.0220	37.549	1058.5	0.0219
16	18.063	1303.2	0.0218	28.635	1213.1	0.0219	36.300	1033.9	0.0218
17	15.872	1245.2	0.0217	25.777	1188.7	0.0217	32.639	989.4	0.0217
18	11.314	1088.8	0.0216	18.728	1080.3	0.0216	23.436	891.0	0.0216

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	25.852	932.5	0.0235	30.756	927.4	0.0234
2	37.054	1013.8	0.0234	43.628	1009.5	0.0233
3	42.555	1051.7	0.0233	49.677	1030.5	0.0232
4	44.668	1061.7	0.0231	51.860	1027.8	0.0231
5	45.462	1062.4	0.0230	52.600	1020.2	0.0230
6	45.766	1059.8	0.0229	52.838	1012.9	0.0228
7	45.894	1056.3	0.0228	52.915	1007.0	0.0227
8	45.957	1052.8	0.0227	52.949	1002.5	0.0226
9	45.997	1049.6	0.0226	52.977	999.2	0.0225
10	46.029	1046.9	0.0224	53.012	996.8	0.0224
11	46.057	1044.6	0.0223	53.057	995.3	0.0223
12	46.074	1042.8	0.0222	53.106	994.8	0.0222
13	46.053	1041.0	0.0221	53.136	995.5	0.0221
14	45.922	1038.9	0.0220	53.076	997.7	0.0220
15	45.471	1034.9	0.0219	52.698	1000.8	0.0219
16	44.054	1024.8	0.0218	51.283	1001.5	0.0218
17	39.789	992.7	0.0217	46.642	984.4	0.0217
18	28.562	893.9	0.0216	33.698	889.4	0.0216

Table 4-96. Burnup and TH Feedback Parameters by Axial Node for Assembly K12

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.520	1059.1	0.0237	2.813	1053.9	0.0238	4.242	1069.0	0.0239
2	0.776	1250.4	0.0236	4.234	1245.2	0.0237	6.395	1250.1	0.0238
3	0.968	1380.7	0.0235	5.296	1374.3	0.0236	7.945	1361.5	0.0237
4	1.079	1450.4	0.0234	5.894	1440.8	0.0235	8.776	1407.8	0.0235
5	1.142	1487.1	0.0232	6.213	1470.0	0.0233	9.193	1420.0	0.0234
6	1.183	1507.0	0.0231	6.410	1483.4	0.0232	9.437	1423.3	0.0232
7	1.211	1517.8	0.0230	6.540	1490.6	0.0230	9.593	1423.0	0.0231
8	1.228	1523.3	0.0228	6.622	1493.6	0.0229	9.691	1421.3	0.0229
9	1.238	1524.2	0.0227	6.668	1493.6	0.0227	9.749	1419.3	0.0228
10	1.240	1521.4	0.0225	6.686	1491.3	0.0226	9.777	1417.7	0.0226
11	1.235	1515.4	0.0224	6.681	1487.3	0.0224	9.784	1416.9	0.0225
12	1.227	1507.4	0.0223	6.663	1482.4	0.0223	9.784	1417.4	0.0223
13	1.212	1495.7	0.0221	6.620	1475.7	0.0222	9.757	1418.4	0.0222
14	1.177	1472.0	0.0220	6.478	1459.6	0.0220	9.600	1414.4	0.0221
15	1.117	1428.7	0.0219	6.202	1429.9	0.0219	9.253	1401.2	0.0219
16	1.022	1359.0	0.0218	5.721	1370.9	0.0218	8.597	1368.9	0.0218
17	0.868	1246.5	0.0217	4.877	1263.1	0.0217	7.367	1279.8	0.0217
18	0.624	1068.6	0.0216	3.474	1080.7	0.0216	5.230	1098.4	0.0216

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	9.623	1083.3	0.0239	15.903	1075.2	0.0239	20.051	914.2	0.0234
2	14.415	1247.1	0.0238	23.374	1198.4	0.0238	29.443	997.1	0.0233
3	17.398	1326.4	0.0237	27.417	1233.1	0.0236	34.428	1032.8	0.0232
4	18.704	1339.2	0.0235	28.843	1227.4	0.0235	36.250	1052.4	0.0231
5	19.210	1334.9	0.0234	29.226	1213.2	0.0233	36.628	1048.3	0.0230
6	19.443	1327.4	0.0232	29.345	1201.4	0.0232	36.851	1051.8	0.0228
7	19.576	1320.7	0.0231	29.412	1193.2	0.0230	36.989	1053.3	0.0227
8	19.663	1315.4	0.0229	29.472	1187.7	0.0229	37.083	1052.4	0.0226
9	19.729	1312.0	0.0228	29.541	1184.1	0.0227	37.159	1049.8	0.0225
10	19.790	1310.4	0.0226	29.628	1181.7	0.0226	37.234	1046.1	0.0224
11	19.860	1311.0	0.0225	29.751	1180.7	0.0225	37.341	1042.2	0.0223
12	19.966	1314.3	0.0224	29.955	1182.0	0.0224	37.610	1043.1	0.0222
13	20.084	1319.6	0.0222	30.229	1186.9	0.0222	38.273	1064.3	0.0221
14	20.029	1324.2	0.0221	30.351	1194.4	0.0221	38.326	1056.8	0.0220
15	19.683	1325.6	0.0220	30.194	1204.9	0.0220	37.939	1039.8	0.0219
16	18.739	1314.6	0.0218	29.311	1212.4	0.0219	36.651	1013.2	0.0218
17	16.444	1260.3	0.0217	26.386	1190.0	0.0217	32.948	968.2	0.0217
18	11.702	1095.7	0.0216	19.108	1079.0	0.0216	23.642	878.2	0.0216

Table 4-96. Burnup and TH Feedback Parameters by Axial Node for Assembly K12 (Cont.)

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	24.671	920.9	0.0234	29.451	924.9	0.0234
2	35.949	994.2	0.0233	42.411	1003.7	0.0233
3	41.697	1029.5	0.0232	48.726	1025.9	0.0232
4	43.690	1033.3	0.0231	50.734	1020.5	0.0230
5	43.919	1021.8	0.0229	50.725	1002.5	0.0229
6	44.122	1017.9	0.0228	50.847	994.6	0.0228
7	44.248	1014.6	0.0227	50.930	989.3	0.0227
8	44.331	1011.4	0.0226	50.990	985.4	0.0226
9	44.402	1008.5	0.0225	51.053	982.4	0.0225
10	44.483	1006.3	0.0224	51.141	980.3	0.0224
11	44.617	1005.5	0.0223	51.303	979.3	0.0223
12	45.022	1011.4	0.0222	51.827	983.2	0.0222
13	46.106	1032.1	0.0221	53.312	1003.7	0.0221
14	46.228	1033.3	0.0220	53.554	1008.6	0.0220
15	45.809	1029.5	0.0219	53.210	1011.3	0.0219
16	44.339	1018.7	0.0218	51.721	1010.8	0.0218
17	40.029	986.9	0.0217	46.994	991.2	0.0217
18	28.709	888.6	0.0216	33.885	892.0	0.0216

Table 4-97. Burnup and TH Feedback Parameters by Axial Node for Assembly K14

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.419	960.9	0.0235	2.300	968.3	0.0236	3.477	987.6	0.0236
2	0.691	1172.8	0.0235	3.776	1174.5	0.0235	5.674	1178.2	0.0235
3	0.874	1301.5	0.0233	4.747	1294.9	0.0234	7.068	1275.4	0.0234
4	0.986	1375.0	0.0232	5.309	1359.5	0.0233	7.834	1317.3	0.0232
5	1.056	1417.2	0.0231	5.648	1392.8	0.0231	8.269	1332.7	0.0231
6	1.103	1441.8	0.0230	5.861	1410.1	0.0230	8.528	1336.9	0.0230
7	1.135	1456.5	0.0228	6.000	1419.6	0.0229	8.692	1337.0	0.0229
8	1.156	1464.9	0.0227	6.092	1424.4	0.0227	8.798	1335.8	0.0227
9	1.168	1468.4	0.0226	6.149	1426.2	0.0226	8.868	1334.4	0.0226
10	1.173	1467.7	0.0224	6.180	1425.6	0.0225	8.909	1333.4	0.0225
11	1.171	1462.8	0.0223	6.183	1422.7	0.0223	8.925	1332.9	0.0224
12	1.160	1452.9	0.0222	6.154	1416.8	0.0222	8.905	1332.6	0.0222
13	1.138	1436.2	0.0221	6.077	1406.3	0.0221	8.831	1331.4	0.0221
14	1.100	1409.8	0.0220	5.928	1388.5	0.0220	8.666	1327.3	0.0220
15	1.039	1367.5	0.0219	5.659	1357.7	0.0219	8.336	1315.0	0.0219
16	0.940	1296.2	0.0218	5.176	1299.5	0.0218	7.695	1282.0	0.0218
17	0.771	1173.9	0.0217	4.288	1186.6	0.0217	6.432	1193.7	0.0217
18	0.488	959.7	0.0216	2.722	976.5	0.0216	4.105	999.4	0.0216

Table 4-97. Burnup and TH Feedback Parameters by Axial Node for Assembly K14 (Cont.)

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	7.926	1007.6	0.0235	13.257	1014.1	0.0234	17.812	963.2	0.0236
2	12.537	1161.5	0.0234	20.154	1126.4	0.0233	26.857	1061.5	0.0235
3	15.072	1222.5	0.0233	23.486	1149.6	0.0232	31.263	1105.8	0.0234
4	16.205	1235.6	0.0232	24.706	1142.6	0.0231	33.003	1129.6	0.0233
5	16.719	1232.2	0.0230	25.134	1130.5	0.0230	33.694	1140.7	0.0231
6	16.966	1224.8	0.0229	25.291	1120.4	0.0229	33.992	1145.3	0.0230
7	17.101	1217.8	0.0228	25.369	1113.2	0.0228	34.146	1146.2	0.0229
8	17.190	1212.4	0.0227	25.434	1108.2	0.0226	34.243	1144.5	0.0227
9	17.261	1208.9	0.0226	25.505	1104.8	0.0225	34.314	1141.0	0.0226
10	17.325	1207.2	0.0224	25.587	1102.5	0.0224	34.373	1136.1	0.0225
11	17.384	1207.4	0.0223	25.680	1101.1	0.0223	34.427	1130.3	0.0224
12	17.428	1209.3	0.0222	25.781	1101.1	0.0222	34.477	1123.9	0.0222
13	17.432	1212.9	0.0221	25.874	1103.3	0.0221	34.497	1116.2	0.0221
14	17.343	1217.3	0.0220	25.915	1108.7	0.0220	34.403	1104.9	0.0220
15	17.027	1219.8	0.0219	25.753	1117.6	0.0219	34.013	1088.5	0.0219
16	16.163	1210.1	0.0218	24.935	1125.1	0.0218	32.803	1064.5	0.0218
17	13.977	1158.7	0.0217	22.216	1108.7	0.0217	29.274	1025.0	0.0217
18	9.205	1005.2	0.0216	15.237	1006.6	0.0216	20.110	923.5	0.0216

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	22.744	957.3	0.0235	27.772	955.1	0.0235
2	33.800	1033.7	0.0234	40.570	1030.5	0.0234
3	39.049	1071.8	0.0233	46.416	1055.6	0.0233
4	41.068	1083.0	0.0232	48.526	1054.3	0.0231
5	41.828	1083.4	0.0231	49.232	1046.7	0.0230
6	42.129	1080.5	0.0229	49.466	1039.3	0.0229
7	42.270	1076.8	0.0228	49.560	1033.4	0.0228
8	42.355	1073.3	0.0227	49.618	1028.9	0.0227
9	42.420	1070.1	0.0226	49.674	1025.7	0.0226
10	42.482	1067.6	0.0225	49.743	1023.4	0.0224
11	42.553	1065.8	0.0224	49.837	1022.0	0.0223
12	42.637	1065.0	0.0222	49.965	1022.1	0.0222
13	42.698	1064.7	0.0221	50.095	1023.7	0.0221
14	42.627	1063.4	0.0220	50.106	1026.4	0.0220
15	42.207	1059.7	0.0219	49.765	1029.8	0.0219
16	40.828	1049.3	0.0218	48.383	1030.1	0.0218
17	36.691	1016.5	0.0217	43.853	1011.5	0.0217
18	25.448	926.5	0.0216	30.825	919.4	0.0216

Table 4-98. Burnup and TH Feedback Parameters by Axial Node for Assembly K17

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.565	1091.5	0.0238	3.051	1086.9	0.0239	4.572	1092.3	0.0239
2	0.839	1291.0	0.0238	4.534	1277.8	0.0238	6.776	1266.6	0.0238
3	1.029	1422.8	0.0236	5.535	1398.8	0.0236	8.218	1365.6	0.0237
4	1.138	1493.0	0.0235	6.088	1459.7	0.0235	8.977	1405.4	0.0235
5	1.201	1525.1	0.0233	6.390	1483.2	0.0233	9.366	1415.5	0.0234
6	1.243	1542.9	0.0232	6.576	1495.0	0.0232	9.595	1417.7	0.0232
7	1.271	1553.6	0.0230	6.699	1501.0	0.0230	9.741	1416.9	0.0231
8	1.289	1558.8	0.0229	6.776	1503.2	0.0229	9.831	1414.9	0.0229
9	1.298	1559.4	0.0227	6.818	1502.5	0.0227	9.882	1412.7	0.0228
10	1.300	1556.3	0.0226	6.832	1499.7	0.0226	9.905	1410.8	0.0226
11	1.296	1550.0	0.0224	6.825	1495.4	0.0225	9.908	1409.6	0.0225
12	1.287	1541.7	0.0223	6.805	1490.4	0.0223	9.904	1409.8	0.0223
13	1.271	1529.6	0.0222	6.762	1483.7	0.0222	9.876	1410.4	0.0222
14	1.235	1505.8	0.0220	6.623	1468.1	0.0220	9.720	1406.1	0.0221
15	1.173	1466.5	0.0219	6.350	1439.7	0.0219	9.379	1393.2	0.0219
16	1.074	1395.1	0.0218	5.872	1384.2	0.0218	8.732	1362.7	0.0218
17	0.910	1276.3	0.0217	5.015	1276.8	0.0217	7.502	1276.0	0.0217
18	0.642	1081.0	0.0216	3.535	1087.0	0.0216	5.296	1098.7	0.0216

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	10.232	1099.5	0.0240	16.813	1092.2	0.0239	19.042	753.4	0.0226
2	14.969	1254.4	0.0238	24.095	1204.2	0.0238	27.560	810.9	0.0226
3	17.734	1327.3	0.0237	27.833	1236.5	0.0236	31.966	834.4	0.0225
4	18.939	1339.5	0.0235	29.146	1230.6	0.0235	33.625	851.7	0.0225
5	19.416	1335.8	0.0234	29.505	1216.7	0.0233	34.174	861.1	0.0224
6	19.638	1328.9	0.0232	29.617	1205.1	0.0232	34.387	865.4	0.0223
7	19.765	1322.5	0.0231	29.679	1197.1	0.0230	34.503	866.7	0.0223
8	19.847	1317.6	0.0229	29.737	1191.7	0.0229	34.585	866.2	0.0222
9	19.908	1314.4	0.0228	29.804	1188.1	0.0228	34.658	864.6	0.0221
10	19.964	1313.0	0.0226	29.889	1185.9	0.0226	34.735	862.2	0.0221
11	20.031	1313.8	0.0225	30.012	1185.1	0.0225	34.838	859.0	0.0220
12	20.134	1317.1	0.0224	30.217	1186.7	0.0224	35.006	854.8	0.0219
13	20.248	1322.3	0.0222	30.489	1191.8	0.0222	35.217	848.9	0.0219
14	20.189	1326.5	0.0221	30.607	1199.4	0.0221	35.240	841.2	0.0218
15	19.837	1327.1	0.0220	30.441	1209.8	0.0220	34.914	829.8	0.0218
16	18.893	1315.1	0.0218	29.548	1216.6	0.0219	33.737	811.7	0.0217
17	16.596	1260.7	0.0217	26.605	1193.2	0.0217	30.223	783.4	0.0217
18	11.826	1099.4	0.0216	19.331	1084.3	0.0216	21.673	726.0	0.0216

Table 4-98. Burnup and TH Feedback Parameters by Axial Node for Assembly K17 (Cont.)

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	21.696	775.3	0.0226	24.608	796.0	0.0227
2	31.464	821.1	0.0226	35.522	838.6	0.0226
3	36.406	844.6	0.0225	40.848	854.8	0.0225
4	38.244	851.5	0.0225	42.742	854.1	0.0225
5	38.841	852.1	0.0224	43.311	849.9	0.0224
6	39.055	850.3	0.0223	43.484	845.5	0.0223
7	39.158	847.7	0.0223	43.555	841.8	0.0223
8	39.228	845.3	0.0222	43.605	838.8	0.0222
9	39.292	843.1	0.0221	43.660	836.5	0.0222
10	39.368	841.3	0.0221	43.733	834.7	0.0221
11	39.475	839.8	0.0220	43.846	833.3	0.0220
12	39.650	838.4	0.0220	44.034	832.2	0.0220
13	39.867	836.9	0.0219	44.272	831.7	0.0219
14	39.893	835.5	0.0218	44.337	832.4	0.0218
15	39.543	832.9	0.0218	44.028	833.8	0.0218
16	38.242	825.7	0.0217	42.715	833.3	0.0217
17	34.296	802.5	0.0217	38.485	819.3	0.0217
18	24.453	748.8	0.0216	27.468	765.2	0.0216

Table 4-99. Burnup and TH Feedback Parameters by Axial Node for Assembly K19

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.519	1051.0	0.0238	2.813	1051.8	0.0239	4.231	1065.5	0.0239
2	0.779	1244.0	0.0237	4.244	1241.6	0.0238	6.381	1242.8	0.0238
3	0.977	1382.2	0.0236	5.305	1372.0	0.0236	7.917	1350.5	0.0237
4	1.098	1461.9	0.0235	5.930	1442.8	0.0235	8.776	1397.4	0.0235
5	1.171	1504.9	0.0233	6.284	1474.8	0.0233	9.232	1411.3	0.0234
6	1.220	1527.4	0.0232	6.508	1490.3	0.0232	9.506	1414.6	0.0232
7	1.254	1541.5	0.0230	6.658	1499.0	0.0230	9.685	1414.4	0.0231
8	1.277	1549.5	0.0229	6.759	1503.4	0.0229	9.804	1412.9	0.0229
9	1.290	1552.8	0.0227	6.822	1504.7	0.0227	9.882	1411.3	0.0228
10	1.296	1552.1	0.0226	6.857	1503.9	0.0226	9.932	1410.2	0.0226
11	1.296	1548.0	0.0224	6.869	1501.4	0.0225	9.961	1410.1	0.0225
12	1.290	1541.3	0.0223	6.865	1497.9	0.0223	9.980	1411.5	0.0223
13	1.276	1530.2	0.0222	6.832	1492.3	0.0222	9.970	1413.5	0.0222
14	1.239	1506.1	0.0220	6.692	1476.6	0.0220	9.819	1410.7	0.0221
15	1.172	1463.6	0.0219	6.395	1445.9	0.0219	9.452	1398.3	0.0219
16	1.061	1383.9	0.0218	5.851	1383.9	0.0218	8.722	1364.5	0.0218
17	0.883	1254.5	0.0217	4.900	1264.1	0.0217	7.357	1270.1	0.0217
18	0.618	1062.2	0.0216	3.406	1070.9	0.0216	5.108	1084.2	0.0216

Table 4-99. Burnup and TH Feedback Parameters by Axial Node for Assembly K19 (Cont.)

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	9.529	1074.6	0.0239	15.755	1071.9	0.0238	20.228	941.6	0.0236
2	14.210	1229.7	0.0238	22.995	1190.4	0.0237	29.629	1038.1	0.0235
3	17.108	1305.6	0.0236	26.888	1220.9	0.0236	34.587	1080.1	0.0234
4	18.438	1321.3	0.0235	28.343	1215.1	0.0234	36.566	1106.6	0.0232
5	18.989	1317.2	0.0233	28.784	1201.3	0.0233	37.287	1119.4	0.0231
6	19.255	1309.6	0.0232	28.946	1189.9	0.0231	37.596	1124.5	0.0230
7	19.414	1302.6	0.0230	29.046	1182.1	0.0230	37.766	1125.0	0.0228
8	19.524	1297.3	0.0229	29.135	1176.9	0.0228	37.877	1122.6	0.0227
9	19.615	1293.9	0.0227	29.234	1173.4	0.0227	37.961	1118.2	0.0226
10	19.701	1292.4	0.0226	29.349	1171.1	0.0226	38.037	1112.3	0.0225
11	19.798	1293.2	0.0225	29.502	1170.1	0.0225	38.121	1104.7	0.0223
12	19.931	1296.6	0.0223	29.736	1171.4	0.0223	38.253	1095.0	0.0222
13	20.075	1302.2	0.0222	30.038	1176.2	0.0222	38.413	1082.8	0.0221
14	20.036	1307.4	0.0221	30.176	1183.6	0.0221	38.378	1069.0	0.0220
15	19.674	1309.5	0.0220	30.003	1194.2	0.0220	37.966	1052.0	0.0219
16	18.646	1299.0	0.0218	29.029	1201.9	0.0219	36.607	1027.5	0.0218
17	16.181	1241.2	0.0217	25.913	1179.6	0.0217	32.708	984.5	0.0217
18	11.326	1078.0	0.0216	18.522	1068.8	0.0216	23.182	889.1	0.0216

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	25.025	934.2	0.0235	29.894	930.1	0.0234
2	36.448	1016.5	0.0234	43.062	1013.5	0.0233
3	42.249	1056.6	0.0233	49.445	1036.1	0.0232
4	44.521	1067.9	0.0232	51.802	1033.8	0.0231
5	45.333	1069.6	0.0230	52.567	1026.6	0.0230
6	45.656	1067.4	0.0229	52.825	1019.3	0.0229
7	45.815	1063.9	0.0228	52.934	1013.3	0.0227
8	45.912	1060.3	0.0227	53.001	1008.7	0.0226
9	45.987	1057.0	0.0226	53.064	1005.2	0.0225
10	46.059	1054.0	0.0224	53.138	1002.7	0.0224
11	46.145	1051.3	0.0223	53.238	1001.0	0.0223
12	46.277	1048.3	0.0222	53.395	1000.0	0.0222
13	46.431	1044.8	0.0221	53.586	999.7	0.0221
14	46.387	1041.5	0.0220	53.606	1001.3	0.0220
15	45.931	1036.9	0.0219	53.222	1003.7	0.0219
16	44.395	1026.5	0.0218	51.684	1004.4	0.0218
17	39.886	994.5	0.0217	46.788	987.3	0.0217
18	28.299	895.0	0.0216	33.434	889.8	0.0216

Table 4-100. Burnup and TH Feedback Parameters by Axial Node for Assembly K19a

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.519	1051.0	0.0238	2.813	1051.8	0.0239	4.231	1065.5	0.0239
2	0.779	1244.0	0.0237	4.244	1241.6	0.0238	6.381	1242.8	0.0238
3	0.977	1382.2	0.0236	5.305	1372.0	0.0236	7.917	1350.5	0.0237
4	1.098	1461.9	0.0235	5.930	1442.8	0.0235	8.776	1397.4	0.0235
5	1.171	1504.9	0.0233	6.284	1474.8	0.0233	9.232	1411.3	0.0234
6	1.220	1527.4	0.0232	6.508	1490.3	0.0232	9.506	1414.6	0.0232
7	1.254	1541.5	0.0230	6.658	1499.0	0.0230	9.685	1414.4	0.0231
8	1.277	1549.5	0.0229	6.759	1503.4	0.0229	9.804	1412.9	0.0229
9	1.290	1552.8	0.0227	6.822	1504.7	0.0227	9.882	1411.3	0.0228
10	1.296	1552.1	0.0226	6.857	1503.9	0.0226	9.932	1410.2	0.0226
11	1.296	1548.0	0.0224	6.869	1501.4	0.0225	9.961	1410.1	0.0225
12	1.290	1541.3	0.0223	6.865	1497.9	0.0223	9.980	1411.5	0.0223
13	1.276	1530.2	0.0222	6.832	1492.3	0.0222	9.970	1413.5	0.0222
14	1.239	1506.1	0.0220	6.692	1476.6	0.0220	9.819	1410.7	0.0221
15	1.172	1463.6	0.0219	6.395	1445.9	0.0219	9.452	1398.3	0.0219
16	1.061	1383.9	0.0218	5.851	1383.9	0.0218	8.722	1364.5	0.0218
17	0.883	1254.5	0.0217	4.900	1264.1	0.0217	7.357	1270.1	0.0217
18	0.618	1062.2	0.0216	3.406	1070.9	0.0216	5.108	1084.2	0.0216

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	9.529	1074.6	0.0239	15.760	1071.9	0.0238	20.328	948.0	0.0236
2	14.210	1229.7	0.0238	23.004	1190.4	0.0237	29.669	1039.7	0.0235
3	17.108	1305.6	0.0236	26.902	1220.9	0.0236	34.550	1076.6	0.0233
4	18.438	1321.3	0.0235	28.360	1215.1	0.0234	36.493	1100.7	0.0232
5	18.989	1317.2	0.0233	28.802	1201.3	0.0233	37.199	1112.7	0.0231
6	19.255	1309.6	0.0232	28.964	1189.9	0.0231	37.502	1117.4	0.0230
7	19.414	1302.6	0.0230	29.065	1182.1	0.0230	37.672	1118.0	0.0228
8	19.524	1297.3	0.0229	29.154	1176.9	0.0228	37.787	1116.0	0.0227
9	19.615	1293.9	0.0227	29.252	1173.4	0.0227	37.879	1112.1	0.0226
10	19.701	1292.4	0.0226	29.368	1171.1	0.0226	37.966	1106.9	0.0225
11	19.798	1293.2	0.0225	29.521	1170.1	0.0225	38.068	1100.5	0.0223
12	19.931	1296.6	0.0223	29.754	1171.4	0.0223	38.228	1092.5	0.0222
13	20.075	1302.2	0.0222	30.056	1176.2	0.0222	38.420	1082.2	0.0221
14	20.036	1307.4	0.0221	30.194	1183.6	0.0221	38.407	1069.8	0.0220
15	19.674	1309.5	0.0220	30.020	1194.2	0.0220	38.005	1053.4	0.0219
16	18.646	1299.0	0.0218	29.046	1201.9	0.0219	36.654	1029.4	0.0218
17	16.181	1241.2	0.0217	25.929	1179.6	0.0217	32.784	988.2	0.0217
18	11.326	1078.0	0.0216	18.534	1068.8	0.0216	23.281	894.9	0.0216

Table 4-100. Burnup and TH Feedback Parameters by Axial Node for Assembly K19a (Cont.)

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	25.240	941.1	0.0235	30.250	939.6	0.0235
2	36.548	1020.1	0.0234	43.293	1023.2	0.0234
3	42.209	1056.1	0.0233	49.530	1045.5	0.0233
4	44.423	1065.8	0.0232	51.837	1043.9	0.0231
5	45.211	1067.0	0.0230	52.586	1037.1	0.0230
6	45.524	1064.6	0.0229	52.838	1030.1	0.0229
7	45.682	1061.0	0.0228	52.950	1024.2	0.0228
8	45.784	1057.4	0.0227	53.024	1019.8	0.0227
9	45.867	1054.1	0.0226	53.098	1016.4	0.0225
10	45.953	1051.3	0.0224	53.188	1013.9	0.0224
11	46.064	1048.9	0.0223	53.318	1012.3	0.0223
12	46.237	1046.6	0.0222	53.522	1011.5	0.0222
13	46.438	1043.9	0.0221	53.769	1011.8	0.0221
14	46.427	1041.2	0.0220	53.826	1013.6	0.0220
15	45.982	1036.6	0.0219	53.451	1015.6	0.0219
16	44.457	1026.3	0.0218	51.910	1015.4	0.0218
17	39.999	996.0	0.0217	47.048	996.9	0.0217
18	28.471	898.7	0.0216	33.727	898.1	0.0216

Table 4-101. Burnup and TH Feedback Parameters by Axial Node for Assembly K20

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.397	941.9	0.0235	2.167	946.4	0.0235	3.267	961.6	0.0235
2	0.682	1165.1	0.0235	3.676	1158.9	0.0235	5.483	1152.3	0.0234
3	0.877	1301.9	0.0234	4.673	1281.6	0.0233	6.892	1246.6	0.0233
4	0.997	1380.9	0.0233	5.250	1347.1	0.0232	7.666	1286.9	0.0232
5	1.072	1425.1	0.0231	5.594	1380.7	0.0231	8.101	1302.0	0.0230
6	1.122	1450.6	0.0230	5.807	1397.4	0.0230	8.356	1306.0	0.0229
7	1.155	1466.1	0.0229	5.944	1406.2	0.0228	8.514	1305.9	0.0228
8	1.177	1475.0	0.0227	6.035	1410.6	0.0227	8.617	1304.4	0.0227
9	1.191	1479.1	0.0226	6.093	1412.2	0.0226	8.685	1302.9	0.0225
10	1.197	1479.0	0.0225	6.125	1411.7	0.0225	8.728	1302.0	0.0224
11	1.196	1474.7	0.0223	6.132	1409.1	0.0223	8.746	1301.6	0.0223
12	1.186	1465.3	0.0222	6.107	1403.7	0.0222	8.731	1301.3	0.0222
13	1.164	1448.7	0.0221	6.036	1394.1	0.0221	8.664	1300.4	0.0221
14	1.125	1422.1	0.0220	5.892	1377.2	0.0220	8.506	1296.7	0.0220
15	1.061	1379.3	0.0219	5.623	1347.2	0.0219	8.181	1285.0	0.0219
16	0.954	1303.7	0.0218	5.126	1288.3	0.0218	7.531	1251.7	0.0218
17	0.770	1171.2	0.0217	4.195	1171.8	0.0217	6.232	1165.1	0.0217
18	0.451	928.7	0.0216	2.491	941.2	0.0216	3.740	960.6	0.0216

Table 4-102. Burnup and TH Feedback Parameters by Axial Node for Assembly K23

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.523	1063.8	0.0239	2.790	1049.9	0.0238	4.184	1056.6	0.0238
2	0.803	1272.2	0.0238	4.282	1249.3	0.0238	6.397	1234.7	0.0237
3	1.013	1414.3	0.0236	5.384	1380.8	0.0236	7.970	1341.0	0.0236
4	1.136	1491.3	0.0235	6.002	1447.2	0.0235	8.807	1385.2	0.0235
5	1.208	1527.4	0.0234	6.333	1474.6	0.0233	9.227	1397.5	0.0233
6	1.255	1548.0	0.0232	6.536	1487.4	0.0232	9.472	1399.7	0.0232
7	1.288	1561.0	0.0230	6.672	1494.2	0.0230	9.630	1398.7	0.0230
8	1.309	1568.1	0.0229	6.760	1497.1	0.0229	9.732	1396.6	0.0229
9	1.322	1570.6	0.0227	6.814	1497.3	0.0227	9.796	1394.5	0.0227
10	1.327	1569.2	0.0226	6.840	1495.5	0.0226	9.833	1392.9	0.0226
11	1.326	1564.7	0.0224	6.846	1492.4	0.0224	9.853	1392.2	0.0225
12	1.320	1558.0	0.0223	6.841	1488.7	0.0223	9.868	1393.1	0.0223
13	1.306	1547.1	0.0222	6.811	1483.4	0.0222	9.859	1394.7	0.0222
14	1.270	1523.2	0.0220	6.677	1468.7	0.0220	9.713	1391.5	0.0221
15	1.203	1482.0	0.0219	6.395	1439.9	0.0219	9.365	1379.4	0.0219
16	1.094	1406.6	0.0218	5.885	1382.0	0.0218	8.686	1346.7	0.0218
17	0.916	1278.0	0.0217	4.976	1269.4	0.0217	7.398	1258.6	0.0217
18	0.637	1075.6	0.0216	3.466	1076.6	0.0216	5.167	1083.1	0.0216

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	9.404	1069.8	0.0238	15.556	1067.1	0.0238	19.544	906.2	0.0234
2	14.149	1225.5	0.0237	22.886	1187.5	0.0237	28.833	994.7	0.0234
3	17.102	1301.8	0.0236	26.887	1221.2	0.0236	33.877	1035.8	0.0232
4	18.393	1317.0	0.0234	28.304	1216.1	0.0234	35.840	1065.3	0.0231
5	18.892	1312.6	0.0233	28.689	1202.5	0.0233	36.521	1080.8	0.0230
6	19.123	1305.1	0.0231	28.813	1191.4	0.0231	36.809	1088.3	0.0229
7	19.257	1298.3	0.0230	28.887	1183.6	0.0230	36.975	1091.1	0.0228
8	19.347	1293.1	0.0229	28.955	1178.5	0.0229	37.090	1091.0	0.0226
9	19.418	1289.7	0.0227	29.034	1175.0	0.0227	37.183	1088.9	0.0225
10	19.487	1288.2	0.0226	29.132	1172.8	0.0226	37.272	1085.3	0.0224
11	19.570	1289.0	0.0225	29.270	1172.0	0.0225	37.383	1080.3	0.0223
12	19.695	1292.5	0.0223	29.497	1173.3	0.0223	37.562	1073.8	0.0222
13	19.834	1297.8	0.0222	29.794	1178.2	0.0222	37.776	1064.9	0.0221
14	19.792	1302.4	0.0221	29.927	1185.5	0.0221	37.767	1052.4	0.0220
15	19.442	1303.7	0.0220	29.761	1195.8	0.0220	37.353	1033.7	0.0219
16	18.474	1292.8	0.0218	28.844	1203.0	0.0219	36.002	1004.6	0.0218
17	16.141	1235.7	0.0217	25.877	1180.7	0.0217	32.192	957.5	0.0217
18	11.422	1080.1	0.0216	18.710	1074.2	0.0216	23.003	864.7	0.0216

Table 4-102. Burnup and TH Feedback Parameters by Axial Node for Assembly K23 (Cont.)

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	24.109	921.2	0.0234	28.829	924.0	0.0234
2	35.348	997.5	0.0233	41.758	1001.4	0.0233
3	41.229	1037.3	0.0232	48.213	1023.9	0.0232
4	43.475	1048.0	0.0231	50.541	1021.8	0.0230
5	44.233	1048.8	0.0230	51.250	1014.7	0.0229
6	44.527	1046.0	0.0229	51.481	1007.7	0.0228
7	44.681	1042.4	0.0227	51.590	1002.0	0.0227
8	44.786	1039.0	0.0226	51.670	997.8	0.0226
9	44.877	1036.1	0.0225	51.752	994.6	0.0225
10	44.974	1033.8	0.0224	51.855	992.3	0.0224
11	45.105	1032.2	0.0223	52.004	990.7	0.0223
12	45.314	1031.0	0.0222	52.249	989.9	0.0222
13	45.562	1029.9	0.0221	52.551	990.3	0.0221
14	45.577	1028.8	0.0220	52.642	992.5	0.0220
15	45.138	1025.7	0.0219	52.283	995.9	0.0219
16	43.611	1015.6	0.0218	50.758	996.9	0.0218
17	39.161	981.8	0.0217	45.916	979.1	0.0217
18	27.936	883.7	0.0216	32.954	882.0	0.0216

Table 4-103. Burnup and TH Feedback Parameters by Axial Node for Assembly K25

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.335	884.3	0.0232	1.810	884.0	0.0232	2.722	895.7	0.0231
2	0.587	1086.0	0.0232	3.126	1075.0	0.0231	4.647	1069.4	0.0231
3	0.761	1210.9	0.0231	3.996	1186.1	0.0230	5.870	1155.3	0.0230
4	0.865	1279.8	0.0230	4.492	1242.7	0.0229	6.530	1190.3	0.0229
5	0.931	1319.7	0.0229	4.782	1272.1	0.0228	6.894	1203.1	0.0228
6	0.973	1342.2	0.0228	4.957	1287.4	0.0227	7.101	1206.5	0.0227
7	1.002	1355.7	0.0227	5.068	1294.6	0.0226	7.226	1206.1	0.0226
8	1.020	1363.2	0.0226	5.138	1297.9	0.0225	7.304	1204.5	0.0225
9	1.031	1366.4	0.0224	5.181	1298.6	0.0224	7.353	1202.8	0.0224
10	1.035	1365.8	0.0223	5.202	1297.5	0.0223	7.380	1201.6	0.0223
11	1.033	1361.4	0.0222	5.202	1294.6	0.0222	7.387	1200.9	0.0222
12	1.024	1352.3	0.0221	5.175	1289.3	0.0221	7.366	1200.3	0.0221
13	1.004	1336.9	0.0220	5.109	1280.2	0.0220	7.300	1199.0	0.0220
14	0.969	1312.3	0.0219	4.982	1264.8	0.0219	7.159	1194.9	0.0219
15	0.913	1272.5	0.0218	4.750	1236.5	0.0218	6.877	1183.1	0.0218
16	0.818	1204.9	0.0217	4.324	1183.9	0.0217	6.321	1152.5	0.0218
17	0.655	1084.6	0.0217	3.516	1079.8	0.0217	5.199	1074.5	0.0217
18	0.375	866.0	0.0216	2.048	873.2	0.0216	3.064	889.1	0.0216

Table 4-103. Burnup and TH Feedback Parameters by Axial Node for Assembly K25 (Cont.)

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	6.196	920.0	0.0231	10.510	946.3	0.0231	14.287	915.3	0.0234
2	10.129	1062.0	0.0230	16.423	1052.6	0.0230	22.195	1023.7	0.0234
3	12.321	1116.6	0.0229	19.354	1080.1	0.0229	26.265	1076.5	0.0233
4	13.300	1128.6	0.0228	20.445	1076.9	0.0228	27.949	1103.7	0.0231
5	13.731	1126.1	0.0227	20.820	1067.6	0.0227	28.637	1117.6	0.0230
6	13.926	1120.0	0.0226	20.946	1059.4	0.0226	28.940	1124.6	0.0229
7	14.023	1114.0	0.0225	20.998	1053.5	0.0226	29.098	1127.6	0.0228
8	14.082	1109.3	0.0224	21.037	1049.4	0.0225	29.199	1128.0	0.0227
9	14.126	1106.1	0.0224	21.081	1046.6	0.0224	29.277	1126.6	0.0225
10	14.166	1104.6	0.0223	21.136	1044.8	0.0223	29.344	1124.1	0.0224
11	14.202	1104.6	0.0222	21.203	1043.8	0.0222	29.411	1120.8	0.0223
12	14.227	1106.0	0.0221	21.275	1044.0	0.0221	29.473	1117.1	0.0222
13	14.218	1108.6	0.0220	21.338	1046.0	0.0220	29.501	1111.9	0.0221
14	14.129	1111.9	0.0219	21.354	1050.7	0.0219	29.405	1102.1	0.0220
15	13.843	1113.0	0.0218	21.183	1057.8	0.0219	28.999	1085.5	0.0219
16	13.077	1102.7	0.0218	20.422	1062.0	0.0218	27.787	1059.7	0.0218
17	11.146	1054.7	0.0217	17.954	1042.1	0.0217	24.408	1015.4	0.0217
18	6.864	906.9	0.0216	11.574	930.9	0.0216	15.916	906.8	0.0216

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	18.581	930.0	0.0234	23.111	941.6	0.0233
2	28.404	1008.6	0.0233	34.616	1003.9	0.0233
3	33.349	1042.0	0.0232	40.182	1030.9	0.0231
4	35.338	1051.9	0.0231	42.280	1031.6	0.0230
5	36.106	1052.1	0.0229	43.009	1025.1	0.0229
6	36.419	1049.4	0.0228	43.267	1018.5	0.0228
7	36.573	1046.1	0.0227	43.384	1013.5	0.0227
8	36.672	1043.2	0.0226	43.466	1009.8	0.0226
9	36.754	1040.8	0.0225	43.548	1007.1	0.0225
10	36.839	1039.2	0.0224	43.645	1005.3	0.0224
11	36.937	1038.5	0.0223	43.771	1004.5	0.0223
12	37.051	1039.0	0.0222	43.935	1005.0	0.0222
13	37.140	1040.2	0.0221	44.099	1007.1	0.0221
14	37.087	1040.6	0.0220	44.134	1010.5	0.0220
15	36.667	1038.6	0.0219	43.798	1014.4	0.0219
16	35.282	1030.0	0.0218	42.414	1014.9	0.0218
17	31.262	1001.3	0.0217	37.998	994.9	0.0217
18	20.780	920.1	0.0216	25.807	922.4	0.0216

Table 4-104. Burnup and TH Feedback Parameters by Axial Node for Assembly K27

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.374	932.6	0.0235	1.974	917.1	0.0234	2.960	922.7	0.0233
2	0.666	1165.7	0.0235	3.468	1133.4	0.0233	5.138	1113.2	0.0232
3	0.876	1307.2	0.0234	4.515	1259.1	0.0233	6.596	1208.4	0.0231
4	0.999	1383.6	0.0232	5.096	1320.8	0.0231	7.361	1245.8	0.0230
5	1.074	1425.2	0.0231	5.418	1351.1	0.0230	7.760	1258.3	0.0229
6	1.122	1450.1	0.0230	5.610	1365.6	0.0229	7.984	1261.0	0.0228
7	1.154	1464.7	0.0228	5.731	1372.8	0.0228	8.119	1260.1	0.0227
8	1.176	1472.9	0.0227	5.809	1376.0	0.0226	8.204	1258.0	0.0226
9	1.189	1476.4	0.0226	5.856	1376.5	0.0225	8.258	1256.0	0.0225
10	1.194	1475.9	0.0225	5.880	1375.1	0.0224	8.288	1254.5	0.0224
11	1.193	1471.4	0.0223	5.881	1372.0	0.0223	8.296	1253.6	0.0223
12	1.183	1462.1	0.0222	5.856	1366.6	0.0222	8.277	1253.1	0.0222
13	1.162	1446.1	0.0221	5.789	1357.4	0.0221	8.212	1252.0	0.0221
14	1.124	1419.6	0.0220	5.654	1341.3	0.0220	8.063	1247.9	0.0220
15	1.060	1376.0	0.0219	5.405	1312.8	0.0219	7.765	1236.3	0.0219
16	0.956	1302.6	0.0218	4.949	1258.1	0.0218	7.176	1205.8	0.0218
17	0.772	1171.4	0.0217	4.073	1150.5	0.0217	5.973	1129.0	0.0217
18	0.463	938.1	0.0216	2.493	938.5	0.0216	3.705	948.4	0.0216

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	6.714	949.0	0.0232	11.325	967.6	0.0233	14.178	839.9	0.0235
2	11.150	1103.1	0.0232	17.967	1082.8	0.0232	23.478	999.0	0.0235
3	13.729	1162.2	0.0231	21.412	1112.9	0.0231	28.635	1083.6	0.0234
4	14.842	1174.4	0.0230	22.650	1109.0	0.0230	30.582	1116.3	0.0232
5	15.306	1171.0	0.0229	23.050	1098.8	0.0229	31.331	1132.0	0.0231
6	15.512	1164.1	0.0227	23.180	1090.0	0.0228	31.654	1139.5	0.0230
7	15.617	1157.6	0.0226	23.238	1083.8	0.0227	31.825	1142.5	0.0228
8	15.682	1152.7	0.0225	23.283	1079.5	0.0226	31.938	1142.8	0.0227
9	15.731	1149.4	0.0224	23.335	1076.7	0.0225	32.026	1141.4	0.0226
10	15.776	1147.7	0.0223	23.399	1074.8	0.0224	32.106	1138.8	0.0225
11	15.819	1147.7	0.0222	23.477	1073.8	0.0223	32.186	1135.5	0.0224
12	15.853	1149.4	0.0222	23.566	1074.1	0.0222	32.264	1131.4	0.0222
13	15.853	1152.4	0.0221	23.651	1076.4	0.0221	32.304	1125.5	0.0221
14	15.765	1156.0	0.0220	23.680	1081.5	0.0220	32.217	1115.6	0.0220
15	15.467	1157.3	0.0219	23.514	1089.2	0.0219	31.810	1099.0	0.0219
16	14.670	1147.2	0.0218	22.740	1095.1	0.0218	30.567	1071.3	0.0218
17	12.640	1099.5	0.0217	20.188	1079.1	0.0217	27.039	1023.5	0.0217
18	8.205	961.3	0.0216	13.730	979.8	0.0216	18.296	910.1	0.0216

Table 4-104. Burnup and TH Feedback Parameters by Axial Node for Assembly K27 (Cont.)

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	17.408	851.0	0.0234	20.846	867.8	0.0234
2	29.333	973.4	0.0233	35.238	978.9	0.0233
3	35.855	1039.9	0.0232	42.794	1032.2	0.0232
4	38.181	1056.8	0.0231	45.280	1036.1	0.0231
5	39.025	1058.9	0.0230	46.093	1029.9	0.0230
6	39.362	1056.7	0.0229	46.376	1023.3	0.0228
7	39.527	1053.5	0.0228	46.502	1018.1	0.0227
8	39.636	1050.5	0.0226	46.592	1014.2	0.0226
9	39.729	1048.0	0.0225	46.682	1011.3	0.0225
10	39.824	1046.3	0.0224	46.789	1009.3	0.0224
11	39.935	1045.4	0.0223	46.926	1008.2	0.0223
12	40.059	1045.5	0.0222	47.095	1008.3	0.0222
13	40.154	1046.1	0.0221	47.256	1009.8	0.0221
14	40.106	1046.1	0.0220	47.293	1012.8	0.0220
15	39.684	1043.5	0.0219	46.956	1016.6	0.0219
16	38.268	1033.1	0.0218	45.541	1017.3	0.0218
17	34.090	1000.8	0.0217	40.965	997.9	0.0217
18	23.287	913.8	0.0216	28.411	914.5	0.0216

Table 4-105. Burnup and TH Feedback Parameters by Axial Node for Assembly K27a

Axial Node	Statepoint 70 (27.0 Cy10)			Statepoint 71 (143.0 Cy10)			Statepoint 72 (209.0 Cy10)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	27.0 Cy10	18.0 Cy10	18.0 Cy10	143.0 Cy10	82.9 Cy10	82.9 Cy10	209.0 Cy10	176.7 Cy10	176.7 Cy10
1	0.374	932.6	0.0235	1.974	917.1	0.0234	2.960	922.7	0.0233
2	0.666	1165.7	0.0235	3.468	1133.4	0.0233	5.138	1113.2	0.0232
3	0.876	1307.2	0.0234	4.515	1259.1	0.0233	6.596	1208.4	0.0231
4	0.999	1383.6	0.0232	5.096	1320.8	0.0231	7.361	1245.8	0.0230
5	1.074	1425.2	0.0231	5.418	1351.1	0.0230	7.760	1258.3	0.0229
6	1.122	1450.1	0.0230	5.610	1365.6	0.0229	7.984	1261.0	0.0228
7	1.154	1464.7	0.0228	5.731	1372.8	0.0228	8.119	1260.1	0.0227
8	1.176	1472.9	0.0227	5.809	1376.0	0.0226	8.204	1258.0	0.0226
9	1.189	1476.4	0.0226	5.856	1376.5	0.0225	8.258	1256.0	0.0225
10	1.194	1475.9	0.0225	5.880	1375.1	0.0224	8.288	1254.5	0.0224
11	1.193	1471.4	0.0223	5.881	1372.0	0.0223	8.296	1253.6	0.0223
12	1.183	1462.1	0.0222	5.856	1366.6	0.0222	8.277	1253.1	0.0222
13	1.162	1446.1	0.0221	5.789	1357.4	0.0221	8.212	1252.0	0.0221
14	1.124	1419.6	0.0220	5.654	1341.3	0.0220	8.063	1247.9	0.0220
15	1.060	1376.0	0.0219	5.405	1312.8	0.0219	7.765	1236.3	0.0219
16	0.956	1302.6	0.0218	4.949	1258.1	0.0218	7.176	1205.8	0.0218
17	0.772	1171.4	0.0217	4.073	1150.5	0.0217	5.973	1129.0	0.0217
18	0.463	938.1	0.0216	2.493	938.5	0.0216	3.705	948.4	0.0216

Table 4-105. Burnup and TH Feedback Parameters by Axial Node for Assembly K27a (Cont.)

Axial Node	Datapoint (430.4 Cy10)			Statepoint 73 (BOC Cy11)			Datapoint (208.7 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	430.4 Cy10	319.5 Cy10	319.5 Cy10	BOC Cy11	549.3 Cy10	549.3 Cy10	208.7 Cy11	103.8 Cy11	103.8 Cy11
1	6.714	949.0	0.0232	11.322	967.6	0.0233	15.829	971.7	0.0236
2	11.150	1103.1	0.0232	17.967	1082.8	0.0232	24.716	1080.1	0.0236
3	13.729	1162.2	0.0231	21.419	1112.9	0.0231	29.313	1127.5	0.0234
4	14.842	1174.4	0.0230	22.663	1109.0	0.0230	31.087	1148.9	0.0233
5	15.306	1171.0	0.0229	23.065	1098.8	0.0229	31.759	1159.9	0.0232
6	15.512	1164.1	0.0227	23.197	1090.0	0.0228	32.038	1164.7	0.0230
7	15.617	1157.6	0.0226	23.255	1083.8	0.0227	32.174	1165.6	0.0229
8	15.682	1152.7	0.0225	23.301	1079.5	0.0226	32.253	1163.9	0.0228
9	15.731	1149.4	0.0224	23.353	1076.7	0.0225	32.306	1160.3	0.0226
10	15.776	1147.7	0.0223	23.417	1074.8	0.0224	32.346	1155.3	0.0225
11	15.819	1147.7	0.0222	23.495	1073.8	0.0223	32.380	1149.2	0.0224
12	15.853	1149.4	0.0222	23.585	1074.1	0.0222	32.407	1141.8	0.0222
13	15.853	1152.4	0.0221	23.671	1076.4	0.0221	32.399	1132.8	0.0221
14	15.765	1156.0	0.0220	23.700	1081.5	0.0220	32.286	1121.0	0.0220
15	15.467	1157.3	0.0219	23.535	1089.2	0.0219	31.896	1105.1	0.0219
16	14.670	1147.2	0.0218	22.761	1095.1	0.0218	30.741	1082.6	0.0218
17	12.640	1099.5	0.0217	20.206	1079.1	0.0217	27.344	1042.9	0.0217
18	8.205	961.3	0.0216	13.742	979.8	0.0216	18.611	932.7	0.0216

Axial Node	Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	20.698	964.8	0.0235	25.652	960.9	0.0235
2	31.638	1041.1	0.0234	38.324	1028.8	0.0234
3	37.103	1076.4	0.0233	44.380	1053.5	0.0232
4	39.146	1087.3	0.0232	46.495	1051.2	0.0231
5	39.883	1087.5	0.0231	47.174	1043.3	0.0230
6	40.163	1084.5	0.0229	47.384	1035.7	0.0229
7	40.284	1080.7	0.0228	47.455	1029.7	0.0228
8	40.349	1077.1	0.0227	47.491	1025.2	0.0226
9	40.394	1073.9	0.0226	47.525	1021.9	0.0225
10	40.436	1071.3	0.0225	47.571	1019.4	0.0224
11	40.483	1069.3	0.0224	47.635	1017.9	0.0223
12	40.533	1068.0	0.0222	47.721	1017.5	0.0222
13	40.554	1067.0	0.0221	47.798	1018.5	0.0221
14	40.459	1065.6	0.0220	47.778	1021.0	0.0220
15	40.048	1062.4	0.0219	47.449	1024.6	0.0219
16	38.745	1053.2	0.0218	46.162	1026.0	0.0218
17	34.747	1022.5	0.0217	41.805	1009.0	0.0217
18	23.926	934.0	0.0216	29.255	925.1	0.0216

Table 4-106. Burnup and TH Feedback Parameters by Axial Node for Assembly L2

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	4.483	1074.0	0.0238	9.323	1054.8	0.0238	14.242	1036.4	0.0237
2	6.636	1257.6	0.0237	13.734	1200.7	0.0237	20.753	1159.4	0.0236
3	8.045	1370.2	0.0235	16.396	1279.4	0.0236	24.332	1194.6	0.0235
4	8.750	1422.7	0.0234	17.575	1304.4	0.0234	25.704	1197.0	0.0233
5	9.104	1445.0	0.0232	18.084	1309.4	0.0233	26.194	1189.2	0.0232
6	9.290	1452.7	0.0231	18.316	1307.7	0.0231	26.370	1181.0	0.0230
7	9.387	1454.7	0.0230	18.423	1304.6	0.0230	26.437	1174.6	0.0229
8	9.429	1453.5	0.0228	18.470	1301.8	0.0228	26.466	1170.2	0.0228
9	9.433	1450.3	0.0227	18.485	1299.6	0.0227	26.484	1167.5	0.0227
10	9.408	1445.4	0.0225	18.479	1298.1	0.0226	26.499	1166.2	0.0225
11	9.355	1439.0	0.0224	18.452	1297.5	0.0224	26.509	1166.1	0.0224
12	9.271	1430.9	0.0223	18.399	1297.3	0.0223	26.511	1167.5	0.0223
13	9.150	1420.6	0.0222	18.307	1297.6	0.0222	26.496	1170.6	0.0222
14	8.977	1405.9	0.0220	18.147	1297.3	0.0221	26.433	1175.6	0.0221
15	8.706	1382.4	0.0219	17.819	1294.0	0.0219	26.194	1181.4	0.0220
16	8.206	1339.7	0.0218	17.037	1278.1	0.0218	25.367	1181.2	0.0218
17	7.171	1252.6	0.0217	15.085	1217.6	0.0217	22.810	1153.9	0.0217
18	5.162	1080.6	0.0216	10.865	1068.0	0.0216	16.565	1040.5	0.0216

Table 4-107. Burnup and TH Feedback Parameters by Axial Node for Assembly L6

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	4.195	1039.8	0.0237	9.010	1049.5	0.0237	13.984	1037.0	0.0237
2	6.244	1217.8	0.0236	13.300	1192.8	0.0236	20.396	1161.4	0.0236
3	7.655	1331.7	0.0235	15.984	1271.0	0.0235	24.030	1197.4	0.0235
4	8.393	1388.4	0.0233	17.200	1295.3	0.0234	25.447	1199.5	0.0233
5	8.776	1415.8	0.0232	17.729	1298.8	0.0232	25.956	1191.7	0.0232
6	8.987	1428.9	0.0231	17.977	1296.3	0.0231	26.151	1183.6	0.0231
7	9.108	1434.3	0.0229	18.106	1292.7	0.0230	26.241	1177.3	0.0229
8	9.175	1435.9	0.0228	18.180	1289.6	0.0228	26.301	1173.0	0.0228
9	9.206	1435.0	0.0226	18.228	1287.4	0.0227	26.354	1170.3	0.0227
10	9.212	1432.3	0.0225	18.261	1286.2	0.0226	26.410	1168.7	0.0225
11	9.195	1428.2	0.0224	18.286	1286.3	0.0224	26.475	1168.4	0.0224
12	9.153	1422.2	0.0223	18.299	1287.3	0.0223	26.548	1169.5	0.0223
13	9.070	1413.2	0.0221	18.275	1289.2	0.0222	26.609	1172.5	0.0222
14	8.914	1398.6	0.0220	18.159	1290.7	0.0221	26.600	1177.7	0.0221
15	8.624	1372.1	0.0219	17.833	1289.0	0.0219	26.374	1184.0	0.0220
16	8.069	1323.8	0.0218	16.994	1274.0	0.0218	25.499	1184.7	0.0218
17	6.976	1231.1	0.0217	14.953	1213.6	0.0217	22.836	1158.0	0.0217
18	4.999	1062.3	0.0216	10.755	1066.5	0.0216	16.576	1043.8	0.0216

Table 4-108. Burnup and TH Feedback Parameters by Axial Node for Assembly L10

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	4.868	1108.0	0.0238	10.067	1078.7	0.0238	15.331	1060.7	0.0238
2	6.799	1269.9	0.0237	14.000	1206.9	0.0237	21.222	1173.5	0.0237
3	8.059	1369.7	0.0235	16.379	1276.1	0.0235	24.495	1209.7	0.0235
4	8.706	1417.5	0.0234	17.465	1298.8	0.0234	25.794	1214.0	0.0234
5	9.041	1439.4	0.0232	17.950	1303.5	0.0232	26.275	1207.6	0.0232
6	9.221	1446.8	0.0231	18.174	1302.2	0.0231	26.453	1200.0	0.0231
7	9.317	1448.8	0.0230	18.280	1299.2	0.0230	26.524	1194.0	0.0230
8	9.362	1447.8	0.0228	18.329	1296.4	0.0228	26.559	1189.8	0.0228
9	9.371	1444.8	0.0227	18.348	1294.2	0.0227	26.585	1187.3	0.0227
10	9.354	1440.4	0.0225	18.349	1292.7	0.0226	26.609	1186.0	0.0226
11	9.313	1434.8	0.0224	18.335	1292.0	0.0224	26.637	1186.1	0.0224
12	9.247	1427.9	0.0223	18.303	1292.0	0.0223	26.665	1187.5	0.0223
13	9.146	1418.8	0.0222	18.236	1292.1	0.0222	26.678	1190.7	0.0222
14	8.989	1405.6	0.0220	18.092	1291.7	0.0221	26.632	1195.5	0.0221
15	8.730	1382.7	0.0219	17.775	1288.0	0.0219	26.397	1200.4	0.0220
16	8.244	1341.5	0.0218	17.007	1270.7	0.0218	25.557	1198.1	0.0218
17	7.260	1259.2	0.0217	15.154	1213.6	0.0217	23.051	1166.3	0.0217
18	5.441	1104.3	0.0216	11.364	1081.0	0.0216	17.304	1055.5	0.0216

Table 4-109. Burnup and TH Feedback Parameters by Axial Node for Assembly L12

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	4.345	1059.3	0.0236	9.194	1055.3	0.0237	14.180	1043.3	0.0237
2	6.168	1217.3	0.0235	13.062	1188.4	0.0236	20.069	1165.5	0.0236
3	7.462	1323.4	0.0234	15.551	1263.2	0.0235	23.534	1206.9	0.0235
4	8.118	1374.2	0.0233	16.655	1287.3	0.0233	24.866	1210.7	0.0234
5	8.428	1396.1	0.0231	17.085	1290.4	0.0232	25.273	1203.5	0.0232
6	8.597	1406.4	0.0230	17.281	1287.9	0.0231	25.415	1195.6	0.0231
7	8.696	1411.0	0.0229	17.386	1284.6	0.0229	25.485	1189.7	0.0229
8	8.748	1411.9	0.0227	17.442	1281.6	0.0228	25.528	1185.7	0.0228
9	8.767	1410.3	0.0226	17.472	1279.5	0.0227	25.567	1183.2	0.0227
10	8.764	1407.1	0.0225	17.493	1278.4	0.0225	25.612	1181.9	0.0226
11	8.749	1402.9	0.0224	17.519	1278.9	0.0224	25.685	1182.0	0.0224
12	8.736	1399.1	0.0222	17.581	1281.6	0.0223	25.829	1184.4	0.0223
13	8.714	1394.4	0.0221	17.656	1285.9	0.0222	26.030	1189.7	0.0222
14	8.595	1381.8	0.0220	17.587	1287.7	0.0221	26.079	1195.5	0.0221
15	8.336	1357.7	0.0219	17.282	1284.6	0.0219	25.862	1200.7	0.0220
16	7.837	1313.7	0.0218	16.503	1267.0	0.0218	25.011	1198.4	0.0218
17	6.870	1230.2	0.0217	14.663	1209.1	0.0217	22.516	1168.1	0.0217
18	5.172	1082.8	0.0216	10.975	1074.7	0.0216	16.841	1052.8	0.0216

Table 4-110. Burnup and TH Feedback Parameters by Axial Node for Assembly L14

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	3.560	978.2	0.0235	7.776	1007.9	0.0235	12.205	1002.9	0.0234
2	5.690	1174.2	0.0234	12.214	1164.9	0.0234	18.642	1122.9	0.0233
3	6.991	1283.3	0.0233	14.584	1227.1	0.0233	21.734	1150.5	0.0232
4	7.670	1338.0	0.0232	15.624	1243.3	0.0232	22.902	1148.4	0.0231
5	8.037	1365.7	0.0231	16.095	1244.2	0.0231	23.341	1140.0	0.0230
6	8.245	1379.2	0.0229	16.324	1240.7	0.0229	23.517	1132.0	0.0229
7	8.368	1385.4	0.0228	16.447	1236.7	0.0228	23.605	1126.1	0.0228
8	8.441	1387.8	0.0227	16.524	1233.5	0.0227	23.668	1122.0	0.0226
9	8.481	1387.9	0.0226	16.578	1231.4	0.0226	23.726	1119.4	0.0225
10	8.496	1386.1	0.0224	16.621	1230.6	0.0225	23.788	1117.8	0.0224
11	8.491	1382.8	0.0223	16.657	1230.9	0.0223	23.858	1117.3	0.0223
12	8.459	1377.5	0.0222	16.678	1232.2	0.0222	23.930	1118.1	0.0222
13	8.386	1369.0	0.0221	16.664	1234.5	0.0221	23.989	1120.7	0.0221
14	8.240	1354.8	0.0220	16.567	1236.9	0.0220	23.986	1125.5	0.0220
15	7.958	1329.1	0.0219	16.271	1236.7	0.0219	23.784	1131.8	0.0219
16	7.399	1278.9	0.0218	15.482	1224.4	0.0218	22.974	1134.1	0.0218
17	6.240	1177.4	0.0217	13.429	1170.0	0.0217	20.376	1111.4	0.0217
18	3.913	966.3	0.0216	8.566	996.9	0.0216	13.368	984.3	0.0216

Table 4-111. Burnup and TH Feedback Parameters by Axial Node for Assembly L17

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	4.715	1093.9	0.0237	9.850	1074.8	0.0237	15.114	1062.9	0.0238
2	6.564	1249.9	0.0236	13.663	1200.6	0.0236	20.895	1178.3	0.0237
3	7.777	1347.1	0.0235	15.983	1269.8	0.0235	24.140	1216.5	0.0236
4	8.396	1393.4	0.0233	17.027	1292.0	0.0234	25.408	1221.8	0.0234
5	8.696	1413.3	0.0232	17.450	1295.4	0.0232	25.816	1215.0	0.0233
6	8.860	1422.4	0.0231	17.646	1293.4	0.0231	25.963	1207.5	0.0231
7	8.956	1425.8	0.0229	17.750	1290.4	0.0230	26.036	1201.7	0.0230
8	9.007	1425.8	0.0228	17.807	1287.6	0.0228	26.083	1197.8	0.0228
9	9.026	1423.8	0.0227	17.839	1285.6	0.0227	26.125	1195.4	0.0227
10	9.023	1420.4	0.0225	17.861	1284.6	0.0226	26.175	1194.4	0.0226
11	9.011	1416.6	0.0224	17.892	1285.2	0.0224	26.257	1194.7	0.0225
12	9.003	1413.4	0.0223	17.961	1287.8	0.0223	26.414	1197.3	0.0223
13	8.987	1409.7	0.0221	18.044	1291.4	0.0222	26.625	1202.5	0.0222
14	8.875	1398.4	0.0220	17.979	1292.3	0.0221	26.681	1208.2	0.0221
15	8.624	1375.8	0.0219	17.675	1288.9	0.0219	26.460	1213.0	0.0220
16	8.134	1333.9	0.0218	16.895	1271.1	0.0218	25.594	1209.6	0.0218
17	7.169	1252.5	0.0217	15.058	1213.7	0.0217	23.075	1176.2	0.0217
18	5.398	1101.1	0.0216	11.331	1082.0	0.0216	17.351	1062.2	0.0216

Table 4-112. Burnup and TH Feedback Parameters by Axial Node for Assembly L19

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	4.264	1050.8	0.0236	9.110	1056.5	0.0237	14.135	1046.9	0.0237
2	6.047	1206.5	0.0235	12.876	1185.9	0.0236	19.838	1163.8	0.0236
3	7.308	1310.6	0.0234	15.268	1255.1	0.0235	23.142	1201.9	0.0235
4	7.988	1363.9	0.0233	16.384	1277.4	0.0233	24.478	1204.1	0.0233
5	8.331	1388.8	0.0231	16.851	1280.1	0.0232	24.930	1196.8	0.0232
6	8.528	1401.4	0.0230	17.080	1277.7	0.0230	25.113	1189.3	0.0231
7	8.649	1407.9	0.0229	17.213	1274.5	0.0229	25.218	1183.8	0.0229
8	8.722	1410.6	0.0228	17.298	1271.8	0.0228	25.297	1180.0	0.0228
9	8.762	1410.7	0.0226	17.359	1270.1	0.0227	25.372	1177.8	0.0227
10	8.781	1409.1	0.0225	17.411	1269.5	0.0225	25.455	1176.7	0.0226
11	8.788	1406.7	0.0224	17.472	1270.6	0.0224	25.569	1177.1	0.0224
12	8.797	1404.5	0.0223	17.570	1274.1	0.0223	25.756	1179.7	0.0223
13	8.794	1401.3	0.0221	17.680	1279.3	0.0222	26.000	1185.2	0.0222
14	8.682	1389.1	0.0220	17.632	1282.0	0.0221	26.078	1191.3	0.0221
15	8.406	1363.5	0.0219	17.319	1279.8	0.0219	25.856	1196.8	0.0220
16	7.850	1314.7	0.0218	16.470	1262.5	0.0218	24.930	1194.6	0.0218
17	6.789	1223.3	0.0217	14.498	1203.2	0.0217	22.286	1164.7	0.0217
18	5.021	1069.8	0.0216	10.719	1068.4	0.0216	16.535	1050.6	0.0216

Table 4-113. Burnup and TH Feedback Parameters by Axial Node for Assembly L20

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	3.200	937.6	0.0233	6.969	965.4	0.0233	10.965	968.6	0.0232
2	5.226	1129.7	0.0232	11.017	1108.7	0.0232	16.786	1078.9	0.0232
3	6.426	1230.9	0.0232	13.174	1165.3	0.0231	19.625	1109.5	0.0231
4	7.048	1280.5	0.0230	14.129	1180.6	0.0230	20.717	1108.6	0.0230
5	7.380	1305.1	0.0229	14.557	1181.7	0.0229	21.124	1101.3	0.0228
6	7.566	1317.5	0.0228	14.761	1178.6	0.0228	21.282	1094.2	0.0227
7	7.676	1323.1	0.0227	14.870	1174.9	0.0227	21.360	1088.8	0.0226
8	7.741	1325.1	0.0226	14.936	1172.0	0.0226	21.414	1085.1	0.0225
9	7.777	1325.1	0.0225	14.984	1170.0	0.0225	21.465	1082.7	0.0224
10	7.793	1323.6	0.0224	15.022	1169.2	0.0224	21.521	1081.3	0.0223
11	7.793	1320.9	0.0223	15.058	1169.4	0.0223	21.588	1080.8	0.0223
12	7.774	1316.8	0.0222	15.088	1170.8	0.0222	21.665	1081.6	0.0222
13	7.720	1310.1	0.0220	15.089	1173.1	0.0221	21.735	1084.1	0.0221
14	7.596	1297.8	0.0219	15.008	1175.3	0.0220	21.739	1088.4	0.0220
15	7.342	1274.4	0.0219	14.735	1174.5	0.0219	21.543	1093.9	0.0219
16	6.831	1228.9	0.0218	14.005	1162.2	0.0218	20.775	1094.9	0.0218
17	5.764	1135.9	0.0217	12.138	1111.8	0.0217	18.389	1071.1	0.0217
18	3.552	929.4	0.0216	7.726	958.2	0.0216	12.081	953.9	0.0216

Table 4-114. Burnup and TH Feedback Parameters by Axial Node for Assembly L23

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	4.236	1048.7	0.0236	8.954	1045.3	0.0237	13.871	1039.3	0.0237
2	6.115	1212.5	0.0236	12.815	1173.7	0.0236	19.712	1160.1	0.0236
3	7.467	1321.9	0.0234	15.371	1248.4	0.0234	23.273	1203.8	0.0235
4	8.175	1375.4	0.0233	16.545	1273.6	0.0233	24.703	1208.3	0.0234
5	8.517	1398.7	0.0232	17.019	1277.3	0.0232	25.169	1201.9	0.0232
6	8.707	1409.7	0.0230	17.243	1275.2	0.0230	25.347	1194.4	0.0231
7	8.824	1415.0	0.0229	17.371	1272.2	0.0229	25.447	1188.8	0.0229
8	8.894	1416.8	0.0228	17.452	1269.5	0.0228	25.521	1185.1	0.0228
9	8.933	1416.4	0.0226	17.509	1267.7	0.0227	25.591	1182.7	0.0227
10	8.953	1414.7	0.0225	17.560	1267.0	0.0225	25.672	1181.6	0.0226
11	8.965	1412.5	0.0224	17.625	1268.0	0.0224	25.789	1181.9	0.0224
12	8.984	1411.1	0.0223	17.734	1271.4	0.0223	25.989	1184.4	0.0223
13	8.993	1409.2	0.0221	17.858	1276.6	0.0222	26.246	1189.9	0.0222
14	8.895	1399.0	0.0220	17.821	1279.2	0.0221	26.334	1195.8	0.0221
15	8.636	1375.9	0.0219	17.521	1276.2	0.0219	26.122	1201.0	0.0220
16	8.105	1330.9	0.0218	16.704	1258.6	0.0218	25.228	1198.5	0.0218
17	7.069	1243.9	0.0217	14.791	1201.5	0.0217	22.649	1167.5	0.0217
18	5.251	1088.4	0.0216	11.028	1071.4	0.0216	16.927	1055.0	0.0216

Table 4-115. Burnup and TH Feedback Parameters by Axial Node for Assembly L27

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	3.073	926.4	0.0234	6.615	944.5	0.0233	10.433	956.6	0.0233
2	5.277	1135.2	0.0233	10.931	1095.9	0.0232	16.629	1074.4	0.0232
3	6.699	1252.1	0.0232	13.447	1160.7	0.0231	19.941	1110.9	0.0231
4	7.428	1307.6	0.0231	14.567	1181.1	0.0230	21.237	1111.6	0.0230
5	7.801	1333.3	0.0230	15.053	1183.3	0.0229	21.710	1104.7	0.0229
6	8.005	1344.9	0.0229	15.278	1180.4	0.0228	21.893	1097.5	0.0228
7	8.125	1349.9	0.0228	15.397	1176.8	0.0227	21.981	1092.0	0.0227
8	8.198	1351.7	0.0226	15.472	1173.7	0.0226	22.042	1088.2	0.0226
9	8.243	1351.6	0.0225	15.526	1171.6	0.0225	22.100	1085.7	0.0225
10	8.268	1350.3	0.0224	15.574	1170.6	0.0224	22.164	1084.1	0.0224
11	8.279	1348.2	0.0223	15.619	1170.6	0.0223	22.239	1083.5	0.0223
12	8.271	1345.0	0.0222	15.660	1171.8	0.0222	22.327	1084.0	0.0222
13	8.228	1339.5	0.0221	15.672	1173.9	0.0221	22.405	1086.2	0.0221
14	8.114	1328.8	0.0220	15.600	1175.9	0.0220	22.417	1090.3	0.0220
15	7.864	1307.9	0.0219	15.332	1175.2	0.0219	22.227	1095.7	0.0219
16	7.337	1263.9	0.0218	14.594	1163.1	0.0218	21.455	1097.2	0.0218
17	6.186	1167.3	0.0217	12.643	1113.1	0.0217	18.990	1074.8	0.0217
18	3.764	949.0	0.0216	7.986	960.7	0.0216	12.412	957.4	0.0216

Table 4-116. Burnup and TH Feedback Parameters by Axial Node for Assembly L28

Axial Node	Datapoint (208.7 Cy11)			Datapoint (417.8 Cy11)			Statepoint 74 (615.0 Cy11)		
	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm	Burnup (GWd/MTU)	T-Fuel °F	Spec. Vol. ft ³ /lbm
	208.7 Cy11	103.8 Cy11	103.8 Cy11	417.8 Cy11	312.8 Cy11	312.8 Cy11	615.0 Cy11	515.7 Cy11	515.7 Cy11
1	1.734	766.9	0.0225	3.839	797.9	0.0226	6.223	828.4	0.0226
2	2.866	882.2	0.0225	6.242	910.9	0.0225	9.902	927.5	0.0226
3	3.614	954.5	0.0224	7.675	964.0	0.0225	11.872	960.9	0.0225
4	4.015	991.1	0.0224	8.337	980.8	0.0224	12.662	964.9	0.0224
5	4.224	1008.6	0.0223	8.628	983.9	0.0223	12.952	961.0	0.0224
6	4.335	1016.7	0.0223	8.755	982.6	0.0223	13.051	956.3	0.0223
7	4.395	1020.1	0.0222	8.813	980.2	0.0222	13.086	952.4	0.0223
8	4.426	1021.0	0.0221	8.841	978.1	0.0222	13.102	949.7	0.0222
9	4.441	1020.5	0.0221	8.856	976.5	0.0221	13.116	947.9	0.0221
10	4.443	1019.0	0.0220	8.866	975.6	0.0220	13.133	946.8	0.0221
11	4.436	1016.7	0.0220	8.872	975.3	0.0220	13.154	946.5	0.0220
12	4.416	1013.3	0.0219	8.871	975.6	0.0219	13.178	946.9	0.0220
13	4.373	1008.0	0.0218	8.849	976.2	0.0219	13.191	948.5	0.0219
14	4.291	999.1	0.0218	8.777	976.5	0.0218	13.165	951.3	0.0218
15	4.133	983.1	0.0217	8.583	974.1	0.0218	13.007	954.3	0.0218
16	3.813	951.4	0.0217	8.088	961.3	0.0217	12.455	952.1	0.0217
17	3.161	887.4	0.0216	6.866	916.4	0.0217	10.818	925.0	0.0217
18	1.940	762.5	0.0216	4.272	795.3	0.0216	6.870	820.4	0.0216

4.2 CORE FOLLOW-CONTROL ROD HISTORY AND BORON DATA

Control rod insertion time (by axial node) for each assembly with a control rod inserted during core operation is provided in Tables 4-117 through 4-146. Each SP is defined by EFPD and cycle. The boron data is provided as all-rods-out-critical-boron (AROCB) concentrations at hot full power conditions (Table 4-147). The power level is 100 % of full power (%FP) and the control rod insertion data (for rod banks 6, 7, and 8) are expressed as % withdrawn (%WD). For banks 6 and 7, the %WD can be related to position relative to active fuel length by referring to Figure 2-22 (for 0%WD) and Figure 2-23 (for 100%WD). Figures 2-24 and 2-25 provide similar information for bank 8 (APSRs).

Table 4-117. Rod Insertion Time by Axial Node for Assembly B15

Axial Node	Time Rod Inserted (EFPD)	
	BOC3 to 142.8 EFPD	142.8 to 287.47 EFPD(EOC3)
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.9	0.0
8	1.0	0.0
9	15.6	26.7
10	141.4	131.0
11	142.3	144.7
12	139.3	144.7
13	137.2	141.9
14	64.7	60.2
15	0.0	0.3
16	0.0	0.0
17	0.0	0.0
18	0.0	0.0

Table 4-118. Rod Insertion Time by Axial Node for Assembly B21

Axial Node	Time Rod Inserted (EFPD)	
	BOC4 to 126.6 EFPD	126.6 to 273.96 EFPD(EOC4)
1	124.9	124.3
2	23.1	0.7
3	3.5	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	0.0	0.0
10	0.0	0.0
11	0.0	0.0
12	0.0	0.0
13	0.0	0.0
14	0.0	0.0
15	0.0	0.0
16	0.0	0.0
17	0.0	0.0
18	0.0	0.0

Table 4-119. Rod Insertion Time by Axial Node for Assembly B21a

Axial Node	Time Rod Inserted (EFPD)
	BOC5 to 114.4 EFPD(SP61)
1	103.3
2	46.6
3	3.0
4	0.0
5	0.0
6	0.0
7	0.0
8	0.0
9	0.0
10	0.0
11	0.0
12	0.0
13	0.0
14	0.0
15	0.0
16	0.0
17	0.0
18	0.0

Table 4-120. Rod Insertion Time by Axial Node for Assembly B29

Axial Node	Time Rod Inserted (EFPD)	
	BOC4 to 126.6 EFPD	126.6 to 274.0 EFPD
1	124.9	124.3
2	23.0	0.7
3	3.4	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	0.0	0.0
10	0.0	0.0
11	0.0	0.0
12	0.0	0.0
13	0.0	0.0
14	0.0	0.0
15	0.0	0.0
16	0.0	0.0
17	0.0	0.0
18	0.0	0.0

Table 4-121. Rod Insertion Time by Axial Node for Assembly C21

Axial Node	Time Rod Inserted (EFPD)	
	BOC4 to 126.6 EFPD	126.6 to 274.0 EFPD
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.4	0.0
8	16.3	0.0
9	92.2	28.7
10	126.6	146.5
11	126.6	147.4
12	118.3	147.4
13	72.3	147.4
14	5.1	52.6
15	0.0	0.0
16	0.0	0.0
17	0.0	0.0
18	0.0	0.0

Table 4-122. Rod Insertion Time by Axial Node for Assembly C28

Axial Node	Time Rod Inserted (EFPD)	
	BOC4 to 126.6 EFPD	126.6 to 274.0 EFPD
1	10.2	3.1
2	0.0	0.0
3	0.0	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	0.0	0.0
10	0.0	0.0
11	0.0	0.0
12	0.0	0.0
13	0.0	0.0
14	0.0	0.0
15	0.0	0.0
16	0.0	0.0
17	0.0	0.0
18	0.0	0.0

Table 4-123. Rod Insertion Time by Axial Node for Assembly C29

Axial Node	Time Rod Inserted (EFPD)	
	BOC4 to 126.6 EFPD	126.6 to 274.0 EFPD
1	124.9	124.3
2	23.3	0.7
3	3.6	0.0
4	0.0	0.0
5	0.0	0.0
6	0.0	0.0
7	0.0	0.0
8	0.0	0.0
9	0.0	0.0
10	0.0	0.0
11	0.0	0.0
12	0.0	0.0
13	0.0	0.0
14	0.0	0.0
15	0.0	0.0
16	0.0	0.0
17	0.0	0.0
18	0.0	0.0

Table 4-124. Rod Insertion Time by Axial Node for Assembly D15

Axial Node	Time Rod Inserted (EFPD)			
	BOC6 (SP62) to 69.1 EFPD (SP63)	69.1 (SP63) to 176.7 EFPD	176.7 to 320.3 EFPD	320.3 to 421.2 EFPD (EOC6)
1	68.21	107.52	143.67	91.03
2	26.43	31.34	20.25	2.33
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00

Table 4-125. Rod Insertion Time by Axial Node for Assembly D15a

Axial Node	Time Rod Inserted (EFPD)			
	BOC6 (SP62) to 69.1 EFPD (SP63)	69.1 (SP63) to 176.7 EFPD	176.7 to 320.3 EFPD	320.3 to 421.2 EFPD (EOC6)
1	68.09	107.60	143.68	90.98
2	26.29	31.29	20.23	2.32
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00

Table 4-126. Rod Insertion Time by Axial Node for Assembly D20a

Axial Node	Time Rod Inserted (EFPD)		
	BOC5 (SP60) to 114.4 EFPD (SP61)	114.4 (SP61) to 206.7 EFPD	206.7 to 302.4 EFPD (EOC5)
1	102.26	91.97	82.37
2	46.52	5.98	1.43
3	2.96	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.00	0.00
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-127. Rod Insertion Time by Axial Node for Assembly D21

Axial Node	Time Rod Inserted (EFPD)		
	BOC5 (SP60) to 114.4 EFPD (SP61)	114.4 (SP61) to 206.7 EFPD	206.7 to 302.4 EFPD (EOC5)
1	0.00	0.00	0.00
2	0.00	0.00	0.00
3	0.00	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	4.96	0.00	0.00
8	36.68	11.45	4.56
9	105.43	92.26	30.16
10	114.40	92.26	27.59
11	114.40	92.30	27.30
12	81.74	92.30	28.86
13	32.77	40.67	16.44
14	1.69	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-128. Rod Insertion Time by Axial Node for Assembly D25a

Axial Node	Time Rod Inserted (EFPD)		
	BOC5 (SP60) to 114.4 EFPD (SP61)	114.4 (SP61) to 206.7 EFPD	206.7 to 302.4 EFPD (EOC5)
1	102.55	91.98	82.57
2	47.02	5.99	1.43
3	3.14	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.00	0.00
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-129. Rod Insertion Time by Axial Node for Assembly D28

Axial Node	Time Rod Inserted (EFPD)			
	BOC6 (SP62) to 69.1 EFPD (SP63)	69.1 (SP63) to 176.7 EFPD	176.7 to 320.3 EFPD	320.3 to 421.2 EFPD EOC6
1	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00
4	13.24	2.93	19.19	6.55
5	62.32	91.08	143.57	100.88
6	69.10	107.60	143.60	100.85
7	69.07	107.63	143.60	100.88
8	69.10	107.60	143.60	100.88
9	69.10	107.60	143.60	100.88
10	69.13	107.57	143.60	100.88
11	69.10	107.63	143.57	100.88
12	60.10	107.35	139.17	100.85
13	10.82	27.41	3.35	6.27
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00

Table 4-130. Rod Insertion Time by Axial Node for Assembly F2

Axial Node	Time Rod Inserted (EFPD)				
	BOC7 (SP64) to 30.0 EFPD (SP65)	30.0 (SP65) to 107.8 EFPD (SP66)	107.8(SP66) to 227.4 EFPD	227.4 to 367.3 EFPD	367.3 to 474.7 EFPD (EOC7)
1	30.00	78.00	119.31	139.90	93.28
2	13.12	25.32	31.76	47.51	20.07
3	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00

Table 4-131. Rod Insertion Time by Axial Node for Assembly F4

Axial Node	Time Rod Inserted (EFPD)				
	BOC7 (SP64) to 30.0 EFPD (SP65)	30.0 (SP65) to 107.8 EFPD (SP66)	107.8(SP66) to 227.4 EFPD	227.4 to 367.3 EFPD	367.3 to 474.7 EFPD (EOC7)
1	30.00	78.00	119.40	139.83	93.60
2	13.09	25.29	31.78	47.48	20.24
3	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00

Table 4-132. Rod Insertion Time by Axial Node for Assembly F23

Axial Node	Time Rod Inserted (EFPD)				
	BOC7 (SP64) to 30.0 EFPD (SP65)	30.0 (SP65) to 107.8 EFPD (SP66)	107.8(SP66) to 227.4 EFPD	227.4 to 367.3 EFPD	367.3 to 474.7 EFPD (EOC7)
1	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00
4	19.59	69.57	45.14	3.65	18.94
5	30.00	77.97	119.43	16.64	78.32
6	30.00	78.00	119.40	16.64	78.11
7	30.00	78.00	119.40	16.64	78.11
8	30.00	78.00	119.40	16.64	78.26
9	30.00	78.03	119.37	16.64	78.45
10	30.00	78.00	119.40	16.64	78.81
11	30.00	78.00	119.40	16.64	79.37
12	14.11	18.28	88.94	15.08	71.53
13	0.00	0.00	0.00	0.01	0.00
14	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00

Table 4-133. Rod Insertion Time by Axial Node for Assembly G2

Axial Node	Time Rod Inserted (EFPD)		
	BOC8 (SP67) to 171.1 EFPD	171.1 to 338.1 EFPD	338.1 to 508.8 EFPD (EOC8)
1	171.10	167.00	170.76
2	84.97	54.20	49.13
3	0.00	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.00	0.00
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-134. Rod Insertion Time by Axial Node for Assembly G10

Axial Node	Time Rod Inserted (EFPD)		
	BOC8 (SP67) to 171.1 EFPD	171.1 to 338.1 EFPD	338.1 to 508.8 EFPD (EOC8)
1	0.00	0.00	0.00
2	0.00	0.00	0.00
3	0.00	0.00	0.00
4	17.72	31.58	39.90
5	171.07	167.03	170.67
6	171.10	167.00	170.70
7	171.10	167.00	170.70
8	171.10	167.00	170.73
9	171.10	166.97	170.73
10	171.10	167.00	170.70
11	171.10	167.00	170.70
12	166.35	155.00	150.51
13	8.93	1.39	1.75
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-135. Rod Insertion Time by Axial Node for Assembly G27a

Axial Node	Time Rod Inserted (EFPD)		
	BOC8 (SP67) to 171.1 EFPD	171.1 to 338.1 EFPD	338.1 to 508.8 EFPD (EOC8)
1	171.10	167.00	13.64
2	84.99	54.14	3.92
3	0.00	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.00	0.00
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-136. Rod Insertion Time by Axial Node for Assembly H10a

Axial Node	Time Rod Inserted (EFPD)				
	BOC10 (SP69) to 27.0 EFPD (SP70)	27.0 (SP70) to 143.0 EFPD (SP71)	143.0 (SP71) to 209.0 EFPD (SP72)	209.0 (SP72) to 430.4 EFPD	430.4 to 660.3 EFPD EOC10
1	25.07	113.50	66.08	220.68	229.66
2	7.37	50.04	19.63	32.65	26.51
3	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00

Table 4-137. Rod Insertion Time by Axial Node for Assembly H10b

Axial Node	Time Rod Inserted (EFPD)			
	BOC 11 (SP73) to 208.7 EFPD	208.7 to 417.8 EFPD	417.8 to 615.0 EFPD (SP74)	615.0 (SP74) to 683.0 EFPD EOC11
1	208.70	209.10	197.20	60.67
2	62.43	55.84	45.43	13.83
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00

Table 4-138. Rod Insertion Time by Axial Node for Assembly H12

Axial Node	Time Rod Inserted (EFPD)		
	BOC9 (SP68) to 214.0 EFPD	214.0 to 425.0 EFPD	425.0 to 639.4 EFPD (EOC9)
1	214.00	211.00	213.69
2	127.88	103.85	86.25
3	0.00	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.00	0.00
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-139. Rod Insertion Time by Axial Node for Assembly H23

Axial Node	Time Rod Inserted (EFPD)		
	BOC9 (SP68) to 214.0 EFPD	214.0 to 425.0 EFPD	425.0 to 639.4 EFPD (EOC9)
1	0.00	0.00	1.67
2	0.00	0.00	1.67
3	0.00	0.00	3.31
4	51.93	56.47	46.53
5	214.00	211.00	158.37
6	214.00	211.00	157.86
7	214.00	211.00	157.86
8	214.00	211.03	158.01
9	214.00	211.00	158.39
10	214.03	210.97	159.03
11	214.03	211.00	158.47
12	189.27	181.27	136.97
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-140. Rod Insertion Time by Axial Node for Assembly H27a

Axial Node	Time Rod Inserted (EFPD)		
	BOC9 (SP68) to 214.0 EFPD	214.0 to 425.0 EFPD	425.0 to 639.4 EFPD (EOC9)
1	214.00	211.00	213.70
2	127.88	103.77	85.85
3	0.00	0.00	0.00
4	0.00	0.00	0.00
5	0.00	0.00	0.00
6	0.00	0.00	0.00
7	0.00	0.00	0.00
8	0.00	0.00	0.00
9	0.00	0.00	0.00
10	0.00	0.00	0.00
11	0.00	0.00	0.00
12	0.00	0.00	0.00
13	0.00	0.00	0.00
14	0.00	0.00	0.00
15	0.00	0.00	0.00
16	0.00	0.00	0.00
17	0.00	0.00	0.00
18	0.00	0.00	0.00

Table 4-141. Rod Insertion Time by Axial Node for Assembly J20

Axial Node	Time Rod Inserted (EFPD)				
	BOC10 (SP69) to 27.0 EFPD (SP70)	27.0 (SP70) to 143.0 EFPD (SP71)	143.0 (SP71) to 209.0 EFPD (SP72)	209.0 (SP72) to 430.4 EFPD	430.4 to 660.3 EFPD EOC10
1	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00
4	5.77	17.87	14.86	51.02	59.87
5	27.00	115.59	66.00	221.40	229.90
6	27.03	115.97	66.00	221.40	229.90
7	27.00	116.00	66.00	221.40	229.87
8	27.03	115.97	66.00	221.40	229.93
9	26.97	116.00	66.03	221.40	229.90
10	27.00	116.00	66.00	221.40	229.90
11	27.00	116.00	66.00	221.40	229.90
12	24.68	111.35	59.46	198.33	199.22
13	0.00	1.83	0.00	0.19	0.00
14	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00

Table 4-142. Rod Insertion Time by Axial Node for Assembly J27

Axial Node	Time Rod Inserted (EFPD)				
	BOC10 (SP69) to 27.0 EFPD (SP70)	27.0 (SP70) to 143.0 EFPD (SP71)	143.0 (SP71) to 209.0 EFPD (SP72)	209.0 (SP72) to 430.4 EFPD	430.4 to 660.3 EFPD EOC10
1	25.09	113.54	66.00	220.79	229.58
2	7.33	49.95	19.61	32.85	26.50
3	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00

Table 4-143. Rod Insertion Time by Axial Node for Assembly J27a

Axial Node	Time Rod Inserted (EFPD)				
	BOC10 (SP69) to 27.0 EFPD (SP70)	27.0 (SP70) to 143.0 EFPD (SP71)	143.0 (SP71) to 209.0 EFPD (SP72)	209.0 (SP72) to 430.4 EFPD	430.4 to 660.3 EFPD EOC10
1	25.10	113.42	66.00	220.77	20.97
2	7.33	50.06	19.61	32.78	2.42
3	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00	0.00

Table 4-144. Rod Insertion Time by Axial Node for Assembly K6

Axial Node	Time Rod Inserted (EFPD)			
	BOC11 (SP73) to 208.7 EFPD	208.7 to 417.8 EFPD	417.8 to 615.0 EFPD (SP74)	615.0 (SP74) to 683.0 EFPD EOC11
1	208.70	5.87	197.20	60.68
2	62.26	1.57	45.44	13.77
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00

Table 4-145. Rod Insertion Time by Axial Node for Assembly K12

Axial Node	Time Rod Inserted (EFPD)			
	BOC11 (SP73) to 208.7 EFPD	208.7 to 417.8 EFPD	417.8 to 615.0 EFPD (SP74)	615.0 (SP74) to 683.0 EFPD EOC11
1	0.00	0.00	0.00	6.44
2	0.00	0.00	0.00	6.42
3	0.00	0.00	0.00	6.45
4	45.70	52.61	45.58	15.95
5	208.67	209.13	197.20	50.88
6	208.70	209.10	197.20	44.29
7	208.73	209.10	197.20	44.10
8	208.70	209.10	197.20	44.05
9	208.70	209.10	197.20	44.10
10	208.70	209.10	197.23	44.21
11	208.70	209.13	197.17	44.49
12	188.58	183.06	176.63	41.71
13	0.78	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00

Table 4-146. Rod Insertion Time by Axial Node for Assembly K27

Axial Node	Time Rod Inserted (EFPD)			
	BOC11 (SP73) to 208.7 EFPD	208.7 to 417.8 EFPD	417.8 to 615.0 EFPD (SP74)	615.0 (SP74) to 683.0 EFPD EOC11
1	208.70	209.04	197.26	60.52
2	62.33	55.78	45.45	13.74
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00
18	0.00	0.00	0.00	0.00

Table 4-147. All-Rods-Out-Critical-Boron Data for TMI-1

Cycle 2	
EFPD	ppmB ^a
25	912
50	840
75	767
100	695
125	622
150	550
175	477
200	405
225	332
250	260
256.2	242

Cycle 3	
EFPD	ppmB
25	788
50	717
75	645
100	573
125	502
150	430
175	358
200	287
225	215
250	143
275	72
287.1	37

Cycle 4	
EFPD	ppmB
25	765
50	694
75	624
100	554
125	483
150	413
175	343
200	273
225	202
250	132
274	64

Cycle 5	
EFPD	ppmB
25	749
50	677
75	604
100	532
125	459
150	386
175	314
200	241
225	168
250	96
275	23

Cycle 6	
EFPD	ppmB
25	960
50	935
75	900
100	855
125	805
150	750
175	690
200	625
225	560
250	495
275	425
300	350
325	270
350	180
375	90
400	40
420	10

Cycle 7	
EFPD	ppmB
25	1150
50	1125
75	1080
100	1020
125	955
150	890
175	820
200	755
225	680
250	600
275	515
300	430
325	350
350	265
375	185
400	105
425	30
450	5

Cycle 8	
EFPD	ppmB
25	1290
50	1250
75	1200
100	1155
125	1105
150	1055
175	1000
200	940
225	880
250	815
275	745
300	675
325	605
350	535
375	460
400	385
425	305
450	220
475	130
500	40

Cycle 9	
EFPD	ppmB
25	1600
50	1525
75	1475
100	1420
125	1355
150	1290
175	1230
200	1175
225	1120
250	1065
275	980
300	900
325	825
350	740
375	670
400	600
425	530
450	470
475	410
500	345
550	210
600	20

Table 4-147. All-Rods-Out-Critical-Boron Data for TMI-1 (Cont.)

Cycle 10	
EFPD	ppmB
25.0	1737
48.0	1696
68.0	1656
103.9	1580
124.8	1535
147.7	1486
169.7	1419
204.6	1334
223.2	1296
244.1	1226
265.1	1159
299.8	1068
333.4	964
354.5	906
382.5	826
402.5	770
430.4	688
465.4	587
479.4	539
500.4	480
556.3	309
605.2	167
652.8	35

Cycle 11	
EFPD	ppmB
26.9	1670
48.0	1575
82.9	1508
103.8	1453
124.8	1401
145.8	1358
180.7	1265
201.7	1211
222.8	1154
243.7	1103
277.9	1016
298.9	966
319.9	906
354.8	823
375.9	764
396.9	709
417.8	660
452.8	565
473.8	510
494.7	445
550.4	308
592.4	195
647.6	48
682.5	2

NOTE: ^a ppmB = Parts per million Boron by mass

4.3 STATEPOINT CRITICAL CONDITIONS AND MEASUREMENTS

Measured critical conditions for 16 reactor startups (or SPs) are provided in Table 4-148. The data includes the initial startup of the reactor or beginning-of-life, the beginning-of-cycle (BOC) of each reload core for Cycles 2 through 11, and 8 reactor restarts during the first 11 cycles of TMI-1. The cycle and SP number, along with the effective-full-power-days (EFPD) during the cycle for which the startup occurred, is provided. The elapsed time (in hours) since the reactor was shutdown (downtime) prior to the startup is also given for each SP. In addition, Table 4-148 provides the measured soluble boron concentration (ppmB), rod bank positions, and temperature of the moderator or coolant in the reactor (for each SP) when criticality was achieved.

Table 4-149 provides shutdown and startup dates for each cycle and SP. The cycle shutdown and startup dates can be used in determining the downtime for fuel assemblies that are out of the reactor for one or more cycles and are then reinserted in a later cycle.

Table 4-148. Statepoint Data for TMI-1 - Measured Critical Conditions

Cycle(SP)	Burnup EFPD	Downtime (Hours)	Boron Concent- ration ppmB	Rod Bank Position 100% Rod Withdrawn (WD) Or The Distance In cm Above The Bottom Of Active Fuel				RCS T(Coolant) (°F)
				Bank 5	Bank 6	Bank 7	Bank 8 APSR	
1 (SP59)	0.0	0.0	1609	WD ^a	WD	274.9	WD	532
5 (SP60)	0.0	58080	1178	WD	WD	338.3	140.0	532
5 (SP61)	114.4	792	777	WD	324.3	62.4	103.3	532
6 (SP62)	0.0	3432	1453	WD	WD	313.8	104.3	532
6 (SP63)	69.1	360	1194	WD	146.2	17.0	118.2	531
7 (SP64)	0.0	1392	1636	WD	WD	156.7	104.3	532
7 (SP65)	30.0	216	1536	WD	357.5	95.6	135.7	532.2
7 (SP66)	107.8	312	1380	WD	285.9	23.9	121.7	534.5
8 (SP67)	0.0	1368	1813	WD	WD	272.3	104.3	532
9 (SP68)	0.0	1152	2162	WD	WD	334.8	104.3	532
10 (SP69)	0.0	840	2407	WD	WD	311.1	116.3	532
10 (SP70)	27.0	120	2187	WD	WD	99.9	122.6	528.8
10 (SP71)	143.0	216	1983	WD	346.1	84.1	120.8	537.4
10 (SP72)	209.0	192	1719	WD	145.3	16.0	120.8	534
11 (SP73)	0.0	816	2249	WD	WD	229.1	120.8	532
11 (SP74)	615.0	168	555	355.2	93.2	16.0	121.5	535.9

NOTE: ^a WD = Rod 100 % Withdrawn

Table 4-149. Statepoint Data for TMI 1 - Shutdown and Startup Dates

Cycle(SP)	EFPD	Shutdown Date	Startup Time
1 (SP59)	0.0	-	05-Jun-74
5 (SP60)	0.0	17-Feb-79	03-Oct-85 @ 1330
5 (SP61)	114.4	21-Mar-86	23-Apr-86 @ 0410
6 (SP62)	0.0	31-Oct-86	23-Mar-87 @ 1731
6 (SP63)	69.1	12-Jun-87	27-Jun-87 @ 0532
7 (SP64)	0.0	17-Jun-88	14-Aug-88 @ 1500
7 (SP65)	30.0	17-Sep-88	26-Sep-88 @ 0630
7 (SP66)	107.8	16-Dec-88	29-Dec-88 @ 0155
8 (SP67)	0.0	05-Jan-90	03-Mar-90 @ 0600
9 (SP68)	0.0	27-Sep-91	14-Nov-91 @ 1230
10 (SP69)	0.0	10-Sep-93	15-Oct-93 @ 0852
10 (SP70)	27.0	14-Nov-93	19-Nov-93 @ 0339
10 (SP71)	143.0	17-Mar-94	26-Mar-94 @ 1404
10 (SP72)	209.0	01-Jun-94	09-Jun-94 @ 1115
11 (SP73)	0.0	08-Sep-95	12-Oct-95 @ 1250
11 (SP74)	615.0	21-Jun-97	28-Jun-97 @ 1435

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5. CONCLUSIONS

The information reported herein is acceptable for quality affecting activities and for use in evaluations concerning procurement, construction, or fabrication. The components of the engineered barrier system have been identified as items important to radiological safety and waste isolation in a number of classification analyses (e.g., CRWMS M&O 1999).

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6. REFERENCES

6.1 DOCUMENTS CITED

BSC (Bechtel SAIC Company) 2001. *Technical Work Plan for: Waste Package Design Description for LA*. TWP-EBS-MD-000004 REV 01. Las Vegas, Nevada: Bechtel SAIC Company. ACC: MOL.20010702.0152.

CRWMS (Civilian Radioactive Waste Management System) M&O (Management and Operating Contractor) 1999. *Classification of the MGR Uncanistered Spent Nuclear Fuel Disposal Container System*. ANL-UDC-SE-000001 REV 00. Las Vegas, Nevada: CRWMS M&O. ACC: MOL.19990928.0216.

DOE (U.S. Department of Energy) 2000. *Quality Assurance Requirements and Description*. DOE/RW-0333P, Rev. 10. Washington, D.C.: U.S. Department of Energy, Office of Civilian Radioactive Waste Management. ACC: MOL.20000427.0422.

Framatome Cogema Fuels 2000. *Quality Assurance Program for Framatome Cogema Fuels*. 56-1177617-06. Lynchburg, Virginia: Framatome Cogema Fuels. TIC: 249160.

Mellington, S.P. 1999. "Office of Project Execution (OPE) Approval of LV.WP.TWD.08/99-131 as Accepted Data." Letter from S.P. Mellington (DOE/YMSCO) to T.W. Doering (CRWMS M&O), September 29, 1999 ACC: MOL.19990927.0472.

YMP (Yucca Mountain Site Characterization Project) 2000. *Disposal Criticality Analysis Methodology Topical Report*. YMP/TR-004Q, Rev. 01. Las Vegas, Nevada: Yucca Mountain Site Characterization Office. ACC: MOL.20001214.0001.

6.2 CODES, STANDARDS, REGULATIONS, AND PROCEDURES

ASTM A533/A 533M-93 (Reapproved 1999). 1993. *Standard Specification for Pressure Vessel Plates, Alloy Steel, Quenched and Tempered, Manganese-Molybdenum and Manganese-Molybdenum-Nickel*. West Conshohocken, Pennsylvania: American Society for Testing and Materials. TIC: 249680.

6.3 SOURCE DATA, LISTED BY DATA TRACKING NUMBER

MO0106SPADEP01.007. TMI-1 Nemo Depletion and State-Points. Submittal date: 06/21/01.

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APPENDIX A
FUEL ROD DATA FOR ASSEMBLIES NJ05YU & NJ070G

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APPENDIX A - FUEL ROD DATA FOR ASSEMBLIES NJ05YU & NJ070G

At the end of cycle 10, several fuel rods were removed from once burned and twice burned fuel assemblies. A chemical analysis was performed on a few of the rods that were removed. This section provides information on six of these rods, two from assembly NJ05YU, and four from assembly NJ070G.

Assembly NJ05YU was a fresh assembly at the beginning of cycle 9 and was inserted in the core during both cycles 9 and 10. The assembly was removed at the end of cycle 10. The data for two of the fuel rods that were removed are presented in this section.

Assembly NJ070G was a fresh assembly at the beginning of cycle 10 and was inserted in the core during both cycles 10 and 11. At the end of cycle 10, some of the fuel rods were removed and replaced with stainless steel rods. The assembly was re-inserted into the core for cycle 11. The data for four of the fuel rods that were removed at the end of cycle 10 are presented in this section.

The locations of the assemblies in the core as a function of cycle are provided in Figures A-1 and A-2.

The rods that were removed from assembly NJ05YU were located in position D5 and H6 (Figure A-3). The rods that were removed from assembly NJ070G were located in position O1, O11, O12, and O13 (Figure A-4).

The fuel assembly and selected rod Uranium loading are provided in Table A-1. Table A-2 provides the geometric, material, and identification information for the fuel rods. Table A-3 provides the fuel pellet Uranium isotopic weight percent. The rod burnup history (GWd/MTU) is provided in Tables A-4 and A-5.

Although assembly NJ070G contained Gadolinia fuel rods, none of the rods presented in this section contained Gadolinia.

← NORTH

Figure A-1. TMI-1 Cycle 9 Assembly NJ05YU Location

← NORTH

Figure A-2. TMI-1 Cycle 10 Assembly NJ05YU and NJ070G Location

← NORTH

Figure A-3. TMI-1 Fuel Rod Locations in Assembly NJ05YU

← NORTH

Figure A-4. TMI-1 Fuel Rod Locations in Assembly NJ070G

Table A-1. Assembly & Fuel Rod Uranium Loading (Assemblies NJ05YU & NJ070G)

Fuel Assembly/Rod	Position In FA	Initial UO ₂ (gm)	Uranium (gm)	²³⁵ U (gm)	Enrichment wt % ²³⁵ U
FA NJ05YU			463,167.8	18,587.09	4.00
Fuel Rod I05381	D5	2,531	2,229.8	89.48	4.00
Fuel Rod I05243	H6	2,528	2,227.2	89.38	4.00
FA NJ070G			462,975.3	21,487.29	4.65/4.19 Gd ^a
Fuel Rod C53923	O1	2,531	2,230.8	103.89	4.65
Fuel Rod C53927	O11	2,522	2,222.9	103.52	4.65
Fuel Rod C53928	O13	2,528	2,228.2	103.77	4.65
Fuel Rod C53930	O12	2,532	2,231.7	103.93	4.65

NOTE: ^a Four of the fuel rods contain 2.0 wt % Gd and 4.19 wt % U235

Table A-2. Fuel Rod Geometric & Material Data (Assemblies NJ05YU & NJ070G)

Fuel Assembly		
Fuel Assembly Identification	NJ05YU	NJ070G
Fuel Assembly Type	MK-B8	MK-B9Gd
Fuel Batch	11	12
Fuel Rod		
Clad OD (cm)	1.0922	1.0922
Clad ID (cm)	0.9576	0.9576
Fuel Rod Length (cm)	391.5664	391.5664
Fill Gas	Helium	Helium
Fuel Pellet		
Diameter (cm)	0.9362	0.9398
Active Fuel Length (cm)	360.172	357.124
LAF ^b to Fuel Rod Bottom (cm)	13.0810	13.0302
²³⁵ U wt %	4.00	4.65/4.19 (Gd) ^a
% Theoretical Density	95	95
Volumes		
Upper Cap (cm ³)	0.7194	0.7194
Upper Spring (cm ³)	2.1631	2.5236
Upper Plenum Gas (cm ³)	10.3320	12.1756
Lower Plenum Gas (cm ³)	3.1955	3.1955
Lower Spring (cm ³)	0.7915	0.7915
Lower Cap (cm ³)	6.4778	6.4778
Materials		
Fuel Rod Clad	Zircaloy	Zircaloy
Fuel Rod Upper Cap	Zircaloy-4	Zircaloy-4
Fuel Rod Upper Spring	302SS	302SS
Fuel Rod Lower Spring	A286 Alloy	A286 Alloy
Fuel Rod Lower Cap	Zircaloy-4	Zircaloy-4

NOTES: ^a Four of the fuel rods contain 2.0 wt % Gd and 4.19 wt % U235

^b Lower Active Fuel

Table A-3. Fuel Pellet Uranium Isotopic (wt %)

Identification No.	²³⁴ U	²³⁵ U	²³⁶ U	²³⁷ U
FA NJ05YU	0.040	4.013	<0.001	95.947
FA NJ070G	0.045	4.657	<0.001	95.298

Table A-4. Fuel Rod Data for Assembly NJ05YU

Cycle 9, EFPD: 0.0, Boron (ppmB): 1670

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0238	1041.0	0.000	0.000
2	20.0025	320.1035	340.1060	0.0237	1243.4	0.000	0.000
3	20.0025	300.1010	320.1035	0.0236	1390.6	0.000	0.000
4	20.0025	280.0985	300.1010	0.0234	1481.0	0.000	0.000
5	20.0025	260.0960	280.0985	0.0233	1526.5	0.000	0.000
6	20.0025	240.0935	260.0960	0.0231	1550.6	0.000	0.000
7	20.0025	220.0910	240.0935	0.0230	1564.2	0.000	0.000
8	20.0025	200.0885	220.0910	0.0228	1569.6	0.000	0.000
9	20.0025	180.0860	200.0885	0.0227	1568.3	0.000	0.000
10	20.0025	160.0835	180.0860	0.0225	1561.3	0.000	0.000
11	20.0025	140.0810	160.0835	0.0224	1549.6	0.000	0.000
12	20.0025	120.0785	140.0810	0.0223	1534.7	0.000	0.000
13	20.0025	100.0760	120.0785	0.0221	1516.2	0.000	0.000
14	20.0025	80.0735	100.0760	0.0220	1486.5	0.000	0.000
15	20.0025	60.0710	80.0735	0.0219	1436.8	0.000	0.000
16	20.0025	40.0685	60.0710	0.0218	1359.3	0.000	0.000
17	20.0025	20.0660	40.0685	0.0217	1236.4	0.000	0.000
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1042.8	0.000	0.000

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 9, EFPD: 74.2, Boron (ppmB): 1481

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0238	1068.7	1.600	1.504
2	20.0025	320.1035	340.1060	0.0237	1269.3	2.183	2.283
3	20.0025	300.1010	320.1035	0.0236	1394.5	2.679	2.839
4	20.0025	280.0985	300.1010	0.0235	1458.4	2.980	3.179
5	20.0025	260.0960	280.0985	0.0233	1482.4	3.145	3.365
6	20.0025	240.0935	260.0960	0.0231	1492.7	3.246	3.476
7	20.0025	220.0910	240.0935	0.0230	1496.8	3.309	3.543
8	20.0025	200.0885	220.0910	0.0229	1496.9	3.342	3.578
9	20.0025	180.0860	200.0885	0.0227	1494.4	3.352	3.588
10	20.0025	160.0835	180.0860	0.0226	1490.3	3.343	3.577
11	20.0025	140.0810	160.0835	0.0224	1485.1	3.319	3.551
12	20.0025	120.0785	140.0810	0.0223	1479.5	3.292	3.513
13	20.0025	100.0760	120.0785	0.0222	1471.8	3.257	3.456
14	20.0025	80.0735	100.0760	0.0220	1456.1	3.165	3.353
15	20.0025	60.0710	80.0735	0.0219	1428.0	3.004	3.184
16	20.0025	40.0685	60.0710	0.0218	1369.2	2.742	2.909
17	20.0025	20.0660	40.0685	0.0217	1259.4	2.306	2.450
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1066.1	1.826	1.693

Cycle 9, EFPD: 144.1, Boron (ppmB): 1342

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0238	1080.7	3.216	3.035
2	20.0025	320.1035	340.1060	0.0237	1271.0	4.423	4.594
3	20.0025	300.1010	320.1035	0.0236	1376.9	5.379	5.639
4	20.0025	280.0985	300.1010	0.0235	1421.6	5.922	6.235
5	20.0025	260.0960	280.0985	0.0233	1432.4	6.195	6.540
6	20.0025	240.0935	260.0960	0.0232	1434.2	6.352	6.709
7	20.0025	220.0910	240.0935	0.0230	1432.7	6.445	6.805
8	20.0025	200.0885	220.0910	0.0229	1429.9	6.492	6.853
9	20.0025	180.0860	200.0885	0.0227	1426.9	6.505	6.866
10	20.0025	160.0835	180.0860	0.0226	1424.1	6.492	6.852
11	20.0025	140.0810	160.0835	0.0224	1422.0	6.464	6.819
12	20.0025	120.0785	140.0810	0.0223	1421.1	6.437	6.774
13	20.0025	100.0760	120.0785	0.0222	1420.5	6.402	6.701
14	20.0025	80.0735	100.0760	0.0221	1414.8	6.264	6.546
15	20.0025	60.0710	80.0735	0.0219	1400.0	5.993	6.269
16	20.0025	40.0685	60.0710	0.0218	1362.0	5.515	5.780
17	20.0025	20.0660	40.0685	0.0217	1268.2	4.664	4.907
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1081.8	3.662	3.399

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 9, EFPD: 214, Boron (ppmB): 1175

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0239	1072.1	4.880	4.614
2	20.0025	320.1035	340.1060	0.0238	1244.7	6.764	6.963
3	20.0025	300.1010	320.1035	0.0236	1337.4	8.173	8.474
4	20.0025	280.0985	300.1010	0.0235	1372.5	8.934	9.293
5	20.0025	260.0960	280.0985	0.0233	1377.2	9.290	9.687
6	20.0025	240.0935	260.0960	0.0232	1375.3	9.483	9.892
7	20.0025	220.0910	240.0935	0.0230	1371.9	9.593	10.004
8	20.0025	200.0885	220.0910	0.0229	1368.6	9.647	10.059
9	20.0025	180.0860	200.0885	0.0227	1366.0	9.665	10.077
10	20.0025	160.0835	180.0860	0.0226	1364.5	9.659	10.069
11	20.0025	140.0810	160.0835	0.0225	1364.4	9.640	10.045
12	20.0025	120.0785	140.0810	0.0223	1366.2	9.635	10.014
13	20.0025	100.0760	120.0785	0.0222	1369.4	9.630	9.953
14	20.0025	80.0735	100.0760	0.0221	1370.0	9.481	9.786
15	20.0025	60.0710	80.0735	0.0220	1364.6	9.142	9.446
16	20.0025	40.0685	60.0710	0.0218	1343.5	8.483	8.786
17	20.0025	20.0660	40.0685	0.0217	1266.1	7.223	7.521
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1088.3	5.616	5.225

Cycle 9, EFPD: 283.9, Boron (ppmB): 990

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0239	1087.3	6.610	6.259
2	20.0025	320.1035	340.1060	0.0237	1255.2	9.225	9.411
3	20.0025	300.1010	320.1035	0.0236	1327.6	11.073	11.359
4	20.0025	280.0985	300.1010	0.0234	1341.2	12.016	12.363
5	20.0025	260.0960	280.0985	0.0233	1335.8	12.424	12.813
6	20.0025	240.0935	260.0960	0.0232	1327.5	12.628	13.030
7	20.0025	220.0910	240.0935	0.0230	1320.1	12.740	13.142
8	20.0025	200.0885	220.0910	0.0229	1314.4	12.794	13.197
9	20.0025	180.0860	200.0885	0.0227	1310.8	12.816	13.218
10	20.0025	160.0835	180.0860	0.0226	1309.1	12.818	13.219
11	20.0025	140.0810	160.0835	0.0225	1309.7	12.818	13.213
12	20.0025	120.0785	140.0810	0.0223	1312.9	12.849	13.209
13	20.0025	100.0760	120.0785	0.0222	1318.3	12.893	13.178
14	20.0025	80.0735	100.0760	0.0221	1322.8	12.762	13.025
15	20.0025	60.0710	80.0735	0.0220	1323.4	12.391	12.660
16	20.0025	40.0685	60.0710	0.0218	1310.8	11.592	11.873
17	20.0025	20.0660	40.0685	0.0217	1247.1	9.938	10.245
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1083.1	7.662	7.141

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 9, EFPD: 349.7, Boron (ppmB): 772

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0238	1073.0	8.320	7.884
2	20.0025	320.1035	340.1060	0.0237	1228.0	11.666	11.805
3	20.0025	300.1010	320.1035	0.0236	1290.3	13.892	14.123
4	20.0025	280.0985	300.1010	0.0234	1299.0	14.959	15.249
5	20.0025	260.0960	280.0985	0.0233	1291.1	15.376	15.715
6	20.0025	240.0935	260.0960	0.0231	1281.8	15.568	15.922
7	20.0025	220.0910	240.0935	0.0230	1274.2	15.668	16.021
8	20.0025	200.0885	220.0910	0.0229	1269.1	15.716	16.070
9	20.0025	180.0860	200.0885	0.0227	1266.3	15.739	16.092
10	20.0025	160.0835	180.0860	0.0226	1265.8	15.753	16.104
11	20.0025	140.0810	160.0835	0.0225	1267.2	15.775	16.119
12	20.0025	120.0785	140.0810	0.0223	1271.2	15.847	16.147
13	20.0025	100.0760	120.0785	0.0222	1278.2	15.953	16.158
14	20.0025	80.0735	100.0760	0.0221	1286.1	15.865	16.043
15	20.0025	60.0710	80.0735	0.0220	1292.8	15.502	15.690
16	20.0025	40.0685	60.0710	0.0218	1289.8	14.619	14.831
17	20.0025	20.0660	40.0685	0.0217	1245.1	12.632	12.900
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1085.4	9.678	9.027

Cycle 9, EFPD: 425, Boron (ppmB): 545

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0238	1069.8	10.325	9.788
2	20.0025	320.1035	340.1060	0.0237	1217.3	14.528	14.573
3	20.0025	300.1010	320.1035	0.0236	1259.7	17.142	17.275
4	20.0025	280.0985	300.1010	0.0234	1256.6	18.311	18.506
5	20.0025	260.0960	280.0985	0.0233	1243.2	18.715	18.971
6	20.0025	240.0935	260.0960	0.0231	1231.2	18.881	19.155
7	20.0025	220.0910	240.0935	0.0230	1222.6	18.963	19.237
8	20.0025	200.0885	220.0910	0.0228	1216.9	19.004	19.278
9	20.0025	180.0860	200.0885	0.0227	1213.6	19.031	19.305
10	20.0025	160.0835	180.0860	0.0226	1212.2	19.059	19.331
11	20.0025	140.0810	160.0835	0.0225	1212.7	19.109	19.370
12	20.0025	120.0785	140.0810	0.0223	1216.1	19.232	19.439
13	20.0025	100.0760	120.0785	0.0222	1222.6	19.417	19.505
14	20.0025	80.0735	100.0760	0.0221	1231.2	19.396	19.448
15	20.0025	60.0710	80.0735	0.0220	1241.7	19.077	19.139
16	20.0025	40.0685	60.0710	0.0219	1247.7	18.151	18.246
17	20.0025	20.0660	40.0685	0.0217	1221.3	15.840	16.023
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1080.0	12.080	11.278

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 9, EFPD: 483.9, Boron (ppmB): 352

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0238	1066.6	11.953	11.338
2	20.0025	320.1035	340.1060	0.0237	1197.7	16.837	16.792
3	20.0025	300.1010	320.1035	0.0235	1225.6	19.715	19.756
4	20.0025	280.0985	300.1010	0.0234	1220.8	20.926	21.038
5	20.0025	260.0960	280.0985	0.0232	1207.9	21.300	21.483
6	20.0025	240.0935	260.0960	0.0231	1197.0	21.435	21.639
7	20.0025	220.0910	240.0935	0.0230	1189.7	21.498	21.703
8	20.0025	200.0885	220.0910	0.0228	1185.1	21.531	21.736
9	20.0025	180.0860	200.0885	0.0227	1182.6	21.558	21.764
10	20.0025	160.0835	180.0860	0.0226	1181.6	21.594	21.798
11	20.0025	140.0810	160.0835	0.0225	1182.1	21.662	21.854
12	20.0025	120.0785	140.0810	0.0223	1185.2	21.821	21.951
13	20.0025	100.0760	120.0785	0.0222	1191.3	22.065	22.055
14	20.0025	80.0735	100.0760	0.0221	1199.6	22.098	22.047
15	20.0025	60.0710	80.0735	0.0220	1210.4	21.828	21.785
16	20.0025	40.0685	60.0710	0.0219	1217.0	20.902	20.894
17	20.0025	20.0660	40.0685	0.0217	1198.6	18.385	18.484
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1077.9	13.999	13.081

Cycle 9, EFPD: 549.2, Boron (ppmB): 134

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0238	1066.1	13.811	13.106
2	20.0025	320.1035	340.1060	0.0236	1176.3	19.434	19.277
3	20.0025	300.1010	320.1035	0.0235	1200.4	22.554	22.490
4	20.0025	280.0985	300.1010	0.0233	1191.4	23.779	23.797
5	20.0025	260.0960	280.0985	0.0232	1176.8	24.104	24.208
6	20.0025	240.0935	260.0960	0.0231	1165.9	24.201	24.331
7	20.0025	220.0910	240.0935	0.0229	1159.0	24.244	24.376
8	20.0025	200.0885	220.0910	0.0228	1155.0	24.270	24.403
9	20.0025	180.0860	200.0885	0.0227	1152.6	24.300	24.433
10	20.0025	160.0835	180.0860	0.0226	1151.2	24.346	24.477
11	20.0025	140.0810	160.0835	0.0224	1150.8	24.432	24.550
12	20.0025	120.0785	140.0810	0.0223	1152.4	24.628	24.675
13	20.0025	100.0760	120.0785	0.0222	1157.4	24.934	24.819
14	20.0025	80.0735	100.0760	0.0221	1165.2	25.027	24.863
15	20.0025	60.0710	80.0735	0.0220	1176.7	24.820	24.662
16	20.0025	40.0685	60.0710	0.0219	1187.5	23.922	23.799
17	20.0025	20.0660	40.0685	0.0217	1172.2	21.232	21.227
18 (Bottom)	20.066	0.0000	20.0660	0.0216	1071.2	16.177	15.130

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 9, EFPD: 608, Boron (ppmB): 13

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.066	340.1060	360.1720	0.0235	1087.3	15.525	14.738
2	20.0025	320.1035	340.1060	0.0234	1194.3	21.793	21.528
3	20.0025	300.1010	320.1035	0.0232	1207.9	25.092	24.933
4	20.0025	280.0985	300.1010	0.0231	1192.6	26.325	26.256
5	20.0025	260.0960	280.0985	0.0230	1179.2	26.621	26.645
6	20.0025	240.0935	260.0960	0.0228	1169.7	26.699	26.750
7	20.0025	220.0910	240.0935	0.0227	1162.5	26.734	26.788
8	20.0025	200.0885	220.0910	0.0226	1156.5	26.759	26.814
9	20.0025	180.0860	200.0885	0.0224	1150.3	26.791	26.846
10	20.0025	160.0835	180.0860	0.0223	1142.6	26.839	26.891
11	20.0025	140.0810	160.0835	0.0222	1132.5	26.927	26.966
12	20.0025	120.0785	140.0810	0.0221	1119.2	27.126	27.091
13	20.0025	100.0760	120.0785	0.0220	1105.7	27.449	27.240
14	20.0025	80.0735	100.0760	0.0219	1099.1	27.568	27.308
15	20.0025	60.0710	80.0735	0.0218	1101.5	27.404	27.148
16	20.0025	40.0685	60.0710	0.0217	1108.8	26.536	26.313
17	20.0025	20.0660	40.0685	0.0216	1099.8	23.726	23.628
18 (Bottom)	20.066	0.0000	20.0660	0.0215	1015.6	18.116	16.960

Cycle 9, EFPD: 639.4, Boron (ppmB): 2 (EOC9)

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	20.0660	340.1060	360.1720	0.0229	842.5	16.567	15.732
2	20.0025	320.1035	340.1060	0.0228	891.3	23.205	22.880
3	20.0025	300.1010	320.1035	0.0228	886.0	26.583	26.366
4	20.0025	280.0985	300.1010	0.0227	870.2	27.799	27.672
5	20.0025	260.0960	280.0985	0.0226	857.1	28.068	28.034
6	20.0025	240.0935	260.0960	0.0226	845.9	28.121	28.115
7	20.0025	220.0910	240.0935	0.0225	835.7	28.136	28.132
8	20.0025	200.0885	220.0910	0.0225	826.0	28.143	28.141
9	20.0025	180.0860	200.0885	0.0224	816.3	28.157	28.155
10	20.0025	160.0835	180.0860	0.0223	806.3	28.183	28.181
11	20.0025	140.0810	160.0835	0.0223	795.7	28.244	28.230
12	20.0025	120.0785	140.0810	0.0223	784.4	28.410	28.325
13	20.0025	100.0760	120.0785	0.0222	773.5	28.701	28.444
14	20.0025	80.0735	100.0760	0.0222	765.6	28.802	28.497
15	20.0025	60.0710	80.0735	0.0221	761.6	28.639	28.338
16	20.0025	40.0685	60.0710	0.0221	761.0	27.774	27.507
17	20.0025	20.0660	40.0685	0.0220	758.8	24.907	24.767
18 (Bottom)	20.0660	0.0000	20.0660	0.0220	732.0	19.041	17.836

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 10, EFPD: 0.0, Boron (ppmB): 1800

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0234	877.4	15.868	15.238
2	20.0025	319.6311	339.6336	0.0234	978.8	22.757	22.164
3	20.0025	299.6286	319.6311	0.0233	1030.6	26.477	26.122
4	20.0025	279.6261	299.6286	0.0231	1065.9	27.808	27.605
5	20.0025	259.6236	279.6261	0.0230	1091.6	28.115	28.021
6	20.0025	239.6211	259.6236	0.0229	1109.8	28.172	28.115
7	20.0025	219.6186	239.6211	0.0228	1122.1	28.188	28.136
8	20.0025	199.6161	219.6186	0.0227	1129.2	28.194	28.144
9	20.0025	179.6136	199.6161	0.0225	1131.7	28.207	28.158
10	20.0025	159.6111	179.6136	0.0224	1130.1	28.232	28.183
11	20.0025	139.6086	159.6111	0.0223	1125.0	28.289	28.231
12	20.0025	119.6061	139.6086	0.0222	1116.3	28.445	28.325
13	20.0025	99.6036	119.6061	0.0221	1102.5	28.727	28.448
14	20.0025	79.6011	99.6036	0.0220	1081.0	28.830	28.503
15	20.0025	59.5986	79.6011	0.0219	1050.0	28.676	28.345
16	20.0025	39.5961	59.5986	0.0218	1010.3	27.840	27.506
17	20.0025	19.5936	39.5961	0.0217	958.6	25.036	24.716
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	853.5	18.045	17.761

NOTE: The EOC9 burnup is slightly different from BOC10 due to the non-symmetric one-quarter core model relative to the full core and the difference in axial nodal height between the Cycle 9 and Cycle 10.

Cycle 10, EFPD: 68, Boron (ppmB): 1649

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0234	877.9	17.136	16.393
2	20.0025	319.6311	339.6336	0.0233	973.3	24.694	23.948
3	20.0025	299.6286	319.6311	0.0232	1020.3	28.799	28.260
4	20.0025	279.6261	299.6286	0.0231	1050.8	30.346	29.947
5	20.0025	259.6236	279.6261	0.0230	1073.0	30.785	30.489
6	20.0025	239.6211	259.6236	0.0229	1086.4	30.927	30.667
7	20.0025	219.6186	239.6211	0.0228	1094.2	30.999	30.743
8	20.0025	199.6161	219.6186	0.0226	1097.9	31.041	30.786
9	20.0025	179.6136	199.6161	0.0225	1098.4	31.071	30.817
10	20.0025	159.6111	179.6136	0.0224	1096.4	31.099	30.844
11	20.0025	139.6086	159.6111	0.0223	1092.4	31.146	30.883
12	20.0025	119.6061	139.6086	0.0222	1086.6	31.282	30.956
13	20.0025	99.6036	119.6061	0.0221	1077.8	31.523	31.040
14	20.0025	79.6011	99.6036	0.0220	1062.8	31.552	31.021
15	20.0025	59.5986	79.6011	0.0219	1038.6	31.274	30.741
16	20.0025	39.5961	59.5986	0.0218	1003.4	30.248	29.716
17	20.0025	19.5936	39.5961	0.0217	958.4	27.125	26.617
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	858.3	19.441	19.008

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 10, EFPD: 131.8, Boron (ppmB): 1521

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0234	902.1	18.364	17.518
2	20.0025	319.6311	339.6336	0.0233	995.4	26.552	25.669
3	20.0025	299.6286	319.6311	0.0232	1032.3	31.001	30.302
4	20.0025	279.6261	299.6286	0.0231	1055.6	32.725	32.156
5	20.0025	259.6236	279.6261	0.0230	1065.6	33.260	32.790
6	20.0025	239.6211	259.6236	0.0228	1069.5	33.457	33.022
7	20.0025	219.6186	239.6211	0.0227	1070.3	33.561	33.131
8	20.0025	199.6161	219.6186	0.0226	1069.1	33.622	33.192
9	20.0025	179.6136	199.6161	0.0225	1066.9	33.661	33.232
10	20.0025	159.6111	179.6136	0.0224	1063.9	33.690	33.260
11	20.0025	139.6086	159.6111	0.0223	1060.7	33.733	33.294
12	20.0025	119.6061	139.6086	0.0222	1057.2	33.860	33.358
13	20.0025	99.6036	119.6061	0.0221	1051.9	34.080	33.423
14	20.0025	79.6011	99.6036	0.0220	1042.1	34.063	33.358
15	20.0025	59.5986	79.6011	0.0219	1025.0	33.699	32.991
16	20.0025	39.5961	59.5986	0.0218	996.7	32.523	31.818
17	20.0025	19.5936	39.5961	0.0217	951.1	29.119	28.445
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	858.7	20.788	20.221

Cycle 10, EFPD: 209, Boron (ppmB): 1322

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0234	910.9	19.935	18.970
2	20.0025	319.6311	339.6336	0.0233	996.7	28.892	27.851
3	20.0025	299.6286	319.6311	0.0232	1036.3	33.719	32.841
4	20.0025	279.6261	299.6286	0.0231	1052.2	35.610	34.852
5	20.0025	259.6236	279.6261	0.0230	1055.7	36.218	35.557
6	20.0025	239.6211	259.6236	0.0228	1054.3	36.448	35.820
7	20.0025	219.6186	239.6211	0.0227	1051.2	36.567	35.944
8	20.0025	199.6161	219.6186	0.0226	1047.7	36.634	36.012
9	20.0025	179.6136	199.6161	0.0225	1044.4	36.676	36.053
10	20.0025	159.6111	179.6136	0.0224	1041.5	36.707	36.083
11	20.0025	139.6086	159.6111	0.0223	1039.5	36.754	36.121
12	20.0025	119.6061	139.6086	0.0222	1038.3	36.885	36.190
13	20.0025	99.6036	119.6061	0.0221	1037.1	37.101	36.253
14	20.0025	79.6011	99.6036	0.0220	1033.2	37.061	36.165
15	20.0025	59.5986	79.6011	0.0219	1023.9	36.630	35.730
16	20.0025	39.5961	59.5986	0.0218	1004.2	35.313	34.419
17	20.0025	19.5936	39.5961	0.0217	960.0	31.601	30.742
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	870.0	22.490	21.768

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 10, EFPD: 272.1, Boron (ppmB): 1140

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0234	918.2	21.287	20.227
2	20.0025	319.6311	339.6336	0.0233	997.7	30.869	29.709
3	20.0025	299.6286	319.6311	0.0232	1038.6	35.982	34.970
4	20.0025	279.6261	299.6286	0.0231	1048.6	37.979	37.080
5	20.0025	259.6236	279.6261	0.0229	1047.6	38.620	37.816
6	20.0025	239.6211	259.6236	0.0228	1043.2	38.856	38.084
7	20.0025	219.6186	239.6211	0.0227	1038.3	38.973	38.205
8	20.0025	199.6161	219.6186	0.0226	1033.9	39.037	38.270
9	20.0025	179.6136	199.6161	0.0225	1030.4	39.076	38.309
10	20.0025	159.6111	179.6136	0.0224	1027.9	39.109	38.341
11	20.0025	139.6086	159.6111	0.0223	1026.6	39.162	38.384
12	20.0025	119.6061	139.6086	0.0222	1026.8	39.305	38.466
13	20.0025	99.6036	119.6061	0.0221	1027.5	39.532	38.541
14	20.0025	79.6011	99.6036	0.0220	1026.9	39.492	38.454
15	20.0025	59.5986	79.6011	0.0219	1022.3	39.035	37.994
16	20.0025	39.5961	59.5986	0.0218	1008.5	37.635	36.600
17	20.0025	19.5936	39.5961	0.0217	969.8	33.696	32.698
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	877.2	23.951	23.107

Cycle 10, EFPD: 347.4, Boron (ppmB): 918

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0234	923.0	22.978	21.810
2	20.0025	319.6311	339.6336	0.0233	1002.4	33.300	32.005
3	20.0025	299.6286	319.6311	0.0232	1037.7	38.722	37.561
4	20.0025	279.6261	299.6286	0.0231	1041.9	40.810	39.756
5	20.0025	259.6236	279.6261	0.0229	1037.1	41.465	40.502
6	20.0025	239.6211	259.6236	0.0228	1030.7	41.690	40.759
7	20.0025	219.6186	239.6211	0.0227	1024.8	41.795	40.867
8	20.0025	199.6161	219.6186	0.0226	1020.1	41.849	40.922
9	20.0025	179.6136	199.6161	0.0225	1016.6	41.885	40.958
10	20.0025	159.6111	179.6136	0.0224	1014.4	41.921	40.992
11	20.0025	139.6086	159.6111	0.0223	1013.6	41.985	41.047
12	20.0025	119.6061	139.6086	0.0222	1014.5	42.147	41.149
13	20.0025	99.6036	119.6061	0.0221	1016.4	42.396	41.249
14	20.0025	79.6011	99.6036	0.0220	1018.3	42.374	41.180
15	20.0025	59.5986	79.6011	0.0219	1018.0	41.912	40.714
16	20.0025	39.5961	59.5986	0.0218	1010.4	40.445	39.255
17	20.0025	19.5936	39.5961	0.0217	978.4	36.264	35.112
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	883.7	25.771	24.789

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 10, EFPD: 416.4, Boron (ppmB): 718

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0234	926.9	24.596	23.331
2	20.0025	319.6311	339.6336	0.0233	1007.0	35.582	34.172
3	20.0025	299.6286	319.6311	0.0232	1036.2	41.259	39.971
4	20.0025	279.6261	299.6286	0.0230	1035.7	43.402	42.215
5	20.0025	259.6236	279.6261	0.0229	1028.2	44.049	42.951
6	20.0025	239.6211	259.6236	0.0228	1020.3	44.253	43.186
7	20.0025	219.6186	239.6211	0.0227	1013.8	44.340	43.276
8	20.0025	199.6161	219.6186	0.0226	1008.8	44.382	43.319
9	20.0025	179.6136	199.6161	0.0225	1005.1	44.414	43.350
10	20.0025	159.6111	179.6136	0.0224	1002.7	44.452	43.386
11	20.0025	139.6086	159.6111	0.0223	1001.7	44.527	43.451
12	20.0025	119.6061	139.6086	0.0222	1002.3	44.708	43.574
13	20.0025	99.6036	119.6061	0.0221	1004.4	44.982	43.701
14	20.0025	79.6011	99.6036	0.0220	1007.5	44.986	43.660
15	20.0025	59.5986	79.6011	0.0219	1010.0	44.539	43.209
16	20.0025	39.5961	59.5986	0.0218	1007.2	43.041	41.720
17	20.0025	19.5936	39.5961	0.0217	981.7	38.670	37.386
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	886.5	27.508	26.403

Cycle 10, EFPD: 486.4, Boron (ppmB): 506

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0234	929.8	26.297	24.938
2	20.0025	319.6311	339.6336	0.0233	1009.6	37.937	36.419
3	20.0025	299.6286	319.6311	0.0232	1032.2	43.843	42.435
4	20.0025	279.6261	299.6286	0.0230	1027.3	46.018	44.706
5	20.0025	259.6236	279.6261	0.0229	1017.4	46.642	45.416
6	20.0025	239.6211	259.6236	0.0228	1008.6	46.818	45.621
7	20.0025	219.6186	239.6211	0.0227	1001.9	46.883	45.689
8	20.0025	199.6161	219.6186	0.0226	997.0	46.913	45.718
9	20.0025	179.6136	199.6161	0.0225	993.4	46.939	45.744
10	20.0025	159.6111	179.6136	0.0224	991.0	46.979	45.782
11	20.0025	139.6086	159.6111	0.0223	989.7	47.063	45.856
12	20.0025	119.6061	139.6086	0.0222	990.0	47.263	45.998
13	20.0025	99.6036	119.6061	0.0221	992.0	47.563	46.153
14	20.0025	79.6011	99.6036	0.0220	995.7	47.601	46.147
15	20.0025	59.5986	79.6011	0.0219	1000.4	47.184	45.728
16	20.0025	39.5961	59.5986	0.0218	1002.1	45.680	44.234
17	20.0025	19.5936	39.5961	0.0217	983.4	41.149	39.740
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	888.7	29.331	28.107

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 10, EFPD: 556.3, Boron (ppmB): 298

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0233	932.5	28.049	26.602
2	20.0025	319.6311	339.6336	0.0232	1011.5	40.314	38.696
3	20.0025	299.6286	319.6311	0.0231	1027.0	46.420	44.900
4	20.0025	279.6261	299.6286	0.0230	1017.4	48.605	47.174
5	20.0025	259.6236	279.6261	0.0229	1005.4	49.196	47.848
6	20.0025	239.6211	259.6236	0.0228	995.8	49.340	48.020
7	20.0025	219.6186	239.6211	0.0227	989.1	49.384	48.065
8	20.0025	199.6161	219.6186	0.0226	984.3	49.402	48.083
9	20.0025	179.6136	199.6161	0.0225	980.8	49.425	48.104
10	20.0025	159.6111	179.6136	0.0224	978.3	49.466	48.144
11	20.0025	139.6086	159.6111	0.0223	976.7	49.559	48.227
12	20.0025	119.6061	139.6086	0.0222	976.4	49.775	48.386
13	20.0025	99.6036	119.6061	0.0221	978.0	50.100	48.568
14	20.0025	79.6011	99.6036	0.0220	981.7	50.173	48.597
15	20.0025	59.5986	79.6011	0.0219	987.7	49.797	48.220
16	20.0025	39.5961	59.5986	0.0218	993.0	48.309	46.744
17	20.0025	19.5936	39.5961	0.0217	980.8	43.649	42.123
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	888.5	31.208	29.870

Cycle 10, EFPD: 626.1, Boron (ppmB): 103

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0233	932.5	29.858	28.326
2	20.0025	319.6311	339.6336	0.0232	1010.0	42.718	41.005
3	20.0025	299.6286	319.6311	0.0231	1019.2	48.990	47.363
4	20.0025	279.6261	299.6286	0.0230	1007.1	51.164	49.620
5	20.0025	259.6236	279.6261	0.0229	996.0	51.712	50.248
6	20.0025	239.6211	259.6236	0.0228	987.2	51.822	50.383
7	20.0025	219.6186	239.6211	0.0227	981.1	51.845	50.407
8	20.0025	199.6161	219.6186	0.0226	976.9	51.853	50.415
9	20.0025	179.6136	199.6161	0.0225	973.9	51.872	50.432
10	20.0025	159.6111	179.6136	0.0224	971.6	51.915	50.473
11	20.0025	139.6086	159.6111	0.0223	970.1	52.015	50.563
12	20.0025	119.6061	139.6086	0.0222	970.0	52.245	50.735
13	20.0025	99.6036	119.6061	0.0221	971.6	52.591	50.941
14	20.0025	79.6011	99.6036	0.0220	974.9	52.699	51.005
15	20.0025	59.5986	79.6011	0.0219	980.0	52.367	50.674
16	20.0025	39.5961	59.5986	0.0218	983.8	50.911	49.232
17	20.0025	19.5936	39.5961	0.0217	976.9	46.153	44.515
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	894.0	33.126	31.679

TABLE A-4. Fuel Rod Data for Assembly NJ05YU (Cont.)

Cycle 10, EFPD: 660.3, Boron (ppmB): 1.8 (EOC10)

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	T-Fuel (°F)	Fuel Rod D5	Fuel Rod H6
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0233	927.7	30.765	29.193
2	20.0025	319.6311	339.6336	0.0232	1003.4	43.904	42.146
3	20.0025	299.6286	319.6311	0.0231	1010.8	50.247	48.569
4	20.0025	279.6261	299.6286	0.0230	1002.2	52.409	50.810
5	20.0025	259.6236	279.6261	0.0229	992.1	52.933	51.413
6	20.0025	239.6211	259.6236	0.0228	984.3	53.025	51.530
7	20.0025	219.6186	239.6211	0.0227	979.1	53.038	51.545
8	20.0025	199.6161	219.6186	0.0226	975.7	53.042	51.547
9	20.0025	179.6136	199.6161	0.0225	973.3	53.060	51.563
10	20.0025	159.6111	179.6136	0.0224	971.4	53.103	51.604
11	20.0025	139.6086	159.6111	0.0223	970.3	53.205	51.696
12	20.0025	119.6061	139.6086	0.0222	970.2	53.440	51.874
13	20.0025	99.6036	119.6061	0.0221	971.7	53.796	52.089
14	20.0025	79.6011	99.6036	0.0220	974.9	53.920	52.170
15	20.0025	59.5986	79.6011	0.0219	980.3	53.611	51.861
16	20.0025	39.5961	59.5986	0.0218	983.9	52.174	50.440
17	20.0025	19.5936	39.5961	0.0217	976.4	47.377	45.687
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	897.8	34.078	32.579

Table A-5. Fuel Rod Data for Assembly NJ070G

Cycle 10, EFPD: 0.0, Boron (ppmB): 1800

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	Fuel T-Fuel (°F)	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)			Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0238	1022.7	0	0	0	0
2	20.0025	319.6311	339.6336	0.0237	1212.7	0	0	0	0
3	20.0025	299.6286	319.6311	0.0236	1356.3	0	0	0	0
4	20.0025	279.6261	299.6286	0.0235	1448.2	0	0	0	0
5	20.0025	259.6236	279.6261	0.0233	1505.0	0	0	0	0
6	20.0025	239.6211	259.6236	0.0232	1538.4	0	0	0	0
7	20.0025	219.6186	239.6211	0.0230	1560.8	0	0	0	0
8	20.0025	199.6161	219.6186	0.0229	1575.3	0	0	0	0
9	20.0025	179.6136	199.6161	0.0227	1583.3	0	0	0	0
10	20.0025	159.6111	179.6136	0.0226	1585.5	0	0	0	0
11	20.0025	139.6086	159.6111	0.0224	1582.6	0	0	0	0
12	20.0025	119.6061	139.6086	0.0223	1575.5	0	0	0	0
13	20.0025	99.6036	119.6061	0.0222	1562.3	0	0	0	0
14	20.0025	79.6011	99.6036	0.0220	1534.2	0	0	0	0
15	20.0025	59.5986	79.6011	0.0219	1486.7	0	0	0	0
16	20.0025	39.5961	59.5986	0.0218	1401.5	0	0	0	0
17	20.0025	19.5936	39.5961	0.0217	1264.9	0	0	0	0
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1067.8	0	0	0	0

TABLE A-5. Fuel Rod Data for Assembly NJ070G (Cont.)

Cycle 10, EFPD: 68, Boron (ppmB): 1649

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	Fuel T-Fuel (°F)	Rod O1 Burnup (GWd/MTU)	Rod O11 Burnup (GWd/MTU)	Rod O12 Burnup (GWd/MTU)	Rod O13 Burnup (GWd/MTU)
		Bottom (cm)	Top (cm)						
1 (Top)	17.4777	339.6336	357.1113	0.0239	1028.5	1.363	1.261	1.255	1.262
2	20.0025	319.6311	339.6336	0.0238	1215.9	2.138	2.079	2.051	2.000
3	20.0025	299.6286	319.6311	0.0237	1351.1	2.722	2.648	2.616	2.553
4	20.0025	279.6261	299.6286	0.0235	1432.3	3.084	3.001	2.966	2.897
5	20.0025	259.6236	279.6261	0.0234	1476.8	3.312	3.221	3.184	3.112
6	20.0025	239.6211	259.6236	0.0232	1499.9	3.462	3.365	3.327	3.253
7	20.0025	219.6186	239.6211	0.0231	1514.5	3.563	3.462	3.424	3.349
8	20.0025	199.6161	219.6186	0.0229	1523.2	3.632	3.529	3.490	3.414
9	20.0025	179.6136	199.6161	0.0228	1527.6	3.676	3.571	3.532	3.455
10	20.0025	159.6111	179.6136	0.0226	1528.5	3.699	3.594	3.554	3.477
11	20.0025	139.6086	159.6111	0.0225	1526.7	3.702	3.597	3.558	3.480
12	20.0025	119.6061	139.6086	0.0223	1523.0	3.682	3.581	3.541	3.463
13	20.0025	99.6036	119.6061	0.0222	1516.3	3.628	3.534	3.493	3.415
14	20.0025	79.6011	99.6036	0.0221	1498.2	3.525	3.435	3.395	3.318
15	20.0025	59.5986	79.6011	0.0219	1463.8	3.341	3.256	3.217	3.143
16	20.0025	39.5961	59.5986	0.0218	1397.8	3.028	2.946	2.910	2.841
17	20.0025	19.5936	39.5961	0.0217	1272.8	2.488	2.418	2.384	2.323
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1076.4	1.599	1.503	1.486	1.485

Cycle 10, EFPD: 131.8, Boron (ppmB): 1521

Axial Node	Node Height (cm)	Elevation		Spec. Vol. (ft ³ /lbm)	Fuel T-Fuel (°F)	Rod O1 Burnup (GWd/MTU)	Rod O11 Burnup (GWd/MTU)	Rod O12 Burnup (GWd/MTU)	Rod O13 Burnup (GWd/MTU)
		Bottom (cm)	Top (cm)						
1 (Top)	17.4777	339.6336	357.1113	0.0239	1064.2	2.704	2.502	2.486	2.495
2	20.0025	319.6311	339.6336	0.0238	1249.6	4.259	4.100	4.049	3.956
3	20.0025	299.6286	319.6311	0.0237	1368.0	5.393	5.179	5.122	5.018
4	20.0025	279.6261	299.6286	0.0235	1425.5	6.074	5.823	5.762	5.653
5	20.0025	259.6236	279.6261	0.0234	1446.2	6.485	6.206	6.143	6.033
6	20.0025	239.6211	259.6236	0.0232	1454.6	6.744	6.447	6.383	6.271
7	20.0025	219.6186	239.6211	0.0231	1458.0	6.916	6.606	6.542	6.429
8	20.0025	199.6161	219.6186	0.0229	1458.8	7.032	6.714	6.648	6.535
9	20.0025	179.6136	199.6161	0.0228	1458.3	7.107	6.783	6.718	6.604
10	20.0025	159.6111	179.6136	0.0226	1457.3	7.149	6.824	6.757	6.643
11	20.0025	139.6086	159.6111	0.0225	1456.1	7.162	6.837	6.770	6.655
12	20.0025	119.6061	139.6086	0.0223	1455.4	7.140	6.820	6.752	6.637
13	20.0025	99.6036	119.6061	0.0222	1453.8	7.061	6.755	6.686	6.568
14	20.0025	79.6011	99.6036	0.0221	1444.6	6.894	6.601	6.532	6.414
15	20.0025	59.5986	79.6011	0.0219	1422.9	6.575	6.301	6.233	6.116
16	20.0025	39.5961	59.5986	0.0218	1375.4	5.998	5.747	5.682	5.570
17	20.0025	19.5936	39.5961	0.0217	1266.4	4.955	4.754	4.693	4.586
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1076.4	3.176	2.975	2.938	2.930

TABLE A-5. Fuel Rod Data for Assembly NJ070G (Cont.)

Cycle 10, EFPD: 209, Boron (ppmB): 1322

Axial Node	Node Height (cm)	Elevation		Spec.	Fuel	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)	Vol. (ft ³ /lbm)	T-Fuel (°F)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0239	1076.1	4.443	4.107	4.079	4.087
2	20.0025	319.6311	339.6336	0.0238	1251.2	7.001	6.654	6.582	6.459
3	20.0025	299.6286	319.6311	0.0236	1350.7	8.772	8.306	8.227	8.099
4	20.0025	279.6261	299.6286	0.0235	1385.5	9.767	9.231	9.147	9.016
5	20.0025	259.6236	279.6261	0.0233	1390.9	10.328	9.745	9.659	9.528
6	20.0025	239.6211	259.6236	0.0232	1388.8	10.659	10.049	9.961	9.829
7	20.0025	219.6186	239.6211	0.0230	1384.9	10.869	10.242	10.153	10.020
8	20.0025	199.6161	219.6186	0.0229	1381.1	11.010	10.371	10.281	10.148
9	20.0025	179.6136	199.6161	0.0228	1378.0	11.106	10.459	10.368	10.234
10	20.0025	159.6111	179.6136	0.0226	1376.2	11.168	10.517	10.425	10.290
11	20.0025	139.6086	159.6111	0.0225	1375.7	11.201	10.550	10.457	10.321
12	20.0025	119.6061	139.6086	0.0223	1377.4	11.199	10.553	10.458	10.320
13	20.0025	99.6036	119.6061	0.0222	1380.7	11.127	10.499	10.401	10.260
14	20.0025	79.6011	99.6036	0.0221	1380.6	10.938	10.327	10.229	10.087
15	20.0025	59.5986	79.6011	0.0219	1373.5	10.529	9.944	9.848	9.706
16	20.0025	39.5961	59.5986	0.0218	1348.6	9.711	9.169	9.078	8.938
17	20.0025	19.5936	39.5961	0.0217	1265.5	8.108	7.672	7.583	7.443
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1084.3	5.183	4.854	4.788	4.763

Cycle 10, EFPD: 272.1, Boron (ppmB): 1140

Axial Node	Node Height (cm)	Elevation		Spec.	Fuel	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)	Vol. (ft ³ /lbm)	T-Fuel (°F)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0239	1078.0	5.952	5.498	5.457	5.463
2	20.0025	319.6311	339.6336	0.0238	1242.9	9.353	8.817	8.729	8.595
3	20.0025	299.6286	319.6311	0.0236	1325.4	11.587	10.893	10.795	10.657
4	20.0025	279.6261	299.6286	0.0235	1349.4	12.770	11.993	11.889	11.747
5	20.0025	259.6236	279.6261	0.0233	1348.9	13.397	12.568	12.462	12.320
6	20.0025	239.6211	259.6236	0.0232	1343.0	13.747	12.890	12.782	12.638
7	20.0025	219.6186	239.6211	0.0230	1336.9	13.961	13.088	12.978	12.832
8	20.0025	199.6161	219.6186	0.0229	1331.8	14.104	13.220	13.108	12.962
9	20.0025	179.6136	199.6161	0.0227	1328.2	14.205	13.314	13.201	13.053
10	20.0025	159.6111	179.6136	0.0226	1326.4	14.279	13.383	13.268	13.119
11	20.0025	139.6086	159.6111	0.0225	1326.6	14.331	13.433	13.317	13.167
12	20.0025	119.6061	139.6086	0.0223	1329.4	14.353	13.460	13.342	13.189
13	20.0025	99.6036	119.6061	0.0222	1334.7	14.306	13.431	13.310	13.152
14	20.0025	79.6011	99.6036	0.0221	1338.3	14.132	13.273	13.151	12.992
15	20.0025	59.5986	79.6011	0.0220	1336.7	13.701	12.867	12.747	12.589
16	20.0025	39.5961	59.5986	0.0218	1319.9	12.758	11.969	11.854	11.700
17	20.0025	19.5936	39.5961	0.0217	1250.2	10.769	10.114	10.004	9.849
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1082.3	6.906	6.464	6.372	6.334

TABLE A-5. Fuel Rod Data for Assembly NJ070G (Cont.)

Cycle 10, EFPD: 347.4, Boron (ppmB): 918

Axial Node	Node Height (cm)	Elevation		Spec.	Fuel	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)	Vol. (ft ³ /lbm)	T-Fuel (°F)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0239	1074.3	7.837	7.238	7.181	7.185
2	20.0025	319.6311	339.6336	0.0237	1228.2	12.230	11.462	11.357	11.213
3	20.0025	299.6286	319.6311	0.0236	1297.4	14.945	13.992	13.873	13.722
4	20.0025	279.6261	299.6286	0.0235	1308.3	16.290	15.250	15.121	14.964
5	20.0025	259.6236	279.6261	0.0233	1301.7	16.954	15.862	15.729	15.570
6	20.0025	239.6211	259.6236	0.0232	1292.6	17.299	16.181	16.046	15.885
7	20.0025	219.6186	239.6211	0.0230	1284.9	17.502	16.370	16.232	16.070
8	20.0025	199.6161	219.6186	0.0229	1279.1	17.639	16.497	16.358	16.194
9	20.0025	179.6136	199.6161	0.0227	1275.3	17.742	16.594	16.453	16.288
10	20.0025	159.6111	179.6136	0.0226	1273.5	17.828	16.675	16.533	16.366
11	20.0025	139.6086	159.6111	0.0225	1273.9	17.904	16.748	16.603	16.434
12	20.0025	119.6061	139.6086	0.0223	1277.1	17.959	16.807	16.660	16.487
13	20.0025	99.6036	119.6061	0.0222	1283.1	17.950	16.817	16.665	16.487
14	20.0025	79.6011	99.6036	0.0221	1289.4	17.814	16.695	16.542	16.361
15	20.0025	59.5986	79.6011	0.0220	1293.7	17.393	16.294	16.143	15.963
16	20.0025	39.5961	59.5986	0.0218	1287.0	16.355	15.299	15.155	14.981
17	20.0025	19.5936	39.5961	0.0217	1236.5	13.976	13.072	12.937	12.764
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1075.8	9.034	8.458	8.336	8.282

Cycle 10, EFPD: 416.4, Boron (ppmB): 718

Axial Node	Node Height (cm)	Elevation		Spec.	Fuel	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)	Vol. (ft ³ /lbm)	T-Fuel (°F)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0238	1070.1	9.637	8.903	8.833	8.833
2	20.0025	319.6311	339.6336	0.0237	1218.5	14.906	13.937	13.816	13.661
3	20.0025	299.6286	319.6311	0.0236	1270.6	18.012	16.841	16.701	16.536
4	20.0025	279.6261	299.6286	0.0234	1271.9	19.459	18.204	18.052	17.878
5	20.0025	259.6236	279.6261	0.0233	1260.9	20.127	18.823	18.666	18.490
6	20.0025	239.6211	259.6236	0.0231	1249.9	20.450	19.126	18.966	18.787
7	20.0025	219.6186	239.6211	0.0230	1241.3	20.634	19.299	19.136	18.955
8	20.0025	199.6161	219.6186	0.0229	1235.1	20.761	19.419	19.254	19.071
9	20.0025	179.6136	199.6161	0.0227	1231.0	20.865	19.516	19.350	19.164
10	20.0025	159.6111	179.6136	0.0226	1228.8	20.960	19.607	19.438	19.251
11	20.0025	139.6086	159.6111	0.0225	1228.4	21.054	19.698	19.527	19.338
12	20.0025	119.6061	139.6086	0.0223	1230.6	21.139	19.788	19.613	19.419
13	20.0025	99.6036	119.6061	0.0222	1236.2	21.168	19.837	19.656	19.456
14	20.0025	79.6011	99.6036	0.0221	1243.3	21.079	19.757	19.575	19.372
15	20.0025	59.5986	79.6011	0.0220	1251.2	20.690	19.384	19.203	19.001
16	20.0025	39.5961	59.5986	0.0218	1252.4	19.611	18.340	18.169	17.973
17	20.0025	19.5936	39.5961	0.0217	1217.9	16.936	15.821	15.663	15.472
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1070.4	11.050	10.353	10.205	10.134

TABLE A-5. Fuel Rod Data for Assembly NJ070G (Cont.)

Cycle 10, EFPD: 486.4, Boron (ppmB): 506

Axial Node	Node Height (cm)	Elevation		Spec.	Fuel	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)	Vol. (ft ³ /lbm)	T-Fuel (°F)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0238	1069.6	11.528	10.658	10.575	10.571
2	20.0025	319.6311	339.6336	0.0237	1205.0	17.652	16.493	16.355	16.189
3	20.0025	299.6286	319.6311	0.0236	1239.8	21.100	19.738	19.575	19.392
4	20.0025	279.6261	299.6286	0.0234	1237.0	22.619	21.175	20.998	20.805
5	20.0025	259.6236	279.6261	0.0233	1225.3	23.274	21.784	21.603	21.407
6	20.0025	239.6211	259.6236	0.0231	1214.3	23.568	22.061	21.877	21.678
7	20.0025	219.6186	239.6211	0.0230	1206.2	23.731	22.216	22.029	21.828
8	20.0025	199.6161	219.6186	0.0229	1200.6	23.847	22.327	22.138	21.935
9	20.0025	179.6136	199.6161	0.0227	1197.0	23.950	22.425	22.234	22.028
10	20.0025	159.6111	179.6136	0.0226	1194.9	24.053	22.525	22.331	22.123
11	20.0025	139.6086	159.6111	0.0225	1194.6	24.164	22.633	22.437	22.227
12	20.0025	119.6061	139.6086	0.0223	1196.9	24.276	22.751	22.550	22.335
13	20.0025	99.6036	119.6061	0.0222	1202.5	24.343	22.839	22.632	22.408
14	20.0025	79.6011	99.6036	0.0221	1210.1	24.305	22.809	22.599	22.372
15	20.0025	59.5986	79.6011	0.0220	1219.0	23.966	22.479	22.271	22.044
16	20.0025	39.5961	59.5986	0.0219	1221.9	22.878	21.419	21.220	21.001
17	20.0025	19.5936	39.5961	0.0217	1196.5	19.951	18.653	18.468	18.257
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1070.4	13.159	12.348	12.173	12.084

Cycle 10, EFPD: 556.3, Boron (ppmB): 298

Axial Node	Node Height (cm)	Elevation		Spec.	Fuel	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)	Vol. (ft ³ /lbm)	T-Fuel (°F)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0238	1073.1	13.480	12.477	12.381	12.374
2	20.0025	319.6311	339.6336	0.0237	1189.3	20.413	19.087	18.930	18.750
3	20.0025	299.6286	319.6311	0.0236	1218.7	24.166	22.631	22.446	22.246
4	20.0025	279.6261	299.6286	0.0234	1211.1	25.728	24.116	23.917	23.705
5	20.0025	259.6236	279.6261	0.0233	1196.3	26.355	24.703	24.499	24.285
6	20.0025	239.6211	259.6236	0.0231	1184.4	26.618	24.953	24.746	24.528
7	20.0025	219.6186	239.6211	0.0230	1176.3	26.759	25.090	24.881	24.660
8	20.0025	199.6161	219.6186	0.0228	1170.9	26.867	25.195	24.983	24.760
9	20.0025	179.6136	199.6161	0.0227	1167.4	26.970	25.295	25.081	24.856
10	20.0025	159.6111	179.6136	0.0226	1165.1	27.082	25.403	25.187	24.959
11	20.0025	139.6086	159.6111	0.0225	1164.0	27.209	25.528	25.309	25.078
12	20.0025	119.6061	139.6086	0.0223	1165.2	27.345	25.671	25.447	25.210
13	20.0025	99.6036	119.6061	0.0222	1169.9	27.446	25.796	25.564	25.318
14	20.0025	79.6011	99.6036	0.0221	1177.4	27.460	25.815	25.580	25.331
15	20.0025	59.5986	79.6011	0.0220	1188.3	27.181	25.541	25.306	25.057
16	20.0025	39.5961	59.5986	0.0219	1196.8	26.111	24.491	24.266	24.025
17	20.0025	19.5936	39.5961	0.0217	1175.9	22.982	21.520	21.311	21.079
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1066.8	15.335	14.416	14.215	14.108

TABLE A-5. Fuel Rod Data for Assembly NJ070G (Cont.)

Cycle 10, EFPD: 626.1, Boron (ppmB): 103

Axial Node	Node Height (cm)	Elevation		Spec.	Fuel	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)	Vol. (ft ³ /lbm)	T-Fuel (°F)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0238	1073.2	15.502	14.369	14.261	14.250
2	20.0025	319.6311	339.6336	0.0237	1174.8	23.204	21.724	21.547	21.354
3	20.0025	299.6286	319.6311	0.0235	1196.6	27.215	25.531	25.323	25.106
4	20.0025	279.6261	299.6286	0.0234	1183.9	28.792	27.037	26.815	26.586
5	20.0025	259.6236	279.6261	0.0232	1168.0	29.382	27.591	27.365	27.133
6	20.0025	239.6211	259.6236	0.0231	1156.7	29.610	27.810	27.581	27.347
7	20.0025	219.6186	239.6211	0.0230	1149.6	29.732	27.931	27.699	27.462
8	20.0025	199.6161	219.6186	0.0228	1145.0	29.833	28.031	27.797	27.557
9	20.0025	179.6136	199.6161	0.0227	1141.9	29.938	28.134	27.898	27.655
10	20.0025	159.6111	179.6136	0.0226	1139.6	30.057	28.251	28.012	27.767
11	20.0025	139.6086	159.6111	0.0225	1138.3	30.197	28.390	28.148	27.899
12	20.0025	119.6061	139.6086	0.0223	1138.6	30.354	28.555	28.307	28.053
13	20.0025	99.6036	119.6061	0.0222	1141.6	30.484	28.712	28.456	28.191
14	20.0025	79.6011	99.6036	0.0221	1147.7	30.548	28.780	28.520	28.251
15	20.0025	59.5986	79.6011	0.0220	1158.9	30.333	28.565	28.306	28.036
16	20.0025	39.5961	59.5986	0.0219	1171.1	29.303	27.548	27.297	27.035
17	20.0025	19.5936	39.5961	0.0217	1159.5	26.015	24.413	24.179	23.927
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1061.0	17.566	16.550	16.324	16.199

Cycle 10, EFPD: 660.3, Boron (ppmB): 1.8 (EOC10)

Axial Node	Node Height (cm)	Elevation		Spec.	Fuel	Rod O1	Rod O11	Rod O12	Rod O13
		Bottom (cm)	Top (cm)	Vol. (ft ³ /lbm)	T-Fuel (°F)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)	Burnup (GWd/MTU)
1 (Top)	17.4777	339.6336	357.1113	0.0238	1067.7	16.518	15.324	15.209	15.197
2	20.0025	319.6311	339.6336	0.0237	1162.7	24.580	23.031	22.845	22.645
3	20.0025	299.6286	319.6311	0.0235	1179.8	28.703	26.953	26.735	26.510
4	20.0025	279.6261	299.6286	0.0234	1166.3	30.279	28.462	28.229	27.992
5	20.0025	259.6236	279.6261	0.0232	1151.7	30.848	28.997	28.760	28.521
6	20.0025	239.6211	259.6236	0.0231	1141.9	31.059	29.201	28.961	28.719
7	20.0025	219.6186	239.6211	0.0230	1136.0	31.172	29.314	29.072	28.827
8	20.0025	199.6161	219.6186	0.0228	1132.6	31.271	29.412	29.168	28.920
9	20.0025	179.6136	199.6161	0.0227	1130.3	31.377	29.518	29.271	29.020
10	20.0025	159.6111	179.6136	0.0226	1128.6	31.500	29.639	29.389	29.136
11	20.0025	139.6086	159.6111	0.0225	1127.5	31.645	29.784	29.531	29.274
12	20.0025	119.6061	139.6086	0.0223	1128.1	31.810	29.958	29.699	29.436
13	20.0025	99.6036	119.6061	0.0222	1131.4	31.953	30.130	29.862	29.588
14	20.0025	79.6011	99.6036	0.0221	1137.4	32.039	30.220	29.948	29.669
15	20.0025	59.5986	79.6011	0.0220	1148.1	31.855	30.035	29.763	29.484
16	20.0025	39.5961	59.5986	0.0219	1160.9	30.849	29.038	28.775	28.504
17	20.0025	19.5936	39.5961	0.0217	1153.3	27.498	25.838	25.592	25.331
18 (Bottom)	19.5936	0.0000	19.5936	0.0216	1059.6	18.678	17.620	17.380	17.247

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