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Management & Operating Contractor

Summary Report of Commercial Reactor Criticality Data for Crystal River Unit 3

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Management & Operating Contractor

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1.0 INTRODUCTION

The "Summary Report of Commercial Reactor Criticality Data for Crytal River Unit 3" contains the detailed information necessary to perform commercial reactor criticality (CRC) analyses for the Crystal River Unit 3 (CR3) 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 commerical spent nuclear fuel in a geologic repository. A topical report on the disposal criticality analysis methodology is scheduled to be submitted to the United States Nuclear Regulatory Commission (NRC) for formal review in October 1998. This summary report provides data that will be used in analyses that will support the development of parts of the disposal criticality analysis methodology.

1.2 Objective

The objective of the Summary Report of Commercial Reactor Criticality Data for Crystal River Unit 3 is to present the commercial CRC data for the CR3 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 will be discussed in the Disposal Criticality Analysis Methodology Topical Report.

1.3 Scope

The scope of this Summary Report is the presentation of data required to perform 33 statepoint calculations from cycles 1 through 10 of Crystal River 3. The only interface for the development of the information in this document is with Framatome Cogema Fuels (FCF). FCF is one of the teammates of the Civilian Radioactive Waste Management System Management and Operating Contractor (M&O). FCF independently requested and received permission from Florida Power Corporation, the owner/operator of CR3, to publish the information related to statepoint measurements that is recorded in this document. All the information contained in this report is documented in a FCF calculational file (Reference 5). The data provided in Reference 5 was obtained from various other reports, calculations, and drawings developed under an NRC accepted quality assurance program (Reference 1), and the data has supported prior licensing submittals. The data therefore will be considered acceptable for quality affecting activities and for use in analyses affecting procurement, construction, or fabrication.

1.4 Quality Assurance

The Quality Assurance (QA) program applies to the development of this report. The data provided in this report will indirectly be used to develop the methodology for evaluating the Monitored Geologic Repository (MGR) waste package and engineered barrier segment. The QAP-2-3 (*Classification of Permanent Items*) evaluation entitled *Classification of the*

Preliminary MGDS Repository Design (Reference 2, TBV-228) has identified the waste package as an MGR (formerly MGDS) item important to safety, waste isolation, and physical protection of materials. The Waste Package responsible manager has evaluated the technical document development activity in accordance with QAP-2-0, *Conduct of Activities*. The QAP-2-0 activity evaluation, *Develop Technical Documents* (Reference 3), has determined that the preparation and review of this technical document is subject to *Quality Assurance Requirements and Description* (Reference 4) requirements. As specified in NLP-3-18, *Documentation of QA Controls on Drawings, Specifications, Design Analyses, and Technical Documents*, this activity is subject to QA controls. No scientific and engineering software or computational software was used in the development of this report.

2.0 REACTOR DESIGN INFORMATION

This section provides general material and geometry data for modeling the Crystal River Unit 3 reactor for cycles 1 through 10. Figures 2-1 through 2-12 provide pictorial representations of various components that must be modeled. A radial view of the reactor internals is presented in Figure 2-1. This includes the 177 fuel assemblies (FA) 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 (SS304 from Reference 5 or A240, Type 304 from 1997 *Annual Book of ASTM Standards*, Vol. 01.03, Section 1, Iron and Steel Products, p. 37, Table 1). The pressure vessel is carbon steel (CS533B from Reference 5 or A533, Type B, Class 1 from 1997 *Annual Book of ASTM Standards*, Vol. 01.04, Section 1, Iron and Steel Products, p. 257, Table 1). Table 2-1 provides dimensions from the center of the core (from Assy 1, Assy 2, ... , Assy 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 Assembly 1	10.84072	10.84072
Water	0.12954	10.97026
Assembly 2	21.68144	32.65170
Water	0.12954	32.78124
Assembly 3	21.68144	54.46268
Water	0.12954	54.59222
Assembly 4	21.68144	76.27366
Water	0.12954	76.40320
Assembly 5	21.68144	98.08464
Water	0.12954	98.21418
Assembly 6	21.68144	119.89562
Water	0.12954	120.02516
Assembly 7	21.68144	141.70660
Water	0.12954	141.83614
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. Horizontal View of the Vessel Internals Along Core Midplane

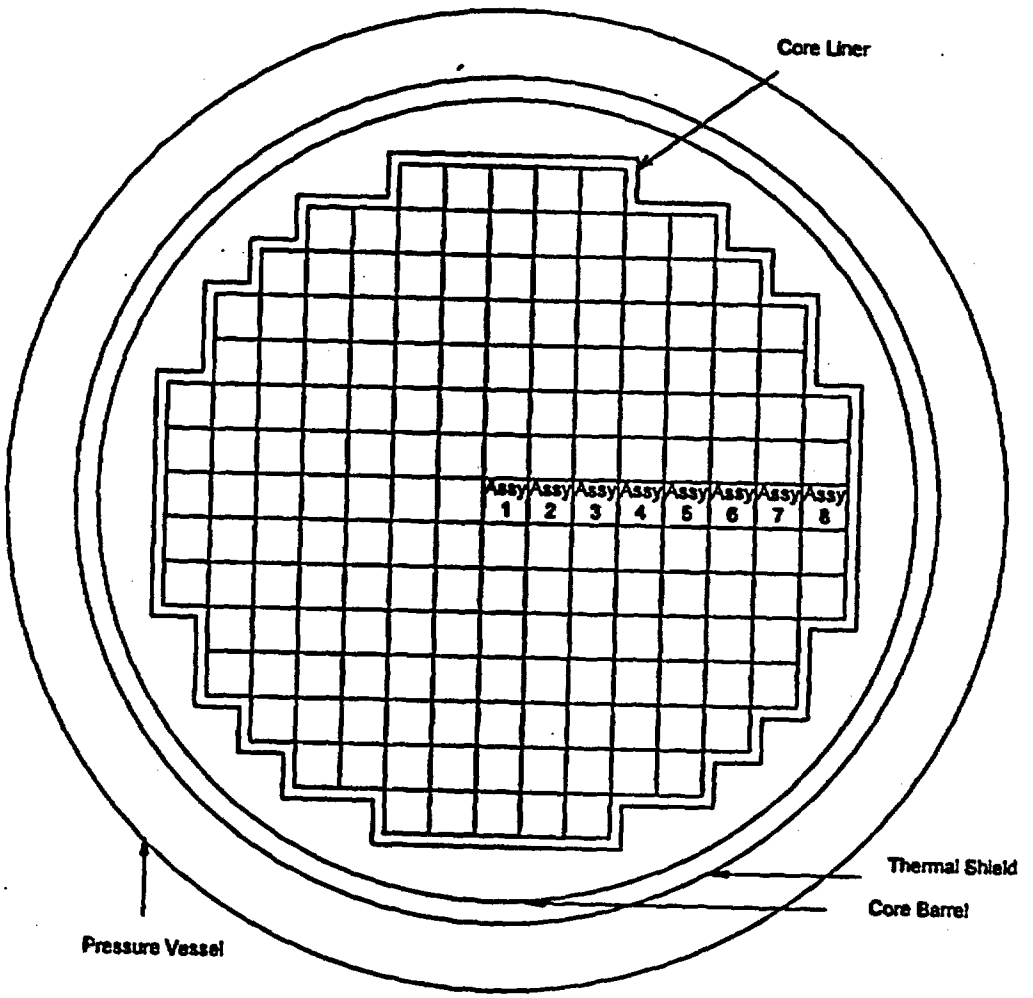


Table 2-2 summarizes fuel assembly and reactor core data used for modeling the Crystal River Unit 3 reactor for cycles 1 through 10. Additional fuel cycle design, core operations, and reactor criticality statepoint information will be provided in Sections 3 and 4. Note that cycles 1-9 are modeled with an active fuel height of 360.172 cm, whereas cycle 10 is modeled with an active fuel height of 357.1113 cm.

Table 2-2. Crystal River 3 Cycles 1-9 Fuel Assembly/Core Data

Fuel Assembly Array Size	15 x 15
Number of Fuel Pins (N_R) / Assembly	208
Number of Guide Tubes (N_{GT}) / Assembly	16
Number of Instrument Tubes (N_{IT}) / Assembly	1
Number of Assemblies in Core	177
System Pressure	2200 psia/1.52×10^7 Pa
Core Height (H) - Cycles 1-9	360.172 cm
- Cycle 10	357.1113 cm
Pin Pitch	1.44272 cm
Fuel Pin Clading OD (outer diameter - OD_C)	1.0922 cm
Fuel Cladding Material	zircaloy
Guide Tube OD (OD_{GT})	1.3462 cm
Guide Tube Material	zircaloy
Instrument Tube OD (OD_{IT})	1.38193 cm
Instrument Tube Material	zircaloy
Assembly Pitch (P)	21.81098 cm
Inconel Intermediate Spacer Grid Height	3.81 cm
Zircaloy Intermediate Spacer Grid Height	5.08 cm

Grid Volume (six intermediate spacer grids) in Single Assembly:

Volume of Inconel Grid = V_{IG} = 532.056482 cm^3 for cycles 1-6
Volume of Zircaloy Grid = V_{ZG} = 754.545455 cm^3 for cycles 7-10

V_{M+G} = Volume of Moderator plus Grid in Fuel Assembly (excluding inside guide tubes and instrument tube)

$$= P^2 H - H\,[N_R\,\pi\,(OD_C)^2/4.0 + N_{GT}\,\pi\,(OD_{GT})^2/4.0 + N_{IT}\,\pi\,(OD_{IT})^2/4.0]$$

= 92,409.27457 cm^3 for cycles 1-9
= 91,623.99126 cm^3 for cycle 10

Assembly Volume Fraction of Inconel Grid = V_{IG}/V_{M+G} = 0.005757609 for cycles 1-6

Assembly Volume Fraction of Zircaloy Grid = V_{ZG}/V_{M+G} = 0.008165257 for cycles 7-9
= 0.008235239 for cycle 10

(Note: The number of digits shown above for volumes and volume fractions are an artifact of the computational process and are taken directly from Reference 5).

Figure 2-2 presents a radial view of a single fuel assembly showing the locations of the guide tubes, instrument tube, and fuel pins. Figures 2-3 and 2-4 provide axial dimensions, by region, for the B&W Mark-B4 and Mark-B4Z fuel assemblies. For neutronics modeling purposes, the only difference between these two assembly types is that the Mark-B4 assembly contains 6 Inconel intermediate spacer grids and the Mark-B4Z contains 6 zircaloy intermediate spacer grids. The two end spacer grids are Inconel for both assembly types. Additionally, for neutronic modeling purposes the Mark-B4 assembly is representative of B&W fuel assemblies with Inconel intermediate spacer grids and the Mark-B4Z is representative of B&W fuel assemblies with zircaloy intermediate spacer grids. For cycles 1-9 the average height of the active fuel region should be modeled as 360.172 cm. For cycle 10 a more representative value for the average height of the active fuel region is 357.1113 cm, and this value should be used for modeling the active fuel region. Figures 2-4 through 2-12 note the changes in the axial representations which should be made to accommodate the slightly different fuel stack height for cycle 10.

Figure 2-2. Radial View of a Single Fuel Assembly

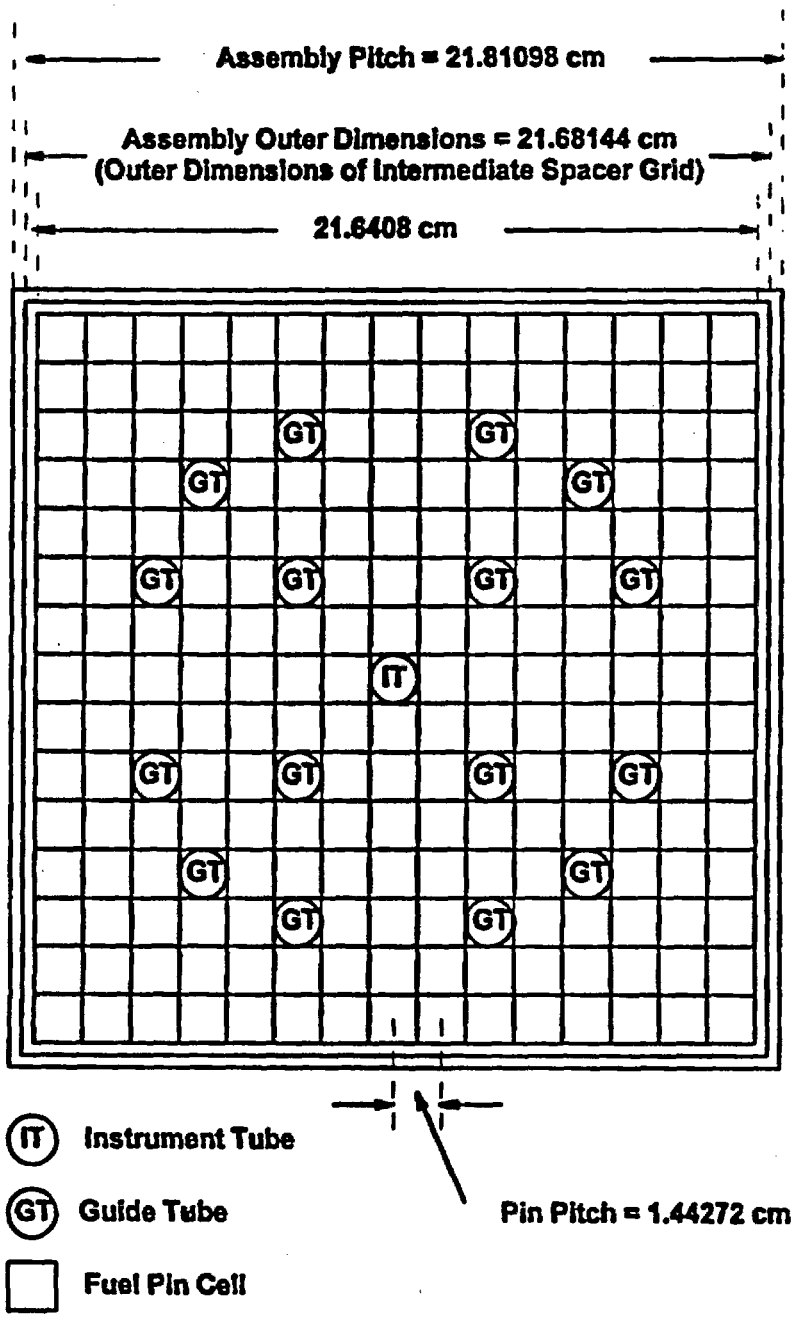


Figure 2-3. Axial Dimensions by Region for Mark-B4 Fuel Assembly

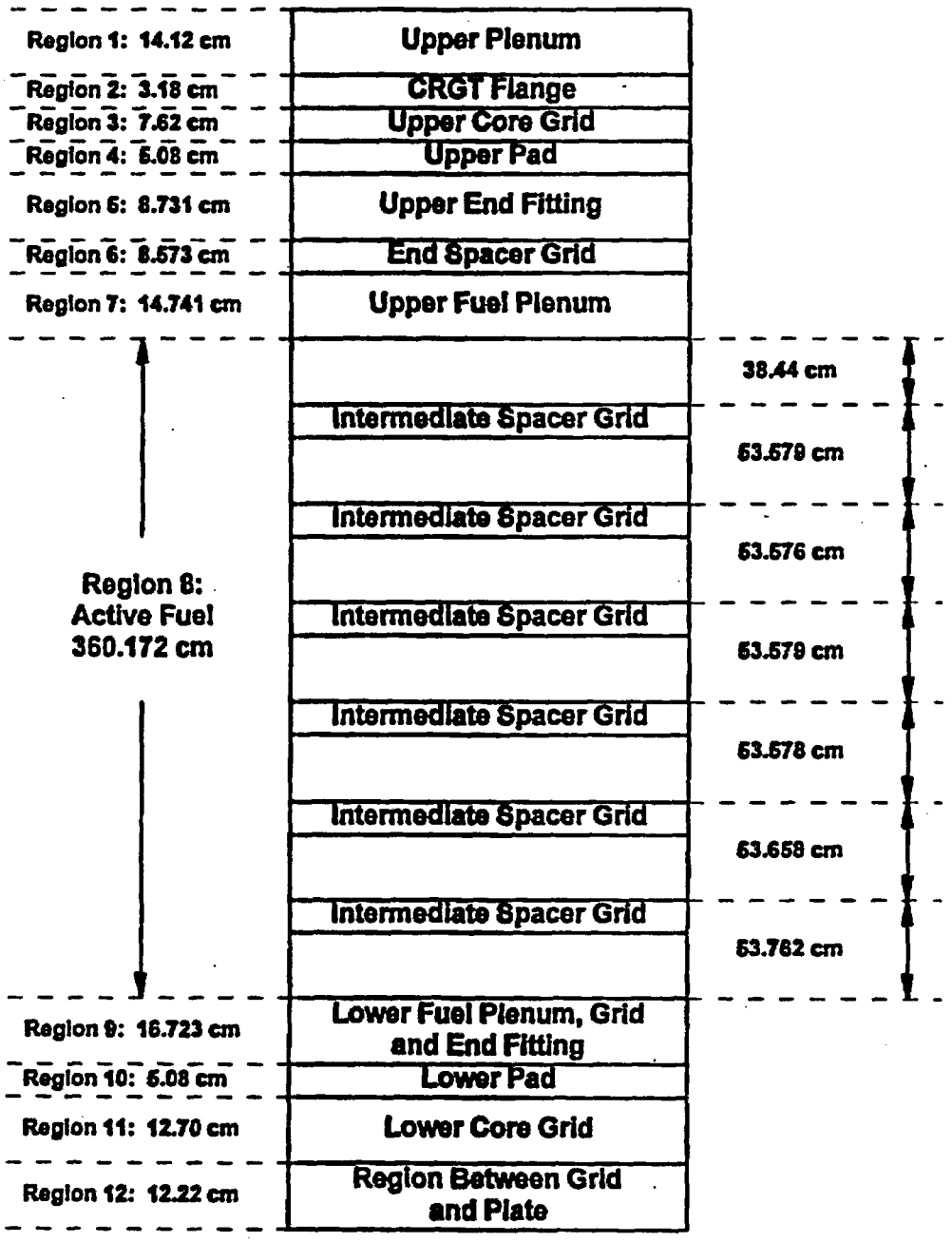
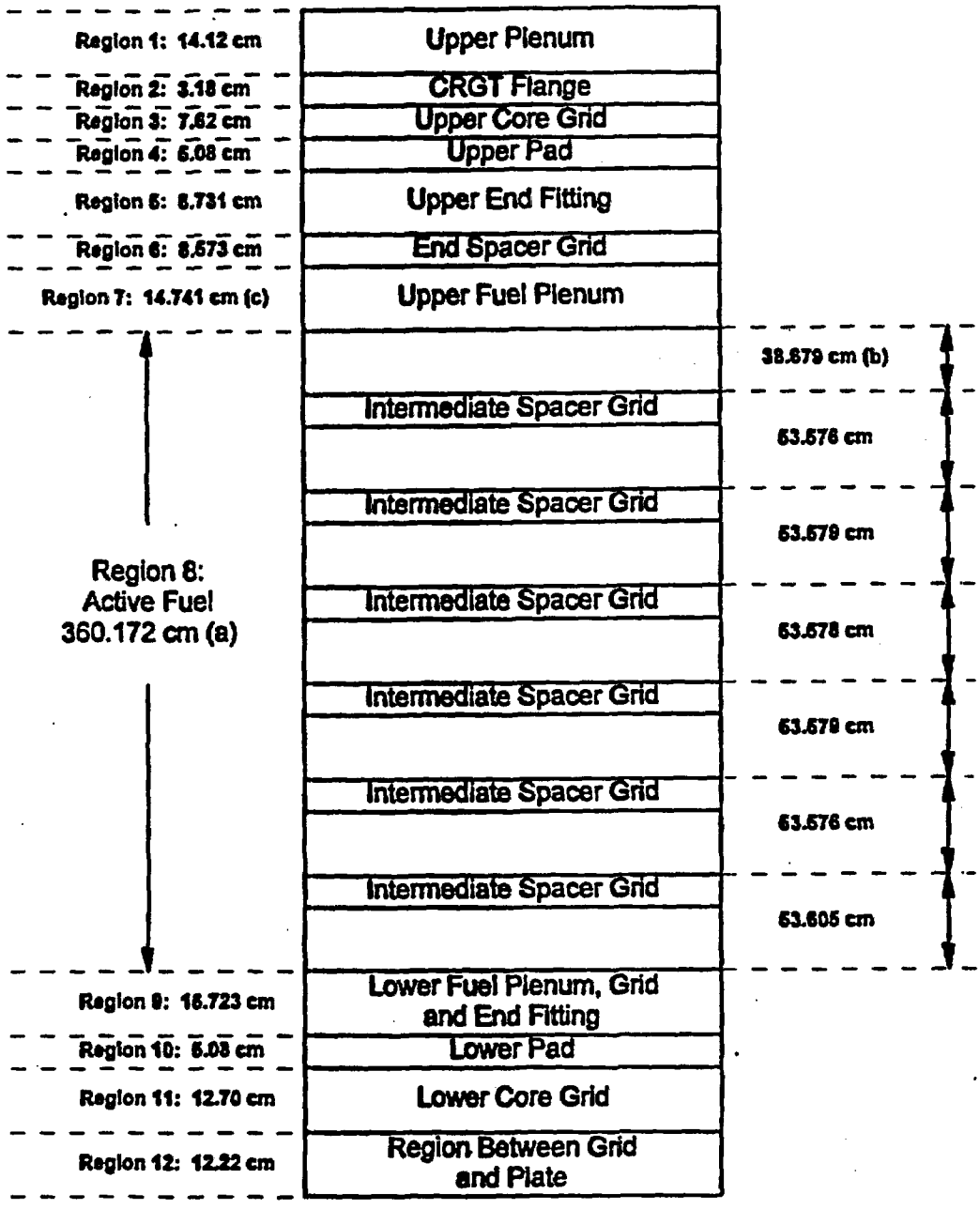


Figure 2-4. Axial Dimensions by Region for Mark-B4Z Fuel Assembly



(a) 357.1113 cm for cycle 10
(b) 35.6183 cm for cycle 10
(c) 17.8017 cm for cycle 10

Figures 2-5 through 2-7 provide axial dimensions for the guide tubes, instrument tube, and fuel pins shown in Figure 2-2. Figures 2-8 through 2-12 provide axial dimensions for rod cluster control assemblies (RCCAs) with rods at 0% and 100% withdrawn, both black and gray axial power shaping rod assemblies (APSRs), and burnable poison rod assemblies (BPRAs).

Regions 1-4 and 10-12 are represented as homogenized regions of stainless steel (SS) and water. For assemblies containing no form of neutron control material, the volume fractions of stainless steel and water in these regions are given in Table 2-3 below.

Table 2-3. Volume Fractions for Regions 1-4 and 10-12 for Non-Control Assemblies

	Volume Fractions	
Region	SS	Water
1	0.0578	0.9422
2	0.1381	0.8619
3	0.2491	0.7509
4	0.3418	0.6582
10	0.2848	0.7152
11	0.2400	0.7600
12	0.0300	0.9700

Regions 5, 6, 7, and 9 contain various combinations of guide tubes, instrument tube, and fuel rod assemblies (no fuel pellets), 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. Note that 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, are presented in Table 2-4.

Table 2-4. Volume Fractions for Regions 5-9 for Non-Control Assemblies

	Volume Fractions*			
Region	SS	Inc	Zr	Water
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
9	0.1656	0.0306	0.0125	0.7913

* The volume fractions presented exclude the guide tube, instrument tube, and fuel rod assembly portions of these regions.

Note: Inc = Inconel
Zr = zircaloy.

Figure 2-5. Axial Dimensions for Guide Tubes

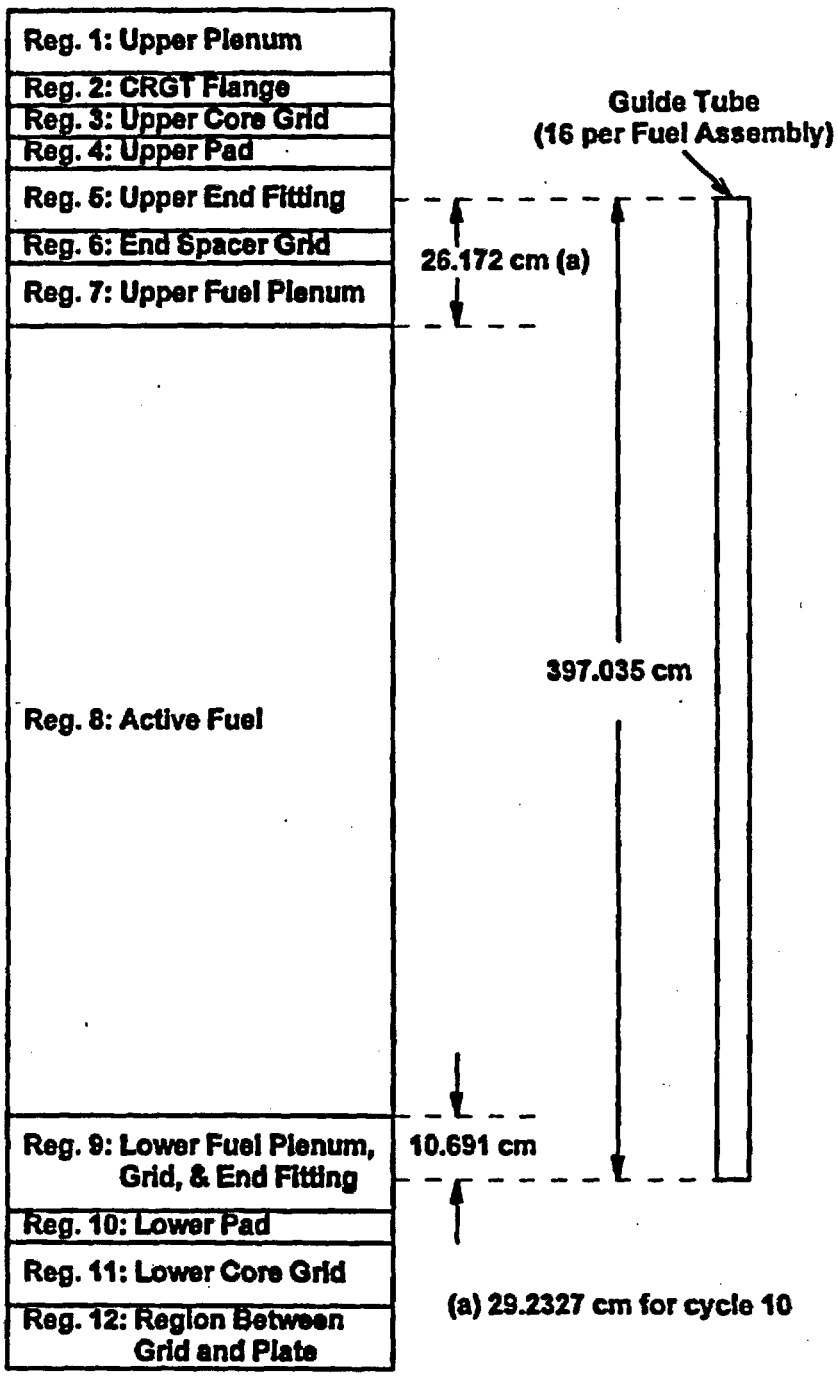


Figure 2-6. Axial Dimensions for Instrument Tube

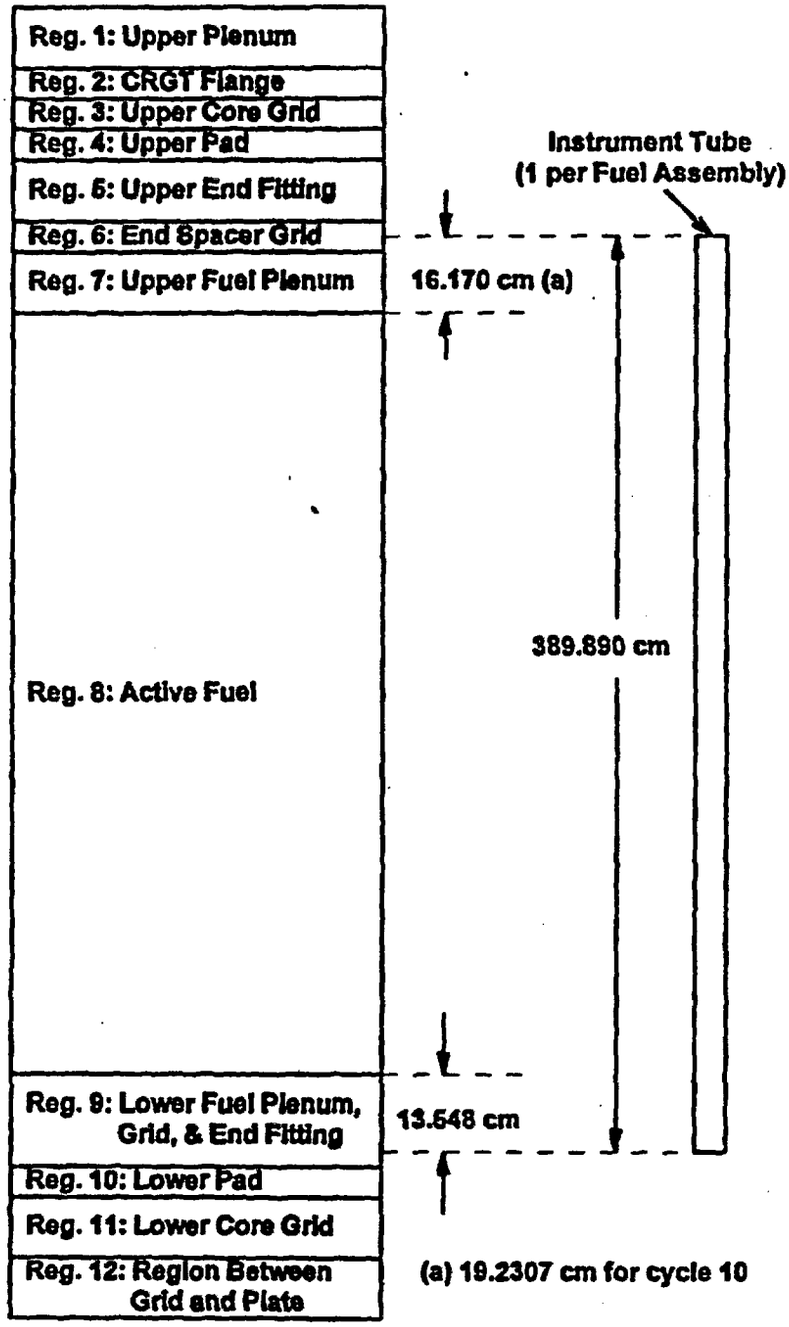
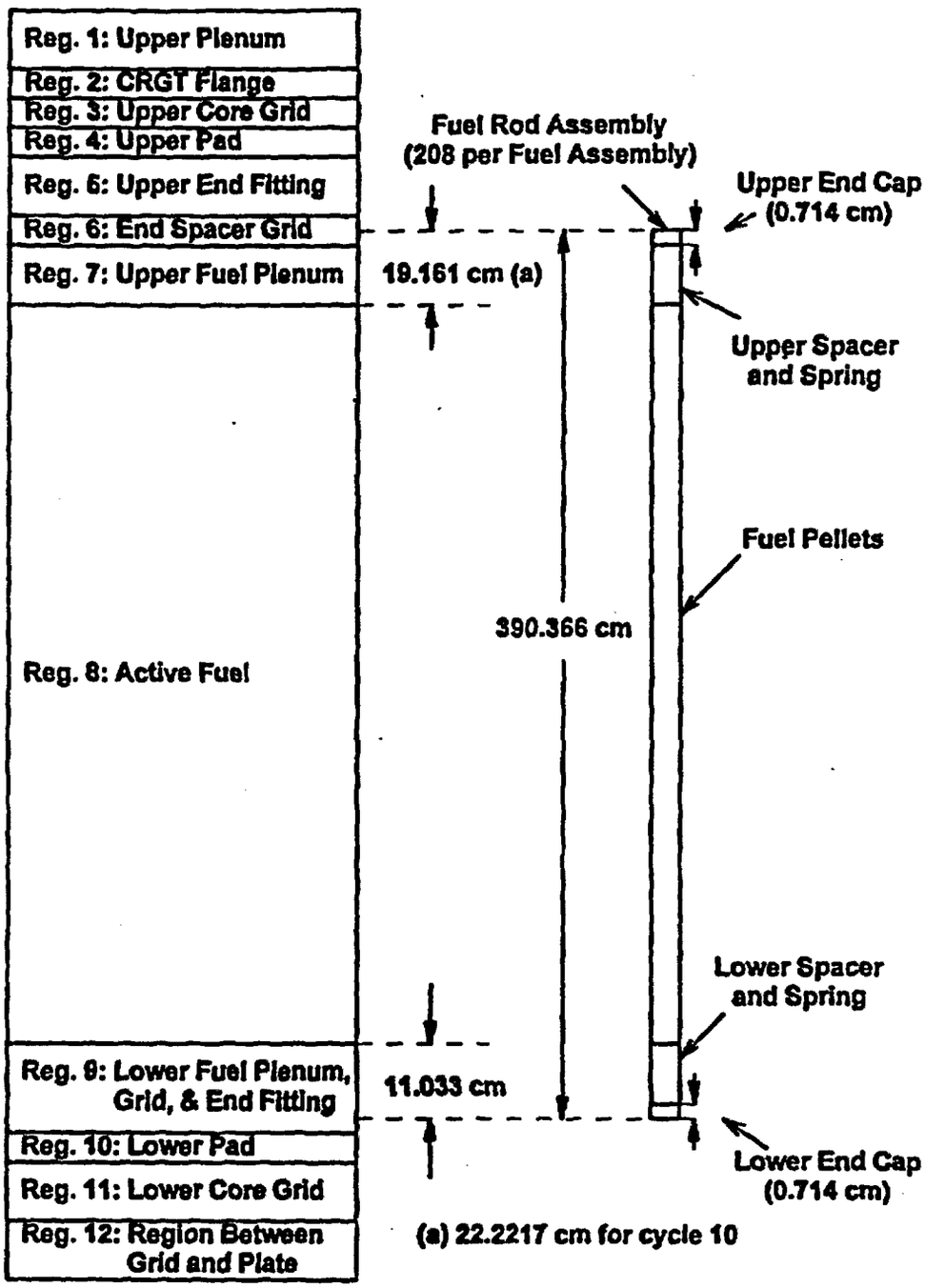


Figure 2-7. Axial Dimensions for Fuel Rod Assembly



Regions 6, 7, and 9 contain various amounts of stainless steel and zircaloy in the fuel rod assembly which represent the end caps, spacers, and springs. In addition, these regions also 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. The fuel rod assembly volume fractions for materials in these regions are as follows:

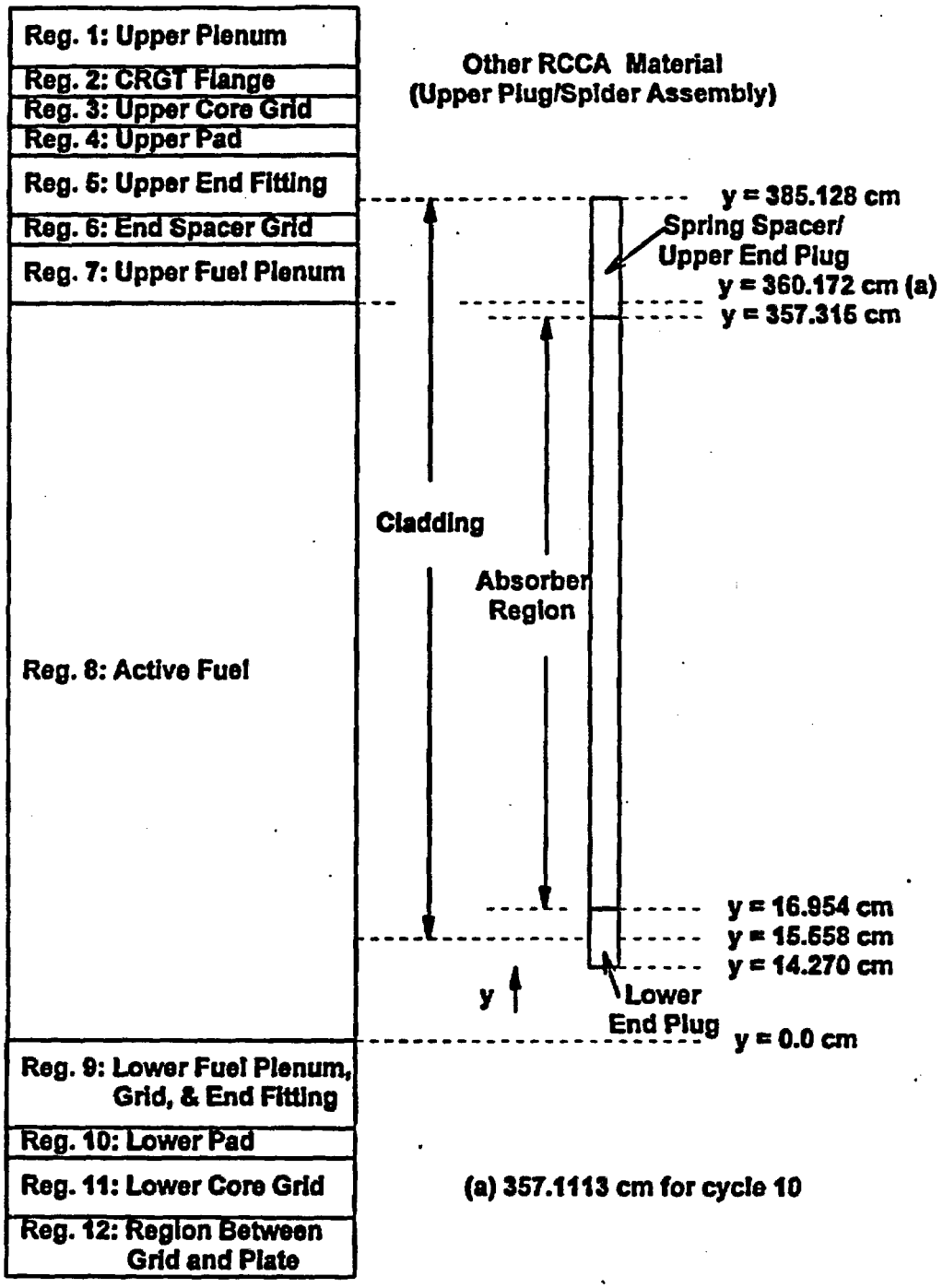
Table 2-5. Fuel Rod Assembly Volume Fractions for Non-Control Assemblies - Regions 6-9

	Fuel Rod Assembly Volume Fractions			
Region	SS	Zr	Cladding*	Gas
6	0.0	0.3344	0.1940	0.4716
7	0.0810	0.0439	0.2313	0.6438
9	0.1230	0.1926	0.2163	0.4681

* The zircaloy cladding extends the entire length of the fuel rod but does not include the ends of the end caps (i.e., extends 388.938 cm and excludes the final 0.714 cm of each end of the fuel rod assembly). There are 208 fuel rod assemblies in each fuel assembly.

The volume fractions of materials in regions 1 through 5 of assemblies containing neutron control materials are given in Tables 2-6 through 2-9 below.

Figure 2-8. Axial Dimensions for RCCAs (0% Withdrawn)



RCCA Materials:

Lower end plug - stainless steel

Cladding - stainless steel

Absorber - Ag-In-Cd

Spring spacer - stainless steel, volume fraction of spacer spring/plug inside of clad = 0.3090

Upper plug & spider assembly - stainless steel

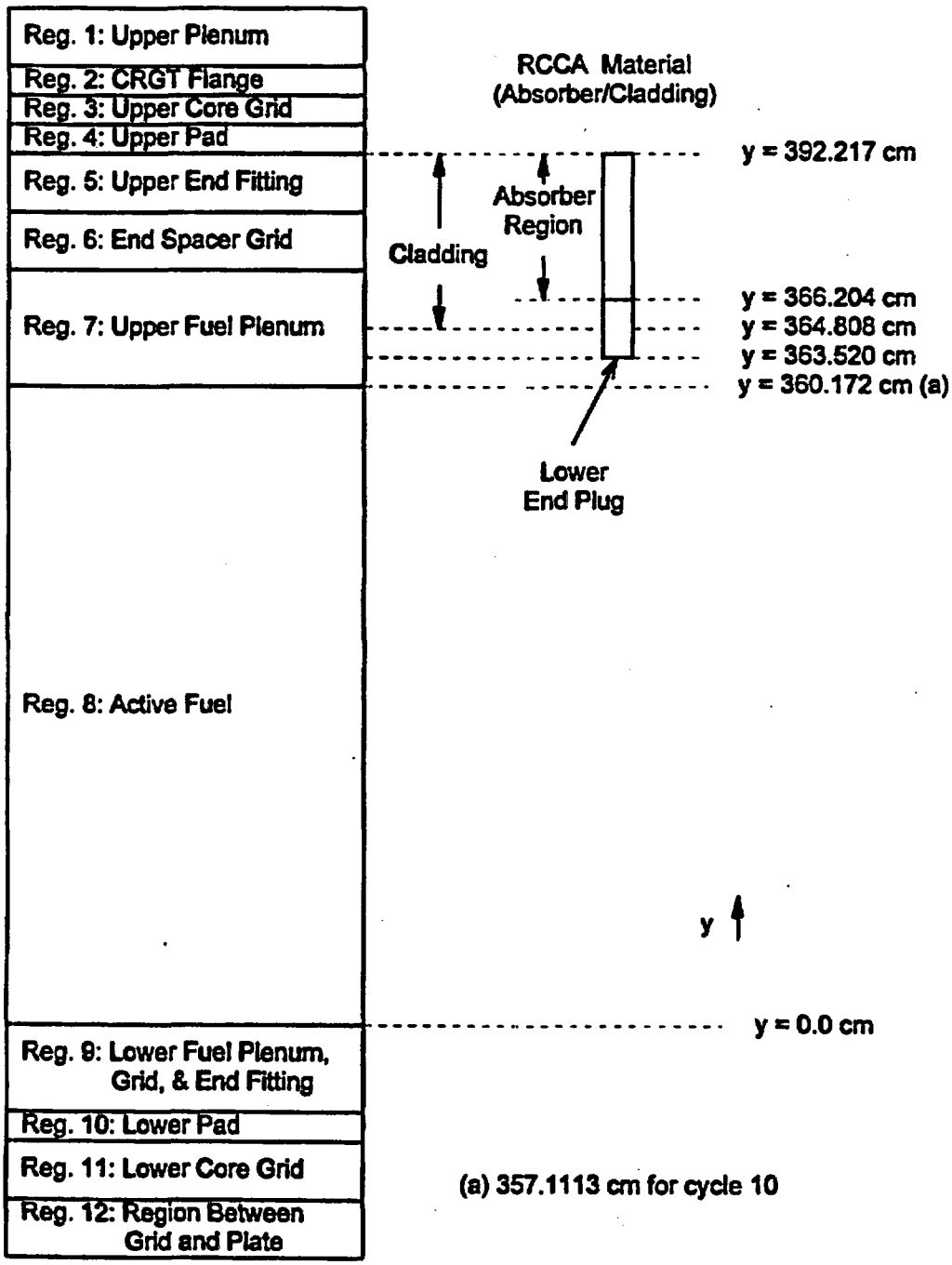
RCCA Volume Fractions:

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 remainder of materials are homogenized in regions 1 - 5. The volume fractions of these materials (including non-RCCA materials) for RCCAs with rods at 0% withdrawn are given in Table 2-6.

Table 2-6. Volume Fractions in Assemblies with RCCAs (0% Withdrawn) - Regions 1-5

	Volume Fractions (rods 0% Withdrawn)			
Region	SS	Inc	Zr	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

Figure 2-9. Axial Dimensions for RCCA (100% Withdrawn)



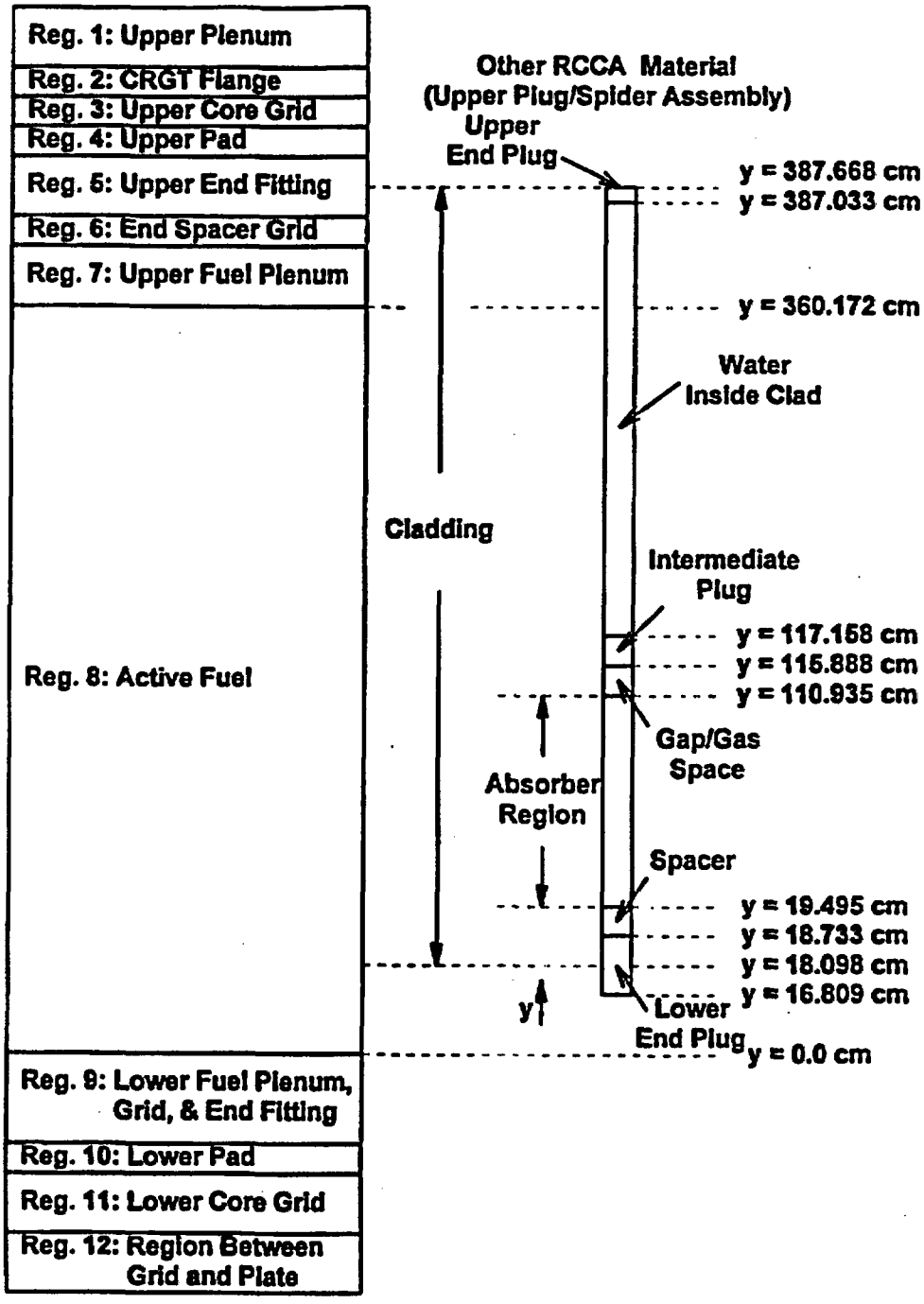
For rods 100% withdrawn the cladding and absorber material inside the cladding are represented explicitly through region 5 (upper end fitting). This extends beyond the guide tubes. Materials for the remaining regions are homogenized. The volume fractions of these materials (including non-RCCA materials) for RCCAs with rods at 100% withdrawn are given in Table 2-7.

Table 2-7. Volume Fractions in Assemblies with RCCAs (100% Withdrawn) - Regions 1-5

	Volume Fractions (rods 100% Withdrawn)				
Region	SS	Inc	Zr	Ag-In-Cd	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

* Material is not homogenized for this region.

Figure 2-10. Axial Dimensions for Black APSR (0% Withdrawn)



Black APSRs Materials:

Lower end plug - stainless steel

Cladding - stainless steel

Absorber - Ag-In-Cd

Spacer - zircaloy (annular design), volume = 6.11 cm^3 (16 APSRs)

Intermediate plug - stainless steel, volume = 16.15 cm^3 (16 APSRs)

Upper end plug & spider assembly - stainless steel

Black APSRs Volume Fractions:

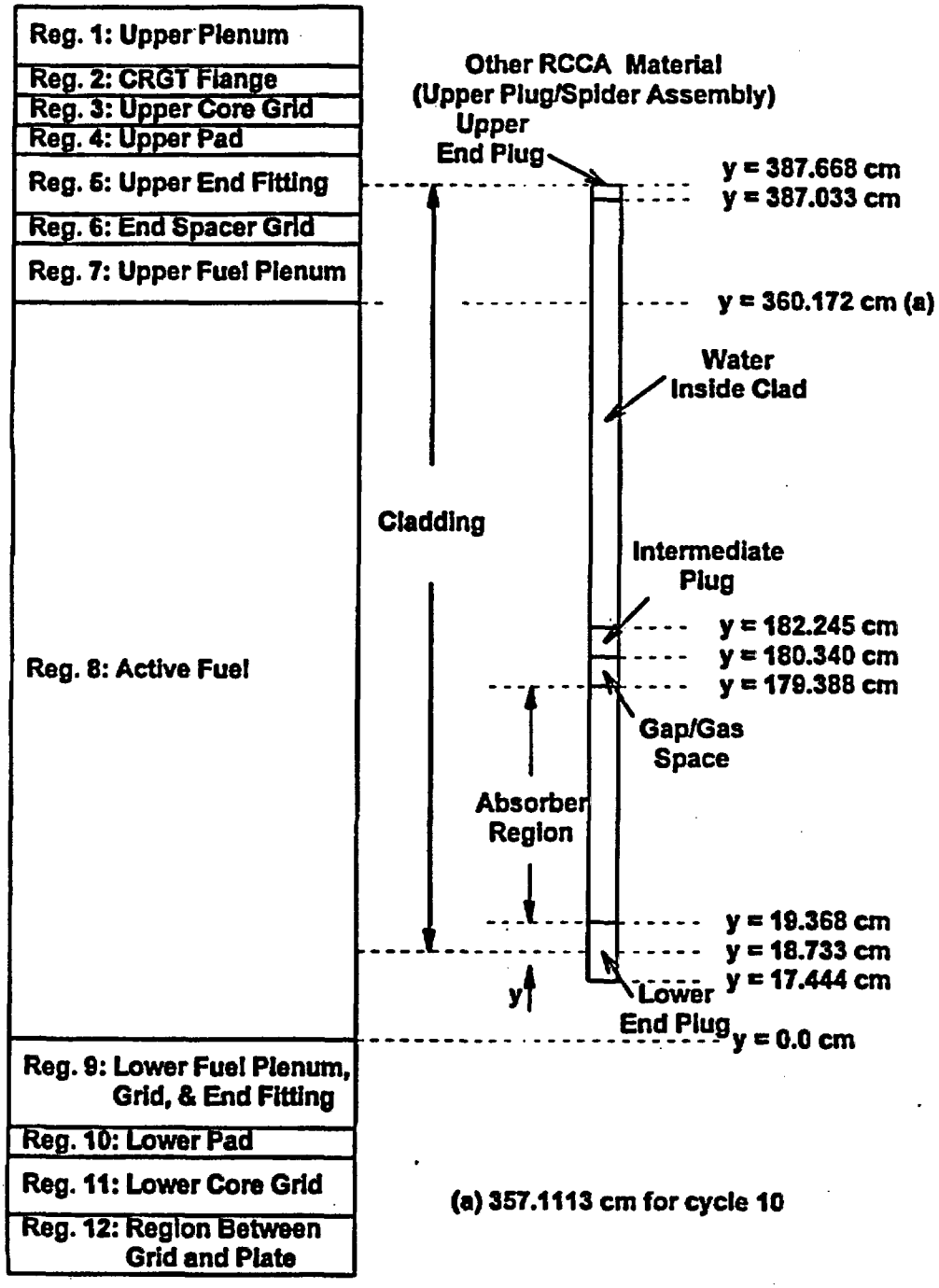
The rods and other material inside the cladding are represented explicitly in the active fuel, upper fuel plenum, end spacer grid regions, and to the ends of the APSR cladding in the upper end fitting region. The remainder of the materials are homogenized in regions 1 - 5. The volume fractions of these materials (including non-APSR materials) for black APSRs with rods at 0% withdrawn are given in Table 2-8.

Table 2-8. Volume Fractions in Assemblies with Black APSRs (0% Withdrawn) - Regions 1-5

	Volume Fractions (rods 0% Withdrawn)			
Region	SS	Inc	Zr	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

Black APSRs at 100% withdrawn should be treated the same as RCCAs.

Figure 2-11. Axial Dimensions for Gray APSR (0% Withdrawn)



Gray APSR Materials:

Lower end plug - stainless steel

Cladding - stainless steel

Absorber - Inconel

Intermediate plug - stainless steel, volume = 22.71 cm^3

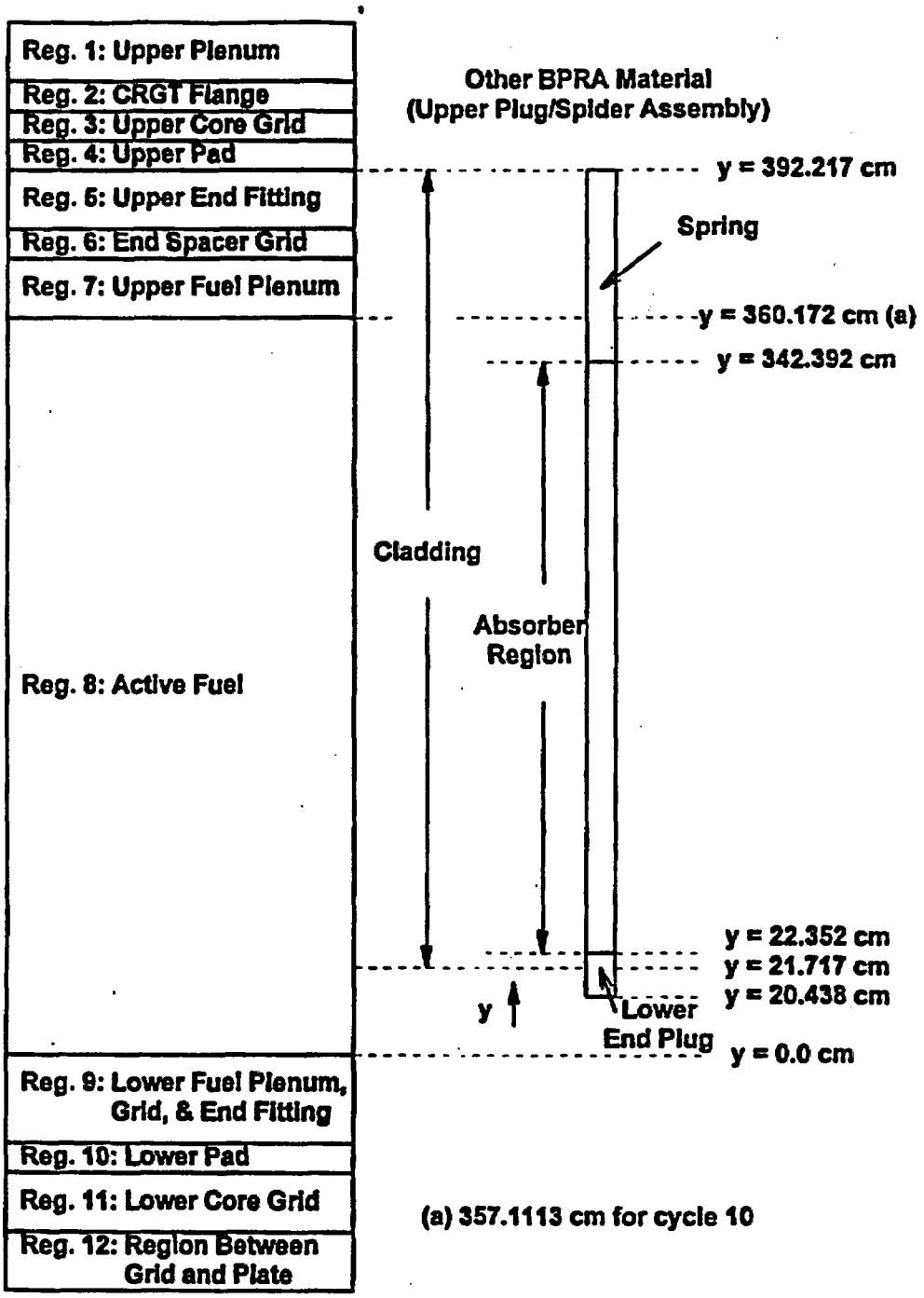
Upper end plug & spider assembly - stainless steel

Gray APSRs 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 remainder of the materials are homogenized in regions 1 - 5. The volume fractions of these materials (including non-APSR materials) for gray APSRs with rods at 0% withdrawn are similar to those given for the black APSRs (Table 2-8) and are not repeated (i.e., use black APSR values for regions 1 - 5).

For gray APSRs at 100% withdrawn, treat the same as RCCAs.

Figure 2-12. Axial Dimensions for BPRA



BPRA Materials:

Lower end plug - zircaloy

Cladding - zircaloy

Absorber - Al_2O_3 - B_4C

Spring - stainless steel, volume fraction of spring inside of clad = 0.2090

Upper end plug - zircaloy

Spider assembly - stainless steel

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 given in Table 2-9.

Table 2-9. Volume Fractions in Assemblies with BPRAs - Regions 1-5

	Volume Fractions BPRAs			
Region	SS	Inc	Zr	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

3.0 FUEL CYCLE DESIGN INFORMATION

This section provides fuel assembly design data for cycles 1 through 10 of the Crystal River Unit 3 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 and burnable absorber enrichments for each assembly, and control rod bank locations are presented in Section 3.2.

3.1 Fuel Batch Data

Material and geometry data for each fuel batch present in cycles 1-10 are given in Table 3-1. This includes the cycle in which the fuel was first loaded, the fuel assembly type, the enrichment and kilograms of uranium in each fuel assembly (by 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 assembly types in Table 3-1 are represented by the Mark-B4 Fuel Assembly shown in Figure 2-3. The axial dimensions of the Mk-B4Z, Mk-B9, and Mk-B10ZL fuel assembly types in Table 3-1 are represented by the Mark-B4Z Fuel Assembly shown in Figure 2-4 with the exceptions noted for cycle 10. The type of axial power shaping rods (black or gray APSRs) used in each cycle is given 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 also presented. In addition, material and radial dimensions for RCCAs, black and gray APSRs, and BPRAs are provided. This data should be used in modeling each fuel assembly type for burnup calculations and the reactor criticality calculations for the statepoints defined in Table 3-2.

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 statepoint criticality data was measured is also presented.

Table 3-1. Fuel Assembly/Pin/Cycle Description for Cycles 1-10

Cycle	Fresh Fuel Batch	Assembly Type	wt% U-235	kgU/ Assembly	FP Pellet OD (cm)	FA Grid Material	APSRs Black/Gray	BP Cycle	Rodded Cycle
1A	1	Mk-B3	1.93	463.63	0.939800	Inconel	Black	Yes	Yes
	2	Mk-B3	2.54	463.63	0.939800	Inconel	Black	Yes	Yes
	3	Mk-B3	2.83	463.63	0.939800	Inconel	Black	Yes	Yes
1B	1X	Mk-B2	2.00	468.62	0.939800	Inconel	Black	No	Yes
2	4	Mk-B4	2.64	468.62	0.939038	Inconel	Black	No	Yes
3	5	Mk-B4	2.62	463.63	0.936244	Inconel	Black	No	Yes
4	6A	Mk-B4	2.62	463.63	0.936244	Inconel	Black	Yes	Yes
	6B	Mk-B4	2.95	463.63	0.936244	Inconel	Black	Yes	Yes
5	7A	Mk-B4	3.29	463.63	0.936244	Inconel	Black	Yes	No
	7B	Mk-B4	2.95	463.63	0.936244	Inconel	Black	Yes	No
6	8	Mk-B4	3.49	463.63	0.936244	Inconel	Gray	Yes	No
7	9	Mk-B4Z	3.84	463.63	0.936244	zircaloy	Gray	Yes	No
8	10	Mk-B4Z	3.94	463.63	0.936244	zircaloy	Gray	Yes	No
9	11	Mk-B9	3.90	463.605	0.939800	zircaloy	Gray	Yes	No
10	12	Mk-B10ZL	4.167*	463.66	0.939800	zircaloy	Gray	Yes	No

FP - Fuel Pin; FA - Fuel Assembly; BP - Burnable Poison; OD - Outer Diameter; ID - Inner Diameter

* Assembly contains 192 fuel rods at 4.19 wt% U-235 and 16 fuel rods at 3.89 wt% U-235, for an assembly average enrichment of 4.167 wt% U-235. See Figure 3-11 for the locations of the reduced enrichment fuel rods.

Description	Material	OD(cm)	ID(cm)
Fuel Clad	zircaloy	1.09220	0.95758
Instrument Tube	zircaloy	1.38193	1.12014
Guide Tube	zircaloy	1.34620	1.26492

RCCAs and Black APSRs

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	SS304
Clad OD	1.11760 cm
Clad ID	1.01092 cm

Gray APSRs

Rod Material	Inconel
Rod OD	0.95250 cm
Clad material	SS304
Clad OD	1.11760 cm
Clad ID	0.98044 cm

BPRAs

Pellet Material	Al_2O_3-B_4C
Pellet Density	3.7 g/cc
Pellet OD	0.8636 cm
Clad Material	zircaloy
Clad OD	1.0922 cm
Clad ID	0.9144 cm

Table 3-2. Cycle Length and Time During Cycle Statepoint Data Measured for Cycles 1-10

Cycle	End-of-Cycle EFPD	Statepoint Number	Time of Measurement EFPD
1A	268.8	SP1	0.0
1B*	440.1	SP2	268.8
		SP3	411.0
2	166.5	SP4	0.0
3	323.0	SP5	0.0
		SP6	168.5
		SP7	250.0
4	336.6	SP8	0.0
		SP9	228.1
		SP10	253.0
5	484.4	SP11	0.0
		SP12	388.5
6	412.07	SP13	0.0
		SP14	96.0
		SP15	400.0
7	497.9	SP16	0.0
		SP17	260.3
		SP18	291.0
		SP19	319.0
		SP20	462.3
		SP21	479.0
8	535.9	SP22	0.0
		SP23	97.6
		SP24	139.8
		SP25	404.0
		SP26	409.6
		SP27	515.5
9	557.23	SP28	0.0
		SP29	158.8
		SP30	219.0
		SP31	363.1
10	592.8	SP32	0.0
		SP33	573.7

* Since cycle 1B is a continuation of cycle 1A, the EFPD at the beginning of cycle 1B is the same as the end of cycle 1A.

3.2 Fuel Assembly Data

The fuel assembly loadings for each cycle are presented in Figures 3-1 through 3-11. A one-eighth core representation is used, where the fuel assembly at the center of the core is in location H8. Included in these figures are 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 U-235 (by batch), the locations of BPRAs and weight percent of B_4C in each BPRA, and the location of the various control rod banks are also presented for each cycle.

Each fuel assembly is given a unique alphanumeric designation which is then used in tracking the assembly through its entire period of operation. This includes both the time 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 J for cycle 10). Since cycle 1B is a continuation of cycle 1A no new letter designation is assigned to cycle 1B. In addition, each one-eighth core location is assigned a unique number. As noted in Table 2-2, the Crystal River Unit 3 reactor contains 177 fuel assemblies. Assuming eighth core symmetry reduces this number to 29 fuel assemblies represented. Thus, the locations are numbered 1 through 29. Starting at the center of the core, H8 is location number 1. Location numbers 2 through 9 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. From Figure 3-3 it is seen that the first fresh fuel assembly encountered in cycle 2 is in location H15. Thus, the cycle 2 labeling for new fuel starts with assembly B8.

Figures 3-12 through 3-23 were constructed by applying this nomeclature to the fuel assembly location data given in Figures 3-1 through 3-11. These figures also provide additional data that is needed for modeling these fuel cycles. It is observed in examining Figures 3-12 through 3-23 that a further designation is assigned to the fuel assembly identification. For example, in Figure 3-13 a designation A18b is assigned to location L12 and a designation of O1 is assigned to location N12. In addition, the location L12 is also assigned assembly A26. The A18b designation indicates that the 8 assemblies (in full core) represented with the eighth core location L12 did not follow the same path during their lifetime in the core.

During cycle 1 the plant was shut down and the core off-loaded for repairs. One of the fuel assemblies was damaged in the spent fuel pool. Subsequently, 4 fuel assemblies from the Oconee Unit 1 reactor were shipped to Crystal River and loaded in location N12 and symmetric locations (hence the designation O1 for the Oconee 1 assembly). The assembly A26 (actually 4 assemblies) which was previously in location N12 was shuffled into location N10, and eighth

core symmetry was lost. The loss of eighth core symmetry is demonstrated in Figure 3-14 where a full core representation is given for cycle 1B. The eighth core representation in Figure 3-13 indicates that four of the original eight assemblies represented by A18 are still in four of the eight locations. The remaining four were replaced with assembly A26 (which went to symmetric location N10). It is observed that a quarter core rotational symmetry is maintained by the Crystal River reactor for cycle 1B. The "b" designation on A18b is given because two of the four assemblies (A18) that were removed for cycle 1B were reinserted in the core in location H8 for cycles 8 and 9 respectively. This results in the original 8 assemblies designated A18 following three different burnup paths during their lifetime.

This type of scenario is not unusual even for reactors that maintain eighth core symmetry. For example, 4 assemblies from eighth core symmetric locations could be shuffled to two different quarter core symmetry axis locations. A study of Figures 3-12 through 3-23 indicates that this will occur several times during the 10 cycles of Crystal River Unit 3 and will be indicated by subdesignations "a" and "b". For the Crystal River 3 data, it is recommended that cycle 1B statepoints be examined with full core and eighth core symmetry in order to bound the magnitude of any reactivity differences resulting from loss of symmetry. The effect observed for cycle 1B will diminish (with burnup) for subsequent statepoint calculations since no further asymmetries were introduced in future fuel cycle designs.

Figure 3-1. Cycle 1A One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	F(1A) 2	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 3	F(1A) 3
K		F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 3
L			F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 3	F(1A) 3
M				F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 3	
N					F(1A) 1	F(1A) 3	F(1A) 3	
O						F(1A) 3		

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
1A	1	1.93
	2	2.54
	3	2.83

BPRA Loading	Location
1.34 Wt% B4C	H9, K10, K14
1.18 Wt% B4C	H11, H13, K12, L13, N13
1.01 Wt% B4C	L11, M12

Control Rod Bank	Core Location
5	K9, M13
6	H12, M11
7	H8, L14
8	L12

Note: Control rod bank 7 was changed near the end of cycle 1A from location L14 to H14 and N12

Figure 3-2. Cycle 1B One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	F(1A) 2	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 3	F(1A) 3
K		F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 3
L			F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 2	F(1A) 3	F(1A) 3
M				F(1A) 1	F(1A) 2	F(1A) 1	F(1A) 3	
N			from F(1A) cy1A N12		from F(1) oco 1 cy1	F(1A) 3	F(1A) 3	
O						F(1A) 3		

Note: Four Oconee 1, Cycle 1, FAs inserted into CR3, Cycle 1B, & N12 moved to N10

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
1B	1	1.93
	2	2.54
	3	2.83
Oconee 1	1X	2.00

BRPAs removed in Cycle 1B

Control Rod Bank	Core Location
5	K9, M13
6	H12, M11
7	H8, H14, N12
8	L12

Figure 3-3. Cycle 2 One-Eighth Core Loading for Crystal River 3

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

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
2	2	2.64
	3	2.83
	4	2.64

NO BPRAs REQUIRED

Control Rod Bank	Core Location
5	K13
6	H10, N12
7	H14, L10
8	L12

Figure 3-4. Cycle 3 One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	H8 F(1A) 2	H12 F(1A) 3	L14 F(2) 4	H10 F(1A) 3	H15 F(2) 4	H14 F(1A) 2	K13 F(1A) 3	F(3) 5
K		L14 F(2) 4	L12 F(1A) 3	K15 F(2) 4	M12 F(1A) 3	L15 F(2) 4	K10 F(1A) 3	F(3) 5
L			M11 F(1A) 3	K11 F(1A) 3	M14 F(2) 4	N13 F(2) 4	F(3) 5	F(3) 5
M				L10 F(1A) 2	N14/O13 F(2) 4	K12 F(1A) 3	F(3) 5	
N					K13 F(1A) 3	F(3) 5	F(3) 5	
O						F(3) 5		

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

NO BPRAs REQUIRED

Cycle	Batch	Wt % U-235
3	2	2.54
	3	2.83
	4	2.64
	5	2.62

Control Rod Bank	Core Location
5	K13
6	H10, N12
7	H14, L10
8	L12

Figure 3-5. Cycle 4 One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	K9 F(2) 4	N13 F(3) 5	H12 F(2) 4	N14 F(2) 4	H10 F(2) 4	F(4) 6B	K13 F(2) 4	H15 F(3) 5
K		N13 F(3) 5	F(4) 6A	L12 F(2) 4	F(4) 6A	K11 F(2) 4	F(4) 6A	N14 F(3) 5
L			M12 F(2) 4	F(4) 6A	L13 F(2) 4	F(4) 6A	L15 F(3) 5	K15 F(3) 5
M				K13 F(2) 4	F(4) 6A	L14 F(3) 5	F(4) 6A	
N					M12 F(2) 4	F(4) 6B	M14 F(3) 5	
O						O13 F(3) 5		

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
4	4	2.64
	5	2.62
	6A	2.62
	6B	2.95

BPRA Loading	Location
0.20 Wt% B4C	H11, K14, L11, L13, N13
0.50 Wt% B4C	H13, K10, K12, M12

Control Rod Bank	Core Location
5	K13
6	H10, N12
7	H14, L10
8	L12

Figure 3-6. Cycle 5 One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	K9 F(2) 4	L13 F(4) 6A	L14 F(3) 5	F(5) 7A	O13 F(3) 5	F(5) 7A	L15 F(3) 5	F(5) 7A
K		N14 F(3) 5	F(5) 7B	K10 F(4) 6A	F(5) 7A	M12 F(4) 6A	F(5) 7A	K14 F(4) 6A
L			N14 F(3) 5	F(5) 7A	K12 F(4) 6A	F(5) 7A	M14 F(4) 6A	N13 F(4) 6B
M				L13 F(4) 6A	F(5) 7A	K15 F(3) 5	F(5) 7A	
N					L15 F(3) 5	F(5) 7A	L11 F(4) 6A	
O						H13 F(4) 6B		

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
5	4	2.64
	5	2.62
	6A	2.62
	6B	2.95
	7A	3.29
	7B	2.95

BPRA Loading	Location
0.20 Wt% B4C	K14
0.50 Wt% B4C	K10
1.40 Wt% B4C	H11, H13, K12, L11, L13, M12

Control Rod Bank	Core Location
5	H12, M11
6	K13
7	H10, H14, N12
8	L12

Figure 3-7. Cycle 6 One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	K9 F(2) 4	K14 F(5) 7A	H11 F(2) 4	H15 F(5) 7A	O13 F(4) 6B	F(6) 8	L14 F(4) 6A	H11 F(5) 7A
K		H13 F(5) 7A	F(6) 8	K10 F(5) 7B	F(6) 8	K12 F(5) 7A	F(6) 8	M12 F(5) 7A
L			L15 F(4) 6B	F(6) 8	L11 F(5) 7A	F(6) 8	M14 F(5) 7A	N14 F(4) 6A
M				L14 F(4) 6A	F(6) 8	L13 F(5) 7A	N13 F(5) 7A	
N					K14 F(5) 7A	F(6) 8	K15 F(4) 6A	
O						L15 F(4) 6B		

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
6	4	2.64
	6A	2.62
	6B	2.95
	7A	3.29
	7B	2.95
	8	3.49

BPRA Loading	Location
0.80 Wt% B4C	L13
1.10 Wt% B4C	H13
1.40 Wt% B4C	K10, K12 L11, M12

Control Rod Bank	Core Location
5	K13, M11
6	H14, L10
7	H12, N12
8	L12

Figure 3-8. Cycle 7 One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	K9 F(2) 4	. F(7) 9	M14 F(5) 7A	F(7) 9	K14 F(1A) 2	F(7) 9	H13 F(6) 8	F(7) 9
K		M14 F(5) 7A	F(7) 9	K15 F(5) 7A	F(7) 9	K12 F(6) 8	F(7) 9	K10 F(6) 8
L			K14 F(1A) 2	F(7) 9	L14 F(5) 7A	F(7) 9	N13 F(6) 8	M12 F(6) 8
M				L11 F(6) 8	F(7) 9	K14 F(6) 8	F(7) 9	
N					L11 F(6) 8	F(7) 9	L13 F(6) 8	
O						H15 F(3) 5		

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
7	2	2.54
	4	2.64
	5	2.62
	7A	3.29
	8	3.49
	9	3.84

BPRA Loading	Location
0.000 Wt% B4C	N13
0.200 Wt% B4C	K14
0.800 Wt% B4C	H9, H11, K10, K12, L13
1.134 Wt% B4C	L11
1.177 Wt% B4C	H13
1.194 Wt% B4C	M12

Control Rod Bank	Core Location
5	K13, M11
6	H14, L10
7	H12, N12
8	L12

Figure 3-9. Cycle 8 One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	L12 F(1A) 1	N13 F(7) 9	H11/H13 F(7) 9	F(8) 10	M13 F(3) 6	F(8) 10	H9 F(7) 9	N14 F(6) 8
K		L13 F(7) 9	F(8) 10	K10 F(7) 9	F(8) 10	K12 F(7) 9	F(8) 10	L14 F(6) 8
L			M13 F(3) 6	F(8) 10	L11 F(7) 9	F(8) 10	K14 F(7) 9	L15 F(6) 8
M				L13 F(7) 9	F(8) 10	M14 F(7) 9	F(8) 10	
N					N14 F(6) 8	F(8) 10	M12 F(7) 9	
O						M13 F(5) 7A		

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
8	1	1.93
	6	2.62
	7A	3.29
	8	3.49
	9	3.84
	10	3.94

BPRA Loading	Location
1.70 Wt% B4C	H13, K10
2.00 Wt% B4C	H11, K12, L11, L13, M12

Control Rod Bank	Core Location
5	K13, M11
6	H14, L10
7	H12, N12
8	L12

NOTE:
Assemblies from both H11 and H13, cycle 7 (i.e., eight assemblies in full-core representation), were used in position H10, cycle 8 (i.e., four assemblies in full-core representation). The remaining four assemblies from H11 and H13, cycle 7, were used in cycle 9.

Figure 3-10. Cycle 9 One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	L12 F(1A) 1	H15 F(7) 9	N13 F(8) 10	F(9) 11	N13 F(8) 10	F(9) 11	H11 F(8) 10	H14 F(7) 9
K		H11/H13 F(7) 9	F(9) 11	N14 F(7) 9	F(9) 11	K14 F(8) 10	F(9) 11	L11 F(8) 10
L			M12 F(8) 10	F(9) 11	K12 F(8) 10	F(9) 11	L13 F(8) 10	M13 F(7) 9
M				H13 F(8) 10	F(9) 11	M14 F(8) 10	K10 F(8) 10	
N					N13 F(7) 9	F(9) 11	L14 F(7) 9	
O						M12 F(8) 10		

CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
9	1	1.93
	9	3.84
	10	3.94
	11	3.90

BPRA Loading	Location
0.50 Wt% B4C	L13
1.40 Wt% B4C	H13
2.00 Wt% B4C	H11, K12, L11
2.10 Wt% B4C	K10, M12

Control Rod Bank	Core Location
5	K13, M11
6	H14, L10
7	H12, N12
8	L12

NOTE:
Assemblies from both H11 and H13, cycle 7 (i.e., eight assemblies in full-core representation), were used in position K9, cycle 9 (i.e., four assemblies in full-core representation). The remaining four assemblies from H11 and H13, cycle 7, were used in cycle 8.

Figure 3-11. Cycle 10 One-Eighth Core Loading for Crystal River 3

	8	9	10	11	12	13	14	15
H	N12 F(7) 9	N13 F(9) 11	K12 F(9) 11	F(10) 12	K12 F(9) 11	F(10) 12	H13 F(9) 11	H9 F(7) 9
K		K10 F(9) 11	F(10) 12	L11 F(9) 11	F(10) 12	L13 F(9) 11	F(10) 12	M14 F(8) 10
L			H11 F(9) 11	F(10) 12	M12 F(9) 11	F(10) 12	F(10) 12	M13 F(8) 10
M				K10 F(9) 11	F(10) 12	K14 F(9) 11	K15 F(8) 10	
N					N13 F(9) 11	F(10) 12	L14 F(8) 10	
O						O13 F(8) 10		

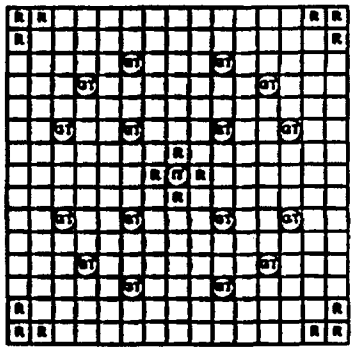
CR	= Previous FA Position, Column (C), Row (R) - (normalized to 1/8 core)
F(c)	= Cycle (c) FA was Fresh (F)
B	= Fuel Batch (B)

Cycle	Batch	Wt % U-235
10	9	3.84
	10	3.94
	11	3.90
	12	4.167*

BPRA Loading	Location
0.80 Wt% B4C	K14
1.10 Wt% B4C	H13, L13, M12
1.40 Wt% B4C	K10
1.70 Wt% B4C	H11
2.00 Wt% B4C	K12, L11

Control Rod Bank	Core Location
5	K13, M11
6	H14, L10
7	H12, N12
8	L12

* Assembly contains 192 rods at 4.19 Wt% U-235 & 16 rods at a reduced enrichment of 3.89 Wt% U-235, for an average enrichment of 4.167 Wt% U-235.



The locations of the fuel rods with the reduced enrichment (3.89 Wt% U-235) are represented by "R" in above figure.

Figure 3-12. Crystal River 3, Cycle 1A Fuel Assembly Identification & Locations

	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
I	Cycle 9
J	Cycle 10

Figure 3-13. Crystal River 3, Cycle 1B Fuel Assembly Identification & Locations

	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	A18b/ A26	A19	A20	A21
M				A22	A23	A24	A25	
N					Oconee 1 O1 Cycle 1	A27	A28	
O						A29		

A	Cycle 1	Assembly O1 - Oconee 1, Cycle 1
B	Cycle 2	
C	Cycle 3	
D	Cycle 4	
E	Cycle 5	
F	Cycle 6	
G	Cycle 7	
H	Cycle 8	
I	Cycle 9	
J	Cycle 10	

Figure 3-14. Crystal River 3, Cycle 1B Full Core Representation

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A						A21	A15	A8	A15	A21					
B				A28	A25	A20	A14	A7	A14	A20	A25	A28			
C			A29	A27	A24	A19	A13	A6	A13	A19	A24	A27	A29		
D		A28	A27	O1	A23	A26	A12	A5	A12	A26	A23	O1	A27	A28	
E		A25	A24	A23	A22	A17	A11	A4	A11	A17	A22	A23	A24	A25	
F	A21	A20	A19	A18	A17	A16	A10	A3	A10	A16	A17	A18	A19	A20	A21
G	A15	A14	A13	A12	A11	A10	A9	A2	A9	A10	A11	A12	A13	A14	A15
H	A8	A7	A6	A5	A4	A3	A2	A1	A2	A3	A4	A5	A6	A7	A8
K	A15	A14	A13	A12	A11	A10	A9	A2	A9	A10	A11	A12	A13	A14	A15
L	A21	A20	A19	A18	A17	A16	A10	A3	A10	A16	A17	A18	A19	A20	A21
M		A25	A24	A23	A22	A17	A11	A4	A11	A17	A22	A23	A24	A25	
N		A28	A27	O1	A23	A26	A12	A5	A12	A26	A23	O1	A27	A28	
O			A29	A27	A24	A19	A13	A6	A13	A19	A24	A27	A29		
P				A28	A25	A20	A14	A7	A14	A20	A25	A28			
R						A21	A15	A8	A15	A21					

Figure 3-15. Crystal River 3, Cycle 2 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	A1	A2	A7	A12a	A8	A6	A23	B8
K		A12	A15	A21	A27	A25	A14	B15
L			A23a	A17	A28	A19	B20	B21
M				A29	A20	A10	B25	
N					A4	B27	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
I Cycle 9
J Cycle 10

Figure 3-16. Crystal River 3, Cycle 3 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	A1	A8	B20	A7	B8	A23	A25	C8
K		B20a	A28	B15	A20	B21	A15	C15
L			A29	A21	B25	B27	C20	C21
M				A23a	B28/ B29	A27	C25	
N					A25a	C27	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
I Cycle 9
J Cycle 10

Figure 3-17. Crystal River 3, Cycle 4 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	B20a	C27	B8	B28a Cycle 2	B20	D6	B21	C8
K		C27a	D10	B25	D12	B15	D14	C28
L			B29	D17	B27	D19	C21	C15
M				B21a	D23	C20	D25	
N					B28	D27	C25	
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
I Cycle 9
J Cycle 10

Figure 3-18. Crystal River 3, Cycle 5 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	B20b1 Cycle 3	D19	C21	E4	C29	E6	C15	E8
K		C25	E10	D10	E12	D23	E14	D14
L			C25a	E17	D12	E19	D25	D27
M				D19a	E23	C28	E25	
N					C15a	E27	D17	
O						D6		

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

Figure 3-19. Crystal River 3, Cycle 6 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	B20b2 Cycle 3	E14	B28a Cycle 4	E8	D6	F6	D25	E4
K		E6	F10	E10	F12	E12	F14	E23
L			D27	F17	E17	F19	E25	D17
M				D25a	F23	E19	E27	
N					E14a	F27	D14	
O						D27a		

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

Figure 3-20. Crystal River 3, Cycle 7 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	B20b3 Cycle 3	G2	E27	G4	A14 Cycle 2	G6	F6	G8
K		E27a	G10	E23	G12	F12	G14	F10
L			A14a Cycle 2	G17	E25	G19	F27	F23
M				F17	G23	F14	G25	
N					F17a	G27	F19	
O						C8 Cycle 4		

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

Figure 3-21. Crystal River 3, Cycle 8 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	A18 Cycle 1A	G27	G4/ G6	H4	C20 Cycle 4	H6	G2	F19
K		G19	H10	G10	H12	G12	H14	F27
L			C20a Cycle 4	H17	G17	H19	G14	F23
M				G19a	H23	G25	H25	
N					F19a	H27	G23	
O						E19 Cycle 6		

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

Figure 3-22. Crystal River 3, Cycle 9 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	A18a Cycle 1A	G8 Cycle 7	H27	I4	H27a	I6	H4	G2
K		G4a/ G6a Cycle 7	I10	G23	I12	H14	I14	H17
L			H23	I17	H12	I19	H19	G25
M				H6	I23	H25	H10	
N					G27a Cycle 7	I27	G14	
O						H23a		

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

Figure 3-23. Crystal River 3, Cycle 10 Fuel Assembly Identification & Locations

	8	9	10	11	12	13	14	15
H	G27a	I27	I12	J4	I12a	J6	I6	G8
K		I10	J10	I17	J12	I19	J14	H10
L			I4	J17	I23	J19	J20	H25
M				I10a	J23	I14	H17	
N					I27a	J27	H19	
O						H23a		

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

To aid in the burnup calculations, and thus the generation of isotopic data for the statepoint 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 10). Those assemblies which split for a subesquent cycle (i.e., with "a" or "b" designator) carry a hyphen (-) designator in the cycle column to indicate those cycles where the assemblies are present prior to the split. This will aid the burnup calculation process by indicating where redundant data generation is not required. The location of each assembly in each cycle is indicated by the coordinates given in the figures (e.g., H8, K12).

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 insertion must be modeled in the burnup calculations for those assemblies and axial locations where rods are inserted. (More data concerning rod insertion time by axial node is given is Section 4). The wt% of B_4C in assemblies that contain burnable absorber (BA) rods (or BPRAs) is also indicated by assembly and cycle. For those cycles and assemblies where neither rod banks nor BPRAs are present, the assembly presence is indicated with an "X".

Table 3-3. Fuel Assembly Locations by Cycle for Burnup Calculations

Assembly Number	Assembly Location in Cycle											Comments
	1A	1B	2	3	4	5	6	7	8	9	10	
A1(1)	H8	H8	H8	H8								Cycle 1
A2(2)	H9	H9	H9									
A3(3)	H10	H10										
A4(4)	H11	H11	N12									
A5(5)	H12	H12										
A6(6)	H13	H13	H13									
A7(7)	H14	H14	H10	H11								
A8(8)	H15	H15	H12	H9								
A9(9)	K9	K9										
A10(10)	K10	K10	M13									
A11(11)	K11	K11										
A12(12)	K12	K12	K9									
A12a(13)	-	-	H11									
A13(14)	K13	K13										
A14(15)	K14	K14	K14					H12				
A14a(16)	-	-	-					L10				
A15(17)	K15	K15	K10	K14								
A16(18)	L10	L10										
A17(19)	L11	L11	L11									
A18(20)	L12								H8			1 assembly from 1A to 8
A18a(21)	-									H8		1 assembly from 1A to 9
A18b(22)	-	L12										4 assemblies - 1A to 1B
A19(23)	L13	L13	L13									
A20(24)	L14	L14	M12	K12								
A21(25)	L15	L15	K11	L11								
A22(26)	M11	M11										
A23(27)	M12	M12	H14	H13								
A23a(28)	-	-	L10	M11								
A24(29)	M13	M13										
A25(30)	M14	M14	K13	H14								
A25a(31)	-	-	-	N12								
A26(32)	N12	N10										4 assemblies - 1A to 1B
A27(33)	N13	N13	K12	M13								By shuffling N12 to N10,
A28(34)	N14	N14	L12	K10								1/8 th core symmetry is
A29(35)	O13	O13	M11	L10								lost in 1B.
O1(36)	(K9)	N12										From Oco 1, cycle 1 (K9)
B8(37)			H15	H12	H10							Cycle 2
B15(38)			K15	K11	K13							
B20(39)			L14	H10	H12							
B20a(40)			-	K9	H8							1 assembly from K9 cy 3
B20b1(41)			-	-		H8						1 assembly from K9 cy 3
B20b2(42)			-	-			H8					1 assembly from K9 cy 3
B20b3(43)			-	-				H8				1 assembly from K9 cy 3

Table 3-3. Fuel Assembly Locations by Cycle for Burnup Calculations (Cont'd)

Assembly Number	Assembly Location in Cycle											Comments
	1A	1B	2	3	4	5	6	7	8	9	10	
B21(44)			L15	K13	H14							
B21a(45)			-	-	M11							
B25(46)			M14	L12	K11							
B27(47)			N13	L13	L12							
B28(48)			N14	M12	N12							4 assemblies from N14
B28a(49)			-		H11		H10					4 assemblies from N14
B29(50)			O13	M12	L10							4 assemblies from O13
C8(51)				H15	H15			O13				Cycle 3
C15(52)				K15	L15	H14						
C15a(53)				-	-	N12						
C20(54)				L14	M13				H12			
C20a(55)				-	-				L10			
C21(56)				L15	L14	H10						
C25(57)				M14	N14	K9						
C25a(58)				-	-	L10						
C27(59)				N13	H9							
C27a(60)				-	K9							
C28(61)				N14	K15	M13						
C29(62)				O13	O13	H12						
D6(63					H13	O13	H12					Cycle 4
D10(64)					K10	K11						
D12(65)					K12	L12						
D14(66)					K14	K15	N14					
D17(67)					L11	N14	L15					
D19(68)					L13	H9						
D19a(69)					-	M11						
D23(70)					M12	K13						
D25(71)					M14	L14	H14					
D25a(72)					-	-	M11					
D27(73)					N13	L15	L10					
D27a(74)					-	-	O13					
E4(75)						H11	H15					Cycle 5
E6(76)						H13	K9					
E8(77)						H15	H11					
E10(78)						K10	K11					
E12(79)						K12	K13					
E14(80)						K14	H9					
E14a(81)						-	N12					
E17(82)						L11	L12					
E19(83)						L13	M13		O13			
E23(84)						M12	K15	K11				
E25(85)						M14	L14	L12				
E27(86)						N13	M14	H10				
E27a(87)						-	-	K9				

Table 3-3. Fuel Assembly Locations by Cycle for Burnup Calculations (Cont'd)

Assembly Number	Assembly Location in Cycle											Comments
	1A	1B	2	3	4	5	6	7	8	9	10	
F6(88)							H13	H14				Cycle 6
F10(89)							K10	K15				
F12(90)							K12	K13				
F14(91)							K14	M13				
F17(92)							L11	M11				
F17a(93)							-	N12				
F19(94)							L13	N14	H15			
F19a(95)							-	-	N12			
F23(96)							M12	L15	L15			
F27(97)							N13	L14	K15			
G2(98)								H9	H14	H15		Cycle 7
G4(99)								H11	H10			2 assemblies from H11
G4a(100)								-		K9		2 assemblies from H11
G6(101)								H13	H10			2 assemblies from H13
G6a(102)								-		K9		2 assemblies from H13
G8(103)								H15		H9	H15	
G10(104)								K10	K11			
G12(105)								K12	K13			
G14(106)								K14	L14	N14		
G17(107)								L11	L12			
G19(108)								L13	K9			
G19a(109)								-	M11			
G23(110)								M12	N14	K11		
G25(111)								M14	M13	L15		
G27(112)								N13	H9			
G27a(113)								-		N12	H8	
H4(114)									H11	H14		Cycle 8
H6(115)									H13	M11		
H10(116)									K10	M14	K15	
H12(117)									K12	L12		
H14(118)									K14	K13		
H17(119)									L11	K15	M14	
H19(120)									L13	L14	N14	
H23(121)									M12	L10		
H23a(122)									-	O13	O13	
H25(123)									M14	M13	L15	
H27(124)									N13	H10		
H27a(125)									-	H12		
I4(126)										H11	L10	Cycle 9
I6(127)										H13	H14	
I10(128)										K10	K9	
I10a(129)										-	M11	
I12(130)										K12	H10	
I12a(131)										-	H12	

Table 3-3. Fuel Assembly Locations by Cycle for Burnup Calculations (Cont'd)

Assembly Number	Assembly Location in Cycle											Comments
	1A	1B	2	3	4	5	6	7	8	9	10	
I14(132)										K14	M13	
I17(133)										L11	K11	
I19(134)										L13	K13	
I23(135)										M12	L12	
I27(136)										N13	H9	
I27a(137)										-	N12	
J4(138)											H11	Cycle 10
J6(139)											H13	
J10(140)											K10	
J12(141)											K12	
J14(142)											K14	
J17(143)											L11	
J19(144)											L13	
J20(145)											L14	
J23(146)											M12	
J27(147)											N13	

Table 3-4. Control Rod and BA Loading by Cycle for Burnup Calculations

Assembly Number/Batch	Wt % B4C or Rod Bank ID/Assembly Location in Cycle										
	1A	1B	2	3	4	5	6	7	8	9	10
Cycle 1											
A1/2	CR7/H8	CR7/H8	X	X							
A2/2	1.34/H9	X	X								
A4/2	1.18/H11	X	CR6/N12								
A5/1	CR6/H12	CR6/H12									
A6/2	1.18/H13	X	X								
A7/3	CR7/H14	CR7/H14	CR6/H10	X							
A10/2	1.34/K10	X	X								
A12/2	1.18/K12	X	X								
A12a/2	-	-	X								
A14/2	1.34/K14	X	X					CR7/H12			
A14a/2	-	-	-					X			
A17/2	1.01/L11	X	X								
A18/1	CR8/L12								X		
A18a/1	-									X	
A18b/1	-	CR8/L12									
A19/2	1.18/L13	X	X								
A20/3	CR7/L14	X	X	X							
A22/1	CR6/M11	CR6/M11									
A23/2	1.01/M12	X	CR7/H14	X							
A23a/2	-	-	CR7/L10	X							
A25/3	X	X	X	CR7/H14							
A25a/3	-	-	-	CR6/N12							
A26/1	CR7/N12	CR8/N10									
A27/3	1.18/N13	X	X	X							
A28/3	X	X	CR8/L12	X							
A29/3	X	X	X	CR7/L10							
O1*/1X	CR6/K9*	CR7/N12									
Cycle 2											
B8/4			X	X	CR8/H10						
B20/4			X	CR6/H10							
B21/4			X	X	CR7/H14						
B25/4			X	CR8/L12	X						
B27/4			X	X	CR8/L12						
B28/4			X	X	CR6/N12						
B28a/4			-		0.2/H11		X				
B29/4			X	X	CR7/L10						
Cycle 3											
C15/5				X	X	CR7/H14					
C15a/5				-	-	CR7/N12					
C20/5				X	X				CR7/H12		
C21/5				X	X	CR7/H10					
Cycle 4											
D6/6B					0.5/H13	X	CR7/H12				
D10/6A					0.5/K10	X					
D12/6A					0.5/K12	CR8/L12					
D14/6A					0.2/K14	X	X				
D17/6A					0.2/L11	X	X				
D19/6A					0.2/L13	X					
D19a/6A					-	X					
D23/6A					0.5/M12	X					
D27/6B					0.2/N13	X	X				

* O1 is from core location K9 in cycle 1 of Oconee 1 and operated with control bank 6 partially inserted.

Table 3-4. Control Rod and BA Loading by Cycle for Burnup Calculations (Cont'd)

Assembly Number/Batch	Wt % B4C or Rod Bank ID/Assembly Location in Cycle										
	1A	1B	2	3	4	5	6	7	8	9	10
Cycle 5											
E4/7A						1.4/H11	X				
E6/7A						1.4/H13	X				
E10/7B						0.5/K10	X				
E12/7A						1.4/K12	X				
E14/7A						0.2/K14	X				
E14a/7A						-	CR7/N12				
E17/7A						1.4/L11	CR8/L12				
E19/7A						1.4/L13	X		X		
E23/7A						1.4/M12	X	X			
E25/7A						X	X	CR8/L12			
Cycle 6											
F6/8							1.1/H13	X			
F10/8							1.4/K10	X			
F12/8							1.4/K12	X			
F17/8							1.4/L11	X			
F17a/8							-	CR7/N12			
F19/8							0.8/L13	X	X		
F19a/8							-	-	CR7/N12		
F23/8							1.4/M12	X	X		
Cycle 7											
G2/9								0.8/H9	X	X	
G4/9								0.8/H11	X		
G4a/9								-		X	
G6/9								1.177/H13	X		
G6a/9								-		X	
G10/9								0.8/K10	X		
G12/9								0.8/K12	X		
G14/9								0.2/K14	X	X	
G17/9								1.134/L11	CR8/L12		
G19/9								0.8/L13	X		
G19a/9								-	X		
G23/9								1.194/M12	X	X	
G27/9								0.0/N13	X		
G27a/9								-		CR7/N12	X
Cycle 8											
H4/10									2.0/H11	X	
H6/10									1.7/H13	X	
H10/10									1.7/K10	X	X
H12/10									2.0/K12	CR8/L12	
H17/10									2.0/L11	X	X
H19/10									2.0/L13	X	X
H23/10									2.0/M12	X	
H23a/10									-	X	X
H27a/10									X	CR7/H12	

Table 3-4. Control Rod and BA Loading by Cycle for Burnup Calculations (Cont'd)

Assembly Number/Batch	Wt % B4C or Rod Bank ID/Assembly Location in Cycle										
	1A	1B	2	3	4	5	6	7	8	9	10
Cycle 9											
I4/11										2.0/H11	X
I6/11										1.4/H13	X
I10/11										2.1/K10	X
I10a/11										-	X
I12/11										2.0/K12	X
I12a/11										-	CR7/H12
I17/11										2.0/L11	X
I19/11										0.5/L13	X
I23/11										2.1/M12	CR8/L12
I27a/11										X	CR7/N12
Cycle 10											
J4/12											1.7/H11
J6/12											1.1/H13
J10/12											1.4/K10
J12/12											2.0/K12
J14/12											0.5/K14
J17/12											2.0/L11
J19/12											1.1/L13
J23/12											1.1/M12

4.0 CORE OPERATIONS AND STATEPOINT INFORMATION

This section provides core operations data for the burnup calculations required to generate isotopic concentrations for the statepoint evaluations. The measured critical conditions for the statepoints 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 in order to adequately model the conditions for burnup calculations at each axial location of each fuel assembly represented in the reactor core for each statepoint 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 statepoint 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 4-1 through 4-147 provide axial burnup profiles for each assembly at each statepoint along with axial fuel temperature and moderator specific volume distributions to be used in the burnup calculations between statepoints. Since the fuel burnup between statepoints in cycle 10 is equivalent to 573.7 effective-full-power-days, two additional datapoints were added in order to accurately model the core operations data. The data in Tables 4-1 through 4-147 is given by axial node location. Starting from the top of the reactor core (node 1) the nodal spacings are as follows:

Axial	Node Spacing (cm)	
Node	Cycles 1-9	Cycle 10
1	17.7800	17.4777
2	20.0025	20.0025
3	20.0025	20.0025
4	20.0025	20.0025
5	20.0025	20.0025
6	20.0025	20.0025
7	20.0025	20.0025
8	20.0025	20.0025
9	20.0025	20.0025
10	20.0025	20.0025
11	20.0025	20.0025
12	20.0025	20.0025
13	20.0025	20.0025
14	20.0025	20.0025
15	20.0025	20.0025
16	20.0025	20.0025
17	20.0025	20.0025
18	22.3520	19.5936

Table 4-1. Burnup and TH Feedback Parameters by Axial Node for Assembly A1

Axial Node	Burnup SP2	SP1 to SP2 T-Fuel	SP1 to SP2 Spec.Vol	Burnup SP3	SP2 to SP3 T-Fuel	SP2 to SP3 Spec.Vol	Burnup SP4	SP3 to SP4 T-Fuel	SP3 to SP4 Spec.Vol
1	2.816	881.9	0.0231	4.819	974.7	0.0230	5.191	912.6	0.0237
2	4.715	1055.5	0.0231	7.860	1135.9	0.0229	8.429	1033.5	0.0236
3	6.179	1169.8	0.0230	9.908	1186.3	0.0228	10.599	1084.4	0.0235
4	7.134	1222.7	0.0229	11.075	1178.1	0.0227	11.995	1168.3	0.0234
5	7.720	1247.6	0.0228	11.694	1153.1	0.0226	12.770	1428.3	0.0233
6	8.056	1257.8	0.0228	11.953	1128.4	0.0225	13.190	1490.9	0.0232
7	8.232	1262.6	0.0227	12.045	1108.3	0.0225	13.318	1501.4	0.0230
8	8.306	1267.6	0.0226	12.060	1094.5	0.0224	13.341	1504.9	0.0229
9	8.314	1275.2	0.0225	12.042	1086.6	0.0223	13.329	1507.4	0.0227
10	8.275	1285.4	0.0224	12.010	1083.8	0.0222	13.308	1510.2	0.0225
11	8.206	1295.9	0.0223	11.979	1085.1	0.0222	13.294	1512.9	0.0224
12	8.129	1303.4	0.0222	11.963	1089.7	0.0221	13.297	1513.2	0.0223
13	8.077	1305.7	0.0221	11.987	1096.8	0.0220	13.332	1505.7	0.0221
14	8.211	1302.6	0.0220	12.208	1104.0	0.0219	13.535	1478.7	0.0220
15	9.357	1318.7	0.0219	13.574	1114.5	0.0219	14.814	1390.7	0.0219
16	11.135	1561.3	0.0218	16.249	1257.0	0.0218	17.321	1233.5	0.0217
17	10.619	1475.9	0.0217	15.740	1271.5	0.0217	16.644	1128.2	0.0217
18	6.746	1191.0	0.0216	10.259	1100.7	0.0216	10.859	974.7	0.0216

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	7.992	974.1	0.0231	10.720	968.2	0.0232	12.280	1006.3	0.0232
2	12.840	1120.5	0.0231	17.114	1107.5	0.0231	19.411	1108.0	0.0231
3	15.827	1189.6	0.0230	20.924	1151.9	0.0230	23.509	1126.5	0.0230
4	17.481	1209.5	0.0229	22.904	1149.8	0.0229	25.524	1111.8	0.0229
5	18.282	1211.3	0.0227	23.812	1138.4	0.0228	26.395	1093.3	0.0228
6	18.646	1205.6	0.0226	24.195	1124.8	0.0227	26.737	1079.3	0.0227
7	18.721	1201.9	0.0225	24.276	1116.0	0.0226	26.797	1071.7	0.0226
8	18.702	1199.5	0.0224	24.275	1112.9	0.0225	26.793	1068.2	0.0225
9	18.662	1196.7	0.0223	24.283	1116.6	0.0224	26.815	1067.3	0.0224
10	18.630	1191.9	0.0222	24.335	1126.7	0.0223	26.893	1068.0	0.0223
11	18.616	1183.6	0.0221	24.424	1140.4	0.0222	27.016	1069.3	0.0222
12	18.619	1171.5	0.0220	24.518	1153.2	0.0221	27.148	1070.6	0.0221
13	18.633	1155.5	0.0219	24.577	1161.0	0.0220	27.247	1072.0	0.0220
14	18.754	1132.8	0.0219	24.659	1158.9	0.0219	27.358	1071.6	0.0219
15	19.753	1084.0	0.0218	25.403	1128.4	0.0218	28.056	1054.6	0.0218
16	21.717	1005.7	0.0217	26.806	1061.8	0.0217	29.285	1012.1	0.0217
17	20.470	957.9	0.0216	24.902	1009.0	0.0216	27.150	985.7	0.0217
18	13.470	866.9	0.0216	16.497	915.6	0.0216	18.111	923.6	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-2. Burnup and TH Feedback Parameters by Axial Node for Assembly A2

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	4.165	1017.4	0.0237	7.139	1139.0	0.0235	7.703	1036.9	0.0235
2	6.642	1225.4	0.0236	11.297	1331.9	0.0234	12.146	1184.3	0.0234
3	8.681	1356.1	0.0235	14.093	1393.0	0.0233	15.070	1235.6	0.0233
4	10.034	1425.4	0.0234	15.601	1377.7	0.0232	16.635	1256.4	0.0232
5	10.864	1456.5	0.0233	16.355	1340.8	0.0230	17.420	1287.7	0.0231
6	11.345	1468.4	0.0231	16.695	1304.8	0.0229	17.783	1303.9	0.0229
7	11.602	1473.9	0.0230	16.824	1277.1	0.0228	17.919	1306.7	0.0228
8	11.715	1480.8	0.0229	16.853	1258.7	0.0227	17.948	1306.4	0.0227
9	11.733	1492.4	0.0227	16.835	1248.6	0.0225	17.930	1306.4	0.0225
10	11.681	1506.9	0.0226	16.796	1245.5	0.0224	17.898	1307.2	0.0224
11	11.582	1522.1	0.0224	16.754	1247.9	0.0223	17.870	1308.6	0.0223
12	11.463	1533.3	0.0223	16.731	1254.9	0.0222	17.864	1308.4	0.0222
13	11.360	1536.7	0.0222	16.749	1265.3	0.0221	17.893	1302.4	0.0221
14	11.315	1532.1	0.0220	16.838	1278.1	0.0220	17.976	1284.0	0.0219
15	11.318	1528.2	0.0219	16.988	1296.9	0.0219	18.087	1246.9	0.0218
16	10.993	1516.9	0.0218	16.743	1320.8	0.0218	17.769	1196.5	0.0217
17	9.608	1415.1	0.0217	14.923	1294.7	0.0217	15.824	1133.5	0.0217
18	6.503	1172.5	0.0216	10.001	1100.3	0.0216	10.594	971.5	0.0216

Table 4-3. Burnup and TH Feedback Parameters by Axial Node for Assembly A3

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	4.068	1004.6	0.0237	6.835	1108.7	0.0234
2	6.985	1235.8	0.0236	11.317	1286.1	0.0233
3	9.147	1365.6	0.0235	14.188	1344.9	0.0232
4	10.553	1431.7	0.0234	15.741	1330.3	0.0230
5	11.408	1459.7	0.0232	16.520	1294.0	0.0229
6	11.895	1468.5	0.0231	16.872	1258.7	0.0228
7	12.152	1472.4	0.0230	17.005	1231.7	0.0227
8	12.260	1479.0	0.0228	17.028	1213.9	0.0226
9	12.261	1491.8	0.0227	16.989	1204.0	0.0225
10	12.176	1510.3	0.0225	16.905	1200.5	0.0224
11	12.023	1527.9	0.0224	16.798	1202.6	0.0223
12	11.839	1539.5	0.0223	16.703	1209.5	0.0222
13	11.662	1540.6	0.0221	16.648	1220.6	0.0221
14	11.483	1530.2	0.0220	16.607	1235.2	0.0220
15	11.184	1504.4	0.0219	16.425	1252.2	0.0219
16	10.485	1451.5	0.0218	15.702	1261.6	0.0218
17	8.928	1341.4	0.0217	13.667	1226.6	0.0217
18	5.493	1086.8	0.0216	8.599	1060.3	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-4. Burnup and TH Feedback Parameters by Axial Node for Assembly A4

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	4.168	1003.2	0.0239	7.050	1137.0	0.0237	7.708	1111.1	0.0234
2	6.942	1223.7	0.0238	11.500	1341.4	0.0235	12.474	1267.6	0.0233
3	9.426	1384.5	0.0237	14.855	1424.4	0.0234	15.921	1288.1	0.0231
4	11.077	1474.8	0.0235	16.798	1411.0	0.0233	17.847	1255.8	0.0230
5	12.048	1512.2	0.0234	17.756	1368.0	0.0231	18.769	1226.7	0.0229
6	12.595	1524.8	0.0232	18.176	1327.9	0.0230	19.161	1209.2	0.0228
7	12.881	1528.5	0.0231	18.334	1298.2	0.0228	19.298	1199.5	0.0227
8	12.996	1534.6	0.0229	18.359	1279.0	0.0227	19.306	1193.5	0.0226
9	12.980	1547.3	0.0228	18.295	1268.6	0.0226	19.230	1188.7	0.0224
10	12.838	1566.7	0.0226	18.145	1264.8	0.0225	19.077	1185.4	0.0223
11	12.582	1587.9	0.0225	17.927	1266.9	0.0224	18.874	1186.3	0.0222
12	12.272	1600.7	0.0223	17.714	1275.4	0.0222	18.692	1191.8	0.0221
13	11.997	1595.7	0.0222	17.589	1289.5	0.0221	18.604	1197.4	0.0220
14	11.757	1573.7	0.0220	17.532	1308.3	0.0220	18.575	1199.5	0.0219
15	11.417	1538.3	0.0219	17.355	1330.3	0.0219	18.406	1196.3	0.0218
16	10.676	1470.6	0.0218	16.616	1344.4	0.0218	17.637	1183.5	0.0217
17	9.098	1347.9	0.0217	14.510	1308.8	0.0217	15.425	1141.3	0.0217
18	6.066	1119.1	0.0216	9.593	1109.5	0.0216	10.199	983.4	0.0216

Table 4-5. Burnup and TH Feedback Parameters by Axial Node for Assembly A5

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	2.445	825.3	0.0236	4.124	925.7	0.0233
2	5.137	993.2	0.0235	7.935	1131.7	0.0233
3	8.442	1279.6	0.0234	12.475	1344.4	0.0232
4	10.198	1403.0	0.0233	15.090	1340.7	0.0230
5	11.117	1443.2	0.0232	16.172	1300.8	0.0229
6	11.623	1456.5	0.0230	16.599	1265.2	0.0228
7	11.884	1462.9	0.0229	16.758	1238.8	0.0227
8	11.985	1472.1	0.0228	16.782	1221.7	0.0226
9	11.956	1488.3	0.0226	16.708	1212.1	0.0225
10	11.795	1511.8	0.0225	16.527	1207.7	0.0224
11	11.501	1534.7	0.0224	16.247	1208.0	0.0223
12	11.149	1545.9	0.0222	15.966	1214.4	0.0222
13	10.864	1535.9	0.0221	15.807	1226.6	0.0221
14	10.663	1503.9	0.0220	15.768	1243.8	0.0220
15	10.418	1458.5	0.0219	15.684	1265.3	0.0219
16	9.841	1393.7	0.0217	15.130	1279.9	0.0218
17	8.445	1283.3	0.0217	13.267	1245.7	0.0217
18	5.210	1040.6	0.0216	8.365	1073.7	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-6. Burnup and TH Feedback Parameters by Axial Node for Assembly A6

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.654	957.1	0.0237	6.144	1075.2	0.0235	6.728	1066.9	0.0236
2	6.130	1168.4	0.0236	10.136	1275.7	0.0234	11.018	1219.1	0.0235
3	8.399	1322.1	0.0235	13.264	1360.0	0.0233	14.265	1262.6	0.0234
4	9.932	1413.0	0.0234	15.149	1358.1	0.0231	16.196	1272.7	0.0233
5	10.847	1454.4	0.0232	16.120	1324.0	0.0230	17.196	1299.8	0.0231
6	11.372	1471.5	0.0231	16.571	1290.0	0.0229	17.672	1318.1	0.0230
7	11.656	1480.9	0.0230	16.763	1264.3	0.0228	17.873	1325.1	0.0229
8	11.778	1491.8	0.0228	16.819	1247.8	0.0226	17.928	1328.3	0.0227
9	11.774	1508.5	0.0227	16.781	1238.9	0.0225	17.887	1330.2	0.0226
10	11.648	1529.1	0.0225	16.651	1235.7	0.0224	17.763	1332.6	0.0225
11	11.411	1549.2	0.0224	16.449	1237.6	0.0223	17.582	1338.4	0.0224
12	11.136	1558.9	0.0223	16.255	1244.9	0.0222	17.423	1346.7	0.0222
13	10.925	1551.7	0.0221	16.169	1256.9	0.0221	17.371	1349.6	0.0221
14	10.811	1529.0	0.0220	16.216	1273.8	0.0220	17.434	1339.5	0.0220
15	10.674	1492.1	0.0219	16.291	1303.1	0.0219	17.487	1311.5	0.0219
16	10.155	1433.3	0.0218	15.934	1341.4	0.0218	17.059	1266.6	0.0218
17	8.760	1321.9	0.0217	14.138	1321.0	0.0217	15.123	1197.1	0.0217
18	5.876	1102.3	0.0216	9.407	1120.7	0.0216	10.050	1017.1	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-7. Burnup and TH Feedback Parameters by Axial Node for Assembly A7

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.645	975.5	0.0236	5.260	897.9	0.0228	5.593	874.2	0.0236
2	6.341	1202.1	0.0236	8.891	1024.9	0.0227	9.400	973.4	0.0236
3	8.389	1328.9	0.0235	11.451	1066.6	0.0227	12.075	1022.8	0.0235
4	9.750	1397.0	0.0233	13.043	1066.3	0.0226	13.887	1101.7	0.0234
5	10.606	1429.2	0.0232	13.979	1048.5	0.0225	14.978	1337.1	0.0233
6	11.121	1443.3	0.0231	14.462	1028.6	0.0224	15.622	1403.6	0.0232
7	11.414	1451.7	0.0229	14.706	1012.6	0.0224	15.911	1423.0	0.0230
8	11.561	1461.8	0.0228	14.817	1002.0	0.0223	16.036	1432.8	0.0229
9	11.597	1476.9	0.0227	14.839	996.2	0.0222	16.067	1439.7	0.0227
10	11.542	1495.3	0.0225	14.791	994.3	0.0222	16.034	1446.6	0.0226
11	11.417	1513.4	0.0224	14.695	995.7	0.0221	15.964	1454.5	0.0224
12	11.273	1525.1	0.0223	14.602	1000.0	0.0221	15.902	1460.8	0.0223
13	11.175	1525.5	0.0221	14.569	1006.5	0.0220	15.891	1458.6	0.0221
14	11.168	1515.8	0.0220	14.652	1016.2	0.0219	15.970	1439.1	0.0220
15	11.291	1498.4	0.0219	15.074	1047.3	0.0219	16.335	1385.4	0.0219
16	10.892	1458.3	0.0218	15.739	1232.9	0.0218	16.879	1288.2	0.0218
17	9.417	1357.3	0.0217	14.395	1279.6	0.0217	15.372	1195.1	0.0217
18	5.813	1103.7	0.0216	9.214	1109.5	0.0216	9.856	1021.7	0.0216

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	7.656	871.5	0.0233	10.803	1020.4	0.0234	12.512	1041.4	0.0233
2	12.915	977.1	0.0232	17.876	1176.9	0.0233	20.413	1147.0	0.0232
3	17.273	1121.4	0.0232	23.097	1200.7	0.0232	25.906	1150.4	0.0231
4	19.795	1241.2	0.0230	25.889	1188.3	0.0231	28.701	1121.7	0.0230
5	21.042	1250.0	0.0229	27.189	1167.2	0.0230	29.947	1098.0	0.0229
6	21.673	1239.1	0.0228	27.785	1145.2	0.0228	30.492	1081.9	0.0228
7	21.905	1232.8	0.0227	27.950	1126.3	0.0227	30.624	1071.6	0.0227
8	21.966	1229.6	0.0226	27.922	1111.6	0.0226	30.571	1063.9	0.0225
9	21.942	1226.0	0.0224	27.817	1106.1	0.0225	30.449	1058.6	0.0224
10	21.868	1218.8	0.0223	27.726	1113.7	0.0224	30.361	1057.7	0.0223
11	21.778	1206.9	0.0222	27.706	1133.0	0.0223	30.371	1061.0	0.0222
12	21.716	1190.9	0.0221	27.779	1158.1	0.0222	30.497	1066.9	0.0222
13	21.714	1172.9	0.0220	27.934	1180.9	0.0221	30.727	1074.6	0.0221
14	21.789	1154.5	0.0219	28.121	1191.9	0.0220	30.994	1082.8	0.0220
15	22.075	1132.7	0.0218	28.346	1181.1	0.0219	31.250	1082.9	0.0219
16	22.359	1101.9	0.0217	28.278	1143.5	0.0218	31.101	1066.6	0.0218
17	20.344	1073.3	0.0217	25.590	1094.2	0.0217	28.192	1044.3	0.0217
18	13.277	963.8	0.0216	16.831	980.9	0.0216	18.697	973.0	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-8. Burnup and TH Feedback Parameters by Axial Node for Assembly A8

Axial Node	Burnup SP2	SP1 to SP2 T-Fuel	SP1 to SP2 Spec.Vol	Burnup SP3	SP2 to SP3 T-Fuel	SP2 to SP3 Spec.Vol	Burnup SP4	SP3 to SP4 T-Fuel	SP3 to SP4 Spec.Vol
1	2.376	831.5	0.0228	3.894	884.1	0.0227	4.202	847.9	0.0230
2	4.230	998.8	0.0228	6.705	1032.0	0.0226	7.197	968.4	0.0229
3	5.599	1100.7	0.0227	8.582	1084.2	0.0226	9.186	1026.9	0.0229
4	6.481	1152.6	0.0227	9.647	1086.8	0.0225	10.333	1079.8	0.0228
5	7.028	1178.3	0.0226	10.227	1073.2	0.0224	10.980	1145.2	0.0227
6	7.355	1190.2	0.0225	10.525	1056.1	0.0223	11.330	1186.1	0.0226
7	7.539	1197.3	0.0224	10.668	1041.7	0.0223	11.502	1204.7	0.0225
8	7.631	1204.6	0.0223	10.731	1031.9	0.0222	11.578	1214.6	0.0224
9	7.656	1214.5	0.0223	10.749	1026.8	0.0221	11.605	1221.5	0.0223
10	7.633	1226.5	0.0222	10.739	1025.6	0.0221	11.606	1227.7	0.0222
11	7.579	1237.7	0.0221	10.717	1027.5	0.0220	11.600	1233.0	0.0221
12	7.522	1245.0	0.0220	10.708	1031.8	0.0220	11.606	1235.0	0.0220
13	7.494	1246.2	0.0219	10.737	1038.0	0.0219	11.642	1228.6	0.0219
14	7.509	1241.8	0.0218	10.824	1047.5	0.0218	11.718	1207.6	0.0219
15	7.490	1231.6	0.0218	10.934	1069.8	0.0218	11.787	1168.0	0.0218
16	7.165	1202.4	0.0217	10.749	1104.7	0.0217	11.531	1113.7	0.0217
17	6.119	1122.0	0.0216	9.474	1092.1	0.0216	10.144	1042.4	0.0216
18	3.653	915.0	0.0216	5.849	948.1	0.0216	6.276	897.3	0.0216

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	7.971	1134.5	0.0237	10.717	975.9	0.0234	12.299	1013.2	0.0233
2	12.979	1314.3	0.0236	17.322	1123.0	0.0233	19.680	1121.8	0.0232
3	15.872	1382.3	0.0234	21.146	1175.9	0.0232	23.822	1144.6	0.0231
4	17.259	1393.7	0.0233	22.931	1182.7	0.0231	25.656	1132.8	0.0230
5	17.908	1389.9	0.0231	23.721	1171.9	0.0229	26.413	1115.7	0.0229
6	18.197	1385.9	0.0230	24.043	1158.2	0.0228	26.697	1102.5	0.0228
7	18.296	1385.5	0.0228	24.145	1148.0	0.0227	26.777	1094.5	0.0227
8	18.288	1386.6	0.0227	24.151	1144.1	0.0226	26.780	1090.8	0.0226
9	18.207	1383.7	0.0226	24.123	1148.9	0.0225	26.768	1090.7	0.0225
10	18.080	1368.6	0.0224	24.100	1162.5	0.0224	26.779	1093.5	0.0224
11	17.962	1339.1	0.0223	24.115	1181.0	0.0223	26.839	1097.2	0.0223
12	17.915	1305.1	0.0222	24.185	1198.0	0.0222	26.957	1100.3	0.0221
13	17.965	1275.2	0.0221	24.300	1207.8	0.0221	27.120	1102.4	0.0221
14	18.100	1254.0	0.0220	24.420	1207.5	0.0220	27.284	1103.9	0.0220
15	18.218	1244.3	0.0219	24.406	1196.1	0.0219	27.285	1102.9	0.0219
16	17.871	1240.3	0.0218	23.765	1173.9	0.0218	26.591	1097.7	0.0218
17	15.941	1210.7	0.0217	21.200	1131.9	0.0217	23.819	1081.7	0.0217
18	10.186	1058.2	0.0216	13.734	1001.4	0.0216	15.601	999.0	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-9. Burnup and TH Feedback Parameters by Axial Node for Assembly A9

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	3.985	999.6	0.0237	6.728	1102.0	0.0234
2	6.804	1227.4	0.0236	11.097	1277.9	0.0233
3	8.867	1352.3	0.0235	13.855	1334.3	0.0231
4	10.203	1415.3	0.0233	15.328	1320.4	0.0230
5	11.019	1442.2	0.0232	16.064	1285.7	0.0229
6	11.488	1451.1	0.0231	16.397	1251.7	0.0228
7	11.736	1454.9	0.0229	16.523	1225.3	0.0227
8	11.843	1461.0	0.0228	16.547	1207.8	0.0226
9	11.852	1472.6	0.0227	16.519	1198.1	0.0224
10	11.787	1489.3	0.0225	16.460	1194.7	0.0223
11	11.669	1507.0	0.0224	16.390	1196.7	0.0223
12	11.527	1519.3	0.0223	16.334	1203.2	0.0222
13	11.395	1522.0	0.0221	16.315	1213.2	0.0221
14	11.282	1514.8	0.0220	16.328	1226.3	0.0220
15	11.104	1498.7	0.0219	16.268	1243.0	0.0219
16	10.552	1461.8	0.0218	15.717	1255.6	0.0218
17	9.076	1358.8	0.0217	13.792	1223.7	0.0217
18	5.614	1102.7	0.0216	8.718	1059.0	0.0216

Table 4-10. Burnup and TH Feedback Parameters by Axial Node for Assembly A10

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	4.480	1042.1	0.0239	7.588	1162.6	0.0236	8.214	1077.7	0.0233
2	7.222	1260.6	0.0238	12.079	1362.7	0.0235	13.010	1230.5	0.0233
3	9.503	1402.6	0.0237	15.142	1424.9	0.0234	16.177	1263.7	0.0231
4	11.023	1478.2	0.0235	16.819	1405.3	0.0232	17.855	1246.8	0.0230
5	11.950	1511.0	0.0234	17.660	1363.8	0.0231	18.672	1227.1	0.0229
6	12.481	1522.4	0.0232	18.041	1324.6	0.0230	19.031	1214.0	0.0228
7	12.761	1526.4	0.0231	18.185	1295.0	0.0228	19.158	1205.8	0.0227
8	12.879	1531.9	0.0229	18.210	1275.8	0.0227	19.169	1200.3	0.0226
9	12.874	1543.4	0.0228	18.160	1265.3	0.0226	19.110	1196.3	0.0224
10	12.763	1560.8	0.0226	18.049	1261.9	0.0225	18.999	1193.8	0.0223
11	12.560	1579.9	0.0225	17.896	1264.4	0.0224	18.860	1194.5	0.0222
12	12.314	1592.3	0.0223	17.753	1272.9	0.0222	18.742	1198.1	0.0221
13	12.088	1590.6	0.0222	17.673	1286.3	0.0221	18.692	1200.6	0.0220
14	11.875	1574.7	0.0220	17.632	1304.0	0.0220	18.670	1198.7	0.0219
15	11.546	1545.8	0.0219	17.452	1324.5	0.0219	18.490	1190.9	0.0218
16	10.797	1486.6	0.0218	16.696	1337.8	0.0218	17.700	1174.8	0.0217
17	9.199	1365.7	0.0217	14.571	1302.5	0.0217	15.471	1131.8	0.0217
18	6.173	1134.8	0.0216	9.673	1103.9	0.0216	10.269	975.1	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-11. Burnup and TH Feedback Parameters by Axial Node for Assembly A11

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	3.886	979.3	0.0237	6.514	1094.1	0.0234
2	6.799	1211.4	0.0236	10.954	1277.8	0.0233
3	9.069	1350.8	0.0235	13.973	1344.5	0.0232
4	10.564	1426.2	0.0233	15.684	1333.8	0.0230
5	11.459	1458.4	0.0232	16.548	1297.0	0.0229
6	11.961	1469.0	0.0231	16.934	1261.0	0.0228
7	12.220	1474.1	0.0229	17.076	1233.9	0.0227
8	12.317	1482.6	0.0228	17.088	1216.3	0.0226
9	12.281	1498.7	0.0226	17.000	1206.3	0.0225
10	12.100	1521.9	0.0225	16.785	1200.8	0.0224
11	11.748	1545.4	0.0224	16.427	1198.9	0.0223
12	11.307	1558.4	0.0222	16.046	1204.4	0.0222
13	10.965	1545.0	0.0221	15.833	1217.0	0.0221
14	10.729	1508.0	0.0220	15.770	1234.6	0.0220
15	10.461	1458.3	0.0219	15.682	1257.0	0.0219
16	9.895	1390.2	0.0217	15.158	1273.0	0.0218
17	8.520	1279.2	0.0217	13.320	1238.8	0.0217
18	5.265	1040.3	0.0216	8.404	1068.5	0.0216

Table 4-12. Burnup and TH Feedback Parameters by Axial Node for Assembly A12

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.858	971.1	0.0237	6.629	1125.7	0.0236	7.281	1113.1	0.0234
2	6.474	1187.3	0.0236	10.901	1335.1	0.0235	11.873	1273.0	0.0233
3	8.867	1346.9	0.0235	14.191	1422.5	0.0234	15.263	1300.7	0.0232
4	10.477	1440.1	0.0234	16.133	1414.5	0.0232	17.199	1275.7	0.0231
5	11.427	1481.2	0.0232	17.104	1374.1	0.0231	18.145	1254.7	0.0229
6	11.961	1496.7	0.0231	17.534	1335.6	0.0229	18.556	1243.9	0.0228
7	12.238	1505.0	0.0229	17.697	1307.0	0.0228	18.703	1238.5	0.0227
8	12.340	1515.3	0.0228	17.716	1289.0	0.0227	18.700	1234.4	0.0226
9	12.288	1531.5	0.0227	17.608	1279.1	0.0226	18.559	1226.9	0.0225
10	12.043	1554.4	0.0225	17.296	1271.6	0.0224	18.218	1212.7	0.0224
11	11.505	1582.6	0.0224	16.676	1263.1	0.0223	17.610	1204.6	0.0223
12	10.774	1595.7	0.0222	15.962	1265.7	0.0222	16.943	1218.5	0.0222
13	10.311	1562.0	0.0221	15.634	1279.4	0.0221	16.676	1232.9	0.0221
14	10.097	1499.9	0.0220	15.622	1298.9	0.0220	16.736	1243.7	0.0220
15	9.956	1440.0	0.0218	15.743	1327.8	0.0219	16.893	1254.1	0.0219
16	9.643	1367.5	0.0217	15.584	1358.7	0.0218	16.688	1238.6	0.0218
17	8.531	1258.8	0.0217	13.991	1325.4	0.0217	14.958	1178.6	0.0217
18	5.796	1064.1	0.0216	9.347	1119.6	0.0216	9.978	1004.8	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-13. Burnup and TH Feedback Parameters by Axial Node for Assembly A12a

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.858	971.1	0.0237	6.629	1125.7	0.0236	7.305	1113.1	0.0234
2	6.474	1187.3	0.0236	10.901	1335.1	0.0235	11.915	1273.0	0.0233
3	8.867	1346.9	0.0235	14.191	1422.5	0.0234	15.317	1300.7	0.0232
4	10.477	1440.1	0.0234	16.133	1414.5	0.0232	17.257	1275.7	0.0231
5	11.427	1481.2	0.0232	17.104	1374.1	0.0231	18.205	1254.7	0.0229
6	11.961	1496.7	0.0231	17.534	1335.6	0.0229	18.616	1243.9	0.0228
7	12.238	1505.0	0.0229	17.697	1307.0	0.0228	18.762	1238.5	0.0227
8	12.340	1515.3	0.0228	17.716	1289.0	0.0227	18.755	1234.4	0.0226
9	12.288	1531.5	0.0227	17.608	1279.1	0.0226	18.606	1226.9	0.0225
10	12.043	1554.4	0.0225	17.296	1271.6	0.0224	18.247	1212.7	0.0224
11	11.505	1582.6	0.0224	16.676	1263.1	0.0223	17.602	1204.6	0.0223
12	10.774	1595.7	0.0222	15.962	1265.7	0.0222	16.892	1218.5	0.0222
13	10.311	1562.0	0.0221	15.634	1279.4	0.0221	16.599	1232.9	0.0221
14	10.097	1499.9	0.0220	15.622	1298.9	0.0220	16.647	1243.7	0.0220
15	9.956	1440.0	0.0218	15.743	1327.8	0.0219	16.807	1254.1	0.0219
16	9.643	1367.5	0.0217	15.584	1358.7	0.0218	16.634	1238.6	0.0218
17	8.531	1258.8	0.0217	13.991	1325.4	0.0217	14.948	1178.6	0.0217
18	5.796	1064.1	0.0216	9.347	1119.6	0.0216	9.986	1004.8	0.0216

Table 4-14. Burnup and TH Feedback Parameters by Axial Node for Assembly A13

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	3.288	922.1	0.0234	5.740	1068.9	0.0234
2	5.786	1137.8	0.0233	9.726	1261.5	0.0233
3	7.754	1268.8	0.0232	12.470	1330.8	0.0232
4	9.071	1342.4	0.0231	14.054	1330.2	0.0230
5	9.872	1377.2	0.0230	14.875	1301.4	0.0229
6	10.330	1391.9	0.0229	15.258	1271.0	0.0228
7	10.571	1400.3	0.0228	15.415	1247.5	0.0227
8	10.666	1410.2	0.0226	15.449	1232.4	0.0226
9	10.639	1425.7	0.0225	15.387	1224.2	0.0225
10	10.475	1447.2	0.0224	15.203	1219.9	0.0224
11	10.152	1470.2	0.0223	14.878	1218.5	0.0223
12	9.756	1479.3	0.0222	14.538	1223.6	0.0222
13	9.488	1459.3	0.0220	14.382	1234.6	0.0221
14	9.394	1422.3	0.0219	14.431	1249.0	0.0220
15	9.373	1386.3	0.0218	14.567	1269.4	0.0219
16	9.113	1340.6	0.0217	14.352	1286.9	0.0218
17	8.002	1246.5	0.0216	12.786	1251.6	0.0217
18	4.988	1017.0	0.0216	8.108	1076.1	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-15. Burnup and TH Feedback Parameters by Axial Node for Assembly A14

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.042	898.5	0.0232	5.483	1066.3	0.0234	5.980	1002.2	0.0236
2	4.939	1070.7	0.0231	8.892	1268.6	0.0233	9.666	1160.9	0.0235
3	6.561	1193.8	0.0230	11.299	1338.5	0.0232	12.216	1226.2	0.0234
4	7.668	1260.2	0.0230	12.673	1340.7	0.0231	13.671	1270.2	0.0233
5	8.361	1294.1	0.0229	13.401	1318.5	0.0229	14.457	1323.1	0.0232
6	8.770	1310.7	0.0228	13.759	1292.8	0.0228	14.858	1357.9	0.0230
7	8.995	1320.6	0.0226	13.920	1272.1	0.0227	15.044	1374.9	0.0229
8	9.097	1330.3	0.0225	13.980	1258.7	0.0226	15.113	1384.7	0.0228
9	9.105	1342.9	0.0224	13.977	1252.1	0.0225	15.116	1391.5	0.0226
10	9.030	1358.2	0.0223	13.922	1250.9	0.0224	15.072	1397.8	0.0225
11	8.888	1372.4	0.0222	13.831	1254.2	0.0223	15.005	1405.1	0.0224
12	8.731	1378.6	0.0221	13.759	1261.6	0.0222	14.962	1410.8	0.0222
13	8.635	1372.7	0.0220	13.768	1271.6	0.0221	14.994	1407.9	0.0221
14	8.663	1358.8	0.0219	13.903	1282.7	0.0220	15.127	1386.9	0.0220
15	8.790	1348.7	0.0218	14.142	1299.2	0.0219	15.321	1340.3	0.0219
16	8.660	1334.6	0.0217	14.055	1319.4	0.0218	15.142	1273.1	0.0218
17	7.628	1251.7	0.0217	12.572	1284.6	0.0217	13.506	1186.3	0.0217
18	5.173	1049.6	0.0216	8.373	1088.6	0.0216	8.974	1002.4	0.0216

Axial	Burnup	SP4 to SP16		Burnup	SP16 to SP17		Burnup	SP17 to SP18	
Node	SP16	T-Fuel	Spec.Vol	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol
1	8.374	927.3	0.0230	11.725	981.7	0.0232	12.243	1001.0	0.0232
2	13.458	1061.1	0.0229	19.446	1100.8	0.0231	20.297	1074.7	0.0231
3	16.706	1115.0	0.0228	24.253	1123.5	0.0230	25.222	1077.8	0.0230
4	18.408	1126.9	0.0227	26.522	1126.8	0.0229	27.518	1063.7	0.0229
5	19.258	1127.2	0.0226	27.588	1121.4	0.0228	28.581	1051.3	0.0228
6	19.659	1126.4	0.0225	28.078	1114.2	0.0227	29.061	1041.6	0.0227
7	19.822	1126.8	0.0225	28.285	1108.0	0.0226	29.260	1036.2	0.0226
8	19.857	1127.4	0.0224	28.349	1103.6	0.0225	29.319	1034.4	0.0225
9	19.812	1125.5	0.0223	28.328	1100.7	0.0224	29.297	1035.2	0.0224
10	19.713	1118.0	0.0222	28.244	1098.8	0.0223	29.214	1037.9	0.0223
11	19.598	1104.3	0.0221	28.131	1097.4	0.0222	29.105	1042.1	0.0222
12	19.528	1087.2	0.0220	28.041	1095.5	0.0221	29.019	1047.5	0.0221
13	19.554	1069.7	0.0219	28.005	1091.8	0.0220	28.989	1053.7	0.0220
14	19.696	1053.7	0.0218	28.008	1083.9	0.0219	28.996	1059.5	0.0219
15	19.899	1041.6	0.0218	27.941	1068.7	0.0218	28.925	1062.7	0.0218
16	19.649	1035.0	0.0217	27.219	1044.7	0.0217	28.177	1059.9	0.0218
17	17.597	1013.6	0.0216	24.303	1008.4	0.0216	25.179	1045.6	0.0217
18	11.653	889.8	0.0216	16.167	907.6	0.0216	16.777	963.2	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-15. Burnup and TH Feedback Parameters by Axial Node for Assembly A14 (Cont'd)

Axial	Burnup	SP18 to SP19		Burnup	SP19 to SP20		Burnup	SP20 to SP21	
Node	SP19	T-Fuel	Spec.Vol	SP20	T-Fuel	Spec.Vol	SP21	T-Fuel	Spec.Vol
1	12.775	1001.0	0.0232	15.529	1014.2	0.0232	15.897	1014.2	0.0232
2	21.119	1074.7	0.0231	25.257	1079.0	0.0231	25.756	1079.0	0.0231
3	26.141	1077.8	0.0230	30.701	1075.1	0.0230	31.236	1075.1	0.0230
4	28.452	1063.7	0.0229	33.047	1062.0	0.0229	33.579	1062.0	0.0229
5	29.505	1051.3	0.0228	34.037	1049.6	0.0228	34.559	1049.6	0.0228
6	29.969	1041.6	0.0227	34.436	1039.4	0.0227	34.949	1039.4	0.0227
7	30.154	1036.2	0.0226	34.579	1033.0	0.0226	35.087	1033.0	0.0226
8	30.204	1034.4	0.0225	34.611	1029.6	0.0225	35.118	1029.6	0.0225
9	30.175	1035.2	0.0224	34.584	1028.4	0.0224	35.091	1028.4	0.0224
10	30.090	1037.9	0.0223	34.512	1028.8	0.0223	35.021	1028.8	0.0223
11	29.979	1042.1	0.0222	34.426	1030.4	0.0222	34.938	1030.4	0.0222
12	29.895	1047.5	0.0221	34.378	1033.0	0.0221	34.893	1033.0	0.0221
13	29.867	1053.7	0.0220	34.397	1036.7	0.0220	34.917	1036.7	0.0220
14	29.876	1059.5	0.0219	34.457	1040.9	0.0219	34.984	1040.9	0.0219
15	29.799	1062.7	0.0218	34.416	1044.2	0.0218	34.950	1044.2	0.0218
16	29.030	1059.9	0.0218	33.614	1042.5	0.0218	34.150	1042.5	0.0218
17	25.962	1045.6	0.0217	30.269	1028.2	0.0217	30.781	1028.2	0.0217
18	17.325	963.2	0.0216	20.436	957.4	0.0216	20.815	957.4	0.0216

Table 4-16. Burnup and TH Feedback Parameters by Axial Node for Assembly A14a

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP1	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.042	898.5	0.0232	5.483	1066.3	0.0234	5.980	1002.2	0.0236
2	4.939	1070.7	0.0231	8.892	1268.6	0.0233	9.666	1160.9	0.0235
3	6.561	1193.8	0.0230	11.299	1338.5	0.0232	12.216	1226.2	0.0234
4	7.668	1260.2	0.0230	12.673	1340.7	0.0231	13.671	1270.2	0.0233
5	8.361	1294.1	0.0229	13.401	1318.5	0.0229	14.457	1323.1	0.0232
6	8.770	1310.7	0.0228	13.759	1292.8	0.0228	14.858	1357.9	0.0230
7	8.995	1320.6	0.0226	13.920	1272.1	0.0227	15.044	1374.9	0.0229
8	9.097	1330.3	0.0225	13.980	1258.7	0.0226	15.113	1384.7	0.0228
9	9.105	1342.9	0.0224	13.977	1252.1	0.0225	15.116	1391.5	0.0226
10	9.030	1358.2	0.0223	13.922	1250.9	0.0224	15.072	1397.8	0.0225
11	8.888	1372.4	0.0222	13.831	1254.2	0.0223	15.005	1405.1	0.0224
12	8.731	1378.6	0.0221	13.759	1261.6	0.0222	14.962	1410.8	0.0222
13	8.635	1372.7	0.0220	13.768	1271.6	0.0221	14.994	1407.9	0.0221
14	8.663	1358.8	0.0219	13.903	1282.7	0.0220	15.127	1386.9	0.0220
15	8.790	1348.7	0.0218	14.142	1299.2	0.0219	15.321	1340.3	0.0219
16	8.660	1334.6	0.0217	14.055	1319.4	0.0218	15.142	1273.1	0.0218
17	7.628	1251.7	0.0217	12.572	1284.6	0.0217	13.506	1186.3	0.0217
18	5.173	1049.6	0.0216	8.373	1088.6	0.0216	8.974	1002.4	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-16. Burnup and TH Feedback Parameters by Axial Node for Assembly A14a (Cont'd)

Axial Node	Burnup SP16	SP4 to SP16 T-Fuel	SP4 to SP16 Spec.Vol	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol
1	8.381	927.3	0.0230	12.578	963.7	0.0232	13.161	981.5	0.0232
2	13.468	1061.1	0.0229	19.862	1083.6	0.0231	20.719	1064.9	0.0231
3	16.719	1115.0	0.0228	24.178	1114.1	0.0230	25.146	1077.2	0.0230
4	18.422	1126.9	0.0227	26.326	1119.2	0.0229	27.322	1065.2	0.0229
5	19.272	1127.2	0.0226	27.358	1114.4	0.0228	28.351	1053.7	0.0228
6	19.674	1126.4	0.0225	27.834	1107.7	0.0227	28.818	1044.5	0.0227
7	19.836	1126.8	0.0225	28.034	1102.0	0.0226	29.010	1039.2	0.0226
8	19.869	1127.4	0.0224	28.092	1097.8	0.0225	29.063	1037.4	0.0225
9	19.822	1125.5	0.0223	28.062	1095.0	0.0224	29.032	1038.3	0.0224
10	19.717	1118.0	0.0222	27.967	1093.1	0.0223	28.939	1041.3	0.0223
11	19.595	1104.3	0.0221	27.842	1091.6	0.0222	28.817	1045.8	0.0222
12	19.516	1087.2	0.0220	27.741	1089.7	0.0221	28.722	1051.6	0.0221
13	19.536	1069.7	0.0219	27.700	1085.9	0.0220	28.688	1058.1	0.0220
14	19.676	1053.7	0.0218	27.709	1078.0	0.0219	28.700	1064.2	0.0219
15	19.881	1041.6	0.0218	27.660	1062.7	0.0218	28.647	1067.2	0.0218
16	19.636	1035.0	0.0217	26.978	1039.2	0.0217	27.938	1064.0	0.0218
17	17.591	1013.6	0.0216	24.130	1004.7	0.0216	25.010	1049.8	0.0217
18	11.651	889.8	0.0216	16.089	906.4	0.0216	16.703	966.8	0.0216

Axial Node	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	13.725	981.5	0.0232	16.648	993.9	0.0232	17.005	993.9	0.0232
2	21.540	1064.9	0.0231	25.684	1069.3	0.0231	26.176	1069.3	0.0231
3	26.064	1077.2	0.0230	30.625	1074.7	0.0230	31.158	1074.7	0.0230
4	28.256	1065.2	0.0229	32.859	1063.2	0.0229	33.391	1063.2	0.0229
5	29.276	1053.7	0.0228	33.820	1051.5	0.0228	34.343	1051.5	0.0228
6	29.727	1044.5	0.0227	34.209	1041.7	0.0227	34.724	1041.7	0.0227
7	29.907	1039.2	0.0226	34.348	1035.4	0.0226	34.858	1035.4	0.0226
8	29.951	1037.4	0.0225	34.375	1032.0	0.0225	34.883	1032.0	0.0225
9	29.914	1038.3	0.0224	34.339	1030.9	0.0224	34.847	1030.9	0.0224
10	29.818	1041.3	0.0223	34.257	1031.3	0.0223	34.767	1031.3	0.0223
11	29.695	1045.8	0.0222	34.161	1033.1	0.0222	34.674	1033.1	0.0222
12	29.601	1051.6	0.0221	34.105	1036.0	0.0221	34.622	1036.0	0.0221
13	29.570	1058.1	0.0220	34.124	1039.9	0.0220	34.646	1039.9	0.0220
14	29.584	1064.2	0.0219	34.190	1044.3	0.0219	34.720	1044.3	0.0219
15	29.526	1067.2	0.0218	34.167	1047.5	0.0218	34.703	1047.5	0.0218
16	28.795	1064.0	0.0218	33.402	1045.5	0.0218	33.939	1045.5	0.0218
17	25.797	1049.8	0.0217	30.126	1031.6	0.0217	30.639	1031.6	0.0217
18	17.256	966.8	0.0216	20.386	960.0	0.0216	20.766	960.0	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-17. Burnup and TH Feedback Parameters by Axial Node for Assembly A15

Axial Node	Burnup SP2	SP1 to SP2 T-Fuel	SP1 to SP2 Spec.Vol	Burnup SP3	SP2 to SP3 T-Fuel	SP2 to SP3 Spec.Vol	Burnup SP4	SP3 to SP4 T-Fuel	SP3 to SP4 Spec.Vol
1	2.089	797.4	0.0227	3.735	911.8	0.0228	4.068	868.2	0.0229
2	3.709	945.2	0.0226	6.410	1076.0	0.0227	6.942	1001.9	0.0229
3	4.917	1042.2	0.0226	8.182	1137.8	0.0226	8.824	1061.8	0.0228
4	5.701	1093.0	0.0225	9.165	1143.5	0.0226	9.871	1103.0	0.0227
5	6.188	1118.2	0.0225	9.685	1129.7	0.0225	10.436	1144.2	0.0227
6	6.476	1130.7	0.0224	9.943	1112.0	0.0224	10.728	1173.6	0.0226
7	6.636	1138.2	0.0223	10.063	1097.4	0.0223	10.868	1189.4	0.0225
8	6.712	1145.4	0.0223	10.113	1087.6	0.0223	10.928	1198.5	0.0224
9	6.728	1154.2	0.0222	10.124	1082.7	0.0222	10.947	1205.0	0.0223
10	6.698	1164.7	0.0221	10.112	1082.0	0.0221	10.946	1210.5	0.0222
11	6.640	1174.4	0.0220	10.092	1084.6	0.0220	10.941	1215.2	0.0221
12	6.580	1179.9	0.0220	10.088	1089.6	0.0220	10.952	1216.9	0.0220
13	6.555	1179.4	0.0219	10.125	1096.1	0.0219	10.997	1210.6	0.0219
14	6.595	1175.1	0.0218	10.222	1103.4	0.0218	11.083	1190.3	0.0218
15	6.652	1171.3	0.0217	10.328	1113.5	0.0218	11.151	1152.6	0.0218
16	6.475	1156.1	0.0217	10.123	1120.1	0.0217	10.878	1100.1	0.0217
17	5.604	1086.5	0.0216	8.899	1088.1	0.0216	9.544	1029.4	0.0216
18	3.380	890.8	0.0216	5.493	935.6	0.0216	5.902	885.4	0.0216

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	7.023	1013.1	0.0234	9.290	896.4	0.0230	10.571	946.1	0.0230
2	11.611	1172.9	0.0233	15.210	1016.5	0.0229	17.128	1048.6	0.0230
3	14.464	1255.2	0.0232	18.778	1064.3	0.0228	20.970	1067.6	0.0229
4	15.888	1295.8	0.0231	20.505	1074.9	0.0227	22.771	1063.3	0.0228
5	16.533	1306.7	0.0230	21.264	1072.7	0.0226	23.537	1054.8	0.0227
6	16.798	1305.5	0.0228	21.552	1064.8	0.0226	23.817	1047.6	0.0226
7	16.883	1303.8	0.0227	21.608	1054.3	0.0225	23.864	1042.5	0.0225
8	16.883	1303.0	0.0226	21.540	1044.4	0.0224	23.787	1038.7	0.0224
9	16.838	1299.8	0.0225	21.417	1039.7	0.0223	23.657	1036.4	0.0223
10	16.778	1290.1	0.0224	21.309	1043.8	0.0222	23.553	1036.7	0.0223
11	16.733	1272.8	0.0222	21.277	1056.4	0.0221	23.543	1039.6	0.0222
12	16.733	1251.3	0.0221	21.353	1074.4	0.0221	23.661	1044.6	0.0221
13	16.791	1229.2	0.0220	21.530	1092.3	0.0220	23.910	1052.3	0.0220
14	16.913	1210.1	0.0219	21.783	1103.9	0.0219	24.281	1066.7	0.0219
15	17.041	1199.9	0.0218	22.004	1108.7	0.0218	24.637	1086.1	0.0218
16	16.782	1203.6	0.0218	21.660	1103.2	0.0217	24.288	1087.7	0.0217
17	15.055	1189.4	0.0217	19.386	1061.1	0.0216	21.783	1063.7	0.0217
18	9.654	1047.4	0.0216	12.470	925.1	0.0216	14.116	968.2	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-18. Burnup and TH Feedback Parameters by Axial Node for Assembly A16

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	3.967	989.1	0.0237	6.627	1096.5	0.0234
2	6.909	1221.8	0.0236	11.100	1277.2	0.0233
3	9.171	1359.2	0.0235	14.094	1341.2	0.0232
4	10.653	1431.9	0.0234	15.768	1329.0	0.0230
5	11.540	1462.4	0.0232	16.609	1292.0	0.0229
6	12.040	1472.1	0.0231	16.983	1256.0	0.0228
7	12.298	1476.7	0.0229	17.119	1228.8	0.0227
8	12.395	1484.9	0.0228	17.129	1211.0	0.0226
9	12.363	1500.8	0.0227	17.044	1200.8	0.0225
10	12.197	1522.9	0.0225	16.855	1195.9	0.0224
11	11.898	1545.0	0.0224	16.567	1195.8	0.0223
12	11.535	1557.7	0.0222	16.276	1202.1	0.0222
13	11.229	1549.6	0.0221	16.101	1214.8	0.0221
14	10.992	1521.6	0.0220	16.035	1232.7	0.0220
15	10.695	1475.2	0.0219	15.904	1254.3	0.0219
16	10.060	1408.0	0.0217	15.292	1268.1	0.0218
17	8.605	1294.8	0.0217	13.376	1234.3	0.0217
18	5.300	1049.4	0.0216	8.424	1066.0	0.0216

Table 4-19. Burnup and TH Feedback Parameters by Axial Node for Assembly A17

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	4.023	987.6	0.0237	6.794	1122.0	0.0236	7.442	1106.5	0.0233
2	6.795	1210.5	0.0237	11.197	1324.2	0.0235	12.158	1261.5	0.0232
3	9.272	1371.6	0.0236	14.536	1407.1	0.0233	15.590	1284.2	0.0231
4	10.920	1462.5	0.0234	16.484	1395.8	0.0232	17.526	1254.6	0.0230
5	11.888	1500.7	0.0233	17.448	1353.9	0.0230	18.458	1228.6	0.0229
6	12.429	1514.0	0.0231	17.870	1314.2	0.0229	18.852	1213.1	0.0228
7	12.707	1520.3	0.0230	18.022	1285.0	0.0228	18.982	1204.1	0.0226
8	12.804	1528.4	0.0228	18.026	1266.4	0.0227	18.959	1197.1	0.0225
9	12.738	1544.1	0.0227	17.893	1255.9	0.0225	18.787	1186.8	0.0224
10	12.461	1569.4	0.0225	17.533	1247.2	0.0224	18.394	1169.8	0.0223
11	11.866	1601.4	0.0224	16.838	1237.5	0.0223	17.709	1159.9	0.0222
12	11.060	1617.5	0.0222	16.040	1239.4	0.0222	16.961	1174.3	0.0221
13	10.532	1582.8	0.0221	15.652	1253.9	0.0221	16.643	1192.5	0.0220
14	10.267	1516.8	0.0220	15.613	1275.8	0.0220	16.688	1210.0	0.0219
15	10.088	1449.1	0.0218	15.735	1308.8	0.0219	16.858	1228.8	0.0218
16	9.751	1368.5	0.0217	15.596	1344.6	0.0218	16.682	1220.7	0.0217
17	8.616	1255.6	0.0217	14.017	1315.6	0.0217	14.971	1166.1	0.0217
18	5.801	1057.5	0.0216	9.328	1115.4	0.0216	9.952	997.9	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-20. Burnup and TH Feedback Parameters by Axial Node for Assembly A18

Axial Node	Burnup SP22	SP1 to SP22 T-Fuel	SP1 to SP22 Spec.Vol	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol
1	3.416	929.4	0.0232	4.858	975.0	0.0231	5.507	975.0	0.0231
2	6.039	1153.1	0.0232	8.345	1124.6	0.0230	9.362	1124.6	0.0230
3	8.119	1287.8	0.0231	10.833	1168.5	0.0229	12.012	1168.5	0.0229
4	9.507	1364.2	0.0230	12.370	1173.9	0.0228	13.600	1173.9	0.0228
5	10.341	1399.1	0.0229	13.263	1168.5	0.0227	14.507	1168.5	0.0227
6	10.809	1413.1	0.0227	13.759	1162.1	0.0226	15.006	1162.1	0.0226
7	11.047	1421.0	0.0226	14.013	1156.8	0.0225	15.259	1156.8	0.0225
8	11.116	1431.8	0.0225	14.095	1153.4	0.0224	15.341	1153.4	0.0224
9	10.998	1451.4	0.0224	13.994	1153.4	0.0223	15.243	1153.4	0.0223
10	10.622	1482.1	0.0222	13.650	1158.8	0.0223	14.908	1158.8	0.0223
11	9.391	1531.2	0.0221	12.517	1184.1	0.0222	13.810	1184.1	0.0222
12	6.666	1591.7	0.0220	10.008	1246.7	0.0221	11.380	1246.7	0.0221
13	5.922	1390.6	0.0219	9.284	1259.9	0.0220	10.668	1259.9	0.0220
14	5.786	1185.1	0.0218	9.078	1252.9	0.0219	10.445	1252.9	0.0219
15	5.910	1122.0	0.0217	9.058	1230.6	0.0218	10.384	1230.6	0.0218
16	6.969	1052.3	0.0217	9.803	1165.4	0.0217	11.023	1165.4	0.0217
17	7.477	969.8	0.0216	9.821	1073.4	0.0216	10.854	1073.4	0.0216
18	4.839	927.0	0.0216	6.305	926.3	0.0216	6.967	926.3	0.0216

Axial Node	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	9.904	977.2	0.0230	10.003	977.2	0.0230	11.964	983.9	0.0230
2	15.935	1101.7	0.0230	16.078	1101.7	0.0230	18.845	1074.1	0.0229
3	19.409	1134.2	0.0229	19.566	1134.2	0.0229	22.566	1076.1	0.0228
4	21.159	1128.2	0.0228	21.317	1128.2	0.0228	24.308	1058.8	0.0227
5	22.042	1116.0	0.0227	22.198	1116.0	0.0227	25.131	1041.2	0.0226
6	22.481	1105.3	0.0226	22.634	1105.3	0.0226	25.516	1027.9	0.0225
7	22.681	1097.4	0.0225	22.833	1097.4	0.0225	25.678	1018.7	0.0225
8	22.729	1092.3	0.0224	22.880	1092.3	0.0224	25.702	1012.7	0.0224
9	22.627	1090.9	0.0223	22.778	1090.9	0.0223	25.591	1009.9	0.0223
10	22.331	1094.6	0.0222	22.483	1094.6	0.0222	25.302	1010.8	0.0222
11	21.408	1115.0	0.0221	21.563	1115.0	0.0221	24.433	1022.9	0.0221
12	19.386	1166.1	0.0221	19.548	1166.1	0.0221	22.549	1055.0	0.0221
13	18.788	1178.9	0.0220	18.953	1178.9	0.0220	22.002	1064.7	0.0220
14	18.573	1178.4	0.0219	18.739	1178.4	0.0219	21.820	1068.9	0.0219
15	18.427	1169.2	0.0218	18.595	1169.2	0.0218	21.698	1071.7	0.0218
16	18.657	1129.3	0.0217	18.820	1129.3	0.0217	21.858	1058.6	0.0217
17	17.588	1063.3	0.0216	17.737	1063.3	0.0216	20.539	1030.9	0.0216
18	11.499	931.6	0.0216	11.603	931.6	0.0216	13.607	944.7	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.4 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-21. Burnup and TH Feedback Parameters by Axial Node for Assembly A18a

Axial	Burnup	SP1 to SP28		Burnup	SP28 to SP29		Burnup	SP29 to SP30	
Node	SP28	T-Fuel	Spec.Vol	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol
1	3.416	929.4	0.0232	5.836	983.5	0.0231	6.823	988.8	0.0231
2	6.039	1153.1	0.0232	9.936	1142.6	0.0231	11.468	1127.7	0.0231
3	8.119	1287.8	0.0231	12.740	1195.4	0.0230	14.512	1173.1	0.0230
4	9.507	1364.2	0.0230	14.408	1206.0	0.0229	16.251	1173.5	0.0229
5	10.341	1399.1	0.0229	15.354	1203.0	0.0228	17.210	1164.3	0.0228
6	10.809	1413.1	0.0227	15.868	1197.2	0.0227	17.721	1154.7	0.0227
7	11.047	1421.0	0.0226	16.124	1191.6	0.0226	17.969	1147.0	0.0226
8	11.116	1431.8	0.0225	16.202	1187.6	0.0225	18.040	1141.7	0.0225
9	10.998	1451.4	0.0224	16.102	1187.1	0.0224	17.939	1140.2	0.0224
10	10.622	1482.1	0.0222	15.770	1192.5	0.0223	17.617	1144.4	0.0223
11	9.391	1531.2	0.0221	14.700	1219.6	0.0222	16.594	1167.4	0.0222
12	6.666	1591.7	0.0220	12.336	1286.7	0.0221	14.339	1225.0	0.0221
13	5.922	1390.6	0.0219	11.651	1300.8	0.0220	13.681	1239.4	0.0220
14	5.786	1185.1	0.0218	11.434	1295.2	0.0219	13.458	1238.3	0.0219
15	5.910	1122.0	0.0217	11.352	1273.0	0.0218	13.339	1225.9	0.0218
16	6.969	1052.3	0.0217	11.911	1205.9	0.0218	13.768	1177.6	0.0218
17	7.477	969.8	0.0216	11.595	1107.5	0.0217	13.197	1099.4	0.0217
18	4.839	927.0	0.0216	7.424	949.6	0.0216	8.469	953.8	0.0216

Axial	Burnup	SP30 to SP31	
Node	SP31	T-Fuel	Spec.Vol
1	9.342	995.4	0.0231
2	15.254	1119.6	0.0230
3	18.790	1145.0	0.0229
4	20.633	1134.0	0.0228
5	21.580	1118.7	0.0227
6	22.052	1106.7	0.0226
7	22.265	1098.1	0.0226
8	22.313	1092.4	0.0225
9	22.207	1090.2	0.0224
10	21.908	1092.6	0.0223
11	20.985	1111.4	0.0222
12	18.963	1160.3	0.0221
13	18.383	1174.5	0.0220
14	18.182	1177.8	0.0219
15	18.034	1174.5	0.0218
16	18.247	1143.5	0.0218
17	17.168	1088.5	0.0217
18	11.149	957.9	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-22. Burnup and TH Feedback Parameters by Axial Node for Assembly A18b

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	3.416	929.4	0.0232	5.861	1064.3	0.0231
2	6.039	1153.1	0.0232	9.956	1253.8	0.0231
3	8.119	1287.8	0.0231	12.792	1321.8	0.0229
4	9.507	1364.2	0.0230	14.424	1317.4	0.0228
5	10.341	1399.1	0.0229	15.255	1285.0	0.0227
6	10.809	1413.1	0.0227	15.627	1251.8	0.0226
7	11.047	1421.0	0.0226	15.760	1226.7	0.0225
8	11.116	1431.8	0.0225	15.750	1210.8	0.0224
9	10.998	1451.4	0.0224	15.564	1202.2	0.0223
10	10.622	1482.1	0.0222	14.951	1185.3	0.0222
11	9.391	1531.2	0.0221	12.957	1094.9	0.0221
12	6.666	1591.7	0.0220	9.795	1048.4	0.0220
13	5.922	1390.6	0.0219	9.090	1056.4	0.0220
14	5.786	1185.1	0.0218	9.113	1070.0	0.0219
15	5.910	1122.0	0.0217	9.779	1102.8	0.0218
16	6.969	1052.3	0.0217	11.959	1269.7	0.0218
17	7.477	969.8	0.0216	12.257	1252.8	0.0217
18	4.839	927.0	0.0216	7.957	1075.8	0.0216

Table 4-23. Burnup and TH Feedback Parameters by Axial Node for Assembly A19

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.311	922.5	0.0233	6.174	1144.8	0.0236	6.770	1073.6	0.0235
2	5.425	1112.1	0.0232	10.024	1362.2	0.0235	10.934	1239.6	0.0234
3	7.233	1242.2	0.0231	12.703	1438.7	0.0234	13.746	1299.0	0.0233
4	8.467	1315.0	0.0230	14.203	1437.7	0.0233	15.279	1308.1	0.0232
5	9.230	1352.2	0.0229	14.969	1407.7	0.0231	16.050	1311.3	0.0231
6	9.670	1369.7	0.0228	15.322	1375.4	0.0230	16.404	1316.0	0.0229
7	9.899	1380.3	0.0227	15.462	1350.7	0.0228	16.540	1320.1	0.0228
8	9.979	1391.7	0.0226	15.481	1335.3	0.0227	16.546	1322.1	0.0227
9	9.923	1408.3	0.0225	15.387	1327.5	0.0226	16.425	1318.7	0.0226
10	9.688	1430.9	0.0223	15.100	1321.5	0.0225	16.114	1307.2	0.0224
11	9.174	1455.9	0.0222	14.514	1313.7	0.0223	15.543	1301.5	0.0223
12	8.484	1460.5	0.0221	13.843	1316.6	0.0222	14.923	1317.8	0.0222
13	8.089	1414.1	0.0220	13.572	1329.5	0.0221	14.713	1330.8	0.0221
14	8.019	1350.8	0.0219	13.666	1344.3	0.0220	14.869	1333.3	0.0220
15	8.197	1312.2	0.0218	14.022	1361.6	0.0219	15.241	1325.6	0.0219
16	8.350	1282.9	0.0217	14.220	1375.1	0.0218	15.363	1284.8	0.0218
17	7.639	1202.0	0.0216	12.954	1326.0	0.0217	13.935	1202.6	0.0217
18	5.251	1020.2	0.0216	8.668	1114.5	0.0216	9.298	1016.0	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-24. Burnup and TH Feedback Parameters by Axial Node for Assembly A20

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	1.929	766.4	0.0226	4.564	1116.6	0.0236	5.094	1038.6	0.0235
2	3.349	890.3	0.0226	7.656	1349.1	0.0235	8.487	1220.9	0.0235
3	4.454	980.9	0.0225	9.656	1443.2	0.0234	10.635	1294.5	0.0233
4	5.176	1034.5	0.0225	10.692	1455.2	0.0232	11.730	1327.4	0.0232
5	5.618	1063.3	0.0224	11.186	1437.0	0.0231	12.251	1351.3	0.0231
6	5.871	1077.4	0.0224	11.397	1412.9	0.0229	12.480	1370.9	0.0230
7	6.003	1085.8	0.0223	11.473	1393.2	0.0228	12.568	1385.1	0.0228
8	6.054	1093.3	0.0222	11.490	1380.6	0.0227	12.589	1394.4	0.0227
9	6.041	1102.2	0.0222	11.473	1374.8	0.0226	12.573	1400.1	0.0226
10	5.965	1112.6	0.0221	11.419	1374.1	0.0224	12.528	1404.1	0.0224
11	5.831	1121.4	0.0220	11.340	1377.9	0.0223	12.470	1409.1	0.0223
12	5.685	1122.4	0.0220	11.287	1386.3	0.0222	12.449	1414.7	0.0222
13	5.608	1112.5	0.0219	11.324	1397.1	0.0221	12.515	1412.9	0.0221
14	5.721	1098.0	0.0219	11.522	1403.6	0.0220	12.718	1393.5	0.0220
15	6.476	1109.7	0.0218	12.214	1385.3	0.0219	13.362	1337.7	0.0218
16	7.826	1298.5	0.0217	13.223	1329.1	0.0218	14.259	1244.4	0.0217
17	7.524	1237.3	0.0216	12.242	1253.5	0.0217	13.123	1150.2	0.0217
18	4.698	1003.7	0.0216	7.730	1068.4	0.0216	8.299	985.1	0.0216

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	8.349	1050.3	0.0236	11.641	1022.2	0.0234	13.385	1044.7	0.0233
2	13.645	1217.7	0.0235	18.735	1167.1	0.0233	21.262	1137.9	0.0233
3	16.910	1311.6	0.0234	22.886	1207.6	0.0232	25.705	1153.8	0.0231
4	18.514	1360.1	0.0232	24.819	1211.1	0.0231	27.687	1140.6	0.0230
5	19.233	1380.6	0.0231	25.637	1201.2	0.0230	28.483	1125.2	0.0229
6	19.520	1389.8	0.0229	25.916	1184.3	0.0228	28.733	1113.4	0.0228
7	19.589	1397.4	0.0228	25.895	1159.4	0.0227	28.682	1103.9	0.0227
8	19.522	1404.3	0.0227	25.615	1126.3	0.0226	28.343	1090.3	0.0226
9	19.319	1404.1	0.0225	25.089	1103.4	0.0225	27.715	1071.2	0.0225
10	18.973	1379.8	0.0224	24.534	1107.0	0.0224	27.095	1065.2	0.0224
11	18.605	1318.8	0.0223	24.168	1130.3	0.0223	26.738	1070.7	0.0223
12	18.406	1260.1	0.0221	24.130	1169.9	0.0222	26.761	1081.5	0.0222
13	18.467	1220.0	0.0220	24.503	1221.0	0.0221	27.260	1099.8	0.0221
14	18.792	1193.8	0.0219	25.199	1248.4	0.0220	28.139	1121.4	0.0220
15	19.541	1179.2	0.0218	26.016	1234.1	0.0219	29.033	1120.3	0.0219
16	20.283	1168.9	0.0217	26.402	1185.8	0.0218	29.332	1098.5	0.0218
17	18.570	1141.1	0.0217	23.960	1126.2	0.0217	26.649	1075.1	0.0217
18	11.970	1005.6	0.0216	15.579	999.8	0.0216	17.494	995.2	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-25. Burnup and TH Feedback Parameters by Axial Node for Assembly A21

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	1.326	708.6	0.0223	2.726	864.6	0.0226	3.009	825.6	0.0226
2	2.386	807.4	0.0222	4.724	1023.9	0.0226	5.183	955.5	0.0226
3	3.186	876.5	0.0222	6.040	1091.3	0.0225	6.591	1016.0	0.0225
4	3.703	916.6	0.0222	6.746	1104.1	0.0224	7.338	1043.9	0.0225
5	4.021	938.4	0.0221	7.099	1095.5	0.0224	7.714	1063.4	0.0224
6	4.206	949.8	0.0221	7.263	1081.6	0.0223	7.892	1078.8	0.0223
7	4.305	956.5	0.0221	7.330	1069.4	0.0222	7.969	1089.4	0.0223
8	4.347	962.3	0.0220	7.351	1061.2	0.0222	7.995	1096.3	0.0222
9	4.347	968.6	0.0220	7.348	1057.1	0.0221	7.996	1101.0	0.0221
10	4.313	975.3	0.0219	7.329	1056.6	0.0220	7.985	1104.8	0.0221
11	4.258	980.8	0.0219	7.306	1059.0	0.0220	7.974	1108.1	0.0220
12	4.203	982.6	0.0218	7.299	1063.5	0.0219	7.979	1109.3	0.0219
13	4.184	979.9	0.0218	7.330	1068.6	0.0218	8.018	1104.4	0.0218
14	4.251	976.4	0.0217	7.424	1071.2	0.0218	8.105	1087.7	0.0218
15	4.435	984.9	0.0217	7.573	1066.0	0.0217	8.224	1054.7	0.0217
16	4.538	1000.7	0.0216	7.522	1047.0	0.0217	8.116	1007.6	0.0217
17	4.040	955.3	0.0216	6.633	998.8	0.0216	7.135	944.5	0.0216
18	2.427	800.1	0.0216	4.040	854.6	0.0216	4.353	815.8	0.0216

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	6.609	1125.3	0.0237	9.583	1004.0	0.0233	11.187	1025.4	0.0233
2	10.829	1324.4	0.0236	15.451	1148.7	0.0232	17.792	1132.0	0.0232
3	13.276	1415.5	0.0235	18.742	1202.1	0.0231	21.372	1151.0	0.0231
4	14.387	1450.3	0.0233	20.186	1209.5	0.0230	22.866	1142.2	0.0229
5	14.839	1460.7	0.0232	20.744	1200.8	0.0229	23.406	1129.1	0.0228
6	14.992	1463.2	0.0230	20.894	1183.9	0.0228	23.526	1118.3	0.0227
7	15.009	1466.2	0.0229	20.819	1157.2	0.0227	23.417	1108.3	0.0226
8	14.952	1469.9	0.0227	20.534	1120.5	0.0226	23.066	1092.6	0.0225
9	14.830	1468.4	0.0226	20.067	1093.9	0.0225	22.482	1070.0	0.0224
10	14.656	1451.1	0.0225	19.666	1095.4	0.0224	22.002	1060.8	0.0223
11	14.498	1412.4	0.0223	19.501	1118.4	0.0223	21.840	1064.4	0.0223
12	14.434	1370.5	0.0222	19.606	1160.5	0.0222	22.009	1075.5	0.0222
13	14.499	1336.8	0.0221	20.012	1217.5	0.0221	22.562	1098.0	0.0221
14	14.690	1314.1	0.0220	20.661	1253.5	0.0220	23.470	1133.4	0.0220
15	14.939	1308.4	0.0219	21.208	1264.0	0.0219	24.242	1161.3	0.0219
16	14.829	1315.9	0.0218	21.082	1260.8	0.0218	24.134	1162.6	0.0218
17	13.319	1288.9	0.0217	18.971	1215.2	0.0217	21.793	1139.4	0.0217
18	8.491	1112.6	0.0216	12.261	1051.1	0.0216	14.248	1038.6	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-26. Burnup and TH Feedback Parameters by Axial Node for Assembly A22

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	2.356	817.6	0.0235	3.912	901.0	0.0232
2	4.987	984.0	0.0234	7.595	1099.8	0.0231
3	8.232	1269.2	0.0233	12.009	1302.3	0.0230
4	9.957	1391.9	0.0232	14.545	1300.9	0.0229
5	10.858	1432.1	0.0231	15.588	1261.8	0.0228
6	11.352	1445.9	0.0230	15.992	1226.2	0.0227
7	11.601	1453.4	0.0228	16.133	1200.1	0.0226
8	11.681	1464.5	0.0227	16.129	1183.4	0.0225
9	11.603	1484.2	0.0226	15.985	1173.3	0.0224
10	11.320	1514.1	0.0224	15.619	1164.2	0.0223
11	10.761	1546.4	0.0223	14.973	1154.9	0.0222
12	10.054	1559.1	0.0222	14.263	1154.6	0.0221
13	9.553	1523.6	0.0220	13.875	1166.3	0.0220
14	9.311	1454.6	0.0219	13.841	1187.8	0.0219
15	9.181	1384.7	0.0218	14.005	1223.7	0.0219
16	8.884	1306.8	0.0217	13.923	1262.0	0.0218
17	7.816	1200.9	0.0216	12.514	1240.6	0.0217
18	4.869	981.4	0.0216	7.959	1072.3	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-27. Burnup and TH Feedback Parameters by Axial Node for Assembly A23

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.449	938.7	0.0235	5.805	1052.6	0.0233	6.376	1048.6	0.0234
2	5.866	1149.6	0.0234	9.673	1250.7	0.0232	10.542	1200.9	0.0233
3	8.075	1304.2	0.0233	12.706	1331.4	0.0231	13.698	1242.4	0.0232
4	9.565	1395.0	0.0232	14.516	1329.1	0.0230	15.549	1249.2	0.0231
5	10.449	1436.6	0.0231	15.410	1292.3	0.0229	16.458	1266.8	0.0230
6	10.949	1454.3	0.0230	15.800	1255.8	0.0228	16.855	1274.6	0.0229
7	11.206	1464.9	0.0228	15.948	1229.3	0.0226	16.997	1274.3	0.0227
8	11.291	1478.0	0.0227	15.955	1213.1	0.0225	16.982	1271.8	0.0226
9	11.214	1498.6	0.0226	15.819	1204.0	0.0224	16.807	1264.4	0.0225
10	10.922	1526.7	0.0224	15.443	1195.3	0.0223	16.392	1249.6	0.0224
11	10.308	1557.5	0.0223	14.716	1183.6	0.0222	15.663	1242.7	0.0223
12	9.490	1567.9	0.0222	13.885	1182.9	0.0222	14.867	1261.5	0.0222
13	8.973	1520.3	0.0220	13.484	1195.7	0.0221	14.529	1281.9	0.0221
14	8.769	1441.6	0.0219	13.499	1217.9	0.0220	14.621	1296.4	0.0220
15	8.724	1372.0	0.0218	13.812	1260.9	0.0219	14.972	1303.3	0.0219
16	8.565	1295.7	0.0217	14.009	1322.0	0.0218	15.122	1274.3	0.0218
17	7.653	1192.2	0.0216	12.790	1307.0	0.0217	13.767	1198.0	0.0217
18	5.186	1005.8	0.0216	8.552	1110.7	0.0216	9.189	1015.0	0.0216

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP4	T-Fuel	Spec.Vol	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol
1	7.865	788.9	0.0224	10.524	939.6	0.0231	11.962	974.7	0.0231
2	12.836	864.6	0.0224	16.971	1065.8	0.0230	19.074	1066.7	0.0230
3	16.381	892.7	0.0223	21.207	1094.9	0.0229	23.549	1074.2	0.0229
4	18.343	894.4	0.0223	23.400	1090.8	0.0228	25.776	1058.6	0.0228
5	19.264	891.3	0.0222	24.380	1080.2	0.0227	26.735	1043.2	0.0227
6	19.645	889.0	0.0222	24.747	1066.7	0.0226	27.077	1032.4	0.0226
7	19.764	888.1	0.0221	24.805	1051.9	0.0225	27.114	1024.9	0.0225
8	19.724	887.9	0.0221	24.668	1038.6	0.0224	26.957	1019.4	0.0224
9	19.524	887.4	0.0220	24.366	1033.2	0.0224	26.639	1016.6	0.0224
10	19.089	886.2	0.0220	23.889	1041.7	0.0223	26.167	1020.0	0.0223
11	18.356	884.8	0.0219	23.219	1065.6	0.0222	25.535	1031.2	0.0222
12	17.572	882.2	0.0219	22.586	1098.9	0.0221	24.973	1046.7	0.0221
13	17.243	875.2	0.0218	22.437	1127.2	0.0220	24.914	1060.4	0.0220
14	17.361	865.7	0.0218	22.707	1140.4	0.0219	25.305	1074.7	0.0219
15	17.917	861.2	0.0217	23.302	1134.9	0.0218	26.011	1086.1	0.0218
16	18.555	908.1	0.0217	23.728	1109.1	0.0217	26.384	1072.9	0.0217
17	17.404	973.2	0.0216	21.941	1054.6	0.0217	24.346	1041.8	0.0217
18	11.711	872.0	0.0216	14.702	930.3	0.0216	16.375	953.9	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-28. Burnup and TH Feedback Parameters by Axial Node for Assembly A23a

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	3.449	938.7	0.0235	5.805	1052.6	0.0233	6.365	1048.6	0.0234
2	5.866	1149.6	0.0234	9.673	1250.7	0.0232	10.522	1200.9	0.0233
3	8.075	1304.2	0.0233	12.706	1331.4	0.0231	13.671	1242.4	0.0232
4	9.565	1395.0	0.0232	14.516	1329.1	0.0230	15.519	1249.2	0.0231
5	10.449	1436.6	0.0231	15.410	1292.3	0.0229	16.427	1266.8	0.0230
6	10.949	1454.3	0.0230	15.800	1255.8	0.0228	16.824	1274.6	0.0229
7	11.206	1464.9	0.0228	15.948	1229.3	0.0226	16.966	1274.3	0.0227
8	11.291	1478.0	0.0227	15.955	1213.1	0.0225	16.953	1271.8	0.0226
9	11.214	1498.6	0.0226	15.819	1204.0	0.0224	16.782	1264.4	0.0225
10	10.922	1526.7	0.0224	15.443	1195.3	0.0223	16.376	1249.6	0.0224
11	10.308	1557.5	0.0223	14.716	1183.6	0.0222	15.664	1242.7	0.0223
12	9.490	1567.9	0.0222	13.885	1182.9	0.0222	14.889	1261.5	0.0222
13	8.973	1520.3	0.0220	13.484	1195.7	0.0221	14.563	1281.9	0.0221
14	8.769	1441.6	0.0219	13.499	1217.9	0.0220	14.661	1296.4	0.0220
15	8.724	1372.0	0.0218	13.812	1260.9	0.0219	15.010	1303.3	0.0219
16	8.565	1295.7	0.0217	14.009	1322.0	0.0218	15.145	1274.3	0.0218
17	7.653	1192.2	0.0216	12.790	1307.0	0.0217	13.769	1198.0	0.0217
18	5.186	1005.8	0.0216	8.552	1110.7	0.0216	9.184	1015.0	0.0216

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP4	T-Fuel	Spec.Vol	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol
1	8.331	850.2	0.0227	11.155	964.8	0.0232	12.699	996.5	0.0232
2	13.523	942.5	0.0226	17.963	1104.5	0.0231	20.238	1092.0	0.0231
3	17.174	977.7	0.0225	22.439	1139.5	0.0230	24.987	1103.4	0.0230
4	19.167	982.5	0.0225	24.749	1139.8	0.0229	27.335	1086.1	0.0229
5	20.086	980.3	0.0224	25.766	1127.7	0.0228	28.325	1068.4	0.0228
6	20.451	977.5	0.0223	26.121	1109.7	0.0227	28.647	1055.5	0.0227
7	20.549	976.0	0.0223	26.117	1083.8	0.0226	28.606	1044.8	0.0226
8	20.485	975.6	0.0222	25.827	1051.6	0.0225	28.252	1030.4	0.0225
9	20.252	974.3	0.0221	25.283	1029.5	0.0224	27.612	1013.5	0.0224
10	19.783	969.5	0.0221	24.606	1032.5	0.0223	26.872	1008.6	0.0223
11	19.033	961.4	0.0220	23.864	1060.1	0.0222	26.143	1018.5	0.0222
12	18.259	952.1	0.0220	23.291	1108.6	0.0222	25.648	1037.7	0.0221
13	17.958	940.4	0.0219	23.337	1163.0	0.0221	25.835	1061.7	0.0220
14	18.129	929.4	0.0218	23.895	1194.5	0.0220	26.583	1086.2	0.0219
15	18.816	928.8	0.0218	24.731	1188.6	0.0219	27.535	1092.6	0.0218
16	19.682	994.1	0.0217	25.340	1148.7	0.0218	28.085	1073.5	0.0217
17	18.652	1087.9	0.0217	23.595	1083.3	0.0217	26.085	1041.6	0.0217
18	12.650	976.3	0.0216	15.922	956.3	0.0216	17.667	957.0	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-29. Burnup and TH Feedback Parameters by Axial Node for Assembly A24

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	2.805	878.2	0.0231	5.017	1026.1	0.0232
2	4.961	1073.1	0.0230	8.547	1215.2	0.0231
3	6.609	1197.5	0.0230	10.902	1278.3	0.0230
4	7.706	1261.1	0.0229	12.219	1277.4	0.0229
5	8.384	1293.4	0.0228	12.890	1252.8	0.0228
6	8.775	1308.8	0.0227	13.199	1225.3	0.0227
7	8.978	1318.5	0.0226	13.322	1204.1	0.0226
8	9.049	1329.3	0.0225	13.339	1190.8	0.0225
9	9.002	1345.0	0.0224	13.262	1183.9	0.0224
10	8.818	1365.7	0.0223	13.056	1180.3	0.0223
11	8.469	1386.8	0.0222	12.701	1179.0	0.0222
12	8.045	1392.1	0.0221	12.328	1184.2	0.0221
13	7.757	1366.5	0.0220	12.148	1195.9	0.0220
14	7.662	1323.7	0.0219	12.195	1211.2	0.0219
15	7.676	1283.8	0.0218	12.363	1231.8	0.0218
16	7.519	1238.3	0.0217	12.247	1247.6	0.0217
17	6.618	1152.2	0.0216	10.915	1212.7	0.0217
18	4.080	936.2	0.0216	6.848	1038.8	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-30. Burnup and TH Feedback Parameters by Axial Node for Assembly A25

Axial Node	Burnup SP2	SP1 to SP2 T-Fuel	SP1 to SP2 Spec.Vol	Burnup SP3	SP2 to SP3 T-Fuel	SP2 to SP3 Spec.Vol	Burnup SP4	SP3 to SP4 T-Fuel	SP3 to SP4 Spec.Vol
1	2.109	798.7	0.0227	4.098	983.8	0.0230	4.503	928.5	0.0230
2	3.769	950.4	0.0227	7.024	1172.9	0.0230	7.663	1079.4	0.0229
3	5.015	1053.3	0.0226	8.938	1242.8	0.0229	9.691	1137.8	0.0229
4	5.823	1106.3	0.0226	9.967	1248.0	0.0228	10.762	1160.7	0.0228
5	6.323	1134.1	0.0225	10.484	1231.1	0.0227	11.295	1174.0	0.0227
6	6.613	1148.4	0.0224	10.722	1210.0	0.0226	11.542	1184.1	0.0226
7	6.765	1157.4	0.0223	10.818	1192.8	0.0225	11.642	1191.3	0.0225
8	6.822	1166.3	0.0223	10.840	1181.8	0.0224	11.664	1196.0	0.0224
9	6.801	1177.7	0.0222	10.809	1176.7	0.0223	11.633	1199.1	0.0223
10	6.704	1191.4	0.0221	10.726	1176.3	0.0222	11.557	1202.1	0.0222
11	6.540	1203.4	0.0220	10.605	1180.2	0.0221	11.454	1207.3	0.0221
12	6.358	1206.4	0.0220	10.497	1188.0	0.0221	11.373	1213.6	0.0220
13	6.239	1195.7	0.0219	10.470	1197.9	0.0220	11.371	1215.0	0.0220
14	6.245	1176.9	0.0218	10.555	1206.2	0.0219	11.463	1204.0	0.0219
15	6.383	1166.0	0.0217	10.701	1207.2	0.0218	11.586	1175.3	0.0218
16	6.393	1160.2	0.0217	10.561	1192.4	0.0217	11.382	1128.6	0.0217
17	5.646	1090.4	0.0216	9.314	1140.9	0.0216	10.017	1059.8	0.0216
18	3.409	888.4	0.0216	5.732	971.1	0.0216	6.179	910.1	0.0216

Axial Node	Burnup SP4	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP5	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP6	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	7.848	1077.0	0.0234	9.228	762.6	0.0224	10.021	805.0	0.0225
2	12.816	1241.9	0.0233	14.942	828.4	0.0224	16.110	869.5	0.0225
3	15.675	1306.2	0.0232	18.205	856.1	0.0223	19.542	885.3	0.0225
4	16.993	1319.7	0.0231	19.683	861.8	0.0223	21.063	882.6	0.0224
5	17.562	1320.1	0.0230	20.304	859.6	0.0222	21.685	876.8	0.0224
6	17.780	1320.1	0.0228	20.526	854.3	0.0222	21.898	871.7	0.0223
7	17.830	1322.6	0.0227	20.553	847.9	0.0221	21.916	868.0	0.0222
8	17.779	1326.0	0.0226	20.463	842.4	0.0221	21.819	865.5	0.0222
9	17.636	1324.7	0.0225	20.281	840.5	0.0221	21.635	864.8	0.0221
10	17.409	1309.0	0.0223	20.036	844.3	0.0220	21.396	866.4	0.0221
11	17.162	1275.9	0.0222	19.807	853.5	0.0220	21.186	870.3	0.0220
12	17.007	1240.4	0.0221	19.702	865.4	0.0219	21.112	875.6	0.0220
13	17.013	1211.8	0.0220	19.779	876.1	0.0219	21.244	882.5	0.0219
14	17.177	1191.5	0.0219	20.070	884.4	0.0218	21.712	906.4	0.0219
15	17.383	1184.6	0.0218	20.741	913.8	0.0218	23.126	1040.8	0.0218
16	17.138	1187.8	0.0217	21.239	1031.6	0.0217	23.701	1060.1	0.0217
17	15.289	1163.2	0.0217	19.155	1017.0	0.0216	21.407	1038.8	0.0217
18	9.716	1020.3	0.0216	12.322	898.4	0.0216	13.883	950.7	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-31. Burnup and TH Feedback Parameters by Axial Node for Assembly A25a

Axial Node	Burnup SP2	SP1 to SP2 T-Fuel	SP1 to SP2 Spec.Vol	Burnup SP3	SP2 to SP3 T-Fuel	SP2 to SP3 Spec.Vol	Burnup SP4	SP3 to SP4 T-Fuel	SP3 to SP4 Spec.Vol
1	2.109	798.7	0.0227	4.098	983.8	0.0230	4.503	928.5	0.0230
2	3.769	950.4	0.0227	7.024	1172.9	0.0230	7.663	1079.4	0.0229
3	5.015	1053.3	0.0226	8.938	1242.8	0.0229	9.691	1137.8	0.0229
4	5.823	1106.3	0.0226	9.967	1248.0	0.0228	10.762	1160.7	0.0228
5	6.323	1134.1	0.0225	10.484	1231.1	0.0227	11.295	1174.0	0.0227
6	6.613	1148.4	0.0224	10.722	1210.0	0.0226	11.542	1184.1	0.0226
7	6.765	1157.4	0.0223	10.818	1192.8	0.0225	11.642	1191.3	0.0225
8	6.822	1166.3	0.0223	10.840	1181.8	0.0224	11.664	1196.0	0.0224
9	6.801	1177.7	0.0222	10.809	1176.7	0.0223	11.633	1199.1	0.0223
10	6.704	1191.4	0.0221	10.726	1176.3	0.0222	11.557	1202.1	0.0222
11	6.540	1203.4	0.0220	10.605	1180.2	0.0221	11.454	1207.3	0.0221
12	6.358	1206.4	0.0220	10.497	1188.0	0.0221	11.373	1213.6	0.0220
13	6.239	1195.7	0.0219	10.470	1197.9	0.0220	11.371	1215.0	0.0220
14	6.245	1176.9	0.0218	10.555	1206.2	0.0219	11.463	1204.0	0.0219
15	6.383	1166.0	0.0217	10.701	1207.2	0.0218	11.586	1175.3	0.0218
16	6.393	1160.2	0.0217	10.561	1192.4	0.0217	11.382	1128.6	0.0217
17	5.646	1090.4	0.0216	9.314	1140.9	0.0216	10.017	1059.8	0.0216
18	3.409	888.4	0.0216	5.732	971.1	0.0216	6.179	910.1	0.0216

Axial Node	Burnup SP4	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP5	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP6	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	7.856	1077.0	0.0234	9.710	855.6	0.0234	10.832	894.2	0.0233
2	12.829	1241.9	0.0233	16.384	1077.9	0.0233	18.586	1110.1	0.0233
3	15.690	1306.2	0.0232	20.857	1183.4	0.0232	23.555	1151.9	0.0232
4	17.010	1319.7	0.0231	22.822	1206.9	0.0231	25.624	1146.4	0.0230
5	17.580	1320.1	0.0230	23.707	1202.7	0.0230	26.507	1133.1	0.0229
6	17.798	1320.1	0.0228	24.005	1190.9	0.0229	26.787	1123.1	0.0228
7	17.847	1322.6	0.0227	24.015	1174.0	0.0227	26.779	1115.7	0.0227
8	17.794	1326.0	0.0226	23.842	1156.6	0.0226	26.583	1109.0	0.0226
9	17.648	1324.7	0.0225	23.542	1147.8	0.0225	26.256	1104.0	0.0225
10	17.414	1309.0	0.0223	23.213	1155.1	0.0224	25.918	1104.4	0.0224
11	17.158	1275.9	0.0222	22.980	1178.1	0.0223	25.708	1110.2	0.0223
12	16.992	1240.4	0.0221	22.947	1210.9	0.0222	25.727	1118.6	0.0222
13	16.991	1211.8	0.0220	23.144	1242.2	0.0221	25.998	1127.3	0.0221
14	17.152	1191.5	0.0219	23.472	1256.6	0.0220	26.400	1133.2	0.0220
15	17.361	1184.6	0.0218	23.667	1245.6	0.0219	26.626	1132.0	0.0219
16	17.123	1187.8	0.0217	23.121	1211.0	0.0218	26.020	1123.4	0.0218
17	15.283	1163.2	0.0217	20.510	1148.8	0.0217	23.164	1099.7	0.0217
18	9.715	1020.3	0.0216	13.098	993.2	0.0216	14.939	1003.9	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-32. Burnup and TH Feedback Parameters by Axial Node for Assembly A26

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	2.845	894.7	0.0232	5.336	1080.1	0.0231
2	5.061	1100.1	0.0232	9.077	1285.2	0.0231
3	6.838	1233.0	0.0231	11.651	1358.8	0.0229
4	8.044	1305.8	0.0230	13.123	1357.7	0.0228
5	8.786	1341.5	0.0229	13.869	1325.9	0.0227
6	9.214	1357.9	0.0228	14.202	1292.0	0.0226
7	9.439	1368.1	0.0227	14.320	1266.0	0.0225
8	9.518	1380.0	0.0226	14.314	1248.9	0.0224
9	9.470	1397.3	0.0224	14.182	1237.5	0.0223
10	9.282	1420.2	0.0223	13.718	1213.7	0.0222
11	8.954	1442.6	0.0222	12.512	1097.8	0.0221
12	8.566	1449.8	0.0221	11.504	999.0	0.0220
13	8.260	1429.5	0.0220	11.196	993.9	0.0220
14	8.097	1388.0	0.0219	11.180	1006.5	0.0219
15	8.098	1336.0	0.0218	11.693	1041.6	0.0218
16	7.767	1269.4	0.0217	12.576	1238.9	0.0218
17	6.697	1168.3	0.0216	11.509	1270.0	0.0217
18	4.116	944.6	0.0216	7.278	1093.8	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-33. Burnup and TH Feedback Parameters by Axial Node for Assembly A27

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	2.734	875.4	0.0230	4.711	981.0	0.0230	5.127	937.6	0.0232
2	4.492	1041.9	0.0230	7.726	1167.7	0.0230	8.383	1088.9	0.0232
3	5.988	1164.5	0.0229	9.885	1230.7	0.0229	10.673	1148.1	0.0231
4	7.017	1232.2	0.0228	11.123	1229.1	0.0228	11.985	1188.2	0.0230
5	7.664	1267.0	0.0227	11.754	1203.3	0.0227	12.658	1232.7	0.0229
6	8.044	1285.0	0.0226	12.044	1175.5	0.0226	12.976	1256.8	0.0228
7	8.246	1296.5	0.0225	12.165	1154.7	0.0225	13.107	1265.3	0.0227
8	8.322	1308.0	0.0224	12.191	1142.1	0.0224	13.133	1269.3	0.0226
9	8.292	1322.8	0.0223	12.142	1136.2	0.0223	13.083	1272.0	0.0224
10	8.159	1340.3	0.0222	12.016	1135.2	0.0222	12.964	1275.5	0.0223
11	7.935	1355.5	0.0221	11.829	1138.8	0.0222	12.800	1282.7	0.0222
12	7.680	1359.2	0.0220	11.648	1147.3	0.0221	12.655	1293.0	0.0221
13	7.477	1344.7	0.0219	11.557	1160.5	0.0220	12.602	1299.7	0.0220
14	7.359	1315.0	0.0219	11.589	1179.2	0.0219	12.653	1294.6	0.0219
15	7.241	1274.8	0.0218	11.671	1210.2	0.0218	12.719	1270.7	0.0218
16	6.856	1217.6	0.0217	11.443	1248.5	0.0217	12.426	1225.1	0.0217
17	5.875	1121.7	0.0216	10.126	1227.9	0.0217	10.975	1148.0	0.0216
18	3.941	939.2	0.0216	6.676	1039.2	0.0216	7.214	971.1	0.0216

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP4	T-Fuel	Spec.Vol	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol
1	8.896	1120.7	0.0236	11.580	945.1	0.0233	13.090	990.1	0.0233
2	14.190	1299.5	0.0235	18.500	1088.0	0.0232	20.768	1091.2	0.0232
3	17.401	1365.2	0.0234	22.655	1141.2	0.0231	25.255	1116.0	0.0231
4	18.972	1374.6	0.0233	24.667	1157.2	0.0230	27.354	1109.4	0.0230
5	19.670	1372.1	0.0231	25.549	1155.5	0.0229	28.240	1097.7	0.0229
6	19.943	1370.5	0.0230	25.870	1144.8	0.0228	28.547	1088.3	0.0227
7	20.003	1372.6	0.0228	25.884	1127.6	0.0227	28.543	1081.2	0.0226
8	19.925	1376.9	0.0227	25.668	1107.5	0.0226	28.298	1073.5	0.0225
9	19.705	1376.9	0.0225	25.258	1095.9	0.0225	27.845	1066.0	0.0224
10	19.329	1356.5	0.0224	24.762	1102.3	0.0224	27.328	1066.1	0.0223
11	18.913	1304.5	0.0223	24.360	1124.5	0.0223	26.946	1073.1	0.0222
12	18.640	1255.4	0.0222	24.220	1157.9	0.0222	26.859	1082.8	0.0221
13	18.614	1222.2	0.0221	24.411	1192.7	0.0221	27.133	1093.9	0.0220
14	18.814	1201.9	0.0220	24.823	1210.1	0.0220	27.641	1103.1	0.0219
15	19.083	1203.4	0.0219	25.114	1200.7	0.0219	27.976	1103.0	0.0219
16	18.840	1226.3	0.0218	24.589	1167.8	0.0218	27.397	1095.0	0.0218
17	16.893	1210.6	0.0217	21.902	1108.2	0.0217	24.467	1072.4	0.0217
18	11.178	1049.9	0.0216	14.397	962.0	0.0216	16.163	976.8	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-34. Burnup and TH Feedback Parameters by Axial Node for Assembly A28

Axial Node	Burnup SP2	SP1 to SP2 T-Fuel	SP1 to SP2 Spec.Vol	Burnup SP3	SP2 to SP3 T-Fuel	SP2 to SP3 Spec.Vol	Burnup SP4	SP3 to SP4 T-Fuel	SP3 to SP4 Spec.Vol
1	1.510	736.2	0.0224	2.757	833.2	0.0225	3.017	803.4	0.0225
2	2.701	851.2	0.0223	4.779	976.4	0.0224	5.200	921.9	0.0225
3	3.602	931.2	0.0223	6.129	1035.4	0.0224	6.634	976.2	0.0224
4	4.196	978.1	0.0223	6.873	1043.6	0.0223	7.414	999.7	0.0224
5	4.565	1002.3	0.0222	7.250	1031.3	0.0223	7.809	1015.7	0.0223
6	4.781	1015.2	0.0222	7.425	1014.9	0.0222	7.992	1026.8	0.0223
7	4.893	1023.4	0.0221	7.494	1001.4	0.0221	8.065	1032.9	0.0222
8	4.934	1030.9	0.0221	7.506	992.7	0.0221	8.078	1036.3	0.0221
9	4.917	1039.7	0.0220	7.480	988.6	0.0220	8.053	1038.7	0.0221
10	4.849	1049.5	0.0219	7.421	988.4	0.0220	8.000	1041.6	0.0220
11	4.740	1057.3	0.0219	7.341	991.5	0.0219	7.933	1045.8	0.0219
12	4.620	1058.6	0.0218	7.271	997.7	0.0219	7.881	1050.5	0.0219
13	4.526	1050.4	0.0218	7.242	1006.3	0.0218	7.870	1051.9	0.0218
14	4.474	1034.4	0.0217	7.260	1016.4	0.0218	7.892	1045.4	0.0218
15	4.414	1013.1	0.0217	7.248	1026.4	0.0217	7.867	1027.7	0.0217
16	4.192	979.7	0.0216	6.980	1026.7	0.0217	7.558	996.2	0.0217
17	3.561	912.5	0.0216	6.030	988.9	0.0216	6.524	941.4	0.0216
18	2.121	770.4	0.0216	3.657	845.1	0.0216	3.963	810.7	0.0216

Axial Node	Burnup SP4	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP5	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP6	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	6.700	1138.8	0.0235	9.416	982.8	0.0234	10.947	1010.3	0.0234
2	10.966	1342.7	0.0234	15.299	1136.1	0.0233	17.603	1130.6	0.0233
3	13.433	1432.2	0.0233	18.714	1199.8	0.0232	21.346	1156.0	0.0232
4	14.577	1462.7	0.0231	20.263	1209.1	0.0231	22.952	1146.9	0.0230
5	15.070	1472.3	0.0230	20.898	1199.9	0.0230	23.563	1132.6	0.0229
6	15.248	1477.4	0.0228	21.104	1186.1	0.0229	23.738	1121.3	0.0228
7	15.230	1485.2	0.0227	21.072	1174.0	0.0228	23.686	1114.5	0.0227
8	15.044	1495.6	0.0225	20.869	1168.1	0.0227	23.477	1111.8	0.0226
9	14.610	1502.7	0.0224	20.464	1175.9	0.0226	23.089	1115.2	0.0225
10	13.631	1472.4	0.0223	19.642	1208.6	0.0225	22.330	1131.3	0.0224
11	12.560	1229.1	0.0221	18.816	1256.3	0.0224	21.595	1152.6	0.0223
12	12.045	1101.8	0.0221	18.517	1295.9	0.0222	21.379	1166.6	0.0222
13	12.149	1062.8	0.0220	18.757	1316.0	0.0221	21.699	1173.1	0.0221
14	12.672	1042.4	0.0219	19.343	1316.2	0.0220	22.398	1180.6	0.0220
15	13.627	1072.3	0.0219	20.264	1299.1	0.0219	23.432	1187.8	0.0219
16	14.062	1291.0	0.0218	20.525	1282.4	0.0218	23.658	1178.8	0.0218
17	12.694	1297.0	0.0217	18.523	1236.5	0.0217	21.413	1153.8	0.0217
18	8.065	1114.9	0.0216	11.954	1066.8	0.0216	13.987	1049.9	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-35. Burnup and TH Feedback Parameters by Axial Node for Assembly A29

Axial	Burnup	SP1 to SP2		Burnup	SP2 to SP3		Burnup	SP3 to SP4	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol	SP4	T-Fuel	Spec.Vol
1	1.731	765.0	0.0225	2.984	834.9	0.0225	3.249	809.5	0.0226
2	3.056	894.2	0.0225	5.144	977.7	0.0224	5.575	929.2	0.0226
3	4.068	984.8	0.0224	6.608	1035.9	0.0224	7.134	987.1	0.0225
4	4.750	1036.6	0.0224	7.439	1041.2	0.0223	8.016	1020.3	0.0225
5	5.179	1064.9	0.0223	7.864	1025.0	0.0223	8.471	1051.2	0.0224
6	5.430	1080.0	0.0223	8.060	1005.4	0.0222	8.685	1069.8	0.0223
7	5.563	1089.6	0.0222	8.140	990.2	0.0222	8.773	1077.4	0.0223
8	5.611	1098.5	0.0221	8.155	980.7	0.0221	8.790	1080.9	0.0222
9	5.593	1108.9	0.0221	8.123	976.3	0.0220	8.760	1083.5	0.0221
10	5.514	1120.1	0.0220	8.051	975.9	0.0220	8.695	1086.9	0.0221
11	5.389	1128.8	0.0219	7.954	979.1	0.0219	8.612	1092.1	0.0220
12	5.249	1130.5	0.0219	7.863	985.7	0.0219	8.543	1098.0	0.0219
13	5.130	1121.6	0.0218	7.817	995.7	0.0218	8.516	1100.6	0.0219
14	5.042	1101.7	0.0218	7.825	1010.4	0.0218	8.532	1094.9	0.0218
15	4.920	1071.3	0.0217	7.822	1032.5	0.0217	8.515	1076.5	0.0217
16	4.607	1025.1	0.0216	7.567	1052.2	0.0217	8.216	1042.7	0.0217
17	3.890	947.7	0.0216	6.588	1026.3	0.0216	7.143	982.2	0.0216
18	2.347	793.9	0.0216	4.052	876.4	0.0216	4.398	840.4	0.0216

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP4	T-Fuel	Spec.Vol	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol
1	6.778	1114.3	0.0237	8.657	850.5	0.0228	9.702	878.7	0.0228
2	11.124	1309.4	0.0236	14.019	943.4	0.0227	15.545	959.9	0.0228
3	13.736	1401.2	0.0235	17.187	982.9	0.0227	18.921	978.2	0.0227
4	15.025	1438.2	0.0233	18.694	987.5	0.0226	20.464	970.4	0.0226
5	15.609	1452.7	0.0232	19.345	980.3	0.0225	21.099	959.3	0.0225
6	15.841	1459.7	0.0230	19.575	969.2	0.0225	21.305	950.4	0.0225
7	15.887	1466.4	0.0229	19.583	956.5	0.0224	21.292	943.7	0.0224
8	15.804	1473.4	0.0227	19.434	945.3	0.0223	21.122	938.0	0.0223
9	15.584	1473.3	0.0226	19.153	941.9	0.0223	20.823	934.5	0.0223
10	15.235	1449.3	0.0224	18.801	951.4	0.0222	20.475	936.6	0.0222
11	14.872	1389.0	0.0223	18.508	971.3	0.0221	20.212	943.6	0.0222
12	14.651	1328.2	0.0222	18.403	995.1	0.0221	20.157	952.5	0.0221
13	14.649	1285.8	0.0221	18.538	1015.8	0.0220	20.371	962.9	0.0220
14	14.836	1262.9	0.0220	18.925	1029.2	0.0219	20.990	991.6	0.0220
15	15.050	1267.8	0.0219	19.776	1068.7	0.0219	22.760	1148.8	0.0219
16	14.823	1294.0	0.0218	20.613	1233.3	0.0218	23.682	1166.1	0.0218
17	13.246	1277.2	0.0217	18.771	1214.6	0.0217	21.602	1141.4	0.0217
18	8.474	1104.7	0.0216	12.244	1051.5	0.0216	14.238	1039.3	0.0216

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-36. Burnup and TH Feedback Parameters by Axial Node for Assembly O1

Axial	Burnup	OC1 to SP2		Burnup	SP2 to SP3	
Node	SP2	T-Fuel	Spec.Vol	SP3	T-Fuel	Spec.Vol
1	2.270	825.0	0.0236	3.557	841.6	0.0225
2	3.977	982.4	0.0236	6.090	981.2	0.0225
3	5.373	1099.5	0.0235	7.986	1043.8	0.0224
4	6.781	1195.7	0.0234	9.617	1037.1	0.0223
5	10.599	1418.1	0.0233	13.312	961.7	0.0223
6	12.825	1512.9	0.0232	15.391	918.2	0.0222
7	13.478	1519.9	0.0230	15.966	898.9	0.0222
8	13.638	1509.5	0.0228	16.080	888.8	0.0221
9	13.636	1498.8	0.0227	16.048	882.9	0.0221
10	13.609	1492.4	0.0226	15.996	878.2	0.0220
11	13.621	1491.5	0.0224	15.991	873.7	0.0220
12	13.679	1495.8	0.0223	16.060	871.9	0.0219
13	13.741	1503.7	0.0221	16.174	875.2	0.0219
14	13.709	1512.2	0.0220	16.247	885.8	0.0218
15	13.411	1513.7	0.0219	16.258	920.9	0.0218
16	12.554	1488.1	0.0218	16.316	1081.4	0.0217
17	10.596	1388.5	0.0216	14.517	1130.2	0.0217
18	6.368	1109.9	0.0216	9.061	1000.2	0.0216

Statepoint	EFPD / Cycle
OC1	0.0 / Cy1 Oconee 1
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-37. Burnup and TH Feedback Parameters by Axial Node for Assembly B8

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	1.434	819.9	0.0226	4.817	1129.5	0.0237	6.615	1143.8	0.0236
2	2.453	982.8	0.0225	7.896	1370.7	0.0236	10.601	1305.8	0.0235
3	3.071	1079.7	0.0225	9.601	1475.6	0.0235	12.681	1360.2	0.0234
4	3.349	1121.1	0.0224	10.304	1502.5	0.0233	13.465	1360.4	0.0232
5	3.457	1138.9	0.0224	10.551	1498.1	0.0232	13.702	1349.1	0.0231
6	3.491	1147.1	0.0223	10.596	1480.8	0.0231	13.722	1338.4	0.0230
7	3.494	1151.5	0.0222	10.533	1457.2	0.0229	13.634	1329.7	0.0228
8	3.484	1153.6	0.0222	10.392	1433.6	0.0228	13.465	1321.3	0.0227
9	3.467	1152.6	0.0221	10.223	1422.0	0.0227	13.266	1314.1	0.0226
10	3.449	1147.4	0.0220	10.124	1431.4	0.0226	13.157	1312.5	0.0225
11	3.436	1138.2	0.0220	10.158	1460.9	0.0224	13.219	1317.1	0.0224
12	3.432	1126.1	0.0219	10.316	1504.1	0.0223	13.443	1326.2	0.0223
13	3.435	1113.0	0.0218	10.552	1546.0	0.0222	13.779	1338.9	0.0221
14	3.453	1101.0	0.0218	10.767	1566.5	0.0220	14.106	1351.7	0.0220
15	3.490	1093.4	0.0217	10.800	1559.6	0.0219	14.197	1356.7	0.0219
16	3.465	1087.4	0.0217	10.426	1519.8	0.0218	13.758	1346.4	0.0218
17	3.092	1041.7	0.0216	9.150	1416.8	0.0217	12.181	1302.2	0.0217
18	1.891	858.9	0.0216	5.726	1154.2	0.0216	7.777	1130.5	0.0216

Axial Node	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol
1	8.213	1143.8	0.0236	10.501	791.8	0.0235	10.800	878.5	0.0234
2	12.949	1305.8	0.0235	16.759	876.9	0.0235	17.229	1013.4	0.0233
3	15.343	1360.2	0.0234	21.501	984.4	0.0234	22.252	1167.5	0.0232
4	16.229	1360.4	0.0232	24.035	1188.7	0.0233	24.904	1175.6	0.0231
5	16.497	1349.1	0.0231	24.935	1271.4	0.0232	25.826	1163.1	0.0230
6	16.519	1338.4	0.0230	25.271	1317.9	0.0231	26.163	1150.9	0.0229
7	16.419	1329.7	0.0228	25.394	1353.5	0.0229	26.285	1142.9	0.0227
8	16.238	1321.3	0.0227	25.412	1382.1	0.0228	26.307	1140.3	0.0226
9	16.054	1314.1	0.0226	25.382	1399.6	0.0226	26.285	1140.9	0.0225
10	15.993	1312.5	0.0225	25.361	1398.5	0.0225	26.270	1139.7	0.0224
11	16.116	1317.1	0.0224	25.392	1376.5	0.0223	26.303	1134.2	0.0223
12	16.389	1326.2	0.0223	25.484	1338.5	0.0222	26.396	1125.6	0.0222
13	16.726	1338.9	0.0221	25.614	1293.3	0.0221	26.525	1116.6	0.0221
14	16.977	1351.7	0.0220	25.721	1254.6	0.0220	26.637	1112.4	0.0220
15	16.928	1356.7	0.0219	25.639	1231.1	0.0219	26.568	1117.7	0.0219
16	16.311	1346.4	0.0218	24.915	1214.8	0.0218	25.851	1126.4	0.0218
17	14.462	1302.2	0.0217	22.375	1175.9	0.0217	23.259	1115.1	0.0217
18	9.341	1130.5	0.0216	14.780	1022.6	0.0216	15.417	1024.3	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-38. Burnup and TH Feedback Parameters by Axial Node for Assembly B15

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	1.572	844.5	0.0227	4.782	1109.3	0.0237	6.522	1128.2	0.0236
2	2.700	1023.2	0.0226	7.908	1348.5	0.0236	10.549	1290.7	0.0235
3	3.390	1126.0	0.0226	9.707	1454.5	0.0235	12.732	1346.1	0.0234
4	3.710	1172.8	0.0225	10.487	1481.6	0.0233	13.595	1345.7	0.0232
5	3.840	1193.8	0.0224	10.777	1476.1	0.0232	13.871	1333.2	0.0231
6	3.886	1204.0	0.0224	10.844	1457.8	0.0230	13.910	1321.6	0.0230
7	3.894	1209.9	0.0223	10.791	1432.0	0.0229	13.829	1312.0	0.0228
8	3.885	1213.0	0.0222	10.641	1403.9	0.0228	13.641	1301.0	0.0227
9	3.866	1212.3	0.0221	10.442	1388.9	0.0227	13.394	1289.1	0.0226
10	3.841	1206.2	0.0221	10.329	1398.7	0.0226	13.258	1285.3	0.0225
11	3.820	1194.9	0.0220	10.369	1429.5	0.0224	13.323	1289.8	0.0224
12	3.808	1180.1	0.0219	10.535	1475.3	0.0223	13.559	1299.6	0.0223
13	3.806	1164.7	0.0219	10.799	1525.6	0.0222	13.941	1316.2	0.0221
14	3.809	1150.5	0.0218	11.079	1552.7	0.0221	14.387	1338.6	0.0220
15	3.793	1137.6	0.0217	11.177	1556.3	0.0219	14.612	1355.2	0.0219
16	3.660	1116.6	0.0217	10.834	1536.8	0.0218	14.245	1352.9	0.0218
17	3.168	1051.1	0.0216	9.513	1449.2	0.0217	12.638	1313.9	0.0217
18	1.901	859.4	0.0216	5.952	1181.4	0.0216	8.076	1141.5	0.0216

Axial Node	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol
1	8.118	1128.2	0.0236	11.978	934.5	0.0235	12.473	1018.9	0.0234
2	12.898	1290.7	0.0235	18.922	1079.1	0.0234	19.653	1123.9	0.0233
3	15.421	1346.1	0.0234	22.699	1164.8	0.0233	23.537	1156.2	0.0232
4	16.420	1345.7	0.0232	24.368	1222.9	0.0232	25.241	1157.1	0.0231
5	16.747	1333.2	0.0231	25.077	1267.1	0.0230	25.958	1148.6	0.0229
6	16.791	1321.6	0.0230	25.353	1301.2	0.0229	26.233	1140.0	0.0228
7	16.691	1312.0	0.0228	25.399	1326.7	0.0228	26.278	1135.0	0.0227
8	16.475	1301.0	0.0227	25.253	1342.1	0.0226	26.132	1134.7	0.0226
9	16.234	1289.1	0.0226	24.947	1340.9	0.0225	25.823	1135.8	0.0225
10	16.150	1285.3	0.0225	24.640	1314.6	0.0224	25.506	1130.7	0.0224
11	16.286	1289.8	0.0224	24.520	1271.7	0.0223	25.379	1118.0	0.0223
12	16.584	1299.6	0.0223	24.633	1229.5	0.0221	25.493	1105.0	0.0222
13	16.982	1316.2	0.0221	24.955	1195.5	0.0220	25.823	1095.3	0.0221
14	17.347	1338.6	0.0220	25.402	1175.2	0.0219	26.290	1093.1	0.0220
15	17.414	1355.2	0.0219	25.669	1170.9	0.0218	26.590	1104.6	0.0219
16	16.859	1352.9	0.0218	25.128	1165.7	0.0217	26.066	1121.2	0.0218
17	14.978	1313.9	0.0217	22.565	1130.7	0.0217	23.450	1112.2	0.0217
18	9.686	1141.5	0.0216	14.847	984.8	0.0216	15.480	1019.8	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-39. Burnup and TH Feedback Parameters by Axial Node for Assembly B20

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	2.697	1037.1	0.0235	4.724	929.2	0.0236	5.934	965.5	0.0235
2	4.534	1298.0	0.0234	8.441	1238.4	0.0236	10.846	1243.8	0.0234
3	5.624	1437.7	0.0233	11.277	1382.3	0.0234	14.212	1310.4	0.0233
4	6.123	1502.4	0.0232	12.407	1408.2	0.0233	15.430	1303.5	0.0232
5	6.332	1533.1	0.0231	12.897	1396.7	0.0232	15.894	1286.0	0.0231
6	6.412	1550.2	0.0229	13.039	1380.7	0.0230	16.001	1272.9	0.0229
7	6.431	1562.2	0.0228	13.052	1366.1	0.0229	15.992	1264.7	0.0228
8	6.412	1570.6	0.0226	13.021	1358.1	0.0228	15.956	1260.4	0.0227
9	6.359	1571.8	0.0225	12.992	1362.3	0.0227	15.940	1259.8	0.0226
10	6.281	1559.9	0.0224	13.011	1381.7	0.0225	15.995	1263.3	0.0225
11	6.206	1534.2	0.0223	13.093	1411.7	0.0224	16.132	1269.1	0.0223
12	6.164	1502.9	0.0222	13.217	1442.8	0.0223	16.320	1275.0	0.0222
13	6.161	1473.8	0.0220	13.344	1466.1	0.0222	16.519	1281.0	0.0221
14	6.172	1450.2	0.0219	13.411	1476.2	0.0220	16.665	1288.5	0.0220
15	6.126	1430.3	0.0218	13.296	1471.6	0.0219	16.603	1295.2	0.0219
16	5.857	1396.6	0.0217	12.742	1447.6	0.0218	16.006	1293.8	0.0218
17	5.044	1300.5	0.0216	11.140	1375.0	0.0217	14.141	1264.7	0.0217
18	3.054	1033.6	0.0216	6.991	1145.8	0.0216	9.050	1108.6	0.0216

Axial	Burnup	SP7 to SP8		Burnup	SP8 to SP9		Burnup	SP9 to SP10	
Node	SP8	T-Fuel	Spec.Vol	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol
1	7.566	965.5	0.0235	11.757	969.1	0.0236	12.290	1054.4	0.0234
2	13.218	1243.8	0.0234	19.602	1101.8	0.0235	20.371	1147.3	0.0233
3	16.885	1310.4	0.0233	24.423	1164.2	0.0234	25.289	1163.9	0.0232
4	18.199	1303.5	0.0232	26.397	1216.0	0.0233	27.295	1158.9	0.0231
5	18.692	1286.0	0.0231	27.270	1258.9	0.0231	28.174	1146.2	0.0230
6	18.810	1272.9	0.0229	27.629	1293.8	0.0230	28.530	1135.0	0.0229
7	18.810	1264.7	0.0228	27.795	1320.4	0.0229	28.695	1127.9	0.0227
8	18.791	1260.4	0.0227	27.887	1337.6	0.0227	28.786	1124.9	0.0226
9	18.813	1259.8	0.0226	27.920	1339.7	0.0226	28.819	1123.4	0.0225
10	18.922	1263.3	0.0225	27.899	1320.5	0.0224	28.794	1118.0	0.0224
11	19.107	1269.1	0.0223	27.875	1284.6	0.0223	28.766	1107.8	0.0223
12	19.308	1275.0	0.0222	27.878	1244.6	0.0222	28.769	1096.8	0.0222
13	19.462	1281.0	0.0221	27.898	1209.0	0.0221	28.796	1088.8	0.0221
14	19.499	1288.5	0.0220	27.921	1185.0	0.0220	28.833	1087.4	0.0220
15	19.284	1295.2	0.0219	27.787	1174.6	0.0219	28.722	1095.9	0.0219
16	18.516	1293.8	0.0218	26.947	1163.9	0.0218	27.890	1107.4	0.0218
17	16.400	1264.7	0.0217	24.140	1131.4	0.0217	25.029	1099.8	0.0217
18	10.617	1108.6	0.0216	15.957	997.0	0.0216	16.599	1014.7	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-40. Burnup and TH Feedback Parameters by Axial Node for Assembly B20a

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	2.693	1037.1	0.0235	5.526	1053.4	0.0236	7.148	1086.0	0.0235
2	4.526	1298.0	0.0234	9.151	1263.8	0.0235	11.631	1240.7	0.0234
3	5.615	1437.7	0.0233	11.307	1357.2	0.0234	14.168	1292.0	0.0233
4	6.113	1502.4	0.0232	12.290	1380.2	0.0233	15.233	1289.0	0.0232
5	6.322	1533.1	0.0231	12.687	1374.3	0.0231	15.612	1274.8	0.0230
6	6.402	1550.2	0.0229	12.823	1361.1	0.0230	15.718	1262.6	0.0229
7	6.421	1562.2	0.0228	12.854	1349.4	0.0229	15.731	1254.9	0.0228
8	6.404	1570.6	0.0226	12.852	1344.8	0.0228	15.728	1251.3	0.0227
9	6.352	1571.8	0.0225	12.861	1351.8	0.0226	15.757	1251.7	0.0226
10	6.277	1559.9	0.0224	12.913	1372.2	0.0225	15.852	1255.7	0.0225
11	6.206	1534.2	0.0223	13.013	1400.9	0.0224	16.009	1261.4	0.0223
12	6.167	1502.9	0.0222	13.133	1428.3	0.0223	16.192	1266.5	0.0222
13	6.167	1473.8	0.0220	13.236	1447.0	0.0222	16.364	1271.8	0.0221
14	6.181	1450.2	0.0219	13.282	1454.3	0.0220	16.494	1280.7	0.0220
15	6.134	1430.3	0.0218	13.177	1452.2	0.0219	16.462	1291.6	0.0219
16	5.863	1396.6	0.0217	12.664	1436.2	0.0218	15.915	1292.0	0.0218
17	5.048	1300.5	0.0216	11.095	1368.8	0.0217	14.085	1262.8	0.0217
18	3.056	1033.6	0.0216	6.968	1142.1	0.0216	9.018	1106.8	0.0216

Axial	Burnup	SP7 to SP8		Burnup	SP8 to SP9		Burnup	SP9 to SP10	
Node	SP8	T-Fuel	Spec.Vol	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol
1	8.735	1086.0	0.0235	12.246	885.2	0.0234	12.701	999.1	0.0232
2	13.948	1240.7	0.0234	19.408	1008.1	0.0233	20.076	1095.9	0.0232
3	16.805	1292.0	0.0233	23.446	1082.9	0.0232	24.216	1124.9	0.0231
4	17.999	1289.0	0.0232	25.334	1143.2	0.0231	26.144	1121.3	0.0229
5	18.429	1274.8	0.0230	26.179	1192.5	0.0230	26.999	1106.9	0.0228
6	18.553	1262.6	0.0229	26.552	1229.3	0.0229	27.370	1092.7	0.0227
7	18.580	1254.9	0.0228	26.744	1255.6	0.0228	27.558	1081.7	0.0226
8	18.602	1251.3	0.0227	26.882	1273.0	0.0226	27.695	1074.3	0.0225
9	18.672	1251.7	0.0226	27.013	1279.5	0.0225	27.826	1068.6	0.0224
10	18.821	1255.7	0.0225	27.147	1272.8	0.0224	27.959	1062.9	0.0223
11	19.023	1261.4	0.0223	27.254	1253.1	0.0223	28.066	1056.4	0.0222
12	19.210	1266.5	0.0222	27.299	1225.0	0.0221	28.111	1050.2	0.0221
13	19.329	1271.8	0.0221	27.277	1195.2	0.0220	28.091	1046.0	0.0220
14	19.343	1280.7	0.0220	27.200	1169.5	0.0219	28.020	1046.0	0.0219
15	19.149	1291.6	0.0219	26.963	1150.6	0.0218	27.793	1051.1	0.0219
16	18.424	1292.0	0.0218	26.107	1133.3	0.0217	26.941	1058.0	0.0218
17	16.339	1262.8	0.0217	23.405	1100.7	0.0217	24.195	1051.4	0.0217
18	10.581	1106.8	0.0216	15.467	971.1	0.0216	16.041	976.8	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-41. Burnup and TH Feedback Parameters by Axial Node for Assembly B20b1

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	2.693	1037.1	0.0235	5.526	1053.4	0.0236	7.148	1086.0	0.0235
2	4.526	1298.0	0.0234	9.151	1263.8	0.0235	11.631	1240.7	0.0234
3	5.615	1437.7	0.0233	11.307	1357.2	0.0234	14.168	1292.0	0.0233
4	6.113	1502.4	0.0232	12.290	1380.2	0.0233	15.233	1289.0	0.0232
5	6.322	1533.1	0.0231	12.687	1374.3	0.0231	15.612	1274.8	0.0230
6	6.402	1550.2	0.0229	12.823	1361.1	0.0230	15.718	1262.6	0.0229
7	6.421	1562.2	0.0228	12.854	1349.4	0.0229	15.731	1254.9	0.0228
8	6.404	1570.6	0.0226	12.852	1344.8	0.0228	15.728	1251.3	0.0227
9	6.352	1571.8	0.0225	12.861	1351.8	0.0226	15.757	1251.7	0.0226
10	6.277	1559.9	0.0224	12.913	1372.2	0.0225	15.852	1255.7	0.0225
11	6.206	1534.2	0.0223	13.013	1400.9	0.0224	16.009	1261.4	0.0223
12	6.167	1502.9	0.0222	13.133	1428.3	0.0223	16.192	1266.5	0.0222
13	6.167	1473.8	0.0220	13.236	1447.0	0.0222	16.364	1271.8	0.0221
14	6.181	1450.2	0.0219	13.282	1454.3	0.0220	16.494	1280.7	0.0220
15	6.134	1430.3	0.0218	13.177	1452.2	0.0219	16.462	1291.6	0.0219
16	5.863	1396.6	0.0217	12.664	1436.2	0.0218	15.915	1292.0	0.0218
17	5.048	1300.5	0.0216	11.095	1368.8	0.0217	14.085	1262.8	0.0217
18	3.056	1033.6	0.0216	6.968	1142.1	0.0216	9.018	1106.8	0.0216

Axial	Burnup	SP7 to SP11		Burnup	SP11 to SP12	
Node	SP11	T-Fuel	Spec.Vol	SP12	T-Fuel	Spec.Vol
1	8.735	1086.0	0.0235	14.867	936.1	0.0229
2	13.948	1240.7	0.0234	22.963	1013.8	0.0228
3	16.805	1292.0	0.0233	27.028	1021.3	0.0227
4	17.999	1289.0	0.0232	28.563	1008.6	0.0226
5	18.429	1274.8	0.0230	29.031	994.8	0.0225
6	18.553	1262.6	0.0229	29.100	984.6	0.0225
7	18.580	1254.9	0.0228	29.055	978.3	0.0224
8	18.602	1251.3	0.0227	29.021	975.7	0.0223
9	18.672	1251.7	0.0226	29.063	976.0	0.0222
10	18.821	1255.7	0.0225	29.210	978.0	0.0222
11	19.023	1261.4	0.0223	29.412	980.0	0.0221
12	19.210	1266.5	0.0222	29.580	981.1	0.0220
13	19.329	1271.8	0.0221	29.645	980.9	0.0219
14	19.343	1280.7	0.0220	29.555	979.4	0.0219
15	19.149	1291.6	0.0219	29.184	977.4	0.0218
16	18.424	1292.0	0.0218	28.120	973.9	0.0217
17	16.339	1262.8	0.0217	25.154	959.9	0.0216
18	10.581	1106.8	0.0216	16.690	886.8	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-42. Burnup and TH Feedback Parameters by Axial Node for Assembly B20b2

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	2.693	1037.1	0.0235	5.526	1053.4	0.0236	7.148	1086.0	0.0235
2	4.526	1298.0	0.0234	9.151	1263.8	0.0235	11.631	1240.7	0.0234
3	5.615	1437.7	0.0233	11.307	1357.2	0.0234	14.168	1292.0	0.0233
4	6.113	1502.4	0.0232	12.290	1380.2	0.0233	15.233	1289.0	0.0232
5	6.322	1533.1	0.0231	12.687	1374.3	0.0231	15.612	1274.8	0.0230
6	6.402	1550.2	0.0229	12.823	1361.1	0.0230	15.718	1262.6	0.0229
7	6.421	1562.2	0.0228	12.854	1349.4	0.0229	15.731	1254.9	0.0228
8	6.404	1570.6	0.0226	12.852	1344.8	0.0228	15.728	1251.3	0.0227
9	6.352	1571.8	0.0225	12.861	1351.8	0.0226	15.757	1251.7	0.0226
10	6.277	1559.9	0.0224	12.913	1372.2	0.0225	15.852	1255.7	0.0225
11	6.206	1534.2	0.0223	13.013	1400.9	0.0224	16.009	1261.4	0.0223
12	6.167	1502.9	0.0222	13.133	1428.3	0.0223	16.192	1266.5	0.0222
13	6.167	1473.8	0.0220	13.236	1447.0	0.0222	16.364	1271.8	0.0221
14	6.181	1450.2	0.0219	13.282	1454.3	0.0220	16.494	1280.7	0.0220
15	6.134	1430.3	0.0218	13.177	1452.2	0.0219	16.462	1291.6	0.0219
16	5.863	1396.6	0.0217	12.664	1436.2	0.0218	15.915	1292.0	0.0218
17	5.048	1300.5	0.0216	11.095	1368.8	0.0217	14.085	1262.8	0.0217
18	3.056	1033.6	0.0216	6.968	1142.1	0.0216	9.018	1106.8	0.0216

Axial	Burnup	SP7 to SP13		Burnup	SP13 to SP14		Burnup	SP14 to SP15	
Node	SP13	T-Fuel	Spec.Vol	SP14	T-Fuel	Spec.Vol	SP15	T-Fuel	Spec.Vol
1	8.735	1086.0	0.0235	10.300	949.6	0.0230	16.097	970.4	0.0230
2	13.948	1240.7	0.0234	16.307	1054.6	0.0230	24.495	1046.0	0.0230
3	16.805	1292.0	0.0233	19.522	1077.1	0.0229	28.537	1056.9	0.0229
4	17.999	1289.0	0.0232	20.856	1080.3	0.0228	30.009	1048.7	0.0228
5	18.429	1274.8	0.0230	21.355	1078.4	0.0227	30.470	1038.8	0.0227
6	18.553	1262.6	0.0229	21.523	1075.6	0.0226	30.567	1030.6	0.0226
7	18.580	1254.9	0.0228	21.578	1072.5	0.0225	30.555	1024.0	0.0225
8	18.602	1251.3	0.0227	21.615	1068.7	0.0224	30.529	1018.3	0.0224
9	18.672	1251.7	0.0226	21.684	1063.5	0.0223	30.531	1012.7	0.0223
10	18.821	1255.7	0.0225	21.814	1056.6	0.0222	30.588	1006.8	0.0222
11	19.023	1261.4	0.0223	21.981	1048.8	0.0221	30.683	1001.2	0.0221
12	19.210	1266.5	0.0222	22.123	1041.0	0.0220	30.771	996.9	0.0221
13	19.329	1271.8	0.0221	22.192	1034.4	0.0220	30.813	995.0	0.0220
14	19.343	1280.7	0.0220	22.150	1028.8	0.0219	30.773	995.5	0.0219
15	19.149	1291.6	0.0219	21.887	1023.3	0.0218	30.515	998.4	0.0218
16	18.424	1292.0	0.0218	21.048	1015.0	0.0217	29.584	1001.3	0.0217
17	16.339	1262.8	0.0217	18.695	992.6	0.0217	26.676	992.8	0.0217
18	10.581	1106.8	0.0216	12.172	900.4	0.0216	17.903	923.4	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-43. Burnup and TH Feedback Parameters by Axial Node for Assembly B20b3

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	2.693	1037.1	0.0235	5.526	1053.4	0.0236	7.148	1086.0	0.0235
2	4.526	1298.0	0.0234	9.151	1263.8	0.0235	11.631	1240.7	0.0234
3	5.615	1437.7	0.0233	11.307	1357.2	0.0234	14.168	1292.0	0.0233
4	6.113	1502.4	0.0232	12.290	1380.2	0.0233	15.233	1289.0	0.0232
5	6.322	1533.1	0.0231	12.687	1374.3	0.0231	15.612	1274.8	0.0230
6	6.402	1550.2	0.0229	12.823	1361.1	0.0230	15.718	1262.6	0.0229
7	6.421	1562.2	0.0228	12.854	1349.4	0.0229	15.731	1254.9	0.0228
8	6.404	1570.6	0.0226	12.852	1344.8	0.0228	15.728	1251.3	0.0227
9	6.352	1571.8	0.0225	12.861	1351.8	0.0226	15.757	1251.7	0.0226
10	6.277	1559.9	0.0224	12.913	1372.2	0.0225	15.852	1255.7	0.0225
11	6.206	1534.2	0.0223	13.013	1400.9	0.0224	16.009	1261.4	0.0223
12	6.167	1502.9	0.0222	13.133	1428.3	0.0223	16.192	1266.5	0.0222
13	6.167	1473.8	0.0220	13.236	1447.0	0.0222	16.364	1271.8	0.0221
14	6.181	1450.2	0.0219	13.282	1454.3	0.0220	16.494	1280.7	0.0220
15	6.134	1430.3	0.0218	13.177	1452.2	0.0219	16.462	1291.6	0.0219
16	5.863	1396.6	0.0217	12.664	1436.2	0.0218	15.915	1292.0	0.0218
17	5.048	1300.5	0.0216	11.095	1368.8	0.0217	14.085	1262.8	0.0217
18	3.056	1033.6	0.0216	6.968	1142.1	0.0216	9.018	1106.8	0.0216

Axial	Burnup	SP7 to SP16		Burnup	SP16 to SP17		Burnup	SP17 to SP18	
Node	SP16	T-Fuel	Spec.Vol	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol
1	8.735	1086.0	0.0235	12.970	963.3	0.0232	13.560	980.1	0.0232
2	13.948	1240.7	0.0234	20.372	1080.3	0.0231	21.234	1060.8	0.0232
3	16.805	1292.0	0.0233	24.317	1117.7	0.0230	25.294	1077.6	0.0231
4	17.999	1289.0	0.0232	26.003	1131.5	0.0229	27.014	1072.5	0.0230
5	18.429	1274.8	0.0230	26.670	1134.6	0.0228	27.686	1064.5	0.0228
6	18.553	1262.6	0.0229	26.913	1133.5	0.0227	27.925	1058.4	0.0227
7	18.580	1254.9	0.0228	26.999	1130.5	0.0226	28.005	1054.7	0.0226
8	18.602	1251.3	0.0227	27.042	1126.5	0.0225	28.044	1053.1	0.0225
9	18.672	1251.7	0.0226	27.103	1121.5	0.0224	28.102	1052.7	0.0224
10	18.821	1255.7	0.0225	27.213	1115.3	0.0223	28.209	1053.0	0.0223
11	19.023	1261.4	0.0223	27.351	1108.3	0.0222	28.347	1054.5	0.0222
12	19.210	1266.5	0.0222	27.458	1101.4	0.0221	28.455	1057.8	0.0221
13	19.329	1271.8	0.0221	27.480	1094.9	0.0220	28.481	1063.1	0.0220
14	19.343	1280.7	0.0220	27.368	1088.0	0.0219	28.374	1070.1	0.0220
15	19.149	1291.6	0.0219	26.978	1078.7	0.0218	27.985	1078.4	0.0219
16	18.424	1292.0	0.0218	25.893	1062.8	0.0217	26.882	1084.4	0.0218
17	16.339	1262.8	0.0217	23.035	1029.5	0.0216	23.947	1073.6	0.0217
18	10.581	1106.8	0.0216	15.152	928.2	0.0216	15.795	990.5	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-43. Burnup and TH Feedback Parameters by Axial Node for Assembly B20b3 (Cont'd)

Axial	Burnup	SP18 to SP19		Burnup	SP19 to SP20		Burnup	SP20 to SP21	
Node	SP19	T-Fuel	Spec.Vol	SP20	T-Fuel	Spec.Vol	SP21	T-Fuel	Spec.Vol
1	14.127	980.1	0.0232	17.066	991.8	0.0232	17.423	991.8	0.0232
2	22.057	1060.8	0.0232	26.200	1064.3	0.0231	26.690	1064.3	0.0231
3	26.217	1077.6	0.0231	30.790	1074.0	0.0230	31.321	1074.0	0.0230
4	27.960	1072.5	0.0230	32.602	1067.7	0.0229	33.137	1067.7	0.0229
5	28.628	1064.5	0.0228	33.241	1060.3	0.0228	33.770	1060.3	0.0228
6	28.857	1058.4	0.0227	33.428	1053.2	0.0227	33.950	1053.2	0.0227
7	28.927	1054.7	0.0226	33.466	1048.1	0.0226	33.985	1048.1	0.0226
8	28.956	1053.1	0.0225	33.479	1044.7	0.0225	33.996	1044.7	0.0225
9	29.006	1052.7	0.0224	33.522	1042.6	0.0224	34.039	1042.6	0.0224
10	29.108	1053.0	0.0223	33.624	1041.1	0.0223	34.141	1041.1	0.0223
11	29.240	1054.5	0.0222	33.766	1040.4	0.0222	34.285	1040.4	0.0222
12	29.346	1057.8	0.0221	33.895	1041.2	0.0221	34.416	1041.2	0.0221
13	29.374	1063.1	0.0220	33.964	1044.2	0.0220	34.489	1044.2	0.0220
14	29.269	1070.1	0.0220	33.917	1049.4	0.0219	34.450	1049.4	0.0219
15	28.881	1078.4	0.0219	33.588	1055.9	0.0219	34.129	1055.9	0.0219
16	27.763	1084.4	0.0218	32.470	1058.5	0.0218	33.017	1058.5	0.0218
17	24.762	1073.6	0.0217	29.212	1052.2	0.0217	29.736	1052.2	0.0217
18	16.373	990.5	0.0216	19.625	981.2	0.0216	20.017	981.2	0.0216

Statepoint	EFPD / Cycle
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-44. Burnup and TH Feedback Parameters by Axial Node for Assembly B21

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	1.363	806.9	0.0226	4.478	1085.1	0.0236	6.158	1118.8	0.0236
2	2.375	967.6	0.0225	7.444	1321.1	0.0235	9.999	1278.8	0.0235
3	3.017	1065.0	0.0225	9.154	1426.5	0.0234	12.092	1336.0	0.0233
4	3.329	1111.2	0.0224	9.914	1458.9	0.0233	12.952	1340.6	0.0232
5	3.465	1132.9	0.0223	10.215	1459.9	0.0231	13.260	1332.3	0.0231
6	3.518	1144.0	0.0223	10.297	1446.2	0.0230	13.329	1323.5	0.0229
7	3.532	1150.4	0.0222	10.248	1422.2	0.0229	13.261	1315.7	0.0228
8	3.525	1153.8	0.0221	10.080	1393.1	0.0227	13.060	1305.9	0.0227
9	3.504	1153.2	0.0221	9.838	1375.0	0.0226	12.767	1294.6	0.0226
10	3.475	1146.8	0.0220	9.662	1380.5	0.0225	12.561	1290.9	0.0225
11	3.447	1135.0	0.0219	9.640	1407.8	0.0224	12.557	1295.7	0.0224
12	3.428	1120.0	0.0219	9.772	1453.0	0.0223	12.754	1306.3	0.0222
13	3.419	1104.8	0.0218	10.034	1505.0	0.0222	13.134	1324.0	0.0221
14	3.408	1090.8	0.0218	10.323	1536.7	0.0220	13.587	1347.2	0.0220
15	3.354	1075.5	0.0217	10.398	1541.5	0.0219	13.786	1364.5	0.0219
16	3.166	1046.6	0.0217	9.983	1515.9	0.0218	13.344	1362.6	0.0218
17	2.665	974.8	0.0216	8.622	1419.7	0.0217	11.682	1319.4	0.0217
18	1.557	804.3	0.0216	5.285	1147.7	0.0216	7.334	1140.1	0.0216

Axial	Burnup	SP7 to SP8		Burnup	SP8 to SP9		Burnup	SP9 to SP10	
Node	SP8	T-Fuel	Spec.Vol	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol
1	7.640	1118.8	0.0236	9.564	748.9	0.0225	9.824	815.7	0.0226
2	12.212	1278.8	0.0235	15.231	821.5	0.0224	15.619	890.2	0.0226
3	14.652	1336.0	0.0233	18.349	870.2	0.0224	18.804	916.4	0.0225
4	15.658	1340.6	0.0232	19.710	901.4	0.0224	20.188	919.4	0.0225
5	16.025	1332.3	0.0231	20.270	923.9	0.0223	20.753	915.9	0.0224
6	16.105	1323.5	0.0229	20.461	940.4	0.0222	20.945	911.8	0.0223
7	16.020	1315.7	0.0228	20.443	952.1	0.0222	20.926	909.4	0.0223
8	15.791	1305.9	0.0227	20.247	959.3	0.0221	20.732	909.7	0.0222
9	15.500	1294.6	0.0226	19.952	960.2	0.0221	20.438	911.2	0.0222
10	15.338	1290.9	0.0225	19.743	952.3	0.0220	20.230	910.9	0.0221
11	15.400	1295.7	0.0224	19.730	936.9	0.0219	20.218	907.4	0.0221
12	15.662	1306.3	0.0222	19.921	918.2	0.0219	20.409	901.8	0.0220
13	16.071	1324.0	0.0221	20.288	900.3	0.0218	20.781	896.7	0.0219
14	16.466	1347.2	0.0220	20.714	886.9	0.0218	21.215	897.1	0.0219
15	16.536	1364.5	0.0219	21.105	883.4	0.0217	21.642	926.5	0.0218
16	15.927	1362.6	0.0218	21.915	919.3	0.0217	22.649	1070.2	0.0218
17	13.991	1319.4	0.0217	20.213	1013.1	0.0216	20.979	1070.8	0.0217
18	8.904	1140.1	0.0216	13.191	908.9	0.0216	13.740	979.4	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-45. Burnup and TH Feedback Parameters by Axial Node for Assembly B21a

Axial	Burnup	SP4 to SP5		Burnup	SP5 to SP6		Burnup	SP6 to SP7	
Node	SP5	T-Fuel	Spec.Vol	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol
1	1.363	806.9	0.0226	4.478	1085.1	0.0236	6.158	1118.8	0.0236
2	2.375	967.6	0.0225	7.444	1321.1	0.0235	9.999	1278.8	0.0235
3	3.017	1065.0	0.0225	9.154	1426.5	0.0234	12.092	1336.0	0.0233
4	3.329	1111.2	0.0224	9.914	1458.9	0.0233	12.952	1340.6	0.0232
5	3.465	1132.9	0.0223	10.215	1459.9	0.0231	13.260	1332.3	0.0231
6	3.518	1144.0	0.0223	10.297	1446.2	0.0230	13.329	1323.5	0.0229
7	3.532	1150.4	0.0222	10.248	1422.2	0.0229	13.261	1315.7	0.0228
8	3.525	1153.8	0.0221	10.080	1393.1	0.0227	13.060	1305.9	0.0227
9	3.504	1153.2	0.0221	9.838	1375.0	0.0226	12.767	1294.6	0.0226
10	3.475	1146.8	0.0220	9.662	1380.5	0.0225	12.561	1290.9	0.0225
11	3.447	1135.0	0.0219	9.640	1407.8	0.0224	12.557	1295.7	0.0224
12	3.428	1120.0	0.0219	9.772	1453.0	0.0223	12.754	1306.3	0.0222
13	3.419	1104.8	0.0218	10.034	1505.0	0.0222	13.134	1324.0	0.0221
14	3.408	1090.8	0.0218	10.323	1536.7	0.0220	13.587	1347.2	0.0220
15	3.354	1075.5	0.0217	10.398	1541.5	0.0219	13.786	1364.5	0.0219
16	3.166	1046.6	0.0217	9.983	1515.9	0.0218	13.344	1362.6	0.0218
17	2.665	974.8	0.0216	8.622	1419.7	0.0217	11.682	1319.4	0.0217
18	1.557	804.3	0.0216	5.285	1147.7	0.0216	7.334	1140.1	0.0216

Axial	Burnup	SP7 to SP8		Burnup	SP8 to SP9		Burnup	SP9 to SP10	
Node	SP8	T-Fuel	Spec.Vol	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol
1	7.632	1118.8	0.0236	11.485	934.9	0.0236	11.978	1029.0	0.0234
2	12.199	1278.8	0.0235	18.297	1082.9	0.0235	19.033	1144.8	0.0234
3	14.635	1336.0	0.0233	22.177	1184.5	0.0234	23.038	1185.2	0.0232
4	15.639	1340.6	0.0232	24.033	1263.9	0.0233	24.941	1188.1	0.0231
5	16.004	1332.3	0.0231	24.883	1324.1	0.0232	25.803	1177.2	0.0230
6	16.083	1323.5	0.0229	25.241	1367.1	0.0230	26.160	1165.9	0.0229
7	15.998	1315.7	0.0228	25.323	1396.1	0.0229	26.241	1159.6	0.0227
8	15.769	1305.9	0.0227	25.157	1413.1	0.0227	26.073	1159.3	0.0226
9	15.480	1294.6	0.0226	24.726	1408.9	0.0226	25.631	1160.3	0.0225
10	15.320	1290.9	0.0225	24.182	1371.6	0.0224	25.063	1151.6	0.0224
11	15.384	1295.7	0.0224	23.842	1311.6	0.0223	24.707	1131.2	0.0223
12	15.648	1306.3	0.0222	23.847	1257.6	0.0222	24.707	1111.9	0.0222
13	16.058	1324.0	0.0221	24.176	1218.8	0.0221	25.047	1098.7	0.0221
14	16.453	1347.2	0.0220	24.748	1202.9	0.0220	25.648	1096.1	0.0220
15	16.523	1364.5	0.0219	25.202	1213.2	0.0219	26.150	1112.7	0.0219
16	15.914	1362.6	0.0218	24.753	1223.7	0.0218	25.729	1137.1	0.0218
17	13.979	1319.4	0.0217	22.172	1195.9	0.0217	23.100	1133.6	0.0217
18	8.895	1140.1	0.0216	14.499	1037.1	0.0216	15.165	1041.0	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-46. Burnup and TH Feedback Parameters by Axial Node for Assembly B25

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	2.130	939.3	0.0232	5.446	1109.1	0.0235	7.219	1123.0	0.0234
2	3.655	1167.1	0.0231	9.029	1338.0	0.0234	11.708	1280.5	0.0233
3	4.623	1299.6	0.0230	11.128	1439.0	0.0233	14.196	1330.4	0.0232
4	5.110	1366.0	0.0229	12.095	1466.0	0.0231	15.256	1328.7	0.0230
5	5.338	1400.1	0.0228	12.499	1461.7	0.0230	15.657	1316.4	0.0229
6	5.436	1418.9	0.0227	12.614	1440.9	0.0228	15.749	1304.8	0.0228
7	5.468	1430.8	0.0226	12.514	1391.3	0.0227	15.615	1293.9	0.0226
8	5.459	1438.2	0.0225	11.989	1237.4	0.0226	14.953	1259.9	0.0225
9	5.417	1438.6	0.0224	10.413	1099.9	0.0225	12.748	1105.4	0.0224
10	5.351	1427.9	0.0223	9.433	1094.6	0.0224	11.370	1063.1	0.0224
11	5.285	1406.1	0.0221	9.260	1115.6	0.0224	11.158	1063.0	0.0223
12	5.242	1379.3	0.0220	9.399	1175.5	0.0223	11.350	1077.5	0.0222
13	5.227	1353.9	0.0220	10.144	1438.3	0.0222	12.345	1149.8	0.0221
14	5.216	1332.5	0.0219	12.028	1553.3	0.0221	15.152	1322.5	0.0220
15	5.140	1311.7	0.0218	12.639	1558.1	0.0219	16.089	1346.3	0.0219
16	4.859	1274.7	0.0217	12.189	1533.2	0.0218	15.638	1344.4	0.0218
17	4.119	1180.3	0.0216	10.560	1446.0	0.0217	13.726	1310.9	0.0217
18	2.445	940.9	0.0216	6.520	1178.8	0.0216	8.667	1139.7	0.0216

Axial Node	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol
1	8.787	1123.0	0.0234	12.547	915.6	0.0236	13.029	1012.9	0.0234
2	14.011	1280.5	0.0233	19.877	1049.4	0.0235	20.590	1114.8	0.0234
3	16.806	1330.4	0.0232	23.988	1132.2	0.0235	24.816	1150.6	0.0232
4	17.958	1328.7	0.0230	25.906	1197.4	0.0233	26.778	1150.9	0.0231
5	18.377	1316.4	0.0229	26.764	1249.0	0.0232	27.647	1139.2	0.0230
6	18.445	1304.8	0.0228	27.103	1288.5	0.0231	27.985	1128.2	0.0229
7	18.184	1293.9	0.0226	27.067	1324.3	0.0229	27.950	1124.3	0.0228
8	17.031	1259.9	0.0225	26.251	1377.2	0.0228	27.151	1138.5	0.0226
9	14.492	1105.4	0.0224	24.202	1460.4	0.0226	25.138	1177.6	0.0225
10	13.114	1063.1	0.0224	22.923	1483.9	0.0225	23.872	1194.1	0.0224
11	12.971	1063.0	0.0223	22.578	1451.5	0.0223	23.525	1185.1	0.0223
12	13.411	1077.5	0.0222	22.744	1397.7	0.0222	23.687	1168.1	0.0222
13	15.081	1149.8	0.0221	23.985	1307.5	0.0221	24.910	1135.2	0.0221
14	18.039	1322.5	0.0220	26.445	1201.4	0.0220	27.343	1088.8	0.0220
15	18.853	1346.3	0.0219	27.281	1173.6	0.0219	28.196	1087.3	0.0219
16	18.247	1344.4	0.0218	26.722	1169.7	0.0218	27.656	1104.8	0.0218
17	16.079	1310.9	0.0217	23.953	1147.0	0.0217	24.842	1101.9	0.0217
18	10.287	1139.7	0.0216	15.742	1012.4	0.0216	16.387	1018.5	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-47. Burnup and TH Feedback Parameters by Axial Node for Assembly B27

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	2.365	975.8	0.0236	5.549	1089.0	0.0237	7.275	1115.2	0.0236
2	4.134	1227.7	0.0235	9.346	1311.5	0.0236	11.976	1271.8	0.0235
3	5.436	1396.2	0.0234	11.784	1407.5	0.0234	14.813	1319.6	0.0234
4	6.178	1505.2	0.0233	13.023	1433.3	0.0233	16.160	1316.8	0.0232
5	6.545	1562.0	0.0231	13.586	1432.2	0.0232	16.732	1304.7	0.0231
6	6.715	1588.9	0.0230	13.797	1416.7	0.0230	16.929	1294.1	0.0229
7	6.780	1604.6	0.0228	13.787	1386.9	0.0229	16.898	1285.1	0.0228
8	6.782	1614.2	0.0227	13.558	1343.7	0.0228	16.613	1270.9	0.0227
9	6.736	1616.0	0.0226	13.140	1312.0	0.0226	16.086	1249.1	0.0226
10	6.659	1605.0	0.0224	12.799	1313.8	0.0225	15.669	1240.7	0.0225
11	6.577	1580.5	0.0223	12.684	1341.0	0.0224	15.556	1244.7	0.0224
12	6.523	1547.8	0.0222	12.791	1392.5	0.0223	15.724	1255.8	0.0222
13	6.504	1515.9	0.0221	13.128	1464.9	0.0222	16.198	1277.7	0.0221
14	6.487	1489.1	0.0219	13.572	1505.0	0.0221	16.850	1306.5	0.0220
15	6.388	1463.4	0.0218	13.669	1507.9	0.0219	17.073	1319.9	0.0219
16	6.042	1419.8	0.0217	13.076	1480.4	0.0218	16.451	1319.0	0.0218
17	5.147	1312.7	0.0217	11.272	1390.3	0.0217	14.353	1286.5	0.0217
18	3.092	1038.4	0.0216	6.919	1138.7	0.0216	8.990	1118.0	0.0216

Axial Node	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol
1	8.795	1115.2	0.0236	12.749	929.6	0.0233	13.253	1019.3	0.0232
2	14.229	1271.8	0.0235	20.373	1069.6	0.0232	21.112	1116.8	0.0231
3	17.377	1319.6	0.0234	24.801	1147.5	0.0231	25.647	1144.0	0.0230
4	18.816	1316.8	0.0232	26.933	1203.4	0.0230	27.814	1138.6	0.0229
5	19.410	1304.7	0.0231	27.914	1249.4	0.0229	28.800	1125.2	0.0228
6	19.596	1294.1	0.0229	28.331	1284.6	0.0227	29.215	1113.4	0.0227
7	19.517	1285.1	0.0228	28.397	1311.0	0.0226	29.278	1107.5	0.0225
8	19.149	1270.9	0.0227	28.091	1329.0	0.0225	28.971	1109.2	0.0224
9	18.581	1249.1	0.0226	27.173	1317.8	0.0223	28.023	1111.0	0.0223
10	18.196	1240.7	0.0225	24.903	1190.3	0.0222	25.565	1072.2	0.0222
11	18.153	1244.7	0.0224	23.778	1038.1	0.0221	24.364	959.3	0.0221
12	18.420	1255.8	0.0222	23.793	993.3	0.0221	24.370	934.4	0.0221
13	18.993	1277.7	0.0221	24.321	966.3	0.0220	24.905	922.0	0.0220
14	19.635	1306.5	0.0220	25.519	963.2	0.0219	26.172	920.2	0.0219
15	19.760	1319.9	0.0219	27.721	1096.7	0.0218	28.617	1002.5	0.0219
16	19.002	1319.0	0.0218	27.423	1156.0	0.0218	28.364	1084.8	0.0218
17	16.653	1286.5	0.0217	24.436	1135.0	0.0217	25.326	1092.3	0.0217
18	10.563	1118.0	0.0216	15.921	1001.2	0.0216	16.564	1012.9	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-48. Burnup and TH Feedback Parameters by Axial Node for Assembly B28

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	1.408	812.3	0.0227	4.466	1090.6	0.0237	6.165	1123.0	0.0236
2	2.488	980.2	0.0226	7.597	1347.6	0.0236	10.251	1301.5	0.0235
3	3.231	1091.6	0.0226	9.616	1472.2	0.0235	12.712	1364.5	0.0234
4	3.641	1154.4	0.0225	10.617	1509.7	0.0233	13.827	1365.6	0.0232
5	3.847	1188.2	0.0224	11.062	1508.6	0.0232	14.275	1353.2	0.0231
6	3.942	1206.1	0.0224	11.210	1489.7	0.0231	14.403	1341.5	0.0230
7	3.977	1215.9	0.0223	11.158	1454.5	0.0229	14.322	1330.8	0.0228
8	3.977	1221.2	0.0222	10.892	1404.2	0.0228	13.989	1313.5	0.0227
9	3.952	1221.0	0.0221	10.448	1367.5	0.0227	13.419	1287.2	0.0226
10	3.912	1213.4	0.0221	10.111	1368.7	0.0226	12.992	1276.2	0.0225
11	3.869	1198.5	0.0220	10.033	1400.3	0.0224	12.912	1280.4	0.0224
12	3.838	1179.4	0.0219	10.190	1460.9	0.0223	13.136	1293.9	0.0223
13	3.818	1160.4	0.0218	10.576	1542.9	0.0222	13.672	1319.9	0.0221
14	3.792	1142.9	0.0218	11.060	1585.2	0.0221	14.378	1352.6	0.0220
15	3.708	1123.1	0.0217	11.195	1587.4	0.0219	14.642	1366.4	0.0219
16	3.466	1087.7	0.0217	10.695	1556.8	0.0218	14.112	1362.6	0.0218
17	2.892	1006.1	0.0216	9.184	1455.2	0.0217	12.303	1322.3	0.0217
18	1.680	822.6	0.0216	5.612	1172.4	0.0216	7.707	1144.1	0.0216

Axial Node	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol
1	7.743	1123.0	0.0236	9.934	785.9	0.0234	10.221	867.3	0.0233
2	12.574	1301.5	0.0235	16.299	873.1	0.0234	16.757	1003.2	0.0233
3	15.330	1364.5	0.0234	21.432	983.8	0.0233	22.171	1154.8	0.0232
4	16.514	1365.6	0.0232	24.305	1190.3	0.0232	25.163	1162.0	0.0231
5	16.961	1353.2	0.0231	25.397	1272.4	0.0231	26.278	1149.8	0.0229
6	17.059	1341.5	0.0230	25.792	1316.2	0.0230	26.675	1139.1	0.0228
7	16.911	1330.8	0.0228	25.815	1346.0	0.0228	26.697	1134.1	0.0227
8	16.476	1313.5	0.0227	25.473	1366.4	0.0227	26.358	1136.8	0.0226
9	15.853	1287.2	0.0226	24.840	1374.8	0.0225	25.729	1143.7	0.0225
10	15.460	1276.2	0.0225	24.299	1359.1	0.0224	25.187	1145.0	0.0224
11	15.464	1280.4	0.0224	24.089	1321.5	0.0223	24.976	1137.0	0.0223
12	15.810	1293.9	0.0223	24.251	1277.6	0.0222	25.138	1123.9	0.0222
13	16.468	1319.9	0.0221	24.792	1236.7	0.0220	25.685	1109.2	0.0221
14	17.177	1352.6	0.0220	25.480	1206.5	0.0219	26.384	1098.2	0.0220
15	17.346	1366.4	0.0219	25.674	1191.9	0.0218	26.593	1098.5	0.0219
16	16.678	1362.6	0.0218	24.822	1174.9	0.0217	25.740	1103.9	0.0218
17	14.617	1322.3	0.0217	21.954	1128.2	0.0217	22.810	1091.6	0.0217
18	9.289	1144.1	0.0216	14.219	976.3	0.0216	14.825	1001.7	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-49. Burnup and TH Feedback Parameters by Axial Node for Assembly B28a

Axial	Burnup	SP4 to SP8		Burnup	SP8 to SP9		Burnup	SP9 to SP10	
Node	SP8	T-Fuel	Spec.Vol	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol
1	1.406	812.3	0.0227	5.231	991.2	0.0239	5.722	1111.4	0.0237
2	2.485	980.2	0.0226	8.653	1211.2	0.0238	9.408	1283.6	0.0236
3	3.227	1091.6	0.0226	11.058	1359.2	0.0237	11.969	1365.4	0.0234
4	3.637	1154.4	0.0225	12.475	1480.6	0.0235	13.450	1375.0	0.0233
5	3.844	1188.2	0.0224	13.232	1565.9	0.0234	14.222	1359.8	0.0232
6	3.939	1206.1	0.0224	13.645	1620.0	0.0232	14.635	1343.5	0.0230
7	3.974	1215.9	0.0223	13.918	1655.9	0.0231	14.907	1332.8	0.0229
8	3.974	1221.2	0.0222	14.144	1686.3	0.0229	15.139	1329.5	0.0228
9	3.950	1221.0	0.0221	14.299	1706.0	0.0227	15.303	1331.2	0.0226
10	3.911	1213.4	0.0221	14.285	1702.2	0.0226	15.296	1331.2	0.0225
11	3.869	1198.5	0.0220	14.123	1674.8	0.0224	15.137	1326.7	0.0224
12	3.838	1179.4	0.0219	13.899	1633.8	0.0223	14.917	1319.8	0.0223
13	3.819	1160.4	0.0218	13.665	1588.0	0.0221	14.687	1312.9	0.0221
14	3.793	1142.9	0.0218	13.496	1543.9	0.0220	14.526	1310.4	0.0220
15	3.710	1123.1	0.0217	13.397	1516.7	0.0219	14.443	1317.7	0.0219
16	3.468	1087.7	0.0217	13.004	1488.6	0.0218	14.054	1325.3	0.0218
17	2.893	1006.1	0.0216	11.550	1408.0	0.0217	12.532	1298.9	0.0217
18	1.680	822.6	0.0216	7.630	1173.2	0.0216	8.334	1149.2	0.0216

Axial	Burnup	SP10 to SP13		Burnup	SP13 to SP14		Burnup	SP14 to SP15	
Node	SP13	T-Fuel	Spec.Vol	SP14	T-Fuel	Spec.Vol	SP15	T-Fuel	Spec.Vol
1	7.683	1111.4	0.0237	9.423	1008.8	0.0234	15.946	1026.8	0.0233
2	12.312	1283.6	0.0236	14.978	1140.3	0.0233	24.356	1120.9	0.0232
3	15.282	1365.4	0.0234	18.403	1171.5	0.0232	28.870	1140.3	0.0231
4	16.838	1375.0	0.0233	20.157	1175.8	0.0231	30.865	1131.6	0.0230
5	17.566	1359.8	0.0232	20.988	1174.0	0.0229	31.686	1119.1	0.0229
6	17.905	1343.5	0.0230	21.390	1170.5	0.0228	32.021	1108.3	0.0228
7	18.110	1332.8	0.0229	21.640	1166.5	0.0227	32.199	1099.3	0.0227
8	18.315	1329.5	0.0228	21.874	1161.4	0.0226	32.365	1091.2	0.0226
9	18.516	1331.2	0.0226	22.089	1156.0	0.0225	32.522	1084.3	0.0225
10	18.594	1331.2	0.0225	22.174	1152.0	0.0224	32.570	1080.0	0.0224
11	18.537	1326.7	0.0224	22.116	1149.8	0.0223	32.506	1078.7	0.0223
12	18.406	1319.8	0.0223	21.971	1148.8	0.0222	32.384	1079.9	0.0222
13	18.204	1312.9	0.0221	21.741	1148.2	0.0221	32.201	1083.5	0.0221
14	17.985	1310.4	0.0220	21.470	1145.8	0.0220	31.978	1088.1	0.0220
15	17.784	1317.7	0.0219	21.175	1138.0	0.0219	31.676	1091.2	0.0219
16	17.228	1325.3	0.0218	20.448	1121.3	0.0218	30.759	1089.8	0.0218
17	15.395	1298.9	0.0217	18.264	1086.4	0.0217	27.801	1071.3	0.0217
18	10.371	1149.2	0.0216	12.288	967.0	0.0216	19.018	979.0	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-50. Burnup and TH Feedback Parameters by Axial Node for Assembly B29

Axial Node	Burnup SP5	SP4 to SP5 T-Fuel	SP4 to SP5 Spec.Vol	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol
1	1.408	828.1	0.0228	4.466	1090.6	0.0237	6.165	1123.0	0.0236
2	2.488	1010.4	0.0228	7.597	1347.6	0.0236	10.251	1301.5	0.0235
3	3.231	1143.3	0.0227	9.616	1472.2	0.0235	12.712	1364.5	0.0234
4	3.641	1224.1	0.0227	10.617	1509.7	0.0233	13.827	1365.6	0.0232
5	3.847	1268.6	0.0226	11.062	1508.6	0.0232	14.275	1353.2	0.0231
6	3.942	1290.7	0.0225	11.210	1489.7	0.0231	14.403	1341.5	0.0230
7	3.977	1302.9	0.0224	11.158	1454.5	0.0229	14.322	1330.8	0.0228
8	3.977	1309.6	0.0223	10.892	1404.2	0.0228	13.989	1313.5	0.0227
9	3.952	1310.1	0.0222	10.448	1367.5	0.0227	13.419	1287.2	0.0226
10	3.912	1302.1	0.0221	10.111	1368.7	0.0226	12.992	1276.2	0.0225
11	3.869	1285.9	0.0220	10.033	1400.3	0.0224	12.912	1280.4	0.0224
12	3.838	1265.0	0.0220	10.190	1460.9	0.0223	13.136	1293.9	0.0223
13	3.818	1243.9	0.0219	10.576	1542.9	0.0222	13.672	1319.9	0.0221
14	3.792	1224.3	0.0218	11.060	1585.2	0.0221	14.378	1352.6	0.0220
15	3.708	1202.1	0.0217	11.195	1587.4	0.0219	14.642	1366.4	0.0219
16	3.466	1162.8	0.0217	10.695	1556.8	0.0218	14.112	1362.6	0.0218
17	2.892	1072.7	0.0216	9.184	1455.2	0.0217	12.303	1322.3	0.0217
18	1.680	865.0	0.0216	5.612	1172.4	0.0216	7.707	1144.1	0.0216

Axial Node	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol
1	7.805	1123.0	0.0236	10.208	792.7	0.0228	10.522	872.2	0.0229
2	12.713	1301.5	0.0235	16.472	878.7	0.0228	16.941	957.9	0.0228
3	15.574	1364.5	0.0234	20.228	939.7	0.0227	20.780	984.4	0.0227
4	16.843	1365.6	0.0232	22.012	985.2	0.0227	22.597	985.1	0.0227
5	17.337	1353.2	0.0231	22.805	1019.5	0.0226	23.399	977.5	0.0226
6	17.457	1341.5	0.0230	23.105	1045.6	0.0225	23.699	969.8	0.0225
7	17.320	1330.8	0.0228	23.098	1067.2	0.0224	23.692	966.1	0.0224
8	16.890	1313.5	0.0227	22.784	1087.3	0.0223	23.382	968.3	0.0224
9	16.271	1287.2	0.0226	22.233	1101.2	0.0223	22.834	973.9	0.0223
10	15.878	1276.2	0.0225	21.795	1096.7	0.0222	22.396	974.6	0.0222
11	15.881	1280.4	0.0224	21.665	1073.7	0.0221	22.263	967.7	0.0221
12	16.225	1293.9	0.0223	21.851	1041.8	0.0220	22.446	956.8	0.0221
13	16.876	1319.9	0.0221	22.361	1007.8	0.0219	22.955	945.0	0.0220
14	17.572	1352.6	0.0220	23.027	981.5	0.0219	23.626	939.4	0.0219
15	17.723	1366.4	0.0219	23.574	977.1	0.0218	24.216	969.3	0.0219
16	17.025	1362.6	0.0218	24.671	1026.8	0.0217	25.539	1125.9	0.0218
17	14.911	1322.3	0.0217	22.924	1154.9	0.0217	23.828	1127.2	0.0217
18	9.475	1144.1	0.0216	15.105	1033.2	0.0216	15.765	1036.0	0.0216

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-51. Burnup and TH Feedback Parameters by Axial Node for Assembly C8

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol
1	1.225	776.6	0.0224	1.977	850.9	0.0226	2.690	850.9	0.0226
2	2.111	914.3	0.0224	3.348	1001.0	0.0226	4.532	1001.0	0.0226
3	2.665	997.0	0.0224	4.163	1070.2	0.0225	5.686	1070.2	0.0225
4	2.931	1033.1	0.0223	4.528	1090.2	0.0225	6.293	1090.2	0.0225
5	3.044	1044.6	0.0223	4.671	1093.2	0.0224	6.561	1093.2	0.0224
6	3.080	1044.3	0.0222	4.712	1091.4	0.0223	6.654	1091.4	0.0223
7	3.075	1039.1	0.0222	4.707	1089.2	0.0223	6.676	1089.2	0.0223
8	3.050	1033.8	0.0221	4.682	1087.9	0.0222	6.674	1087.9	0.0222
9	3.023	1032.2	0.0220	4.659	1088.0	0.0222	6.677	1088.0	0.0222
10	3.010	1036.7	0.0220	4.656	1089.7	0.0221	6.704	1089.7	0.0221
11	3.023	1047.4	0.0219	4.689	1093.3	0.0220	6.761	1093.3	0.0220
12	3.064	1062.0	0.0219	4.765	1099.2	0.0220	6.842	1099.2	0.0220
13	3.131	1076.1	0.0218	4.894	1110.0	0.0219	6.941	1110.0	0.0219
14	3.230	1089.8	0.0218	5.116	1134.6	0.0218	7.089	1134.6	0.0218
15	3.359	1107.4	0.0217	5.408	1171.0	0.0218	7.266	1171.0	0.0218
16	3.375	1115.4	0.0217	5.433	1174.5	0.0217	7.139	1174.5	0.0217
17	2.956	1052.9	0.0216	4.775	1120.7	0.0216	6.242	1120.7	0.0216
18	1.776	856.5	0.0216	2.913	936.7	0.0216	3.838	936.7	0.0216

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP16	SP10 to SP16 T-Fuel	SP10 to SP16 Spec.Vol
1	4.306	735.9	0.0223	4.533	820.3	0.0225	5.354	820.3	0.0225
2	7.205	834.4	0.0223	7.564	921.0	0.0224	8.897	921.0	0.0224
3	8.994	894.0	0.0223	9.418	955.6	0.0224	11.109	955.6	0.0224
4	9.922	929.3	0.0222	10.369	961.3	0.0223	12.226	961.3	0.0223
5	10.360	952.9	0.0222	10.812	959.2	0.0223	12.715	959.2	0.0223
6	10.547	969.7	0.0221	11.000	955.1	0.0222	12.902	955.1	0.0222
7	10.621	980.6	0.0221	11.073	951.9	0.0222	12.966	951.9	0.0222
8	10.640	985.4	0.0220	11.093	950.3	0.0221	12.987	950.3	0.0221
9	10.634	983.3	0.0220	11.088	949.4	0.0221	13.002	949.4	0.0221
10	10.625	974.4	0.0219	11.080	948.0	0.0220	13.030	948.0	0.0220
11	10.633	960.2	0.0219	11.089	945.5	0.0220	13.080	945.5	0.0220
12	10.670	944.3	0.0218	11.129	942.6	0.0219	13.151	942.6	0.0219
13	10.752	929.5	0.0218	11.216	941.3	0.0219	13.244	941.3	0.0219
14	10.936	917.5	0.0217	11.409	945.1	0.0218	13.405	945.1	0.0218
15	11.249	909.9	0.0217	11.744	961.7	0.0218	13.669	961.7	0.0218
16	11.299	910.3	0.0216	11.825	987.8	0.0217	13.641	987.8	0.0217
17	10.139	898.1	0.0216	10.643	974.8	0.0216	12.243	974.8	0.0216
18	6.379	794.2	0.0216	6.722	874.1	0.0216	7.778	874.1	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP16	0.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-51. Burnup and TH Feedback Parameters by Axial Node for Assembly C8 (Cont'd)

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	7.088	755.5	0.0223	7.337	777.6	0.0223	7.581	777.6	0.0223
2	11.791	829.8	0.0222	12.182	843.3	0.0223	12.558	843.3	0.0223
3	14.683	861.2	0.0222	15.136	858.6	0.0222	15.567	858.6	0.0222
4	16.121	868.2	0.0221	16.591	854.4	0.0222	17.033	854.4	0.0222
5	16.754	867.5	0.0221	17.224	848.0	0.0221	17.663	848.0	0.0221
6	17.003	864.7	0.0221	17.470	843.1	0.0221	17.902	843.1	0.0221
7	17.091	861.4	0.0220	17.554	840.0	0.0220	17.979	840.0	0.0220
8	17.117	858.2	0.0220	17.576	838.5	0.0220	17.996	838.5	0.0220
9	17.127	855.2	0.0219	17.583	838.1	0.0219	17.999	838.1	0.0219
10	17.147	852.6	0.0219	17.602	838.5	0.0219	18.015	838.5	0.0219
11	17.186	850.4	0.0218	17.641	839.6	0.0219	18.053	839.6	0.0219
12	17.241	848.4	0.0218	17.698	841.4	0.0218	18.109	841.4	0.0218
13	17.304	846.0	0.0217	17.763	843.8	0.0218	18.174	843.8	0.0218
14	17.398	841.6	0.0217	17.857	845.7	0.0217	18.268	845.7	0.0217
15	17.519	832.3	0.0217	17.975	845.3	0.0217	18.382	845.3	0.0217
16	17.226	816.7	0.0216	17.666	841.3	0.0216	18.060	841.3	0.0216
17	15.323	789.8	0.0216	15.718	828.0	0.0216	16.074	828.0	0.0216
18	9.726	722.4	0.0216	9.989	764.4	0.0216	10.229	764.4	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	8.906	792.0	0.0223	9.079	792.0	0.0223
2	14.547	857.4	0.0223	14.797	857.4	0.0223
3	17.804	868.9	0.0222	18.079	868.9	0.0222
4	19.306	862.1	0.0222	19.581	862.1	0.0222
5	19.914	854.2	0.0221	20.186	854.2	0.0221
6	20.126	848.3	0.0221	20.393	848.3	0.0221
7	20.182	844.5	0.0220	20.447	844.5	0.0220
8	20.186	842.2	0.0220	20.450	842.2	0.0220
9	20.185	841.0	0.0220	20.448	841.0	0.0220
10	20.201	840.3	0.0219	20.465	840.3	0.0219
11	20.245	840.1	0.0219	20.509	840.1	0.0219
12	20.313	840.6	0.0218	20.578	840.6	0.0218
13	20.397	841.7	0.0218	20.664	841.7	0.0218
14	20.511	842.9	0.0217	20.781	842.9	0.0217
15	20.631	842.7	0.0217	20.904	842.7	0.0217
16	20.275	840.3	0.0216	20.546	840.3	0.0216
17	18.123	830.6	0.0216	18.378	830.6	0.0216
18	11.652	771.9	0.0216	11.834	771.9	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-52. Burnup and TH Feedback Parameters by Axial Node for Assembly C15

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol
1	1.357	800.1	0.0225	2.179	874.4	0.0227	2.948	874.4	0.0227
2	2.350	953.9	0.0225	3.704	1034.1	0.0227	4.963	1034.1	0.0227
3	2.976	1046.4	0.0225	4.614	1103.1	0.0226	6.181	1103.1	0.0226
4	3.283	1085.6	0.0224	5.029	1123.9	0.0225	6.775	1123.9	0.0225
5	3.416	1098.1	0.0223	5.196	1126.8	0.0225	7.035	1126.8	0.0225
6	3.461	1097.9	0.0223	5.247	1124.9	0.0224	7.128	1124.9	0.0224
7	3.458	1092.4	0.0222	5.245	1122.7	0.0223	7.147	1122.7	0.0223
8	3.429	1086.6	0.0222	5.217	1121.4	0.0222	7.138	1121.4	0.0222
9	3.396	1084.6	0.0221	5.187	1121.5	0.0222	7.132	1121.5	0.0222
10	3.377	1089.2	0.0220	5.179	1123.2	0.0221	7.152	1123.2	0.0221
11	3.390	1100.5	0.0220	5.211	1126.7	0.0220	7.207	1126.7	0.0220
12	3.436	1116.0	0.0219	5.291	1132.2	0.0220	7.292	1132.2	0.0220
13	3.506	1131.7	0.0219	5.418	1141.3	0.0219	7.394	1141.3	0.0219
14	3.586	1144.2	0.0218	5.586	1157.5	0.0218	7.498	1157.5	0.0218
15	3.634	1150.6	0.0217	5.718	1175.0	0.0218	7.533	1175.0	0.0218
16	3.522	1135.3	0.0217	5.579	1170.4	0.0217	7.258	1170.4	0.0217
17	3.016	1059.3	0.0216	4.827	1115.8	0.0216	6.275	1115.8	0.0216
18	1.788	857.6	0.0216	2.914	932.4	0.0216	3.826	932.4	0.0216

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	4.449	724.1	0.0223	4.657	796.9	0.0224	5.389	796.9	0.0224
2	7.481	818.6	0.0223	7.811	889.8	0.0223	8.961	889.8	0.0223
3	9.315	877.4	0.0222	9.707	921.4	0.0223	11.064	921.4	0.0223
4	10.228	913.4	0.0222	10.641	927.4	0.0222	12.068	927.4	0.0222
5	10.657	937.2	0.0221	11.075	924.8	0.0222	12.510	924.8	0.0222
6	10.841	953.5	0.0221	11.259	920.5	0.0221	12.680	920.5	0.0221
7	10.908	963.9	0.0220	11.325	917.1	0.0221	12.728	917.1	0.0221
8	10.913	968.0	0.0220	11.330	915.4	0.0220	12.725	915.4	0.0220
9	10.888	965.2	0.0219	11.305	914.3	0.0220	12.709	914.3	0.0220
10	10.863	955.5	0.0219	11.280	912.8	0.0220	12.708	912.8	0.0220
11	10.864	941.2	0.0218	11.282	910.1	0.0219	12.742	910.1	0.0219
12	10.906	926.0	0.0218	11.327	906.9	0.0219	12.815	906.9	0.0219
13	10.990	912.7	0.0217	11.416	904.8	0.0218	12.916	904.8	0.0218
14	11.103	902.1	0.0217	11.535	905.0	0.0218	13.020	905.0	0.0218
15	11.140	892.3	0.0217	11.578	907.7	0.0217	13.022	907.7	0.0217
16	10.764	877.2	0.0216	11.199	907.1	0.0217	12.566	907.1	0.0217
17	9.364	840.9	0.0216	9.761	886.8	0.0216	10.969	886.8	0.0216
18	5.763	742.3	0.0216	6.023	801.2	0.0216	6.812	801.2	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-52. Burnup and TH Feedback Parameters by Axial Node for Assembly C15 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	Spec.Vol
1	11.243	1005.5	0.0232
2	18.304	1126.9	0.0231
3	22.723	1140.4	0.0230
4	24.595	1131.5	0.0229
5	25.301	1120.7	0.0228
6	25.521	1110.7	0.0227
7	25.531	1103.6	0.0226
8	25.465	1100.7	0.0225
9	25.413	1102.8	0.0224
10	25.442	1109.4	0.0223
11	25.572	1118.5	0.0222
12	25.775	1127.4	0.0221
13	25.983	1133.6	0.0220
14	26.091	1134.7	0.0219
15	25.896	1130.4	0.0218
16	24.895	1119.1	0.0217
17	21.967	1092.1	0.0217
18	14.181	975.7	0.0216

Table 4-53. Burnup and TH Feedback Parameters by Axial Node for Assembly C15a

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	Spec.Vol
1	1.357	800.1	0.0225	2.179	874.4	0.0227	2.948	874.4	0.0227
2	2.350	953.9	0.0225	3.704	1034.1	0.0227	4.963	1034.1	0.0227
3	2.976	1046.4	0.0225	4.614	1103.1	0.0226	6.181	1103.1	0.0226
4	3.283	1085.6	0.0224	5.029	1123.9	0.0225	6.775	1123.9	0.0225
5	3.416	1098.1	0.0223	5.196	1126.8	0.0225	7.035	1126.8	0.0225
6	3.461	1097.9	0.0223	5.247	1124.9	0.0224	7.128	1124.9	0.0224
7	3.458	1092.4	0.0222	5.245	1122.7	0.0223	7.147	1122.7	0.0223
8	3.429	1086.6	0.0222	5.217	1121.4	0.0222	7.138	1121.4	0.0222
9	3.396	1084.6	0.0221	5.187	1121.5	0.0222	7.132	1121.5	0.0222
10	3.377	1089.2	0.0220	5.179	1123.2	0.0221	7.152	1123.2	0.0221
11	3.390	1100.5	0.0220	5.211	1126.7	0.0220	7.207	1126.7	0.0220
12	3.436	1116.0	0.0219	5.291	1132.2	0.0220	7.292	1132.2	0.0220
13	3.506	1131.7	0.0219	5.418	1141.3	0.0219	7.394	1141.3	0.0219
14	3.586	1144.2	0.0218	5.586	1157.5	0.0218	7.498	1157.5	0.0218
15	3.634	1150.6	0.0217	5.718	1175.0	0.0218	7.533	1175.0	0.0218
16	3.522	1135.3	0.0217	5.579	1170.4	0.0217	7.258	1170.4	0.0217
17	3.016	1059.3	0.0216	4.827	1115.8	0.0216	6.275	1115.8	0.0216
18	1.788	857.6	0.0216	2.914	932.4	0.0216	3.826	932.4	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-53. Burnup and TH Feedback Parameters by Axial Node for Assembly C15a (Cont'd)

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	4.449	724.1	0.0223	4.657	796.9	0.0224	5.385	796.9	0.0224
2	7.481	818.6	0.0223	7.811	889.8	0.0223	8.956	889.8	0.0223
3	9.315	877.4	0.0222	9.707	921.4	0.0223	11.058	921.4	0.0223
4	10.228	913.4	0.0222	10.641	927.4	0.0222	12.061	927.4	0.0222
5	10.657	937.2	0.0221	11.075	924.8	0.0222	12.503	924.8	0.0222
6	10.841	953.5	0.0221	11.259	920.5	0.0221	12.673	920.5	0.0221
7	10.908	963.9	0.0220	11.325	917.1	0.0221	12.721	917.1	0.0221
8	10.913	968.0	0.0220	11.330	915.4	0.0220	12.718	915.4	0.0220
9	10.888	965.2	0.0219	11.305	914.3	0.0220	12.702	914.3	0.0220
10	10.863	955.5	0.0219	11.280	912.8	0.0220	12.701	912.8	0.0220
11	10.864	941.2	0.0218	11.282	910.1	0.0219	12.736	910.1	0.0219
12	10.906	926.0	0.0218	11.327	906.9	0.0219	12.809	906.9	0.0219
13	10.990	912.7	0.0217	11.416	904.8	0.0218	12.909	904.8	0.0218
14	11.103	902.1	0.0217	11.535	905.0	0.0218	13.014	905.0	0.0218
15	11.140	892.3	0.0217	11.578	907.7	0.0217	13.015	907.7	0.0217
16	10.764	877.2	0.0216	11.199	907.1	0.0217	12.560	907.1	0.0217
17	9.364	840.9	0.0216	9.761	886.8	0.0216	10.963	886.8	0.0216
18	5.763	742.3	0.0216	6.023	801.2	0.0216	6.808	801.2	0.0216

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol
1	11.641	1030.6	0.0233
2	18.872	1155.2	0.0232
3	23.409	1167.6	0.0231
4	25.334	1159.5	0.0230
5	26.050	1147.6	0.0229
6	26.230	1135.2	0.0228
7	26.130	1123.2	0.0227
8	25.876	1114.1	0.0226
9	25.618	1112.5	0.0225
10	25.513	1119.8	0.0224
11	25.637	1133.5	0.0223
12	25.966	1150.8	0.0222
13	26.394	1166.2	0.0221
14	26.717	1171.7	0.0220
15	26.649	1166.9	0.0219
16	25.685	1153.6	0.0218
17	22.723	1123.1	0.0217
18	14.744	1003.8	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-54. Burnup and TH Feedback Parameters by Axial Node for Assembly C20

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol
1	2.493	999.5	0.0234	3.905	1067.3	0.0234	5.167	1067.3	0.0234
2	4.263	1254.4	0.0233	6.518	1263.2	0.0234	8.483	1263.2	0.0234
3	5.362	1388.8	0.0232	8.043	1338.2	0.0232	10.360	1338.2	0.0232
4	5.898	1445.0	0.0231	8.728	1355.2	0.0231	11.188	1355.2	0.0231
5	6.135	1461.2	0.0230	9.006	1353.8	0.0230	11.523	1353.8	0.0230
6	6.215	1457.5	0.0229	9.093	1348.9	0.0229	11.630	1348.9	0.0229
7	6.201	1443.6	0.0228	9.076	1344.6	0.0228	11.616	1344.6	0.0228
8	6.117	1427.5	0.0226	8.985	1341.0	0.0226	11.528	1341.0	0.0226
9	6.004	1419.4	0.0225	8.863	1338.5	0.0225	11.426	1338.5	0.0225
10	5.931	1426.6	0.0224	8.790	1339.5	0.0224	11.393	1339.5	0.0224
11	5.944	1449.6	0.0223	8.828	1343.9	0.0223	11.475	1343.9	0.0223
12	6.048	1483.9	0.0222	8.984	1350.8	0.0222	11.663	1350.8	0.0222
13	6.218	1519.8	0.0221	9.232	1360.3	0.0221	11.908	1360.3	0.0221
14	6.377	1542.3	0.0220	9.484	1371.6	0.0220	12.107	1371.6	0.0220
15	6.393	1539.3	0.0219	9.558	1379.0	0.0219	12.083	1379.0	0.0219
16	6.085	1494.6	0.0218	9.187	1369.4	0.0218	11.569	1369.4	0.0218
17	5.168	1369.1	0.0217	7.934	1313.5	0.0217	10.038	1313.5	0.0217
18	3.077	1068.0	0.0216	4.845	1106.1	0.0216	6.217	1106.1	0.0216

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP22	SP10 to SP22 T-Fuel	SP10 to SP22 Spec.Vol
1	8.757	935.2	0.0236	9.221	1028.5	0.0234	10.929	1028.5	0.0234
2	14.343	1101.5	0.0235	15.055	1169.9	0.0233	17.568	1169.9	0.0233
3	17.726	1220.1	0.0234	18.569	1215.6	0.0232	21.398	1215.6	0.0232
4	19.445	1313.6	0.0233	20.340	1218.6	0.0231	23.207	1218.6	0.0231
5	20.279	1381.4	0.0231	21.188	1207.7	0.0230	24.000	1207.7	0.0230
6	20.661	1426.3	0.0230	21.569	1196.9	0.0229	24.301	1196.9	0.0229
7	20.797	1453.1	0.0229	21.703	1190.2	0.0227	24.348	1190.2	0.0227
8	20.753	1465.3	0.0227	21.658	1188.2	0.0226	24.233	1188.2	0.0226
9	20.546	1458.3	0.0226	21.446	1187.7	0.0225	24.012	1187.7	0.0225
10	20.258	1427.3	0.0224	21.147	1182.2	0.0224	23.770	1182.2	0.0224
11	20.076	1380.6	0.0223	20.960	1169.9	0.0223	23.676	1169.9	0.0223
12	20.095	1336.6	0.0222	20.982	1157.7	0.0222	23.814	1157.7	0.0222
13	20.294	1304.2	0.0221	21.192	1148.9	0.0221	24.120	1148.9	0.0221
14	20.584	1287.1	0.0220	21.504	1146.3	0.0220	24.441	1146.3	0.0220
15	20.686	1281.7	0.0218	21.632	1152.6	0.0219	24.500	1152.6	0.0219
16	20.005	1262.8	0.0217	20.952	1159.7	0.0218	23.702	1159.7	0.0218
17	17.581	1195.7	0.0217	18.459	1146.3	0.0217	20.956	1146.3	0.0217
18	11.160	1016.2	0.0216	11.769	1030.5	0.0216	13.507	1030.5	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP22	0.0 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-54. Burnup and TH Feedback Parameters by Axial Node for Assembly C20 (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	12.277	933.9	0.0231	12.945	933.9	0.0231	17.658	956.0	0.0231
2	19.743	1016.6	0.0230	20.752	1016.6	0.0230	27.633	1026.5	0.0231
3	23.947	1043.0	0.0229	25.111	1043.0	0.0229	32.887	1045.0	0.0230
4	25.930	1051.1	0.0228	27.161	1051.1	0.0228	35.225	1045.6	0.0229
5	26.817	1053.2	0.0227	28.078	1053.2	0.0227	36.209	1045.5	0.0228
6	27.175	1053.5	0.0226	28.450	1053.5	0.0226	36.584	1043.1	0.0227
7	27.261	1053.7	0.0225	28.545	1053.7	0.0225	36.672	1040.6	0.0226
8	27.175	1054.5	0.0224	28.465	1054.5	0.0224	36.597	1038.9	0.0225
9	26.976	1055.8	0.0223	28.273	1055.8	0.0223	36.424	1038.2	0.0224
10	26.750	1056.9	0.0222	28.051	1056.9	0.0222	36.232	1038.1	0.0223
11	26.658	1055.4	0.0221	27.961	1055.4	0.0221	36.168	1037.4	0.0222
12	26.776	1050.2	0.0221	28.074	1050.2	0.0221	36.297	1035.2	0.0221
13	27.034	1040.9	0.0220	28.320	1040.9	0.0220	36.542	1031.4	0.0220
14	27.275	1027.8	0.0219	28.537	1027.8	0.0219	36.729	1025.3	0.0219
15	27.219	1011.7	0.0218	28.445	1011.7	0.0218	36.549	1016.1	0.0218
16	26.264	994.5	0.0217	27.432	994.5	0.0217	35.320	1001.2	0.0217
17	23.270	973.0	0.0216	24.332	973.0	0.0216	31.620	984.4	0.0217
18	15.149	901.6	0.0216	15.905	901.6	0.0216	21.177	918.2	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	17.754	956.0	0.0231	19.798	928.1	0.0232
2	27.783	1026.5	0.0231	30.768	1015.8	0.0231
3	33.057	1045.0	0.0230	36.353	1046.8	0.0230
4	35.398	1045.6	0.0229	38.732	1043.9	0.0229
5	36.383	1045.5	0.0228	39.686	1034.2	0.0228
6	36.756	1043.1	0.0227	40.022	1025.3	0.0227
7	36.844	1040.6	0.0226	40.084	1018.8	0.0226
8	36.768	1038.9	0.0225	39.996	1014.7	0.0225
9	36.595	1038.2	0.0224	39.821	1012.3	0.0224
10	36.404	1038.1	0.0223	39.636	1010.9	0.0223
11	36.341	1037.4	0.0222	39.580	1009.6	0.0222
12	36.471	1035.2	0.0221	39.720	1008.1	0.0221
13	36.717	1031.4	0.0220	39.979	1007.1	0.0220
14	36.905	1025.3	0.0219	40.188	1007.5	0.0219
15	36.726	1016.1	0.0218	40.033	1009.5	0.0218
16	35.495	1001.2	0.0217	38.796	1010.2	0.0217
17	31.785	984.4	0.0217	34.918	993.7	0.0217
18	21.299	918.2	0.0216	23.638	931.9	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-55. Burnup and TH Feedback Parameters by Axial Node for Assembly C20a

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol
1	2.493	999.5	0.0234	3.905	1067.3	0.0234	5.167	1067.3	0.0234
2	4.263	1254.4	0.0233	6.518	1263.2	0.0234	8.483	1263.2	0.0234
3	5.362	1388.8	0.0232	8.043	1338.2	0.0232	10.360	1338.2	0.0232
4	5.898	1445.0	0.0231	8.728	1355.2	0.0231	11.188	1355.2	0.0231
5	6.135	1461.2	0.0230	9.006	1353.8	0.0230	11.523	1353.8	0.0230
6	6.215	1457.5	0.0229	9.093	1348.9	0.0229	11.630	1348.9	0.0229
7	6.201	1443.6	0.0228	9.076	1344.6	0.0228	11.616	1344.6	0.0228
8	6.117	1427.5	0.0226	8.985	1341.0	0.0226	11.528	1341.0	0.0226
9	6.004	1419.4	0.0225	8.863	1338.5	0.0225	11.426	1338.5	0.0225
10	5.931	1426.6	0.0224	8.790	1339.5	0.0224	11.393	1339.5	0.0224
11	5.944	1449.6	0.0223	8.828	1343.9	0.0223	11.475	1343.9	0.0223
12	6.048	1483.9	0.0222	8.984	1350.8	0.0222	11.663	1350.8	0.0222
13	6.218	1519.8	0.0221	9.232	1360.3	0.0221	11.908	1360.3	0.0221
14	6.377	1542.3	0.0220	9.484	1371.6	0.0220	12.107	1371.6	0.0220
15	6.393	1539.3	0.0219	9.558	1379.0	0.0219	12.083	1379.0	0.0219
16	6.085	1494.6	0.0218	9.187	1369.4	0.0218	11.569	1369.4	0.0218
17	5.168	1369.1	0.0217	7.934	1313.5	0.0217	10.038	1313.5	0.0217
18	3.077	1068.0	0.0216	4.845	1106.1	0.0216	6.217	1106.1	0.0216

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP22	SP10 to SP22 T-Fuel	SP10 to SP22 Spec.Vol
1	8.757	935.2	0.0236	9.221	1028.5	0.0234	10.907	1028.5	0.0234
2	14.343	1101.5	0.0235	15.055	1169.9	0.0233	17.532	1169.9	0.0233
3	17.726	1220.1	0.0234	18.569	1215.6	0.0232	21.349	1215.6	0.0232
4	19.445	1313.6	0.0233	20.340	1218.6	0.0231	23.149	1218.6	0.0231
5	20.279	1381.4	0.0231	21.188	1207.7	0.0230	23.937	1207.7	0.0230
6	20.661	1426.3	0.0230	21.569	1196.9	0.0229	24.235	1196.9	0.0229
7	20.797	1453.1	0.0229	21.703	1190.2	0.0227	24.281	1190.2	0.0227
8	20.753	1465.3	0.0227	21.658	1188.2	0.0226	24.166	1188.2	0.0226
9	20.546	1458.3	0.0226	21.446	1187.7	0.0225	23.947	1187.7	0.0225
10	20.258	1427.3	0.0224	21.147	1182.2	0.0224	23.708	1182.2	0.0224
11	20.076	1380.6	0.0223	20.960	1169.9	0.0223	23.616	1169.9	0.0223
12	20.095	1336.6	0.0222	20.982	1157.7	0.0222	23.754	1157.7	0.0222
13	20.294	1304.2	0.0221	21.192	1148.9	0.0221	24.058	1148.9	0.0221
14	20.584	1287.1	0.0220	21.504	1146.3	0.0220	24.376	1146.3	0.0220
15	20.686	1281.7	0.0218	21.632	1152.6	0.0219	24.433	1152.6	0.0219
16	20.005	1262.8	0.0217	20.952	1159.7	0.0218	23.637	1159.7	0.0218
17	17.581	1195.7	0.0217	18.459	1146.3	0.0217	20.899	1146.3	0.0217
18	11.160	1016.2	0.0216	11.769	1030.5	0.0216	13.470	1030.5	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP22	0.0 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-55. Burnup and TH Feedback Parameters by Axial Node for Assembly C20a (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	12.472	944.1	0.0231	13.193	944.1	0.0231	18.170	960.3	0.0232
2	19.836	1033.2	0.0231	20.890	1033.2	0.0231	27.982	1038.1	0.0231
3	24.005	1059.7	0.0230	25.212	1059.7	0.0230	33.187	1057.4	0.0230
4	25.973	1067.6	0.0229	27.246	1067.6	0.0229	35.501	1060.4	0.0229
5	26.849	1069.3	0.0228	28.150	1069.3	0.0228	36.467	1058.7	0.0228
6	27.200	1069.3	0.0227	28.515	1069.3	0.0227	36.830	1055.9	0.0227
7	27.284	1069.3	0.0226	28.607	1069.3	0.0226	36.912	1053.2	0.0226
8	27.197	1069.9	0.0225	28.527	1069.9	0.0225	36.835	1051.4	0.0225
9	27.001	1071.2	0.0224	28.337	1071.2	0.0224	36.663	1050.7	0.0224
10	26.778	1072.3	0.0223	28.119	1072.3	0.0223	36.473	1050.5	0.0223
11	26.688	1070.8	0.0222	28.031	1070.8	0.0222	36.410	1049.6	0.0222
12	26.806	1065.4	0.0221	28.144	1065.4	0.0221	36.537	1047.2	0.0221
13	27.061	1055.8	0.0220	28.386	1055.8	0.0220	36.775	1043.2	0.0220
14	27.297	1042.2	0.0219	28.597	1042.2	0.0219	36.952	1036.8	0.0219
15	27.238	1025.7	0.0218	28.501	1025.7	0.0218	36.768	1027.5	0.0218
16	26.285	1008.4	0.0217	27.489	1008.4	0.0217	35.540	1014.1	0.0217
17	23.296	986.3	0.0216	24.392	986.3	0.0216	31.835	994.4	0.0217
18	15.173	912.8	0.0216	15.953	912.8	0.0216	21.337	926.4	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	18.282	960.3	0.0232	20.506	974.8	0.0232
2	28.138	1038.1	0.0231	31.186	1028.3	0.0231
3	33.360	1057.4	0.0230	36.687	1050.6	0.0230
4	35.677	1060.4	0.0229	39.034	1045.9	0.0229
5	36.643	1058.7	0.0228	39.963	1035.4	0.0228
6	37.004	1055.9	0.0227	40.285	1026.1	0.0227
7	37.085	1053.2	0.0226	40.338	1019.4	0.0226
8	37.008	1051.4	0.0225	40.247	1015.0	0.0225
9	36.836	1050.7	0.0224	40.071	1012.3	0.0224
10	36.647	1050.5	0.0223	39.886	1010.6	0.0223
11	36.585	1049.6	0.0222	39.829	1008.9	0.0222
12	36.712	1047.2	0.0221	39.964	1007.2	0.0221
13	36.951	1043.2	0.0220	40.215	1006.1	0.0220
14	37.130	1036.8	0.0219	40.414	1006.3	0.0219
15	36.946	1027.5	0.0218	40.255	1008.4	0.0218
16	35.717	1014.1	0.0217	39.021	1009.3	0.0217
17	32.002	994.4	0.0217	35.140	993.3	0.0217
18	21.460	926.4	0.0216	23.805	931.3	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-56. Burnup and TH Feedback Parameters by Axial Node for Assembly C21

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol
1	1.191	771.6	0.0224	1.909	834.5	0.0225	2.572	834.5	0.0225
2	2.096	912.5	0.0224	3.293	979.9	0.0225	4.380	979.9	0.0225
3	2.686	1000.0	0.0224	4.146	1045.9	0.0225	5.469	1045.9	0.0225
4	2.985	1038.6	0.0223	4.547	1066.0	0.0224	5.980	1066.0	0.0224
5	3.119	1051.8	0.0222	4.713	1069.1	0.0223	6.197	1069.1	0.0223
6	3.166	1052.1	0.0222	4.767	1067.6	0.0223	6.272	1067.6	0.0223
7	3.164	1046.6	0.0221	4.765	1065.4	0.0222	6.281	1065.4	0.0222
8	3.134	1040.3	0.0221	4.735	1063.8	0.0221	6.261	1063.8	0.0221
9	3.097	1037.7	0.0220	4.699	1063.3	0.0221	6.240	1063.3	0.0221
10	3.074	1041.6	0.0220	4.682	1064.3	0.0220	6.243	1064.3	0.0220
11	3.081	1052.4	0.0219	4.704	1066.9	0.0220	6.283	1066.9	0.0220
12	3.121	1067.6	0.0219	4.770	1071.2	0.0219	6.355	1071.2	0.0219
13	3.181	1082.2	0.0218	4.869	1077.2	0.0219	6.439	1077.2	0.0219
14	3.231	1091.0	0.0218	4.963	1084.3	0.0218	6.494	1084.3	0.0218
15	3.215	1087.5	0.0217	4.971	1088.2	0.0217	6.437	1088.2	0.0217
16	3.034	1059.2	0.0217	4.739	1077.0	0.0217	6.107	1077.0	0.0217
17	2.534	980.0	0.0216	4.020	1025.7	0.0216	5.198	1025.7	0.0216
18	1.465	803.1	0.0216	2.374	862.6	0.0216	3.106	862.6	0.0216

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	5.802	921.9	0.0233	6.227	1020.3	0.0233	7.696	1020.3	0.0233
2	9.730	1121.6	0.0233	10.390	1165.0	0.0232	12.626	1165.0	0.0232
3	12.125	1241.1	0.0232	12.900	1221.9	0.0231	15.493	1221.9	0.0231
4	13.334	1317.6	0.0231	14.148	1229.4	0.0230	16.843	1229.4	0.0230
5	13.933	1371.5	0.0229	14.757	1221.6	0.0229	17.449	1221.6	0.0229
6	14.226	1409.7	0.0228	15.050	1212.2	0.0228	17.701	1212.2	0.0228
7	14.357	1434.3	0.0227	15.179	1205.8	0.0226	17.782	1205.8	0.0226
8	14.377	1444.7	0.0226	15.200	1203.4	0.0225	17.773	1203.4	0.0225
9	14.306	1439.2	0.0224	15.128	1202.9	0.0224	17.713	1202.9	0.0224
10	14.180	1416.8	0.0223	15.001	1200.7	0.0223	17.641	1200.7	0.0223
11	14.075	1382.9	0.0222	14.898	1195.4	0.0222	17.618	1195.4	0.0222
12	14.049	1349.0	0.0221	14.878	1189.3	0.0221	17.680	1189.3	0.0221
13	14.114	1322.6	0.0220	14.955	1185.2	0.0220	17.808	1185.2	0.0220
14	14.231	1305.9	0.0219	15.089	1185.9	0.0220	17.932	1185.9	0.0220
15	14.238	1294.1	0.0218	15.114	1192.9	0.0219	17.886	1192.9	0.0219
16	13.731	1268.9	0.0217	14.607	1198.0	0.0218	17.247	1198.0	0.0218
17	11.962	1196.0	0.0216	12.768	1171.3	0.0217	15.132	1171.3	0.0217
18	7.403	984.7	0.0216	7.947	1028.6	0.0216	9.538	1028.6	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-56. Burnup and TH Feedback Parameters by Axial Node for Assembly C21 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	Spec.Vol
1	14.311	1023.3	0.0232
2	22.795	1120.2	0.0232
3	27.865	1123.5	0.0231
4	29.933	1109.6	0.0229
5	30.688	1094.0	0.0228
6	30.908	1081.3	0.0227
7	30.892	1072.8	0.0226
8	30.773	1069.0	0.0225
9	30.638	1070.8	0.0224
10	30.562	1077.3	0.0223
11	30.601	1085.9	0.0222
12	30.758	1093.7	0.0221
13	30.961	1098.3	0.0220
14	31.076	1098.5	0.0219
15	30.854	1094.8	0.0218
16	29.747	1087.2	0.0218
17	26.456	1064.6	0.0217
18	17.391	974.5	0.0216

Table 4-57. Burnup and TH Feedback Parameters by Axial Node for Assembly C25

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	Spec.Vol
1	1.946	908.8	0.0230	3.080	976.4	0.0231	4.105	976.4	0.0231
2	3.378	1126.2	0.0230	5.222	1162.3	0.0230	6.831	1162.3	0.0230
3	4.307	1249.2	0.0229	6.523	1235.8	0.0229	8.411	1235.8	0.0229
4	4.783	1302.2	0.0228	7.134	1253.2	0.0228	9.117	1253.2	0.0228
5	5.002	1318.3	0.0227	7.390	1252.7	0.0227	9.397	1252.7	0.0227
6	5.079	1316.0	0.0226	7.473	1248.2	0.0226	9.481	1248.2	0.0226
7	5.072	1304.9	0.0225	7.462	1244.1	0.0225	9.465	1244.1	0.0225
8	5.008	1292.0	0.0224	7.392	1240.7	0.0224	9.392	1240.7	0.0224
9	4.923	1285.7	0.0223	7.300	1238.7	0.0223	9.313	1238.7	0.0223
10	4.869	1292.0	0.0223	7.249	1239.5	0.0223	9.291	1239.5	0.0223
11	4.881	1311.0	0.0222	7.280	1243.1	0.0222	9.357	1243.1	0.0222
12	4.961	1338.3	0.0221	7.397	1248.3	0.0221	9.500	1248.3	0.0221
13	5.080	1365.3	0.0220	7.568	1254.7	0.0220	9.674	1254.7	0.0220
14	5.172	1379.8	0.0219	7.712	1260.4	0.0219	9.787	1260.4	0.0219
15	5.134	1370.7	0.0218	7.693	1261.5	0.0218	9.702	1261.5	0.0218
16	4.829	1324.8	0.0217	7.314	1248.9	0.0217	9.216	1248.9	0.0217
17	4.048	1211.7	0.0216	6.241	1194.4	0.0216	7.914	1194.4	0.0216
18	2.376	953.5	0.0216	3.754	1001.0	0.0216	4.828	1001.0	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-57. Burnup and TH Feedback Parameters by Axial Node for Assembly C25 (Cont'd)

Axial	Burnup	SP8 to SP9		Burnup	SP9 to SP10		Burnup	SP10 to SP11	
Node	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol	SP11	T-Fuel	Spec.Vol
1	5.680	727.4	0.0224	5.895	802.3	0.0224	6.675	802.3	0.0224
2	9.498	817.9	0.0224	9.841	890.2	0.0224	11.036	890.2	0.0224
3	11.812	881.1	0.0223	12.226	929.5	0.0224	13.587	929.5	0.0224
4	12.952	928.2	0.0223	13.395	938.3	0.0223	14.777	938.3	0.0223
5	13.478	962.5	0.0222	13.930	935.2	0.0222	15.282	935.2	0.0222
6	13.694	985.6	0.0222	14.146	929.9	0.0222	15.459	929.9	0.0222
7	13.743	999.8	0.0221	14.195	926.2	0.0221	15.475	926.2	0.0221
8	13.692	1006.1	0.0221	14.144	924.9	0.0221	15.407	924.9	0.0221
9	13.594	1004.0	0.0220	14.046	924.5	0.0220	15.314	924.5	0.0220
10	13.517	993.3	0.0219	13.970	923.2	0.0220	15.263	923.2	0.0220
11	13.514	976.6	0.0219	13.968	919.9	0.0219	15.298	919.9	0.0219
12	13.598	958.4	0.0218	14.054	915.3	0.0219	15.420	915.3	0.0219
13	13.736	942.5	0.0218	14.197	911.1	0.0218	15.583	911.1	0.0218
14	13.834	930.1	0.0217	14.300	908.7	0.0218	15.682	908.7	0.0218
15	13.710	918.8	0.0217	14.179	908.5	0.0217	15.534	908.5	0.0217
16	13.055	900.3	0.0216	13.516	905.8	0.0217	14.815	905.8	0.0217
17	11.260	859.9	0.0216	11.677	884.9	0.0216	12.839	884.9	0.0216
18	6.927	758.9	0.0216	7.203	802.5	0.0216	7.974	802.5	0.0216

Axial	Burnup	SP11 to SP12	
Node	SP12	T-Fuel	Spec.Vol
1	13.608	998.2	0.0231
2	21.391	1099.2	0.0231
3	25.514	1111.3	0.0230
4	27.225	1099.8	0.0229
5	27.840	1084.9	0.0228
6	27.985	1073.3	0.0227
7	27.928	1066.3	0.0226
8	27.794	1064.2	0.0225
9	27.671	1066.9	0.0224
10	27.636	1072.8	0.0223
11	27.717	1079.5	0.0222
12	27.885	1084.5	0.0221
13	28.061	1086.8	0.0220
14	28.106	1086.2	0.0219
15	27.790	1084.0	0.0218
16	26.664	1079.3	0.0217
17	23.590	1059.4	0.0217
18	15.363	964.4	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-58. Burnup and TH Feedback Parameters by Axial Node for Assembly C25a

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol
1	1.946	908.8	0.0230	3.080	976.4	0.0231	4.105	976.4	0.0231
2	3.378	1126.2	0.0230	5.222	1162.3	0.0230	6.831	1162.3	0.0230
3	4.307	1249.2	0.0229	6.523	1235.8	0.0229	8.411	1235.8	0.0229
4	4.783	1302.2	0.0228	7.134	1253.2	0.0228	9.117	1253.2	0.0228
5	5.002	1318.3	0.0227	7.390	1252.7	0.0227	9.397	1252.7	0.0227
6	5.079	1316.0	0.0226	7.473	1248.2	0.0226	9.481	1248.2	0.0226
7	5.072	1304.9	0.0225	7.462	1244.1	0.0225	9.465	1244.1	0.0225
8	5.008	1292.0	0.0224	7.392	1240.7	0.0224	9.392	1240.7	0.0224
9	4.923	1285.7	0.0223	7.300	1238.7	0.0223	9.313	1238.7	0.0223
10	4.869	1292.0	0.0223	7.249	1239.5	0.0223	9.291	1239.5	0.0223
11	4.881	1311.0	0.0222	7.280	1243.1	0.0222	9.357	1243.1	0.0222
12	4.961	1338.3	0.0221	7.397	1248.3	0.0221	9.500	1248.3	0.0221
13	5.080	1365.3	0.0220	7.568	1254.7	0.0220	9.674	1254.7	0.0220
14	5.172	1379.8	0.0219	7.712	1260.4	0.0219	9.787	1260.4	0.0219
15	5.134	1370.7	0.0218	7.693	1261.5	0.0218	9.702	1261.5	0.0218
16	4.829	1324.8	0.0217	7.314	1248.9	0.0217	9.216	1248.9	0.0217
17	4.048	1211.7	0.0216	6.241	1194.4	0.0216	7.914	1194.4	0.0216
18	2.376	953.5	0.0216	3.754	1001.0	0.0216	4.828	1001.0	0.0216

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	5.680	727.4	0.0224	5.895	802.3	0.0224	6.693	802.3	0.0224
2	9.498	817.9	0.0224	9.841	890.2	0.0224	11.066	890.2	0.0224
3	11.812	881.1	0.0223	12.226	929.5	0.0224	13.627	929.5	0.0224
4	12.952	928.2	0.0223	13.395	938.3	0.0223	14.823	938.3	0.0223
5	13.478	962.5	0.0222	13.930	935.2	0.0222	15.333	935.2	0.0222
6	13.694	985.6	0.0222	14.146	929.9	0.0222	15.512	929.9	0.0222
7	13.743	999.8	0.0221	14.195	926.2	0.0221	15.529	926.2	0.0221
8	13.692	1006.1	0.0221	14.144	924.9	0.0221	15.461	924.9	0.0221
9	13.594	1004.0	0.0220	14.046	924.5	0.0220	15.367	924.5	0.0220
10	13.517	993.3	0.0219	13.970	923.2	0.0220	15.315	923.2	0.0220
11	13.514	976.6	0.0219	13.968	919.9	0.0219	15.350	919.9	0.0219
12	13.598	958.4	0.0218	14.054	915.3	0.0219	15.472	915.3	0.0219
13	13.736	942.5	0.0218	14.197	911.1	0.0218	15.635	911.1	0.0218
14	13.834	930.1	0.0217	14.300	908.7	0.0218	15.736	908.7	0.0218
15	13.710	918.8	0.0217	14.179	908.5	0.0217	15.589	908.5	0.0217
16	13.055	900.3	0.0216	13.516	905.8	0.0217	14.867	905.8	0.0217
17	11.260	859.9	0.0216	11.677	884.9	0.0216	12.885	884.9	0.0216
18	6.927	758.9	0.0216	7.203	802.5	0.0216	8.004	802.5	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-58. Burnup and TH Feedback Parameters by Axial Node for Assembly C25a (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	Spec.Vol
1	14.661	1045.1	0.0235
2	22.943	1154.0	0.0234
3	27.383	1179.9	0.0232
4	29.291	1174.8	0.0231
5	30.011	1161.5	0.0230
6	30.171	1148.3	0.0229
7	30.035	1136.7	0.0228
8	29.728	1128.8	0.0226
9	29.410	1128.4	0.0225
10	29.260	1135.9	0.0224
11	29.366	1148.4	0.0223
12	29.702	1163.3	0.0222
13	30.141	1176.0	0.0221
14	30.425	1180.8	0.0220
15	30.212	1178.2	0.0219
16	29.015	1169.3	0.0218
17	25.701	1139.9	0.0217
18	16.854	1031.9	0.0216

Table 4-59. Burnup and TH Feedback Parameters by Axial Node for Assembly C27

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	Spec.Vol
1	2.215	970.2	0.0234	3.541	1041.7	0.0234	4.815	1041.7	0.0234
2	3.938	1236.7	0.0234	6.140	1256.0	0.0233	8.099	1256.0	0.0233
3	5.181	1390.6	0.0233	7.858	1339.7	0.0232	10.113	1339.7	0.0232
4	5.850	1455.8	0.0231	8.690	1355.3	0.0231	11.021	1355.3	0.0231
5	6.166	1473.7	0.0230	9.044	1351.0	0.0230	11.380	1351.0	0.0230
6	6.284	1469.7	0.0229	9.165	1344.1	0.0229	11.487	1344.1	0.0229
7	6.286	1456.1	0.0228	9.162	1338.9	0.0227	11.468	1338.9	0.0227
8	6.215	1441.4	0.0227	9.085	1335.3	0.0226	11.384	1335.3	0.0226
9	6.121	1435.4	0.0225	8.985	1333.6	0.0225	11.298	1333.6	0.0225
10	6.064	1444.7	0.0224	8.936	1335.3	0.0224	11.285	1335.3	0.0224
11	6.090	1469.7	0.0223	8.987	1339.7	0.0223	11.381	1339.7	0.0223
12	6.195	1504.4	0.0222	9.136	1345.5	0.0222	11.569	1345.5	0.0222
13	6.342	1537.4	0.0221	9.341	1351.7	0.0221	11.784	1351.7	0.0221
14	6.447	1552.9	0.0220	9.500	1356.9	0.0220	11.915	1356.9	0.0220
15	6.386	1540.5	0.0219	9.454	1357.3	0.0219	11.804	1357.3	0.0219
16	6.004	1485.2	0.0218	8.988	1344.4	0.0218	11.226	1344.4	0.0218
17	5.055	1353.7	0.0217	7.707	1288.9	0.0217	9.697	1288.9	0.0217
18	2.999	1055.2	0.0216	4.693	1086.9	0.0216	5.994	1086.9	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-59. Burnup and TH Feedback Parameters by Axial Node for Assembly C27 (Cont'd)

Axial	Burnup	SP8 to SP9		Burnup	SP9 to SP10	
Node	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol
1	8.304	920.5	0.0236	8.757	1039.3	0.0234
2	13.712	1069.8	0.0236	14.400	1179.8	0.0234
3	17.207	1176.4	0.0235	18.033	1230.2	0.0232
4	19.047	1277.0	0.0234	19.932	1228.1	0.0231
5	19.927	1350.8	0.0232	20.827	1212.3	0.0230
6	20.331	1400.6	0.0231	21.231	1197.2	0.0229
7	20.517	1437.1	0.0229	21.414	1186.4	0.0227
8	20.593	1461.5	0.0228	21.491	1180.4	0.0226
9	20.614	1473.5	0.0226	21.515	1177.3	0.0225
10	20.617	1470.4	0.0225	21.522	1174.1	0.0224
11	20.631	1450.8	0.0224	21.537	1168.9	0.0223
12	20.666	1417.2	0.0222	21.573	1162.4	0.0222
13	20.719	1376.6	0.0221	21.629	1156.8	0.0221
14	20.748	1341.7	0.0220	21.665	1155.9	0.0220
15	20.608	1318.1	0.0219	21.538	1162.2	0.0219
16	19.905	1297.4	0.0218	20.840	1169.8	0.0218
17	17.655	1243.8	0.0217	18.539	1161.1	0.0217
18	11.381	1069.6	0.0216	12.011	1050.8	0.0216

Table 4-60. Burnup and TH Feedback Parameters by Axial Node for Assembly C27a

Axial	Burnup	SP5 to SP6		Burnup	SP6 to SP7		Burnup	SP7 to SP8	
Node	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol	SP8	T-Fuel	Spec.Vol
1	2.215	970.2	0.0234	3.541	1041.7	0.0234	4.793	1041.7	0.0234
2	3.938	1236.7	0.0234	6.140	1256.0	0.0233	8.056	1256.0	0.0233
3	5.181	1390.6	0.0233	7.858	1339.7	0.0232	10.051	1339.7	0.0232
4	5.850	1455.8	0.0231	8.690	1355.3	0.0231	10.947	1355.3	0.0231
5	6.166	1473.7	0.0230	9.044	1351.0	0.0230	11.299	1351.0	0.0230
6	6.284	1469.7	0.0229	9.165	1344.1	0.0229	11.401	1344.1	0.0229
7	6.286	1456.1	0.0228	9.162	1338.9	0.0227	11.380	1338.9	0.0227
8	6.215	1441.4	0.0227	9.085	1335.3	0.0226	11.295	1335.3	0.0226
9	6.121	1435.4	0.0225	8.985	1333.6	0.0225	11.207	1333.6	0.0225
10	6.064	1444.7	0.0224	8.936	1335.3	0.0224	11.192	1335.3	0.0224
11	6.090	1469.7	0.0223	8.987	1339.7	0.0223	11.287	1339.7	0.0223
12	6.195	1504.4	0.0222	9.136	1345.5	0.0222	11.473	1345.5	0.0222
13	6.342	1537.4	0.0221	9.341	1351.7	0.0221	11.687	1351.7	0.0221
14	6.447	1552.9	0.0220	9.500	1356.9	0.0220	11.816	1356.9	0.0220
15	6.386	1540.5	0.0219	9.454	1357.3	0.0219	11.704	1357.3	0.0219
16	6.004	1485.2	0.0218	8.988	1344.4	0.0218	11.128	1344.4	0.0218
17	5.055	1353.7	0.0217	7.707	1288.9	0.0217	9.612	1288.9	0.0217
18	2.999	1055.2	0.0216	4.693	1086.9	0.0216	5.943	1086.9	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-60. Burnup and TH Feedback Parameters by Axial Node for Assembly C27a (Cont'd)

Axial	Burnup	SP8 to SP9		Burnup	SP9 to SP10	
Node	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol
1	8.343	927.0	0.0237	8.805	1046.0	0.0235
2	13.784	1081.5	0.0236	14.489	1188.6	0.0234
3	17.266	1190.4	0.0235	18.107	1236.6	0.0233
4	19.091	1288.4	0.0234	19.989	1235.6	0.0232
5	19.975	1362.6	0.0233	20.889	1221.3	0.0230
6	20.387	1413.9	0.0231	21.301	1206.3	0.0229
7	20.580	1451.4	0.0230	21.492	1195.9	0.0228
8	20.666	1475.6	0.0228	21.580	1190.6	0.0227
9	20.695	1488.6	0.0227	21.613	1188.2	0.0225
10	20.702	1485.6	0.0225	21.624	1185.4	0.0224
11	20.713	1465.2	0.0224	21.638	1180.4	0.0223
12	20.745	1431.9	0.0222	21.672	1173.8	0.0222
13	20.798	1390.3	0.0221	21.727	1168.2	0.0221
14	20.840	1354.7	0.0220	21.778	1168.1	0.0220
15	20.757	1332.7	0.0219	21.714	1178.2	0.0219
16	20.149	1317.4	0.0218	21.122	1191.8	0.0218
17	17.941	1270.2	0.0217	18.864	1182.9	0.0217
18	11.589	1091.1	0.0216	12.247	1068.9	0.0216

Table 4-61. Burnup and TH Feedback Parameters by Axial Node for Assembly C28

Axial	Burnup	SP5 to SP6		Burnup	SP6 to SP7		Burnup	SP7 to SP8	
Node	SP6	T-Fuel	Spec.Vol	SP7	T-Fuel	Spec.Vol	SP8	T-Fuel	Spec.Vol
1	1.265	791.1	0.0225	2.034	851.1	0.0226	2.747	851.1	0.0226
2	2.254	948.3	0.0225	3.543	1004.5	0.0226	4.685	1004.5	0.0226
3	2.936	1047.1	0.0225	4.513	1073.8	0.0225	5.862	1073.8	0.0225
4	3.306	1092.7	0.0224	4.994	1092.8	0.0224	6.408	1092.8	0.0224
5	3.482	1107.8	0.0223	5.202	1094.2	0.0224	6.628	1094.2	0.0224
6	3.548	1107.5	0.0223	5.272	1091.1	0.0223	6.695	1091.1	0.0223
7	3.550	1100.6	0.0222	5.272	1087.9	0.0222	6.689	1087.9	0.0222
8	3.515	1092.7	0.0221	5.234	1085.5	0.0222	6.650	1085.5	0.0222
9	3.470	1089.5	0.0221	5.187	1084.5	0.0221	6.612	1084.5	0.0221
10	3.442	1094.5	0.0220	5.164	1085.3	0.0220	6.608	1085.3	0.0220
11	3.451	1107.6	0.0220	5.187	1087.9	0.0220	6.652	1087.9	0.0220
12	3.497	1125.5	0.0219	5.255	1091.5	0.0219	6.736	1091.5	0.0219
13	3.559	1142.0	0.0218	5.345	1095.2	0.0219	6.826	1095.2	0.0219
14	3.593	1149.1	0.0218	5.403	1097.8	0.0218	6.864	1097.8	0.0218
15	3.535	1138.5	0.0217	5.344	1096.1	0.0217	6.763	1096.1	0.0217
16	3.292	1099.5	0.0217	5.034	1081.7	0.0217	6.376	1081.7	0.0217
17	2.723	1009.1	0.0216	4.239	1029.9	0.0216	5.408	1029.9	0.0216
18	1.567	819.8	0.0216	2.497	867.2	0.0216	3.230	867.2	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-61. Burnup and TH Feedback Parameters by Axial Node for Assembly C28 (Cont'd)

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	4.528	755.3	0.0224	4.776	840.9	0.0226	5.656	840.9	0.0226
2*	7.652	865.7	0.0224	8.043	947.4	0.0225	9.445	947.4	0.0225
3	9.545	934.1	0.0224	10.007	985.5	0.0225	11.711	985.5	0.0225
4	10.460	975.3	0.0223	10.948	992.4	0.0224	12.779	992.4	0.0224
5	10.877	1002.3	0.0223	11.371	989.6	0.0223	13.235	989.6	0.0223
6	11.053	1021.0	0.0222	11.548	985.0	0.0223	13.405	985.0	0.0223
7	11.107	1033.3	0.0221	11.601	981.8	0.0222	13.447	981.8	0.0222
8	11.092	1039.1	0.0221	11.587	980.4	0.0222	13.430	980.4	0.0222
9	11.043	1037.2	0.0220	11.539	980.0	0.0221	13.400	980.0	0.0221
10	10.998	1027.6	0.0220	11.495	979.0	0.0220	13.390	979.0	0.0220
11	10.987	1012.4	0.0219	11.487	976.6	0.0220	13.424	976.6	0.0220
12	11.025	995.3	0.0218	11.528	973.6	0.0219	13.499	973.6	0.0219
13	11.099	980.3	0.0218	11.608	972.1	0.0219	13.589	972.1	0.0219
14	11.170	969.2	0.0217	11.689	975.5	0.0218	13.646	975.5	0.0218
15	11.150	962.3	0.0217	11.685	987.5	0.0218	13.584	987.5	0.0218
16	10.775	954.7	0.0216	11.322	1000.2	0.0217	13.118	1000.2	0.0217
17	9.395	922.4	0.0216	9.906	983.9	0.0216	11.492	983.9	0.0216
18	5.778	800.2	0.0216	6.119	876.5	0.0216	7.162	876.5	0.0216

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol
1	12.247	989.1	0.0232
2	19.518	1106.1	0.0231
3	23.552	1131.9	0.0230
4	25.341	1128.9	0.0229
5	26.035	1118.2	0.0228
6	26.208	1106.3	0.0227
7	26.088	1093.6	0.0226
8	25.777	1081.9	0.0225
9	25.441	1078.2	0.0224
10	25.291	1084.3	0.0223
11	25.401	1097.2	0.0222
12	25.748	1115.5	0.0221
13	26.226	1134.5	0.0220
14	26.571	1142.1	0.0219
15	26.478	1138.3	0.0218
16	25.522	1125.7	0.0217
17	22.587	1095.1	0.0217
18	14.645	980.1	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-62. Burnup and TH Feedback Parameters by Axial Node for Assembly C29

Axial Node	Burnup SP6	SP5 to SP6 T-Fuel	SP5 to SP6 Spec.Vol	Burnup SP7	SP6 to SP7 T-Fuel	SP6 to SP7 Spec.Vol	Burnup SP8	SP7 to SP8 T-Fuel	SP7 to SP8 Spec.Vol
1	1.370	816.1	0.0227	2.221	881.2	0.0228	3.038	881.2	0.0228
2	2.487	997.2	0.0227	3.932	1053.5	0.0227	5.232	1053.5	0.0227
3	3.306	1113.7	0.0226	5.090	1130.0	0.0226	6.612	1130.0	0.0226
4	3.766	1166.7	0.0225	5.678	1148.9	0.0226	7.262	1148.9	0.0226
5	3.988	1182.7	0.0225	5.934	1149.0	0.0225	7.525	1149.0	0.0225
6	4.073	1182.2	0.0224	6.023	1145.0	0.0224	7.606	1145.0	0.0224
7	4.080	1174.8	0.0223	6.029	1141.4	0.0223	7.603	1141.4	0.0223
8	4.045	1166.9	0.0222	5.991	1139.1	0.0223	7.565	1139.1	0.0223
9	3.998	1164.0	0.0222	5.944	1138.4	0.0222	7.528	1138.4	0.0222
10	3.970	1169.9	0.0221	5.923	1139.5	0.0221	7.529	1139.5	0.0221
11	3.983	1184.5	0.0220	5.952	1142.2	0.0220	7.582	1142.2	0.0220
12	4.036	1204.2	0.0220	6.029	1145.7	0.0220	7.677	1145.7	0.0220
13	4.104	1222.0	0.0219	6.127	1149.0	0.0219	7.775	1149.0	0.0219
14	4.139	1229.2	0.0218	6.186	1151.2	0.0218	7.813	1151.2	0.0218
15	4.068	1217.1	0.0217	6.113	1149.3	0.0218	7.696	1149.3	0.0218
16	3.788	1174.2	0.0217	5.758	1134.9	0.0217	7.261	1134.9	0.0217
17	3.137	1074.3	0.0216	4.857	1082.7	0.0216	6.173	1082.7	0.0216
18	1.810	860.3	0.0216	2.872	907.5	0.0216	3.702	907.5	0.0216

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	4.719	741.7	0.0225	4.949	831.9	0.0226	5.877	831.9	0.0226
2	8.143	848.3	0.0225	8.518	944.1	0.0225	9.948	944.1	0.0225
3	10.446	932.3	0.0225	10.912	993.1	0.0225	12.545	993.1	0.0225
4	11.690	1000.6	0.0224	12.200	1007.3	0.0224	13.853	1007.3	0.0224
5	12.286	1050.3	0.0224	12.809	1003.8	0.0224	14.424	1003.8	0.0224
6	12.540	1081.3	0.0223	13.065	997.4	0.0223	14.633	997.4	0.0223
7	12.625	1099.4	0.0222	13.150	993.0	0.0222	14.680	993.0	0.0222
8	12.622	1107.9	0.0222	13.147	991.4	0.0222	14.658	991.4	0.0222
9	12.574	1106.4	0.0221	13.101	991.1	0.0221	14.617	991.1	0.0221
10	12.522	1094.9	0.0220	13.051	990.1	0.0220	14.597	990.1	0.0220
11	12.503	1076.2	0.0219	13.033	987.1	0.0220	14.623	987.1	0.0220
12	12.531	1055.4	0.0219	13.066	982.6	0.0219	14.698	982.6	0.0219
13	12.588	1036.5	0.0218	13.127	978.4	0.0219	14.785	978.4	0.0219
14	12.602	1021.6	0.0218	13.148	976.2	0.0218	14.805	976.2	0.0218
15	12.432	1007.4	0.0217	12.981	976.0	0.0217	14.611	976.0	0.0217
16	11.793	983.9	0.0217	12.332	972.3	0.0217	13.898	972.3	0.0217
17	10.124	933.4	0.0216	10.612	946.4	0.0216	12.015	946.4	0.0216
18	6.183	803.1	0.0216	6.506	849.8	0.0216	7.438	849.8	0.0216

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-62. Burnup and TH Feedback Parameters by Axial Node for Assembly C29 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	Spec.Vol
1	14.058	1064.7	0.0235
2	22.121	1183.0	0.0235
3	26.634	1208.3	0.0233
4	28.677	1203.7	0.0232
5	29.476	1190.6	0.0231
6	29.680	1177.3	0.0229
7	29.581	1165.5	0.0228
8	29.322	1157.2	0.0227
9	29.058	1156.4	0.0226
10	28.948	1164.0	0.0225
11	29.065	1177.4	0.0224
12	29.384	1193.8	0.0222
13	29.781	1208.5	0.0221
14	30.012	1215.0	0.0220
15	29.758	1213.2	0.0219
16	28.543	1203.0	0.0218
17	25.282	1169.7	0.0217
18	16.623	1054.1	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-63. Burnup and TH Feedback Parameters by Axial Node for Assembly D6

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	4.063	1030.3	0.0237	4.588	1146.5	0.0237	6.400	1146.5	0.0237
2	6.415	1273.8	0.0236	7.210	1338.4	0.0236	9.970	1338.4	0.0236
3	7.936	1436.7	0.0235	8.872	1415.9	0.0235	12.191	1415.9	0.0235
4	8.764	1544.4	0.0234	9.751	1429.7	0.0234	13.284	1429.7	0.0234
5	9.230	1619.5	0.0233	10.230	1422.5	0.0232	13.796	1422.5	0.0232
6	9.510	1669.3	0.0231	10.511	1411.3	0.0231	14.041	1411.3	0.0231
7	9.684	1703.0	0.0230	10.685	1403.3	0.0229	14.164	1403.3	0.0229
8	9.771	1721.1	0.0228	10.773	1400.3	0.0228	14.224	1400.3	0.0228
9	9.748	1719.0	0.0226	10.750	1399.9	0.0227	14.227	1399.9	0.0227
10	9.612	1694.2	0.0225	10.613	1397.5	0.0225	14.174	1397.5	0.0225
11	9.431	1654.1	0.0224	10.433	1391.7	0.0224	14.108	1391.7	0.0224
12	9.287	1611.7	0.0222	10.296	1385.2	0.0223	14.083	1385.2	0.0223
13	9.238	1574.3	0.0221	10.260	1381.8	0.0222	14.111	1381.8	0.0222
14	9.326	1550.6	0.0220	10.373	1386.8	0.0221	14.198	1386.8	0.0221
15	9.550	1539.0	0.0219	10.635	1408.4	0.0219	14.346	1408.4	0.0219
16	9.654	1520.4	0.0218	10.771	1435.2	0.0218	14.287	1435.2	0.0218
17	8.847	1442.0	0.0217	9.900	1398.3	0.0217	13.031	1398.3	0.0217
18	6.096	1191.2	0.0216	6.844	1213.2	0.0216	9.033	1213.2	0.0216

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	9.765	793.3	0.0224	10.787	793.3	0.0224	12.079	989.5	0.0234
2	15.340	872.0	0.0224	16.840	872.0	0.0224	19.304	1096.9	0.0233
3	18.610	892.8	0.0223	20.281	892.8	0.0223	23.306	1130.9	0.0232
4	20.116	889.9	0.0223	21.814	889.9	0.0223	25.088	1140.6	0.0231
5	20.751	882.4	0.0222	22.452	882.4	0.0222	25.866	1142.6	0.0230
6	20.993	874.9	0.0222	22.711	874.9	0.0222	26.223	1142.6	0.0229
7	21.057	868.9	0.0221	22.816	868.9	0.0221	26.407	1142.5	0.0228
8	21.039	865.6	0.0221	22.857	865.6	0.0221	26.518	1142.8	0.0226
9	20.985	865.9	0.0220	22.862	865.9	0.0220	26.581	1143.1	0.0225
10	20.924	870.1	0.0220	22.840	870.1	0.0220	26.601	1142.9	0.0224
11	20.908	876.8	0.0219	22.825	876.8	0.0219	26.604	1141.9	0.0223
12	20.966	883.5	0.0219	22.843	883.5	0.0219	26.610	1139.8	0.0222
13	21.072	888.1	0.0218	22.880	888.1	0.0218	26.602	1135.8	0.0221
14	21.171	888.5	0.0218	22.905	888.5	0.0218	26.544	1128.8	0.0220
15	21.194	883.1	0.0217	22.860	883.1	0.0217	26.371	1116.6	0.0219
16	20.778	870.7	0.0217	22.373	870.7	0.0217	25.678	1096.0	0.0218
17	18.699	846.0	0.0216	20.152	846.0	0.0216	23.098	1061.7	0.0217
18	12.654	766.1	0.0216	13.657	766.1	0.0216	15.671	961.2	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-63. Burnup and TH Feedback Parameters by Axial Node for Assembly D6 (Cont'd)

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	18.630	1021.8	0.0234
2	28.726	1095.1	0.0233
3	33.854	1111.7	0.0232
4	35.936	1109.5	0.0231
5	36.748	1101.7	0.0229
6	37.072	1094.3	0.0228
7	37.226	1088.2	0.0227
8	37.323	1083.6	0.0226
9	37.385	1080.3	0.0225
10	37.410	1078.2	0.0224
11	37.423	1077.0	0.0223
12	37.449	1077.1	0.0222
13	37.464	1077.9	0.0221
14	37.418	1078.9	0.0220
15	37.195	1078.2	0.0219
16	36.262	1070.4	0.0218
17	32.896	1046.9	0.0217
18	22.698	966.9	0.0216

Table 4-64. Burnup and TH Feedback Parameters by Axial Node for Assembly D10

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	3.439	950.6	0.0237	3.889	1099.2	0.0237	5.792	1099.2	0.0237
2	5.599	1167.0	0.0237	6.303	1303.5	0.0236	9.208	1303.5	0.0236
3	7.318	1340.6	0.0236	8.192	1405.9	0.0234	11.667	1405.9	0.0234
4	8.423	1487.2	0.0235	9.374	1423.9	0.0233	13.014	1423.9	0.0233
5	9.036	1590.9	0.0233	10.010	1411.2	0.0232	13.627	1411.2	0.0232
6	9.384	1659.2	0.0232	10.360	1395.1	0.0230	13.906	1395.1	0.0230
7	9.628	1704.8	0.0230	10.605	1383.9	0.0229	14.088	1383.9	0.0229
8	9.841	1737.2	0.0229	10.822	1379.2	0.0228	14.282	1379.2	0.0228
9	10.000	1756.4	0.0227	10.989	1378.8	0.0226	14.484	1378.8	0.0226
10	10.032	1753.2	0.0226	11.027	1377.6	0.0225	14.604	1377.6	0.0225
11	9.935	1727.4	0.0224	10.935	1373.1	0.0224	14.609	1373.1	0.0224
12	9.768	1686.7	0.0223	10.771	1367.1	0.0223	14.527	1367.1	0.0223
13	9.588	1637.9	0.0221	10.596	1362.1	0.0222	14.375	1362.1	0.0222
14	9.499	1594.3	0.0220	10.518	1363.9	0.0221	14.236	1363.9	0.0221
15	9.616	1567.8	0.0219	10.664	1382.8	0.0219	14.250	1382.8	0.0219
16	9.733	1547.6	0.0218	10.814	1408.1	0.0218	14.204	1408.1	0.0218
17	8.979	1473.9	0.0217	10.002	1371.8	0.0217	13.023	1371.8	0.0217
18	6.204	1216.9	0.0216	6.933	1193.8	0.0216	9.045	1193.8	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-64. Burnup and TH Feedback Parameters by Axial Node for Assembly D10 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol
1	13.973	1066.4	0.0235
2	21.586	1197.9	0.0234
3	26.065	1222.1	0.0233
4	28.163	1215.5	0.0232
5	28.992	1200.7	0.0231
6	29.236	1185.5	0.0229
7	29.207	1169.9	0.0228
8	29.044	1155.3	0.0227
9	28.879	1148.8	0.0226
10	28.819	1153.8	0.0225
11	28.898	1167.5	0.0223
12	29.113	1188.1	0.0222
13	29.392	1210.5	0.0221
14	29.570	1220.7	0.0220
15	29.515	1215.3	0.0219
16	28.838	1195.0	0.0218
17	26.116	1151.3	0.0217
18	17.914	1024.4	0.0216

Table 4-65. Burnup and TH Feedback Parameters by Axial Node for Assembly D12

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	4.291	1053.8	0.0238	4.839	1170.8	0.0238	6.779	1170.8	0.0238
2	6.795	1307.4	0.0238	7.629	1369.3	0.0237	10.526	1369.3	0.0237
3	8.419	1482.0	0.0236	9.399	1446.3	0.0235	12.741	1446.3	0.0235
4	9.315	1601.3	0.0235	10.347	1457.9	0.0234	13.804	1457.9	0.0234
5	9.824	1686.7	0.0233	10.869	1448.6	0.0232	14.306	1448.6	0.0232
6	10.133	1738.3	0.0232	11.178	1435.2	0.0231	14.542	1435.2	0.0231
7	10.341	1775.5	0.0230	11.385	1426.0	0.0229	14.641	1426.0	0.0229
8	10.468	1799.5	0.0229	11.514	1423.6	0.0228	14.655	1423.6	0.0228
9	10.395	1798.1	0.0227	11.432	1423.8	0.0227	14.559	1423.8	0.0227
10	10.011	1755.0	0.0225	11.021	1413.1	0.0225	14.227	1413.1	0.0225
11	9.615	1689.3	0.0224	10.609	1387.6	0.0224	13.933	1387.6	0.0224
12	9.369	1629.3	0.0222	10.363	1370.2	0.0223	13.855	1370.2	0.0223
13	9.264	1581.3	0.0221	10.269	1361.3	0.0222	13.925	1361.3	0.0222
14	9.408	1558.3	0.0220	10.446	1362.8	0.0220	14.100	1362.8	0.0220
15	9.782	1569.7	0.0219	10.875	1385.1	0.0219	14.403	1385.1	0.0219
16	9.776	1557.1	0.0218	10.885	1404.1	0.0218	14.226	1404.1	0.0218
17	8.824	1458.3	0.0217	9.852	1368.3	0.0217	12.845	1368.3	0.0217
18	6.043	1195.7	0.0216	6.771	1192.1	0.0216	8.868	1192.1	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-65. Burnup and TH Feedback Parameters by Axial Node for Assembly D12 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol
1	14.516	1030.9	0.0233
2	22.205	1153.3	0.0232
3	26.394	1186.9	0.0231
4	28.256	1187.5	0.0230
5	29.003	1175.6	0.0228
6	29.176	1159.7	0.0227
7	28.789	1128.9	0.0226
8	27.132	1026.2	0.0225
9	24.482	968.5	0.0224
10	23.226	978.6	0.0224
11	22.976	994.8	0.0223
12	23.626	1033.8	0.0222
13	26.211	1215.8	0.0221
14	28.752	1235.6	0.0220
15	29.438	1219.0	0.0219
16	28.710	1197.7	0.0218
17	25.832	1154.6	0.0217
18	17.678	1026.7	0.0216

Table 4-66. Burnup and TH Feedback Parameters by Axial Node for Assembly D14

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	3.131	923.0	0.0232	3.548	1041.6	0.0233	4.992	1041.6	0.0233
2	5.159	1143.6	0.0232	5.811	1229.6	0.0232	8.086	1229.6	0.0232
3	6.468	1292.2	0.0231	7.243	1303.4	0.0231	10.032	1303.4	0.0231
4	7.171	1383.9	0.0230	7.991	1319.0	0.0230	10.993	1319.0	0.0230
5	7.555	1445.4	0.0229	8.387	1314.2	0.0229	11.435	1314.2	0.0229
6	7.775	1487.9	0.0228	8.608	1305.4	0.0228	11.637	1305.4	0.0228
7	7.901	1515.6	0.0227	8.734	1298.9	0.0227	11.731	1298.9	0.0227
8	7.954	1528.7	0.0225	8.787	1296.3	0.0226	11.772	1296.3	0.0226
9	7.928	1524.8	0.0224	8.763	1296.2	0.0225	11.775	1296.2	0.0225
10	7.833	1503.7	0.0223	8.669	1295.5	0.0224	11.749	1295.5	0.0224
11	7.714	1471.6	0.0222	8.554	1292.5	0.0223	11.723	1292.5	0.0223
12	7.627	1438.3	0.0221	8.474	1288.9	0.0222	11.726	1288.9	0.0222
13	7.611	1411.0	0.0220	8.470	1287.4	0.0221	11.765	1287.4	0.0221
14	7.692	1393.0	0.0219	8.571	1292.8	0.0220	11.840	1292.8	0.0220
15	7.874	1381.7	0.0218	8.784	1312.3	0.0219	11.956	1312.3	0.0219
16	7.953	1362.9	0.0217	8.891	1336.0	0.0218	11.892	1336.0	0.0218
17	7.225	1289.9	0.0216	8.105	1302.3	0.0217	10.759	1302.3	0.0217
18	4.795	1052.1	0.0216	5.407	1127.8	0.0216	7.223	1127.8	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-66. Burnup and TH Feedback Parameters by Axial Node for Assembly D14 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	8.575	817.7	0.0225	9.666	817.7	0.0225	10.153	697.7	0.0221
2	13.784	902.4	0.0224	15.385	902.4	0.0224	16.170	744.4	0.0221
3	16.824	928.2	0.0224	18.610	928.2	0.0224	19.562	759.7	0.0221
4	18.213	926.7	0.0223	20.026	926.7	0.0223	21.064	763.2	0.0220
5	18.787	919.3	0.0223	20.599	919.3	0.0223	21.686	763.7	0.0220
6	19.001	912.1	0.0222	20.823	912.1	0.0222	21.943	763.4	0.0220
7	19.061	906.9	0.0221	20.914	906.9	0.0221	22.061	763.1	0.0219
8	19.060	904.4	0.0221	20.956	904.4	0.0221	22.125	762.8	0.0219
9	19.040	905.2	0.0220	20.980	905.2	0.0220	22.166	762.4	0.0219
10	19.026	909.1	0.0220	20.992	909.1	0.0220	22.189	761.7	0.0218
11	19.047	914.5	0.0219	21.010	914.5	0.0219	22.207	760.6	0.0218
12	19.110	919.7	0.0219	21.040	919.7	0.0219	22.228	758.9	0.0218
13	19.191	923.1	0.0218	21.067	923.1	0.0218	22.235	756.8	0.0217
14	19.244	923.1	0.0218	21.063	923.1	0.0218	22.202	753.8	0.0217
15	19.212	918.2	0.0217	20.978	918.2	0.0217	22.070	749.1	0.0217
16	18.771	906.1	0.0217	20.474	906.1	0.0217	21.490	740.7	0.0216
17	16.781	878.8	0.0216	18.342	878.8	0.0216	19.216	725.7	0.0216
18	11.097	790.1	0.0216	12.179	790.1	0.0216	12.736	681.3	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	12.301	722.1	0.0221
2	19.363	766.6	0.0221
3	23.168	774.2	0.0221
4	24.772	771.5	0.0220
5	25.397	767.3	0.0220
6	25.636	763.7	0.0220
7	25.736	760.8	0.0219
8	25.788	758.7	0.0219
9	25.820	757.1	0.0219
10	25.835	755.7	0.0218
11	25.845	754.7	0.0218
12	25.858	753.9	0.0218
13	25.860	753.5	0.0217
14	25.820	753.4	0.0217
15	25.663	752.9	0.0217
16	24.982	750.2	0.0216
17	22.393	741.7	0.0216
18	14.902	702.0	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-67. Burnup and TH Feedback Parameters by Axial Node for Assembly D17

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	3.925	1010.2	0.0238	4.430	1136.5	0.0236	6.280	1136.5	0.0236
2	6.383	1266.6	0.0237	7.161	1332.0	0.0235	9.987	1332.0	0.0235
3	8.003	1442.2	0.0236	8.925	1409.6	0.0234	12.297	1409.6	0.0234
4	8.923	1566.1	0.0235	9.899	1421.1	0.0233	13.444	1421.1	0.0233
5	9.450	1655.5	0.0233	10.441	1410.6	0.0231	13.968	1410.6	0.0231
6	9.764	1714.0	0.0232	10.756	1397.1	0.0230	14.198	1397.1	0.0230
7	9.972	1752.7	0.0230	10.963	1388.0	0.0229	14.283	1388.0	0.0229
8	10.096	1777.0	0.0228	11.086	1385.7	0.0227	14.282	1385.7	0.0227
9	10.006	1774.9	0.0227	10.986	1386.0	0.0226	14.169	1386.0	0.0226
10	9.593	1729.0	0.0225	10.543	1373.9	0.0225	13.817	1373.9	0.0225
11	9.167	1658.7	0.0224	10.099	1346.1	0.0224	13.511	1346.1	0.0224
12	8.904	1591.7	0.0222	9.834	1327.1	0.0223	13.437	1327.1	0.0223
13	8.801	1542.3	0.0221	9.742	1317.3	0.0221	13.523	1317.3	0.0221
14	8.998	1523.1	0.0220	9.974	1319.6	0.0220	13.749	1319.6	0.0220
15	9.564	1547.2	0.0219	10.610	1354.2	0.0219	14.235	1354.2	0.0219
16	9.924	1563.4	0.0218	11.021	1397.9	0.0218	14.433	1397.9	0.0218
17	9.191	1496.9	0.0217	10.230	1371.1	0.0217	13.269	1371.1	0.0217
18	6.247	1218.4	0.0216	6.986	1196.3	0.0216	9.110	1196.3	0.0216

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	9.085	754.1	0.0222	9.945	754.1	0.0222	10.385	679.7	0.0220
2	14.460	820.4	0.0222	15.725	820.4	0.0222	16.419	719.3	0.0220
3	17.618	840.1	0.0222	19.029	840.1	0.0222	19.855	730.9	0.0220
4	19.089	838.9	0.0221	20.527	838.9	0.0221	21.416	732.9	0.0220
5	19.710	832.8	0.0221	21.151	832.8	0.0221	22.077	732.8	0.0219
6	19.936	826.7	0.0220	21.391	826.7	0.0220	22.344	732.4	0.0219
7	19.971	821.7	0.0220	21.461	821.7	0.0220	22.435	732.2	0.0219
8	19.905	819.0	0.0220	21.445	819.0	0.0220	22.440	732.5	0.0218
9	19.747	819.9	0.0219	21.339	819.9	0.0219	22.352	733.1	0.0218
10	19.406	825.6	0.0219	21.037	825.6	0.0219	22.062	734.3	0.0218
11	19.157	833.2	0.0218	20.793	833.2	0.0218	21.821	734.6	0.0218
12	19.157	839.7	0.0218	20.761	839.7	0.0218	21.778	733.0	0.0217
13	19.306	843.4	0.0218	20.851	843.4	0.0218	21.845	730.0	0.0217
14	19.533	842.5	0.0217	21.011	842.5	0.0217	21.973	725.8	0.0217
15	19.886	834.6	0.0217	21.298	834.6	0.0217	22.214	719.4	0.0216
16	19.755	820.8	0.0216	21.098	820.8	0.0216	21.947	711.2	0.0216
17	17.889	797.1	0.0216	19.106	797.1	0.0216	19.840	698.6	0.0216
18	12.049	729.2	0.0216	12.882	729.2	0.0216	13.354	662.4	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-67. Burnup and TH Feedback Parameters by Axial Node for Assembly D17 (Cont'd)

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	12.300	703.5	0.0221
2	19.242	741.9	0.0220
3	23.020	747.6	0.0220
4	24.655	744.4	0.0220
5	25.311	740.2	0.0220
6	25.558	736.8	0.0219
7	25.636	734.5	0.0219
8	25.635	733.1	0.0219
9	25.550	732.5	0.0218
10	25.270	733.2	0.0218
11	25.031	733.6	0.0218
12	24.975	732.9	0.0217
13	25.023	731.6	0.0217
14	25.126	730.1	0.0217
15	25.322	727.3	0.0217
16	24.961	723.8	0.0216
17	22.586	716.1	0.0216
18	15.237	682.3	0.0216

Table 4-68. Burnup and TH Feedback Parameters by Axial Node for Assembly D19

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	4.074	1032.6	0.0238	4.597	1149.0	0.0237	6.419	1149.0	0.0237
2	6.682	1305.9	0.0238	7.493	1348.4	0.0236	10.246	1348.4	0.0236
3	8.376	1492.5	0.0236	9.334	1425.8	0.0235	12.512	1425.8	0.0235
4	9.311	1618.7	0.0235	10.322	1438.5	0.0233	13.605	1438.5	0.0233
5	9.834	1704.0	0.0233	10.859	1430.5	0.0232	14.120	1430.5	0.0232
6	10.136	1754.4	0.0232	11.161	1418.2	0.0230	14.350	1418.2	0.0230
7	10.309	1787.3	0.0230	11.332	1409.7	0.0229	14.413	1409.7	0.0229
8	10.356	1801.8	0.0228	11.377	1406.9	0.0228	14.338	1406.9	0.0228
9	10.173	1787.6	0.0227	11.182	1406.0	0.0226	14.115	1406.0	0.0226
10	9.716	1735.4	0.0225	10.696	1394.5	0.0225	13.694	1394.5	0.0225
11	9.312	1667.4	0.0224	10.276	1369.6	0.0224	13.386	1369.6	0.0224
12	9.117	1611.2	0.0222	10.084	1354.0	0.0223	13.364	1354.0	0.0223
13	9.114	1576.0	0.0221	10.098	1347.3	0.0221	13.556	1347.3	0.0221
14	9.360	1567.8	0.0220	10.383	1350.6	0.0220	13.869	1350.6	0.0220
15	9.756	1585.0	0.0219	10.832	1371.7	0.0219	14.220	1371.7	0.0219
16	9.684	1566.4	0.0218	10.771	1387.5	0.0218	13.992	1387.5	0.0218
17	8.618	1450.9	0.0217	9.620	1350.5	0.0217	12.505	1350.5	0.0217
18	5.699	1162.8	0.0216	6.397	1174.3	0.0216	8.403	1174.3	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-68. Burnup and TH Feedback Parameters by Axial Node for Assembly D19 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol
1	12.977	983.0	0.0231
2	20.117	1090.2	0.0230
3	23.905	1100.9	0.0229
4	25.475	1088.6	0.0228
5	26.065	1073.1	0.0227
6	26.241	1060.9	0.0226
7	26.227	1053.6	0.0225
8	26.100	1051.9	0.0224
9	25.879	1056.1	0.0223
10	25.529	1065.9	0.0222
11	25.302	1075.7	0.0222
12	25.314	1081.0	0.0221
13	25.474	1081.4	0.0220
14	25.666	1077.1	0.0219
15	25.764	1068.4	0.0218
16	25.088	1058.1	0.0217
17	22.517	1035.3	0.0217
18	15.178	932.5	0.0216

Table 4-69. Burnup and TH Feedback Parameters by Axial Node for Assembly D19a

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	4.074	1032.6	0.0238	4.597	1149.0	0.0237	6.413	1149.0	0.0237
2	6.682	1305.9	0.0238	7.493	1348.4	0.0236	10.236	1348.4	0.0236
3	8.376	1492.5	0.0236	9.334	1425.8	0.0235	12.499	1425.8	0.0235
4	9.311	1618.7	0.0235	10.322	1438.5	0.0233	13.590	1438.5	0.0233
5	9.834	1704.0	0.0233	10.859	1430.5	0.0232	14.104	1430.5	0.0232
6	10.136	1754.4	0.0232	11.161	1418.2	0.0230	14.333	1418.2	0.0230
7	10.309	1787.3	0.0230	11.332	1409.7	0.0229	14.396	1409.7	0.0229
8	10.356	1801.8	0.0228	11.377	1406.9	0.0228	14.321	1406.9	0.0228
9	10.173	1787.6	0.0227	11.182	1406.0	0.0226	14.098	1406.0	0.0226
10	9.716	1735.4	0.0225	10.696	1394.5	0.0225	13.677	1394.5	0.0225
11	9.312	1667.4	0.0224	10.276	1369.6	0.0224	13.370	1369.6	0.0224
12	9.117	1611.2	0.0222	10.084	1354.0	0.0223	13.348	1354.0	0.0223
13	9.114	1576.0	0.0221	10.098	1347.3	0.0221	13.540	1347.3	0.0221
14	9.360	1567.8	0.0220	10.383	1350.6	0.0220	13.852	1350.6	0.0220
15	9.756	1585.0	0.0219	10.832	1371.7	0.0219	14.202	1371.7	0.0219
16	9.684	1566.4	0.0218	10.771	1387.5	0.0218	13.975	1387.5	0.0218
17	8.618	1450.9	0.0217	9.620	1350.5	0.0217	12.490	1350.5	0.0217
18	5.699	1162.8	0.0216	6.397	1174.3	0.0216	8.393	1174.3	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-69. Burnup and TH Feedback Parameters by Axial Node for Assembly D19a (Cont'd)

Axial	Burnup	SP11 to SP12	
Node	SP12	T-Fuel	Spec.Vol
1	14.369	1052.7	0.0235
2	22.220	1175.6	0.0234
3	26.526	1207.6	0.0233
4	28.454	1207.0	0.0232
5	29.228	1194.6	0.0230
6	29.414	1178.8	0.0229
7	29.190	1159.7	0.0228
8	28.604	1140.3	0.0227
9	27.852	1133.9	0.0226
10	27.214	1146.5	0.0225
11	27.049	1169.3	0.0224
12	27.473	1199.3	0.0222
13	28.310	1229.7	0.0221
14	29.107	1238.2	0.0220
15	29.445	1226.3	0.0219
16	28.649	1206.1	0.0218
17	25.682	1164.5	0.0217
18	17.384	1038.2	0.0216

Table 4-70. Burnup and TH Feedback Parameters by Axial Node for Assembly D23

Axial	Burnup	SP8 to SP9		Burnup	SP9 to SP10		Burnup	SP10 to SP11	
Node	SP9	T-Fuel	Spec.Vol	SP10	T-Fuel	Spec.Vol	SP11	T-Fuel	Spec.Vol
1	3.836	999.6	0.0238	4.331	1134.6	0.0237	6.244	1134.6	0.0237
2	6.266	1244.2	0.0238	7.039	1343.7	0.0236	9.912	1343.7	0.0236
3	8.154	1436.3	0.0236	9.107	1444.9	0.0235	12.408	1444.9	0.0235
4	9.345	1596.8	0.0235	10.374	1463.1	0.0234	13.746	1463.1	0.0234
5	9.995	1705.2	0.0234	11.046	1453.0	0.0232	14.358	1453.0	0.0232
6	10.343	1763.5	0.0232	11.397	1438.7	0.0231	14.608	1438.7	0.0231
7	10.534	1800.1	0.0230	11.586	1429.3	0.0229	14.666	1429.3	0.0229
8	10.583	1816.0	0.0228	11.632	1426.3	0.0228	14.573	1426.3	0.0228
9	10.378	1800.3	0.0227	11.413	1425.5	0.0226	14.317	1425.5	0.0226
10	9.875	1743.6	0.0225	10.877	1413.1	0.0225	13.849	1413.1	0.0225
11	9.419	1668.9	0.0224	10.402	1385.6	0.0224	13.501	1385.6	0.0224
12	9.184	1608.0	0.0222	10.169	1367.0	0.0223	13.460	1367.0	0.0223
13	9.165	1569.6	0.0221	10.166	1357.8	0.0222	13.657	1357.8	0.0222
14	9.425	1562.2	0.0220	10.467	1359.8	0.0220	13.996	1359.8	0.0220
15	9.856	1583.4	0.0219	10.956	1381.3	0.0219	14.386	1381.3	0.0219
16	9.819	1570.0	0.0218	10.932	1398.7	0.0218	14.196	1398.7	0.0218
17	8.790	1462.2	0.0217	9.817	1361.8	0.0217	12.748	1361.8	0.0217
18	5.959	1191.0	0.0216	6.680	1185.1	0.0216	8.730	1185.1	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-70. Burnup and TH Feedback Parameters by Axial Node for Assembly D23 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol
1	13.802	1034.1	0.0234
2	21.408	1159.9	0.0234
3	25.851	1185.6	0.0232
4	27.949	1181.3	0.0231
5	28.802	1168.4	0.0230
6	29.051	1154.9	0.0229
7	28.955	1142.0	0.0228
8	28.597	1131.8	0.0226
9	28.097	1131.8	0.0225
10	27.593	1144.9	0.0224
11	27.405	1163.5	0.0223
12	27.660	1183.4	0.0222
13	28.214	1200.6	0.0221
14	28.760	1203.7	0.0220
15	28.994	1192.7	0.0219
16	28.194	1174.6	0.0218
17	25.270	1135.2	0.0217
18	17.171	1011.4	0.0216

Table 4-71. Burnup and TH Feedback Parameters by Axial Node for Assembly D25

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	2.593	859.5	0.0230	2.939	970.7	0.0230	4.168	970.7	0.0230
2	4.448	1062.5	0.0230	5.005	1154.1	0.0230	6.922	1154.1	0.0230
3	5.673	1207.0	0.0229	6.343	1227.2	0.0229	8.569	1227.2	0.0229
4	6.363	1303.0	0.0228	7.077	1242.6	0.0228	9.374	1242.6	0.0228
5	6.746	1368.5	0.0227	7.473	1237.3	0.0227	9.748	1237.3	0.0227
6	6.956	1411.3	0.0226	7.683	1228.0	0.0226	9.910	1228.0	0.0226
7	7.065	1437.4	0.0225	7.791	1221.2	0.0225	9.968	1221.2	0.0225
8	7.096	1448.1	0.0224	7.822	1218.2	0.0224	9.968	1218.2	0.0224
9	7.051	1442.0	0.0223	7.776	1217.6	0.0223	9.928	1217.6	0.0223
10	6.943	1420.0	0.0222	7.668	1216.3	0.0222	9.864	1216.3	0.0222
11	6.823	1388.9	0.0221	7.550	1212.7	0.0221	9.814	1212.7	0.0221
12	6.740	1358.3	0.0220	7.474	1208.1	0.0221	9.809	1208.1	0.0221
13	6.718	1334.2	0.0219	7.462	1204.8	0.0220	9.845	1204.8	0.0220
14	6.745	1317.1	0.0218	7.501	1204.4	0.0219	9.884	1204.4	0.0219
15	6.732	1299.2	0.0218	7.499	1206.4	0.0218	9.831	1206.4	0.0218
16	6.473	1258.4	0.0217	7.229	1201.1	0.0217	9.452	1201.1	0.0217
17	5.607	1156.3	0.0216	6.288	1158.2	0.0217	8.258	1158.2	0.0217
18	3.423	917.2	0.0216	3.864	983.4	0.0216	5.145	983.4	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-71. Burnup and TH Feedback Parameters by Axial Node for Assembly D25 (Cont'd)

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	9.837	949.8	0.0230	11.473	949.8	0.0230	12.636	858.7	0.0228
2	15.757	1068.8	0.0229	18.103	1068.8	0.0229	19.906	937.1	0.0228
3	19.020	1106.1	0.0228	21.623	1106.1	0.0228	23.779	961.7	0.0227
4	20.468	1105.7	0.0228	23.118	1105.7	0.0228	25.456	968.0	0.0226
5	21.053	1096.0	0.0227	23.709	1096.0	0.0227	26.156	969.2	0.0225
6	21.230	1085.5	0.0226	23.914	1085.5	0.0226	26.438	969.4	0.0225
7	21.201	1076.5	0.0225	23.949	1076.5	0.0225	26.538	969.8	0.0224
8	21.063	1070.8	0.0224	23.907	1070.8	0.0224	26.553	970.9	0.0223
9	20.903	1071.3	0.0223	23.849	1071.3	0.0223	26.542	971.8	0.0222
10	20.815	1078.5	0.0222	23.829	1078.5	0.0222	26.549	971.2	0.0221
11	20.856	1090.0	0.0221	23.875	1090.0	0.0221	26.597	968.6	0.0221
12	21.026	1103.0	0.0221	23.985	1103.0	0.0221	26.679	964.0	0.0220
13	21.257	1113.7	0.0220	24.110	1113.7	0.0220	26.752	957.9	0.0219
14	21.400	1117.7	0.0219	24.140	1117.7	0.0219	26.709	951.3	0.0218
15	21.234	1114.6	0.0218	23.885	1114.6	0.0218	26.357	944.2	0.0218
16	20.375	1103.6	0.0217	22.941	1103.6	0.0217	25.263	934.4	0.0217
17	17.939	1069.6	0.0216	20.310	1069.6	0.0216	22.346	912.9	0.0216
18	11.516	942.9	0.0216	13.197	942.9	0.0216	14.548	838.8	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	17.368	890.3	0.0228
2	26.714	951.7	0.0228
3	31.423	959.9	0.0227
4	33.325	957.1	0.0226
5	34.050	950.7	0.0225
6	34.310	944.7	0.0225
7	34.393	940.2	0.0224
8	34.406	937.3	0.0223
9	34.401	935.2	0.0222
10	34.406	933.3	0.0222
11	34.440	931.3	0.0221
12	34.499	929.2	0.0220
13	34.548	927.7	0.0219
14	34.488	927.5	0.0219
15	34.106	928.6	0.0218
16	32.865	927.9	0.0217
17	29.363	919.2	0.0217
18	19.521	863.3	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-72. Burnup and TH Feedback Parameters by Axial Node for Assembly D25a

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	2.593	859.5	0.0230	2.939	970.7	0.0230	4.168	970.7	0.0230
2	4.448	1062.5	0.0230	5.005	1154.1	0.0230	6.922	1154.1	0.0230
3	5.673	1207.0	0.0229	6.343	1227.2	0.0229	8.569	1227.2	0.0229
4	6.363	1303.0	0.0228	7.077	1242.6	0.0228	9.374	1242.6	0.0228
5	6.746	1368.5	0.0227	7.473	1237.3	0.0227	9.748	1237.3	0.0227
6	6.956	1411.3	0.0226	7.683	1228.0	0.0226	9.910	1228.0	0.0226
7	7.065	1437.4	0.0225	7.791	1221.2	0.0225	9.968	1221.2	0.0225
8	7.096	1448.1	0.0224	7.822	1218.2	0.0224	9.968	1218.2	0.0224
9	7.051	1442.0	0.0223	7.776	1217.6	0.0223	9.928	1217.6	0.0223
10	6.943	1420.0	0.0222	7.668	1216.3	0.0222	9.864	1216.3	0.0222
11	6.823	1388.9	0.0221	7.550	1212.7	0.0221	9.814	1212.7	0.0221
12	6.740	1358.3	0.0220	7.474	1208.1	0.0221	9.809	1208.1	0.0221
13	6.718	1334.2	0.0219	7.462	1204.8	0.0220	9.845	1204.8	0.0220
14	6.745	1317.1	0.0218	7.501	1204.4	0.0219	9.884	1204.4	0.0219
15	6.732	1299.2	0.0218	7.499	1206.4	0.0218	9.831	1206.4	0.0218
16	6.473	1258.4	0.0217	7.229	1201.1	0.0217	9.452	1201.1	0.0217
17	5.607	1156.3	0.0216	6.288	1158.2	0.0217	8.258	1158.2	0.0217
18	3.423	917.2	0.0216	3.864	983.4	0.0216	5.145	983.4	0.0216

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	9.837	949.8	0.0230	11.469	949.8	0.0230	13.018	959.7	0.0233
2	15.757	1068.8	0.0229	18.096	1068.8	0.0229	20.418	1049.7	0.0232
3	19.020	1106.1	0.0228	21.615	1106.1	0.0228	24.351	1081.3	0.0231
4	20.468	1105.7	0.0228	23.109	1105.7	0.0228	26.059	1091.0	0.0230
5	21.053	1096.0	0.0227	23.700	1096.0	0.0227	26.776	1093.9	0.0229
6	21.230	1085.5	0.0226	23.905	1085.5	0.0226	27.071	1095.2	0.0228
7	21.201	1076.5	0.0225	23.941	1076.5	0.0225	27.184	1096.7	0.0227
8	21.063	1070.8	0.0224	23.899	1070.8	0.0224	27.212	1098.7	0.0226
9	20.903	1071.3	0.0223	23.841	1071.3	0.0223	27.215	1100.4	0.0225
10	20.815	1078.5	0.0222	23.821	1078.5	0.0222	27.243	1100.9	0.0224
11	20.856	1090.0	0.0221	23.868	1090.0	0.0221	27.320	1100.6	0.0223
12	21.026	1103.0	0.0221	23.977	1103.0	0.0221	27.435	1100.2	0.0222
13	21.257	1113.7	0.0220	24.102	1113.7	0.0220	27.527	1097.8	0.0221
14	21.400	1117.7	0.0219	24.132	1117.7	0.0219	27.486	1092.0	0.0220
15	21.234	1114.6	0.0218	23.877	1114.6	0.0218	27.121	1082.5	0.0219
16	20.375	1103.6	0.0217	22.933	1103.6	0.0217	26.007	1067.3	0.0218
17	17.939	1069.6	0.0216	20.304	1069.6	0.0216	23.070	1040.6	0.0217
18	11.516	942.9	0.0216	13.192	942.9	0.0216	15.132	954.8	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-72. Burnup and TH Feedback Parameters by Axial Node for Assembly D25a (Cont'd)

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	19.280	987.3	0.0233
2	29.296	1060.0	0.0232
3	34.330	1080.7	0.0231
4	36.354	1082.2	0.0230
5	37.108	1076.1	0.0229
6	37.381	1069.8	0.0228
7	37.479	1065.0	0.0227
8	37.512	1061.8	0.0226
9	37.531	1059.7	0.0225
10	37.574	1058.1	0.0224
11	37.675	1057.8	0.0223
12	37.839	1059.2	0.0222
13	37.985	1061.1	0.0221
14	37.971	1062.6	0.0220
15	37.580	1063.1	0.0219
16	36.264	1058.7	0.0218
17	32.583	1037.4	0.0217
18	22.022	965.3	0.0216

Table 4-73. Burnup and TH Feedback Parameters by Axial Node for Assembly D27

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	2.904	893.4	0.0235	3.288	1027.4	0.0234	4.845	1027.4	0.0234
2	4.981	1106.7	0.0234	5.605	1234.9	0.0233	7.988	1234.9	0.0233
3	6.673	1287.7	0.0233	7.461	1337.0	0.0232	10.204	1337.0	0.0232
4	7.782	1437.5	0.0232	8.648	1358.6	0.0231	11.437	1358.6	0.0231
5	8.389	1540.6	0.0231	9.278	1350.0	0.0230	12.009	1350.0	0.0230
6	8.703	1601.3	0.0230	9.596	1337.7	0.0229	12.250	1337.7	0.0229
7	8.869	1636.9	0.0228	9.762	1329.4	0.0227	12.349	1329.4	0.0227
8	8.937	1652.8	0.0227	9.832	1326.7	0.0226	12.380	1326.7	0.0226
9	8.910	1649.1	0.0225	9.806	1327.1	0.0225	12.363	1327.1	0.0225
10	8.798	1626.4	0.0224	9.696	1326.5	0.0224	12.311	1326.5	0.0224
11	8.657	1590.6	0.0223	9.559	1323.0	0.0223	12.262	1323.0	0.0223
12	8.549	1553.7	0.0222	9.459	1317.6	0.0222	12.254	1317.6	0.0222
13	8.505	1522.2	0.0220	9.427	1312.9	0.0221	12.284	1312.9	0.0221
14	8.515	1499.2	0.0219	9.453	1311.3	0.0220	12.316	1311.3	0.0220
15	8.478	1475.8	0.0218	9.428	1312.7	0.0219	12.239	1312.7	0.0219
16	8.147	1426.1	0.0217	9.083	1307.1	0.0218	11.777	1307.1	0.0218
17	7.111	1309.7	0.0216	7.961	1263.7	0.0217	10.374	1263.7	0.0217
18	4.634	1051.1	0.0216	5.217	1095.8	0.0216	6.881	1095.8	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-73. Burnup and TH Feedback Parameters by Axial Node for Assembly D27 (Cont'd)

Axial	Burnup	SP11 to SP12		Burnup	SP12 to SP13		Burnup	SP13 to SP14	
Node	SP12	T-Fuel	Spec.Vol	SP13	T-Fuel	Spec.Vol	SP14	T-Fuel	Spec.Vol
1	7.657	762.5	0.0222	8.534	762.5	0.0222	10.387	1037.8	0.0236
2	12.436	829.3	0.0222	13.723	829.3	0.0222	16.508	1161.8	0.0235
3	15.444	849.9	0.0222	16.876	849.9	0.0222	20.135	1198.6	0.0234
4	16.955	847.7	0.0221	18.405	847.7	0.0221	21.896	1209.2	0.0232
5	17.601	841.1	0.0221	19.048	841.1	0.0221	22.672	1211.7	0.0231
6	17.834	834.8	0.0220	19.289	834.8	0.0220	23.004	1212.0	0.0230
7	17.891	830.0	0.0220	19.372	830.0	0.0220	23.160	1211.9	0.0229
8	17.872	827.4	0.0220	19.392	827.4	0.0220	23.239	1211.8	0.0227
9	17.821	827.6	0.0219	19.380	827.6	0.0219	23.275	1211.6	0.0226
10	17.769	830.6	0.0219	19.352	830.6	0.0219	23.283	1211.3	0.0225
11	17.755	835.3	0.0218	19.337	835.3	0.0218	23.286	1210.7	0.0224
12	17.800	840.2	0.0218	19.353	840.2	0.0218	23.298	1209.6	0.0222
13	17.875	843.7	0.0218	19.381	843.7	0.0218	23.293	1207.0	0.0221
14	17.906	844.4	0.0217	19.361	844.4	0.0217	23.206	1201.9	0.0220
15	17.738	841.8	0.0217	19.149	841.8	0.0217	22.884	1192.6	0.0219
16	17.016	834.2	0.0216	18.379	834.2	0.0216	21.929	1175.6	0.0218
17	14.973	812.3	0.0216	16.219	812.3	0.0216	19.414	1140.6	0.0217
18	9.834	741.1	0.0216	10.689	741.1	0.0216	12.887	1021.8	0.0216

Axial	Burnup	SP14 to SP15	
Node	SP15	T-Fuel	Spec.Vol
1	17.453	1055.8	0.0236
2	26.590	1149.7	0.0235
3	31.447	1172.9	0.0233
4	33.546	1169.1	0.0232
5	34.367	1160.0	0.0231
6	34.673	1151.8	0.0229
7	34.798	1145.3	0.0228
8	34.860	1140.4	0.0227
9	34.892	1137.0	0.0226
10	34.907	1135.0	0.0225
11	34.934	1134.4	0.0224
12	34.987	1135.2	0.0222
13	35.033	1137.3	0.0221
14	34.989	1140.1	0.0220
15	34.654	1142.5	0.0219
16	33.490	1140.8	0.0218
17	30.140	1121.3	0.0217
18	20.564	1024.8	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-74. Burnup and TH Feedback Parameters by Axial Node for Assembly D27a

Axial Node	Burnup SP9	SP8 to SP9 T-Fuel	SP8 to SP9 Spec.Vol	Burnup SP10	SP9 to SP10 T-Fuel	SP9 to SP10 Spec.Vol	Burnup SP11	SP10 to SP11 T-Fuel	SP10 to SP11 Spec.Vol
1	2.904	893.4	0.0235	3.288	1027.4	0.0234	4.845	1027.4	0.0234
2	4.981	1106.7	0.0234	5.605	1234.9	0.0233	7.988	1234.9	0.0233
3	6.673	1287.7	0.0233	7.461	1337.0	0.0232	10.204	1337.0	0.0232
4	7.782	1437.5	0.0232	8.648	1358.6	0.0231	11.437	1358.6	0.0231
5	8.389	1540.6	0.0231	9.278	1350.0	0.0230	12.009	1350.0	0.0230
6	8.703	1601.3	0.0230	9.596	1337.7	0.0229	12.250	1337.7	0.0229
7	8.869	1636.9	0.0228	9.762	1329.4	0.0227	12.349	1329.4	0.0227
8	8.937	1652.8	0.0227	9.832	1326.7	0.0226	12.380	1326.7	0.0226
9	8.910	1649.1	0.0225	9.806	1327.1	0.0225	12.363	1327.1	0.0225
10	8.798	1626.4	0.0224	9.696	1326.5	0.0224	12.311	1326.5	0.0224
11	8.657	1590.6	0.0223	9.559	1323.0	0.0223	12.262	1323.0	0.0223
12	8.549	1553.7	0.0222	9.459	1317.6	0.0222	12.254	1317.6	0.0222
13	8.505	1522.2	0.0220	9.427	1312.9	0.0221	12.284	1312.9	0.0221
14	8.515	1499.2	0.0219	9.453	1311.3	0.0220	12.316	1311.3	0.0220
15	8.478	1475.8	0.0218	9.428	1312.7	0.0219	12.239	1312.7	0.0219
16	8.147	1426.1	0.0217	9.083	1307.1	0.0218	11.777	1307.1	0.0218
17	7.111	1309.7	0.0216	7.961	1263.7	0.0217	10.374	1263.7	0.0217
18	4.634	1051.1	0.0216	5.217	1095.8	0.0216	6.881	1095.8	0.0216

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	7.657	762.5	0.0222	8.521	762.5	0.0222	9.164	749.9	0.0223
2	12.436	829.3	0.0222	13.701	829.3	0.0222	14.771	817.1	0.0223
3	15.444	849.9	0.0222	16.844	849.9	0.0222	18.168	839.9	0.0222
4	16.955	847.7	0.0221	18.366	847.7	0.0221	19.820	844.4	0.0222
5	17.601	841.1	0.0221	19.005	841.1	0.0221	20.532	844.7	0.0222
6	17.834	834.8	0.0220	19.245	834.8	0.0220	20.821	844.2	0.0221
7	17.891	830.0	0.0220	19.328	830.0	0.0220	20.943	843.8	0.0221
8	17.872	827.4	0.0220	19.349	827.4	0.0220	20.996	843.5	0.0220
9	17.821	827.6	0.0219	19.342	827.6	0.0219	21.014	843.3	0.0220
10	17.769	830.6	0.0219	19.317	830.6	0.0219	21.006	842.9	0.0219
11	17.755	835.3	0.0218	19.303	835.3	0.0218	20.998	842.1	0.0219
12	17.800	840.2	0.0218	19.319	840.2	0.0218	21.006	840.6	0.0218
13	17.875	843.7	0.0218	19.343	843.7	0.0218	21.009	838.4	0.0218
14	17.906	844.4	0.0217	19.318	844.4	0.0217	20.946	835.2	0.0217
15	17.738	841.8	0.0217	19.104	841.8	0.0217	20.670	830.4	0.0217
16	17.016	834.2	0.0216	18.334	834.2	0.0216	19.796	821.8	0.0217
17	14.973	812.3	0.0216	16.181	812.3	0.0216	17.436	801.0	0.0216
18	9.834	741.1	0.0216	10.665	741.1	0.0216	11.451	733.1	0.0216

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-74. Burnup and TH Feedback Parameters by Axial Node for Assembly D27a (Cont'd)

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	12.017	777.4	0.0223
2	19.047	838.8	0.0223
3	23.022	848.7	0.0223
4	24.817	844.4	0.0222
5	25.539	838.4	0.0222
6	25.806	833.5	0.0221
7	25.906	829.8	0.0221
8	25.945	827.1	0.0220
9	25.955	825.2	0.0220
10	25.943	823.9	0.0219
11	25.933	823.1	0.0219
12	25.942	822.6	0.0218
13	25.949	822.7	0.0218
14	25.890	823.3	0.0218
15	25.594	824.2	0.0217
16	24.607	823.6	0.0217
17	21.816	813.6	0.0216
18	14.414	756.5	0.0216

Statepoint	EFPD / Cycle
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-75. Burnup and TH Feedback Parameters by Axial Node for Assembly E4

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	9.036	1204.1	0.0240	11.416	1204.1	0.0240	12.083	734.9	0.0223
2	13.471	1394.9	0.0239	16.869	1394.9	0.0239	17.924	792.1	0.0222
3	16.129	1471.7	0.0237	19.919	1471.7	0.0237	21.180	809.7	0.0222
4	17.252	1482.9	0.0236	21.110	1482.9	0.0236	22.472	814.4	0.0222
5	17.632	1472.9	0.0234	21.498	1472.9	0.0234	22.921	815.7	0.0221
6	17.681	1459.6	0.0232	21.590	1459.6	0.0232	23.056	816.1	0.0221
7	17.556	1447.3	0.0231	21.563	1447.3	0.0231	23.065	816.6	0.0220
8	17.340	1440.4	0.0229	21.489	1440.4	0.0229	23.024	817.4	0.0220
9	17.141	1443.0	0.0228	21.439	1443.0	0.0228	22.999	817.7	0.0219
10	17.077	1455.7	0.0227	21.473	1455.7	0.0227	23.043	816.6	0.0219
11	17.199	1474.0	0.0225	21.599	1474.0	0.0225	23.163	813.7	0.0219
12	17.476	1492.1	0.0224	21.785	1492.1	0.0224	23.325	809.2	0.0218
13	17.809	1507.3	0.0222	21.962	1507.3	0.0222	23.464	804.0	0.0218
14	18.016	1514.0	0.0221	22.008	1514.0	0.0221	23.463	798.9	0.0217
15	17.887	1510.5	0.0220	21.753	1510.5	0.0220	23.150	794.2	0.0217
16	17.144	1491.7	0.0218	20.892	1491.7	0.0218	22.201	787.6	0.0217
17	15.242	1425.2	0.0217	18.707	1425.2	0.0217	19.842	770.5	0.0216
18	10.807	1224.0	0.0216	13.345	1224.0	0.0216	14.065	713.3	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	14.928	765.3	0.0223
2	22.116	817.2	0.0223
3	25.886	825.9	0.0222
4	27.303	822.6	0.0222
5	27.760	818.1	0.0221
6	27.876	814.3	0.0221
7	27.873	811.7	0.0221
8	27.831	810.1	0.0220
9	27.807	808.9	0.0220
10	27.842	807.1	0.0219
11	27.937	804.6	0.0219
12	28.062	801.6	0.0218
13	28.162	799.1	0.0218
14	28.133	797.9	0.0217
15	27.793	798.7	0.0217
16	26.753	799.5	0.0217
17	24.012	791.6	0.0216
18	16.903	739.6	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-76. Burnup and TH Feedback Parameters by Axial Node for Assembly E6

Axial	Burnup	SP11 to SP12		Burnup	SP12 to SP13		Burnup	SP13 to SP14	
Node	SP12	T-Fuel	Spec.Vol	SP13	T-Fuel	Spec.Vol	SP14	T-Fuel	Spec.Vol
1	8.567	1184.5	0.0239	10.899	1184.5	0.0239	12.730	1002.2	0.0234
2	12.839	1373.0	0.0238	16.188	1373.0	0.0238	18.969	1116.5	0.0233
3	15.465	1449.7	0.0237	19.222	1449.7	0.0237	22.465	1154.8	0.0232
4	16.621	1465.2	0.0235	20.458	1465.2	0.0235	23.910	1165.2	0.0231
5	17.043	1457.6	0.0234	20.895	1457.6	0.0234	24.460	1167.1	0.0230
6	17.132	1445.1	0.0232	21.030	1445.1	0.0232	24.665	1166.2	0.0229
7	17.051	1433.7	0.0231	21.048	1433.7	0.0231	24.734	1164.5	0.0227
8	16.888	1427.6	0.0229	21.030	1427.6	0.0229	24.752	1162.3	0.0226
9	16.753	1431.2	0.0228	21.047	1431.2	0.0228	24.788	1158.9	0.0225
10	16.756	1445.1	0.0226	21.152	1445.1	0.0226	24.892	1153.9	0.0224
11	16.924	1465.0	0.0225	21.330	1465.0	0.0225	25.050	1147.6	0.0223
12	17.212	1484.4	0.0224	21.530	1484.4	0.0224	25.214	1141.0	0.0222
13	17.523	1499.1	0.0222	21.687	1499.1	0.0222	25.322	1134.6	0.0221
14	17.690	1505.2	0.0221	21.693	1505.2	0.0221	25.265	1129.0	0.0220
15	17.523	1501.3	0.0220	21.400	1501.3	0.0220	24.883	1122.8	0.0219
16	16.761	1482.2	0.0218	20.519	1482.2	0.0218	23.847	1111.4	0.0218
17	14.857	1413.3	0.0217	18.327	1413.3	0.0217	21.309	1079.1	0.0217
18	10.491	1213.8	0.0216	13.025	1213.8	0.0216	15.019	961.9	0.0216

Axial	Burnup	SP14 to SP15	
Node	SP15	T-Fuel	Spec.Vol
1	19.502	1016.3	0.0234
2	28.636	1105.1	0.0233
3	33.237	1122.9	0.0232
4	34.954	1120.1	0.0231
5	35.520	1113.7	0.0230
6	35.678	1106.5	0.0228
7	35.694	1100.1	0.0227
8	35.666	1094.7	0.0226
9	35.658	1090.0	0.0225
10	35.716	1085.6	0.0224
11	35.833	1081.8	0.0223
12	35.973	1079.3	0.0222
13	36.081	1078.6	0.0221
14	36.048	1080.1	0.0220
15	35.676	1082.4	0.0219
16	34.498	1080.9	0.0218
17	31.219	1066.1	0.0217
18	22.028	971.6	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-77. Burnup and TH Feedback Parameters by Axial Node for Assembly E8

Axial	Burnup	SP11 to SP12		Burnup	SP12 to SP13		Burnup	SP13 to SP14	
Node	SP12	T-Fuel	Spec.Vol	SP13	T-Fuel	Spec.Vol	SP14	T-Fuel	Spec.Vol
1	4.451	928.0	0.0228	5.803	928.0	0.0228	7.661	1086.9	0.0237
2	7.354	1092.2	0.0228	9.404	1092.2	0.0228	12.331	1239.6	0.0236
3	9.046	1149.2	0.0227	11.377	1149.2	0.0227	14.886	1297.1	0.0235
4	9.775	1156.8	0.0226	12.165	1156.8	0.0226	15.955	1314.2	0.0234
5	10.033	1150.6	0.0225	12.434	1150.6	0.0225	16.383	1319.6	0.0232
6	10.097	1142.7	0.0224	12.518	1142.7	0.0224	16.574	1321.3	0.0231
7	10.088	1137.3	0.0224	12.553	1137.3	0.0224	16.689	1321.1	0.0229
8	10.062	1135.8	0.0223	12.587	1135.8	0.0223	16.786	1319.9	0.0228
9	10.057	1139.0	0.0222	12.638	1139.0	0.0222	16.883	1317.8	0.0227
10	10.090	1146.1	0.0221	12.705	1146.1	0.0221	16.980	1315.1	0.0225
11	10.162	1155.2	0.0221	12.773	1155.2	0.0221	17.060	1312.4	0.0224
12	10.248	1164.2	0.0220	12.818	1164.2	0.0220	17.095	1310.3	0.0223
13	10.309	1170.8	0.0219	12.815	1170.8	0.0219	17.058	1308.1	0.0222
14	10.290	1173.5	0.0218	12.729	1173.5	0.0218	16.905	1304.5	0.0220
15	10.103	1170.0	0.0218	12.482	1170.0	0.0218	16.547	1297.0	0.0219
16	9.579	1153.1	0.0217	11.880	1153.1	0.0217	15.744	1280.8	0.0218
17	8.296	1098.9	0.0216	10.390	1098.9	0.0216	13.824	1236.4	0.0217
18	5.159	926.4	0.0216	6.574	926.4	0.0216	8.851	1074.9	0.0216

Axial	Burnup	SP14 to SP15	
Node	SP15	T-Fuel	Spec.Vol
1	14.941	1094.2	0.0236
2	22.815	1210.3	0.0235
3	26.684	1238.4	0.0234
4	28.123	1238.3	0.0233
5	28.611	1230.9	0.0231
6	28.776	1222.5	0.0230
7	28.853	1215.1	0.0229
8	28.916	1208.8	0.0227
9	28.988	1203.5	0.0226
10	29.068	1199.4	0.0225
11	29.150	1197.1	0.0224
12	29.215	1197.1	0.0223
13	29.230	1199.5	0.0221
14	29.134	1203.9	0.0220
15	28.785	1208.9	0.0219
16	27.787	1208.9	0.0218
17	24.976	1188.5	0.0217
18	16.725	1072.5	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-78. Burnup and TH Feedback Parameters by Axial Node for Assembly E10

Axial	Burnup	SP11 to SP12		Burnup	SP12 to SP13		Burnup	SP13 to SP14	
Node	SP12	T-Fuel	Spec.Vol	SP13	T-Fuel	Spec.Vol	SP14	T-Fuel	Spec.Vol
1	8.250	1163.7	0.0237	10.430	1163.7	0.0237	12.186	1007.7	0.0235
2	12.701	1350.4	0.0236	15.824	1350.4	0.0236	18.513	1123.3	0.0235
3	15.168	1413.0	0.0235	18.634	1413.0	0.0235	21.826	1168.4	0.0233
4	16.158	1418.8	0.0234	19.676	1418.8	0.0234	23.124	1185.6	0.0232
5	16.474	1407.1	0.0232	19.994	1407.1	0.0232	23.589	1191.9	0.0231
6	16.507	1393.5	0.0231	20.060	1393.5	0.0231	23.756	1194.3	0.0229
7	16.412	1382.9	0.0229	20.044	1382.9	0.0229	23.818	1195.3	0.0228
8	16.263	1378.2	0.0228	20.012	1378.2	0.0228	23.849	1195.8	0.0227
9	16.140	1381.6	0.0227	20.006	1381.6	0.0227	23.894	1195.3	0.0226
10	16.117	1393.0	0.0226	20.057	1393.0	0.0226	23.978	1193.4	0.0225
11	16.215	1409.3	0.0224	20.155	1409.3	0.0224	24.091	1191.0	0.0223
12	16.406	1426.7	0.0223	20.266	1426.7	0.0223	24.195	1188.8	0.0222
13	16.614	1440.3	0.0222	20.343	1440.3	0.0222	24.238	1185.8	0.0221
14	16.715	1445.8	0.0220	20.311	1445.8	0.0220	24.137	1180.9	0.0220
15	16.555	1442.9	0.0219	20.047	1442.9	0.0219	23.762	1172.4	0.0219
16	15.888	1424.8	0.0218	19.282	1424.8	0.0218	22.807	1155.6	0.0218
17	14.123	1362.4	0.0217	17.272	1362.4	0.0217	20.418	1116.1	0.0217
18	9.688	1171.5	0.0216	11.994	1171.5	0.0216	14.112	993.8	0.0216

Axial	Burnup	SP14 to SP15	
Node	SP15	T-Fuel	Spec.Vol
1	18.991	1026.0	0.0235
2	28.268	1116.6	0.0234
3	32.814	1141.4	0.0233
4	34.479	1141.3	0.0232
5	35.010	1136.2	0.0230
6	35.160	1129.9	0.0229
7	35.198	1124.3	0.0228
8	35.212	1119.7	0.0227
9	35.245	1115.9	0.0226
10	35.320	1112.8	0.0224
11	35.436	1111.1	0.0223
12	35.572	1111.4	0.0222
13	35.663	1113.2	0.0221
14	35.604	1115.6	0.0220
15	35.221	1117.8	0.0219
16	34.061	1114.8	0.0218
17	30.826	1096.1	0.0217
18	21.478	996.8	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-79. Burnup and TH Feedback Parameters by Axial Node for Assembly E12

Axial	Burnup	SP11 to SP12		Burnup	SP12 to SP13		Burnup	SP13 to SP14	
Node	SP12	T-Fuel	Spec.Vol	SP13	T-Fuel	Spec.Vol	SP14	T-Fuel	Spec.Vol
1	9.149	1197.8	0.0240	11.572	1197.8	0.0240	13.233	984.1	0.0235
2	13.595	1390.1	0.0239	17.042	1390.1	0.0239	19.651	1101.4	0.0234
3	16.206	1474.3	0.0237	20.060	1474.3	0.0237	23.207	1149.1	0.0233
4	17.329	1490.3	0.0236	21.264	1490.3	0.0236	24.697	1166.4	0.0232
5	17.727	1481.9	0.0234	21.680	1481.9	0.0234	25.285	1172.5	0.0231
6	17.759	1467.4	0.0232	21.764	1467.4	0.0232	25.493	1175.9	0.0230
7	17.502	1445.8	0.0231	21.619	1445.8	0.0231	25.461	1180.6	0.0228
8	16.933	1419.1	0.0229	21.237	1419.1	0.0229	25.191	1188.6	0.0227
9	16.279	1408.6	0.0228	20.813	1408.6	0.0228	24.869	1196.8	0.0226
10	15.980	1420.8	0.0227	20.676	1420.8	0.0227	24.797	1199.5	0.0225
11	16.101	1445.7	0.0225	20.827	1445.7	0.0225	24.969	1196.7	0.0223
12	16.598	1482.0	0.0224	21.222	1482.0	0.0224	25.336	1189.3	0.0222
13	17.416	1522.8	0.0223	21.824	1522.8	0.0223	25.856	1176.7	0.0221
14	18.091	1536.2	0.0221	22.258	1536.2	0.0221	26.173	1163.0	0.0220
15	18.154	1529.6	0.0220	22.148	1529.6	0.0220	25.918	1151.1	0.0219
16	17.433	1507.8	0.0218	21.288	1507.8	0.0218	24.839	1134.3	0.0218
17	15.495	1441.5	0.0217	19.050	1441.5	0.0217	22.178	1094.5	0.0217
18	10.979	1234.7	0.0216	13.576	1234.7	0.0216	15.632	968.6	0.0216

Axial	Burnup	SP14 to SP15	
Node	SP15	T-Fuel	Spec.Vol
1	19.827	1006.3	0.0235
2	29.223	1098.8	0.0234
3	34.034	1121.4	0.0233
4	35.896	1125.0	0.0231
5	36.553	1120.4	0.0230
6	36.758	1114.5	0.0229
7	36.739	1110.7	0.0228
8	36.528	1110.2	0.0227
9	36.281	1111.1	0.0225
10	36.245	1110.4	0.0224
11	36.419	1108.3	0.0223
12	36.769	1105.7	0.0222
13	37.248	1102.1	0.0221
14	37.526	1099.8	0.0220
15	37.229	1100.0	0.0219
16	35.945	1095.6	0.0218
17	32.433	1073.1	0.0217
18	22.812	974.1	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-80. Burnup and TH Feedback Parameters by Axial Node for Assembly E14

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	7.014	1099.3	0.0235	9.005	1099.3	0.0235	10.803	1005.2	0.0233
2	11.134	1285.1	0.0234	14.042	1285.1	0.0234	16.766	1123.9	0.0233
3	13.494	1349.2	0.0233	16.761	1349.2	0.0233	19.926	1156.0	0.0231
4	14.506	1357.1	0.0232	17.846	1357.1	0.0232	21.198	1164.9	0.0230
5	14.874	1348.6	0.0231	18.229	1348.6	0.0231	21.679	1165.5	0.0229
6	14.961	1337.3	0.0229	18.352	1337.3	0.0229	21.863	1163.6	0.0228
7	14.919	1328.4	0.0228	18.388	1328.4	0.0228	21.941	1160.9	0.0227
8	14.828	1324.6	0.0227	18.407	1324.6	0.0227	21.987	1157.4	0.0226
9	14.766	1328.5	0.0226	18.458	1328.5	0.0226	22.046	1152.8	0.0225
10	14.801	1340.0	0.0225	18.567	1340.0	0.0225	22.146	1146.9	0.0224
11	14.942	1356.0	0.0223	18.713	1356.0	0.0223	22.266	1140.2	0.0222
12	15.150	1372.8	0.0222	18.853	1372.8	0.0222	22.368	1133.8	0.0221
13	15.352	1386.4	0.0221	18.939	1386.4	0.0221	22.406	1128.0	0.0220
14	15.430	1392.3	0.0220	18.895	1392.3	0.0220	22.304	1123.2	0.0219
15	15.235	1388.9	0.0219	18.602	1388.9	0.0219	21.930	1118.0	0.0219
16	14.538	1369.8	0.0218	17.802	1369.8	0.0218	20.988	1107.5	0.0218
17	12.780	1309.2	0.0217	15.789	1309.2	0.0217	18.639	1077.8	0.0217
18	8.535	1123.7	0.0216	10.711	1123.7	0.0216	12.609	961.0	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	17.434	1021.9	0.0233
2	26.164	1107.1	0.0232
3	30.344	1124.8	0.0231
4	31.835	1118.9	0.0230
5	32.305	1109.4	0.0229
6	32.428	1100.8	0.0228
7	32.441	1093.7	0.0227
8	32.427	1087.6	0.0226
9	32.428	1082.1	0.0225
10	32.469	1076.7	0.0224
11	32.537	1072.2	0.0223
12	32.608	1069.1	0.0222
13	32.644	1068.4	0.0221
14	32.568	1070.7	0.0220
15	32.214	1075.4	0.0219
16	31.156	1079.0	0.0218
17	28.119	1066.2	0.0217
18	19.339	977.4	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-81. Burnup and TH Feedback Parameters by Axial Node for Assembly E14a

Axial	Burnup	SP11 to SP12		Burnup	SP12 to SP13		Burnup	SP13 to SP14	
Node	SP12	T-Fuel	Spec.Vol	SP13	T-Fuel	Spec.Vol	SP14	T-Fuel	Spec.Vol
1	7.014	1099.3	0.0235	9.007	1099.3	0.0235	10.204	981.6	0.0235
2	11.134	1285.1	0.0234	14.045	1285.1	0.0234	16.429	1113.2	0.0234
3	13.494	1349.2	0.0233	16.765	1349.2	0.0233	19.786	1159.1	0.0233
4	14.506	1357.1	0.0232	17.851	1357.1	0.0232	21.180	1177.6	0.0232
5	14.874	1348.6	0.0231	18.234	1348.6	0.0231	21.745	1184.8	0.0230
6	14.961	1337.3	0.0229	18.358	1337.3	0.0229	21.995	1187.6	0.0229
7	14.919	1328.4	0.0228	18.394	1328.4	0.0228	22.133	1189.4	0.0228
8	14.828	1324.6	0.0227	18.413	1324.6	0.0227	22.240	1190.9	0.0227
9	14.766	1328.5	0.0226	18.464	1328.5	0.0226	22.363	1191.4	0.0225
10	14.801	1340.0	0.0225	18.573	1340.0	0.0225	22.521	1190.2	0.0224
11	14.942	1356.0	0.0223	18.719	1356.0	0.0223	22.690	1187.8	0.0223
12	15.150	1372.8	0.0222	18.859	1372.8	0.0222	22.823	1185.1	0.0222
13	15.352	1386.4	0.0221	18.945	1386.4	0.0221	22.869	1181.6	0.0221
14	15.430	1392.3	0.0220	18.902	1392.3	0.0220	22.748	1176.8	0.0220
15	15.235	1388.9	0.0219	18.609	1388.9	0.0219	22.331	1168.8	0.0219
16	14.538	1369.8	0.0218	17.809	1369.8	0.0218	21.312	1151.6	0.0218
17	12.780	1309.2	0.0217	15.795	1309.2	0.0217	18.863	1110.7	0.0217
18	8.535	1123.7	0.0216	10.714	1123.7	0.0216	12.716	980.3	0.0216

Axial	Burnup	SP14 to SP15	
Node	SP15	T-Fuel	Spec.Vol
1	16.503	1023.1	0.0234
2	25.728	1112.5	0.0233
3	30.356	1137.4	0.0232
4	32.141	1136.5	0.0231
5	32.789	1129.2	0.0230
6	33.036	1122.2	0.0229
7	33.165	1116.4	0.0227
8	33.274	1111.9	0.0226
9	33.403	1108.1	0.0225
10	33.564	1104.7	0.0224
11	33.739	1102.5	0.0223
12	33.894	1102.0	0.0222
13	33.977	1103.2	0.0221
14	33.897	1106.1	0.0220
15	33.479	1109.7	0.0219
16	32.260	1110.3	0.0218
17	28.948	1092.1	0.0217
18	19.761	992.3	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-82. Burnup and TH Feedback Parameters by Axial Node for Assembly E17

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	9.177	1198.0	0.0240	11.590	1198.0	0.0240	13.319	997.7	0.0235
2	13.641	1390.0	0.0239	17.070	1390.0	0.0239	19.714	1113.5	0.0235
3	16.272	1474.0	0.0237	20.105	1474.0	0.0237	23.204	1159.5	0.0233
4	17.409	1489.6	0.0235	21.325	1489.6	0.0235	24.605	1157.2	0.0232
5	17.806	1480.7	0.0234	21.743	1480.7	0.0234	25.133	1152.9	0.0231
6	17.822	1465.2	0.0232	21.815	1465.2	0.0232	25.311	1155.2	0.0230
7	17.526	1441.7	0.0231	21.643	1441.7	0.0231	25.241	1160.3	0.0229
8	16.897	1412.8	0.0229	21.220	1412.8	0.0229	24.923	1168.9	0.0227
9	16.179	1401.1	0.0228	20.757	1401.1	0.0228	24.558	1177.7	0.0226
10	15.844	1413.9	0.0227	20.605	1413.9	0.0227	24.488	1180.5	0.0225
11	15.966	1440.8	0.0225	20.764	1440.8	0.0225	24.778	1179.1	0.0224
12	16.499	1481.1	0.0224	21.185	1481.1	0.0224	25.321	1197.3	0.0223
13	17.377	1524.0	0.0223	21.823	1524.0	0.0223	25.980	1206.7	0.0221
14	18.105	1537.8	0.0221	22.285	1537.8	0.0221	26.339	1195.4	0.0220
15	18.191	1530.0	0.0220	22.178	1530.0	0.0220	26.091	1183.3	0.0219
16	17.478	1507.5	0.0218	21.316	1507.5	0.0218	25.016	1166.1	0.0218
17	15.540	1441.4	0.0217	19.077	1441.4	0.0217	22.371	1126.2	0.0217
18	11.009	1234.6	0.0216	13.595	1234.6	0.0216	15.806	997.8	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol
1	20.145	1018.5	0.0235
2	29.565	1112.6	0.0234
3	34.317	1135.8	0.0233
4	35.795	1123.5	0.0232
5	36.165	1110.2	0.0230
6	36.300	1104.2	0.0229
7	36.245	1101.0	0.0228
8	35.990	1101.1	0.0227
9	35.705	1102.6	0.0226
10	35.672	1102.2	0.0225
11	35.991	1101.9	0.0224
12	36.905	1120.5	0.0222
13	37.941	1135.8	0.0221
14	38.356	1134.7	0.0220
15	38.076	1134.8	0.0219
16	36.788	1130.0	0.0218
17	33.262	1102.8	0.0217
18	23.492	998.4	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-83. Burnup and TH Feedback Parameters by Axial Node for Assembly E19

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	8.145	1150.0	0.0237	10.391	1150.0	0.0237	11.819	940.1	0.0233
2	12.192	1332.0	0.0236	15.409	1332.0	0.0236	17.680	1057.3	0.0232
3	14.631	1410.7	0.0235	18.253	1410.7	0.0235	21.006	1098.1	0.0231
4	15.707	1428.3	0.0233	19.421	1428.3	0.0233	22.430	1112.8	0.0230
5	16.097	1422.4	0.0232	19.838	1422.4	0.0232	22.999	1117.7	0.0229
6	16.136	1408.3	0.0231	19.931	1408.3	0.0231	23.203	1120.4	0.0228
7	15.894	1386.8	0.0229	19.800	1386.8	0.0229	23.171	1124.5	0.0227
8	15.346	1358.8	0.0228	19.433	1358.8	0.0228	22.906	1131.8	0.0226
9	14.715	1346.4	0.0227	19.026	1346.4	0.0227	22.590	1139.3	0.0225
10	14.430	1358.4	0.0226	18.900	1358.4	0.0226	22.522	1141.7	0.0223
11	14.548	1382.2	0.0224	19.051	1382.2	0.0224	22.695	1139.1	0.0222
12	15.026	1420.4	0.0223	19.436	1420.4	0.0223	23.059	1132.7	0.0221
13	15.815	1469.4	0.0222	20.021	1469.4	0.0222	23.574	1121.6	0.0220
14	16.466	1484.9	0.0221	20.441	1484.9	0.0221	23.894	1109.5	0.0219
15	16.526	1478.3	0.0219	20.332	1478.3	0.0219	23.658	1099.0	0.0218
16	15.836	1454.4	0.0218	19.503	1454.4	0.0218	22.634	1084.0	0.0218
17	14.004	1383.2	0.0217	17.372	1383.2	0.0217	20.118	1047.3	0.0217
18	9.862	1188.9	0.0216	12.309	1188.9	0.0216	14.092	927.5	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP22	SP15 to SP22 T-Fuel	SP15 to SP22 Spec.Vol	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol
1	17.670	971.0	0.0232	17.954	971.0	0.0232	18.526	690.3	0.0221
2	26.247	1062.3	0.0232	26.653	1062.3	0.0232	27.559	723.0	0.0221
3	30.708	1084.4	0.0231	31.159	1084.4	0.0231	32.248	736.4	0.0221
4	32.456	1081.3	0.0230	32.918	1081.3	0.0230	34.100	743.9	0.0220
5	33.079	1073.5	0.0228	33.541	1073.5	0.0228	34.774	746.9	0.0220
6	33.276	1067.1	0.0227	33.734	1067.1	0.0227	34.998	747.7	0.0220
7	33.257	1063.7	0.0226	33.709	1063.7	0.0226	34.992	747.7	0.0219
8	33.045	1064.3	0.0225	33.491	1064.3	0.0225	34.788	747.5	0.0219
9	32.798	1066.6	0.0224	33.235	1066.6	0.0224	34.540	747.0	0.0219
10	32.762	1066.2	0.0223	33.188	1066.2	0.0223	34.494	745.6	0.0218
11	32.935	1063.4	0.0222	33.347	1063.4	0.0222	34.646	743.5	0.0218
12	33.286	1059.3	0.0221	33.683	1059.3	0.0221	34.966	740.6	0.0218
13	33.768	1054.4	0.0220	34.151	1054.4	0.0220	35.409	736.8	0.0217
14	34.054	1051.8	0.0220	34.428	1051.8	0.0220	35.651	732.5	0.0217
15	33.786	1052.8	0.0219	34.155	1052.8	0.0219	35.331	727.5	0.0216
16	32.581	1053.5	0.0218	32.944	1053.5	0.0218	34.044	719.5	0.0216
17	29.287	1038.7	0.0217	29.627	1038.7	0.0217	30.581	703.1	0.0216
18	20.454	944.2	0.0216	20.699	944.2	0.0216	21.315	671.4	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP22	0.0 / Cy8
SP23	97.6 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec.Vol. - ft^3 / lbm

Table 4-83. Burnup and TH Feedback Parameters by Axial Node for Assembly E19 (Cont'd)

Axial Node	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol
1	18.794	690.3	0.0221	20.723	701.5	0.0221	20.768	701.5	0.0221
2	27.971	723.0	0.0221	30.806	729.7	0.0221	30.870	729.7	0.0221
3	32.731	736.4	0.0221	35.931	741.6	0.0221	36.002	741.6	0.0221
4	34.615	743.9	0.0220	37.924	744.9	0.0220	37.996	744.9	0.0220
5	35.304	746.9	0.0220	38.634	744.7	0.0220	38.707	744.7	0.0220
6	35.534	747.7	0.0220	38.858	743.3	0.0220	38.930	743.3	0.0220
7	35.531	747.7	0.0219	38.845	741.8	0.0219	38.916	741.8	0.0219
8	35.329	747.5	0.0219	38.638	740.7	0.0219	38.709	740.7	0.0219
9	35.082	747.0	0.0219	38.391	739.9	0.0219	38.462	739.9	0.0219
10	35.035	745.6	0.0218	38.338	738.5	0.0218	38.409	738.5	0.0218
11	35.184	743.5	0.0218	38.477	736.8	0.0218	38.549	736.8	0.0218
12	35.500	740.6	0.0218	38.781	734.7	0.0218	38.852	734.7	0.0218
13	35.936	736.8	0.0217	39.201	732.4	0.0217	39.272	732.4	0.0217
14	36.169	732.5	0.0217	39.421	730.1	0.0217	39.492	730.1	0.0217
15	35.836	727.5	0.0216	39.067	727.9	0.0217	39.139	727.9	0.0217
16	34.524	719.5	0.0216	37.683	723.7	0.0216	37.754	723.7	0.0216
17	31.005	703.1	0.0216	33.900	711.2	0.0216	33.967	711.2	0.0216
18	21.595	671.4	0.0216	23.598	681.3	0.0216	23.646	681.3	0.0216

Axial Node	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	21.700	727.2	0.0222
2	32.173	752.1	0.0222
3	37.422	761.5	0.0221
4	39.427	759.7	0.0221
5	40.122	755.8	0.0220
6	40.328	752.2	0.0220
7	40.302	749.5	0.0220
8	40.089	747.8	0.0219
9	39.839	746.7	0.0219
10	39.783	745.2	0.0219
11	39.919	743.5	0.0218
12	40.219	741.6	0.0218
13	40.638	740.0	0.0217
14	40.864	739.6	0.0217
15	40.523	740.8	0.0217
16	39.142	742.0	0.0216
17	35.286	736.3	0.0216
18	24.609	708.1	0.0216

Statepoint	EFPD / Cycle
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-84. Burnup and TH Feedback Parameters by Axial Node for Assembly E23

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	8.426	1178.0	0.0238	10.738	1178.0	0.0238	11.405	736.5	0.0223
2	12.636	1365.4	0.0237	15.961	1365.4	0.0237	17.027	797.5	0.0223
3	15.258	1442.3	0.0236	18.998	1442.3	0.0236	20.277	816.0	0.0222
4	16.434	1458.7	0.0234	20.265	1458.7	0.0234	21.649	820.8	0.0222
5	16.853	1450.9	0.0233	20.712	1450.9	0.0233	22.159	821.9	0.0221
6	16.880	1434.9	0.0231	20.801	1434.9	0.0231	22.293	822.4	0.0221
7	16.588	1411.0	0.0230	20.640	1411.0	0.0230	22.172	823.9	0.0220
8	15.957	1380.8	0.0229	20.223	1380.8	0.0229	21.794	827.1	0.0220
9	15.236	1367.3	0.0227	19.763	1367.3	0.0227	21.368	830.4	0.0219
10	14.895	1379.9	0.0226	19.610	1379.9	0.0226	21.232	830.8	0.0219
11	15.015	1407.2	0.0225	19.771	1407.2	0.0225	21.389	827.9	0.0219
12	15.557	1450.5	0.0224	20.201	1450.5	0.0224	21.792	821.9	0.0218
13	16.446	1499.6	0.0222	20.850	1499.6	0.0222	22.396	813.6	0.0218
14	17.189	1514.2	0.0221	21.322	1514.2	0.0221	22.813	805.8	0.0217
15	17.296	1506.7	0.0219	21.232	1506.7	0.0219	22.661	799.8	0.0217
16	16.612	1484.0	0.0218	20.395	1484.0	0.0218	21.731	792.5	0.0217
17	14.737	1413.1	0.0217	18.215	1413.1	0.0217	19.369	774.7	0.0216
18	10.415	1212.6	0.0216	12.949	1212.6	0.0216	13.675	714.9	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol
1	14.232	766.2	0.0223	14.374	766.2	0.0223	18.708	943.5	0.0232
2	21.224	821.1	0.0223	21.426	821.1	0.0223	27.967	1034.0	0.0232
3	25.004	830.4	0.0222	25.225	830.4	0.0222	32.888	1065.3	0.0231
4	26.503	826.9	0.0222	26.726	826.9	0.0222	34.903	1077.8	0.0229
5	27.020	822.0	0.0221	27.240	822.0	0.0221	35.647	1080.0	0.0228
6	27.138	818.2	0.0221	27.354	818.2	0.0221	35.872	1077.9	0.0227
7	27.012	816.5	0.0221	27.225	816.5	0.0221	35.817	1075.7	0.0226
8	26.650	817.2	0.0220	26.861	817.2	0.0220	35.527	1075.4	0.0225
9	26.248	818.7	0.0220	26.456	818.7	0.0220	35.185	1076.2	0.0224
10	26.117	818.4	0.0219	26.319	818.4	0.0219	35.067	1074.5	0.0223
11	26.253	815.8	0.0219	26.449	815.8	0.0219	35.169	1069.9	0.0222
12	26.612	811.4	0.0218	26.801	811.4	0.0218	35.455	1063.2	0.0221
13	27.159	805.9	0.0218	27.341	805.9	0.0218	35.883	1054.9	0.0220
14	27.530	802.1	0.0217	27.707	802.1	0.0217	36.093	1045.6	0.0219
15	27.340	801.6	0.0217	27.513	801.6	0.0217	35.682	1034.4	0.0218
16	26.310	802.0	0.0217	26.481	802.0	0.0217	34.271	1016.3	0.0217
17	23.557	793.7	0.0216	23.716	793.7	0.0216	30.706	984.1	0.0217
18	16.508	740.3	0.0216	16.620	740.3	0.0216	21.386	895.1	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-84. Burnup and TH Feedback Parameters by Axial Node for Assembly E23 (Cont'd)

Axial Node	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol
1	19.311	954.0	0.0233	19.897	954.0	0.0233	22.922	964.6	0.0232
2	28.841	1019.0	0.0232	29.679	1019.0	0.0232	33.892	1028.5	0.0232
3	33.872	1046.9	0.0231	34.804	1046.9	0.0231	39.418	1052.2	0.0231
4	35.916	1046.5	0.0230	36.866	1046.5	0.0230	41.527	1047.5	0.0229
5	36.661	1039.2	0.0229	37.603	1039.2	0.0229	42.213	1037.5	0.0228
6	36.878	1032.8	0.0227	37.807	1032.8	0.0227	42.364	1029.4	0.0227
7	36.818	1029.9	0.0226	37.736	1029.9	0.0226	42.264	1025.0	0.0226
8	36.528	1031.0	0.0225	37.441	1031.0	0.0225	41.969	1024.3	0.0225
9	36.189	1034.3	0.0224	37.100	1034.3	0.0224	41.646	1025.6	0.0224
10	36.073	1037.3	0.0223	36.981	1037.3	0.0223	41.544	1026.2	0.0223
11	36.176	1039.6	0.0222	37.080	1039.6	0.0222	41.659	1026.0	0.0222
12	36.463	1041.9	0.0221	37.365	1041.9	0.0221	41.963	1025.9	0.0221
13	36.892	1044.6	0.0221	37.793	1044.6	0.0221	42.420	1026.3	0.0220
14	37.105	1049.0	0.0220	38.005	1049.0	0.0220	42.678	1029.1	0.0219
15	36.694	1055.1	0.0219	37.594	1055.1	0.0219	42.325	1035.3	0.0219
16	35.267	1057.1	0.0218	36.154	1057.1	0.0218	40.894	1039.8	0.0218
17	31.628	1035.1	0.0217	32.451	1035.1	0.0217	36.950	1024.1	0.0217
18	22.036	947.3	0.0216	22.621	947.3	0.0216	25.918	940.7	0.0216

Axial Node	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	23.293	964.6	0.0232
2	34.393	1028.5	0.0232
3	39.956	1052.2	0.0231
4	42.064	1047.5	0.0229
5	42.742	1037.5	0.0228
6	42.885	1029.4	0.0227
7	42.782	1025.0	0.0226
8	42.488	1024.3	0.0225
9	42.166	1025.6	0.0224
10	42.066	1026.2	0.0223
11	42.183	1026.0	0.0222
12	42.489	1025.9	0.0221
13	42.949	1026.3	0.0220
14	43.213	1029.1	0.0219
15	42.869	1035.3	0.0219
16	41.445	1039.8	0.0218
17	37.481	1024.1	0.0217
18	26.318	940.7	0.0216

Statepoint	EFPD / Cycle
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-85. Burnup and TH Feedback Parameters by Axial Node for Assembly E25

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	5.138	958.5	0.0230	6.653	958.5	0.0230	7.879	907.3	0.0230
2	8.346	1128.8	0.0229	10.598	1128.8	0.0229	12.550	1023.4	0.0229
3	10.095	1191.6	0.0228	12.644	1191.6	0.0228	15.010	1071.2	0.0228
4	10.829	1202.7	0.0227	13.449	1202.7	0.0227	16.034	1087.1	0.0228
5	11.090	1197.1	0.0226	13.731	1197.1	0.0226	16.448	1092.5	0.0227
6	11.131	1187.6	0.0225	13.810	1187.6	0.0225	16.621	1094.7	0.0226
7	11.057	1178.9	0.0225	13.809	1178.9	0.0225	16.699	1096.6	0.0225
8	10.929	1173.9	0.0224	13.782	1173.9	0.0224	16.743	1098.6	0.0224
9	10.815	1175.8	0.0223	13.774	1175.8	0.0223	16.793	1099.9	0.0223
10	10.789	1184.9	0.0222	13.816	1184.9	0.0222	16.872	1099.5	0.0222
11	10.874	1198.8	0.0221	13.907	1198.8	0.0221	16.973	1097.1	0.0221
12	11.047	1214.4	0.0221	14.019	1214.4	0.0221	17.066	1093.2	0.0220
13	11.243	1227.1	0.0220	14.109	1227.1	0.0220	17.107	1088.2	0.0220
14	11.349	1232.3	0.0219	14.101	1232.3	0.0219	17.025	1082.2	0.0219
15	11.230	1228.4	0.0218	13.886	1228.4	0.0218	16.705	1074.4	0.0218
16	10.695	1210.0	0.0217	13.250	1210.0	0.0217	15.894	1060.1	0.0217
17	9.300	1153.0	0.0216	11.623	1153.0	0.0216	13.923	1023.1	0.0217
18	5.818	969.4	0.0216	7.394	969.4	0.0216	8.873	902.2	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol
1	12.851	937.4	0.0230	13.094	937.4	0.0230	17.492	951.6	0.0232
2	19.886	1036.2	0.0229	20.228	1036.2	0.0229	26.824	1040.2	0.0231
3	23.354	1061.6	0.0228	23.731	1061.6	0.0228	31.497	1076.3	0.0230
4	24.672	1061.4	0.0227	25.056	1061.4	0.0227	33.316	1089.9	0.0229
5	25.140	1055.2	0.0226	25.520	1055.2	0.0226	33.763	1071.6	0.0228
6	25.305	1049.0	0.0226	25.681	1049.0	0.0226	33.953	1063.0	0.0227
7	25.377	1044.4	0.0225	25.747	1044.4	0.0225	34.055	1058.0	0.0226
8	25.429	1041.2	0.0224	25.794	1041.2	0.0224	34.121	1053.2	0.0225
9	25.493	1038.7	0.0223	25.850	1038.7	0.0223	34.182	1048.7	0.0224
10	25.579	1036.2	0.0222	25.927	1036.2	0.0222	34.252	1044.5	0.0223
11	25.676	1033.9	0.0221	26.013	1033.9	0.0221	34.338	1040.8	0.0222
12	25.763	1032.3	0.0221	26.088	1032.3	0.0221	34.523	1039.3	0.0221
13	25.802	1031.8	0.0220	26.117	1031.8	0.0220	34.891	1061.9	0.0220
14	25.725	1033.3	0.0219	26.032	1033.3	0.0219	34.896	1070.6	0.0219
15	25.386	1036.5	0.0218	25.689	1036.5	0.0218	34.395	1064.3	0.0218
16	24.409	1037.5	0.0217	24.707	1037.5	0.0217	33.011	1048.1	0.0217
17	21.740	1020.9	0.0217	22.019	1020.9	0.0217	29.459	1014.3	0.0217
18	14.275	924.2	0.0216	14.477	924.2	0.0216	19.621	929.5	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-85. Burnup and TH Feedback Parameters by Axial Node for Assembly E25 (Cont'd)

Axial Node	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol
1	18.092	958.9	0.0232	18.674	958.9	0.0232	21.682	969.9	0.0232
2	27.687	1020.3	0.0231	28.514	1020.3	0.0231	32.676	1027.5	0.0231
3	32.472	1045.3	0.0230	33.397	1045.3	0.0230	37.969	1050.8	0.0230
4	34.321	1044.7	0.0229	35.262	1044.7	0.0229	39.875	1045.9	0.0229
5	34.731	1020.9	0.0228	35.629	1020.9	0.0228	40.027	1020.0	0.0228
6	34.903	1010.2	0.0227	35.781	1010.2	0.0227	40.083	1007.7	0.0227
7	34.997	1005.5	0.0226	35.861	1005.5	0.0226	40.123	1001.7	0.0226
8	35.058	1003.4	0.0225	35.912	1003.4	0.0225	40.154	998.2	0.0225
9	35.115	1003.0	0.0224	35.962	1003.0	0.0224	40.197	996.1	0.0224
10	35.184	1004.0	0.0223	36.026	1004.0	0.0223	40.265	995.1	0.0223
11	35.272	1006.4	0.0222	36.111	1006.4	0.0222	40.365	995.2	0.0222
12	35.464	1012.3	0.0222	36.307	1012.3	0.0222	40.612	998.5	0.0221
13	35.886	1040.8	0.0221	36.776	1040.8	0.0221	41.344	1023.2	0.0221
14	35.924	1059.0	0.0220	36.837	1059.0	0.0220	41.570	1038.8	0.0220
15	35.430	1068.3	0.0219	36.348	1068.3	0.0219	41.164	1047.8	0.0219
16	34.030	1071.1	0.0218	34.935	1071.1	0.0218	39.769	1053.2	0.0218
17	30.404	1050.8	0.0217	31.247	1050.8	0.0217	35.846	1038.4	0.0217
18	20.300	975.3	0.0216	20.909	975.3	0.0216	24.340	968.1	0.0216

Axial Node	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	22.051	969.9	0.0232
2	33.171	1027.5	0.0231
3	38.503	1050.8	0.0230
4	40.407	1045.9	0.0229
5	40.533	1020.0	0.0228
6	40.577	1007.7	0.0227
7	40.611	1001.7	0.0226
8	40.640	998.2	0.0225
9	40.683	996.1	0.0224
10	40.752	995.1	0.0223
11	40.853	995.2	0.0222
12	41.105	998.5	0.0221
13	41.865	1023.2	0.0221
14	42.112	1038.8	0.0220
15	41.718	1047.8	0.0219
16	40.331	1053.2	0.0218
17	36.389	1038.4	0.0217
18	24.756	968.1	0.0216

Statepoint	EFPD / Cycle
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-86. Burnup and TH Feedback Parameters by Axial Node for Assembly E27

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	6.307	1056.1	0.0233	8.134	1056.1	0.0233	9.003	804.0	0.0225
2	10.225	1240.5	0.0232	12.921	1240.5	0.0232	14.296	884.6	0.0225
3	12.451	1299.7	0.0231	15.483	1299.7	0.0231	17.139	913.5	0.0224
4	13.406	1305.2	0.0230	16.510	1305.2	0.0230	18.311	921.9	0.0224
5	13.747	1295.9	0.0229	16.872	1295.9	0.0229	18.760	924.6	0.0223
6	13.807	1284.2	0.0228	16.980	1284.2	0.0228	18.929	925.6	0.0223
7	13.723	1274.2	0.0227	16.990	1274.2	0.0227	18.991	926.4	0.0222
8	13.571	1269.2	0.0226	16.969	1269.2	0.0226	19.016	927.4	0.0221
9	13.438	1272.4	0.0225	16.971	1272.4	0.0225	19.054	927.8	0.0221
10	13.412	1284.1	0.0224	17.035	1284.1	0.0224	19.139	926.6	0.0220
11	13.526	1301.4	0.0223	17.157	1301.4	0.0223	19.263	923.9	0.0220
12	13.752	1320.1	0.0222	17.305	1320.1	0.0222	19.393	920.0	0.0219
13	14.004	1335.1	0.0221	17.423	1335.1	0.0221	19.473	915.4	0.0218
14	14.145	1341.1	0.0220	17.420	1341.1	0.0220	19.416	910.5	0.0218
15	14.011	1336.7	0.0219	17.167	1336.7	0.0219	19.091	905.0	0.0217
16	13.376	1317.3	0.0218	16.416	1317.3	0.0218	18.223	895.4	0.0217
17	11.691	1257.9	0.0217	14.475	1257.9	0.0217	16.051	871.8	0.0216
18	7.391	1061.5	0.0216	9.313	1061.5	0.0216	10.335	790.9	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol
1	12.674	836.3	0.0226	12.854	836.3	0.0226	17.299	957.1	0.0233
2	19.688	908.9	0.0225	19.944	908.9	0.0225	26.547	1045.6	0.0232
3	23.229	923.7	0.0225	23.511	923.7	0.0225	31.196	1077.1	0.0231
4	24.588	921.4	0.0224	24.874	921.4	0.0224	33.062	1088.0	0.0230
5	25.060	916.1	0.0223	25.344	916.1	0.0223	33.775	1091.1	0.0228
6	25.212	911.2	0.0223	25.493	911.2	0.0223	34.044	1089.6	0.0227
7	25.261	907.5	0.0222	25.537	907.5	0.0222	34.151	1086.7	0.0226
8	25.284	905.0	0.0221	25.556	905.0	0.0221	34.203	1083.3	0.0225
9	25.324	902.9	0.0221	25.590	902.9	0.0221	34.248	1079.7	0.0224
10	25.402	900.6	0.0220	25.660	900.6	0.0220	34.305	1075.6	0.0223
11	25.509	898.1	0.0220	25.759	898.1	0.0220	34.365	1070.9	0.0222
12	25.619	896.0	0.0219	25.860	896.0	0.0219	34.404	1065.9	0.0221
13	25.684	894.7	0.0219	25.917	894.7	0.0219	34.374	1060.6	0.0220
14	25.620	895.0	0.0218	25.847	895.0	0.0218	34.184	1054.1	0.0219
15	25.277	896.8	0.0217	25.500	896.8	0.0217	33.647	1045.3	0.0218
16	24.291	897.4	0.0217	24.511	897.4	0.0217	32.304	1030.6	0.0217
17	21.627	886.7	0.0216	21.833	886.7	0.0216	28.861	1005.3	0.0217
18	14.199	818.7	0.0216	14.348	818.7	0.0216	19.238	922.7	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-86. Burnup and TH Feedback Parameters by Axial Node for Assembly E27 (Cont'd)

Axial Node	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol
1	17.916	967.8	0.0233	18.512	967.8	0.0233	21.590	977.9	0.0233
2	27.429	1026.8	0.0232	28.273	1026.8	0.0232	32.509	1032.9	0.0232
3	32.187	1053.3	0.0231	33.125	1053.3	0.0231	37.759	1058.0	0.0231
4	34.084	1054.7	0.0230	35.042	1054.7	0.0230	39.733	1055.1	0.0230
5	34.800	1049.0	0.0229	35.753	1049.0	0.0229	40.407	1046.6	0.0228
6	35.065	1043.4	0.0228	36.006	1043.4	0.0228	40.614	1039.1	0.0227
7	35.166	1039.9	0.0227	36.096	1039.9	0.0227	40.672	1033.9	0.0226
8	35.215	1038.5	0.0226	36.136	1038.5	0.0226	40.696	1030.8	0.0225
9	35.258	1038.8	0.0225	36.172	1038.8	0.0225	40.730	1029.1	0.0224
10	35.313	1040.2	0.0224	36.223	1040.2	0.0224	40.788	1028.2	0.0223
11	35.374	1042.7	0.0223	36.281	1042.7	0.0223	40.862	1028.3	0.0222
12	35.416	1046.6	0.0222	36.322	1046.6	0.0222	40.930	1029.6	0.0221
13	35.392	1052.2	0.0221	36.299	1052.2	0.0221	40.952	1032.8	0.0220
14	35.208	1059.7	0.0220	36.119	1059.7	0.0220	40.835	1038.5	0.0220
15	34.674	1067.5	0.0219	35.587	1067.5	0.0219	40.372	1046.1	0.0219
16	33.316	1070.1	0.0218	34.216	1070.1	0.0218	39.018	1051.2	0.0218
17	29.801	1049.3	0.0217	30.641	1049.3	0.0217	35.215	1036.6	0.0217
18	19.915	977.0	0.0216	20.523	977.0	0.0216	23.941	968.8	0.0216

Axial Node	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	21.964	977.9	0.0233
2	33.011	1032.9	0.0232
3	38.298	1058.0	0.0231
4	40.273	1055.1	0.0230
5	40.940	1046.6	0.0228
6	41.140	1039.1	0.0227
7	41.194	1033.9	0.0226
8	41.217	1030.8	0.0225
9	41.251	1029.1	0.0224
10	41.310	1028.2	0.0223
11	41.385	1028.3	0.0222
12	41.457	1029.6	0.0221
13	41.484	1032.8	0.0220
14	41.375	1038.5	0.0220
15	40.921	1046.1	0.0219
16	39.574	1051.2	0.0218
17	35.753	1036.6	0.0217
18	24.353	968.8	0.0216

Statepoint	EFPD / Cycle
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-87. Burnup and TH Feedback Parameters by Axial Node for Assembly E27a

Axial Node	Burnup SP12	SP11 to SP12 T-Fuel	SP11 to SP12 Spec.Vol	Burnup SP13	SP12 to SP13 T-Fuel	SP12 to SP13 Spec.Vol	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol
1	6.307	1056.1	0.0233	8.134	1056.1	0.0233	9.003	804.0	0.0225
2	10.225	1240.5	0.0232	12.921	1240.5	0.0232	14.296	884.6	0.0225
3	12.451	1299.7	0.0231	15.483	1299.7	0.0231	17.139	913.5	0.0224
4	13.406	1305.2	0.0230	16.510	1305.2	0.0230	18.311	921.9	0.0224
5	13.747	1295.9	0.0229	16.872	1295.9	0.0229	18.760	924.6	0.0223
6	13.807	1284.2	0.0228	16.980	1284.2	0.0228	18.929	925.6	0.0223
7	13.723	1274.2	0.0227	16.990	1274.2	0.0227	18.991	926.4	0.0222
8	13.571	1269.2	0.0226	16.969	1269.2	0.0226	19.016	927.4	0.0221
9	13.438	1272.4	0.0225	16.971	1272.4	0.0225	19.054	927.8	0.0221
10	13.412	1284.1	0.0224	17.035	1284.1	0.0224	19.139	926.6	0.0220
11	13.526	1301.4	0.0223	17.157	1301.4	0.0223	19.263	923.9	0.0220
12	13.752	1320.1	0.0222	17.305	1320.1	0.0222	19.393	920.0	0.0219
13	14.004	1335.1	0.0221	17.423	1335.1	0.0221	19.473	915.4	0.0218
14	14.145	1341.1	0.0220	17.420	1341.1	0.0220	19.416	910.5	0.0218
15	14.011	1336.7	0.0219	17.167	1336.7	0.0219	19.091	905.0	0.0217
16	13.376	1317.3	0.0218	16.416	1317.3	0.0218	18.223	895.4	0.0217
17	11.691	1257.9	0.0217	14.475	1257.9	0.0217	16.051	871.8	0.0216
18	7.391	1061.5	0.0216	9.313	1061.5	0.0216	10.335	790.9	0.0216

Axial Node	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol
1	12.674	836.3	0.0226	12.846	836.3	0.0226	17.318	956.8	0.0233
2	19.688	908.9	0.0225	19.929	908.9	0.0225	26.563	1045.9	0.0232
3	23.229	923.7	0.0225	23.493	923.7	0.0225	31.200	1079.0	0.0231
4	24.588	921.4	0.0224	24.856	921.4	0.0224	33.057	1092.9	0.0230
5	25.060	916.1	0.0223	25.325	916.1	0.0223	33.767	1096.5	0.0229
6	25.212	911.2	0.0223	25.475	911.2	0.0223	34.036	1095.3	0.0227
7	25.261	907.5	0.0222	25.519	907.5	0.0222	34.140	1092.2	0.0226
8	25.284	905.0	0.0221	25.537	905.0	0.0221	34.187	1088.5	0.0225
9	25.324	902.9	0.0221	25.571	902.9	0.0221	34.225	1084.4	0.0224
10	25.402	900.6	0.0220	25.641	900.6	0.0220	34.274	1079.9	0.0223
11	25.509	898.1	0.0220	25.739	898.1	0.0220	34.330	1075.0	0.0222
12	25.619	896.0	0.0219	25.839	896.0	0.0219	34.368	1070.0	0.0221
13	25.684	894.7	0.0219	25.895	894.7	0.0219	34.339	1064.8	0.0220
14	25.620	895.0	0.0218	25.826	895.0	0.0218	34.152	1058.9	0.0219
15	25.277	896.8	0.0217	25.481	896.8	0.0217	33.618	1050.5	0.0218
16	24.291	897.4	0.0217	24.495	897.4	0.0217	32.279	1035.0	0.0217
17	21.627	886.7	0.0216	21.820	886.7	0.0216	28.843	1006.9	0.0217
18	14.199	818.7	0.0216	14.341	818.7	0.0216	19.228	924.0	0.0216

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-87. Burnup and TH Feedback Parameters by Axial Node for Assembly E27a (Cont'd)

Axial Node	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol
1	17.938	967.8	0.0233	18.535	967.8	0.0233	21.619	978.0	0.0233
2	27.448	1028.8	0.0232	28.294	1028.8	0.0232	32.542	1035.0	0.0232
3	32.195	1054.7	0.0231	33.136	1054.7	0.0231	37.786	1059.4	0.0231
4	34.084	1056.7	0.0230	35.046	1056.7	0.0230	39.755	1056.9	0.0230
5	34.798	1051.5	0.0229	35.755	1051.5	0.0229	40.430	1048.8	0.0229
6	35.062	1046.0	0.0228	36.008	1046.0	0.0228	40.637	1041.4	0.0227
7	35.161	1042.5	0.0227	36.096	1042.5	0.0227	40.693	1036.2	0.0226
8	35.204	1041.0	0.0226	36.129	1041.0	0.0226	40.710	1033.0	0.0225
9	35.239	1041.2	0.0225	36.158	1041.2	0.0225	40.735	1031.1	0.0224
10	35.288	1042.6	0.0224	36.202	1042.6	0.0224	40.785	1030.3	0.0223
11	35.345	1045.2	0.0223	36.256	1045.2	0.0223	40.855	1030.4	0.0222
12	35.386	1049.2	0.0222	36.295	1049.2	0.0222	40.924	1031.8	0.0221
13	35.363	1055.0	0.0221	36.274	1055.0	0.0221	40.949	1035.2	0.0221
14	35.182	1062.6	0.0220	36.097	1062.6	0.0220	40.836	1041.0	0.0220
15	34.650	1070.5	0.0219	35.568	1070.5	0.0219	40.376	1048.6	0.0219
16	33.297	1073.0	0.0218	34.202	1073.0	0.0218	39.025	1053.5	0.0218
17	29.789	1052.7	0.0217	30.633	1052.7	0.0217	35.226	1038.7	0.0217
18	19.908	979.0	0.0216	20.520	979.0	0.0216	23.950	970.3	0.0216

Axial Node	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	21.993	978.0	0.0233
2	33.044	1035.0	0.0232
3	38.326	1059.4	0.0231
4	40.297	1056.9	0.0230
5	40.965	1048.8	0.0229
6	41.166	1041.4	0.0227
7	41.217	1036.2	0.0226
8	41.233	1033.0	0.0225
9	41.258	1031.1	0.0224
10	41.309	1030.3	0.0223
11	41.381	1030.4	0.0222
12	41.453	1031.8	0.0221
13	41.483	1035.2	0.0221
14	41.378	1041.0	0.0220
15	40.928	1048.6	0.0219
16	39.584	1053.5	0.0218
17	35.766	1038.7	0.0217
18	24.364	970.3	0.0216

Statepoint	EFPD / Cycle
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-88. Burnup and TH Feedback Parameters by Axial Node for Assembly F6

Axial Node	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol
1	1.783	1160.2	0.0239	9.034	1177.7	0.0239	9.364	1177.7	0.0239
2	2.774	1383.4	0.0238	13.448	1357.1	0.0238	13.934	1357.1	0.0238
3	3.457	1504.8	0.0237	15.881	1431.3	0.0236	16.435	1431.3	0.0236
4	3.830	1555.5	0.0235	16.861	1448.3	0.0235	17.430	1448.3	0.0235
5	4.047	1575.5	0.0234	17.245	1444.7	0.0233	17.812	1444.7	0.0233
6	4.197	1583.7	0.0232	17.430	1436.7	0.0232	17.991	1436.7	0.0232
7	4.321	1588.3	0.0231	17.575	1429.6	0.0230	18.128	1429.6	0.0230
8	4.433	1592.7	0.0229	17.726	1424.6	0.0229	18.270	1424.6	0.0229
9	4.528	1596.5	0.0228	17.872	1421.3	0.0227	18.405	1421.3	0.0227
10	4.595	1598.6	0.0226	17.984	1419.4	0.0226	18.504	1419.4	0.0226
11	4.624	1598.8	0.0225	18.050	1419.1	0.0225	18.555	1419.1	0.0225
12	4.609	1597.0	0.0223	18.070	1420.7	0.0223	18.558	1420.7	0.0223
13	4.547	1592.8	0.0222	18.040	1423.7	0.0222	18.513	1423.7	0.0222
14	4.440	1584.6	0.0221	17.954	1428.2	0.0221	18.417	1428.2	0.0221
15	4.273	1568.3	0.0219	17.737	1431.9	0.0220	18.192	1431.9	0.0220
16	3.987	1529.3	0.0218	17.099	1424.6	0.0218	17.544	1424.6	0.0218
17	3.459	1432.7	0.0217	15.355	1369.6	0.0217	15.768	1369.6	0.0217
18	2.418	1206.0	0.0216	10.903	1191.0	0.0216	11.206	1191.0	0.0216

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	13.595	956.2	0.0233	14.162	967.4	0.0232	14.710	967.4	0.0232
2	20.658	1089.6	0.0232	21.510	1057.7	0.0232	22.325	1057.7	0.0232
3	24.551	1138.6	0.0231	25.528	1078.0	0.0231	26.452	1078.0	0.0231
4	26.229	1156.7	0.0230	27.244	1073.4	0.0230	28.193	1073.4	0.0230
5	26.944	1159.6	0.0229	27.963	1064.5	0.0228	28.907	1064.5	0.0228
6	27.278	1155.9	0.0228	28.290	1057.3	0.0227	29.222	1057.3	0.0227
7	27.478	1149.5	0.0226	28.482	1052.0	0.0226	29.400	1052.0	0.0226
8	27.636	1142.4	0.0225	28.633	1049.1	0.0225	29.540	1049.1	0.0225
9	27.769	1135.9	0.0224	28.761	1048.3	0.0224	29.659	1048.3	0.0224
10	27.860	1130.9	0.0223	28.851	1049.4	0.0223	29.744	1049.4	0.0223
11	27.905	1127.5	0.0222	28.898	1052.6	0.0222	29.788	1052.6	0.0222
12	27.898	1125.7	0.0221	28.897	1057.8	0.0221	29.788	1057.8	0.0221
13	27.821	1124.5	0.0220	28.829	1065.0	0.0220	29.725	1065.0	0.0220
14	27.631	1121.8	0.0219	28.647	1073.7	0.0220	29.549	1073.7	0.0220
15	27.179	1114.2	0.0218	28.199	1082.3	0.0219	29.102	1082.3	0.0219
16	26.035	1095.4	0.0217	27.035	1088.2	0.0218	27.923	1088.2	0.0218
17	23.168	1049.6	0.0216	24.080	1073.6	0.0217	24.894	1073.6	0.0217
18	15.945	919.5	0.0216	16.563	971.7	0.0216	17.120	971.7	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-88. Burnup and TH Feedback Parameters by Axial Node for Assembly F6 (Cont'd)

Axial	Burnup	SP19 to SP20		Burnup	SP20 to SP21	
Node	SP20	T-Fuel	Spec.Vol	SP21	T-Fuel	Spec.Vol
1	17.580	982.7	0.0233	17.936	982.7	0.0233
2	26.457	1064.6	0.0232	26.953	1064.6	0.0232
3	31.049	1077.3	0.0231	31.589	1077.3	0.0231
4	32.870	1072.9	0.0230	33.414	1072.9	0.0230
5	33.553	1064.8	0.0228	34.090	1064.8	0.0228
6	33.818	1056.6	0.0227	34.349	1056.6	0.0227
7	33.957	1050.4	0.0226	34.484	1050.4	0.0226
8	34.073	1046.2	0.0225	34.597	1046.2	0.0225
9	34.182	1043.6	0.0224	34.706	1043.6	0.0224
10	34.272	1042.7	0.0223	34.797	1042.7	0.0223
11	34.337	1043.4	0.0222	34.865	1043.4	0.0222
12	34.375	1046.0	0.0221	34.906	1046.0	0.0221
13	34.367	1050.7	0.0220	34.905	1050.7	0.0220
14	34.263	1057.6	0.0219	34.810	1057.6	0.0219
15	33.886	1065.4	0.0219	34.443	1065.4	0.0219
16	32.708	1068.5	0.0218	33.271	1068.5	0.0218
17	29.391	1058.5	0.0217	29.929	1058.5	0.0217
18	20.310	969.9	0.0216	20.704	969.9	0.0216

Table 4-89. Burnup and TH Feedback Parameters by Axial Node for Assembly F10

Axial	Burnup	SP13 to SP14		Burnup	SP14 to SP15		Burnup	SP15 to SP16	
Node	SP14	T-Fuel	Spec.Vol	SP15	T-Fuel	Spec.Vol	SP16	T-Fuel	Spec.Vol
1	2.077	1205.0	0.0240	9.865	1203.0	0.0240	10.228	1203.0	0.0240
2	3.065	1426.7	0.0239	14.350	1384.5	0.0239	14.866	1384.5	0.0239
3	3.702	1546.9	0.0237	16.755	1464.7	0.0237	17.331	1464.7	0.0237
4	4.031	1595.1	0.0236	17.676	1481.4	0.0236	18.263	1481.4	0.0236
5	4.210	1610.9	0.0234	18.002	1477.7	0.0234	18.584	1477.7	0.0234
6	4.324	1615.2	0.0233	18.128	1469.9	0.0232	18.703	1469.9	0.0232
7	4.407	1616.2	0.0231	18.197	1462.5	0.0231	18.762	1462.5	0.0231
8	4.472	1615.8	0.0229	18.250	1456.5	0.0229	18.805	1456.5	0.0229
9	4.520	1614.8	0.0228	18.296	1452.1	0.0228	18.839	1452.1	0.0228
10	4.551	1613.5	0.0226	18.338	1449.4	0.0227	18.867	1449.4	0.0227
11	4.564	1612.3	0.0225	18.380	1448.9	0.0225	18.894	1448.9	0.0225
12	4.555	1611.2	0.0224	18.425	1450.6	0.0224	18.924	1450.6	0.0224
13	4.519	1609.4	0.0222	18.462	1454.4	0.0222	18.948	1454.4	0.0222
14	4.449	1604.6	0.0221	18.458	1459.5	0.0221	18.934	1459.5	0.0221
15	4.322	1592.3	0.0219	18.314	1463.0	0.0220	18.784	1463.0	0.0220
16	4.078	1558.6	0.0218	17.740	1455.7	0.0218	18.201	1455.7	0.0218
17	3.595	1466.0	0.0217	16.045	1402.7	0.0217	16.472	1402.7	0.0217
18	2.587	1242.8	0.0216	11.581	1218.2	0.0216	11.895	1218.2	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-89. Burnup and TH Feedback Parameters by Axial Node for Assembly F10 (Cont'd)

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	12.487	770.5	0.0224	12.797	794.3	0.0225	13.097	794.3	0.0225
2	18.510	851.5	0.0224	18.986	859.7	0.0224	19.441	859.7	0.0224
3	21.739	882.4	0.0223	22.287	874.6	0.0224	22.807	874.6	0.0224
4	23.036	892.7	0.0223	23.606	873.2	0.0223	24.142	873.2	0.0223
5	23.532	894.5	0.0222	24.105	868.5	0.0223	24.639	868.5	0.0223
6	23.727	892.5	0.0222	24.296	864.0	0.0222	24.823	864.0	0.0222
7	23.813	888.9	0.0221	24.377	860.7	0.0222	24.896	860.7	0.0222
8	23.856	884.9	0.0221	24.416	858.7	0.0221	24.928	858.7	0.0221
9	23.880	881.3	0.0220	24.437	857.9	0.0220	24.943	857.9	0.0220
10	23.895	878.3	0.0220	24.450	858.3	0.0220	24.953	858.3	0.0220
11	23.907	875.8	0.0219	24.462	859.6	0.0219	24.963	859.6	0.0219
12	23.917	873.8	0.0218	24.474	861.9	0.0219	24.975	861.9	0.0219
13	23.907	871.8	0.0218	24.467	865.3	0.0218	24.969	865.3	0.0218
14	23.826	868.8	0.0217	24.389	869.5	0.0218	24.893	869.5	0.0218
15	23.537	863.0	0.0217	24.100	873.8	0.0217	24.603	873.8	0.0217
16	22.669	851.2	0.0216	23.218	875.3	0.0217	23.709	875.3	0.0217
17	20.326	823.7	0.0216	20.821	862.8	0.0216	21.266	862.8	0.0216
18	14.309	744.4	0.0216	14.636	792.2	0.0216	14.932	792.2	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	14.724	810.5	0.0225	14.931	810.5	0.0225
2	21.839	873.2	0.0225	22.137	873.2	0.0225
3	25.495	884.1	0.0224	25.823	884.1	0.0224
4	26.886	879.9	0.0223	27.216	879.9	0.0223
5	27.367	873.5	0.0223	27.694	873.5	0.0223
6	27.523	867.9	0.0222	27.846	867.9	0.0222
7	27.571	863.8	0.0222	27.891	863.8	0.0222
8	27.587	861.0	0.0221	27.906	861.0	0.0221
9	27.595	859.3	0.0221	27.914	859.3	0.0221
10	27.606	858.5	0.0220	27.924	858.5	0.0220
11	27.625	858.5	0.0219	27.945	858.5	0.0219
12	27.654	859.4	0.0219	27.975	859.4	0.0219
13	27.675	861.4	0.0218	28.000	861.4	0.0218
14	27.632	864.8	0.0218	27.962	864.8	0.0218
15	27.372	869.3	0.0217	27.707	869.3	0.0217
16	26.463	872.7	0.0217	26.799	872.7	0.0217
17	23.822	864.7	0.0216	24.140	864.7	0.0216
18	16.693	799.8	0.0216	16.917	799.8	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-90. Burnup and TH Feedback Parameters by Axial Node for Assembly F12

Axial Node	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol
1	1.919	1196.8	0.0240	9.615	1204.0	0.0240	9.966	1204.0	0.0240
2	2.909	1418.2	0.0239	14.106	1386.1	0.0239	14.619	1386.1	0.0239
3	3.583	1540.5	0.0238	16.586	1465.2	0.0237	17.172	1465.2	0.0237
4	3.941	1589.4	0.0236	17.541	1481.0	0.0236	18.145	1481.0	0.0236
5	4.145	1607.4	0.0235	17.887	1476.1	0.0234	18.491	1476.1	0.0234
6	4.289	1613.5	0.0233	18.057	1468.1	0.0233	18.655	1468.1	0.0233
7	4.408	1617.2	0.0231	18.196	1461.2	0.0231	18.786	1461.2	0.0231
8	4.515	1620.5	0.0230	18.343	1456.1	0.0230	18.924	1456.1	0.0230
9	4.609	1623.4	0.0228	18.488	1452.7	0.0228	19.057	1452.7	0.0228
10	4.683	1624.8	0.0227	18.609	1450.5	0.0227	19.164	1450.5	0.0227
11	4.735	1626.0	0.0225	18.723	1450.5	0.0225	19.260	1450.5	0.0225
12	4.752	1628.8	0.0224	18.849	1454.1	0.0224	19.365	1454.1	0.0224
13	4.717	1629.5	0.0222	18.929	1459.4	0.0222	19.427	1459.4	0.0222
14	4.623	1624.1	0.0221	18.899	1464.3	0.0221	19.384	1464.3	0.0221
15	4.465	1609.9	0.0220	18.702	1467.8	0.0220	19.179	1467.8	0.0220
16	4.185	1575.7	0.0218	18.064	1461.0	0.0218	18.531	1461.0	0.0218
17	3.667	1479.7	0.0217	16.287	1409.4	0.0217	16.720	1409.4	0.0217
18	2.629	1251.1	0.0216	11.727	1222.4	0.0216	12.044	1222.4	0.0216

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	14.698	1004.9	0.0235	15.338	1008.2	0.0235	15.958	1008.2	0.0235
2	22.066	1142.0	0.0234	23.020	1101.2	0.0234	23.934	1101.2	0.0234
3	26.133	1195.7	0.0233	27.224	1120.7	0.0232	28.255	1120.7	0.0232
4	27.844	1214.6	0.0232	28.975	1120.1	0.0231	30.032	1120.1	0.0231
5	28.537	1217.0	0.0231	29.670	1113.1	0.0230	30.720	1113.1	0.0230
6	28.858	1212.4	0.0229	29.983	1105.4	0.0229	31.018	1105.4	0.0229
7	29.058	1205.6	0.0228	30.173	1099.9	0.0228	31.193	1099.9	0.0228
8	29.220	1198.4	0.0227	30.328	1097.0	0.0227	31.336	1097.0	0.0227
9	29.358	1191.9	0.0225	30.462	1096.2	0.0225	31.460	1096.2	0.0225
10	29.464	1186.7	0.0224	30.567	1097.6	0.0224	31.559	1097.6	0.0224
11	29.556	1182.6	0.0223	30.661	1100.8	0.0223	31.650	1100.8	0.0223
12	29.653	1179.6	0.0222	30.764	1106.1	0.0222	31.755	1106.1	0.0222
13	29.688	1177.8	0.0221	30.810	1114.2	0.0221	31.806	1114.2	0.0221
14	29.552	1174.9	0.0220	30.685	1124.0	0.0220	31.688	1124.0	0.0220
15	29.107	1166.5	0.0219	30.244	1133.0	0.0219	31.250	1133.0	0.0219
16	27.937	1146.2	0.0218	29.054	1133.9	0.0218	30.044	1133.9	0.0218
17	24.993	1098.2	0.0217	26.017	1114.8	0.0217	26.928	1114.8	0.0217
18	17.443	962.1	0.0216	18.145	1006.0	0.0216	18.776	1006.0	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-90. Burnup and TH Feedback Parameters by Axial Node for Assembly F12 (Cont'd)

Axial	Burnup	SP19 to SP20		Burnup	SP20 to SP21	
Node	SP20	T-Fuel	Spec.Vol	SP21	T-Fuel	Spec.Vol
1	19.164	1019.3	0.0234	19.558	1019.3	0.0234
2	28.512	1103.8	0.0233	29.056	1103.8	0.0233
3	33.329	1121.3	0.0232	33.920	1121.3	0.0232
4	35.183	1119.4	0.0231	35.775	1119.4	0.0231
5	35.825	1109.3	0.0230	36.408	1109.3	0.0230
6	36.061	1099.8	0.0229	36.636	1099.8	0.0229
7	36.191	1092.9	0.0227	36.761	1092.9	0.0227
8	36.308	1088.4	0.0226	36.876	1088.4	0.0226
9	36.423	1085.7	0.0225	36.990	1085.7	0.0225
10	36.528	1084.7	0.0224	37.096	1084.7	0.0224
11	36.640	1085.1	0.0223	37.210	1085.1	0.0223
12	36.783	1087.4	0.0222	37.358	1087.4	0.0222
13	36.899	1092.4	0.0221	37.480	1092.4	0.0221
14	36.863	1100.0	0.0220	37.455	1100.0	0.0220
15	36.503	1108.6	0.0219	37.106	1108.6	0.0219
16	35.304	1112.8	0.0218	35.914	1112.8	0.0218
17	31.892	1091.5	0.0217	32.478	1091.5	0.0217
18	22.337	998.8	0.0216	22.770	998.8	0.0216

Table 4-91. Burnup and TH Feedback Parameters by Axial Node for Assembly F14

Axial	Burnup	SP13 to SP14		Burnup	SP14 to SP15		Burnup	SP15 to SP16	
Node	SP14	T-Fuel	Spec.Vol	SP15	T-Fuel	Spec.Vol	SP16	T-Fuel	Spec.Vol
1	1.520	1060.7	0.0235	7.615	1096.2	0.0235	7.910	1096.2	0.0235
2	2.540	1297.9	0.0235	11.876	1272.2	0.0234	12.305	1272.2	0.0234
3	3.164	1408.1	0.0233	13.998	1334.3	0.0233	14.478	1334.3	0.0233
4	3.497	1450.4	0.0232	14.813	1345.8	0.0231	15.303	1345.8	0.0231
5	3.694	1465.9	0.0231	15.126	1340.7	0.0230	15.615	1340.7	0.0230
6	3.831	1471.9	0.0230	15.277	1332.5	0.0229	15.759	1332.5	0.0229
7	3.944	1475.4	0.0228	15.394	1325.4	0.0228	15.869	1325.4	0.0228
8	4.045	1478.8	0.0227	15.515	1320.2	0.0227	15.983	1320.2	0.0227
9	4.130	1481.6	0.0226	15.630	1316.7	0.0225	16.088	1316.7	0.0225
10	4.187	1482.9	0.0225	15.712	1314.6	0.0224	16.160	1314.6	0.0224
11	4.208	1482.2	0.0223	15.750	1313.7	0.0223	16.185	1313.7	0.0223
12	4.188	1479.7	0.0222	15.744	1314.2	0.0222	16.165	1314.2	0.0222
13	4.128	1475.2	0.0221	15.700	1316.5	0.0221	16.109	1316.5	0.0221
14	4.029	1467.7	0.0220	15.618	1320.7	0.0220	16.018	1320.7	0.0220
15	3.879	1453.3	0.0219	15.433	1324.7	0.0219	15.827	1324.7	0.0219
16	3.614	1419.1	0.0218	14.893	1319.2	0.0218	15.279	1319.2	0.0218
17	3.078	1329.7	0.0217	13.282	1273.5	0.0217	13.639	1273.5	0.0217
18	1.873	1077.9	0.0216	8.632	1093.6	0.0216	8.882	1093.6	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-91. Burnup and TH Feedback Parameters by Axial Node for Assembly F14 (Cont'd)

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	12.208	983.6	0.0234	12.794	994.4	0.0233	13.363	994.4	0.0233
2	19.127	1123.6	0.0233	20.005	1086.4	0.0232	20.848	1086.4	0.0232
3	22.770	1176.1	0.0232	23.780	1109.9	0.0231	24.735	1109.9	0.0231
4	24.327	1193.6	0.0231	25.377	1105.9	0.0230	26.359	1105.9	0.0230
5	24.983	1195.2	0.0229	26.036	1096.2	0.0229	27.012	1096.2	0.0229
6	25.285	1190.8	0.0228	26.330	1087.8	0.0228	27.293	1087.8	0.0228
7	25.464	1184.3	0.0227	26.500	1082.2	0.0227	27.449	1082.2	0.0227
8	25.601	1177.5	0.0226	26.631	1079.1	0.0226	27.568	1079.1	0.0226
9	25.711	1171.4	0.0225	26.737	1078.3	0.0225	27.665	1078.3	0.0225
10	25.785	1166.8	0.0224	26.810	1079.7	0.0224	27.734	1079.7	0.0224
11	25.822	1164.1	0.0223	26.850	1083.4	0.0223	27.772	1083.4	0.0223
12	25.825	1163.8	0.0221	26.861	1089.8	0.0222	27.786	1089.8	0.0222
13	25.781	1165.0	0.0220	26.829	1099.2	0.0221	27.762	1099.2	0.0221
14	25.630	1164.2	0.0219	26.691	1110.1	0.0220	27.632	1110.1	0.0220
15	25.226	1157.1	0.0218	26.292	1120.4	0.0219	27.236	1120.4	0.0219
16	24.175	1138.2	0.0217	25.222	1126.2	0.0218	26.150	1126.2	0.0218
17	21.435	1093.8	0.0217	22.393	1110.5	0.0217	23.247	1110.5	0.0217
18	13.982	961.0	0.0216	14.644	1013.3	0.0216	15.238	1013.3	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	16.334	1009.4	0.0233	16.703	1009.4	0.0233
2	25.106	1092.4	0.0232	25.618	1092.4	0.0232
3	29.479	1108.0	0.0231	30.037	1108.0	0.0231
4	31.186	1100.8	0.0230	31.746	1100.8	0.0230
5	31.801	1090.0	0.0229	32.353	1090.0	0.0229
6	32.026	1080.6	0.0228	32.571	1080.6	0.0228
7	32.142	1073.9	0.0227	32.682	1073.9	0.0227
8	32.238	1069.6	0.0226	32.776	1069.6	0.0226
9	32.328	1067.1	0.0225	32.866	1067.1	0.0225
10	32.404	1066.3	0.0224	32.944	1066.3	0.0224
11	32.467	1067.3	0.0223	33.009	1067.3	0.0223
12	32.527	1070.7	0.0222	33.074	1070.7	0.0222
13	32.574	1076.9	0.0221	33.129	1076.9	0.0221
14	32.529	1085.3	0.0220	33.094	1085.3	0.0220
15	32.210	1094.8	0.0219	32.786	1094.8	0.0219
16	31.126	1100.8	0.0218	31.708	1100.8	0.0218
17	27.938	1092.2	0.0217	28.496	1092.2	0.0217
18	18.622	1008.6	0.0216	19.037	1008.6	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-92. Burnup and TH Feedback Parameters by Axial Node for Assembly F17

Axial Node	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol
1	2.007	1203.1	0.0241	9.827	1209.5	0.0241	10.186	1209.5	0.0241
2	2.956	1424.1	0.0239	14.305	1395.1	0.0240	14.813	1395.1	0.0240
3	3.581	1546.4	0.0238	16.759	1478.4	0.0238	17.325	1478.4	0.0238
4	3.916	1595.5	0.0236	17.705	1494.4	0.0236	18.282	1494.4	0.0236
5	4.107	1612.6	0.0235	18.042	1489.7	0.0235	18.614	1489.7	0.0235
6	4.240	1618.6	0.0233	18.202	1482.4	0.0233	18.765	1482.4	0.0233
7	4.348	1621.9	0.0232	18.326	1475.7	0.0231	18.879	1475.7	0.0231
8	4.444	1624.7	0.0230	18.452	1470.6	0.0230	18.994	1470.6	0.0230
9	4.526	1626.9	0.0228	18.576	1467.0	0.0228	19.105	1467.0	0.0228
10	4.594	1628.2	0.0227	18.691	1464.8	0.0227	19.205	1464.8	0.0227
11	4.648	1629.9	0.0225	18.816	1465.1	0.0225	19.313	1465.1	0.0225
12	4.674	1633.9	0.0224	18.971	1469.4	0.0224	19.448	1469.4	0.0224
13	4.653	1636.0	0.0222	19.090	1475.4	0.0223	19.548	1475.4	0.0223
14	4.572	1631.7	0.0221	19.095	1480.8	0.0221	19.538	1480.8	0.0221
15	4.427	1618.0	0.0220	18.920	1484.2	0.0220	19.352	1484.2	0.0220
16	4.164	1584.3	0.0218	18.295	1476.5	0.0219	18.715	1476.5	0.0219
17	3.675	1491.0	0.0217	16.537	1426.4	0.0217	16.927	1426.4	0.0217
18	2.664	1263.1	0.0216	11.960	1234.7	0.0216	12.249	1234.7	0.0216

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	15.048	1019.1	0.0236	15.715	1022.6	0.0235	16.362	1022.6	0.0235
2	22.373	1154.9	0.0235	23.361	1118.3	0.0234	24.310	1118.3	0.0234
3	26.373	1209.5	0.0234	27.502	1139.7	0.0233	28.574	1139.7	0.0233
4	28.049	1228.4	0.0232	29.220	1141.3	0.0232	30.319	1141.3	0.0232
5	28.705	1230.1	0.0231	29.879	1133.5	0.0231	30.969	1133.5	0.0231
6	28.997	1225.2	0.0230	30.162	1125.2	0.0229	31.235	1125.2	0.0229
7	29.175	1218.6	0.0228	30.330	1119.7	0.0228	31.389	1119.7	0.0228
8	29.316	1211.9	0.0227	30.464	1117.0	0.0227	31.511	1117.0	0.0227
9	29.435	1205.8	0.0226	30.580	1116.6	0.0226	31.618	1116.6	0.0226
10	29.535	1200.7	0.0224	30.679	1118.3	0.0225	31.711	1118.3	0.0225
11	29.642	1196.4	0.0223	30.789	1121.7	0.0224	31.818	1121.7	0.0224
12	29.782	1193.5	0.0222	30.936	1127.6	0.0222	31.967	1127.6	0.0222
13	29.878	1192.4	0.0221	31.045	1136.7	0.0221	32.083	1136.7	0.0221
14	29.792	1189.9	0.0220	30.972	1147.6	0.0220	32.020	1147.6	0.0220
15	29.378	1181.0	0.0219	30.563	1156.9	0.0219	31.612	1156.9	0.0219
16	28.239	1160.2	0.0218	29.402	1157.5	0.0218	30.434	1157.5	0.0218
17	25.366	1112.7	0.0217	26.433	1134.4	0.0217	27.384	1134.4	0.0217
18	17.844	977.5	0.0216	18.581	1021.0	0.0216	19.242	1021.0	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-92. Burnup and TH Feedback Parameters by Axial Node for Assembly F17 (Cont'd)

Axial	Burnup	SP19 to SP20		Burnup	SP20 to SP21	
Node	SP20	T-Fuel	Spec.Vol	SP21	T-Fuel	Spec.Vol
1	19.694	1031.9	0.0235	20.102	1031.9	0.0235
2	29.052	1119.4	0.0234	29.614	1119.4	0.0234
3	33.831	1140.9	0.0233	34.441	1140.9	0.0233
4	35.656	1138.9	0.0232	36.267	1138.9	0.0232
5	36.252	1127.9	0.0230	36.854	1127.9	0.0230
6	36.451	1117.7	0.0229	37.044	1117.7	0.0229
7	36.558	1110.6	0.0228	37.145	1110.6	0.0228
8	36.655	1106.2	0.0227	37.240	1106.2	0.0227
9	36.755	1103.7	0.0226	37.339	1103.7	0.0226
10	36.855	1102.7	0.0224	37.440	1102.7	0.0224
11	36.984	1103.1	0.0223	37.571	1103.1	0.0223
12	37.177	1105.7	0.0222	37.768	1105.7	0.0222
13	37.367	1111.5	0.0221	37.967	1111.5	0.0221
14	37.395	1119.8	0.0220	38.005	1119.8	0.0220
15	37.069	1128.7	0.0219	37.691	1128.7	0.0219
16	35.896	1132.7	0.0218	36.525	1132.7	0.0218
17	32.536	1109.0	0.0217	33.140	1109.0	0.0217
18	22.951	1011.5	0.0216	23.398	1011.5	0.0216

Table 4-93. Burnup and TH Feedback Parameters by Axial Node for Assembly F17a

Axial	Burnup	SP13 to SP14		Burnup	SP14 to SP15		Burnup	SP15 to SP16	
Node	SP14	T-Fuel	Spec.Vol	SP15	T-Fuel	Spec.Vol	SP16	T-Fuel	Spec.Vol
1	2.007	1203.1	0.0241	9.827	1209.5	0.0241	10.197	1209.5	0.0241
2	2.956	1424.1	0.0239	14.305	1395.1	0.0240	14.835	1395.1	0.0240
3	3.581	1546.4	0.0238	16.759	1478.4	0.0238	17.358	1478.4	0.0238
4	3.916	1595.5	0.0236	17.705	1494.4	0.0236	18.323	1494.4	0.0236
5	4.107	1612.6	0.0235	18.042	1489.7	0.0235	18.661	1489.7	0.0235
6	4.240	1618.6	0.0233	18.202	1482.4	0.0233	18.814	1482.4	0.0233
7	4.348	1621.9	0.0232	18.326	1475.7	0.0231	18.930	1475.7	0.0231
8	4.444	1624.7	0.0230	18.452	1470.6	0.0230	19.047	1470.6	0.0230
9	4.526	1626.9	0.0228	18.576	1467.0	0.0228	19.159	1467.0	0.0228
10	4.594	1628.2	0.0227	18.691	1464.8	0.0227	19.258	1464.8	0.0227
11	4.648	1629.9	0.0225	18.816	1465.1	0.0225	19.364	1465.1	0.0225
12	4.674	1633.9	0.0224	18.971	1469.4	0.0224	19.499	1469.4	0.0224
13	4.653	1636.0	0.0222	19.090	1475.4	0.0223	19.599	1475.4	0.0223
14	4.572	1631.7	0.0221	19.095	1480.8	0.0221	19.590	1480.8	0.0221
15	4.427	1618.0	0.0220	18.920	1484.2	0.0220	19.407	1484.2	0.0220
16	4.164	1584.3	0.0218	18.295	1476.5	0.0219	18.771	1476.5	0.0219
17	3.675	1491.0	0.0217	16.537	1426.4	0.0217	16.978	1426.4	0.0217
18	2.664	1263.1	0.0216	11.960	1234.7	0.0216	12.283	1234.7	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-93. Burnup and TH Feedback Parameters by Axial Node for Assembly F17a (Cont'd)

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	13.697	986.1	0.0234	14.229	1000.3	0.0233	14.776	1000.3	0.0233
2	21.263	1118.8	0.0233	22.152	1084.2	0.0233	23.010	1084.2	0.0233
3	25.698	1161.9	0.0232	26.725	1095.7	0.0231	27.698	1095.7	0.0231
4	27.478	1177.7	0.0231	28.544	1091.2	0.0230	29.542	1091.2	0.0230
5	28.183	1179.9	0.0229	29.253	1084.5	0.0229	30.245	1084.5	0.0229
6	28.502	1175.5	0.0228	29.565	1077.2	0.0228	30.543	1077.2	0.0228
7	28.688	1168.8	0.0227	29.742	1072.1	0.0227	30.706	1072.1	0.0227
8	28.827	1161.8	0.0226	29.874	1069.2	0.0226	30.826	1069.2	0.0226
9	28.942	1155.4	0.0225	29.984	1068.5	0.0225	30.928	1068.5	0.0225
10	29.038	1150.3	0.0224	30.079	1069.7	0.0224	31.017	1069.7	0.0224
11	29.141	1146.2	0.0223	30.183	1072.5	0.0223	31.118	1072.5	0.0223
12	29.267	1143.0	0.0221	30.315	1077.1	0.0222	31.251	1077.1	0.0222
13	29.342	1140.8	0.0220	30.399	1084.1	0.0221	31.338	1084.1	0.0221
14	29.246	1137.8	0.0219	30.313	1092.8	0.0220	31.259	1092.8	0.0220
15	28.835	1129.8	0.0218	29.905	1100.7	0.0219	30.853	1100.7	0.0219
16	27.695	1110.6	0.0217	28.745	1101.1	0.0218	29.676	1101.1	0.0218
17	24.794	1064.7	0.0217	25.755	1083.8	0.0217	26.610	1083.8	0.0217
18	17.342	934.1	0.0216	17.998	980.3	0.0216	18.586	980.3	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol
1	17.619	1014.2	0.0233	18.000	1014.2	0.0233
2	27.334	1089.0	0.0232	27.858	1089.0	0.0232
3	32.511	1095.4	0.0231	33.076	1095.4	0.0231
4	34.431	1092.8	0.0230	34.997	1092.8	0.0230
5	35.096	1083.4	0.0229	35.654	1083.4	0.0229
6	35.338	1074.4	0.0228	35.888	1074.4	0.0228
7	35.459	1067.9	0.0227	36.004	1067.9	0.0227
8	35.555	1063.6	0.0226	36.098	1063.6	0.0226
9	35.647	1061.0	0.0225	36.190	1061.0	0.0225
10	35.741	1060.0	0.0224	36.285	1060.0	0.0224
11	35.861	1060.2	0.0223	36.406	1060.2	0.0223
12	36.027	1061.9	0.0222	36.576	1061.9	0.0222
13	36.170	1066.0	0.0221	36.725	1066.0	0.0221
14	36.164	1072.7	0.0220	36.728	1072.7	0.0220
15	35.828	1080.3	0.0219	36.403	1080.3	0.0219
16	34.653	1083.6	0.0218	35.233	1083.6	0.0218
17	31.296	1064.4	0.0217	31.852	1064.4	0.0217
18	21.931	975.5	0.0216	22.340	975.5	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-94. Burnup and TH Feedback Parameters by Axial Node for Assembly F19

Axial Node	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol
1	1.776	1141.8	0.0239	8.818	1161.9	0.0238	9.155	1161.9	0.0238
2	2.760	1372.1	0.0238	13.244	1343.3	0.0237	13.731	1343.3	0.0237
3	3.407	1493.4	0.0236	15.612	1416.3	0.0236	16.163	1416.3	0.0236
4	3.760	1540.6	0.0235	16.521	1430.5	0.0234	17.088	1430.5	0.0234
5	3.969	1558.0	0.0233	16.857	1425.4	0.0233	17.426	1425.4	0.0233
6	4.120	1566.2	0.0232	17.034	1417.6	0.0231	17.598	1417.6	0.0231
7	4.249	1572.0	0.0230	17.194	1411.1	0.0230	17.750	1411.1	0.0230
8	4.371	1578.0	0.0229	17.371	1406.8	0.0229	17.920	1406.8	0.0229
9	4.480	1582.9	0.0228	17.546	1404.2	0.0227	18.084	1404.2	0.0227
10	4.563	1585.7	0.0226	17.684	1402.6	0.0226	18.208	1402.6	0.0226
11	4.618	1587.1	0.0225	17.795	1403.2	0.0225	18.302	1403.2	0.0225
12	4.631	1589.5	0.0223	17.901	1407.7	0.0223	18.388	1407.7	0.0223
13	4.587	1589.4	0.0222	17.951	1413.5	0.0222	18.420	1413.5	0.0222
14	4.485	1583.4	0.0221	17.898	1418.6	0.0221	18.355	1418.6	0.0221
15	4.322	1569.0	0.0219	17.703	1422.7	0.0219	18.153	1422.7	0.0219
16	4.038	1532.5	0.0218	17.095	1416.2	0.0218	17.535	1416.2	0.0218
17	3.495	1435.6	0.0217	15.346	1363.8	0.0217	15.755	1363.8	0.0217
18	2.389	1198.9	0.0216	10.757	1184.0	0.0216	11.055	1184.0	0.0216

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	10.932	734.8	0.0223	11.182	757.0	0.0223	11.425	757.0	0.0223
2	16.654	805.5	0.0222	17.042	816.4	0.0223	17.415	816.4	0.0223
3	19.749	833.3	0.0222	20.201	830.4	0.0222	20.629	830.4	0.0222
4	21.003	842.0	0.0221	21.474	829.4	0.0222	21.916	829.4	0.0222
5	21.495	843.2	0.0221	21.968	825.2	0.0221	22.409	825.2	0.0221
6	21.732	840.8	0.0221	22.201	820.8	0.0221	22.636	820.8	0.0221
7	21.902	836.9	0.0220	22.367	817.2	0.0220	22.795	817.2	0.0220
8	22.067	832.5	0.0220	22.527	814.6	0.0220	22.948	814.6	0.0220
9	22.217	828.4	0.0219	22.674	813.0	0.0220	23.090	813.0	0.0220
10	22.327	825.1	0.0219	22.781	812.5	0.0219	23.194	812.5	0.0219
11	22.407	822.6	0.0218	22.861	813.0	0.0219	23.272	813.0	0.0219
12	22.478	820.6	0.0218	22.933	814.5	0.0218	23.344	814.5	0.0218
13	22.485	819.0	0.0218	22.944	817.1	0.0218	23.355	817.1	0.0218
14	22.370	817.0	0.0217	22.831	820.9	0.0217	23.244	820.9	0.0217
15	22.056	812.6	0.0217	22.516	824.5	0.0217	22.929	824.5	0.0217
16	21.199	802.5	0.0216	21.647	825.3	0.0216	22.049	825.3	0.0216
17	18.904	779.0	0.0216	19.307	814.2	0.0216	19.670	814.2	0.0216
18	13.017	711.9	0.0216	13.282	753.0	0.0216	13.523	753.0	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-94. Burnup and TH Feedback Parameters by Axial Node for Assembly F19 (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	12.747	771.5	0.0223	12.917	771.5	0.0223	13.110	771.5	0.0223
2	19.388	829.3	0.0223	19.635	829.3	0.0223	19.914	829.3	0.0223
3	22.855	840.1	0.0222	23.128	840.1	0.0222	23.437	840.1	0.0222
4	24.192	836.8	0.0222	24.468	836.8	0.0222	24.781	836.8	0.0222
5	24.671	831.1	0.0221	24.944	831.1	0.0221	25.254	831.1	0.0221
6	24.872	825.8	0.0221	25.141	825.8	0.0221	25.447	825.8	0.0221
7	25.007	821.5	0.0220	25.273	821.5	0.0220	25.577	821.5	0.0220
8	25.144	818.1	0.0220	25.408	818.1	0.0220	25.711	818.1	0.0220
9	25.276	815.7	0.0220	25.540	815.7	0.0220	25.841	815.7	0.0220
10	25.378	814.2	0.0219	25.642	814.2	0.0219	25.943	814.2	0.0219
11	25.461	813.6	0.0219	25.725	813.6	0.0219	26.028	813.6	0.0219
12	25.545	813.9	0.0218	25.810	813.9	0.0218	26.114	813.9	0.0218
13	25.577	815.4	0.0218	25.845	815.4	0.0218	26.152	815.4	0.0218
14	25.495	818.4	0.0217	25.767	818.4	0.0217	26.078	818.4	0.0217
15	25.203	822.2	0.0217	25.478	822.2	0.0217	25.794	822.2	0.0217
16	24.306	824.5	0.0216	24.582	824.5	0.0216	24.899	824.5	0.0216
17	21.759	816.8	0.0216	22.019	816.8	0.0216	22.318	816.8	0.0216
18	14.953	760.2	0.0216	15.136	760.2	0.0216	15.348	760.2	0.0216

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	13.738	713.1	0.0222	14.031	713.1	0.0222	16.177	729.0	0.0222
2	20.891	757.9	0.0221	21.337	757.9	0.0221	24.470	770.2	0.0222
3	24.593	772.4	0.0221	25.111	772.4	0.0221	28.624	778.3	0.0221
4	26.025	777.1	0.0221	26.574	777.1	0.0221	30.191	777.8	0.0221
5	26.547	778.8	0.0220	27.109	778.8	0.0220	30.744	775.8	0.0220
6	26.769	778.8	0.0220	27.336	778.8	0.0220	30.959	773.3	0.0220
7	26.913	777.6	0.0220	27.482	777.6	0.0220	31.083	770.6	0.0220
8	27.051	775.5	0.0219	27.620	775.5	0.0219	31.199	767.7	0.0219
9	27.182	773.1	0.0219	27.748	773.1	0.0219	31.308	765.0	0.0219
10	27.279	770.6	0.0218	27.843	770.6	0.0218	31.389	762.7	0.0218
11	27.355	768.1	0.0218	27.916	768.1	0.0218	31.454	760.8	0.0218
12	27.428	765.4	0.0218	27.985	765.4	0.0218	31.518	759.1	0.0218
13	27.444	762.4	0.0217	27.996	762.4	0.0217	31.530	757.7	0.0217
14	27.339	759.0	0.0217	27.883	759.0	0.0217	31.417	756.7	0.0217
15	27.008	754.4	0.0217	27.539	754.4	0.0217	31.058	755.6	0.0217
16	26.036	747.8	0.0216	26.542	747.8	0.0216	29.987	753.6	0.0216
17	23.309	734.7	0.0216	23.759	734.7	0.0216	26.926	746.2	0.0216
18	15.991	691.7	0.0216	16.289	691.7	0.0216	18.484	707.0	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-94. Burnup and TH Feedback Parameters by Axial Node for Assembly F19 (Cont'd)

Axial	Burnup	SP25 to SP26		Burnup	SP26 to SP27	
Node	SP26	T-Fuel	Spec.Vol	SP27	T-Fuel	Spec.Vol
1	16.229	729.0	0.0222	17.297	770.3	0.0223
2	24.543	770.2	0.0222	26.024	802.4	0.0222
3	28.704	778.3	0.0221	30.304	798.6	0.0222
4	30.272	777.8	0.0221	31.876	794.6	0.0222
5	30.824	775.8	0.0220	32.408	789.8	0.0221
6	31.038	773.3	0.0220	32.601	785.4	0.0221
7	31.162	770.6	0.0220	32.708	781.6	0.0220
8	31.277	767.7	0.0219	32.810	778.5	0.0220
9	31.386	765.0	0.0219	32.908	775.8	0.0219
10	31.467	762.7	0.0218	32.983	773.7	0.0219
11	31.532	760.8	0.0218	33.046	772.1	0.0218
12	31.597	759.1	0.0218	33.112	771.0	0.0218
13	31.609	757.7	0.0217	33.131	770.9	0.0218
14	31.497	756.7	0.0217	33.034	771.9	0.0217
15	31.138	755.6	0.0217	32.693	773.8	0.0217
16	30.067	753.6	0.0216	31.630	775.3	0.0216
17	27.002	746.2	0.0216	28.493	775.4	0.0216
18	18.538	707.0	0.0216	19.627	745.6	0.0216

Table 4-95. Burnup and TH Feedback Parameters by Axial Node for Assembly F19a

Axial	Burnup	SP13 to SP14		Burnup	SP14 to SP15		Burnup	SP15 to SP16	
Node	SP14	T-Fuel	Spec.Vol	SP15	T-Fuel	Spec.Vol	SP16	T-Fuel	Spec.Vol
1	1.776	1141.8	0.0239	8.818	1161.9	0.0238	9.155	1161.9	0.0238
2	2.760	1372.1	0.0238	13.244	1343.3	0.0237	13.731	1343.3	0.0237
3	3.407	1493.4	0.0236	15.612	1416.3	0.0236	16.163	1416.3	0.0236
4	3.760	1540.6	0.0235	16.521	1430.5	0.0234	17.088	1430.5	0.0234
5	3.969	1558.0	0.0233	16.857	1425.4	0.0233	17.426	1425.4	0.0233
6	4.120	1566.2	0.0232	17.034	1417.6	0.0231	17.598	1417.6	0.0231
7	4.249	1572.0	0.0230	17.194	1411.1	0.0230	17.750	1411.1	0.0230
8	4.371	1578.0	0.0229	17.371	1406.8	0.0229	17.920	1406.8	0.0229
9	4.480	1582.9	0.0228	17.546	1404.2	0.0227	18.084	1404.2	0.0227
10	4.563	1585.7	0.0226	17.684	1402.6	0.0226	18.208	1402.6	0.0226
11	4.618	1587.1	0.0225	17.795	1403.2	0.0225	18.302	1403.2	0.0225
12	4.631	1589.5	0.0223	17.901	1407.7	0.0223	18.388	1407.7	0.0223
13	4.587	1589.4	0.0222	17.951	1413.5	0.0222	18.420	1413.5	0.0222
14	4.485	1583.4	0.0221	17.898	1418.6	0.0221	18.355	1418.6	0.0221
15	4.322	1569.0	0.0219	17.703	1422.7	0.0219	18.153	1422.7	0.0219
16	4.038	1532.5	0.0218	17.095	1416.2	0.0218	17.535	1416.2	0.0218
17	3.495	1435.6	0.0217	15.346	1363.8	0.0217	15.755	1363.8	0.0217
18	2.389	1198.9	0.0216	10.757	1184.0	0.0216	11.055	1184.0	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-95. Burnup and TH Feedback Parameters by Axial Node for Assembly F19a (Cont'd)

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	10.932	734.8	0.0223	11.182	757.0	0.0223	11.425	757.0	0.0223
2	16.654	805.5	0.0222	17.042	816.4	0.0223	17.415	816.4	0.0223
3	19.749	833.3	0.0222	20.201	830.4	0.0222	20.629	830.4	0.0222
4	21.003	842.0	0.0221	21.474	829.4	0.0222	21.916	829.4	0.0222
5	21.495	843.2	0.0221	21.968	825.2	0.0221	22.409	825.2	0.0221
6	21.732	840.8	0.0221	22.201	820.8	0.0221	22.636	820.8	0.0221
7	21.902	836.9	0.0220	22.367	817.2	0.0220	22.795	817.2	0.0220
8	22.067	832.5	0.0220	22.527	814.6	0.0220	22.948	814.6	0.0220
9	22.217	828.4	0.0219	22.674	813.0	0.0220	23.090	813.0	0.0220
10	22.327	825.1	0.0219	22.781	812.5	0.0219	23.194	812.5	0.0219
11	22.407	822.6	0.0218	22.861	813.0	0.0219	23.272	813.0	0.0219
12	22.478	820.6	0.0218	22.933	814.5	0.0218	23.344	814.5	0.0218
13	22.485	819.0	0.0218	22.944	817.1	0.0218	23.355	817.1	0.0218
14	22.370	817.0	0.0217	22.831	820.9	0.0217	23.244	820.9	0.0217
15	22.056	812.6	0.0217	22.516	824.5	0.0217	22.929	824.5	0.0217
16	21.199	802.5	0.0216	21.647	825.3	0.0216	22.049	825.3	0.0216
17	18.904	779.0	0.0216	19.307	814.2	0.0216	19.670	814.2	0.0216
18	13.017	711.9	0.0216	13.282	753.0	0.0216	13.523	753.0	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	12.747	771.5	0.0223	12.917	771.5	0.0223	13.111	771.5	0.0223
2	19.388	829.3	0.0223	19.635	829.3	0.0223	19.917	829.3	0.0223
3	22.855	840.1	0.0222	23.128	840.1	0.0222	23.440	840.1	0.0222
4	24.192	836.8	0.0222	24.468	836.8	0.0222	24.784	836.8	0.0222
5	24.671	831.1	0.0221	24.944	831.1	0.0221	25.257	831.1	0.0221
6	24.872	825.8	0.0221	25.141	825.8	0.0221	25.450	825.8	0.0221
7	25.007	821.5	0.0220	25.273	821.5	0.0220	25.580	821.5	0.0220
8	25.144	818.1	0.0220	25.408	818.1	0.0220	25.714	818.1	0.0220
9	25.276	815.7	0.0220	25.540	815.7	0.0220	25.845	815.7	0.0220
10	25.378	814.2	0.0219	25.642	814.2	0.0219	25.947	814.2	0.0219
11	25.461	813.6	0.0219	25.725	813.6	0.0219	26.032	813.6	0.0219
12	25.545	813.9	0.0218	25.810	813.9	0.0218	26.118	813.9	0.0218
13	25.577	815.4	0.0218	25.845	815.4	0.0218	26.156	815.4	0.0218
14	25.495	818.4	0.0217	25.767	818.4	0.0217	26.080	818.4	0.0217
15	25.203	822.2	0.0217	25.478	822.2	0.0217	25.795	822.2	0.0217
16	24.306	824.5	0.0216	24.582	824.5	0.0216	24.899	824.5	0.0216
17	21.759	816.8	0.0216	22.019	816.8	0.0216	22.318	816.8	0.0216
18	14.953	760.2	0.0216	15.136	760.2	0.0216	15.348	760.2	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-95. Burnup and TH Feedback Parameters by Axial Node for Assembly F19a (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	14.496	927.4	0.0232	15.171	927.4	0.0232	19.864	941.1	0.0232
2	22.247	1019.3	0.0231	23.299	1019.3	0.0231	30.254	1014.7	0.0231
3	26.259	1058.0	0.0230	27.498	1058.0	0.0230	35.409	1041.6	0.0230
4	27.853	1077.6	0.0229	29.179	1077.6	0.0229	37.413	1053.1	0.0229
5	28.469	1086.5	0.0228	29.836	1086.5	0.0228	38.160	1054.5	0.0228
6	28.748	1089.5	0.0227	30.136	1089.5	0.0227	38.468	1052.4	0.0227
7	28.931	1089.4	0.0226	30.328	1089.4	0.0226	38.647	1049.0	0.0226
8	29.096	1087.3	0.0225	30.498	1087.3	0.0225	38.800	1045.2	0.0225
9	29.245	1084.3	0.0224	30.648	1084.3	0.0224	38.940	1041.8	0.0224
10	29.357	1081.2	0.0223	30.761	1081.2	0.0223	39.053	1039.0	0.0223
11	29.444	1078.2	0.0222	30.849	1078.2	0.0222	39.158	1037.2	0.0222
12	29.523	1075.1	0.0221	30.928	1075.1	0.0221	39.271	1036.3	0.0221
13	29.533	1071.5	0.0220	30.936	1071.5	0.0220	39.325	1035.9	0.0220
14	29.397	1065.4	0.0219	30.789	1065.4	0.0219	39.213	1034.9	0.0219
15	29.001	1054.4	0.0218	30.364	1054.4	0.0218	38.767	1030.8	0.0218
16	27.912	1035.4	0.0217	29.213	1035.4	0.0217	37.437	1019.3	0.0217
17	24.970	1000.8	0.0216	26.134	1000.8	0.0216	33.719	991.5	0.0217
18	17.110	904.2	0.0216	17.898	904.2	0.0216	23.251	910.3	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	19.959	941.1	0.0232	21.997	914.1	0.0232
2	30.404	1014.7	0.0231	33.377	1005.2	0.0231
3	35.578	1041.6	0.0230	38.856	1037.6	0.0230
4	37.586	1053.1	0.0229	40.905	1036.0	0.0229
5	38.333	1054.5	0.0228	41.627	1028.0	0.0228
6	38.641	1052.4	0.0227	41.901	1019.9	0.0227
7	38.819	1049.0	0.0226	42.053	1013.2	0.0226
8	38.971	1045.2	0.0225	42.188	1007.9	0.0225
9	39.110	1041.8	0.0224	42.317	1003.5	0.0224
10	39.224	1039.0	0.0223	42.427	1000.2	0.0223
11	39.330	1037.2	0.0222	42.536	997.9	0.0222
12	39.444	1036.3	0.0221	42.662	996.8	0.0221
13	39.499	1035.9	0.0220	42.741	997.7	0.0220
14	39.389	1034.9	0.0219	42.668	1001.0	0.0219
15	38.945	1030.8	0.0218	42.266	1006.1	0.0218
16	37.615	1019.3	0.0217	40.950	1009.7	0.0217
17	33.887	991.5	0.0217	37.072	996.4	0.0217
18	23.374	910.3	0.0216	25.744	923.3	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-96. Burnup and TH Feedback Parameters by Axial Node for Assembly F23

Axial Node	Burnup SP14	SP13 to SP14 T-Fuel	SP13 to SP14 Spec.Vol	Burnup SP15	SP14 to SP15 T-Fuel	SP14 to SP15 Spec.Vol	Burnup SP16	SP15 to SP16 T-Fuel	SP15 to SP16 Spec.Vol
1	1.792	1168.1	0.0239	9.179	1187.7	0.0239	9.520	1187.7	0.0239
2	2.733	1384.5	0.0238	13.522	1368.1	0.0238	14.024	1368.1	0.0238
3	3.387	1505.4	0.0237	15.964	1445.8	0.0237	16.541	1445.8	0.0237
4	3.743	1554.2	0.0235	16.923	1463.2	0.0235	17.520	1463.2	0.0235
5	3.950	1572.4	0.0234	17.276	1459.2	0.0234	17.876	1459.2	0.0234
6	4.097	1581.0	0.0232	17.456	1451.8	0.0232	18.052	1451.8	0.0232
7	4.220	1587.5	0.0231	17.610	1445.5	0.0231	18.199	1445.5	0.0231
8	4.334	1593.0	0.0229	17.775	1441.3	0.0229	18.356	1441.3	0.0229
9	4.435	1597.4	0.0228	17.939	1438.7	0.0228	18.508	1438.7	0.0228
10	4.515	1599.8	0.0226	18.076	1437.4	0.0226	18.630	1437.4	0.0226
11	4.575	1601.6	0.0225	18.204	1438.4	0.0225	18.739	1438.4	0.0225
12	4.598	1605.1	0.0224	18.342	1443.3	0.0224	18.857	1443.3	0.0224
13	4.566	1606.3	0.0222	18.431	1449.2	0.0222	18.926	1449.2	0.0222
14	4.474	1601.2	0.0221	18.406	1454.4	0.0221	18.887	1454.4	0.0221
15	4.319	1587.2	0.0219	18.216	1457.9	0.0220	18.689	1457.9	0.0220
16	4.042	1549.9	0.0218	17.585	1450.4	0.0218	18.047	1450.4	0.0218
17	3.531	1453.6	0.0217	15.828	1395.2	0.0217	16.256	1395.2	0.0217
18	2.521	1230.2	0.0216	11.368	1211.2	0.0216	11.681	1211.2	0.0216

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	11.141	713.2	0.0222	11.367	736.6	0.0222	11.586	736.6	0.0222
2	16.630	774.2	0.0221	16.977	790.3	0.0222	17.311	790.3	0.0222
3	19.677	796.8	0.0221	20.077	802.2	0.0221	20.457	802.2	0.0221
4	20.906	803.7	0.0221	21.321	801.1	0.0221	21.712	801.1	0.0221
5	21.378	804.5	0.0220	21.794	797.3	0.0221	22.183	797.3	0.0221
6	21.600	802.4	0.0220	22.013	793.3	0.0220	22.396	793.3	0.0220
7	21.757	799.0	0.0219	22.165	790.0	0.0220	22.542	790.0	0.0220
8	21.904	795.1	0.0219	22.308	787.6	0.0219	22.679	787.6	0.0219
9	22.039	791.4	0.0219	22.440	786.0	0.0219	22.806	786.0	0.0219
10	22.144	788.3	0.0218	22.542	785.4	0.0219	22.905	785.4	0.0219
11	22.235	785.8	0.0218	22.633	785.6	0.0218	22.993	785.6	0.0218
12	22.332	783.6	0.0218	22.731	786.6	0.0218	23.090	786.6	0.0218
13	22.374	781.7	0.0217	22.774	788.5	0.0218	23.134	788.5	0.0218
14	22.288	779.4	0.0217	22.689	791.5	0.0217	23.051	791.5	0.0217
15	21.993	775.4	0.0217	22.395	794.6	0.0217	22.755	794.6	0.0217
16	21.157	766.9	0.0216	21.548	795.4	0.0216	21.900	795.4	0.0216
17	18.944	747.6	0.0216	19.297	785.4	0.0216	19.616	785.4	0.0216
18	13.371	690.2	0.0216	13.603	729.9	0.0216	13.815	729.9	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-96. Burnup and TH Feedback Parameters by Axial Node for Assembly F23 (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	12.791	751.3	0.0222	12.947	751.3	0.0222	13.125	751.3	0.0222
2	19.097	804.0	0.0222	19.322	804.0	0.0222	19.578	804.0	0.0222
3	22.458	813.4	0.0222	22.705	813.4	0.0222	22.988	813.4	0.0222
4	23.752	810.2	0.0221	24.001	810.2	0.0221	24.286	810.2	0.0221
5	24.208	805.0	0.0221	24.455	805.0	0.0221	24.737	805.0	0.0221
6	24.396	800.2	0.0220	24.639	800.2	0.0220	24.917	800.2	0.0220
7	24.519	796.2	0.0220	24.759	796.2	0.0220	25.035	796.2	0.0220
8	24.639	793.1	0.0220	24.878	793.1	0.0220	25.152	793.1	0.0220
9	24.756	790.7	0.0219	24.994	790.7	0.0219	25.267	790.7	0.0219
10	24.851	789.3	0.0219	25.089	789.3	0.0219	25.362	789.3	0.0219
11	24.942	788.5	0.0218	25.180	788.5	0.0218	25.453	788.5	0.0218
12	25.048	788.4	0.0218	25.287	788.4	0.0218	25.561	788.4	0.0218
13	25.109	789.4	0.0218	25.350	789.4	0.0218	25.626	789.4	0.0218
14	25.049	791.8	0.0217	25.293	791.8	0.0217	25.574	791.8	0.0217
15	24.775	795.1	0.0217	25.023	795.1	0.0217	25.307	795.1	0.0217
16	23.907	797.4	0.0216	24.156	797.4	0.0216	24.442	797.4	0.0216
17	21.475	790.3	0.0216	21.709	790.3	0.0216	21.979	790.3	0.0216
18	15.087	737.8	0.0216	15.252	737.8	0.0216	15.442	737.8	0.0216

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	13.599	675.9	0.0220	13.820	675.9	0.0220	15.452	689.0	0.0220
2	20.326	713.6	0.0220	20.668	713.6	0.0220	23.092	724.8	0.0220
3	23.879	726.6	0.0220	24.280	726.6	0.0220	27.020	733.5	0.0220
4	25.250	731.4	0.0220	25.676	731.4	0.0220	28.509	734.2	0.0220
5	25.740	733.2	0.0219	26.178	733.2	0.0219	29.029	733.1	0.0219
6	25.944	733.5	0.0219	26.386	733.5	0.0219	29.229	731.3	0.0219
7	26.073	732.7	0.0219	26.517	732.7	0.0219	29.345	729.2	0.0219
8	26.196	731.2	0.0218	26.638	731.2	0.0218	29.450	727.0	0.0218
9	26.311	729.4	0.0218	26.752	729.4	0.0218	29.549	724.9	0.0218
10	26.402	727.5	0.0218	26.842	727.5	0.0218	29.628	723.1	0.0218
11	26.488	725.4	0.0217	26.925	725.4	0.0217	29.704	721.5	0.0218
12	26.585	723.1	0.0217	27.020	723.1	0.0217	29.794	720.0	0.0217
13	26.634	720.5	0.0217	27.064	720.5	0.0217	29.836	718.7	0.0217
14	26.556	717.7	0.0217	26.981	717.7	0.0217	29.751	717.7	0.0217
15	26.252	713.8	0.0216	26.666	713.8	0.0216	29.421	716.5	0.0216
16	25.325	708.0	0.0216	25.718	708.0	0.0216	28.407	714.2	0.0216
17	22.745	696.2	0.0216	23.091	696.2	0.0216	25.547	706.5	0.0216
18	15.931	659.7	0.0216	16.157	659.7	0.0216	17.829	672.0	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-96. Burnup and TH Feedback Parameters by Axial Node for Assembly F23 (Cont'd)

Axial	Burnup	SP25 to SP26		Burnup	SP26 to SP27	
Node	SP26	T-Fuel	Spec.Vol	SP27	T-Fuel	Spec.Vol
1	15.491	689.0	0.0220	16.313	724.6	0.0221
2	23.149	724.8	0.0220	24.311	755.9	0.0221
3	27.083	733.5	0.0220	28.349	756.0	0.0221
4	28.573	734.2	0.0220	29.847	750.4	0.0220
5	29.092	733.1	0.0219	30.353	745.6	0.0220
6	29.293	731.3	0.0219	30.536	741.7	0.0220
7	29.408	729.2	0.0219	30.638	738.6	0.0219
8	29.512	727.0	0.0218	30.732	735.9	0.0219
9	29.611	724.9	0.0218	30.823	733.6	0.0219
10	29.690	723.1	0.0218	30.897	731.8	0.0218
11	29.766	721.5	0.0218	30.971	730.4	0.0218
12	29.855	720.0	0.0217	31.060	729.3	0.0218
13	29.898	718.7	0.0217	31.108	729.0	0.0217
14	29.814	717.7	0.0217	31.033	729.6	0.0217
15	29.484	716.5	0.0216	30.716	731.3	0.0217
16	28.470	714.2	0.0216	29.705	734.0	0.0216
17	25.606	706.5	0.0216	26.775	734.4	0.0216
18	17.871	672.0	0.0216	18.707	704.6	0.0216

Table 4-97. Burnup and TH Feedback Parameters by Axial Node for Assembly F27

Axial	Burnup	SP13 to SP14		Burnup	SP14 to SP15		Burnup	SP15 to SP16	
Node	SP14	T-Fuel	Spec.Vol	SP15	T-Fuel	Spec.Vol	SP16	T-Fuel	Spec.Vol
1	1.291	1018.2	0.0234	6.866	1060.9	0.0233	7.120	1060.9	0.0233
2	2.251	1247.0	0.0233	10.875	1234.9	0.0232	11.262	1234.9	0.0232
3	2.873	1352.9	0.0232	12.921	1293.9	0.0231	13.367	1293.9	0.0231
4	3.205	1393.3	0.0231	13.714	1304.4	0.0230	14.174	1304.4	0.0230
5	3.395	1407.9	0.0230	14.017	1299.8	0.0229	14.477	1299.8	0.0229
6	3.525	1413.3	0.0228	14.156	1292.3	0.0228	14.611	1292.3	0.0228
7	3.627	1416.1	0.0227	14.255	1285.5	0.0227	14.704	1285.5	0.0227
8	3.716	1418.4	0.0226	14.350	1280.4	0.0226	14.792	1280.4	0.0226
9	3.789	1420.3	0.0225	14.440	1276.8	0.0225	14.872	1276.8	0.0225
10	3.842	1421.2	0.0224	14.510	1274.5	0.0224	14.932	1274.5	0.0224
11	3.868	1421.2	0.0223	14.557	1273.8	0.0223	14.966	1273.8	0.0223
12	3.863	1420.4	0.0222	14.582	1275.0	0.0222	14.978	1275.0	0.0222
13	3.823	1418.2	0.0221	14.581	1278.1	0.0221	14.964	1278.1	0.0221
14	3.744	1412.8	0.0220	14.536	1282.5	0.0220	14.911	1282.5	0.0220
15	3.609	1399.7	0.0219	14.374	1286.0	0.0219	14.743	1286.0	0.0219
16	3.359	1366.5	0.0218	13.850	1279.1	0.0218	14.210	1279.1	0.0218
17	2.848	1280.2	0.0217	12.302	1234.7	0.0217	12.635	1234.7	0.0217
18	1.720	1036.9	0.0216	7.932	1058.1	0.0216	8.162	1058.1	0.0216

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6
SP16	0.0 / Cy7
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-97. Burnup and TH Feedback Parameters by Axial Node for Assembly F27 (Cont'd)

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	10.806	922.6	0.0230	11.304	938.4	0.0230	11.785	938.4	0.0230
2	17.114	1050.1	0.0230	17.863	1030.2	0.0230	18.581	1030.2	0.0230
3	20.435	1100.1	0.0229	21.297	1051.5	0.0229	22.113	1051.5	0.0229
4	21.839	1115.9	0.0228	22.735	1049.4	0.0228	23.574	1049.4	0.0228
5	22.430	1118.3	0.0227	23.329	1041.7	0.0227	24.164	1041.7	0.0227
6	22.696	1114.7	0.0226	23.589	1034.7	0.0226	24.413	1034.7	0.0226
7	22.842	1109.0	0.0225	23.728	1029.7	0.0225	24.540	1029.7	0.0225
8	22.945	1102.9	0.0224	23.825	1026.9	0.0224	24.627	1026.9	0.0224
9	23.023	1097.4	0.0223	23.899	1026.1	0.0223	24.694	1026.1	0.0223
10	23.078	1093.1	0.0222	23.953	1027.1	0.0223	24.742	1027.1	0.0223
11	23.110	1090.3	0.0221	23.987	1030.0	0.0222	24.775	1030.0	0.0222
12	23.119	1088.9	0.0220	24.002	1034.8	0.0221	24.791	1034.8	0.0221
13	23.087	1088.2	0.0220	23.978	1041.8	0.0220	24.771	1041.8	0.0220
14	22.959	1086.1	0.0219	23.859	1050.3	0.0219	24.658	1050.3	0.0219
15	22.597	1079.4	0.0218	23.499	1059.1	0.0218	24.300	1059.1	0.0218
16	21.631	1062.3	0.0217	22.515	1063.4	0.0217	23.302	1063.4	0.0217
17	19.105	1022.4	0.0216	19.911	1048.1	0.0217	20.631	1048.1	0.0217
18	12.341	897.5	0.0216	12.890	955.1	0.0216	13.385	955.1	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	14.333	956.1	0.0231	14.651	956.1	0.0231	15.011	956.1	0.0231
2	22.258	1039.0	0.0230	22.704	1039.0	0.0230	23.206	1039.0	0.0230
3	26.215	1054.9	0.0229	26.702	1054.9	0.0229	27.252	1054.9	0.0229
4	27.753	1048.5	0.0228	28.244	1048.5	0.0228	28.798	1048.5	0.0228
5	28.316	1038.4	0.0227	28.801	1038.4	0.0227	29.349	1038.4	0.0227
6	28.520	1029.9	0.0226	28.999	1029.9	0.0226	29.542	1029.9	0.0226
7	28.612	1023.8	0.0225	29.087	1023.8	0.0225	29.627	1023.8	0.0225
8	28.678	1019.8	0.0224	29.152	1019.8	0.0224	29.690	1019.8	0.0224
9	28.738	1017.4	0.0223	29.211	1017.4	0.0223	29.750	1017.4	0.0223
10	28.793	1016.5	0.0222	29.267	1016.5	0.0222	29.806	1016.5	0.0222
11	28.844	1017.1	0.0222	29.320	1017.1	0.0222	29.862	1017.1	0.0222
12	28.895	1019.4	0.0221	29.375	1019.4	0.0221	29.921	1019.4	0.0221
13	28.927	1023.8	0.0220	29.413	1023.8	0.0220	29.966	1023.8	0.0220
14	28.879	1030.6	0.0219	29.373	1030.6	0.0219	29.935	1030.6	0.0219
15	28.582	1039.1	0.0218	29.086	1039.1	0.0218	29.658	1039.1	0.0218
16	27.580	1046.3	0.0217	28.088	1046.3	0.0217	28.666	1046.3	0.0217
17	24.648	1037.8	0.0217	25.133	1037.8	0.0217	25.687	1037.8	0.0217
18	16.246	957.2	0.0216	16.602	957.2	0.0216	17.011	957.2	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-97. Burnup and TH Feedback Parameters by Axial Node for Assembly F27 (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	15.609	700.8	0.0221	15.888	700.8	0.0221	17.930	715.2	0.0221
2	24.127	735.7	0.0221	24.547	735.7	0.0221	27.490	746.2	0.0221
3	28.339	745.6	0.0221	28.826	745.6	0.0221	32.116	752.0	0.0221
4	29.969	750.5	0.0220	30.484	750.5	0.0220	33.868	752.7	0.0220
5	30.566	752.3	0.0220	31.093	752.3	0.0220	34.493	752.1	0.0220
6	30.785	752.5	0.0220	31.318	752.5	0.0220	34.706	750.5	0.0220
7	30.884	751.8	0.0219	31.419	751.8	0.0219	34.789	748.5	0.0219
8	30.953	750.4	0.0219	31.487	750.4	0.0219	34.839	746.5	0.0219
9	31.014	748.6	0.0219	31.546	748.6	0.0219	34.882	744.6	0.0219
10	31.067	746.7	0.0218	31.597	746.7	0.0218	34.922	742.8	0.0218
11	31.115	744.7	0.0218	31.643	744.7	0.0218	34.961	741.3	0.0218
12	31.162	742.4	0.0218	31.686	742.4	0.0218	35.002	740.0	0.0218
13	31.187	739.8	0.0217	31.707	739.8	0.0217	35.023	738.8	0.0217
14	31.126	736.4	0.0217	31.639	736.4	0.0217	34.953	737.4	0.0217
15	30.804	731.9	0.0216	31.305	731.9	0.0216	34.603	735.3	0.0217
16	29.740	725.2	0.0216	30.217	725.2	0.0216	33.447	731.6	0.0216
17	26.625	714.1	0.0216	27.050	714.1	0.0216	30.029	723.6	0.0216
18	17.631	682.5	0.0216	17.918	682.5	0.0216	20.025	696.4	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	17.979	715.2	0.0221	18.995	753.2	0.0222
2	27.559	746.2	0.0221	28.948	774.9	0.0222
3	32.191	752.0	0.0221	33.687	777.7	0.0222
4	33.944	752.7	0.0220	35.443	774.7	0.0221
5	34.568	752.1	0.0220	36.047	770.1	0.0221
6	34.781	750.5	0.0220	36.240	766.0	0.0220
7	34.863	748.5	0.0219	36.307	762.7	0.0220
8	34.913	746.5	0.0219	36.345	759.9	0.0219
9	34.955	744.6	0.0219	36.380	757.7	0.0219
10	34.995	742.8	0.0218	36.414	755.8	0.0219
11	35.034	741.3	0.0218	36.452	754.4	0.0218
12	35.075	740.0	0.0218	36.494	753.5	0.0218
13	35.096	738.8	0.0217	36.522	753.2	0.0218
14	35.027	737.4	0.0217	36.466	754.0	0.0217
15	34.678	735.3	0.0217	36.133	755.7	0.0217
16	33.522	731.6	0.0216	34.984	757.1	0.0216
17	30.100	723.6	0.0216	31.499	752.7	0.0216
18	20.077	696.4	0.0216	21.120	732.2	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-98. Burnup and TH Feedback Parameters by Axial Node for Assembly G2

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	5.256	1173.1	0.0239	5.982	1158.3	0.0239	6.683	1158.3	0.0239
2	8.059	1404.0	0.0238	9.145	1325.4	0.0238	10.186	1325.4	0.0238
3	9.712	1523.2	0.0236	10.975	1388.9	0.0236	12.172	1388.9	0.0236
4	10.506	1569.6	0.0235	11.829	1397.2	0.0235	13.069	1397.2	0.0235
5	10.893	1584.3	0.0233	12.230	1391.3	0.0233	13.472	1391.3	0.0233
6	11.092	1585.0	0.0232	12.428	1384.6	0.0232	13.660	1384.6	0.0232
7	11.202	1582.0	0.0230	12.534	1380.9	0.0230	13.755	1380.9	0.0230
8	11.265	1578.2	0.0229	12.595	1380.7	0.0229	13.806	1380.7	0.0229
9	11.295	1574.5	0.0227	12.625	1383.4	0.0228	13.830	1383.4	0.0228
10	11.296	1570.9	0.0226	12.628	1388.8	0.0226	13.829	1388.8	0.0226
11	11.268	1567.5	0.0224	12.606	1396.6	0.0225	13.806	1396.6	0.0225
12	11.215	1564.3	0.0223	12.560	1407.1	0.0224	13.763	1407.1	0.0224
13	11.129	1560.8	0.0222	12.485	1418.9	0.0222	13.693	1418.9	0.0222
14	10.987	1555.1	0.0220	12.354	1432.2	0.0221	13.569	1432.2	0.0221
15	10.723	1540.2	0.0219	12.093	1445.3	0.0220	13.310	1445.3	0.0220
16	10.171	1502.6	0.0218	11.511	1449.3	0.0218	12.704	1449.3	0.0218
17	8.963	1411.3	0.0217	10.182	1414.4	0.0217	11.270	1414.4	0.0217
18	6.184	1185.4	0.0216	7.043	1229.7	0.0216	7.814	1229.7	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	10.284	1161.1	0.0239	10.719	1161.1	0.0239	11.212	1161.1	0.0239
2	15.395	1320.5	0.0238	16.007	1320.5	0.0238	16.698	1320.5	0.0238
3	18.050	1367.6	0.0236	18.728	1367.6	0.0236	19.491	1367.6	0.0236
4	19.096	1366.6	0.0235	19.784	1366.6	0.0235	20.557	1366.6	0.0235
5	19.489	1355.9	0.0233	20.171	1355.9	0.0233	20.939	1355.9	0.0233
6	19.638	1346.3	0.0232	20.314	1346.3	0.0232	21.077	1346.3	0.0232
7	19.705	1340.1	0.0230	20.378	1340.1	0.0230	21.138	1340.1	0.0230
8	19.747	1336.9	0.0229	20.420	1336.9	0.0229	21.180	1336.9	0.0229
9	19.779	1336.2	0.0227	20.453	1336.2	0.0227	21.215	1336.2	0.0227
10	19.801	1337.4	0.0226	20.478	1337.4	0.0226	21.243	1337.4	0.0226
11	19.815	1340.5	0.0225	20.496	1340.5	0.0225	21.266	1340.5	0.0225
12	19.827	1345.9	0.0223	20.513	1345.9	0.0223	21.289	1345.9	0.0223
13	19.832	1354.1	0.0222	20.527	1354.1	0.0222	21.312	1354.1	0.0222
14	19.802	1365.5	0.0221	20.508	1365.5	0.0221	21.305	1365.5	0.0221
15	19.630	1377.8	0.0220	20.349	1377.8	0.0220	21.161	1377.8	0.0220
16	19.008	1385.9	0.0218	19.732	1385.9	0.0218	20.550	1385.9	0.0218
17	17.167	1362.7	0.0217	17.856	1362.7	0.0217	18.637	1362.7	0.0217
18	12.115	1200.5	0.0216	12.631	1200.5	0.0216	13.218	1200.5	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-98. Burnup and TH Feedback Parameters by Axial Node for Assembly G2 (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	12.603	903.7	0.0231	13.242	903.7	0.0231	17.720	920.5	0.0231
2	18.899	1013.1	0.0230	19.887	1013.1	0.0230	26.482	1011.9	0.0230
3	22.144	1057.1	0.0229	23.310	1057.1	0.0229	30.818	1040.9	0.0229
4	23.445	1076.5	0.0228	24.693	1076.5	0.0228	32.503	1047.3	0.0228
5	23.959	1084.9	0.0227	25.246	1084.9	0.0227	33.139	1046.5	0.0227
6	24.176	1088.0	0.0226	25.482	1088.0	0.0226	33.384	1043.4	0.0226
7	24.285	1088.1	0.0225	25.600	1088.1	0.0225	33.490	1039.8	0.0225
8	24.355	1086.7	0.0224	25.674	1086.7	0.0224	33.551	1036.2	0.0224
9	24.405	1084.4	0.0223	25.725	1084.4	0.0223	33.596	1033.0	0.0223
10	24.438	1081.7	0.0222	25.759	1081.7	0.0222	33.632	1030.5	0.0222
11	24.456	1078.7	0.0222	25.776	1078.7	0.0222	33.665	1028.7	0.0222
12	24.462	1075.1	0.0221	25.780	1075.1	0.0221	33.692	1027.4	0.0221
13	24.448	1070.2	0.0220	25.759	1070.2	0.0220	33.700	1026.3	0.0220
14	24.374	1062.5	0.0219	25.671	1062.5	0.0219	33.629	1024.7	0.0219
15	24.117	1050.3	0.0218	25.384	1050.3	0.0218	33.310	1021.4	0.0218
16	23.314	1029.9	0.0217	24.519	1029.9	0.0217	32.262	1013.0	0.0217
17	21.033	989.7	0.0216	22.098	989.7	0.0216	29.184	987.7	0.0216
18	14.753	877.5	0.0216	15.451	877.5	0.0216	20.330	892.9	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	17.823	920.5	0.0231	19.904	954.0	0.0231	20.343	954.0	0.0231
2	26.628	1011.9	0.0230	29.523	1014.5	0.0230	30.121	1014.5	0.0230
3	30.981	1040.9	0.0229	34.147	1032.8	0.0229	34.792	1032.8	0.0229
4	32.669	1047.3	0.0228	35.870	1030.9	0.0228	36.518	1030.9	0.0228
5	33.305	1046.5	0.0227	36.481	1023.1	0.0227	37.123	1023.1	0.0227
6	33.549	1043.4	0.0226	36.694	1015.5	0.0226	37.328	1015.5	0.0226
7	33.655	1039.8	0.0225	36.776	1009.4	0.0225	37.404	1009.4	0.0225
8	33.715	1036.2	0.0224	36.822	1004.7	0.0224	37.442	1004.7	0.0224
9	33.760	1033.0	0.0223	36.859	1001.1	0.0224	37.472	1001.1	0.0224
10	33.796	1030.5	0.0222	36.895	998.5	0.0223	37.499	998.5	0.0223
11	33.829	1028.7	0.0222	36.933	996.8	0.0222	37.527	996.8	0.0222
12	33.858	1027.4	0.0221	36.975	996.2	0.0221	37.558	996.2	0.0221
13	33.867	1026.3	0.0220	37.007	997.3	0.0220	37.580	997.3	0.0220
14	33.798	1024.7	0.0219	36.972	1000.2	0.0219	37.540	1000.2	0.0219
15	33.481	1021.4	0.0218	36.695	1004.8	0.0218	37.261	1004.8	0.0218
16	32.432	1013.0	0.0217	35.656	1007.4	0.0217	36.221	1007.4	0.0217
17	29.344	987.7	0.0216	32.413	991.4	0.0217	32.951	991.4	0.0217
18	20.445	892.9	0.0216	22.688	923.7	0.0216	23.087	923.7	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-98. Burnup and TH Feedback Parameters by Axial Node for Assembly G2 (Cont'd)

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	21.309	684.7	0.0221	21.724	694.0	0.0221	22.838	709.0	0.0222
2	31.599	712.4	0.0221	32.214	721.1	0.0221	33.814	735.3	0.0221
3	36.537	730.3	0.0221	37.240	736.1	0.0221	39.026	746.8	0.0221
4	38.392	737.4	0.0220	39.127	740.3	0.0221	40.957	747.4	0.0221
5	39.062	740.0	0.0220	39.807	740.6	0.0220	41.635	745.1	0.0220
6	39.299	740.4	0.0220	40.044	739.3	0.0220	41.858	742.1	0.0220
7	39.386	739.5	0.0219	40.128	737.4	0.0219	41.926	739.4	0.0220
8	39.425	738.0	0.0219	40.163	735.4	0.0219	41.946	736.9	0.0219
9	39.447	736.1	0.0219	40.180	733.3	0.0219	41.952	734.8	0.0219
10	39.461	734.0	0.0218	40.190	731.4	0.0218	41.954	733.0	0.0219
11	39.472	731.8	0.0218	40.197	729.6	0.0218	41.956	731.5	0.0218
12	39.481	729.4	0.0218	40.202	727.9	0.0218	41.958	730.3	0.0218
13	39.474	726.5	0.0217	40.190	726.1	0.0217	41.947	729.5	0.0218
14	39.390	723.0	0.0217	40.101	724.1	0.0217	41.859	728.9	0.0217
15	39.047	718.0	0.0217	39.747	721.2	0.0217	41.501	728.2	0.0217
16	37.900	710.1	0.0217	38.574	715.9	0.0217	40.295	725.9	0.0217
17	34.422	694.7	0.0216	35.029	703.0	0.0216	36.619	716.2	0.0216
18	24.066	664.7	0.0216	24.483	673.3	0.0216	25.610	686.7	0.0216

Table 4-99. Burnup and TH Feedback Parameters by Axial Node for Assembly G4

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	5.063	1179.2	0.0239	5.775	1165.7	0.0239	6.470	1165.7	0.0239
2	7.919	1411.1	0.0238	8.996	1330.6	0.0238	10.032	1330.6	0.0238
3	9.697	1525.9	0.0236	10.953	1389.1	0.0236	12.146	1389.1	0.0236
4	10.545	1567.1	0.0235	11.859	1393.1	0.0235	13.091	1393.1	0.0235
5	10.935	1577.5	0.0233	12.259	1384.5	0.0233	13.489	1384.5	0.0233
6	11.127	1576.4	0.0232	12.447	1376.4	0.0232	13.664	1376.4	0.0232
7	11.241	1572.7	0.0230	12.556	1372.1	0.0230	13.761	1372.1	0.0230
8	11.325	1569.2	0.0229	12.639	1371.8	0.0229	13.836	1371.8	0.0229
9	11.388	1566.5	0.0227	12.703	1374.8	0.0228	13.895	1374.8	0.0228
10	11.421	1563.9	0.0226	12.740	1380.2	0.0226	13.930	1380.2	0.0226
11	11.421	1561.3	0.0224	12.746	1387.7	0.0225	13.935	1387.7	0.0225
12	11.385	1558.6	0.0223	12.718	1397.6	0.0223	13.909	1397.6	0.0223
13	11.302	1555.2	0.0222	12.645	1409.7	0.0222	13.840	1409.7	0.0222
14	11.145	1548.8	0.0220	12.497	1422.5	0.0221	13.698	1422.5	0.0221
15	10.849	1533.0	0.0219	12.202	1435.2	0.0220	13.403	1435.2	0.0220
16	10.252	1494.2	0.0218	11.572	1439.1	0.0218	12.748	1439.1	0.0218
17	8.988	1401.5	0.0217	10.185	1401.9	0.0217	11.255	1401.9	0.0217
18	6.168	1176.5	0.0216	7.008	1218.7	0.0216	7.762	1218.7	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-99. Burnup and TH Feedback Parameters by Axial Node for Assembly G4 (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	10.040	1168.8	0.0239	10.479	1168.8	0.0239	10.984	1168.8	0.0239
2	15.227	1326.2	0.0237	15.843	1326.2	0.0237	16.579	1326.2	0.0237
3	18.010	1368.4	0.0236	18.689	1368.4	0.0236	19.605	1368.4	0.0236
4	19.088	1363.7	0.0234	19.774	1363.7	0.0234	20.776	1363.7	0.0234
5	19.460	1351.0	0.0233	20.139	1351.0	0.0233	21.175	1351.0	0.0233
6	19.586	1340.3	0.0231	20.259	1340.3	0.0231	21.302	1340.3	0.0231
7	19.653	1333.7	0.0230	20.321	1333.7	0.0230	21.356	1333.7	0.0230
8	19.722	1330.6	0.0229	20.390	1330.6	0.0229	21.408	1330.6	0.0229
9	19.796	1330.0	0.0227	20.467	1330.0	0.0227	21.468	1330.0	0.0227
10	19.858	1331.1	0.0226	20.531	1331.1	0.0226	21.532	1331.1	0.0226
11	19.901	1333.9	0.0225	20.579	1333.9	0.0225	21.597	1333.9	0.0225
12	19.928	1338.7	0.0223	20.610	1338.7	0.0223	21.663	1338.7	0.0223
13	19.929	1346.4	0.0222	20.620	1346.4	0.0222	21.718	1346.4	0.0222
14	19.874	1357.4	0.0221	20.576	1357.4	0.0221	21.713	1357.4	0.0221
15	19.660	1370.3	0.0219	20.374	1370.3	0.0219	21.523	1370.3	0.0219
16	18.982	1378.6	0.0218	19.700	1378.6	0.0218	20.808	1378.6	0.0218
17	17.074	1354.0	0.0217	17.757	1354.0	0.0217	18.723	1354.0	0.0217
18	11.993	1192.0	0.0216	12.503	1192.0	0.0216	13.198	1192.0	0.0216

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	12.960	1033.7	0.0237	13.853	1033.7	0.0237	19.854	1036.6	0.0236
2	19.582	1156.7	0.0236	20.917	1156.7	0.0236	29.545	1140.5	0.0235
3	23.137	1209.0	0.0235	24.686	1209.0	0.0235	34.427	1175.3	0.0234
4	24.571	1231.0	0.0233	26.216	1231.0	0.0233	36.333	1183.8	0.0233
5	25.115	1241.0	0.0232	26.807	1241.0	0.0232	37.034	1186.4	0.0231
6	25.329	1245.0	0.0230	27.044	1245.0	0.0230	37.293	1185.0	0.0230
7	25.439	1245.7	0.0229	27.166	1245.7	0.0229	37.410	1182.0	0.0229
8	25.525	1244.4	0.0228	27.259	1244.4	0.0228	37.495	1178.6	0.0227
9	25.606	1242.0	0.0226	27.345	1242.0	0.0226	37.580	1175.4	0.0226
10	25.682	1239.0	0.0225	27.423	1239.0	0.0225	37.668	1172.8	0.0225
11	25.748	1235.4	0.0224	27.490	1235.4	0.0224	37.757	1170.7	0.0224
12	25.796	1230.5	0.0222	27.536	1230.5	0.0222	37.832	1168.9	0.0222
13	25.803	1223.1	0.0221	27.532	1223.1	0.0221	37.855	1166.7	0.0221
14	25.710	1212.4	0.0220	27.418	1212.4	0.0220	37.751	1163.2	0.0220
15	25.383	1196.9	0.0219	27.052	1196.9	0.0219	37.337	1156.4	0.0219
16	24.450	1173.4	0.0218	26.045	1173.4	0.0218	36.108	1142.2	0.0218
17	21.960	1129.1	0.0217	23.396	1129.1	0.0217	32.689	1113.4	0.0217
18	15.368	999.3	0.0216	16.346	999.3	0.0216	22.908	999.7	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-99. Burnup and TH Feedback Parameters by Axial Node for Assembly G4 (Cont'd)

Axial	Burnup	SP25 to SP26		Burnup	SP26 to SP27	
Node	SP26	T-Fuel	Spec.Vol	SP27	T-Fuel	Spec.Vol
1	19.986	1036.6	0.0236	22.605	1030.3	0.0235
2	29.730	1140.5	0.0235	33.305	1104.7	0.0234
3	34.631	1175.3	0.0234	38.517	1131.8	0.0233
4	36.541	1183.8	0.0233	40.462	1127.5	0.0231
5	37.242	1186.4	0.0231	41.129	1117.2	0.0230
6	37.499	1185.0	0.0230	41.346	1107.6	0.0229
7	37.616	1182.0	0.0229	41.431	1100.0	0.0228
8	37.700	1178.6	0.0227	41.495	1093.9	0.0226
9	37.785	1175.4	0.0226	41.567	1089.0	0.0225
10	37.874	1172.8	0.0225	41.650	1085.1	0.0224
11	37.963	1170.7	0.0224	41.743	1082.3	0.0223
12	38.039	1168.9	0.0222	41.831	1080.8	0.0222
13	38.064	1166.7	0.0221	41.879	1081.3	0.0221
14	37.962	1163.2	0.0220	41.816	1084.5	0.0220
15	37.551	1156.4	0.0219	41.453	1090.1	0.0219
16	36.321	1142.2	0.0218	40.241	1094.4	0.0218
17	32.890	1113.4	0.0217	36.638	1078.5	0.0217
18	23.055	999.7	0.0216	25.845	987.7	0.0216

Table 4-100. Burnup and TH Feedback Parameters by Axial Node for Assembly G4a

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	5.063	1179.2	0.0239	5.775	1165.7	0.0239	6.470	1165.7	0.0239
2	7.919	1411.1	0.0238	8.996	1330.6	0.0238	10.032	1330.6	0.0238
3	9.697	1525.9	0.0236	10.953	1389.1	0.0236	12.146	1389.1	0.0236
4	10.545	1567.1	0.0235	11.859	1393.1	0.0235	13.091	1393.1	0.0235
5	10.935	1577.5	0.0233	12.259	1384.5	0.0233	13.489	1384.5	0.0233
6	11.127	1576.4	0.0232	12.447	1376.4	0.0232	13.664	1376.4	0.0232
7	11.241	1572.7	0.0230	12.556	1372.1	0.0230	13.761	1372.1	0.0230
8	11.325	1569.2	0.0229	12.639	1371.8	0.0229	13.836	1371.8	0.0229
9	11.388	1566.5	0.0227	12.703	1374.8	0.0228	13.895	1374.8	0.0228
10	11.421	1563.9	0.0226	12.740	1380.2	0.0226	13.930	1380.2	0.0226
11	11.421	1561.3	0.0224	12.746	1387.7	0.0225	13.935	1387.7	0.0225
12	11.385	1558.6	0.0223	12.718	1397.6	0.0223	13.909	1397.6	0.0223
13	11.302	1555.2	0.0222	12.645	1409.7	0.0222	13.840	1409.7	0.0222
14	11.145	1548.8	0.0220	12.497	1422.5	0.0221	13.698	1422.5	0.0221
15	10.849	1533.0	0.0219	12.202	1435.2	0.0220	13.403	1435.2	0.0220
16	10.252	1494.2	0.0218	11.572	1439.1	0.0218	12.748	1439.1	0.0218
17	8.988	1401.5	0.0217	10.185	1401.9	0.0217	11.255	1401.9	0.0217
18	6.168	1176.5	0.0216	7.008	1218.7	0.0216	7.762	1218.7	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-100. Burnup and TH Feedback Parameters by Axial Node for Assembly G4a (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP28	SP21 to SP28 T-Fuel	SP21 to SP28 Spec.Vol
1	10.040	1168.8	0.0239	10.479	1168.8	0.0239	10.966	1168.8	0.0239
2	15.227	1326.2	0.0237	15.843	1326.2	0.0237	16.532	1326.2	0.0237
3	18.010	1368.4	0.0236	18.689	1368.4	0.0236	19.451	1368.4	0.0236
4	19.088	1363.7	0.0234	19.774	1363.7	0.0234	20.545	1363.7	0.0234
5	19.460	1351.0	0.0233	20.139	1351.0	0.0233	20.903	1351.0	0.0233
6	19.586	1340.3	0.0231	20.259	1340.3	0.0231	21.016	1340.3	0.0231
7	19.653	1333.7	0.0230	20.321	1333.7	0.0230	21.076	1333.7	0.0230
8	19.722	1330.6	0.0229	20.390	1330.6	0.0229	21.146	1330.6	0.0229
9	19.796	1330.0	0.0227	20.467	1330.0	0.0227	21.224	1330.0	0.0227
10	19.858	1331.1	0.0226	20.531	1331.1	0.0226	21.293	1331.1	0.0226
11	19.901	1333.9	0.0225	20.579	1333.9	0.0225	21.344	1333.9	0.0225
12	19.928	1338.7	0.0223	20.610	1338.7	0.0223	21.382	1338.7	0.0223
13	19.929	1346.4	0.0222	20.620	1346.4	0.0222	21.400	1346.4	0.0222
14	19.874	1357.4	0.0221	20.576	1357.4	0.0221	21.368	1357.4	0.0221
15	19.660	1370.3	0.0219	20.374	1370.3	0.0219	21.180	1370.3	0.0219
16	18.982	1378.6	0.0218	19.700	1378.6	0.0218	20.512	1378.6	0.0218
17	17.074	1354.0	0.0217	17.757	1354.0	0.0217	18.530	1354.0	0.0217
18	11.993	1192.0	0.0216	12.503	1192.0	0.0216	13.083	1192.0	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	14.156	1021.8	0.0236	15.452	1027.8	0.0236	18.731	1033.9	0.0235
2	21.398	1148.0	0.0235	23.313	1139.3	0.0235	28.017	1127.6	0.0234
3	25.195	1204.6	0.0234	27.402	1182.9	0.0234	32.705	1156.3	0.0233
4	26.714	1229.1	0.0233	29.036	1196.5	0.0232	34.525	1166.6	0.0232
5	27.295	1239.8	0.0231	29.660	1199.5	0.0231	35.189	1164.5	0.0231
6	27.526	1243.5	0.0230	29.906	1197.9	0.0230	35.427	1159.0	0.0229
7	27.647	1242.9	0.0229	30.029	1194.1	0.0228	35.531	1153.1	0.0228
8	27.743	1239.9	0.0227	30.122	1189.3	0.0227	35.607	1147.7	0.0227
9	27.831	1235.8	0.0226	30.206	1184.7	0.0226	35.681	1143.3	0.0226
10	27.905	1231.9	0.0225	30.279	1180.9	0.0225	35.755	1140.2	0.0225
11	27.965	1228.9	0.0224	30.343	1178.4	0.0224	35.835	1138.7	0.0223
12	28.002	1225.9	0.0222	30.386	1176.8	0.0222	35.906	1138.6	0.0222
13	27.979	1220.6	0.0221	30.364	1174.7	0.0221	35.914	1139.2	0.0221
14	27.844	1211.5	0.0220	30.220	1171.1	0.0220	35.794	1139.8	0.0220
15	27.469	1196.8	0.0219	29.814	1164.3	0.0219	35.384	1138.7	0.0219
16	26.468	1172.7	0.0218	28.735	1150.6	0.0218	34.206	1130.2	0.0218
17	23.821	1126.0	0.0217	25.882	1116.1	0.0217	30.951	1100.4	0.0217
18	16.618	994.1	0.0216	18.035	996.7	0.0216	21.625	998.0	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-101. Burnup and TH Feedback Parameters by Axial Node for Assembly G6

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	5.147	1179.9	0.0239	5.851	1159.8	0.0239	6.538	1159.8	0.0239
2	8.057	1409.8	0.0238	9.122	1324.3	0.0238	10.149	1324.3	0.0238
3	9.996	1530.3	0.0237	11.248	1384.7	0.0236	12.439	1384.7	0.0236
4	10.972	1574.9	0.0235	12.287	1388.5	0.0235	13.521	1388.5	0.0235
5	11.436	1583.8	0.0233	12.762	1379.1	0.0233	13.996	1379.1	0.0233
6	11.660	1580.8	0.0232	12.982	1370.1	0.0232	14.202	1370.1	0.0232
7	11.774	1575.1	0.0230	13.089	1364.8	0.0230	14.295	1364.8	0.0230
8	11.839	1569.3	0.0229	13.149	1363.5	0.0229	14.343	1363.5	0.0229
9	11.880	1564.7	0.0227	13.189	1365.5	0.0228	14.376	1365.5	0.0228
10	11.912	1561.3	0.0226	13.223	1370.2	0.0226	14.406	1370.2	0.0226
11	11.935	1559.3	0.0224	13.253	1377.4	0.0225	14.436	1377.4	0.0225
12	11.944	1558.5	0.0223	13.272	1387.3	0.0223	14.459	1387.3	0.0223
13	11.914	1557.9	0.0222	13.256	1399.7	0.0222	14.450	1399.7	0.0222
14	11.793	1554.7	0.0220	13.147	1413.3	0.0221	14.349	1413.3	0.0221
15	11.484	1543.4	0.0219	12.840	1426.8	0.0220	14.044	1426.8	0.0220
16	10.795	1504.2	0.0218	12.117	1431.7	0.0218	13.293	1431.7	0.0218
17	9.358	1406.7	0.0217	10.551	1394.8	0.0217	11.616	1394.8	0.0217
18	6.405	1181.9	0.0216	7.241	1211.8	0.0216	7.991	1211.8	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	10.078	1164.5	0.0239	10.516	1164.5	0.0239	10.984	1164.5	0.0239
2	15.318	1323.1	0.0237	15.936	1323.1	0.0237	16.579	1323.1	0.0237
3	18.311	1366.3	0.0236	18.994	1366.3	0.0236	19.605	1366.3	0.0236
4	19.541	1360.7	0.0234	20.232	1360.7	0.0234	20.776	1360.7	0.0234
5	19.992	1347.0	0.0233	20.677	1347.0	0.0233	21.175	1347.0	0.0233
6	20.147	1335.7	0.0231	20.824	1335.7	0.0231	21.302	1335.7	0.0231
7	20.203	1328.6	0.0230	20.876	1328.6	0.0230	21.356	1328.6	0.0230
8	20.237	1324.9	0.0229	20.909	1324.9	0.0229	21.408	1324.9	0.0229
9	20.276	1323.8	0.0227	20.949	1323.8	0.0227	21.468	1323.8	0.0227
10	20.329	1324.6	0.0226	21.005	1324.6	0.0226	21.532	1324.6	0.0226
11	20.398	1327.2	0.0225	21.079	1327.2	0.0225	21.597	1327.2	0.0225
12	20.480	1332.0	0.0223	21.167	1332.0	0.0223	21.663	1332.0	0.0223
13	20.552	1339.8	0.0222	21.248	1339.8	0.0222	21.718	1339.8	0.0222
14	20.550	1351.1	0.0221	21.258	1351.1	0.0221	21.713	1351.1	0.0221
15	20.331	1364.5	0.0219	21.052	1364.5	0.0219	21.523	1364.5	0.0219
16	19.556	1374.3	0.0218	20.282	1374.3	0.0218	20.808	1374.3	0.0218
17	17.445	1351.8	0.0217	18.134	1351.8	0.0217	18.723	1351.8	0.0217
18	12.216	1189.8	0.0216	12.728	1189.8	0.0216	13.198	1189.8	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-101. Burnup and TH Feedback Parameters by Axial Node for Assembly G6 (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	12.960	1033.7	0.0237	13.853	1033.7	0.0237	19.854	1036.6	0.0236
2	19.582	1156.7	0.0236	20.917	1156.7	0.0236	29.545	1140.5	0.0235
3	23.137	1209.0	0.0235	24.686	1209.0	0.0235	34.427	1175.3	0.0234
4	24.571	1231.0	0.0233	26.216	1231.0	0.0233	36.333	1183.8	0.0233
5	25.115	1241.0	0.0232	26.807	1241.0	0.0232	37.034	1186.4	0.0231
6	25.329	1245.0	0.0230	27.044	1245.0	0.0230	37.293	1185.0	0.0230
7	25.439	1245.7	0.0229	27.166	1245.7	0.0229	37.410	1182.0	0.0229
8	25.525	1244.4	0.0228	27.259	1244.4	0.0228	37.495	1178.6	0.0227
9	25.606	1242.0	0.0226	27.345	1242.0	0.0226	37.580	1175.4	0.0226
10	25.682	1239.0	0.0225	27.423	1239.0	0.0225	37.668	1172.8	0.0225
11	25.748	1235.4	0.0224	27.490	1235.4	0.0224	37.757	1170.7	0.0224
12	25.796	1230.5	0.0222	27.536	1230.5	0.0222	37.832	1168.9	0.0222
13	25.803	1223.1	0.0221	27.532	1223.1	0.0221	37.855	1166.7	0.0221
14	25.710	1212.4	0.0220	27.418	1212.4	0.0220	37.751	1163.2	0.0220
15	25.383	1196.9	0.0219	27.052	1196.9	0.0219	37.337	1156.4	0.0219
16	24.450	1173.4	0.0218	26.045	1173.4	0.0218	36.108	1142.2	0.0218
17	21.960	1129.1	0.0217	23.396	1129.1	0.0217	32.689	1113.4	0.0217
18	15.368	999.3	0.0216	16.346	999.3	0.0216	22.908	999.7	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	19.986	1036.6	0.0236	22.605	1030.3	0.0235
2	29.730	1140.5	0.0235	33.305	1104.7	0.0234
3	34.631	1175.3	0.0234	38.517	1131.8	0.0233
4	36.541	1183.8	0.0233	40.462	1127.5	0.0231
5	37.242	1186.4	0.0231	41.129	1117.2	0.0230
6	37.499	1185.0	0.0230	41.346	1107.6	0.0229
7	37.616	1182.0	0.0229	41.431	1100.0	0.0228
8	37.700	1178.6	0.0227	41.495	1093.9	0.0226
9	37.785	1175.4	0.0226	41.567	1089.0	0.0225
10	37.874	1172.8	0.0225	41.650	1085.1	0.0224
11	37.963	1170.7	0.0224	41.743	1082.3	0.0223
12	38.039	1168.9	0.0222	41.831	1080.8	0.0222
13	38.064	1166.7	0.0221	41.879	1081.3	0.0221
14	37.962	1163.2	0.0220	41.816	1084.5	0.0220
15	37.551	1156.4	0.0219	41.453	1090.1	0.0219
16	36.321	1142.2	0.0218	40.241	1094.4	0.0218
17	32.890	1113.4	0.0217	36.638	1078.5	0.0217
18	23.055	999.7	0.0216	25.845	987.7	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-102. Burnup and TH Feedback Parameters by Axial Node for Assembly G6a

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	5.147	1179.9	0.0239	5.851	1159.8	0.0239	6.538	1159.8	0.0239
2	8.057	1409.8	0.0238	9.122	1324.3	0.0238	10.149	1324.3	0.0238
3	9.996	1530.3	0.0237	11.248	1384.7	0.0236	12.439	1384.7	0.0236
4	10.972	1574.9	0.0235	12.287	1388.5	0.0235	13.521	1388.5	0.0235
5	11.436	1583.8	0.0233	12.762	1379.1	0.0233	13.996	1379.1	0.0233
6	11.660	1580.8	0.0232	12.982	1370.1	0.0232	14.202	1370.1	0.0232
7	11.774	1575.1	0.0230	13.089	1364.8	0.0230	14.295	1364.8	0.0230
8	11.839	1569.3	0.0229	13.149	1363.5	0.0229	14.343	1363.5	0.0229
9	11.880	1564.7	0.0227	13.189	1365.5	0.0228	14.376	1365.5	0.0228
10	11.912	1561.3	0.0226	13.223	1370.2	0.0226	14.406	1370.2	0.0226
11	11.935	1559.3	0.0224	13.253	1377.4	0.0225	14.436	1377.4	0.0225
12	11.944	1558.5	0.0223	13.272	1387.3	0.0223	14.459	1387.3	0.0223
13	11.914	1557.9	0.0222	13.256	1399.7	0.0222	14.450	1399.7	0.0222
14	11.793	1554.7	0.0220	13.147	1413.3	0.0221	14.349	1413.3	0.0221
15	11.484	1543.4	0.0219	12.840	1426.8	0.0220	14.044	1426.8	0.0220
16	10.795	1504.2	0.0218	12.117	1431.7	0.0218	13.293	1431.7	0.0218
17	9.358	1406.7	0.0217	10.551	1394.8	0.0217	11.616	1394.8	0.0217
18	6.405	1181.9	0.0216	7.241	1211.8	0.0216	7.991	1211.8	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP28	SP21 to SP28 T-Fuel	SP21 to SP28 Spec.Vol
1	10.078	1164.5	0.0239	10.516	1164.5	0.0239	10.966	1164.5	0.0239
2	15.318	1323.1	0.0237	15.936	1323.1	0.0237	16.532	1323.1	0.0237
3	18.311	1366.3	0.0236	18.994	1366.3	0.0236	19.451	1366.3	0.0236
4	19.541	1360.7	0.0234	20.232	1360.7	0.0234	20.545	1360.7	0.0234
5	19.992	1347.0	0.0233	20.677	1347.0	0.0233	20.903	1347.0	0.0233
6	20.147	1335.7	0.0231	20.824	1335.7	0.0231	21.016	1335.7	0.0231
7	20.203	1328.6	0.0230	20.876	1328.6	0.0230	21.076	1328.6	0.0230
8	20.237	1324.9	0.0229	20.909	1324.9	0.0229	21.146	1324.9	0.0229
9	20.276	1323.8	0.0227	20.949	1323.8	0.0227	21.224	1323.8	0.0227
10	20.329	1324.6	0.0226	21.005	1324.6	0.0226	21.293	1324.6	0.0226
11	20.398	1327.2	0.0225	21.079	1327.2	0.0225	21.344	1327.2	0.0225
12	20.480	1332.0	0.0223	21.167	1332.0	0.0223	21.382	1332.0	0.0223
13	20.552	1339.8	0.0222	21.248	1339.8	0.0222	21.400	1339.8	0.0222
14	20.550	1351.1	0.0221	21.258	1351.1	0.0221	21.368	1351.1	0.0221
15	20.331	1364.5	0.0219	21.052	1364.5	0.0219	21.180	1364.5	0.0219
16	19.556	1374.3	0.0218	20.282	1374.3	0.0218	20.512	1374.3	0.0218
17	17.445	1351.8	0.0217	18.134	1351.8	0.0217	18.530	1351.8	0.0217
18	12.216	1189.8	0.0216	12.728	1189.8	0.0216	13.083	1189.8	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-102. Burnup and TH Feedback Parameters by Axial Node for Assembly G6a (Cont'd)

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	14.156	1021.8	0.0236	15.452	1027.8	0.0236	18.731	1033.9	0.0235
2	21.398	1148.0	0.0235	23.313	1139.3	0.0235	28.017	1127.6	0.0234
3	25.195	1204.6	0.0234	27.402	1182.9	0.0234	32.705	1156.3	0.0233
4	26.714	1229.1	0.0233	29.036	1196.5	0.0232	34.525	1166.6	0.0232
5	27.295	1239.8	0.0231	29.660	1199.5	0.0231	35.189	1164.5	0.0231
6	27.526	1243.5	0.0230	29.906	1197.9	0.0230	35.427	1159.0	0.0229
7	27.647	1242.9	0.0229	30.029	1194.1	0.0228	35.531	1153.1	0.0228
8	27.743	1239.9	0.0227	30.122	1189.3	0.0227	35.607	1147.7	0.0227
9	27.831	1235.8	0.0226	30.206	1184.7	0.0226	35.681	1143.3	0.0226
10	27.905	1231.9	0.0225	30.279	1180.9	0.0225	35.755	1140.2	0.0225
11	27.965	1228.9	0.0224	30.343	1178.4	0.0224	35.835	1138.7	0.0223
12	28.002	1225.9	0.0222	30.386	1176.8	0.0222	35.906	1138.6	0.0222
13	27.979	1220.6	0.0221	30.364	1174.7	0.0221	35.914	1139.2	0.0221
14	27.844	1211.5	0.0220	30.220	1171.1	0.0220	35.794	1139.8	0.0220
15	27.469	1196.8	0.0219	29.814	1164.3	0.0219	35.384	1138.7	0.0219
16	26.468	1172.7	0.0218	28.735	1150.6	0.0218	34.206	1130.2	0.0218
17	23.821	1126.0	0.0217	25.882	1116.1	0.0217	30.951	1100.4	0.0217
18	16.618	994.1	0.0216	18.035	996.7	0.0216	21.625	998.0	0.0216

Table 4-103. Burnup and TH Feedback Parameters by Axial Node for Assembly G8

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	2.877	899.3	0.0228	3.270	928.0	0.0228	3.650	928.0	0.0228
2	4.848	1086.0	0.0228	5.475	1070.9	0.0228	6.076	1070.9	0.0228
3	6.025	1175.8	0.0227	6.766	1118.7	0.0227	7.468	1118.7	0.0227
4	6.604	1209.6	0.0226	7.383	1127.5	0.0226	8.113	1127.5	0.0226
5	6.883	1218.9	0.0225	7.669	1123.9	0.0225	8.400	1123.9	0.0225
6	7.014	1218.1	0.0224	7.797	1118.6	0.0225	8.520	1118.6	0.0225
7	7.070	1213.7	0.0224	7.847	1115.0	0.0224	8.562	1115.0	0.0224
8	7.090	1208.7	0.0223	7.863	1113.7	0.0223	8.569	1113.7	0.0223
9	7.094	1204.1	0.0222	7.864	1114.6	0.0222	8.565	1114.6	0.0222
10	7.092	1200.7	0.0221	7.862	1117.3	0.0222	8.559	1117.3	0.0222
11	7.087	1198.5	0.0220	7.859	1121.8	0.0221	8.555	1121.8	0.0221
12	7.076	1197.2	0.0220	7.852	1128.2	0.0220	8.549	1128.2	0.0220
13	7.043	1195.9	0.0219	7.826	1136.3	0.0219	8.526	1136.3	0.0219
14	6.959	1192.3	0.0218	7.747	1145.9	0.0219	8.451	1145.9	0.0219
15	6.763	1181.6	0.0217	7.551	1154.1	0.0218	8.253	1154.1	0.0218
16	6.324	1152.6	0.0217	7.090	1152.0	0.0217	7.773	1152.0	0.0217
17	5.359	1079.4	0.0216	6.039	1115.1	0.0216	6.650	1115.1	0.0216
18	3.219	886.3	0.0216	3.652	957.1	0.0216	4.044	957.1	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-103. Burnup and TH Feedback Parameters by Axial Node for Assembly G8 (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP28	SP21 to SP28 T-Fuel	SP21 to SP28 Spec.Vol
1	5.697	948.8	0.0229	5.957	948.8	0.0229	6.252	948.8	0.0229
2	9.207	1081.5	0.0228	9.592	1081.5	0.0228	10.028	1081.5	0.0228
3	11.057	1125.6	0.0227	11.490	1125.6	0.0227	11.980	1125.6	0.0227
4	11.811	1129.4	0.0226	12.253	1129.4	0.0226	12.753	1129.4	0.0226
5	12.094	1122.8	0.0226	12.533	1122.8	0.0226	13.031	1122.8	0.0226
6	12.185	1115.9	0.0225	12.620	1115.9	0.0225	13.114	1115.9	0.0225
7	12.203	1111.0	0.0224	12.635	1111.0	0.0224	13.127	1111.0	0.0224
8	12.198	1108.3	0.0223	12.629	1108.3	0.0223	13.120	1108.3	0.0223
9	12.192	1107.4	0.0222	12.623	1107.4	0.0222	13.115	1107.4	0.0222
10	12.195	1107.9	0.0222	12.628	1107.9	0.0222	13.122	1107.9	0.0222
11	12.211	1109.8	0.0221	12.646	1109.8	0.0221	13.143	1109.8	0.0221
12	12.236	1113.3	0.0220	12.675	1113.3	0.0220	13.176	1113.3	0.0220
13	12.257	1118.7	0.0219	12.701	1118.7	0.0219	13.208	1118.7	0.0219
14	12.235	1126.3	0.0219	12.686	1126.3	0.0219	13.201	1126.3	0.0219
15	12.081	1134.4	0.0218	12.540	1134.4	0.0218	13.063	1134.4	0.0218
16	11.566	1136.2	0.0217	12.025	1136.2	0.0217	12.549	1136.2	0.0217
17	10.124	1105.5	0.0216	10.552	1105.5	0.0216	11.043	1105.5	0.0216
18	6.356	963.8	0.0216	6.650	963.8	0.0216	6.988	963.8	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	9.527	1079.7	0.0237	10.850	1078.7	0.0237	14.189	1081.5	0.0236
2	15.134	1248.1	0.0236	17.123	1225.6	0.0236	21.979	1198.7	0.0235
3	18.042	1318.4	0.0235	20.340	1276.7	0.0234	25.823	1232.1	0.0234
4	19.255	1343.5	0.0234	21.668	1291.1	0.0233	27.330	1235.1	0.0232
5	19.753	1353.9	0.0232	22.208	1292.9	0.0232	27.899	1229.2	0.0231
6	19.956	1357.4	0.0231	22.422	1290.4	0.0230	28.101	1222.0	0.0230
7	20.034	1357.3	0.0229	22.502	1286.6	0.0229	28.161	1215.6	0.0229
8	20.063	1355.4	0.0228	22.530	1282.7	0.0228	28.174	1210.4	0.0227
9	20.080	1352.9	0.0227	22.546	1279.2	0.0226	28.185	1206.6	0.0226
10	20.110	1350.8	0.0225	22.580	1276.8	0.0225	28.229	1204.1	0.0225
11	20.172	1350.6	0.0224	22.654	1276.1	0.0224	28.333	1203.5	0.0224
12	20.246	1350.7	0.0223	22.744	1276.5	0.0223	28.469	1204.5	0.0223
13	20.258	1346.8	0.0222	22.763	1275.6	0.0222	28.529	1205.9	0.0221
14	20.150	1337.8	0.0220	22.648	1272.4	0.0220	28.442	1207.5	0.0220
15	19.808	1321.6	0.0219	22.275	1266.0	0.0219	28.067	1208.6	0.0219
16	18.915	1293.9	0.0218	21.297	1251.1	0.0218	26.984	1204.6	0.0218
17	16.643	1238.3	0.0217	18.796	1209.9	0.0217	24.054	1179.4	0.0217
18	10.655	1066.7	0.0216	12.118	1062.8	0.0216	15.815	1065.0	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-103. Burnup and TH Feedback Parameters by Axial Node for Assembly G8 (Cont'd)

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	19.064	1084.9	0.0235	20.252	682.4	0.0221	21.829	712.6	0.0222
2	28.710	1167.5	0.0234	30.489	708.3	0.0221	32.720	735.1	0.0221
3	33.180	1182.8	0.0233	35.272	723.4	0.0221	37.760	747.3	0.0221
4	34.729	1174.3	0.0232	36.980	731.8	0.0220	39.538	748.8	0.0221
5	35.212	1161.2	0.0230	37.549	735.9	0.0220	40.114	747.2	0.0220
6	35.326	1150.3	0.0229	37.711	737.6	0.0220	40.263	744.9	0.0220
7	35.329	1142.4	0.0228	37.735	737.8	0.0219	40.272	742.5	0.0220
8	35.311	1137.0	0.0227	37.724	737.1	0.0219	40.248	740.4	0.0219
9	35.315	1133.2	0.0226	37.722	735.6	0.0219	40.237	738.7	0.0219
10	35.370	1130.7	0.0225	37.762	733.6	0.0218	40.271	737.1	0.0219
11	35.511	1129.6	0.0224	37.878	730.9	0.0218	40.382	735.7	0.0218
12	35.700	1129.9	0.0222	38.031	727.6	0.0218	40.533	734.5	0.0218
13	35.814	1131.8	0.0221	38.100	723.7	0.0217	40.607	733.8	0.0218
14	35.792	1136.1	0.0220	38.017	718.9	0.0217	40.530	733.5	0.0217
15	35.459	1143.0	0.0219	37.596	712.4	0.0217	40.106	732.9	0.0217
16	34.253	1149.3	0.0218	36.251	703.0	0.0216	38.714	730.4	0.0217
17	30.404	1138.5	0.0217	32.144	687.6	0.0216	34.410	719.9	0.0216
18	20.423	1056.5	0.0216	21.575	660.7	0.0216	23.162	692.6	0.0216

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	DP2 to SP33 Spec.Vol
1	23.520	749.2	0.0223
2	34.983	769.4	0.0222
3	40.185	775.2	0.0222
4	41.962	771.2	0.0221
5	42.504	766.3	0.0221
6	42.623	762.3	0.0221
7	42.610	759.3	0.0220
8	42.572	757.2	0.0220
9	42.552	755.6	0.0219
10	42.579	754.2	0.0219
11	42.684	752.9	0.0219
12	42.834	751.9	0.0218
13	42.915	752.0	0.0218
14	42.860	753.4	0.0218
15	42.469	756.1	0.0217
16	41.096	759.0	0.0217
17	36.688	755.1	0.0216
18	24.845	728.2	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-104. Burnup and TH Feedback Parameters by Axial Node for Assembly G10

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	5.245	1175.0	0.0239	5.971	1160.2	0.0239	6.672	1160.2	0.0239
2	8.060	1406.4	0.0238	9.146	1327.7	0.0238	10.188	1327.7	0.0238
3	9.728	1524.5	0.0236	10.991	1390.4	0.0236	12.189	1390.4	0.0236
4	10.524	1568.6	0.0235	11.845	1397.2	0.0235	13.084	1397.2	0.0235
5	10.900	1580.9	0.0233	12.233	1390.0	0.0233	13.472	1390.0	0.0233
6	11.089	1580.6	0.0232	12.418	1382.5	0.0232	13.646	1382.5	0.0232
7	11.196	1577.0	0.0230	12.521	1378.5	0.0230	13.736	1378.5	0.0230
8	11.267	1573.2	0.0229	12.590	1378.2	0.0229	13.796	1378.2	0.0229
9	11.313	1570.0	0.0227	12.637	1381.0	0.0228	13.837	1381.0	0.0228
10	11.333	1567.0	0.0226	12.661	1386.5	0.0226	13.858	1386.5	0.0226
11	11.326	1564.3	0.0224	12.660	1394.3	0.0225	13.857	1394.3	0.0225
12	11.290	1561.7	0.0223	12.632	1404.6	0.0224	13.831	1404.6	0.0224
13	11.213	1558.6	0.0222	12.565	1416.4	0.0222	13.771	1416.4	0.0222
14	11.066	1552.6	0.0220	12.429	1429.6	0.0221	13.641	1429.6	0.0221
15	10.784	1537.1	0.0219	12.148	1442.4	0.0220	13.361	1442.4	0.0220
16	10.204	1498.4	0.0218	11.537	1446.0	0.0218	12.724	1446.0	0.0218
17	8.969	1406.2	0.0217	10.179	1409.8	0.0217	11.260	1409.8	0.0217
18	6.174	1180.9	0.0216	7.024	1225.1	0.0216	7.788	1225.1	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	10.277	1163.2	0.0239	10.714	1163.2	0.0239	11.207	1163.2	0.0239
2	15.406	1323.1	0.0238	16.021	1323.1	0.0238	16.714	1323.1	0.0238
3	18.076	1369.4	0.0236	18.756	1369.4	0.0236	19.521	1369.4	0.0236
4	19.113	1367.2	0.0234	19.802	1367.2	0.0234	20.576	1367.2	0.0234
5	19.481	1355.5	0.0233	20.164	1355.5	0.0233	20.932	1355.5	0.0233
6	19.610	1345.4	0.0232	20.286	1345.4	0.0232	21.048	1345.4	0.0232
7	19.670	1338.9	0.0230	20.343	1338.9	0.0230	21.102	1338.9	0.0230
8	19.722	1335.7	0.0229	20.394	1335.7	0.0229	21.154	1335.7	0.0229
9	19.775	1335.0	0.0227	20.449	1335.0	0.0227	21.210	1335.0	0.0227
10	19.821	1336.2	0.0226	20.498	1336.2	0.0226	21.263	1336.2	0.0226
11	19.859	1339.2	0.0225	20.540	1339.2	0.0225	21.309	1339.2	0.0225
12	19.890	1344.4	0.0223	20.576	1344.4	0.0223	21.352	1344.4	0.0223
13	19.904	1352.4	0.0222	20.599	1352.4	0.0222	21.384	1352.4	0.0222
14	19.866	1363.7	0.0221	20.572	1363.7	0.0221	21.369	1363.7	0.0221
15	19.668	1376.1	0.0219	20.387	1376.1	0.0219	21.198	1376.1	0.0219
16	19.009	1384.0	0.0218	19.732	1384.0	0.0218	20.549	1384.0	0.0218
17	17.130	1360.0	0.0217	17.817	1360.0	0.0217	18.595	1360.0	0.0217
18	12.060	1197.2	0.0216	12.574	1197.2	0.0216	13.159	1197.2	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-104. Burnup and TH Feedback Parameters by Axial Node for Assembly G10 (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	13.133	1028.9	0.0237	14.016	1028.9	0.0237	20.034	1037.9	0.0237
2	19.633	1150.6	0.0236	20.951	1150.6	0.0236	29.628	1143.8	0.0236
3	22.970	1206.8	0.0235	24.507	1206.8	0.0235	34.379	1184.5	0.0235
4	24.297	1232.3	0.0233	25.938	1232.3	0.0233	36.243	1196.6	0.0233
5	24.805	1243.7	0.0232	26.495	1243.7	0.0232	36.931	1199.6	0.0232
6	25.012	1248.4	0.0231	26.727	1248.4	0.0231	37.195	1198.8	0.0230
7	25.126	1249.7	0.0229	26.855	1249.7	0.0229	37.328	1196.4	0.0229
8	25.216	1249.1	0.0228	26.954	1249.1	0.0228	37.430	1193.5	0.0228
9	25.297	1247.3	0.0226	27.041	1247.3	0.0226	37.527	1191.0	0.0226
10	25.365	1244.9	0.0225	27.113	1244.9	0.0225	37.620	1189.0	0.0225
11	25.419	1242.1	0.0224	27.170	1242.1	0.0224	37.714	1187.8	0.0224
12	25.456	1239.0	0.0222	27.209	1239.0	0.0222	37.809	1187.6	0.0223
13	25.455	1234.3	0.0221	27.205	1234.3	0.0221	37.868	1187.5	0.0221
14	25.362	1225.0	0.0220	27.094	1225.0	0.0220	37.788	1185.0	0.0220
15	25.055	1209.1	0.0219	26.747	1209.1	0.0219	37.388	1177.6	0.0219
16	24.188	1183.8	0.0218	25.804	1183.8	0.0218	36.190	1161.8	0.0218
17	21.844	1138.4	0.0217	23.301	1138.4	0.0217	32.867	1129.3	0.0217
18	15.366	1009.5	0.0216	16.367	1009.5	0.0216	23.138	1012.1	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	20.167	1037.9	0.0237	22.817	1034.4	0.0236
2	29.816	1143.8	0.0236	33.463	1116.3	0.0235
3	34.589	1184.5	0.0235	38.592	1150.5	0.0234
4	36.458	1196.6	0.0233	40.517	1149.1	0.0232
5	37.146	1199.6	0.0232	41.176	1139.3	0.0231
6	37.409	1198.8	0.0230	41.401	1129.8	0.0230
7	37.541	1196.4	0.0229	41.504	1122.3	0.0228
8	37.643	1193.5	0.0228	41.587	1116.3	0.0227
9	37.739	1191.0	0.0226	41.675	1111.7	0.0226
10	37.834	1189.0	0.0225	41.768	1108.2	0.0225
11	37.928	1187.8	0.0224	41.870	1105.8	0.0223
12	38.025	1187.6	0.0223	41.987	1105.2	0.0222
13	38.086	1187.5	0.0221	42.082	1107.0	0.0221
14	38.008	1185.0	0.0220	42.049	1110.9	0.0220
15	37.611	1177.6	0.0219	41.701	1116.6	0.0219
16	36.412	1161.8	0.0218	40.510	1119.6	0.0218
17	33.076	1129.3	0.0217	36.975	1100.0	0.0217
18	23.291	1012.1	0.0216	26.184	1001.5	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-105. Burnup and TH Feedback Parameters by Axial Node for Assembly G12

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	5.146	1184.9	0.0239	5.860	1166.2	0.0239	6.557	1166.2	0.0239
2	8.094	1420.6	0.0238	9.176	1332.3	0.0238	10.219	1332.3	0.0238
3	9.964	1538.4	0.0237	11.230	1390.1	0.0236	12.432	1390.1	0.0236
4	10.862	1579.3	0.0235	12.184	1392.3	0.0235	13.425	1392.3	0.0235
5	11.251	1584.6	0.0233	12.578	1380.8	0.0233	13.812	1380.8	0.0233
6	11.434	1580.4	0.0232	12.754	1370.9	0.0232	13.972	1370.9	0.0232
7	11.540	1575.1	0.0230	12.854	1365.8	0.0230	14.058	1365.8	0.0230
8	11.616	1570.5	0.0229	12.926	1365.0	0.0229	14.120	1365.0	0.0229
9	11.672	1566.9	0.0227	12.983	1367.5	0.0228	14.171	1367.5	0.0228
10	11.709	1564.0	0.0226	13.023	1372.4	0.0226	14.208	1372.4	0.0226
11	11.731	1561.7	0.0224	13.051	1379.6	0.0225	14.236	1379.6	0.0225
12	11.750	1560.9	0.0223	13.082	1389.9	0.0224	14.271	1389.9	0.0224
13	11.751	1562.2	0.0222	13.099	1404.3	0.0222	14.300	1404.3	0.0222
14	11.650	1560.1	0.0220	13.014	1418.7	0.0221	14.225	1418.7	0.0221
15	11.361	1548.8	0.0219	12.729	1432.3	0.0220	13.941	1432.3	0.0220
16	10.720	1511.3	0.0218	12.056	1437.2	0.0218	13.243	1437.2	0.0218
17	9.362	1416.3	0.0217	10.572	1402.6	0.0217	11.652	1402.6	0.0217
18	6.389	1186.3	0.0216	7.236	1219.0	0.0216	7.997	1219.0	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	10.137	1169.5	0.0239	10.579	1169.5	0.0239	11.067	1169.5	0.0239
2	15.441	1327.7	0.0237	16.062	1327.7	0.0237	16.754	1327.7	0.0237
3	18.333	1368.9	0.0236	19.018	1368.9	0.0236	19.784	1368.9	0.0236
4	19.454	1362.4	0.0234	20.144	1362.4	0.0234	20.919	1362.4	0.0234
5	19.793	1347.1	0.0233	20.473	1347.1	0.0233	21.238	1347.1	0.0233
6	19.889	1335.1	0.0231	20.560	1335.1	0.0231	21.317	1335.1	0.0231
7	19.938	1327.9	0.0230	20.605	1327.9	0.0230	21.358	1327.9	0.0230
8	19.990	1324.5	0.0229	20.657	1324.5	0.0229	21.410	1324.5	0.0229
9	20.051	1323.6	0.0227	20.719	1323.6	0.0227	21.475	1323.6	0.0227
10	20.113	1324.5	0.0226	20.784	1324.5	0.0226	21.543	1324.5	0.0226
11	20.179	1327.0	0.0225	20.854	1327.0	0.0225	21.618	1327.0	0.0225
12	20.277	1332.0	0.0223	20.959	1332.0	0.0223	21.729	1332.0	0.0223
13	20.407	1341.4	0.0222	21.099	1341.4	0.0222	21.882	1341.4	0.0222
14	20.442	1353.7	0.0221	21.148	1353.7	0.0221	21.945	1353.7	0.0221
15	20.248	1366.9	0.0219	20.967	1366.9	0.0219	21.780	1366.9	0.0219
16	19.530	1376.3	0.0218	20.255	1376.3	0.0218	21.074	1376.3	0.0218
17	17.521	1354.4	0.0217	18.210	1354.4	0.0217	18.991	1354.4	0.0217
18	12.260	1194.2	0.0216	12.775	1194.2	0.0216	13.361	1194.2	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-105. Burnup and TH Feedback Parameters by Axial Node for Assembly G12 (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	12.815	989.7	0.0235	13.617	989.7	0.0235	19.148	1002.8	0.0235
2	19.456	1108.4	0.0234	20.672	1108.4	0.0234	28.711	1102.9	0.0234
3	23.012	1160.3	0.0233	24.439	1160.3	0.0233	33.585	1137.7	0.0233
4	24.425	1184.3	0.0232	25.951	1184.3	0.0232	35.489	1147.0	0.0232
5	24.904	1195.9	0.0231	26.480	1195.9	0.0231	36.138	1148.4	0.0230
6	25.083	1201.1	0.0229	26.684	1201.1	0.0229	36.371	1147.1	0.0229
7	25.188	1202.6	0.0228	26.802	1202.6	0.0228	36.492	1144.5	0.0228
8	25.279	1201.8	0.0227	26.902	1201.8	0.0227	36.590	1141.5	0.0227
9	25.368	1199.6	0.0226	26.995	1199.6	0.0226	36.687	1138.7	0.0225
10	25.448	1196.9	0.0224	27.078	1196.9	0.0224	36.785	1136.4	0.0224
11	25.528	1193.7	0.0223	27.159	1193.7	0.0223	36.896	1134.9	0.0223
12	25.632	1190.0	0.0222	27.264	1190.0	0.0222	37.048	1134.2	0.0222
13	25.749	1184.3	0.0221	27.377	1184.3	0.0221	37.213	1133.4	0.0221
14	25.735	1175.1	0.0220	27.347	1175.1	0.0220	37.212	1131.1	0.0220
15	25.436	1160.6	0.0219	27.012	1160.6	0.0219	36.838	1124.9	0.0219
16	24.508	1137.0	0.0218	26.010	1137.0	0.0218	35.612	1112.0	0.0218
17	22.016	1092.5	0.0217	23.360	1092.5	0.0217	32.192	1083.4	0.0217
18	15.367	968.2	0.0216	16.274	968.2	0.0216	22.472	975.3	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol
1	19.272	1002.8	0.0235	21.764	1014.9	0.0235
2	28.886	1102.9	0.0234	32.329	1087.4	0.0234
3	33.781	1137.7	0.0233	37.555	1119.1	0.0232
4	35.689	1147.0	0.0232	39.514	1117.7	0.0231
5	36.339	1148.4	0.0230	40.140	1109.1	0.0230
6	36.571	1147.1	0.0229	40.339	1100.7	0.0229
7	36.691	1144.5	0.0228	40.435	1094.0	0.0228
8	36.789	1141.5	0.0227	40.517	1088.7	0.0226
9	36.886	1138.7	0.0225	40.607	1084.6	0.0225
10	36.984	1136.4	0.0224	40.706	1081.4	0.0224
11	37.096	1134.9	0.0223	40.827	1079.3	0.0223
12	37.249	1134.2	0.0222	40.999	1078.5	0.0222
13	37.417	1133.4	0.0221	41.196	1079.6	0.0221
14	37.418	1131.1	0.0220	41.238	1082.9	0.0220
15	37.047	1124.9	0.0219	40.914	1088.5	0.0219
16	35.819	1112.0	0.0218	39.699	1092.1	0.0218
17	32.387	1083.4	0.0217	36.084	1074.4	0.0217
18	22.614	975.3	0.0216	25.349	983.7	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-106. Burnup and TH Feedback Parameters by Axial Node for Assembly G14

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	4.498	1084.1	0.0236	5.101	1084.8	0.0235	5.685	1084.8	0.0235
2	7.338	1320.8	0.0235	8.271	1239.9	0.0234	9.164	1239.9	0.0234
3	9.057	1432.6	0.0234	10.149	1296.8	0.0233	11.182	1296.8	0.0233
4	9.914	1473.0	0.0232	11.058	1303.1	0.0232	12.128	1303.1	0.0232
5	10.335	1482.8	0.0231	11.488	1295.9	0.0231	12.558	1295.9	0.0231
6	10.540	1480.5	0.0230	11.689	1288.2	0.0229	12.747	1288.2	0.0229
7	10.640	1474.5	0.0228	11.782	1283.4	0.0228	12.827	1283.4	0.0228
8	10.689	1468.1	0.0227	11.826	1281.9	0.0227	12.860	1281.9	0.0227
9	10.715	1462.8	0.0226	11.850	1283.3	0.0226	12.876	1283.3	0.0226
10	10.734	1459.1	0.0224	11.869	1287.1	0.0225	12.891	1287.1	0.0225
11	10.749	1457.2	0.0223	11.889	1293.2	0.0223	12.911	1293.2	0.0223
12	10.758	1456.9	0.0222	11.906	1301.8	0.0222	12.930	1301.8	0.0222
13	10.737	1457.2	0.0221	11.897	1313.1	0.0221	12.927	1313.1	0.0221
14	10.640	1455.1	0.0220	11.811	1326.7	0.0220	12.849	1326.7	0.0220
15	10.376	1444.2	0.0219	11.551	1340.1	0.0219	12.591	1340.1	0.0219
16	9.760	1410.5	0.0218	10.908	1343.4	0.0218	11.926	1343.4	0.0218
17	8.394	1321.7	0.0217	9.430	1304.4	0.0217	10.353	1304.4	0.0217
18	5.416	1094.7	0.0216	6.122	1140.7	0.0216	6.757	1140.7	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	8.736	1096.9	0.0235	9.113	1096.9	0.0235	9.539	1096.9	0.0235
2	13.684	1242.6	0.0234	14.225	1242.6	0.0234	14.835	1242.6	0.0234
3	16.309	1288.4	0.0233	16.911	1288.4	0.0233	17.588	1288.4	0.0233
4	17.388	1287.3	0.0232	17.998	1287.3	0.0232	18.686	1287.3	0.0232
5	17.802	1276.5	0.0230	18.407	1276.5	0.0230	19.090	1276.5	0.0230
6	17.948	1266.8	0.0229	18.547	1266.8	0.0229	19.225	1266.8	0.0229
7	17.995	1260.4	0.0228	18.591	1260.4	0.0228	19.266	1260.4	0.0228
8	18.013	1257.0	0.0227	18.608	1257.0	0.0227	19.283	1257.0	0.0227
9	18.031	1255.9	0.0226	18.626	1255.9	0.0226	19.303	1255.9	0.0226
10	18.062	1256.5	0.0225	18.660	1256.5	0.0225	19.340	1256.5	0.0225
11	18.114	1258.8	0.0223	18.716	1258.8	0.0223	19.399	1258.8	0.0223
12	18.183	1263.1	0.0222	18.790	1263.1	0.0222	19.479	1263.1	0.0222
13	18.250	1270.1	0.0221	18.865	1270.1	0.0221	19.563	1270.1	0.0221
14	18.258	1280.3	0.0220	18.883	1280.3	0.0220	19.593	1280.3	0.0220
15	18.077	1292.6	0.0219	18.715	1292.6	0.0219	19.437	1292.6	0.0219
16	17.393	1300.1	0.0218	18.035	1300.1	0.0218	18.763	1300.1	0.0218
17	15.439	1275.3	0.0217	16.047	1275.3	0.0217	16.739	1275.3	0.0217
18	10.389	1128.2	0.0216	10.837	1128.2	0.0216	11.351	1128.2	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-106. Burnup and TH Feedback Parameters by Axial Node for Assembly G14 (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	10.827	886.6	0.0230	11.417	886.6	0.0230	15.560	903.9	0.0230
2	16.876	996.0	0.0229	17.791	996.0	0.0229	23.919	995.3	0.0229
3	20.054	1038.3	0.0228	21.139	1038.3	0.0228	28.139	1024.0	0.0228
4	21.375	1056.2	0.0227	22.538	1056.2	0.0227	29.831	1030.4	0.0227
5	21.905	1064.3	0.0227	23.104	1064.3	0.0227	30.478	1029.6	0.0226
6	22.117	1067.4	0.0226	23.334	1067.4	0.0226	30.718	1026.8	0.0225
7	22.206	1068.1	0.0225	23.432	1068.1	0.0225	30.810	1023.7	0.0225
8	22.252	1067.3	0.0224	23.484	1067.3	0.0224	30.855	1020.8	0.0224
9	22.290	1065.6	0.0223	23.524	1065.6	0.0223	30.892	1018.1	0.0223
10	22.334	1063.3	0.0222	23.569	1063.3	0.0222	30.943	1015.8	0.0222
11	22.392	1060.4	0.0221	23.627	1060.4	0.0221	31.015	1013.9	0.0221
12	22.460	1056.9	0.0220	23.694	1056.9	0.0220	31.107	1012.4	0.0220
13	22.512	1052.3	0.0219	23.742	1052.3	0.0219	31.186	1011.2	0.0219
14	22.482	1045.1	0.0219	23.698	1045.1	0.0219	31.161	1009.6	0.0219
15	22.221	1033.8	0.0218	23.409	1033.8	0.0218	30.844	1006.6	0.0218
16	21.364	1014.9	0.0217	22.494	1014.9	0.0217	29.754	999.0	0.0217
17	18.995	978.6	0.0216	19.994	978.6	0.0216	26.634	975.7	0.0216
18	12.799	869.0	0.0216	13.454	869.0	0.0216	18.024	884.2	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	15.656	903.9	0.0230	17.593	942.3	0.0230	18.003	942.3	0.0230
2	24.055	995.3	0.0229	26.765	1003.8	0.0229	27.328	1003.8	0.0229
3	28.291	1024.0	0.0228	31.266	1012.8	0.0228	31.878	1012.8	0.0228
4	29.987	1030.4	0.0227	33.000	1009.6	0.0228	33.616	1009.6	0.0228
5	30.634	1029.6	0.0226	33.624	1001.5	0.0227	34.235	1001.5	0.0227
6	30.873	1026.8	0.0225	33.836	994.2	0.0226	34.441	994.2	0.0226
7	30.965	1023.7	0.0225	33.907	988.6	0.0225	34.506	988.6	0.0225
8	31.009	1020.8	0.0224	33.939	984.5	0.0224	34.533	984.5	0.0224
9	31.046	1018.1	0.0223	33.971	981.3	0.0223	34.558	981.3	0.0223
10	31.097	1015.8	0.0222	34.021	978.7	0.0222	34.599	978.7	0.0222
11	31.170	1013.9	0.0221	34.100	976.9	0.0221	34.667	976.9	0.0221
12	31.263	1012.4	0.0220	34.205	976.1	0.0221	34.760	976.1	0.0221
13	31.343	1011.2	0.0219	34.306	976.8	0.0220	34.850	976.8	0.0220
14	31.320	1009.6	0.0219	34.315	979.5	0.0219	34.852	979.5	0.0219
15	31.004	1006.6	0.0218	34.036	984.2	0.0218	34.572	984.2	0.0218
16	29.914	999.0	0.0217	32.954	987.9	0.0217	33.487	987.9	0.0217
17	26.785	975.7	0.0216	29.673	979.3	0.0217	30.182	979.3	0.0217
18	18.131	884.2	0.0216	20.236	916.8	0.0216	20.612	916.8	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-106. Burnup and TH Feedback Parameters by Axial Node for Assembly G14 (Cont'd)

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	18.811	669.8	0.0221	19.161	678.3	0.0221	20.100	692.3	0.0221
2	28.589	697.1	0.0220	29.115	703.6	0.0221	30.485	714.5	0.0221
3	33.389	710.2	0.0220	33.998	715.4	0.0220	35.545	725.1	0.0220
4	35.250	717.4	0.0220	35.890	720.0	0.0220	37.485	726.6	0.0220
5	35.932	720.2	0.0220	36.582	720.7	0.0220	38.180	725.0	0.0220
6	36.169	720.8	0.0219	36.821	719.8	0.0219	38.408	722.7	0.0219
7	36.248	720.4	0.0219	36.899	718.4	0.0219	38.475	720.5	0.0219
8	36.279	719.3	0.0219	36.926	716.9	0.0219	38.494	718.5	0.0219
9	36.302	718.0	0.0218	36.946	715.4	0.0218	38.506	716.9	0.0219
10	36.336	716.5	0.0218	36.979	713.9	0.0218	38.534	715.5	0.0218
11	36.394	714.8	0.0218	37.034	712.5	0.0218	38.586	714.4	0.0218
12	36.473	713.0	0.0218	37.111	711.2	0.0218	38.664	713.5	0.0218
13	36.542	710.8	0.0217	37.178	709.9	0.0217	38.734	712.8	0.0217
14	36.511	707.9	0.0217	37.142	708.3	0.0217	38.701	712.5	0.0217
15	36.175	703.6	0.0217	36.797	705.9	0.0217	38.352	711.9	0.0217
16	34.994	696.4	0.0216	35.593	701.0	0.0217	37.119	709.6	0.0217
17	31.498	683.3	0.0216	32.037	689.4	0.0216	33.444	700.6	0.0216
18	21.478	657.2	0.0216	21.845	664.9	0.0216	22.833	677.1	0.0216

Table 4-107. Burnup and TH Feedback Parameters by Axial Node for Assembly G17

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	5.304	1181.8	0.0239	6.032	1164.0	0.0239	6.738	1164.0	0.0239
2	8.081	1408.5	0.0238	9.165	1332.0	0.0238	10.210	1332.0	0.0238
3	9.806	1527.7	0.0236	11.073	1396.1	0.0237	12.278	1396.1	0.0237
4	10.638	1571.0	0.0235	11.964	1401.6	0.0235	13.211	1401.6	0.0235
5	10.999	1578.3	0.0233	12.331	1391.2	0.0233	13.573	1391.2	0.0233
6	11.168	1574.8	0.0232	12.493	1381.7	0.0232	13.719	1381.7	0.0232
7	11.265	1569.8	0.0230	12.584	1376.8	0.0231	13.796	1376.8	0.0231
8	11.331	1565.3	0.0229	12.647	1376.1	0.0229	13.850	1376.1	0.0229
9	11.379	1561.7	0.0227	12.695	1378.8	0.0228	13.892	1378.8	0.0228
10	11.409	1558.9	0.0226	12.729	1384.0	0.0226	13.922	1384.0	0.0226
11	11.429	1556.6	0.0224	12.755	1391.5	0.0225	13.949	1391.5	0.0225
12	11.453	1556.1	0.0223	12.791	1402.2	0.0224	13.990	1402.2	0.0224
13	11.464	1558.0	0.0222	12.820	1416.2	0.0222	14.031	1416.2	0.0222
14	11.376	1555.9	0.0220	12.748	1430.9	0.0221	13.970	1430.9	0.0221
15	11.099	1542.7	0.0219	12.475	1444.3	0.0220	13.698	1444.3	0.0220
16	10.480	1503.8	0.0218	11.821	1448.1	0.0218	13.017	1448.1	0.0218
17	9.185	1410.1	0.0217	10.399	1411.7	0.0217	11.485	1411.7	0.0217
18	6.388	1189.6	0.0216	7.245	1226.1	0.0216	8.014	1226.1	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-107. Burnup and TH Feedback Parameters by Axial Node for Assembly G17 (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	10.367	1167.2	0.0239	10.809	1167.2	0.0239	11.305	1167.2	0.0239
2	15.459	1329.1	0.0238	16.081	1329.1	0.0238	16.779	1329.1	0.0238
3	18.219	1376.1	0.0236	18.908	1376.1	0.0236	19.681	1376.1	0.0236
4	19.292	1372.3	0.0235	19.988	1372.3	0.0235	20.769	1372.3	0.0235
5	19.609	1357.7	0.0233	20.295	1357.7	0.0233	21.068	1357.7	0.0233
6	19.692	1345.9	0.0232	20.370	1345.9	0.0232	21.134	1345.9	0.0232
7	19.732	1338.9	0.0230	20.406	1338.9	0.0230	21.166	1338.9	0.0230
8	19.776	1335.5	0.0229	20.449	1335.5	0.0229	21.209	1335.5	0.0229
9	19.828	1334.7	0.0227	20.502	1334.7	0.0227	21.265	1334.7	0.0227
10	19.883	1335.7	0.0226	20.561	1335.7	0.0226	21.327	1335.7	0.0226
11	19.950	1338.4	0.0225	20.632	1338.4	0.0225	21.402	1338.4	0.0225
12	20.058	1343.8	0.0223	20.746	1343.8	0.0223	21.524	1343.8	0.0223
13	20.206	1353.7	0.0222	20.905	1353.7	0.0222	21.696	1353.7	0.0222
14	20.259	1365.8	0.0221	20.972	1365.8	0.0221	21.778	1365.8	0.0221
15	20.076	1378.6	0.0220	20.803	1378.6	0.0220	21.624	1378.6	0.0220
16	19.369	1387.1	0.0218	20.101	1387.1	0.0218	20.929	1387.1	0.0218
17	17.404	1363.8	0.0217	18.099	1363.8	0.0217	18.886	1363.8	0.0217
18	12.324	1200.1	0.0216	12.843	1200.1	0.0216	13.434	1200.1	0.0216

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	13.171	1012.6	0.0236	14.025	1012.6	0.0236	19.849	1022.1	0.0236
2	19.625	1134.2	0.0235	20.906	1134.2	0.0235	29.336	1126.9	0.0235
3	23.047	1188.7	0.0234	24.544	1188.7	0.0234	34.134	1165.1	0.0234
4	24.316	1205.8	0.0233	25.893	1205.8	0.0233	35.766	1169.3	0.0232
5	24.689	1198.6	0.0231	26.262	1198.6	0.0231	35.970	1155.3	0.0231
6	24.841	1201.5	0.0230	26.434	1201.5	0.0230	36.137	1152.2	0.0230
7	24.934	1203.1	0.0229	26.541	1203.1	0.0229	36.248	1149.5	0.0228
8	25.016	1202.5	0.0227	26.631	1202.5	0.0227	36.338	1146.5	0.0227
9	25.096	1200.7	0.0226	26.715	1200.7	0.0226	36.429	1143.7	0.0226
10	25.174	1198.2	0.0225	26.797	1198.2	0.0225	36.529	1141.7	0.0225
11	25.274	1196.2	0.0224	26.902	1196.2	0.0224	36.681	1141.2	0.0224
12	25.530	1201.5	0.0222	27.186	1201.5	0.0222	37.161	1148.8	0.0223
13	25.839	1230.7	0.0221	27.587	1230.7	0.0221	38.145	1178.6	0.0221
14	25.865	1225.9	0.0220	27.611	1225.9	0.0220	38.270	1180.2	0.0220
15	25.575	1210.9	0.0219	27.284	1210.9	0.0219	37.907	1173.8	0.0219
16	24.652	1186.1	0.0218	26.284	1186.1	0.0218	36.664	1157.3	0.0218
17	22.198	1140.2	0.0217	23.666	1140.2	0.0217	33.232	1125.5	0.0217
18	15.667	1008.4	0.0216	16.672	1008.4	0.0216	23.427	1007.9	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-107. Burnup and TH Feedback Parameters by Axial Node for Assembly G17 (Cont'd)

Axial	Burnup	SP25 to SP26		Burnup	SP26 to SP27	
Node	SP26	T-Fuel	Spec.Vol	SP27	T-Fuel	Spec.Vol
1	19.979	1022.1	0.0236	22.566	1025.2	0.0235
2	29.519	1126.9	0.0235	33.090	1104.9	0.0234
3	34.338	1165.1	0.0234	38.254	1137.9	0.0233
4	35.972	1169.3	0.0232	39.881	1130.2	0.0232
5	36.171	1155.3	0.0231	39.966	1107.8	0.0230
6	36.336	1152.2	0.0230	40.088	1097.6	0.0229
7	36.446	1149.5	0.0228	40.172	1090.6	0.0228
8	36.537	1146.5	0.0227	40.246	1085.2	0.0227
9	36.628	1143.7	0.0226	40.330	1081.0	0.0226
10	36.728	1141.7	0.0225	40.430	1077.7	0.0224
11	36.881	1141.2	0.0224	40.598	1075.9	0.0223
12	37.365	1148.8	0.0223	41.169	1081.1	0.0222
13	38.361	1178.6	0.0221	42.348	1104.7	0.0221
14	38.491	1180.2	0.0220	42.539	1110.9	0.0220
15	38.130	1173.8	0.0219	42.229	1116.8	0.0219
16	36.886	1157.3	0.0218	40.998	1120.5	0.0218
17	33.441	1125.5	0.0217	37.357	1101.9	0.0217
18	23.580	1007.9	0.0216	26.483	1001.2	0.0216

Table 4-108. Burnup and TH Feedback Parameters by Axial Node for Assembly G19

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	5.077	1153.1	0.0238	5.761	1137.9	0.0238	6.424	1137.9	0.0238
2	7.979	1387.6	0.0237	9.015	1300.9	0.0237	10.011	1300.9	0.0237
3	9.816	1508.4	0.0236	11.030	1362.1	0.0235	12.183	1362.1	0.0235
4	10.735	1552.1	0.0234	12.008	1366.4	0.0234	13.200	1366.4	0.0234
5	11.157	1559.8	0.0233	12.435	1355.6	0.0233	13.623	1355.6	0.0233
6	11.359	1555.9	0.0231	12.630	1345.9	0.0231	13.802	1345.9	0.0231
7	11.465	1549.7	0.0230	12.729	1340.6	0.0230	13.888	1340.6	0.0230
8	11.525	1543.6	0.0228	12.784	1339.2	0.0228	13.931	1339.2	0.0228
9	11.561	1538.6	0.0227	12.819	1341.0	0.0227	13.958	1341.0	0.0227
10	11.591	1535.1	0.0226	12.850	1345.3	0.0226	13.985	1345.3	0.0226
11	11.625	1533.4	0.0224	12.890	1352.1	0.0225	14.025	1352.1	0.0225
12	11.677	1534.7	0.0223	12.955	1362.3	0.0223	14.095	1362.3	0.0223
13	11.727	1538.9	0.0222	13.024	1377.6	0.0222	14.179	1377.6	0.0222
14	11.674	1539.8	0.0220	12.991	1394.0	0.0221	14.158	1394.0	0.0221
15	11.413	1530.0	0.0219	12.737	1408.7	0.0219	13.908	1408.7	0.0219
16	10.761	1494.1	0.0218	12.056	1414.5	0.0218	13.204	1414.5	0.0218
17	9.342	1399.8	0.0217	10.513	1378.3	0.0217	11.558	1378.3	0.0217
18	6.298	1170.9	0.0216	7.114	1199.7	0.0216	7.846	1199.7	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-108. Burnup and TH Feedback Parameters by Axial Node for Assembly G19 (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	9.852	1144.1	0.0238	10.273	1144.1	0.0238	10.743	1144.1	0.0238
2	15.023	1300.6	0.0237	15.620	1300.6	0.0237	16.287	1300.6	0.0237
3	17.864	1345.8	0.0235	18.526	1345.8	0.0235	19.265	1345.8	0.0235
4	19.020	1341.5	0.0234	19.690	1341.5	0.0234	20.438	1341.5	0.0234
5	19.402	1326.9	0.0232	20.063	1326.9	0.0232	20.803	1326.9	0.0232
6	19.522	1315.2	0.0231	20.175	1315.2	0.0231	20.907	1315.2	0.0231
7	19.570	1308.1	0.0229	20.218	1308.1	0.0229	20.948	1308.1	0.0229
8	19.598	1304.6	0.0228	20.246	1304.6	0.0228	20.975	1304.6	0.0228
9	19.630	1303.4	0.0227	20.279	1303.4	0.0227	21.009	1303.4	0.0227
10	19.677	1304.1	0.0226	20.328	1304.1	0.0226	21.062	1304.1	0.0226
11	19.754	1306.5	0.0224	20.410	1306.5	0.0224	21.149	1306.5	0.0224
12	19.892	1311.5	0.0223	20.554	1311.5	0.0223	21.300	1311.5	0.0223
13	20.083	1321.1	0.0222	20.757	1321.1	0.0222	21.516	1321.1	0.0222
14	20.181	1333.5	0.0221	20.869	1333.5	0.0221	21.642	1333.5	0.0221
15	20.027	1347.7	0.0219	20.729	1347.7	0.0219	21.518	1347.7	0.0219
16	19.311	1357.8	0.0218	20.019	1357.8	0.0218	20.816	1357.8	0.0218
17	17.259	1336.1	0.0217	17.932	1336.1	0.0217	18.693	1336.1	0.0217
18	11.974	1178.3	0.0216	12.475	1178.3	0.0216	13.045	1178.3	0.0216

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	12.672	1020.8	0.0236	13.539	1020.8	0.0236	19.339	1022.9	0.0235
2	19.228	1143.5	0.0235	20.526	1143.5	0.0235	28.860	1123.6	0.0234
3	22.714	1191.7	0.0234	24.215	1191.7	0.0234	33.582	1155.1	0.0233
4	24.126	1210.1	0.0232	25.712	1210.1	0.0232	35.393	1160.3	0.0232
5	24.620	1218.2	0.0231	26.246	1218.2	0.0231	36.006	1159.5	0.0230
6	24.801	1221.0	0.0230	26.446	1221.0	0.0230	36.210	1156.8	0.0229
7	24.889	1221.0	0.0228	26.544	1221.0	0.0228	36.293	1153.1	0.0228
8	24.948	1219.6	0.0227	26.609	1219.6	0.0227	36.345	1149.5	0.0227
9	25.003	1217.4	0.0226	26.667	1217.4	0.0226	36.400	1146.3	0.0225
10	25.070	1214.7	0.0224	26.737	1214.7	0.0224	36.478	1143.6	0.0224
11	25.163	1211.6	0.0223	26.832	1211.6	0.0223	36.596	1141.5	0.0223
12	25.301	1206.3	0.0222	26.969	1206.3	0.0222	36.758	1139.1	0.0222
13	25.465	1196.8	0.0221	27.120	1196.8	0.0221	36.914	1135.2	0.0221
14	25.497	1184.0	0.0220	27.128	1184.0	0.0220	36.911	1130.3	0.0220
15	25.232	1167.7	0.0219	26.823	1167,7	0.0219	36.549	1123.5	0.0219
16	24.310	1144.5	0.0218	25.829	1144.5	0.0218	35.344	1111.6	0.0218
17	21.782	1101.5	0.0217	23.144	1101.5	0.0217	31.931	1085.3	0.0217
18	15.096	976.9	0.0216	16.017	976.9	0.0216	22.213	979.1	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-108. Burnup and TH Feedback Parameters by Axial Node for Assembly G19 (Cont'd)

Axial	Burnup	SP25 to SP26		Burnup	SP26 to SP27	
Node	SP26	T-Fuel	Spec.Vol	SP27	T-Fuel	Spec.Vol
1	19.468	1022.9	0.0235	22.003	1019.7	0.0234
2	29.038	1123.6	0.0234	32.487	1086.3	0.0233
3	33.778	1155.1	0.0233	37.507	1110.2	0.0232
4	35.592	1160.3	0.0232	39.341	1104.2	0.0231
5	36.204	1159.5	0.0230	39.913	1093.7	0.0229
6	36.407	1156.8	0.0229	40.074	1084.2	0.0228
7	36.489	1153.1	0.0228	40.124	1076.7	0.0227
8	36.540	1149.5	0.0227	40.153	1070.8	0.0226
9	36.594	1146.3	0.0225	40.196	1066.2	0.0225
10	36.673	1143.6	0.0224	40.270	1062.5	0.0224
11	36.792	1141.5	0.0223	40.391	1059.7	0.0223
12	36.954	1139.1	0.0222	40.563	1057.9	0.0222
13	37.112	1135.2	0.0221	40.737	1057.2	0.0221
14	37.110	1130.3	0.0220	40.766	1059.0	0.0220
15	36.750	1123.5	0.0219	40.448	1063.7	0.0219
16	35.545	1111.6	0.0218	39.260	1067.7	0.0218
17	32.121	1085.3	0.0217	35.680	1053.5	0.0217
18	22.352	979.1	0.0216	25.007	972.4	0.0216

Table 4-109. Burnup and TH Feedback Parameters by Axial Node for Assembly G19a

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	5.077	1153.1	0.0238	5.761	1137.9	0.0238	6.424	1137.9	0.0238
2	7.979	1387.6	0.0237	9.015	1300.9	0.0237	10.011	1300.9	0.0237
3	9.816	1508.4	0.0236	11.030	1362.1	0.0235	12.183	1362.1	0.0235
4	10.735	1552.1	0.0234	12.008	1366.4	0.0234	13.200	1366.4	0.0234
5	11.157	1559.8	0.0233	12.435	1355.6	0.0233	13.623	1355.6	0.0233
6	11.359	1555.9	0.0231	12.630	1345.9	0.0231	13.802	1345.9	0.0231
7	11.465	1549.7	0.0230	12.729	1340.6	0.0230	13.888	1340.6	0.0230
8	11.525	1543.6	0.0228	12.784	1339.2	0.0228	13.931	1339.2	0.0228
9	11.561	1538.6	0.0227	12.819	1341.0	0.0227	13.958	1341.0	0.0227
10	11.591	1535.1	0.0226	12.850	1345.3	0.0226	13.985	1345.3	0.0226
11	11.625	1533.4	0.0224	12.890	1352.1	0.0225	14.025	1352.1	0.0225
12	11.677	1534.7	0.0223	12.955	1362.3	0.0223	14.095	1362.3	0.0223
13	11.727	1538.9	0.0222	13.024	1377.6	0.0222	14.179	1377.6	0.0222
14	11.674	1539.8	0.0220	12.991	1394.0	0.0221	14.158	1394.0	0.0221
15	11.413	1530.0	0.0219	12.737	1408.7	0.0219	13.908	1408.7	0.0219
16	10.761	1494.1	0.0218	12.056	1414.5	0.0218	13.204	1414.5	0.0218
17	9.342	1399.8	0.0217	10.513	1378.3	0.0217	11.558	1378.3	0.0217
18	6.298	1170.9	0.0216	7.114	1199.7	0.0216	7.846	1199.7	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-109. Burnup and TH Feedback Parameters by Axial Node for Assembly G19a (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	9.852	1144.1	0.0238	10.273	1144.1	0.0238	10.746	1144.1	0.0238
2	15.023	1300.6	0.0237	15.620	1300.6	0.0237	16.290	1300.6	0.0237
3	17.864	1345.8	0.0235	18.526	1345.8	0.0235	19.269	1345.8	0.0235
4	19.020	1341.5	0.0234	19.690	1341.5	0.0234	20.442	1341.5	0.0234
5	19.402	1326.9	0.0232	20.063	1326.9	0.0232	20.807	1326.9	0.0232
6	19.522	1315.2	0.0231	20.175	1315.2	0.0231	20.912	1315.2	0.0231
7	19.570	1308.1	0.0229	20.218	1308.1	0.0229	20.952	1308.1	0.0229
8	19.598	1304.6	0.0228	20.246	1304.6	0.0228	20.979	1304.6	0.0228
9	19.630	1303.4	0.0227	20.279	1303.4	0.0227	21.014	1303.4	0.0227
10	19.677	1304.1	0.0226	20.328	1304.1	0.0226	21.066	1304.1	0.0226
11	19.754	1306.5	0.0224	20.410	1306.5	0.0224	21.153	1306.5	0.0224
12	19.892	1311.5	0.0223	20.554	1311.5	0.0223	21.304	1311.5	0.0223
13	20.083	1321.1	0.0222	20.757	1321.1	0.0222	21.521	1321.1	0.0222
14	20.181	1333.5	0.0221	20.869	1333.5	0.0221	21.647	1333.5	0.0221
15	20.027	1347.7	0.0219	20.729	1347.7	0.0219	21.523	1347.7	0.0219
16	19.311	1357.8	0.0218	20.019	1357.8	0.0218	20.821	1357.8	0.0218
17	17.259	1336.1	0.0217	17.932	1336.1	0.0217	18.697	1336.1	0.0217
18	11.974	1178.3	0.0216	12.475	1178.3	0.0216	13.048	1178.3	0.0216

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	12.668	1031.5	0.0237	13.548	1031.5	0.0237	19.550	1040.3	0.0237
2	19.213	1154.8	0.0236	20.530	1154.8	0.0236	29.190	1145.7	0.0236
3	22.730	1208.9	0.0235	24.267	1208.9	0.0235	34.114	1184.5	0.0235
4	24.181	1233.4	0.0233	25.821	1233.4	0.0233	36.088	1194.6	0.0233
5	24.703	1244.4	0.0232	26.392	1244.4	0.0232	36.780	1196.5	0.0232
6	24.907	1249.2	0.0231	26.622	1249.2	0.0231	37.036	1195.0	0.0230
7	25.014	1250.9	0.0229	26.743	1250.9	0.0229	37.163	1192.5	0.0229
8	25.085	1250.8	0.0228	26.825	1250.8	0.0228	37.249	1189.9	0.0228
9	25.149	1249.4	0.0226	26.895	1249.4	0.0226	37.331	1187.4	0.0226
10	25.221	1247.2	0.0225	26.971	1247.2	0.0225	37.430	1185.5	0.0225
11	25.322	1244.5	0.0224	27.076	1244.5	0.0224	37.575	1184.4	0.0224
12	25.480	1241.6	0.0223	27.240	1241.6	0.0223	37.805	1184.5	0.0223
13	25.673	1236.9	0.0221	27.434	1236.9	0.0221	38.076	1184.6	0.0221
14	25.725	1227.5	0.0220	27.472	1227.5	0.0220	38.153	1182.4	0.0220
15	25.464	1211.8	0.0219	27.173	1211.8	0.0219	37.810	1175.4	0.0219
16	24.538	1187.3	0.0218	26.171	1187.3	0.0218	36.565	1159.2	0.0218
17	22.015	1143.5	0.0217	23.488	1143.5	0.0217	33.079	1128.8	0.0217
18	15.302	1015.5	0.0216	16.316	1015.5	0.0216	23.118	1014.3	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-109. Burnup and TH Feedback Parameters by Axial Node for Assembly G19a (Cont'd)

Axial	Burnup	SP25 to SP26		Burnup	SP26 to SP27	
Node	SP26	T-Fuel	Spec.Vol	SP27	T-Fuel	Spec.Vol
1	19.683	1040.3	0.0237	22.337	1038.7	0.0236
2	29.377	1145.7	0.0236	33.032	1118.9	0.0235
3	34.323	1184.5	0.0235	38.332	1152.5	0.0234
4	36.302	1194.6	0.0233	40.363	1150.2	0.0232
5	36.994	1196.5	0.0232	41.023	1140.1	0.0231
6	37.249	1195.0	0.0230	41.240	1130.5	0.0230
7	37.375	1192.5	0.0229	41.339	1123.1	0.0228
8	37.462	1189.9	0.0228	41.409	1117.4	0.0227
9	37.543	1187.4	0.0226	41.483	1113.0	0.0226
10	37.642	1185.5	0.0225	41.582	1109.5	0.0225
11	37.788	1184.4	0.0224	41.737	1107.0	0.0224
12	38.020	1184.5	0.0223	41.989	1106.0	0.0222
13	38.294	1184.6	0.0221	42.295	1107.1	0.0221
14	38.373	1182.4	0.0220	42.417	1110.3	0.0220
15	38.032	1175.4	0.0219	42.124	1115.8	0.0219
16	36.786	1159.2	0.0218	40.890	1119.5	0.0218
17	33.288	1128.8	0.0217	37.199	1101.5	0.0217
18	23.271	1014.3	0.0216	26.180	1004.2	0.0216

Table 4-110. Burnup and TH Feedback Parameters by Axial Node for Assembly G23

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	5.120	1181.4	0.0239	5.825	1162.3	0.0239	6.515	1162.3	0.0239
2	7.997	1410.7	0.0238	9.062	1327.5	0.0238	10.092	1327.5	0.0238
3	9.932	1531.1	0.0237	11.187	1388.6	0.0236	12.382	1388.6	0.0236
4	10.910	1574.9	0.0235	12.228	1391.9	0.0235	13.466	1391.9	0.0235
5	11.351	1581.4	0.0233	12.676	1380.4	0.0233	13.910	1380.4	0.0233
6	11.558	1577.1	0.0232	12.877	1370.3	0.0232	14.095	1370.3	0.0232
7	11.667	1571.0	0.0230	12.978	1364.8	0.0230	14.183	1364.8	0.0230
8	11.729	1565.1	0.0229	13.035	1363.5	0.0229	14.228	1363.5	0.0229
9	11.767	1560.2	0.0227	13.072	1365.4	0.0228	14.257	1365.4	0.0228
10	11.797	1556.6	0.0226	13.104	1370.0	0.0226	14.285	1370.0	0.0226
11	11.833	1554.7	0.0225	13.146	1377.1	0.0225	14.327	1377.1	0.0225
12	11.889	1555.3	0.0223	13.215	1387.7	0.0224	14.402	1387.7	0.0224
13	11.943	1559.1	0.0222	13.291	1402.4	0.0222	14.492	1402.4	0.0222
14	11.893	1559.7	0.0220	13.261	1417.7	0.0221	14.475	1417.7	0.0221
15	11.629	1550.4	0.0219	13.003	1432.0	0.0220	14.221	1432.0	0.0220
16	10.969	1515.0	0.0218	12.310	1437.5	0.0218	13.503	1437.5	0.0218
17	9.554	1419.4	0.0217	10.768	1403.3	0.0217	11.852	1403.3	0.0217
18	6.581	1194.3	0.0216	7.435	1219.4	0.0216	8.201	1219.4	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-110. Burnup and TH Feedback Parameters by Axial Node for Assembly G23 (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	10.065	1166.7	0.0239	10.504	1166.7	0.0239	10.990	1166.7	0.0239
2	15.274	1326.0	0.0238	15.893	1326.0	0.0238	16.583	1326.0	0.0238
3	18.271	1369.7	0.0236	18.957	1369.7	0.0236	19.724	1369.7	0.0236
4	19.502	1363.5	0.0234	20.194	1363.5	0.0234	20.971	1363.5	0.0234
5	19.904	1348.0	0.0233	20.587	1348.0	0.0233	21.356	1348.0	0.0233
6	20.027	1335.7	0.0231	20.702	1335.7	0.0231	21.463	1335.7	0.0231
7	20.076	1328.3	0.0230	20.747	1328.3	0.0230	21.503	1328.3	0.0230
8	20.107	1324.7	0.0229	20.776	1324.7	0.0229	21.533	1324.7	0.0229
9	20.141	1323.6	0.0227	20.811	1323.6	0.0227	21.569	1323.6	0.0227
10	20.190	1324.3	0.0226	20.863	1324.3	0.0226	21.625	1324.3	0.0226
11	20.272	1326.6	0.0225	20.949	1326.6	0.0225	21.715	1326.6	0.0225
12	20.416	1331.7	0.0223	21.100	1331.7	0.0223	21.875	1331.7	0.0223
13	20.619	1341.4	0.0222	21.315	1341.4	0.0222	22.102	1341.4	0.0222
14	20.725	1353.7	0.0221	21.435	1353.7	0.0221	22.238	1353.7	0.0221
15	20.570	1367.3	0.0220	21.295	1367.3	0.0220	22.114	1367.3	0.0220
16	19.836	1377.6	0.0218	20.567	1377.6	0.0218	21.394	1377.6	0.0218
17	17.757	1356.9	0.0217	18.452	1356.9	0.0217	19.241	1356.9	0.0217
18	12.494	1196.4	0.0216	13.013	1196.4	0.0216	13.604	1196.4	0.0216

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	11.648	726.6	0.0223	11.952	726.6	0.0223	14.134	740.1	0.0223
2	17.664	789.6	0.0222	18.153	789.6	0.0222	21.485	796.9	0.0222
3	21.049	813.7	0.0222	21.634	813.7	0.0222	25.468	812.9	0.0222
4	22.423	823.4	0.0222	23.052	823.4	0.0222	27.049	815.5	0.0222
5	22.879	827.8	0.0221	23.528	827.8	0.0221	27.570	815.0	0.0221
6	23.028	829.6	0.0221	23.688	829.6	0.0221	27.732	813.3	0.0221
7	23.095	829.7	0.0220	23.758	829.7	0.0220	27.794	811.3	0.0220
8	23.139	828.9	0.0220	23.805	828.9	0.0220	27.830	809.3	0.0220
9	23.183	827.5	0.0219	23.849	827.5	0.0219	27.868	807.4	0.0219
10	23.241	825.7	0.0219	23.906	825.7	0.0219	27.920	805.6	0.0219
11	23.327	823.3	0.0218	23.991	823.3	0.0218	28.003	803.8	0.0218
12	23.474	820.1	0.0218	24.135	820.1	0.0218	28.146	801.8	0.0218
13	23.677	815.7	0.0218	24.332	815.7	0.0218	28.342	799.3	0.0218
14	23.774	810.3	0.0217	24.420	810.3	0.0217	28.424	797.0	0.0217
15	23.588	803.3	0.0217	24.216	803.3	0.0217	28.192	794.5	0.0217
16	22.762	792.4	0.0216	23.356	792.4	0.0216	27.221	789.8	0.0216
17	20.405	770.0	0.0216	20.921	770.0	0.0216	24.410	775.5	0.0216
18	14.320	707.8	0.0216	14.645	707.8	0.0216	16.958	719.8	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-110. Burnup and TH Feedback Parameters by Axial Node for Assembly G23 (Cont'd)

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	14.185	740.1	0.0223	15.239	774.1	0.0223	15.465	774.1	0.0223
2	21.560	796.9	0.0222	23.084	820.1	0.0223	23.404	820.1	0.0223
3	25.553	812.9	0.0222	27.238	823.7	0.0222	27.588	823.7	0.0222
4	27.136	815.5	0.0222	28.845	819.8	0.0222	29.198	819.8	0.0222
5	27.657	815.0	0.0221	29.354	814.8	0.0221	29.704	814.8	0.0221
6	27.818	813.3	0.0221	29.499	810.5	0.0221	29.846	810.5	0.0221
7	27.880	811.3	0.0220	29.547	807.0	0.0221	29.890	807.0	0.0221
8	27.916	809.3	0.0220	29.574	804.3	0.0220	29.914	804.3	0.0220
9	27.954	807.4	0.0219	29.607	802.2	0.0220	29.942	802.2	0.0220
10	28.006	805.6	0.0219	29.656	800.2	0.0219	29.986	800.2	0.0219
11	28.089	803.8	0.0218	29.739	798.5	0.0219	30.062	798.5	0.0219
12	28.232	801.8	0.0218	29.883	796.9	0.0218	30.200	796.9	0.0218
13	28.428	799.3	0.0218	30.084	795.6	0.0218	30.393	795.6	0.0218
14	28.511	797.0	0.0217	30.177	795.8	0.0217	30.482	795.8	0.0217
15	28.280	794.5	0.0217	29.961	797.7	0.0217	30.264	797.7	0.0217
16	27.308	789.8	0.0216	28.985	799.9	0.0216	29.286	799.9	0.0216
17	24.490	775.5	0.0216	26.066	795.8	0.0216	26.348	795.8	0.0216
18	17.014	719.8	0.0216	18.120	752.4	0.0216	18.322	752.4	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	18.446	965.4	0.0234	19.688	976.6	0.0234	22.867	989.0	0.0235
2	27.819	1053.8	0.0233	29.614	1058.7	0.0234	34.093	1066.9	0.0234
3	32.776	1099.5	0.0232	34.838	1104.2	0.0232	39.892	1109.2	0.0232
4	34.783	1125.1	0.0231	36.959	1124.3	0.0231	42.207	1118.6	0.0231
5	35.501	1137.1	0.0230	37.722	1130.3	0.0230	43.015	1116.7	0.0230
6	35.758	1142.0	0.0229	37.996	1130.4	0.0229	43.284	1111.7	0.0229
7	35.865	1142.7	0.0228	38.107	1128.0	0.0228	43.381	1106.5	0.0228
8	35.918	1141.0	0.0226	38.159	1124.7	0.0226	43.421	1102.0	0.0226
9	35.954	1138.0	0.0225	38.192	1121.2	0.0225	43.448	1098.3	0.0225
10	35.991	1134.2	0.0224	38.228	1117.8	0.0224	43.484	1095.4	0.0224
11	36.049	1129.9	0.0223	38.285	1114.7	0.0223	43.551	1093.3	0.0223
12	36.159	1125.1	0.0222	38.395	1111.8	0.0222	43.680	1092.1	0.0222
13	36.302	1118.8	0.0221	38.536	1108.5	0.0221	43.847	1091.7	0.0221
14	36.293	1109.1	0.0220	38.516	1103.7	0.0220	43.848	1091.7	0.0220
15	35.907	1094.3	0.0219	38.101	1095.3	0.0219	43.426	1090.5	0.0219
16	34.654	1071.5	0.0218	36.778	1079.2	0.0218	42.008	1083.3	0.0218
17	31.211	1034.5	0.0217	33.162	1043.1	0.0217	38.037	1054.9	0.0217
18	21.734	943.4	0.0216	23.126	950.2	0.0216	26.669	956.7	0.0216

Statepoint	EFPD / Cycle
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-111. Burnup and TH Feedback Parameters by Axial Node for Assembly G25

Axial Node	Burnup SP17	SP16 to SP17 T-Fuel	SP16 to SP17 Spec.Vol	Burnup SP18	SP17 to SP18 T-Fuel	SP17 to SP18 Spec.Vol	Burnup SP19	SP18 to SP19 T-Fuel	SP18 to SP19 Spec.Vol
1	3.230	945.9	0.0230	3.673	970.9	0.0230	4.103	970.9	0.0230
2	5.438	1150.5	0.0229	6.142	1119.9	0.0229	6.818	1119.9	0.0229
3	6.770	1246.9	0.0229	7.601	1169.0	0.0229	8.388	1169.0	0.0229
4	7.434	1281.4	0.0228	8.307	1175.8	0.0228	9.125	1175.8	0.0228
5	7.754	1289.4	0.0227	8.634	1170.2	0.0227	9.452	1170.2	0.0227
6	7.903	1287.3	0.0226	8.779	1163.7	0.0226	9.587	1163.7	0.0226
7	7.968	1282.1	0.0225	8.838	1159.4	0.0225	9.636	1159.4	0.0225
8	7.994	1276.5	0.0224	8.858	1157.9	0.0224	9.648	1157.9	0.0224
9	8.002	1271.7	0.0223	8.864	1158.8	0.0223	9.647	1158.8	0.0223
10	8.007	1268.2	0.0222	8.869	1161.7	0.0222	9.648	1161.7	0.0222
11	8.013	1266.2	0.0221	8.878	1166.6	0.0222	9.656	1166.6	0.0222
12	8.018	1265.7	0.0220	8.889	1173.4	0.0221	9.668	1173.4	0.0221
13	8.004	1265.8	0.0219	8.883	1182.5	0.0220	9.667	1182.5	0.0220
14	7.932	1263.6	0.0219	8.819	1193.2	0.0219	9.608	1193.2	0.0219
15	7.728	1253.7	0.0218	8.616	1202.9	0.0218	9.406	1202.9	0.0218
16	7.250	1224.4	0.0217	8.115	1203.0	0.0217	8.886	1203.0	0.0217
17	6.182	1147.4	0.0216	6.956	1166.4	0.0216	7.648	1166.4	0.0216
18	3.751	937.4	0.0216	4.249	1003.9	0.0216	4.699	1003.9	0.0216

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	6.399	990.1	0.0230	6.689	990.1	0.0230	7.017	990.1	0.0230
2	10.308	1127.8	0.0230	10.735	1127.8	0.0230	11.217	1127.8	0.0230
3	12.377	1170.5	0.0229	12.855	1170.5	0.0229	13.394	1170.5	0.0229
4	13.228	1171.9	0.0228	13.714	1171.9	0.0228	14.263	1171.9	0.0228
5	13.545	1163.8	0.0227	14.027	1163.8	0.0227	14.573	1163.8	0.0227
6	13.645	1155.8	0.0226	14.122	1155.8	0.0226	14.663	1155.8	0.0226
7	13.665	1150.3	0.0225	14.139	1150.3	0.0225	14.678	1150.3	0.0225
8	13.662	1147.3	0.0224	14.135	1147.3	0.0224	14.673	1147.3	0.0224
9	13.660	1146.2	0.0223	14.133	1146.2	0.0223	14.672	1146.2	0.0223
10	13.671	1146.6	0.0222	14.146	1146.6	0.0222	14.687	1146.6	0.0222
11	13.702	1148.5	0.0222	14.179	1148.5	0.0222	14.723	1148.5	0.0222
12	13.751	1152.0	0.0221	14.232	1152.0	0.0221	14.781	1152.0	0.0221
13	13.803	1157.8	0.0220	14.290	1157.8	0.0220	14.846	1157.8	0.0220
14	13.808	1166.0	0.0219	14.303	1166.0	0.0219	14.868	1166.0	0.0219
15	13.660	1175.1	0.0218	14.163	1175.1	0.0218	14.737	1175.1	0.0218
16	13.109	1178.0	0.0217	13.615	1178.0	0.0217	14.191	1178.0	0.0217
17	11.540	1151.1	0.0216	12.014	1151.1	0.0216	12.556	1151.1	0.0216
18	7.319	1005.2	0.0216	7.648	1005.2	0.0216	8.026	1005.2	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-111. Burnup and TH Feedback Parameters by Axial Node for Assembly G25 (Cont'd)

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	8.704	1009.9	0.0235	9.474	1009.9	0.0235	14.771	1016.3	0.0235
2	13.901	1159.0	0.0235	15.098	1159.0	0.0235	22.940	1140.3	0.0234
3	16.661	1224.0	0.0233	18.087	1224.0	0.0233	27.096	1182.9	0.0233
4	17.840	1252.3	0.0232	19.375	1252.3	0.0232	28.794	1194.1	0.0231
5	18.327	1265.2	0.0231	19.913	1265.2	0.0231	29.452	1194.9	0.0230
6	18.529	1271.0	0.0230	20.142	1271.0	0.0230	29.710	1192.6	0.0229
7	18.619	1273.7	0.0228	20.248	1273.7	0.0228	29.825	1189.8	0.0228
8	18.665	1274.5	0.0227	20.305	1274.5	0.0227	29.892	1187.1	0.0227
9	18.699	1274.0	0.0226	20.346	1274.0	0.0226	29.948	1184.9	0.0225
10	18.737	1272.7	0.0224	20.389	1272.7	0.0224	30.017	1183.2	0.0224
11	18.787	1271.0	0.0223	20.445	1271.0	0.0223	30.114	1182.2	0.0223
12	18.850	1269.3	0.0222	20.513	1269.3	0.0222	30.245	1182.4	0.0222
13	18.893	1266.4	0.0221	20.558	1266.4	0.0221	30.368	1183.3	0.0221
14	18.846	1259.2	0.0220	20.500	1259.2	0.0220	30.363	1183.0	0.0220
15	18.580	1245.0	0.0219	20.200	1245.0	0.0219	30.040	1179.6	0.0219
16	17.788	1218.4	0.0218	19.330	1218.4	0.0218	28.944	1168.4	0.0218
17	15.686	1166.4	0.0217	17.053	1166.4	0.0217	25.860	1136.4	0.0217
18	10.056	1013.0	0.0216	10.962	1013.0	0.0216	17.079	1013.6	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	14.890	1016.3	0.0235	17.283	1033.6	0.0234	17.789	1033.6	0.0234
2	23.111	1140.3	0.0234	26.463	1114.2	0.0233	27.158	1114.2	0.0233
3	27.287	1182.9	0.0233	30.988	1134.2	0.0232	31.747	1134.2	0.0232
4	28.991	1194.1	0.0231	32.749	1130.4	0.0231	33.518	1130.4	0.0231
5	29.649	1194.9	0.0230	33.384	1120.4	0.0230	34.149	1120.4	0.0230
6	29.906	1192.6	0.0229	33.611	1111.5	0.0229	34.371	1111.5	0.0229
7	30.021	1189.8	0.0228	33.705	1105.0	0.0227	34.459	1105.0	0.0227
8	30.087	1187.1	0.0227	33.761	1100.4	0.0226	34.508	1100.4	0.0226
9	30.144	1184.9	0.0225	33.815	1096.9	0.0225	34.555	1096.9	0.0225
10	30.213	1183.2	0.0224	33.889	1094.2	0.0224	34.617	1094.2	0.0224
11	30.311	1182.2	0.0223	33.998	1092.4	0.0223	34.713	1092.4	0.0223
12	30.444	1182.4	0.0222	34.154	1092.2	0.0222	34.852	1092.2	0.0222
13	30.570	1183.3	0.0221	34.314	1094.3	0.0221	34.996	1094.3	0.0221
14	30.567	1183.0	0.0220	34.356	1098.5	0.0220	35.029	1098.5	0.0220
15	30.246	1179.6	0.0219	34.086	1105.0	0.0219	34.756	1105.0	0.0219
16	29.150	1168.4	0.0218	33.003	1111.0	0.0218	33.669	1111.0	0.0218
17	26.054	1136.4	0.0217	29.720	1099.0	0.0217	30.356	1099.0	0.0217
18	17.218	1013.6	0.0216	19.917	1020.3	0.0216	20.392	1020.3	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-111. Burnup and TH Feedback Parameters by Axial Node for Assembly G25 (Cont'd)

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	18.488	654.8	0.0220	18.791	662.8	0.0220	19.612	675.9	0.0220
2	28.230	676.8	0.0220	28.680	683.5	0.0220	29.864	694.7	0.0220
3	33.010	685.8	0.0219	33.525	691.4	0.0219	34.845	701.2	0.0220
4	34.871	690.9	0.0219	35.408	694.3	0.0219	36.758	701.5	0.0219
5	35.548	692.7	0.0219	36.091	694.3	0.0219	37.438	699.7	0.0219
6	35.791	692.8	0.0219	36.333	693.3	0.0219	37.669	697.4	0.0219
7	35.886	692.1	0.0218	36.426	691.8	0.0218	37.750	695.2	0.0219
8	35.935	690.9	0.0218	36.472	690.2	0.0218	37.784	693.3	0.0218
9	35.976	689.5	0.0218	36.509	688.6	0.0218	37.812	691.6	0.0218
10	36.028	687.8	0.0218	36.558	687.1	0.0218	37.854	690.1	0.0218
11	36.110	686.0	0.0217	36.636	685.6	0.0218	37.927	688.8	0.0218
12	36.231	684.0	0.0217	36.753	684.0	0.0217	38.039	687.6	0.0217
13	36.351	681.6	0.0217	36.869	682.3	0.0217	38.153	686.6	0.0217
14	36.352	678.8	0.0217	36.865	680.7	0.0217	38.148	685.9	0.0217
15	36.033	675.1	0.0217	36.538	678.5	0.0217	37.817	685.3	0.0217
16	34.871	669.4	0.0216	35.358	674.6	0.0216	36.614	683.6	0.0216
17	31.410	659.3	0.0216	31.849	665.5	0.0216	33.010	676.4	0.0216
18	21.098	640.0	0.0216	21.402	647.4	0.0216	22.228	659.1	0.0216

Table 4-112. Burnup and TH Feedback Parameters by Axial Node for Assembly G27

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	3.680	1023.6	0.0233	4.195	1039.4	0.0233	4.700	1039.4	0.0233
2	6.285	1253.1	0.0232	7.105	1191.1	0.0232	7.894	1191.1	0.0232
3	7.944	1353.1	0.0231	8.912	1238.3	0.0231	9.829	1238.3	0.0231
4	8.773	1386.5	0.0230	9.787	1242.0	0.0230	10.737	1242.0	0.0230
5	9.167	1393.3	0.0229	10.189	1234.3	0.0229	11.137	1234.3	0.0229
6	9.352	1390.2	0.0228	10.370	1226.7	0.0228	11.307	1226.7	0.0228
7	9.439	1384.1	0.0227	10.450	1222.1	0.0227	11.376	1222.1	0.0227
8	9.480	1377.9	0.0225	10.485	1220.5	0.0226	11.401	1220.5	0.0226
9	9.500	1372.7	0.0224	10.503	1221.6	0.0225	11.412	1221.6	0.0225
10	9.514	1369.1	0.0223	10.518	1224.9	0.0224	11.423	1224.9	0.0224
11	9.528	1367.1	0.0222	10.536	1230.3	0.0223	11.439	1230.3	0.0223
12	9.539	1366.8	0.0221	10.553	1237.9	0.0222	11.459	1237.9	0.0222
13	9.525	1367.1	0.0220	10.549	1248.0	0.0221	11.460	1248.0	0.0221
14	9.439	1365.0	0.0219	10.473	1259.8	0.0220	11.390	1259.8	0.0220
15	9.198	1354.5	0.0218	10.233	1270.9	0.0219	11.151	1270.9	0.0219
16	8.635	1323.2	0.0217	9.644	1272.1	0.0218	10.540	1272.1	0.0218
17	7.393	1242.0	0.0216	8.301	1234.8	0.0217	9.111	1234.8	0.0217
18	4.679	1025.2	0.0216	5.291	1082.7	0.0216	5.842	1082.7	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-112. Burnup and TH Feedback Parameters by Axial Node for Assembly G27 (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP22	SP21 to SP22 T-Fuel	SP21 to SP22 Spec.Vol
1	7.360	1055.1	0.0233	7.698	1055.1	0.0233	8.071	1055.1	0.0233
2	11.912	1193.3	0.0232	12.401	1193.3	0.0232	12.945	1193.3	0.0232
3	14.408	1234.0	0.0231	14.950	1234.0	0.0231	15.559	1234.0	0.0231
4	15.435	1232.7	0.0230	15.985	1232.7	0.0230	16.604	1232.7	0.0230
5	15.819	1222.4	0.0229	16.363	1222.4	0.0229	16.978	1222.4	0.0229
6	15.948	1213.2	0.0228	16.486	1213.2	0.0228	17.096	1213.2	0.0228
7	15.985	1207.1	0.0226	16.520	1207.1	0.0226	17.127	1207.1	0.0226
8	15.996	1203.9	0.0225	16.530	1203.9	0.0225	17.137	1203.9	0.0225
9	16.007	1202.8	0.0224	16.542	1202.8	0.0224	17.150	1202.8	0.0224
10	16.031	1203.3	0.0223	16.568	1203.3	0.0223	17.178	1203.3	0.0223
11	16.075	1205.3	0.0222	16.614	1205.3	0.0222	17.228	1205.3	0.0222
12	16.137	1209.1	0.0221	16.681	1209.1	0.0221	17.300	1209.1	0.0221
13	16.198	1215.3	0.0221	16.749	1215.3	0.0221	17.375	1215.3	0.0221
14	16.201	1224.1	0.0220	16.760	1224.1	0.0220	17.396	1224.1	0.0220
15	16.022	1234.2	0.0219	16.591	1234.2	0.0219	17.238	1234.2	0.0219
16	15.382	1238.5	0.0218	15.954	1238.5	0.0218	16.603	1238.5	0.0218
17	13.599	1211.8	0.0217	14.139	1211.8	0.0217	14.754	1211.8	0.0217
18	9.018	1076.4	0.0216	9.413	1076.4	0.0216	9.865	1076.4	0.0216

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	10.019	1044.0	0.0236	10.890	1044.0	0.0236	16.698	1043.9	0.0235
2	15.939	1185.7	0.0235	17.249	1185.7	0.0235	25.600	1151.4	0.0234
3	19.072	1231.3	0.0234	20.587	1231.3	0.0234	29.943	1184.0	0.0233
4	20.347	1246.7	0.0232	21.943	1246.7	0.0232	31.576	1188.5	0.0232
5	20.840	1251.8	0.0231	22.470	1251.8	0.0231	32.153	1185.6	0.0230
6	21.028	1253.4	0.0230	22.674	1253.4	0.0230	32.344	1181.1	0.0229
7	21.104	1252.9	0.0228	22.758	1252.9	0.0228	32.405	1176.6	0.0228
8	21.144	1251.3	0.0227	22.803	1251.3	0.0227	32.431	1172.5	0.0227
9	21.178	1249.2	0.0226	22.840	1249.2	0.0226	32.463	1169.0	0.0225
10	21.226	1247.3	0.0225	22.892	1247.3	0.0225	32.527	1166.5	0.0224
11	21.298	1246.2	0.0223	22.972	1246.2	0.0223	32.647	1165.2	0.0223
12	21.382	1244.6	0.0222	23.062	1244.6	0.0222	32.794	1164.6	0.0222
13	21.423	1238.4	0.0221	23.097	1238.4	0.0221	32.862	1162.8	0.0221
14	21.357	1227.4	0.0220	23.009	1227.4	0.0220	32.779	1159.8	0.0220
15	21.053	1211.2	0.0219	22.666	1211.2	0.0219	32.388	1155.2	0.0219
16	20.182	1187.5	0.0218	21.720	1187.5	0.0218	31.228	1145.1	0.0218
17	17.887	1141.6	0.0217	19.258	1141.6	0.0217	28.020	1114.4	0.0217
18	11.908	998.6	0.0216	12.823	998.6	0.0216	18.963	1001.9	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-112. Burnup and TH Feedback Parameters by Axial Node for Assembly G27 (Cont'd)

Axial	Burnup	SP25 to SP26		Burnup	SP26 to SP27	
Node	SP26	T-Fuel	Spec.Vol	SP27	T-Fuel	Spec.Vol
1	16.827	1043.9	0.0235	19.365	1041.4	0.0234
2	25.778	1151.4	0.0234	29.219	1105.2	0.0233
3	30.138	1184.0	0.0233	33.846	1117.0	0.0232
4	31.773	1188.5	0.0232	35.488	1109.9	0.0230
5	32.349	1185.6	0.0230	36.016	1098.3	0.0229
6	32.539	1181.1	0.0229	36.160	1088.3	0.0228
7	32.598	1176.6	0.0228	36.185	1080.6	0.0227
8	32.623	1172.5	0.0227	36.189	1074.7	0.0226
9	32.655	1169.0	0.0225	36.209	1070.1	0.0225
10	32.719	1166.5	0.0224	36.269	1066.7	0.0224
11	32.840	1165.2	0.0223	36.397	1064.6	0.0223
12	32.989	1164.6	0.0222	36.564	1064.1	0.0222
13	33.059	1162.8	0.0221	36.658	1064.7	0.0221
14	32.977	1159.8	0.0220	36.611	1067.5	0.0220
15	32.588	1155.2	0.0219	36.267	1072.7	0.0219
16	31.428	1145.1	0.0218	35.125	1076.8	0.0218
17	28.209	1114.4	0.0217	31.751	1064.9	0.0217
18	19.101	1001.9	0.0216	21.742	994.3	0.0216

Table 4-113. Burnup and TH Feedback Parameters by Axial Node for Assembly G27a

Axial	Burnup	SP16 to SP17		Burnup	SP17 to SP18		Burnup	SP18 to SP19	
Node	SP17	T-Fuel	Spec.Vol	SP18	T-Fuel	Spec.Vol	SP19	T-Fuel	Spec.Vol
1	3.680	1023.6	0.0233	4.195	1039.4	0.0233	4.700	1039.4	0.0233
2	6.285	1253.1	0.0232	7.105	1191.1	0.0232	7.894	1191.1	0.0232
3	7.944	1353.1	0.0231	8.912	1238.3	0.0231	9.829	1238.3	0.0231
4	8.773	1386.5	0.0230	9.787	1242.0	0.0230	10.737	1242.0	0.0230
5	9.167	1393.3	0.0229	10.189	1234.3	0.0229	11.137	1234.3	0.0229
6	9.352	1390.2	0.0228	10.370	1226.7	0.0228	11.307	1226.7	0.0228
7	9.439	1384.1	0.0227	10.450	1222.1	0.0227	11.376	1222.1	0.0227
8	9.480	1377.9	0.0225	10.485	1220.5	0.0226	11.401	1220.5	0.0226
9	9.500	1372.7	0.0224	10.503	1221.6	0.0225	11.412	1221.6	0.0225
10	9.514	1369.1	0.0223	10.518	1224.9	0.0224	11.423	1224.9	0.0224
11	9.528	1367.1	0.0222	10.536	1230.3	0.0223	11.439	1230.3	0.0223
12	9.539	1366.8	0.0221	10.553	1237.9	0.0222	11.459	1237.9	0.0222
13	9.525	1367.1	0.0220	10.549	1248.0	0.0221	11.460	1248.0	0.0221
14	9.439	1365.0	0.0219	10.473	1259.8	0.0220	11.390	1259.8	0.0220
15	9.198	1354.5	0.0218	10.233	1270.9	0.0219	11.151	1270.9	0.0219
16	8.635	1323.2	0.0217	9.644	1272.1	0.0218	10.540	1272.1	0.0218
17	7.393	1242.0	0.0216	8.301	1234.8	0.0217	9.111	1234.8	0.0217
18	4.679	1025.2	0.0216	5.291	1082.7	0.0216	5.842	1082.7	0.0216

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-113. Burnup and TH Feedback Parameters by Axial Node for Assembly G27a (Cont'd)

Axial Node	Burnup SP20	SP19 to SP20 T-Fuel	SP19 to SP20 Spec.Vol	Burnup SP21	SP20 to SP21 T-Fuel	SP20 to SP21 Spec.Vol	Burnup SP28	SP21 to SP28 T-Fuel	SP21 to SP28 Spec.Vol
1	7.360	1055.1	0.0233	7.698	1055.1	0.0233	8.071	1055.1	0.0233
2	11.912	1193.3	0.0232	12.401	1193.3	0.0232	12.945	1193.3	0.0232
3	14.408	1234.0	0.0231	14.950	1234.0	0.0231	15.559	1234.0	0.0231
4	15.435	1232.7	0.0230	15.985	1232.7	0.0230	16.604	1232.7	0.0230
5	15.819	1222.4	0.0229	16.363	1222.4	0.0229	16.978	1222.4	0.0229
6	15.948	1213.2	0.0228	16.486	1213.2	0.0228	17.096	1213.2	0.0228
7	15.985	1207.1	0.0226	16.520	1207.1	0.0226	17.127	1207.1	0.0226
8	15.996	1203.9	0.0225	16.530	1203.9	0.0225	17.137	1203.9	0.0225
9	16.007	1202.8	0.0224	16.542	1202.8	0.0224	17.150	1202.8	0.0224
10	16.031	1203.3	0.0223	16.568	1203.3	0.0223	17.178	1203.3	0.0223
11	16.075	1205.3	0.0222	16.614	1205.3	0.0222	17.228	1205.3	0.0222
12	16.137	1209.1	0.0221	16.681	1209.1	0.0221	17.300	1209.1	0.0221
13	16.198	1215.3	0.0221	16.749	1215.3	0.0221	17.375	1215.3	0.0221
14	16.201	1224.1	0.0220	16.760	1224.1	0.0220	17.396	1224.1	0.0220
15	16.022	1234.2	0.0219	16.591	1234.2	0.0219	17.238	1234.2	0.0219
16	15.382	1238.5	0.0218	15.954	1238.5	0.0218	16.603	1238.5	0.0218
17	13.599	1211.8	0.0217	14.139	1211.8	0.0217	14.754	1211.8	0.0217
18	9.018	1076.4	0.0216	9.413	1076.4	0.0216	9.865	1076.4	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	10.491	955.3	0.0235	11.554	967.3	0.0235	14.277	995.0	0.0235
2	17.245	1134.6	0.0234	18.991	1127.4	0.0234	23.326	1121.3	0.0234
3	20.919	1205.8	0.0233	22.999	1182.6	0.0233	28.034	1161.1	0.0233
4	22.482	1236.8	0.0232	24.697	1202.3	0.0232	29.952	1165.7	0.0231
5	23.127	1250.8	0.0231	25.393	1207.0	0.0230	30.697	1160.7	0.0230
6	23.394	1256.3	0.0230	25.677	1206.1	0.0229	30.978	1154.4	0.0229
7	23.512	1257.9	0.0228	25.802	1203.5	0.0228	31.091	1148.9	0.0228
8	23.572	1257.4	0.0227	25.865	1200.7	0.0227	31.148	1144.5	0.0227
9	23.613	1255.6	0.0226	25.908	1197.9	0.0226	31.192	1141.3	0.0225
10	23.655	1253.3	0.0225	25.952	1195.6	0.0224	31.247	1139.1	0.0224
11	23.709	1250.6	0.0223	26.012	1193.8	0.0223	31.327	1137.9	0.0223
12	23.776	1247.8	0.0222	26.087	1192.7	0.0222	31.436	1138.0	0.0222
13	23.823	1244.0	0.0221	26.143	1192.0	0.0221	31.535	1139.5	0.0221
14	23.760	1236.5	0.0220	26.079	1190.2	0.0220	31.512	1141.9	0.0220
15	23.417	1222.5	0.0219	25.712	1184.6	0.0219	31.153	1143.7	0.0219
16	22.421	1196.5	0.0218	24.634	1169.6	0.0218	29.977	1140.7	0.0218
17	19.844	1146.0	0.0217	21.835	1130.6	0.0217	26.753	1117.4	0.0217
18	13.178	996.1	0.0216	14.519	1002.7	0.0216	17.942	1010.3	0.0216

Statepoint	EFPD / Cycle
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-113. Burnup and TH Feedback Parameters by Axial Node for Assembly G27a (Cont'd)

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	18.543	1051.3	0.0234	21.501	855.0	0.0228	25.027	884.8	0.0228
2	29.499	1124.0	0.0234	33.773	899.8	0.0227	38.561	927.7	0.0228
3	34.969	1139.0	0.0232	39.861	934.0	0.0227	45.098	945.9	0.0227
4	37.013	1135.9	0.0231	42.165	945.9	0.0226	47.480	943.8	0.0226
5	37.704	1125.3	0.0230	42.981	950.3	0.0225	48.273	937.5	0.0225
6	37.918	1115.9	0.0229	43.255	951.0	0.0224	48.502	931.1	0.0224
7	37.990	1109.1	0.0228	43.345	949.2	0.0223	48.549	925.4	0.0224
8	38.031	1104.7	0.0226	43.374	945.7	0.0223	48.544	920.5	0.0223
9	38.078	1101.7	0.0225	43.387	940.9	0.0222	48.532	916.5	0.0222
10	38.150	1099.9	0.0224	43.405	935.0	0.0221	48.533	913.2	0.0221
11	38.261	1099.0	0.0223	43.443	927.9	0.0220	48.561	910.5	0.0221
12	38.417	1099.4	0.0222	43.505	919.4	0.0220	48.619	908.2	0.0220
13	38.579	1101.7	0.0221	43.551	909.4	0.0219	48.668	906.6	0.0219
14	38.624	1106.2	0.0220	43.458	898.0	0.0218	48.584	905.9	0.0219
15	38.304	1112.6	0.0219	42.964	884.8	0.0218	48.095	905.7	0.0218
16	36.977	1116.3	0.0218	41.388	867.6	0.0217	46.461	903.4	0.0217
17	32.789	1098.3	0.0217	36.710	839.1	0.0217	41.448	886.7	0.0217
18	22.262	1015.8	0.0216	24.911	779.6	0.0216	28.314	822.5	0.0216

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	DP2 to SP33 Spec.Vol
1	28.447	909.5	0.0229
2	42.937	951.3	0.0228
3	49.713	954.1	0.0227
4	52.052	942.8	0.0226
5	52.758	933.5	0.0226
6	52.918	925.4	0.0225
7	52.918	919.4	0.0224
8	52.882	915.0	0.0223
9	52.852	911.8	0.0223
10	52.842	909.4	0.0222
11	52.864	907.7	0.0221
12	52.924	906.8	0.0220
13	52.991	907.3	0.0220
14	52.949	909.9	0.0219
15	52.527	914.6	0.0218
16	50.952	920.2	0.0218
17	45.798	918.5	0.0217
18	31.622	850.6	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-114. Burnup and TH Feedback Parameters by Axial Node for Assembly H4

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	2.047	1200.9	0.0239	2.990	1200.9	0.0239	9.421	1202.2	0.0240
2	2.997	1415.7	0.0238	4.372	1415.7	0.0238	13.671	1391.4	0.0239
3	3.624	1542.4	0.0237	5.270	1542.4	0.0237	16.148	1487.0	0.0238
4	3.959	1601.1	0.0235	5.738	1601.1	0.0235	17.243	1520.3	0.0236
5	4.141	1625.7	0.0234	5.986	1625.7	0.0234	17.712	1527.3	0.0234
6	4.250	1635.5	0.0232	6.128	1635.5	0.0232	17.930	1527.1	0.0233
7	4.321	1638.9	0.0231	6.219	1638.9	0.0231	18.054	1524.9	0.0231
8	4.369	1640.0	0.0229	6.281	1640.0	0.0229	18.145	1522.5	0.0230
9	4.404	1639.9	0.0228	6.325	1639.9	0.0228	18.226	1520.7	0.0228
10	4.427	1639.1	0.0226	6.356	1639.1	0.0226	18.307	1519.7	0.0226
11	4.436	1637.5	0.0225	6.371	1637.5	0.0225	18.384	1519.4	0.0225
12	4.426	1634.6	0.0223	6.363	1634.6	0.0223	18.446	1519.7	0.0224
13	4.384	1628.9	0.0222	6.314	1628.9	0.0222	18.464	1519.9	0.0222
14	4.295	1617.8	0.0220	6.203	1617.8	0.0220	18.382	1518.3	0.0221
15	4.142	1596.6	0.0219	6.003	1596.6	0.0219	18.105	1511.1	0.0219
16	3.882	1550.5	0.0218	5.645	1550.5	0.0218	17.377	1490.1	0.0218
17	3.427	1454.8	0.0217	4.995	1454.8	0.0217	15.628	1421.2	0.0217
18	2.514	1242.0	0.0216	3.658	1242.0	0.0216	11.403	1229.6	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	9.563	1202.2	0.0240	12.380	1162.5	0.0240	12.966	1162.5	0.0240
2	13.875	1391.4	0.0239	17.873	1317.3	0.0238	18.694	1317.3	0.0238
3	16.382	1487.0	0.0238	20.893	1358.8	0.0237	21.805	1358.8	0.0237
4	17.487	1520.3	0.0236	22.111	1355.6	0.0235	23.038	1355.6	0.0235
5	17.958	1527.3	0.0234	22.572	1345.7	0.0234	23.494	1345.7	0.0234
6	18.176	1527.1	0.0233	22.759	1335.2	0.0232	23.672	1335.2	0.0232
7	18.299	1524.9	0.0231	22.858	1326.9	0.0231	23.763	1326.9	0.0231
8	18.390	1522.5	0.0230	22.937	1320.8	0.0229	23.833	1320.8	0.0229
9	18.472	1520.7	0.0228	23.019	1316.4	0.0228	23.904	1316.4	0.0228
10	18.553	1519.7	0.0226	23.108	1313.3	0.0226	23.982	1313.3	0.0226
11	18.632	1519.4	0.0225	23.204	1311.6	0.0225	24.063	1311.6	0.0225
12	18.696	1519.7	0.0224	23.297	1311.8	0.0223	24.139	1311.8	0.0223
13	18.717	1519.9	0.0222	23.359	1314.6	0.0222	24.187	1314.6	0.0222
14	18.638	1518.3	0.0221	23.336	1320.5	0.0221	24.156	1320.5	0.0221
15	18.363	1511.1	0.0219	23.117	1328.6	0.0220	23.934	1328.6	0.0220
16	17.633	1490.1	0.0218	22.377	1331.7	0.0218	23.187	1331.7	0.0218
17	15.866	1421.2	0.0217	20.316	1312.5	0.0217	21.079	1312.5	0.0217
18	11.578	1229.6	0.0216	14.882	1178	0.0216	15.453	1178	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-114. Burnup and TH Feedback Parameters by Axial Node for Assembly H4 (Cont'd)

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	15.200	882.9	0.0230	16.135	895.1	0.0230	18.561	912.9	0.0230
2	22.257	990.8	0.0230	23.691	991.5	0.0230	27.279	993.7	0.0230
3	26.127	1038.3	0.0229	27.808	1026.4	0.0229	31.897	1016.5	0.0229
4	27.743	1058.9	0.0228	29.521	1036.3	0.0228	33.756	1021.7	0.0228
5	28.398	1067.5	0.0227	30.211	1038.2	0.0227	34.467	1018.7	0.0227
6	28.680	1069.9	0.0226	30.501	1036.3	0.0226	34.740	1013.1	0.0226
7	28.822	1069.1	0.0225	30.642	1032.8	0.0225	34.858	1007.6	0.0225
8	28.912	1066.4	0.0224	30.728	1028.8	0.0224	34.925	1002.8	0.0224
9	28.985	1062.7	0.0223	30.796	1024.9	0.0223	34.981	998.9	0.0223
10	29.050	1058.5	0.0222	30.858	1021.4	0.0222	35.038	995.9	0.0222
11	29.110	1054.1	0.0222	30.914	1018.2	0.0222	35.097	993.7	0.0222
12	29.152	1049.3	0.0221	30.955	1015.6	0.0221	35.149	992.5	0.0221
13	29.148	1043.8	0.0220	30.949	1013.2	0.0220	35.161	992.4	0.0220
14	29.028	1036.4	0.0219	30.823	1010.3	0.0219	35.056	993.1	0.0219
15	28.652	1025.1	0.0218	30.424	1004.9	0.0218	34.660	993.0	0.0218
16	27.620	1005.8	0.0217	29.328	993.2	0.0217	33.490	986.9	0.0218
17	24.934	966.6	0.0217	26.465	965.3	0.0217	30.290	963.2	0.0217
18	17.918	856.7	0.0216	18.932	867.0	0.0216	21.561	881.0	0.0216

Table 4-115. Burnup and TH Feedback Parameters by Axial Node for Assembly H6

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	1.833	1143.5	0.0237	2.681	1143.5	0.0237	8.564	1158.5	0.0238
2	2.754	1356.9	0.0236	4.018	1356.9	0.0236	12.632	1341.7	0.0237
3	3.373	1480.9	0.0235	4.899	1480.9	0.0235	14.999	1432.9	0.0236
4	3.711	1538.2	0.0234	5.365	1538.2	0.0234	16.045	1464.4	0.0234
5	3.899	1563.6	0.0232	5.616	1563.6	0.0232	16.496	1471.9	0.0233
6	4.012	1574.9	0.0231	5.762	1574.9	0.0231	16.707	1471.3	0.0231
7	4.085	1579.7	0.0229	5.854	1579.7	0.0229	16.824	1468.6	0.0230
8	4.134	1581.5	0.0228	5.914	1581.5	0.0228	16.906	1465.9	0.0228
9	4.166	1581.9	0.0227	5.955	1581.9	0.0227	16.976	1464.1	0.0227
10	4.186	1581.3	0.0225	5.981	1581.3	0.0225	17.043	1463.4	0.0226
11	4.193	1580.0	0.0224	5.993	1580.0	0.0224	17.109	1463.6	0.0224
12	4.182	1577.4	0.0223	5.984	1577.4	0.0223	17.165	1464.8	0.0223
13	4.142	1572.0	0.0221	5.938	1572.0	0.0221	17.185	1466.1	0.0222
14	4.058	1560.4	0.0220	5.835	1560.4	0.0220	17.116	1465.8	0.0220
15	3.908	1537.2	0.0219	5.641	1537.2	0.0219	16.860	1459.8	0.0219
16	3.644	1490.1	0.0218	5.282	1490.1	0.0218	16.160	1436.3	0.0218
17	3.172	1393.5	0.0217	4.615	1393.5	0.0217	14.447	1367.6	0.0217
18	2.260	1183.3	0.0216	3.289	1183.3	0.0216	10.367	1182.3	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-115. Burnup and TH Feedback Parameters by Axial Node for Assembly H6 (Cont'd)

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	8.695	1158.5	0.0238	11.339	1136.8	0.0238	11.895	1136.8	0.0238
2	12.823	1341.7	0.0237	16.599	1293.2	0.0237	17.382	1293.2	0.0237
3	15.219	1432.9	0.0236	19.484	1337.3	0.0236	20.355	1337.3	0.0236
4	16.274	1464.4	0.0234	20.647	1334.8	0.0234	21.534	1334.8	0.0234
5	16.726	1471.9	0.0233	21.093	1323.2	0.0233	21.976	1323.2	0.0233
6	16.937	1471.3	0.0231	21.277	1312.4	0.0231	22.153	1312.4	0.0231
7	17.054	1468.6	0.0230	21.373	1304.2	0.0230	22.242	1304.2	0.0230
8	17.136	1465.9	0.0228	21.446	1298.4	0.0228	22.307	1298.4	0.0228
9	17.206	1464.1	0.0227	21.518	1294.3	0.0227	22.370	1294.3	0.0227
10	17.274	1463.4	0.0226	21.596	1291.5	0.0226	22.437	1291.5	0.0226
11	17.341	1463.6	0.0224	21.682	1290.1	0.0224	22.509	1290.1	0.0224
12	17.400	1464.8	0.0223	21.768	1290.4	0.0223	22.580	1290.4	0.0223
13	17.422	1466.1	0.0222	21.831	1293.3	0.0222	22.629	1293.3	0.0222
14	17.356	1465.8	0.0220	21.820	1299.5	0.0221	22.609	1299.5	0.0221
15	17.102	1459.8	0.0219	21.621	1308.6	0.0219	22.408	1308.6	0.0219
16	16.400	1436.3	0.0218	20.910	1316.4	0.0218	21.691	1316.4	0.0218
17	14.670	1367.6	0.0217	18.900	1297.7	0.0217	19.634	1297.7	0.0217
18	10.530	1182.3	0.0216	13.659	1160.5	0.0216	14.208	1160.5	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	15.015	1012.6	0.0237	16.313	1023.7	0.0237	19.632	1035.0	0.0237
2	22.181	1142.2	0.0236	24.119	1141.5	0.0236	28.933	1137.4	0.0236
3	26.115	1207.6	0.0235	28.382	1193.8	0.0235	33.893	1179.9	0.0234
4	27.788	1237.6	0.0233	30.193	1212.1	0.0233	35.939	1194.1	0.0233
5	28.476	1249.5	0.0232	30.930	1215.6	0.0232	36.721	1191.8	0.0232
6	28.784	1253.3	0.0231	31.254	1214.1	0.0230	37.035	1185.5	0.0230
7	28.948	1253.5	0.0229	31.422	1211.1	0.0229	37.186	1179.4	0.0229
8	29.053	1251.5	0.0228	31.527	1207.6	0.0228	37.280	1174.4	0.0228
9	29.132	1248.3	0.0227	31.605	1204.1	0.0226	37.355	1170.6	0.0226
10	29.201	1244.6	0.0225	31.675	1201.0	0.0225	37.431	1167.8	0.0225
11	29.271	1241.0	0.0224	31.750	1198.8	0.0224	37.525	1166.4	0.0224
12	29.347	1238.7	0.0223	31.836	1198.4	0.0223	37.653	1167.3	0.0223
13	29.391	1236.9	0.0222	31.896	1199.4	0.0222	37.774	1170.5	0.0222
14	29.298	1230.3	0.0220	31.805	1197.8	0.0220	37.734	1173.6	0.0220
15	28.913	1216.0	0.0219	31.393	1189.8	0.0219	37.328	1173.7	0.0219
16	27.848	1190.6	0.0218	30.242	1173.2	0.0218	36.065	1164.3	0.0218
17	25.115	1142.2	0.0217	27.287	1136.0	0.0217	32.663	1124.6	0.0217
18	17.895	1004.8	0.0216	19.390	1007.7	0.0216	23.180	1010.7	0.0216

Statepoint	EFPD / Cycle
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-116. Burnup and TH Feedback Parameters by Axial Node for Assembly H10

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	2.092	1200.9	0.0240	3.042	1200.9	0.0240	9.457	1197.0	0.0240
2	3.073	1423.8	0.0239	4.469	1423.8	0.0239	13.788	1390.3	0.0239
3	3.701	1551.0	0.0237	5.367	1551.0	0.0237	16.222	1484.1	0.0237
4	4.029	1608.0	0.0236	5.825	1608.0	0.0236	17.265	1515.4	0.0236
5	4.206	1631.1	0.0234	6.064	1631.1	0.0234	17.702	1521.9	0.0234
6	4.310	1639.1	0.0232	6.200	1639.1	0.0232	17.901	1521.1	0.0233
7	4.378	1642.1	0.0231	6.287	1642.1	0.0231	18.011	1518.4	0.0231
8	4.425	1642.8	0.0229	6.346	1642.8	0.0229	18.092	1515.6	0.0229
9	4.458	1642.5	0.0228	6.389	1642.5	0.0228	18.166	1513.5	0.0228
10	4.481	1641.6	0.0226	6.420	1641.6	0.0226	18.241	1512.2	0.0226
11	4.492	1639.9	0.0225	6.435	1639.9	0.0225	18.312	1511.6	0.0225
12	4.480	1636.6	0.0223	6.424	1636.6	0.0223	18.363	1511.5	0.0223
13	4.433	1630.2	0.0222	6.369	1630.2	0.0222	18.363	1511.2	0.0222
14	4.340	1618.5	0.0220	6.253	1618.5	0.0220	18.268	1509.4	0.0221
15	4.184	1597.6	0.0219	6.049	1597.6	0.0219	17.990	1502.6	0.0219
16	3.919	1551.7	0.0218	5.686	1551.7	0.0218	17.278	1482.3	0.0218
17	3.447	1454.3	0.0217	5.014	1454.3	0.0217	15.528	1413.7	0.0217
18	2.490	1234.0	0.0216	3.618	1234.0	0.0216	11.219	1219.8	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	9.600	1197.0	0.0240	12.408	1163.4	0.0239	12.988	1163.4	0.0239
2	13.992	1390.3	0.0239	17.954	1310.2	0.0238	18.762	1310.2	0.0238
3	16.454	1484.1	0.0237	20.890	1344.8	0.0236	21.780	1344.8	0.0236
4	17.505	1515.4	0.0236	22.035	1339.3	0.0235	22.935	1339.3	0.0235
5	17.943	1521.9	0.0234	22.455	1328.6	0.0233	23.349	1328.6	0.0233
6	18.141	1521.1	0.0233	22.619	1318.0	0.0232	23.503	1318.0	0.0232
7	18.251	1518.4	0.0231	22.703	1309.6	0.0230	23.578	1309.6	0.0230
8	18.332	1515.6	0.0229	22.770	1303.3	0.0229	23.636	1303.3	0.0229
9	18.406	1513.5	0.0228	22.841	1298.8	0.0227	23.697	1298.8	0.0227
10	18.482	1512.2	0.0226	22.922	1295.4	0.0226	23.766	1295.4	0.0226
11	18.555	1511.6	0.0225	23.009	1293.4	0.0225	23.839	1293.4	0.0225
12	18.607	1511.5	0.0223	23.086	1293.3	0.0223	23.901	1293.3	0.0223
13	18.609	1511.2	0.0222	23.126	1295.8	0.0222	23.929	1295.8	0.0222
14	18.518	1509.4	0.0221	23.087	1301.6	0.0221	23.882	1301.6	0.0221
15	18.242	1502.6	0.0219	22.867	1309.8	0.0219	23.660	1309.8	0.0219
16	17.528	1482.3	0.0218	22.148	1313.9	0.0218	22.936	1313.9	0.0218
17	15.761	1413.7	0.0217	20.107	1297.1	0.0217	20.851	1297.1	0.0217
18	11.389	1219.8	0.0216	14.617	1166.7	0.0216	15.176	1166.7	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-116. Burnup and TH Feedback Parameters by Axial Node for Assembly H10 (Cont'd)

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	14.335	757.5	0.0224	14.910	769.9	0.0224	16.435	789.3	0.0225
2	20.918	826.7	0.0224	21.807	834.9	0.0224	24.088	848.0	0.0224
3	24.379	854.8	0.0223	25.416	856.2	0.0223	28.011	860.4	0.0224
4	25.751	865.9	0.0223	26.845	861.4	0.0223	29.527	858.8	0.0223
5	26.274	870.2	0.0222	27.386	861.3	0.0222	30.077	854.9	0.0223
6	26.482	871.0	0.0222	27.597	859.1	0.0222	30.273	850.6	0.0222
7	26.582	870.0	0.0221	27.694	856.3	0.0221	30.352	846.6	0.0221
8	26.647	867.9	0.0221	27.755	853.3	0.0221	30.397	843.2	0.0221
9	26.704	865.2	0.0220	27.808	850.4	0.0220	30.439	840.3	0.0220
10	26.763	862.3	0.0220	27.862	847.6	0.0220	30.486	837.9	0.0220
11	26.820	859.2	0.0219	27.917	845.2	0.0219	30.539	836.1	0.0219
12	26.863	856.3	0.0219	27.958	843.3	0.0219	30.585	835.0	0.0219
13	26.861	853.1	0.0218	27.955	841.7	0.0218	30.592	834.7	0.0218
14	26.763	848.8	0.0218	27.853	840.1	0.0218	30.501	835.0	0.0218
15	26.450	841.9	0.0217	27.525	837.2	0.0217	30.171	834.9	0.0217
16	25.557	830.6	0.0217	26.592	831.0	0.0217	29.188	833.7	0.0217
17	23.129	807.2	0.0216	24.054	813.8	0.0216	26.433	824.1	0.0216
18	16.630	739.0	0.0216	17.241	750.2	0.0216	18.862	767.2	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	18.869	821.2	0.0225	20.099	687.8	0.0222	21.716	717.3	0.0222
2	27.570	869.4	0.0225	29.465	720.7	0.0221	31.811	746.0	0.0222
3	31.863	873.5	0.0224	34.114	737.0	0.0221	36.751	759.7	0.0221
4	33.405	868.0	0.0224	35.838	747.0	0.0221	38.558	761.9	0.0221
5	33.903	860.9	0.0223	36.435	751.7	0.0220	39.166	760.3	0.0221
6	34.048	854.6	0.0222	36.632	753.7	0.0220	39.351	757.8	0.0220
7	34.090	849.9	0.0222	36.700	754.0	0.0220	39.403	755.3	0.0220
8	34.113	846.4	0.0221	36.732	753.2	0.0219	39.422	753.1	0.0220
9	34.143	843.7	0.0221	36.758	751.8	0.0219	39.440	751.4	0.0219
10	34.186	841.7	0.0220	36.790	749.9	0.0218	39.468	749.9	0.0219
11	34.242	840.2	0.0220	36.825	747.6	0.0218	39.505	748.9	0.0218
12	34.299	839.4	0.0219	36.852	744.8	0.0218	39.538	748.3	0.0218
13	34.326	839.9	0.0219	36.837	741.2	0.0217	39.535	748.1	0.0218
14	34.260	841.6	0.0218	36.709	736.3	0.0217	39.418	748.1	0.0217
15	33.933	844.6	0.0218	36.286	729.1	0.0217	38.992	747.6	0.0217
16	32.807	847.1	0.0217	34.998	717.9	0.0217	37.646	744.3	0.0217
17	29.384	840.4	0.0217	31.266	699.7	0.0216	33.675	730.8	0.0216
18	20.843	794.1	0.0216	22.050	664.5	0.0216	23.692	695.8	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-116. Burnup and TH Feedback Parameters by Axial Node for Assembly H10 (Cont'd)

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	23.433	752.7	0.0223
2	34.166	778.9	0.0223
3	39.291	786.3	0.0222
4	41.105	782.6	0.0222
5	41.679	777.6	0.0221
6	41.833	773.4	0.0221
7	41.864	770.3	0.0220
8	41.869	768.0	0.0220
9	41.879	766.4	0.0220
10	41.902	765.1	0.0219
11	41.937	764.2	0.0219
12	41.974	763.9	0.0218
13	41.983	764.4	0.0218
14	41.892	766.2	0.0218
15	41.502	769.1	0.0217
16	40.171	771.7	0.0217
17	36.067	765.3	0.0216
18	25.416	730.0	0.0216

Table 4-117. Burnup and TH Feedback Parameters by Axial Node for Assembly H12

Axial	Burnup	SP22 to SP23		Burnup	SP23 to SP24		Burnup	SP24 to SP25	
Node	SP23	T-Fuel	Spec.Vol	SP24	T-Fuel	Spec.Vol	SP25	T-Fuel	Spec.Vol
1	1.978	1184.9	0.0239	2.892	1184.9	0.0239	9.179	1190.9	0.0240
2	2.905	1395.9	0.0238	4.241	1395.9	0.0238	13.343	1377.2	0.0239
3	3.521	1521.2	0.0236	5.125	1521.2	0.0236	15.784	1472.0	0.0237
4	3.846	1578.1	0.0235	5.578	1578.1	0.0235	16.839	1504.8	0.0235
5	4.020	1601.3	0.0233	5.811	1601.3	0.0233	17.256	1511.1	0.0234
6	4.128	1611.4	0.0232	5.950	1611.4	0.0232	17.457	1510.2	0.0232
7	4.201	1616.1	0.0230	6.042	1616.1	0.0230	17.580	1507.9	0.0231
8	4.251	1617.5	0.0229	6.105	1617.5	0.0229	17.671	1505.7	0.0229
9	4.285	1617.6	0.0227	6.150	1617.6	0.0227	17.752	1504.0	0.0228
10	4.310	1617.1	0.0226	6.182	1617.1	0.0226	17.835	1503.0	0.0226
11	4.329	1616.2	0.0224	6.208	1616.2	0.0224	17.932	1503.2	0.0225
12	4.344	1616.1	0.0223	6.233	1616.1	0.0223	18.067	1505.3	0.0223
13	4.331	1615.7	0.0222	6.227	1615.7	0.0222	18.197	1509.0	0.0222
14	4.256	1607.3	0.0220	6.138	1607.3	0.0220	18.171	1509.2	0.0221
15	4.106	1586.0	0.0219	5.942	1586.0	0.0219	17.909	1502.7	0.0219
16	3.843	1539.2	0.0218	5.583	1539.2	0.0218	17.182	1481.7	0.0218
17	3.384	1443.6	0.0217	4.929	1443.6	0.0217	15.437	1411.9	0.0217
18	2.477	1232.8	0.0216	3.603	1232.8	0.0216	11.255	1222.4	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
DP2	403.4 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-117. Burnup and TH Feedback Parameters by Axial Node for Assembly H12 (Cont'd)

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	9.318	1190.9	0.0240	12.102	1158.7	0.0240	12.688	1158.7	0.0240
2	13.544	1377.2	0.0239	17.502	1315.5	0.0238	18.325	1315.5	0.0238
3	16.015	1472.0	0.0237	20.488	1359.3	0.0237	21.406	1359.3	0.0237
4	17.079	1504.8	0.0235	21.662	1355.6	0.0235	22.599	1355.6	0.0235
5	17.498	1511.1	0.0234	22.064	1343.3	0.0234	23.001	1343.3	0.0234
6	17.698	1510.2	0.0232	22.231	1332.5	0.0232	23.163	1332.5	0.0232
7	17.821	1507.9	0.0231	22.332	1324.5	0.0230	23.257	1324.5	0.0230
8	17.912	1505.7	0.0229	22.414	1318.7	0.0229	23.331	1318.7	0.0229
9	17.994	1504.0	0.0228	22.497	1314.6	0.0228	23.405	1314.6	0.0228
10	18.078	1503.0	0.0226	22.591	1311.9	0.0226	23.486	1311.9	0.0226
11	18.177	1503.2	0.0225	22.713	1310.5	0.0225	23.591	1310.5	0.0225
12	18.314	1505.3	0.0223	22.891	1311.8	0.0223	23.749	1311.8	0.0223
13	18.449	1509.0	0.0222	23.086	1316.8	0.0222	23.923	1316.8	0.0222
14	18.426	1509.2	0.0221	23.126	1323.4	0.0221	23.951	1323.4	0.0221
15	18.166	1502.7	0.0219	22.923	1331.6	0.0220	23.744	1331.6	0.0220
16	17.437	1481.7	0.0218	22.183	1335.1	0.0218	22.997	1335.1	0.0218
17	15.673	1411.9	0.0217	20.122	1316.1	0.0217	20.889	1316.1	0.0217
18	11.428	1222.4	0.0216	14.729	1179.9	0.0216	15.303	1179.9	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	15.690	989.5	0.0236	16.936	999.8	0.0235	20.119	1010.7	0.0235
2	22.967	1115.9	0.0235	24.836	1114.1	0.0234	29.464	1108.2	0.0234
3	26.981	1177.7	0.0234	29.167	1162.5	0.0233	34.455	1150.2	0.0233
4	28.593	1200.9	0.0232	30.898	1177.1	0.0232	36.374	1160.9	0.0232
5	29.024	1192.7	0.0231	31.292	1161.5	0.0231	36.620	1138.5	0.0230
6	29.283	1193.8	0.0230	31.554	1158.0	0.0229	36.845	1130.0	0.0229
7	29.442	1193.4	0.0228	31.716	1155.0	0.0228	36.986	1124.0	0.0228
8	29.549	1191.2	0.0227	31.821	1151.3	0.0227	37.077	1118.9	0.0227
9	29.634	1187.7	0.0226	31.903	1147.7	0.0226	37.153	1115.0	0.0226
10	29.714	1183.8	0.0225	31.983	1144.4	0.0225	37.234	1112.1	0.0225
11	29.814	1179.8	0.0224	32.085	1141.9	0.0224	37.351	1110.4	0.0224
12	30.022	1179.5	0.0223	32.313	1143.3	0.0223	37.637	1112.6	0.0223
13	30.528	1209.7	0.0221	32.945	1171.3	0.0221	38.580	1139.0	0.0221
14	30.528	1206.2	0.0220	32.973	1176.4	0.0220	38.713	1148.5	0.0220
15	30.141	1192.4	0.0219	32.562	1169.4	0.0219	38.314	1149.4	0.0219
16	29.047	1167.9	0.0218	31.385	1149.8	0.0218	37.035	1141.1	0.0218
17	26.253	1119.9	0.0217	28.371	1111.9	0.0217	33.590	1103.6	0.0217
18	18.878	983.2	0.0216	20.327	985.9	0.0216	23.994	990.0	0.0216

Statepoint	EFPD / Cycle
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-118. Burnup and TH Feedback Parameters by Axial Node for Assembly H14

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	1.554	1053.0	0.0235	2.266	1053.0	0.0235	7.248	1072.4	0.0235
2	2.593	1297.7	0.0234	3.754	1297.7	0.0234	11.436	1269.1	0.0234
3	3.215	1416.4	0.0233	4.623	1416.4	0.0233	13.572	1347.6	0.0233
4	3.541	1467.5	0.0232	5.065	1467.5	0.0232	14.461	1370.9	0.0231
5	3.724	1489.4	0.0231	5.302	1489.4	0.0231	14.838	1374.6	0.0230
6	3.835	1498.6	0.0229	5.440	1498.6	0.0229	15.010	1372.2	0.0229
7	3.904	1501.9	0.0228	5.525	1501.9	0.0228	15.100	1368.3	0.0228
8	3.949	1502.5	0.0227	5.578	1502.5	0.0227	15.156	1364.8	0.0226
9	3.978	1501.8	0.0225	5.612	1501.8	0.0225	15.200	1362.1	0.0225
10	3.994	1500.3	0.0224	5.632	1500.3	0.0224	15.242	1360.5	0.0224
11	3.998	1498.5	0.0223	5.640	1498.5	0.0223	15.285	1359.9	0.0223
12	3.987	1496.1	0.0222	5.630	1496.1	0.0222	15.325	1360.5	0.0222
13	3.951	1491.7	0.0221	5.591	1491.7	0.0221	15.342	1361.8	0.0221
14	3.876	1482.6	0.0220	5.501	1482.6	0.0220	15.293	1362.3	0.0220
15	3.736	1463.4	0.0218	5.325	1463.4	0.0218	15.087	1359.0	0.0219
16	3.477	1421.7	0.0217	4.982	1421.7	0.0217	14.491	1341.9	0.0218
17	2.960	1324.5	0.0217	4.269	1324.5	0.0217	12.855	1281.9	0.0217
18	1.800	1065.0	0.0216	2.616	1065.0	0.0216	8.285	1077.8	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	7.362	1072.4	0.0235	9.670	1090.3	0.0235	10.157	1090.3	0.0235
2	11.605	1269.1	0.0234	14.942	1226.6	0.0234	15.632	1226.6	0.0234
3	13.764	1347.6	0.0233	17.488	1262.3	0.0232	18.248	1262.3	0.0232
4	14.658	1370.9	0.0231	18.456	1259.2	0.0231	19.226	1259.2	0.0231
5	15.036	1374.6	0.0230	18.819	1248.7	0.0230	19.585	1248.7	0.0230
6	15.207	1372.2	0.0229	18.963	1239.0	0.0229	19.721	1239.0	0.0229
7	15.297	1368.3	0.0228	19.032	1231.6	0.0228	19.784	1231.6	0.0228
8	15.353	1364.8	0.0226	19.077	1226.3	0.0226	19.822	1226.3	0.0226
9	15.398	1362.1	0.0225	19.119	1222.5	0.0225	19.856	1222.5	0.0225
10	15.440	1360.5	0.0224	19.166	1219.9	0.0224	19.893	1219.9	0.0224
11	15.484	1359.9	0.0223	19.223	1218.4	0.0223	19.938	1218.4	0.0223
12	15.525	1360.5	0.0222	19.286	1218.5	0.0222	19.989	1218.5	0.0222
13	15.544	1361.8	0.0221	19.340	1221.0	0.0221	20.031	1221.0	0.0221
14	15.498	1362.3	0.0220	19.341	1226.6	0.0220	20.026	1226.6	0.0220
15	15.295	1359.0	0.0219	19.188	1235.1	0.0219	19.872	1235.1	0.0219
16	14.697	1341.9	0.0218	18.592	1241.7	0.0218	19.271	1241.7	0.0218
17	13.047	1281.9	0.0217	16.710	1224.2	0.0217	17.351	1224.2	0.0217
18	8.418	1077.8	0.0216	11.002	1085	0.0216	11.462	1085	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-118. Burnup and TH Feedback Parameters by Axial Node for Assembly H14 (Cont'd)

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	13.114	1003.1	0.0236	14.342	1013.5	0.0236	17.477	1026.1	0.0235
2	20.264	1139.8	0.0235	22.117	1130.9	0.0235	26.686	1122.8	0.0234
3	23.884	1208.1	0.0234	26.066	1186.7	0.0234	31.302	1159.1	0.0233
4	25.384	1241.8	0.0233	27.702	1206.2	0.0232	33.153	1167.6	0.0232
5	26.012	1256.0	0.0232	28.379	1210.1	0.0231	33.868	1163.4	0.0231
6	26.294	1261.1	0.0230	28.677	1208.3	0.0230	34.154	1156.9	0.0229
7	26.438	1261.9	0.0229	28.825	1204.8	0.0228	34.284	1150.9	0.0228
8	26.520	1260.5	0.0228	28.908	1201.1	0.0227	34.355	1146.0	0.0227
9	26.574	1257.8	0.0226	28.962	1197.6	0.0226	34.405	1142.3	0.0226
10	26.616	1254.6	0.0225	29.005	1194.6	0.0225	34.454	1139.7	0.0225
11	26.657	1251.3	0.0224	29.049	1192.3	0.0224	34.515	1138.4	0.0223
12	26.698	1248.3	0.0223	29.098	1191.1	0.0222	34.596	1138.7	0.0222
13	26.711	1244.7	0.0221	29.120	1190.9	0.0221	34.667	1140.9	0.0221
14	26.616	1237.0	0.0220	29.025	1189.3	0.0220	34.615	1143.4	0.0220
15	26.269	1222.0	0.0219	28.652	1183.5	0.0219	34.252	1143.9	0.0219
16	25.300	1194.2	0.0218	27.599	1168.2	0.0218	33.103	1138.1	0.0218
17	22.652	1141.7	0.0217	24.727	1129.3	0.0217	29.811	1110.7	0.0217
18	14.986	1008.9	0.0216	16.411	1012.6	0.0216	20.014	1013.7	0.0216

Table 4-119. Burnup and TH Feedback Parameters by Axial Node for Assembly H17

Axial	Burnup	SP22 to SP23		Burnup	SP23 to SP24		Burnup	SP24 to SP25	
Node	SP23	T-Fuel	Spec.Vol	SP24	T-Fuel	Spec.Vol	SP25	T-Fuel	Spec.Vol
1	2.066	1199.8	0.0240	3.013	1199.8	0.0240	9.468	1200.9	0.0240
2	3.005	1415.9	0.0239	4.383	1415.9	0.0239	13.708	1391.9	0.0239
3	3.622	1543.2	0.0237	5.269	1543.2	0.0237	16.173	1488.4	0.0238
4	3.945	1600.5	0.0236	5.722	1600.5	0.0236	17.232	1521.3	0.0236
5	4.117	1623.5	0.0234	5.953	1623.5	0.0234	17.647	1525.7	0.0234
6	4.225	1631.6	0.0232	6.092	1631.6	0.0232	17.845	1524.6	0.0233
7	4.297	1634.9	0.0231	6.184	1634.9	0.0231	17.969	1522.2	0.0231
8	4.348	1636.1	0.0229	6.249	1636.1	0.0229	18.062	1519.8	0.0230
9	4.384	1636.1	0.0228	6.295	1636.1	0.0228	18.146	1518.0	0.0228
10	4.411	1635.5	0.0226	6.330	1635.5	0.0226	18.232	1517.0	0.0227
11	4.433	1634.7	0.0225	6.360	1634.7	0.0225	18.336	1517.2	0.0225
12	4.452	1635.0	0.0223	6.390	1635.0	0.0223	18.480	1519.5	0.0224
13	4.443	1635.0	0.0222	6.389	1635.0	0.0222	18.621	1523.5	0.0222
14	4.369	1627.0	0.0221	6.301	1627.0	0.0221	18.602	1523.7	0.0221
15	4.219	1607.2	0.0219	6.106	1607.2	0.0219	18.341	1517.1	0.0219
16	3.956	1563.0	0.0218	5.745	1563.0	0.0218	17.612	1495.6	0.0218
17	3.494	1466.5	0.0217	5.086	1466.5	0.0217	15.844	1428.2	0.0217
18	2.564	1251.2	0.0216	3.726	1251.2	0.0216	11.560	1235.0	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-119. Burnup and TH Feedback Parameters by Axial Node for Assembly H17 (Cont'd)

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	9.612	1200.9	0.0240	12.461	1171.9	0.0240	13.059	1171.9	0.0240
2	13.914	1391.9	0.0239	17.941	1323.6	0.0239	18.776	1323.6	0.0239
3	16.408	1488.4	0.0238	20.943	1362.8	0.0237	21.871	1362.8	0.0237
4	17.477	1521.3	0.0236	22.115	1358.2	0.0235	23.063	1358.2	0.0235
5	17.893	1525.7	0.0234	22.510	1347.0	0.0234	23.458	1347.0	0.0234
6	18.090	1524.6	0.0233	22.673	1335.9	0.0232	23.615	1335.9	0.0232
7	18.213	1522.2	0.0231	22.772	1327.6	0.0231	23.708	1327.6	0.0231
8	18.306	1519.8	0.0230	22.855	1321.5	0.0229	23.782	1321.5	0.0229
9	18.391	1518.0	0.0228	22.939	1317.1	0.0228	23.856	1317.1	0.0228
10	18.478	1517.0	0.0227	23.035	1314.0	0.0226	23.939	1314.0	0.0226
11	18.583	1517.2	0.0225	23.161	1312.3	0.0225	24.047	1312.3	0.0225
12	18.731	1519.5	0.0224	23.349	1313.3	0.0224	24.213	1313.3	0.0224
13	18.876	1523.5	0.0222	23.554	1318.0	0.0222	24.397	1318.0	0.0222
14	18.860	1523.7	0.0221	23.601	1324.5	0.0221	24.430	1324.5	0.0221
15	18.602	1517.1	0.0219	23.400	1332.8	0.0220	24.225	1332.8	0.0220
16	17.871	1495.6	0.0218	22.659	1336.0	0.0218	23.477	1336.0	0.0218
17	16.084	1428.2	0.0217	20.577	1315.6	0.0217	21.347	1315.6	0.0217
18	11.736	1235.0	0.0216	15.071	1181.6	0.0216	15.648	1181.6	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	14.105	713.5	0.0222	14.554	724.6	0.0222	15.759	742.5	0.0223
2	20.459	768.9	0.0222	21.156	777.3	0.0222	22.962	791.3	0.0222
3	23.899	790.8	0.0222	24.711	793.9	0.0222	26.761	801.1	0.0222
4	25.256	799.0	0.0221	26.111	797.4	0.0221	28.224	799.2	0.0221
5	25.736	802.2	0.0221	26.604	797.2	0.0221	28.722	795.6	0.0221
6	25.934	802.6	0.0220	26.803	795.3	0.0220	28.907	791.6	0.0221
7	26.042	801.4	0.0220	26.908	792.8	0.0220	28.995	788.0	0.0220
8	26.117	799.3	0.0220	26.979	790.0	0.0220	29.050	784.8	0.0220
9	26.184	796.8	0.0219	27.041	787.4	0.0219	29.100	782.1	0.0219
10	26.253	793.9	0.0219	27.105	784.8	0.0219	29.155	779.7	0.0219
11	26.342	790.7	0.0218	27.190	782.2	0.0218	29.234	777.6	0.0219
12	26.480	786.9	0.0218	27.323	779.3	0.0218	29.362	775.5	0.0218
13	26.626	782.4	0.0218	27.463	776.3	0.0218	29.501	773.7	0.0218
14	26.610	777.8	0.0217	27.440	773.9	0.0217	29.479	773.1	0.0217
15	26.329	772.0	0.0217	27.146	771.1	0.0217	29.181	773.2	0.0217
16	25.448	763.1	0.0217	26.233	766.2	0.0217	28.227	772.6	0.0217
17	23.049	744.5	0.0216	23.748	752.2	0.0216	25.568	764.5	0.0216
18	16.719	691.4	0.0216	17.175	701.7	0.0216	18.403	717.7	0.0216

Statepoint	EFPD / Cycle
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-119. Burnup and TH Feedback Parameters by Axial Node for Assembly H17 (Cont'd)

Axial	Burnup	SP31 to SP32		Burnup	SP32 to DP1		Burnup	DP1 to DP2	
Node	SP32	T-Fuel	Spec.Vol	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol
1	17.720	773.1	0.0223	19.367	735.0	0.0224	21.466	766.9	0.0224
2	25.782	815.5	0.0223	28.350	783.8	0.0223	31.414	806.0	0.0224
3	29.883	815.8	0.0222	32.955	804.6	0.0223	36.415	823.8	0.0223
4	31.360	811.2	0.0222	34.689	818.1	0.0223	38.260	826.9	0.0223
5	31.812	805.3	0.0221	35.277	824.8	0.0222	38.862	824.8	0.0222
6	31.952	800.1	0.0221	35.489	827.4	0.0221	39.057	821.4	0.0222
7	32.007	796.1	0.0221	35.578	827.8	0.0221	39.126	818.0	0.0221
8	32.041	793.0	0.0220	35.625	826.8	0.0220	39.157	815.1	0.0221
9	32.077	790.5	0.0220	35.661	825.1	0.0220	39.183	812.9	0.0220
10	32.127	788.5	0.0219	35.698	822.9	0.0219	39.220	811.3	0.0220
11	32.205	786.9	0.0219	35.756	820.2	0.0219	39.284	810.2	0.0219
12	32.339	785.4	0.0218	35.858	816.8	0.0219	39.399	809.6	0.0219
13	32.481	784.5	0.0218	35.949	812.2	0.0218	39.508	809.4	0.0218
14	32.463	785.1	0.0218	35.856	805.8	0.0218	39.434	809.8	0.0218
15	32.154	787.2	0.0217	35.419	796.2	0.0217	38.999	809.5	0.0217
16	31.053	789.1	0.0217	34.096	780.6	0.0217	37.604	805.4	0.0217
17	27.801	785.4	0.0216	30.407	756.7	0.0216	33.593	786.4	0.0216
18	19.851	744.6	0.0216	21.500	704.9	0.0216	23.654	739.1	0.0216

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	23.645	804.0	0.0225
2	34.405	837.9	0.0224
3	39.648	848.3	0.0224
4	41.503	843.6	0.0223
5	42.066	837.2	0.0223
6	42.223	831.8	0.0222
7	42.265	827.8	0.0222
8	42.280	825.0	0.0221
9	42.298	823.0	0.0221
10	42.331	821.6	0.0220
11	42.394	820.6	0.0220
12	42.513	820.1	0.0219
13	42.635	820.6	0.0219
14	42.593	822.9	0.0218
15	42.204	826.9	0.0218
16	40.828	830.5	0.0217
17	36.644	821.7	0.0217
18	25.844	774.4	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-120. Burnup and TH Feedback Parameters by Axial Node for Assembly H19

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	1.866	1142.3	0.0238	2.718	1142.3	0.0238	8.575	1152.3	0.0238
2	2.771	1353.4	0.0237	4.031	1353.4	0.0237	12.553	1333.0	0.0237
3	3.392	1478.7	0.0235	4.915	1478.7	0.0235	14.918	1424.6	0.0235
4	3.730	1535.9	0.0234	5.380	1535.9	0.0234	15.953	1455.4	0.0234
5	3.915	1559.2	0.0232	5.624	1559.2	0.0232	16.366	1460.9	0.0233
6	4.031	1569.7	0.0231	5.772	1569.7	0.0231	16.569	1459.6	0.0231
7	4.109	1574.9	0.0230	5.869	1574.9	0.0230	16.694	1457.0	0.0230
8	4.162	1577.1	0.0228	5.935	1577.1	0.0228	16.783	1454.6	0.0228
9	4.198	1577.7	0.0227	5.980	1577.7	0.0227	16.858	1453.0	0.0227
10	4.223	1577.6	0.0225	6.012	1577.6	0.0225	16.934	1452.3	0.0226
11	4.244	1577.3	0.0224	6.041	1577.3	0.0224	17.029	1453.2	0.0224
12	4.265	1578.4	0.0223	6.073	1578.4	0.0223	17.172	1457.1	0.0223
13	4.260	1579.7	0.0221	6.079	1579.7	0.0221	17.324	1462.3	0.0222
14	4.193	1572.8	0.0220	6.002	1572.8	0.0220	17.327	1464.1	0.0220
15	4.046	1552.6	0.0219	5.814	1552.6	0.0219	17.094	1459.3	0.0219
16	3.771	1505.2	0.0218	5.443	1505.2	0.0218	16.386	1437.2	0.0218
17	3.279	1407.3	0.0217	4.751	1407.3	0.0217	14.642	1369.2	0.0217
18	2.349	1197.4	0.0216	3.406	1197.4	0.0216	10.566	1187.1	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	8.707	1152.3	0.0238	11.345	1139.4	0.0238	11.903	1139.4	0.0238
2	12.743	1333.0	0.0237	16.485	1290.1	0.0237	17.268	1290.1	0.0237
3	15.136	1424.6	0.0235	19.363	1332.7	0.0236	20.236	1332.7	0.0236
4	16.178	1455.4	0.0234	20.509	1329.6	0.0234	21.402	1329.6	0.0234
5	16.593	1460.9	0.0233	20.908	1317.1	0.0232	21.803	1317.1	0.0232
6	16.795	1459.6	0.0231	21.082	1306.1	0.0231	21.972	1306.1	0.0231
7	16.920	1457.0	0.0230	21.188	1298.0	0.0230	22.073	1298.0	0.0230
8	17.009	1454.6	0.0228	21.271	1292.4	0.0228	22.148	1292.4	0.0228
9	17.085	1453.0	0.0227	21.348	1288.5	0.0227	22.217	1288.5	0.0227
10	17.162	1452.3	0.0226	21.435	1285.9	0.0226	22.293	1285.9	0.0226
11	17.258	1453.2	0.0224	21.554	1284.6	0.0224	22.396	1284.6	0.0224
12	17.405	1457.1	0.0223	21.742	1285.8	0.0223	22.564	1285.8	0.0223
13	17.560	1462.3	0.0222	21.959	1290.7	0.0222	22.762	1290.7	0.0222
14	17.567	1464.1	0.0220	22.028	1297.7	0.0221	22.820	1297.7	0.0221
15	17.337	1459.3	0.0219	21.856	1306.8	0.0219	22.644	1306.8	0.0219
16	16.626	1437.2	0.0218	21.138	1312.8	0.0218	21.920	1312.8	0.0218
17	14.865	1369.2	0.0217	19.096	1294.9	0.0217	19.832	1294.9	0.0217
18	10.730	1187.1	0.0216	13.866	1159.3	0.0216	14.416	1159.3	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-120. Burnup and TH Feedback Parameters by Axial Node for Assembly H19 (Cont'd)

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	13.797	840.0	0.0228	14.593	853.0	0.0228	16.677	872.6	0.0228
2	20.306	939.7	0.0228	21.537	943.1	0.0227	24.640	949.9	0.0227
3	23.915	980.7	0.0227	25.356	974.0	0.0227	28.890	967.5	0.0227
4	25.398	998.0	0.0226	26.920	982.2	0.0226	30.575	967.5	0.0226
5	25.961	1005.1	0.0225	27.510	982.8	0.0225	31.180	962.6	0.0225
6	26.212	1006.7	0.0225	27.767	980.1	0.0224	31.420	956.5	0.0224
7	26.352	1005.5	0.0224	27.905	976.3	0.0224	31.535	951.1	0.0224
8	26.442	1002.9	0.0223	27.991	972.4	0.0223	31.602	946.7	0.0223
9	26.511	999.6	0.0222	28.055	968.7	0.0222	31.654	943.1	0.0222
10	26.576	995.9	0.0221	28.115	965.3	0.0221	31.709	940.3	0.0221
11	26.660	991.8	0.0221	28.197	962.0	0.0221	31.791	938.0	0.0221
12	26.799	986.8	0.0220	28.333	958.6	0.0220	31.933	936.3	0.0220
13	26.950	980.7	0.0219	28.481	955.0	0.0219	32.092	935.2	0.0219
14	26.933	973.7	0.0219	28.458	952.1	0.0219	32.085	935.4	0.0219
15	26.627	963.7	0.0218	28.133	947.9	0.0218	31.760	935.3	0.0218
16	25.662	947.1	0.0217	27.113	939.4	0.0217	30.677	932.9	0.0217
17	23.081	913.2	0.0217	24.379	915.2	0.0217	27.651	918.3	0.0217
18	16.479	815.0	0.0216	17.334	826.4	0.0216	19.568	842.6	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	19.909	903.2	0.0228	20.867	658.9	0.0220	22.126	682.1	0.0221
2	29.228	962.2	0.0228	30.723	684.4	0.0220	32.565	705.0	0.0220
3	33.959	971.4	0.0227	35.740	698.5	0.0220	37.808	715.4	0.0220
4	35.676	965.7	0.0226	37.599	705.5	0.0220	39.726	716.4	0.0220
5	36.217	957.0	0.0225	38.214	708.6	0.0219	40.344	714.7	0.0220
6	36.392	949.1	0.0225	38.426	709.7	0.0219	40.543	712.5	0.0219
7	36.463	943.2	0.0224	38.513	709.6	0.0219	40.615	710.3	0.0219
8	36.504	938.8	0.0223	38.559	708.7	0.0218	40.648	708.4	0.0219
9	36.545	935.6	0.0222	38.595	707.5	0.0218	40.676	706.9	0.0218
10	36.598	933.3	0.0222	38.639	706.1	0.0218	40.716	705.7	0.0218
11	36.690	931.5	0.0221	38.716	704.3	0.0218	40.793	704.8	0.0218
12	36.853	930.4	0.0220	38.856	702.1	0.0217	40.936	704.1	0.0218
13	37.035	930.4	0.0220	39.005	699.2	0.0217	41.091	703.6	0.0217
14	37.056	932.5	0.0219	38.980	695.5	0.0217	41.073	703.4	0.0217
15	36.742	936.3	0.0218	38.593	690.2	0.0217	40.684	702.9	0.0217
16	35.503	939.0	0.0217	37.229	681.9	0.0216	39.278	700.6	0.0216
17	31.706	928.3	0.0217	33.187	666.7	0.0216	35.050	690.4	0.0216
18	22.374	867.6	0.0216	23.315	638.9	0.0216	24.575	661.9	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-120. Burnup and TH Feedback Parameters by Axial Node for Assembly H19 (Cont'd)

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	DP2 to SP33 Spec.Vol
1	23.490	712.7	0.0221
2	34.443	734.2	0.0221
3	39.829	739.3	0.0221
4	41.746	735.8	0.0220
5	42.336	731.5	0.0220
6	42.508	728.0	0.0220
7	42.561	725.3	0.0219
8	42.582	723.4	0.0219
9	42.602	722.0	0.0219
10	42.638	720.9	0.0218
11	42.710	720.0	0.0218
12	42.852	719.3	0.0218
13	43.013	719.3	0.0218
14	43.010	720.3	0.0217
15	42.646	722.4	0.0217
16	41.251	724.3	0.0217
17	36.916	719.3	0.0216
18	25.909	690.0	0.0216

Table 4-121. Burnup and TH Feedback Parameters by Axial Node for Assembly H23

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	1.960	1176.8	0.0239	2.860	1176.8	0.0239	9.011	1180.1	0.0239
2	2.914	1391.6	0.0238	4.242	1391.6	0.0238	13.191	1365.5	0.0238
3	3.568	1520.8	0.0237	5.171	1520.8	0.0237	15.676	1459.5	0.0237
4	3.920	1580.0	0.0235	5.659	1580.0	0.0235	16.764	1491.3	0.0235
5	4.114	1604.5	0.0234	5.914	1604.5	0.0234	17.202	1497.2	0.0234
6	4.235	1615.1	0.0232	6.069	1615.1	0.0232	17.415	1496.4	0.0232
7	4.317	1619.4	0.0230	6.172	1619.4	0.0230	17.548	1494.1	0.0231
8	4.374	1620.8	0.0229	6.241	1620.8	0.0229	17.643	1491.8	0.0229
9	4.413	1621.0	0.0227	6.290	1621.0	0.0227	17.724	1489.9	0.0228
10	4.441	1620.3	0.0226	6.327	1620.3	0.0226	17.808	1488.9	0.0226
11	4.467	1619.9	0.0225	6.363	1619.9	0.0225	17.916	1489.3	0.0225
12	4.493	1621.1	0.0223	6.402	1621.1	0.0223	18.074	1492.3	0.0223
13	4.491	1622.6	0.0222	6.412	1622.6	0.0222	18.240	1497.3	0.0222
14	4.424	1616.4	0.0220	6.336	1616.4	0.0220	18.251	1498.8	0.0221
15	4.274	1597.8	0.0219	6.144	1597.8	0.0219	18.015	1493.7	0.0219
16	3.994	1552.2	0.0218	5.765	1552.2	0.0218	17.288	1472.6	0.0218
17	3.491	1452.4	0.0217	5.057	1452.4	0.0217	15.489	1404.0	0.0217
18	2.521	1234.4	0.0216	3.651	1234.4	0.0216	11.216	1214.9	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
DP2	403.4 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-121. Burnup and TH Feedback Parameters by Axial Node for Assembly H23 (Cont'd)

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	9.147	1180.1	0.0239	11.872	1148.5	0.0239	12.448	1148.5	0.0239
2	13.388	1365.5	0.0238	17.269	1303.9	0.0238	18.080	1303.9	0.0238
3	15.903	1459.5	0.0237	20.291	1347.1	0.0236	21.197	1347.1	0.0236
4	16.999	1491.3	0.0235	21.495	1343.0	0.0235	22.422	1343.0	0.0235
5	17.438	1497.2	0.0234	21.918	1330.5	0.0233	22.846	1330.5	0.0233
6	17.652	1496.4	0.0232	22.100	1319.7	0.0232	23.025	1319.7	0.0232
7	17.783	1494.1	0.0231	22.211	1311.6	0.0230	23.130	1311.6	0.0230
8	17.879	1491.8	0.0229	22.297	1305.8	0.0229	23.209	1305.8	0.0229
9	17.961	1489.9	0.0228	22.380	1301.7	0.0227	23.282	1301.7	0.0227
10	18.046	1488.9	0.0226	22.474	1298.8	0.0226	23.363	1298.8	0.0226
11	18.155	1489.3	0.0225	22.605	1297.4	0.0225	23.476	1297.4	0.0225
12	18.316	1492.3	0.0223	22.808	1298.5	0.0223	23.657	1298.5	0.0223
13	18.486	1497.3	0.0222	23.038	1303.4	0.0222	23.866	1303.4	0.0222
14	18.501	1498.8	0.0221	23.117	1310.3	0.0221	23.931	1310.3	0.0221
15	18.268	1493.7	0.0219	22.944	1318.8	0.0220	23.754	1318.8	0.0220
16	17.538	1472.6	0.0218	22.210	1323.3	0.0218	23.012	1323.3	0.0218
17	15.722	1404.0	0.0217	20.108	1305.5	0.0217	20.865	1305.5	0.0217
18	11.386	1214.9	0.0216	14.640	1172.2	0.0216	15.207	1172.2	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	15.644	1015.8	0.0237	16.965	1025.9	0.0237	20.334	1034.8	0.0237
2	22.930	1140.4	0.0236	24.882	1139.8	0.0236	29.730	1134.6	0.0236
3	26.949	1199.2	0.0234	29.214	1186.8	0.0234	34.732	1177.8	0.0234
4	28.637	1226.3	0.0233	31.035	1204.1	0.0233	36.782	1191.5	0.0233
5	29.306	1238.7	0.0232	31.759	1211.6	0.0232	37.565	1190.7	0.0232
6	29.614	1242.8	0.0230	32.086	1211.9	0.0230	37.889	1185.4	0.0230
7	29.786	1242.5	0.0229	32.262	1209.0	0.0229	38.050	1179.4	0.0229
8	29.896	1239.8	0.0228	32.371	1205.2	0.0228	38.145	1174.2	0.0228
9	29.978	1235.9	0.0226	32.450	1201.2	0.0226	38.218	1170.0	0.0226
10	30.054	1231.2	0.0225	32.524	1197.4	0.0225	38.294	1166.9	0.0225
11	30.149	1225.9	0.0224	32.619	1193.9	0.0224	38.399	1164.6	0.0224
12	30.297	1219.3	0.0223	32.765	1190.4	0.0223	38.564	1163.0	0.0223
13	30.444	1210.8	0.0221	32.909	1186.3	0.0221	38.733	1162.3	0.0222
14	30.403	1200.3	0.0220	32.858	1181.3	0.0220	38.705	1162.6	0.0220
15	30.041	1185.3	0.0219	32.463	1171.9	0.0219	38.304	1161.2	0.0219
16	28.980	1162.3	0.0218	31.320	1152.2	0.0218	37.049	1151.6	0.0218
17	26.213	1119.8	0.0217	28.344	1116.8	0.0217	33.645	1113.8	0.0217
18	18.837	990.2	0.0216	20.313	994.3	0.0216	24.063	999.8	0.0216

Statepoint	EFPD / Cycle
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-122. Burnup and TH Feedback Parameters by Axial Node for Assembly H23a

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	1.960	1176.8	0.0239	2.860	1176.8	0.0239	9.011	1180.1	0.0239
2	2.914	1391.6	0.0238	4.242	1391.6	0.0238	13.191	1365.5	0.0238
3	3.568	1520.8	0.0237	5.171	1520.8	0.0237	15.676	1459.5	0.0237
4	3.920	1580.0	0.0235	5.659	1580.0	0.0235	16.764	1491.3	0.0235
5	4.114	1604.5	0.0234	5.914	1604.5	0.0234	17.202	1497.2	0.0234
6	4.235	1615.1	0.0232	6.069	1615.1	0.0232	17.415	1496.4	0.0232
7	4.317	1619.4	0.0230	6.172	1619.4	0.0230	17.548	1494.1	0.0231
8	4.374	1620.8	0.0229	6.241	1620.8	0.0229	17.643	1491.8	0.0229
9	4.413	1621.0	0.0227	6.290	1621.0	0.0227	17.724	1489.9	0.0228
10	4.441	1620.3	0.0226	6.327	1620.3	0.0226	17.808	1488.9	0.0226
11	4.467	1619.9	0.0225	6.363	1619.9	0.0225	17.916	1489.3	0.0225
12	4.493	1621.1	0.0223	6.402	1621.1	0.0223	18.074	1492.3	0.0223
13	4.491	1622.6	0.0222	6.412	1622.6	0.0222	18.240	1497.3	0.0222
14	4.424	1616.4	0.0220	6.336	1616.4	0.0220	18.251	1498.8	0.0221
15	4.274	1597.8	0.0219	6.144	1597.8	0.0219	18.015	1493.7	0.0219
16	3.994	1552.2	0.0218	5.765	1552.2	0.0218	17.288	1472.6	0.0218
17	3.491	1452.4	0.0217	5.057	1452.4	0.0217	15.489	1404.0	0.0217
18	2.521	1234.4	0.0216	3.651	1234.4	0.0216	11.216	1214.9	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	9.147	1180.1	0.0239	11.872	1148.5	0.0239	12.454	1148.5	0.0239
2	13.388	1365.5	0.0238	17.269	1303.9	0.0238	18.090	1303.9	0.0238
3	15.903	1459.5	0.0237	20.291	1347.1	0.0236	21.208	1347.1	0.0236
4	16.999	1491.3	0.0235	21.495	1343.0	0.0235	22.432	1343.0	0.0235
5	17.438	1497.2	0.0234	21.918	1330.5	0.0233	22.855	1330.5	0.0233
6	17.652	1496.4	0.0232	22.100	1319.7	0.0232	23.033	1319.7	0.0232
7	17.783	1494.1	0.0231	22.211	1311.6	0.0230	23.138	1311.6	0.0230
8	17.879	1491.8	0.0229	22.297	1305.8	0.0229	23.217	1305.8	0.0229
9	17.961	1489.9	0.0228	22.380	1301.7	0.0227	23.290	1301.7	0.0227
10	18.046	1488.9	0.0226	22.474	1298.8	0.0226	23.372	1298.8	0.0226
11	18.155	1489.3	0.0225	22.605	1297.4	0.0225	23.487	1297.4	0.0225
12	18.316	1492.3	0.0223	22.808	1298.5	0.0223	23.671	1298.5	0.0223
13	18.486	1497.3	0.0222	23.038	1303.4	0.0222	23.884	1303.4	0.0222
14	18.501	1498.8	0.0221	23.117	1310.3	0.0221	23.952	1310.3	0.0221
15	18.268	1493.7	0.0219	22.944	1318.8	0.0220	23.776	1318.8	0.0220
16	17.538	1472.6	0.0218	22.210	1323.3	0.0218	23.035	1323.3	0.0218
17	15.722	1404.0	0.0217	20.108	1305.5	0.0217	20.886	1305.5	0.0217
18	11.386	1214.9	0.0216	14.640	1172.2	0.0216	15.222	1172.2	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-122. Burnup and TH Feedback Parameters by Axial Node for Assembly H23a (Cont'd)

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	13.570	727.3	0.0223	14.050	738.3	0.0223	15.327	756.6	0.0223
2	19.950	794.4	0.0223	20.717	801.4	0.0223	22.684	814.2	0.0223
3	23.510	824.2	0.0223	24.423	824.6	0.0223	26.700	828.9	0.0223
4	24.956	836.3	0.0222	25.926	831.0	0.0222	28.296	828.9	0.0222
5	25.490	841.2	0.0222	26.480	831.8	0.0222	28.866	825.6	0.0222
6	25.724	842.4	0.0221	26.719	830.2	0.0221	29.095	821.7	0.0221
7	25.855	841.6	0.0221	26.848	827.8	0.0221	29.211	818.1	0.0221
8	25.945	839.9	0.0220	26.935	825.2	0.0220	29.285	815.0	0.0220
9	26.019	837.7	0.0220	27.005	822.7	0.0220	29.348	812.5	0.0220
10	26.094	835.2	0.0219	27.078	820.3	0.0219	29.416	810.4	0.0219
11	26.197	832.4	0.0219	27.178	818.0	0.0219	29.515	808.6	0.0219
12	26.360	828.9	0.0218	27.339	815.4	0.0218	29.677	806.9	0.0219
13	26.539	824.5	0.0218	27.515	812.7	0.0218	29.857	805.4	0.0218
14	26.555	819.5	0.0218	27.526	810.2	0.0218	29.873	804.9	0.0218
15	26.290	812.7	0.0217	27.246	806.9	0.0217	29.588	804.5	0.0217
16	25.385	801.4	0.0217	26.302	800.6	0.0217	28.591	802.8	0.0217
17	22.900	778.1	0.0216	23.711	783.3	0.0216	25.789	792.6	0.0216
18	16.467	713.0	0.0216	16.988	722.8	0.0216	18.372	738.0	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	17.376	789.4	0.0224	18.633	698.2	0.0222	20.262	725.6	0.0222
2	25.696	837.3	0.0224	27.716	739.5	0.0222	30.145	759.0	0.0222
3	30.089	841.1	0.0223	32.536	755.9	0.0221	35.292	770.8	0.0222
4	31.730	835.5	0.0223	34.390	765.4	0.0221	37.234	772.6	0.0221
5	32.267	829.5	0.0222	35.036	770.2	0.0221	37.890	770.6	0.0221
6	32.456	824.3	0.0222	35.281	771.9	0.0220	38.119	767.7	0.0220
7	32.542	820.2	0.0221	35.392	771.9	0.0220	38.212	764.9	0.0220
8	32.598	817.2	0.0221	35.457	771.0	0.0220	38.262	762.5	0.0220
9	32.652	814.9	0.0220	35.509	769.5	0.0219	38.305	760.6	0.0219
10	32.719	813.2	0.0220	35.566	767.6	0.0219	38.360	759.1	0.0219
11	32.824	811.7	0.0219	35.653	765.3	0.0218	38.450	758.1	0.0219
12	32.999	810.6	0.0219	35.799	762.3	0.0218	38.602	757.2	0.0218
13	33.188	810.0	0.0218	35.945	758.4	0.0218	38.757	756.7	0.0218
14	33.211	810.9	0.0218	35.905	753.4	0.0217	38.730	756.6	0.0217
15	32.911	812.9	0.0217	35.504	746.0	0.0217	38.328	756.2	0.0217
16	31.746	813.8	0.0217	34.160	733.9	0.0217	36.925	752.9	0.0217
17	28.292	808.6	0.0216	30.344	714.0	0.0216	32.844	737.7	0.0216
18	19.995	762.6	0.0216	21.271	671.8	0.0216	22.938	699.6	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-122. Burnup and TH Feedback Parameters by Axial Node for Assembly H23a (Cont'd)

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	21.999	760.2	0.0223
2	32.567	787.1	0.0223
3	37.914	795.3	0.0222
4	39.862	791.3	0.0222
5	40.484	785.8	0.0221
6	40.681	781.3	0.0221
7	40.752	778.0	0.0221
8	40.789	775.6	0.0220
9	40.824	773.9	0.0220
10	40.874	772.6	0.0219
11	40.961	771.6	0.0219
12	41.113	770.9	0.0218
13	41.276	770.9	0.0218
14	41.272	772.5	0.0218
15	40.904	775.5	0.0217
16	39.513	778.0	0.0217
17	35.282	769.9	0.0216
18	24.664	732.4	0.0216

Table 4-123. Burnup and TH Feedback Parameters by Axial Node for Assembly H25

Axial	Burnup	SP22 to SP23		Burnup	SP23 to SP24		Burnup	SP24 to SP25	
Node	SP23	T-Fuel	Spec.Vol	SP24	T-Fuel	Spec.Vol	SP25	T-Fuel	Spec.Vol
1	1.165	934.4	0.0230	1.700	934.4	0.0230	5.475	955.4	0.0230
2	1.983	1141.3	0.0230	2.873	1141.3	0.0230	8.829	1134.8	0.0229
3	2.489	1247.4	0.0229	3.581	1247.4	0.0229	10.598	1209.0	0.0228
4	2.759	1293.4	0.0228	3.947	1293.4	0.0228	11.347	1231.8	0.0228
5	2.909	1313.0	0.0227	4.143	1313.0	0.0227	11.662	1236.2	0.0227
6	2.999	1321.0	0.0226	4.255	1321.0	0.0226	11.802	1234.6	0.0226
7	3.056	1324.0	0.0225	4.324	1324.0	0.0225	11.875	1231.5	0.0225
8	3.094	1324.7	0.0224	4.369	1324.7	0.0224	11.921	1228.7	0.0224
9	3.118	1324.3	0.0223	4.397	1324.3	0.0223	11.957	1226.4	0.0223
10	3.132	1323.2	0.0222	4.415	1323.2	0.0222	11.990	1224.9	0.0222
11	3.137	1321.8	0.0221	4.422	1321.8	0.0221	12.023	1224.3	0.0221
12	3.131	1319.8	0.0220	4.417	1319.8	0.0220	12.055	1224.6	0.0220
13	3.103	1316.3	0.0220	4.387	1316.3	0.0220	12.067	1225.5	0.0220
14	3.043	1308.6	0.0219	4.315	1308.6	0.0219	12.023	1225.7	0.0219
15	2.928	1291.7	0.0218	4.169	1291.7	0.0218	11.842	1221.8	0.0218
16	2.711	1254.0	0.0217	3.882	1254.0	0.0217	11.324	1204.7	0.0217
17	2.284	1166.8	0.0216	3.291	1166.8	0.0216	9.946	1148.2	0.0216
18	1.365	944.0	0.0216	1.981	944.0	0.0216	6.283	962.1	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
DP2	403.4 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-123. Burnup and TH Feedback Parameters by Axial Node for Assembly H25 (Cont'd)

Axial	Burnup	SP25 to SP26		Burnup	SP26 to SP27		Burnup	SP27 to SP28	
Node	SP26	T-Fuel	Spec.Vol	SP27	T-Fuel	Spec.Vol	SP28	T-Fuel	Spec.Vol
1	5.563	955.4	0.0230	7.341	993.3	0.0230	7.719	993.3	0.0230
2	8.961	1134.8	0.0229	11.599	1120.9	0.0230	12.149	1120.9	0.0230
3	10.750	1209.0	0.0228	13.727	1158.8	0.0229	14.340	1158.8	0.0229
4	11.504	1231.8	0.0228	14.554	1159.8	0.0228	15.179	1159.8	0.0228
5	11.820	1236.2	0.0227	14.862	1152.5	0.0227	15.485	1152.5	0.0227
6	11.960	1234.6	0.0226	14.980	1144.8	0.0226	15.599	1144.8	0.0226
7	12.032	1231.5	0.0225	15.036	1138.8	0.0225	15.650	1138.8	0.0225
8	12.078	1228.7	0.0224	15.073	1134.5	0.0224	15.681	1134.5	0.0224
9	12.114	1226.4	0.0223	15.107	1131.4	0.0223	15.709	1131.4	0.0223
10	12.147	1224.9	0.0222	15.144	1129.2	0.0222	15.737	1129.2	0.0222
11	12.182	1224.3	0.0221	15.187	1128.0	0.0221	15.770	1128.0	0.0221
12	12.214	1224.6	0.0220	15.236	1128.1	0.0221	15.808	1128.1	0.0221
13	12.229	1225.5	0.0220	15.275	1130.0	0.0220	15.837	1130.0	0.0220
14	12.186	1225.7	0.0219	15.267	1134.5	0.0219	15.823	1134.5	0.0219
15	12.007	1221.8	0.0218	15.123	1140.7	0.0218	15.675	1140.7	0.0218
16	11.487	1204.7	0.0217	14.593	1143.2	0.0217	15.139	1143.2	0.0217
17	10.096	1148.2	0.0216	12.989	1121.5	0.0216	13.500	1121.5	0.0216
18	6.384	962.1	0.0216	8.377	991.5	0.0216	8.734	991.5	0.0216

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	10.265	965.5	0.0233	11.332	976.0	0.0233	14.086	994.4	0.0233
2	16.214	1108.5	0.0233	17.852	1104.0	0.0232	21.933	1100.3	0.0232
3	19.313	1176.4	0.0232	21.248	1156.5	0.0231	25.942	1134.6	0.0231
4	20.615	1207.3	0.0231	22.671	1173.6	0.0230	27.559	1139.6	0.0230
5	21.156	1219.7	0.0229	23.255	1176.2	0.0229	28.176	1134.4	0.0229
6	21.396	1224.0	0.0228	23.507	1174.1	0.0228	28.417	1127.5	0.0228
7	21.519	1224.7	0.0227	23.633	1170.8	0.0227	28.527	1121.5	0.0227
8	21.590	1223.4	0.0226	23.705	1167.4	0.0226	28.588	1116.8	0.0226
9	21.637	1221.1	0.0225	23.751	1164.2	0.0225	28.632	1113.3	0.0225
10	21.672	1218.5	0.0224	23.788	1161.7	0.0224	28.675	1110.9	0.0224
11	21.706	1215.9	0.0223	23.826	1159.9	0.0223	28.730	1109.7	0.0223
12	21.743	1214.0	0.0222	23.872	1159.4	0.0222	28.809	1110.1	0.0222
13	21.757	1211.9	0.0221	23.897	1160.0	0.0221	28.882	1112.4	0.0221
14	21.671	1205.9	0.0220	23.813	1159.3	0.0220	28.841	1115.5	0.0220
15	21.355	1192.7	0.0219	23.475	1154.7	0.0219	28.513	1117.8	0.0219
16	20.483	1167.0	0.0218	22.527	1141.5	0.0218	27.474	1114.7	0.0218
17	18.162	1115.2	0.0217	19.997	1104.5	0.0217	24.547	1091.2	0.0217
18	11.766	972.1	0.0216	13.001	978.4	0.0216	16.168	990.3	0.0216

Statepoint	EFPD / Cycle
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-123. Burnup and TH Feedback Parameters by Axial Node for Assembly H25 (Cont'd)

Axial	Burnup	SP31 to SP32		Burnup	SP32 to DP1		Burnup	DP1 to DP2	
Node	SP32	T-Fuel	Spec.Vol	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol
1	18.273	1023.5	0.0233	19.256	663.5	0.0220	20.550	688.2	0.0221
2	27.833	1099.4	0.0232	29.346	688.7	0.0220	31.218	709.6	0.0221
3	32.497	1115.9	0.0231	34.297	701.2	0.0220	36.400	719.2	0.0220
4	34.195	1109.6	0.0230	36.143	709.1	0.0220	38.311	720.8	0.0220
5	34.747	1097.8	0.0229	36.774	712.9	0.0219	38.950	719.4	0.0220
6	34.919	1087.9	0.0228	36.988	714.4	0.0219	39.153	717.4	0.0219
7	34.985	1081.0	0.0227	37.074	714.5	0.0219	39.226	715.3	0.0219
8	35.027	1076.3	0.0226	37.122	713.9	0.0219	39.263	713.5	0.0219
9	35.069	1073.2	0.0225	37.162	712.8	0.0218	39.296	712.0	0.0218
10	35.125	1071.2	0.0224	37.209	711.3	0.0218	39.340	710.9	0.0218
11	35.209	1070.3	0.0223	37.278	709.5	0.0218	39.411	710.1	0.0218
12	35.339	1071.0	0.0222	37.385	707.3	0.0217	39.523	709.5	0.0218
13	35.482	1073.9	0.0221	37.494	704.3	0.0217	39.639	709.2	0.0217
14	35.512	1078.7	0.0220	37.474	700.3	0.0217	39.627	709.0	0.0217
15	35.226	1085.5	0.0219	37.110	694.5	0.0217	39.260	708.4	0.0217
16	34.054	1091.2	0.0218	35.806	685.5	0.0216	37.909	705.8	0.0216
17	30.201	1079.3	0.0217	31.707	671.3	0.0216	33.623	695.5	0.0216
18	20.212	1003.5	0.0216	21.183	645.5	0.0216	22.499	671.2	0.0216

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	21.936	719.3	0.0221
2	33.113	736.9	0.0221
3	38.441	742.6	0.0221
4	40.355	739.5	0.0221
5	40.968	735.3	0.0220
6	41.146	731.8	0.0220
7	41.200	729.2	0.0219
8	41.226	727.4	0.0219
9	41.252	726.0	0.0219
10	41.292	724.9	0.0219
11	41.361	724.1	0.0218
12	41.474	723.7	0.0218
13	41.599	723.9	0.0218
14	41.605	725.0	0.0217
15	41.264	727.1	0.0217
16	39.923	729.1	0.0217
17	35.536	724.5	0.0216
18	23.889	701.1	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-124. Burnup and TH Feedback Parameters by Axial Node for Assembly H27

Axial Node	Burnup SP23	SP22 to SP23 T-Fuel	SP22 to SP23 Spec.Vol	Burnup SP24	SP23 to SP24 T-Fuel	SP23 to SP24 Spec.Vol	Burnup SP25	SP24 to SP25 T-Fuel	SP24 to SP25 Spec.Vol
1	1.405	1016.2	0.0234	2.054	1016.2	0.0234	6.590	1034.6	0.0233
2	2.399	1252.6	0.0233	3.474	1252.6	0.0233	10.558	1227.6	0.0232
3	3.018	1369.3	0.0232	4.335	1369.3	0.0232	12.644	1303.4	0.0231
4	3.346	1420.0	0.0231	4.777	1420.0	0.0231	13.524	1326.2	0.0230
5	3.530	1441.9	0.0230	5.015	1441.9	0.0230	13.899	1329.9	0.0229
6	3.642	1451.1	0.0228	5.153	1451.1	0.0228	14.070	1327.4	0.0228
7	3.713	1454.7	0.0227	5.240	1454.7	0.0227	14.162	1323.7	0.0227
8	3.762	1455.8	0.0226	5.298	1455.8	0.0226	14.225	1320.4	0.0226
9	3.794	1455.6	0.0225	5.337	1455.6	0.0225	14.276	1317.9	0.0224
10	3.814	1454.6	0.0224	5.362	1454.6	0.0224	14.322	1316.3	0.0223
11	3.823	1453.3	0.0223	5.374	1453.3	0.0223	14.367	1315.6	0.0222
12	3.817	1451.3	0.0221	5.370	1451.3	0.0221	14.407	1316.1	0.0221
13	3.787	1447.6	0.0220	5.337	1447.6	0.0220	14.426	1317.2	0.0220
14	3.717	1439.3	0.0219	5.255	1439.3	0.0219	14.382	1317.8	0.0219
15	3.582	1421.0	0.0218	5.086	1421.0	0.0218	14.184	1314.5	0.0218
16	3.327	1380.1	0.0217	4.749	1380.1	0.0217	13.598	1297.8	0.0217
17	2.814	1284.3	0.0216	4.044	1284.3	0.0216	12.002	1239.2	0.0217
18	1.694	1030.7	0.0216	2.453	1030.7	0.0216	7.661	1040.3	0.0216

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	6.691	1034.6	0.0233	8.770	1044.3	0.0233	9.218	1044.3	0.0233
2	10.712	1227.6	0.0232	13.771	1179.9	0.0232	14.414	1179.9	0.0232
3	12.821	1303.4	0.0231	16.264	1221.6	0.0231	16.977	1221.6	0.0231
4	13.707	1326.2	0.0230	17.229	1221.5	0.0230	17.953	1221.5	0.0230
5	14.083	1329.9	0.0229	17.593	1212.4	0.0229	18.314	1212.4	0.0229
6	14.253	1327.4	0.0228	17.739	1203.4	0.0228	18.454	1203.4	0.0228
7	14.345	1323.7	0.0227	17.812	1196.6	0.0227	18.521	1196.6	0.0227
8	14.408	1320.4	0.0226	17.866	1191.6	0.0226	18.567	1191.6	0.0226
9	14.459	1317.9	0.0224	17.915	1188.1	0.0224	18.607	1188.1	0.0224
10	14.505	1316.3	0.0223	17.966	1185.5	0.0223	18.648	1185.5	0.0223
11	14.551	1315.6	0.0222	18.022	1183.9	0.0222	18.693	1183.9	0.0222
12	14.593	1316.1	0.0221	18.082	1183.5	0.0221	18.742	1183.5	0.0221
13	14.614	1317.2	0.0220	18.131	1185.4	0.0220	18.784	1185.4	0.0220
14	14.572	1317.8	0.0219	18.129	1190.2	0.0220	18.778	1190.2	0.0220
15	14.376	1314.5	0.0218	17.977	1197.6	0.0219	18.624	1197.6	0.0219
16	13.789	1297.8	0.0217	17.385	1202.7	0.0218	18.028	1202.7	0.0218
17	12.178	1239.2	0.0217	15.549	1183.2	0.0217	16.153	1183.2	0.0217
18	7.782	1040.3	0.0216	10.140	1048.4	0.0216	10.570	1048.4	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-124. Burnup and TH Feedback Parameters by Axial Node for Assembly H27 (Cont'd)

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	12.514	1052.2	0.0237	13.863	1060.2	0.0237	17.287	1068.1	0.0237
2	19.405	1189.9	0.0236	21.390	1178.1	0.0236	26.285	1167.1	0.0236
3	22.895	1249.0	0.0235	25.193	1229.3	0.0235	30.746	1201.7	0.0234
4	24.339	1277.8	0.0234	26.767	1248.0	0.0233	32.541	1210.8	0.0233
5	24.946	1291.1	0.0232	27.428	1252.8	0.0232	33.256	1208.2	0.0232
6	25.220	1295.8	0.0231	27.721	1251.9	0.0231	33.548	1202.3	0.0230
7	25.359	1296.2	0.0229	27.865	1248.6	0.0229	33.679	1196.3	0.0229
8	25.441	1294.1	0.0228	27.947	1244.6	0.0228	33.749	1191.1	0.0228
9	25.497	1290.8	0.0227	28.001	1240.7	0.0227	33.799	1187.1	0.0226
10	25.541	1287.1	0.0225	28.046	1237.3	0.0225	33.849	1184.3	0.0225
11	25.582	1283.3	0.0224	28.089	1234.5	0.0224	33.908	1182.6	0.0224
12	25.611	1278.7	0.0223	28.121	1232.1	0.0223	33.965	1182.0	0.0223
13	25.598	1272.1	0.0222	28.107	1229.3	0.0222	33.982	1182.5	0.0222
14	25.485	1262.1	0.0220	27.984	1225.2	0.0220	33.884	1183.6	0.0220
15	25.142	1246.4	0.0219	27.609	1217.7	0.0219	33.506	1183.5	0.0219
16	24.214	1221.0	0.0218	26.600	1202.3	0.0218	32.391	1176.9	0.0218
17	21.694	1177.3	0.0217	23.872	1165.8	0.0217	29.249	1150.7	0.0217
18	14.364	1046.6	0.0216	15.891	1049.7	0.0216	19.756	1049.3	0.0216

Table 4-125. Burnup and TH Feedback Parameters by Axial Node for Assembly H27a

Axial	Burnup	SP22 to SP23		Burnup	SP23 to SP24		Burnup	SP24 to SP25	
Node	SP23	T-Fuel	Spec.Vol	SP24	T-Fuel	Spec.Vol	SP25	T-Fuel	Spec.Vol
1	1.405	1016.2	0.0234	2.054	1016.2	0.0234	6.590	1034.6	0.0233
2	2.399	1252.6	0.0233	3.474	1252.6	0.0233	10.558	1227.6	0.0232
3	3.018	1369.3	0.0232	4.335	1369.3	0.0232	12.644	1303.4	0.0231
4	3.346	1420.0	0.0231	4.777	1420.0	0.0231	13.524	1326.2	0.0230
5	3.530	1441.9	0.0230	5.015	1441.9	0.0230	13.899	1329.9	0.0229
6	3.642	1451.1	0.0228	5.153	1451.1	0.0228	14.070	1327.4	0.0228
7	3.713	1454.7	0.0227	5.240	1454.7	0.0227	14.162	1323.7	0.0227
8	3.762	1455.8	0.0226	5.298	1455.8	0.0226	14.225	1320.4	0.0226
9	3.794	1455.6	0.0225	5.337	1455.6	0.0225	14.276	1317.9	0.0224
10	3.814	1454.6	0.0224	5.362	1454.6	0.0224	14.322	1316.3	0.0223
11	3.823	1453.3	0.0223	5.374	1453.3	0.0223	14.367	1315.6	0.0222
12	3.817	1451.3	0.0221	5.370	1451.3	0.0221	14.407	1316.1	0.0221
13	3.787	1447.6	0.0220	5.337	1447.6	0.0220	14.426	1317.2	0.0220
14	3.717	1439.3	0.0219	5.255	1439.3	0.0219	14.382	1317.8	0.0219
15	3.582	1421.0	0.0218	5.086	1421.0	0.0218	14.184	1314.5	0.0218
16	3.327	1380.1	0.0217	4.749	1380.1	0.0217	13.598	1297.8	0.0217
17	2.814	1284.3	0.0216	4.044	1284.3	0.0216	12.002	1239.2	0.0217
18	1.694	1030.7	0.0216	2.453	1030.7	0.0216	7.661	1040.3	0.0216

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-125. Burnup and TH Feedback Parameters by Axial Node for Assembly H27a (Cont'd)

Axial Node	Burnup SP26	SP25 to SP26 T-Fuel	SP25 to SP26 Spec.Vol	Burnup SP27	SP26 to SP27 T-Fuel	SP26 to SP27 Spec.Vol	Burnup SP28	SP27 to SP28 T-Fuel	SP27 to SP28 Spec.Vol
1	6.691	1034.6	0.0233	8.770	1044.3	0.0233	9.212	1044.3	0.0233
2	10.712	1227.6	0.0232	13.771	1179.9	0.0232	14.406	1179.9	0.0232
3	12.821	1303.4	0.0231	16.264	1221.6	0.0231	16.970	1221.6	0.0231
4	13.707	1326.2	0.0230	17.229	1221.5	0.0230	17.947	1221.5	0.0230
5	14.083	1329.9	0.0229	17.593	1212.4	0.0229	18.309	1212.4	0.0229
6	14.253	1327.4	0.0228	17.739	1203.4	0.0228	18.450	1203.4	0.0228
7	14.345	1323.7	0.0227	17.812	1196.6	0.0227	18.518	1196.6	0.0227
8	14.408	1320.4	0.0226	17.866	1191.6	0.0226	18.565	1191.6	0.0226
9	14.459	1317.9	0.0224	17.915	1188.1	0.0224	18.607	1188.1	0.0224
10	14.505	1316.3	0.0223	17.966	1185.5	0.0223	18.648	1185.5	0.0223
11	14.551	1315.6	0.0222	18.022	1183.9	0.0222	18.692	1183.9	0.0222
12	14.593	1316.1	0.0221	18.082	1183.5	0.0221	18.738	1183.5	0.0221
13	14.614	1317.2	0.0220	18.131	1185.4	0.0220	18.775	1185.4	0.0220
14	14.572	1317.8	0.0219	18.129	1190.2	0.0220	18.766	1190.2	0.0220
15	14.376	1314.5	0.0218	17.977	1197.6	0.0219	18.610	1197.6	0.0219
16	13.789	1297.8	0.0217	17.385	1202.7	0.0218	18.013	1202.7	0.0218
17	12.178	1239.2	0.0217	15.549	1183.2	0.0217	16.139	1183.2	0.0217
18	7.782	1040.3	0.0216	10.140	1048.4	0.0216	10.560	1048.4	0.0216

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	12.054	1007.6	0.0238	13.297	1021.4	0.0238	16.449	1044.1	0.0237
2	19.265	1186.3	0.0237	21.246	1178.2	0.0237	26.143	1171.1	0.0236
3	22.933	1259.5	0.0236	25.274	1242.0	0.0235	30.937	1214.3	0.0235
4	24.458	1295.4	0.0234	26.951	1265.2	0.0234	32.867	1225.4	0.0234
5	25.110	1311.9	0.0233	27.664	1271.7	0.0233	33.644	1222.8	0.0232
6	25.408	1318.3	0.0231	27.985	1271.2	0.0231	33.966	1217.2	0.0231
7	25.565	1319.7	0.0230	28.149	1268.3	0.0230	34.117	1211.4	0.0229
8	25.660	1318.4	0.0228	28.246	1264.7	0.0228	34.206	1206.5	0.0228
9	25.724	1315.8	0.0227	28.312	1261.2	0.0227	34.270	1202.9	0.0227
10	25.771	1312.4	0.0226	28.361	1258.2	0.0226	34.329	1200.4	0.0226
11	25.809	1308.9	0.0224	28.403	1255.9	0.0224	34.392	1199.2	0.0224
12	25.838	1305.1	0.0223	28.439	1254.4	0.0223	34.462	1199.5	0.0223
13	25.832	1299.9	0.0222	28.438	1253.2	0.0222	34.506	1201.3	0.0222
14	25.722	1290.9	0.0221	28.324	1250.4	0.0221	34.432	1203.4	0.0221
15	25.369	1274.7	0.0219	27.941	1243.3	0.0219	34.053	1203.3	0.0219
16	24.412	1246.6	0.0218	26.895	1226.6	0.0218	32.897	1196.0	0.0218
17	21.854	1198.1	0.0217	24.114	1186.6	0.0217	29.673	1167.8	0.0217
18	14.473	1062.8	0.0216	16.054	1064.9	0.0216	20.039	1061.3	0.0216

Statepoint	EFPD / Cycle
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-126. Burnup and TH Feedback Parameters by Axial Node for Assembly I4

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	3.522	1117.7	0.0239	4.994	1128.2	0.0240	8.749	1126.8	0.0240
2	4.913	1411.1	0.0238	6.947	1403.6	0.0239	12.086	1378.3	0.0239
3	6.003	1549.4	0.0237	8.435	1518.2	0.0237	14.466	1469.8	0.0237
4	6.591	1615.7	0.0235	9.208	1563.8	0.0236	15.586	1491.5	0.0236
5	6.901	1641.9	0.0234	9.597	1574.4	0.0234	16.084	1491.3	0.0234
6	7.071	1651.4	0.0232	9.799	1575.5	0.0232	16.311	1485.8	0.0233
7	7.166	1654.2	0.0231	9.908	1573.2	0.0231	16.421	1479.9	0.0231
8	7.218	1653.9	0.0229	9.967	1570.2	0.0229	16.482	1475.2	0.0230
9	7.245	1651.9	0.0228	9.997	1567.3	0.0228	16.521	1472.0	0.0228
10	7.255	1649.3	0.0226	10.012	1564.9	0.0226	16.554	1470.1	0.0227
11	7.252	1646.2	0.0225	10.015	1563.4	0.0225	16.587	1469.7	0.0225
12	7.233	1642.6	0.0223	10.003	1562.5	0.0224	16.617	1470.8	0.0224
13	7.183	1637.1	0.0222	9.956	1561.7	0.0222	16.618	1473.5	0.0222
14	7.074	1626.8	0.0221	9.838	1559.2	0.0221	16.538	1476.8	0.0221
15	6.864	1607.2	0.0219	9.589	1550.8	0.0220	16.277	1477.7	0.0220
16	6.473	1563.3	0.0218	9.086	1526.8	0.0218	15.606	1466.7	0.0219
17	5.742	1468.2	0.0217	8.090	1449.9	0.0217	14.031	1414.3	0.0217
18	4.204	1252.8	0.0216	5.915	1248.3	0.0216	10.246	1228.7	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	14.310	1118.9	0.0240	18.431	941.3	0.0236	23.227	956.6	0.0236
2	19.460	1348.1	0.0238	25.509	1127.1	0.0235	32.156	1116.7	0.0235
3	22.783	1386.4	0.0237	29.999	1189.3	0.0234	37.547	1164.2	0.0234
4	24.104	1378.4	0.0235	31.919	1218.6	0.0233	39.751	1175.1	0.0232
5	24.572	1364.1	0.0234	32.701	1232.5	0.0231	40.584	1172.0	0.0231
6	24.735	1352.8	0.0232	33.029	1238.2	0.0230	40.894	1165.5	0.0230
7	24.802	1344.5	0.0231	33.180	1239.2	0.0229	41.017	1159.0	0.0228
8	24.846	1339.0	0.0229	33.259	1237.3	0.0227	41.077	1153.9	0.0227
9	24.891	1335.6	0.0228	33.305	1233.5	0.0226	41.121	1150.1	0.0226
10	24.947	1333.7	0.0226	33.338	1228.4	0.0225	41.167	1147.9	0.0225
11	25.020	1333.2	0.0225	33.366	1222.1	0.0223	41.227	1147.2	0.0224
12	25.108	1334.3	0.0224	33.386	1214.5	0.0222	41.298	1148.1	0.0222
13	25.190	1337.8	0.0222	33.363	1204.3	0.0221	41.338	1150.2	0.0221
14	25.208	1344.2	0.0221	33.207	1189.4	0.0220	41.238	1152.5	0.0220
15	25.026	1352.4	0.0220	32.732	1167.1	0.0219	40.765	1152.0	0.0219
16	24.228	1357.3	0.0219	31.420	1132.7	0.0218	39.275	1140.8	0.0218
17	21.857	1339.8	0.0217	28.057	1072.2	0.0217	35.183	1093.4	0.0217
18	15.981	1198.4	0.0216	19.993	934.6	0.0216	24.884	971.9	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-126. Burnup and TH Feedback Parameters by Axial Node for Assembly I4 (Cont'd)

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	DP2 to SP33 Spec.Vol
1	27.696	957.4	0.0235
2	37.998	1110.7	0.0234
3	43.896	1134.9	0.0233
4	46.140	1126.4	0.0231
5	46.899	1113.0	0.0230
6	47.135	1102.1	0.0229
7	47.209	1094.4	0.0228
8	47.244	1089.3	0.0227
9	47.277	1086.0	0.0226
10	47.324	1083.8	0.0224
11	47.395	1082.8	0.0223
12	47.490	1083.4	0.0222
13	47.575	1086.3	0.0221
14	47.551	1092.2	0.0220
15	47.174	1101.3	0.0219
16	45.721	1108.9	0.0218
17	41.279	1090.7	0.0217
18	29.332	977.8	0.0216

Table 4-127. Burnup and TH Feedback Parameters by Axial Node for Assembly I6

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	3.277	1084.1	0.0239	4.648	1094.9	0.0239	8.150	1097.6	0.0239
2	4.787	1391.2	0.0238	6.751	1378.3	0.0238	11.670	1348.4	0.0238
3	5.967	1538.9	0.0237	8.342	1495.1	0.0236	14.136	1434.5	0.0236
4	6.608	1608.7	0.0235	9.169	1539.6	0.0235	15.283	1455.1	0.0235
5	6.945	1636.2	0.0234	9.582	1550.8	0.0233	15.783	1453.0	0.0233
6	7.129	1646.9	0.0232	9.795	1551.5	0.0232	16.007	1446.0	0.0232
7	7.233	1649.9	0.0231	9.911	1548.8	0.0230	16.117	1439.2	0.0230
8	7.292	1649.7	0.0229	9.975	1545.6	0.0229	16.179	1434.0	0.0229
9	7.324	1648.2	0.0228	10.012	1542.8	0.0228	16.223	1430.6	0.0227
10	7.339	1646.0	0.0226	10.031	1540.9	0.0226	16.260	1428.7	0.0226
11	7.340	1643.6	0.0225	10.041	1540.0	0.0225	16.299	1428.5	0.0225
12	7.328	1641.1	0.0223	10.039	1540.1	0.0223	16.341	1430.2	0.0223
13	7.287	1637.0	0.0222	10.007	1540.6	0.0222	16.363	1433.8	0.0222
14	7.182	1628.1	0.0221	9.899	1539.7	0.0221	16.305	1438.6	0.0221
15	6.961	1608.0	0.0219	9.643	1532.8	0.0220	16.053	1441.6	0.0220
16	6.519	1561.6	0.0218	9.088	1506.5	0.0218	15.349	1432.6	0.0218
17	5.666	1454.1	0.0217	7.949	1426.3	0.0217	13.637	1379.2	0.0217
18	3.949	1216.6	0.0216	5.550	1212.9	0.0216	9.600	1195.6	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
DP2	403.4 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-127. Burnup and TH Feedback Parameters by Axial Node for Assembly I6 (Cont'd)

Axial	Burnup	SP31 to SP32		Burnup	SP32 to DP1		Burnup	DP1 to DP2	
Node	SP32	T-Fuel	Spec.Vol	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol
1	13.395	1095.9	0.0238	16.271	836.1	0.0230	19.841	870.6	0.0230
2	18.722	1320.8	0.0237	23.027	978.2	0.0229	28.021	996.4	0.0230
3	22.083	1355.7	0.0236	27.265	1023.1	0.0229	32.934	1018.4	0.0229
4	23.404	1346.7	0.0234	29.042	1044.9	0.0228	34.916	1022.7	0.0228
5	23.866	1331.6	0.0233	29.751	1056.2	0.0227	35.661	1020.1	0.0227
6	24.023	1319.5	0.0231	30.045	1061.3	0.0226	35.939	1014.9	0.0226
7	24.090	1311.0	0.0230	30.182	1062.5	0.0225	36.053	1009.7	0.0225
8	24.137	1305.5	0.0228	30.260	1061.4	0.0224	36.113	1005.4	0.0224
9	24.186	1302.1	0.0227	30.315	1058.7	0.0223	36.161	1002.1	0.0223
10	24.247	1300.3	0.0226	30.360	1054.9	0.0222	36.211	999.9	0.0222
11	24.326	1299.8	0.0225	30.404	1049.8	0.0221	36.270	998.6	0.0222
12	24.427	1301.0	0.0223	30.447	1043.1	0.0220	36.339	998.3	0.0221
13	24.531	1304.6	0.0222	30.460	1034.2	0.0220	36.386	998.8	0.0220
14	24.572	1311.3	0.0221	30.361	1022.0	0.0219	36.321	999.8	0.0219
15	24.401	1320.8	0.0220	29.964	1004.6	0.0218	35.924	999.3	0.0218
16	23.582	1328.3	0.0219	28.753	978.6	0.0217	34.584	990.9	0.0217
17	21.084	1313.4	0.0217	25.495	933.8	0.0217	30.776	963.4	0.0217
18	15.026	1175.6	0.0216	17.817	828.4	0.0216	21.392	877.0	0.0216

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	23.392	899.8	0.0231
2	32.668	1008.8	0.0230
3	37.975	1026.9	0.0229
4	39.983	1020.4	0.0228
5	40.672	1010.1	0.0227
6	40.894	1001.6	0.0226
7	40.971	995.6	0.0225
8	41.011	991.6	0.0224
9	41.051	988.8	0.0224
10	41.100	987.0	0.0223
11	41.165	986.0	0.0222
12	41.248	986.1	0.0221
13	41.327	987.9	0.0220
14	41.318	992.3	0.0219
15	40.996	999.4	0.0219
16	39.687	1005.2	0.0218
17	35.602	989.3	0.0217
18	24.879	913.0	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-128. Burnup and TH Feedback Parameters by Axial Node for Assembly I10

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	3.622	1126.8	0.0239	5.113	1133.8	0.0239	8.902	1127.6	0.0240
2	4.985	1415.8	0.0238	7.023	1403.8	0.0238	12.158	1374.8	0.0239
3	6.038	1548.9	0.0237	8.461	1513.5	0.0237	14.452	1463.0	0.0237
4	6.600	1612.0	0.0235	9.199	1557.7	0.0235	15.521	1484.7	0.0236
5	6.895	1637.2	0.0234	9.568	1567.6	0.0234	15.993	1484.4	0.0234
6	7.054	1645.8	0.0232	9.758	1568.4	0.0232	16.204	1479.0	0.0232
7	7.142	1648.0	0.0230	9.858	1565.9	0.0231	16.303	1473.2	0.0231
8	7.190	1647.2	0.0229	9.910	1562.5	0.0229	16.354	1468.5	0.0229
9	7.213	1644.9	0.0227	9.936	1559.4	0.0228	16.387	1465.1	0.0228
10	7.224	1642.1	0.0226	9.950	1556.9	0.0226	16.418	1463.0	0.0226
11	7.224	1639.1	0.0225	9.956	1555.1	0.0225	16.451	1462.4	0.0225
12	7.207	1635.4	0.0223	9.945	1554.0	0.0224	16.478	1463.2	0.0224
13	7.156	1629.5	0.0222	9.895	1552.8	0.0222	16.472	1465.5	0.0222
14	7.045	1619.1	0.0221	9.774	1549.8	0.0221	16.385	1468.4	0.0221
15	6.836	1599.6	0.0219	9.526	1541.4	0.0220	16.122	1468.9	0.0220
16	6.443	1554.5	0.0218	9.022	1517.1	0.0218	15.450	1457.9	0.0219
17	5.698	1458.8	0.0217	8.013	1438.7	0.0217	13.867	1403.8	0.0217
18	4.158	1244.6	0.0216	5.843	1240.0	0.0216	10.113	1221.6	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	14.450	1113.4	0.0239	18.166	901.6	0.0233	22.526	921.9	0.0233
2	19.468	1340.4	0.0238	24.932	1071.4	0.0233	30.949	1067.0	0.0232
3	22.661	1379.6	0.0237	29.139	1124.5	0.0232	35.923	1102.3	0.0231
4	23.908	1372.7	0.0235	30.868	1146.8	0.0230	37.861	1109.5	0.0230
5	24.343	1358.5	0.0233	31.545	1156.8	0.0229	38.561	1105.3	0.0229
6	24.487	1347.0	0.0232	31.813	1160.2	0.0228	38.800	1098.6	0.0228
7	24.540	1338.6	0.0230	31.922	1159.8	0.0227	38.873	1092.3	0.0227
8	24.571	1333.1	0.0229	31.966	1156.9	0.0226	38.892	1087.0	0.0226
9	24.606	1329.7	0.0228	31.984	1152.2	0.0225	38.896	1083.1	0.0225
10	24.656	1327.7	0.0226	31.991	1146.0	0.0223	38.903	1080.3	0.0224
11	24.725	1327.1	0.0225	31.992	1138.4	0.0222	38.917	1078.6	0.0223
12	24.806	1328.1	0.0224	31.979	1129.0	0.0221	38.927	1078.0	0.0222
13	24.874	1331.4	0.0222	31.920	1117.5	0.0220	38.903	1078.4	0.0221
14	24.880	1337.5	0.0221	31.753	1103.1	0.0219	38.772	1079.5	0.0220
15	24.693	1345.6	0.0220	31.314	1084.1	0.0218	38.337	1079.2	0.0219
16	23.894	1351.7	0.0219	30.097	1056.8	0.0218	36.989	1070.9	0.0218
17	21.528	1333.6	0.0217	26.890	1006.8	0.0217	33.172	1031.5	0.0217
18	15.730	1192.5	0.0216	19.173	884.5	0.0216	23.475	930.3	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-128. Burnup and TH Feedback Parameters by Axial Node for Assembly I10 (Cont'd)

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	Spec.Vol
1	26.655	933.1	0.0233
2	36.299	1066.7	0.0232
3	41.700	1087.4	0.0231
4	43.650	1078.6	0.0230
5	44.270	1066.2	0.0229
6	44.436	1056.1	0.0228
7	44.461	1049.1	0.0227
8	44.452	1044.3	0.0226
9	44.443	1041.1	0.0225
10	44.448	1039.0	0.0224
11	44.468	1037.9	0.0223
12	44.496	1038.1	0.0222
13	44.509	1040.2	0.0221
14	44.445	1045.4	0.0220
15	44.100	1053.6	0.0219
16	42.798	1061.0	0.0218
17	38.690	1045.5	0.0217
18	27.501	949.5	0.0216

Table 4-129. Burnup and TH Feedback Parameters by Axial Node for Assembly I10a

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	Spec.Vol
1	3.622	1126.8	0.0239	5.113	1133.8	0.0239	8.902	1127.6	0.0240
2	4.985	1415.8	0.0238	7.023	1403.8	0.0238	12.158	1374.8	0.0239
3	6.038	1548.9	0.0237	8.461	1513.5	0.0237	14.452	1463.0	0.0237
4	6.600	1612.0	0.0235	9.199	1557.7	0.0235	15.521	1484.7	0.0236
5	6.895	1637.2	0.0234	9.568	1567.6	0.0234	15.993	1484.4	0.0234
6	7.054	1645.8	0.0232	9.758	1568.4	0.0232	16.204	1479.0	0.0232
7	7.142	1648.0	0.0230	9.858	1565.9	0.0231	16.303	1473.2	0.0231
8	7.190	1647.2	0.0229	9.910	1562.5	0.0229	16.354	1468.5	0.0229
9	7.213	1644.9	0.0227	9.936	1559.4	0.0228	16.387	1465.1	0.0228
10	7.224	1642.1	0.0226	9.950	1556.9	0.0226	16.418	1463.0	0.0226
11	7.224	1639.1	0.0225	9.956	1555.1	0.0225	16.451	1462.4	0.0225
12	7.207	1635.4	0.0223	9.945	1554.0	0.0224	16.478	1463.2	0.0224
13	7.156	1629.5	0.0222	9.895	1552.8	0.0222	16.472	1465.5	0.0222
14	7.045	1619.1	0.0221	9.774	1549.8	0.0221	16.385	1468.4	0.0221
15	6.836	1599.6	0.0219	9.526	1541.4	0.0220	16.122	1468.9	0.0220
16	6.443	1554.5	0.0218	9.022	1517.1	0.0218	15.450	1457.9	0.0219
17	5.698	1458.8	0.0217	8.013	1438.7	0.0217	13.867	1403.8	0.0217
18	4.158	1244.6	0.0216	5.843	1240.0	0.0216	10.113	1221.6	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
DP2	403.4 / Cy10
SP33	573.7 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-129. Burnup and TH Feedback Parameters by Axial Node for Assembly I10a (Cont'd)

Axial	Burnup	SP31 to SP32		Burnup	SP32 to DP1		Burnup	DP1 to DP2	
Node	SP32	T-Fuel	Spec.Vol	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol
1	14.501	1113.4	0.0239	18.510	935.1	0.0236	23.223	952.1	0.0236
2	19.552	1340.4	0.0238	25.499	1121.7	0.0235	32.069	1112.2	0.0235
3	22.764	1379.6	0.0237	29.912	1186.2	0.0234	37.389	1159.3	0.0234
4	24.021	1372.7	0.0235	31.783	1216.1	0.0233	39.535	1169.2	0.0232
5	24.460	1358.5	0.0233	32.532	1229.5	0.0232	40.320	1164.9	0.0231
6	24.607	1347.0	0.0232	32.843	1235.1	0.0230	40.605	1157.7	0.0230
7	24.663	1338.6	0.0230	32.989	1236.6	0.0229	40.723	1151.3	0.0228
8	24.697	1333.1	0.0229	33.069	1235.6	0.0227	40.786	1146.2	0.0227
9	24.735	1329.7	0.0228	33.121	1232.8	0.0226	40.838	1142.6	0.0226
10	24.787	1327.7	0.0226	33.167	1228.9	0.0225	40.901	1140.6	0.0225
11	24.860	1327.1	0.0225	33.221	1224.6	0.0224	40.997	1140.5	0.0224
12	24.945	1328.1	0.0224	33.282	1220.4	0.0222	41.133	1142.9	0.0222
13	25.018	1331.4	0.0222	33.306	1214.5	0.0221	41.252	1147.3	0.0221
14	25.028	1337.5	0.0221	33.179	1202.3	0.0220	41.201	1150.9	0.0220
15	24.842	1345.6	0.0220	32.708	1180.6	0.0219	40.743	1151.1	0.0219
16	24.039	1351.7	0.0219	31.377	1145.3	0.0218	39.242	1140.7	0.0218
17	21.655	1333.6	0.0217	27.963	1082.2	0.0217	35.100	1093.8	0.0217
18	15.818	1192.5	0.0216	19.878	940.0	0.0216	24.769	972.4	0.0216

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	27.665	955.6	0.0235
2	37.885	1108.8	0.0234
3	43.713	1133.1	0.0233
4	45.896	1124.1	0.0231
5	46.604	1110.1	0.0230
6	46.818	1098.9	0.0229
7	46.892	1091.4	0.0228
8	46.932	1086.4	0.0227
9	46.975	1083.1	0.0226
10	47.040	1081.0	0.0224
11	47.148	1080.1	0.0223
12	47.312	1081.4	0.0222
13	47.483	1085.4	0.0221
14	47.507	1091.7	0.0220
15	47.145	1100.9	0.0219
16	45.684	1108.8	0.0218
17	41.199	1091.4	0.0217
18	29.222	979.3	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-130. Burnup and TH Feedback Parameters by Axial Node for Assembly I12

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	3.476	1112.5	0.0239	4.931	1122.6	0.0240	8.637	1121.9	0.0240
2	4.912	1411.2	0.0238	6.940	1401.3	0.0239	12.049	1373.6	0.0239
3	6.058	1555.8	0.0237	8.499	1519.2	0.0237	14.515	1465.7	0.0237
4	6.670	1623.9	0.0236	9.298	1564.1	0.0236	15.654	1486.4	0.0236
5	6.974	1647.2	0.0234	9.672	1572.3	0.0234	16.110	1483.5	0.0234
6	7.141	1655.8	0.0232	9.867	1571.9	0.0233	16.315	1476.5	0.0232
7	7.241	1658.7	0.0231	9.979	1569.3	0.0231	16.425	1470.2	0.0231
8	7.299	1658.7	0.0229	10.043	1566.2	0.0229	16.490	1465.3	0.0229
9	7.330	1657.1	0.0228	10.079	1563.4	0.0228	16.535	1462.0	0.0228
10	7.345	1654.9	0.0226	10.100	1561.3	0.0227	16.576	1460.1	0.0227
11	7.351	1652.8	0.0225	10.115	1560.2	0.0225	16.626	1459.9	0.0225
12	7.362	1652.0	0.0224	10.142	1561.1	0.0224	16.711	1462.0	0.0224
13	7.366	1652.1	0.0222	10.169	1564.1	0.0222	16.825	1467.3	0.0222
14	7.284	1644.7	0.0221	10.090	1564.3	0.0221	16.810	1472.6	0.0221
15	7.071	1625.5	0.0220	9.842	1557.3	0.0220	16.563	1474.9	0.0220
16	6.647	1583.1	0.0218	9.302	1533.4	0.0218	15.857	1465.1	0.0219
17	5.844	1480.4	0.0217	8.217	1455.6	0.0217	14.177	1413.2	0.0217
18	4.221	1254.8	0.0216	5.932	1248.0	0.0216	10.249	1225.9	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	14.106	1115.4	0.0239	18.039	925.1	0.0235	22.638	942.9	0.0235
2	19.321	1344.5	0.0238	25.100	1102.9	0.0234	31.455	1095.0	0.0234
3	22.720	1381.9	0.0237	29.592	1159.2	0.0233	36.777	1134.9	0.0233
4	24.036	1372.4	0.0235	31.452	1184.9	0.0232	38.885	1143.8	0.0231
5	24.431	1356.8	0.0233	32.135	1198.0	0.0230	39.612	1140.8	0.0230
6	24.560	1344.4	0.0232	32.414	1203.2	0.0229	39.871	1134.4	0.0229
7	24.624	1335.9	0.0231	32.549	1203.4	0.0228	39.974	1128.0	0.0228
8	24.671	1330.4	0.0229	32.619	1200.8	0.0226	40.020	1122.7	0.0226
9	24.722	1327.1	0.0228	32.659	1196.3	0.0225	40.050	1118.7	0.0225
10	24.786	1325.3	0.0226	32.685	1190.2	0.0224	40.082	1116.0	0.0224
11	24.881	1325.1	0.0225	32.716	1182.4	0.0223	40.130	1114.5	0.0223
12	25.052	1327.4	0.0224	32.788	1171.8	0.0222	40.228	1113.5	0.0222
13	25.284	1333.3	0.0222	32.879	1157.7	0.0221	40.348	1113.1	0.0221
14	25.377	1340.5	0.0221	32.781	1141.3	0.0220	40.286	1113.8	0.0220
15	25.209	1349.1	0.0220	32.336	1120.2	0.0219	39.841	1113.2	0.0219
16	24.378	1353.2	0.0219	31.043	1089.9	0.0218	38.396	1103.7	0.0218
17	21.904	1337.7	0.0217	27.662	1036.2	0.0217	34.353	1060.7	0.0217
18	15.909	1197.4	0.0216	19.624	908.2	0.0216	24.214	950.7	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-130. Burnup and TH Feedback Parameters by Axial Node for Assembly I12 (Cont'd)

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	DP2 to SP33 Spec.Vol
1	26.955	948.3	0.0234
2	37.064	1090.2	0.0233
3	42.845	1111.6	0.0232
4	44.975	1102.7	0.0231
5	45.628	1090.3	0.0229
6	45.815	1080.0	0.0228
7	45.868	1072.6	0.0227
8	45.887	1067.6	0.0226
9	45.905	1064.3	0.0225
10	45.935	1062.1	0.0224
11	45.989	1060.8	0.0223
12	46.102	1060.4	0.0222
13	46.255	1061.7	0.0221
14	46.259	1066.5	0.0220
15	45.906	1075.0	0.0219
16	44.505	1082.6	0.0218
17	40.147	1066.5	0.0217
18	28.448	963.1	0.0216

Table 4-131. Burnup and TH Feedback Parameters by Axial Node for Assembly I12a

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	3.476	1112.5	0.0239	4.931	1122.6	0.0240	8.637	1121.9	0.0240
2	4.912	1411.2	0.0238	6.940	1401.3	0.0239	12.049	1373.6	0.0239
3	6.058	1555.8	0.0237	8.499	1519.2	0.0237	14.515	1465.7	0.0237
4	6.670	1623.9	0.0236	9.298	1564.1	0.0236	15.654	1486.4	0.0236
5	6.974	1647.2	0.0234	9.672	1572.3	0.0234	16.110	1483.5	0.0234
6	7.141	1655.8	0.0232	9.867	1571.9	0.0233	16.315	1476.5	0.0232
7	7.241	1658.7	0.0231	9.979	1569.3	0.0231	16.425	1470.2	0.0231
8	7.299	1658.7	0.0229	10.043	1566.2	0.0229	16.490	1465.3	0.0229
9	7.330	1657.1	0.0228	10.079	1563.4	0.0228	16.535	1462.0	0.0228
10	7.345	1654.9	0.0226	10.100	1561.3	0.0227	16.576	1460.1	0.0227
11	7.351	1652.8	0.0225	10.115	1560.2	0.0225	16.626	1459.9	0.0225
12	7.362	1652.0	0.0224	10.142	1561.1	0.0224	16.711	1462.0	0.0224
13	7.366	1652.1	0.0222	10.169	1564.1	0.0222	16.825	1467.3	0.0222
14	7.284	1644.7	0.0221	10.090	1564.3	0.0221	16.810	1472.6	0.0221
15	7.071	1625.5	0.0220	9.842	1557.3	0.0220	16.563	1474.9	0.0220
16	6.647	1583.1	0.0218	9.302	1533.4	0.0218	15.857	1465.1	0.0219
17	5.844	1480.4	0.0217	8.217	1455.6	0.0217	14.177	1413.2	0.0217
18	4.221	1254.8	0.0216	5.932	1248.0	0.0216	10.249	1225.9	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
DP2	403.4 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-131. Burnup and TH Feedback Parameters by Axial Node for Assembly I12a (Cont'd)

Axial	Burnup	SP31 to SP32		Burnup	SP32 to DP1		Burnup	DP1 to DP2	
Node	SP32	T-Fuel	Spec.Vol	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol
1	14.172	1115.4	0.0239	17.792	945.5	0.0236	22.308	968.5	0.0236
2	19.433	1344.5	0.0238	25.257	1125.5	0.0235	31.835	1120.1	0.0235
3	22.861	1381.9	0.0237	29.985	1185.7	0.0234	37.503	1163.2	0.0234
4	24.193	1372.4	0.0235	31.956	1215.6	0.0233	39.769	1173.8	0.0232
5	24.596	1356.8	0.0233	32.703	1231.8	0.0231	40.580	1171.5	0.0231
6	24.731	1344.4	0.0232	33.023	1239.0	0.0230	40.888	1165.3	0.0230
7	24.800	1335.9	0.0231	33.188	1240.8	0.0229	41.027	1158.9	0.0228
8	24.851	1330.4	0.0229	33.284	1239.4	0.0227	41.105	1153.7	0.0227
9	24.906	1327.1	0.0228	33.347	1236.0	0.0226	41.165	1149.9	0.0226
10	24.974	1325.3	0.0226	33.397	1231.1	0.0225	41.229	1147.5	0.0225
11	25.074	1325.1	0.0225	33.454	1224.8	0.0223	41.316	1146.5	0.0224
12	25.250	1327.4	0.0224	33.555	1215.8	0.0222	41.459	1146.5	0.0222
13	25.487	1333.3	0.0222	33.670	1203.0	0.0221	41.622	1147.2	0.0221
14	25.583	1340.5	0.0221	33.580	1186.6	0.0220	41.580	1148.6	0.0220
15	25.416	1349.1	0.0220	33.112	1163.6	0.0219	41.111	1148.0	0.0219
16	24.578	1353.2	0.0219	31.754	1129.1	0.0218	39.578	1137.1	0.0218
17	22.077	1337.7	0.0217	28.262	1069.8	0.0217	35.367	1091.0	0.0217
18	16.028	1197.4	0.0216	20.033	933.9	0.0216	24.916	970.9	0.0216

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	26.825	971.6	0.0235
2	37.708	1115.8	0.0234
3	43.869	1137.1	0.0233
4	46.173	1128.1	0.0232
5	46.914	1115.1	0.0230
6	47.152	1104.3	0.0229
7	47.243	1096.6	0.0228
8	47.295	1091.5	0.0227
9	47.344	1088.0	0.0226
10	47.408	1085.7	0.0224
11	47.503	1084.4	0.0223
12	47.664	1084.3	0.0222
13	47.863	1086.0	0.0221
14	47.890	1091.2	0.0220
15	47.516	1100.2	0.0219
16	46.022	1108.1	0.0218
17	41.467	1090.9	0.0217
18	29.375	978.8	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-132. Burnup and TH Feedback Parameters by Axial Node for Assembly I14

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	2.625	984.5	0.0234	3.724	998.7	0.0234	6.579	1013.9	0.0234
2	4.154	1287.5	0.0234	5.820	1272.8	0.0233	9.965	1247.6	0.0233
3	5.185	1415.4	0.0233	7.187	1368.6	0.0232	12.015	1312.0	0.0232
4	5.715	1471.9	0.0232	7.855	1402.0	0.0231	12.905	1325.1	0.0231
5	5.990	1495.6	0.0230	8.182	1410.4	0.0230	13.279	1321.5	0.0229
6	6.137	1504.5	0.0229	8.345	1409.6	0.0229	13.435	1314.2	0.0228
7	6.216	1506.7	0.0228	8.428	1406.1	0.0227	13.502	1307.4	0.0227
8	6.258	1505.9	0.0227	8.470	1402.2	0.0226	13.533	1302.1	0.0226
9	6.277	1503.7	0.0225	8.488	1398.9	0.0225	13.548	1298.4	0.0225
10	6.280	1501.0	0.0224	8.493	1396.5	0.0224	13.559	1296.2	0.0224
11	6.272	1498.0	0.0223	8.487	1395.0	0.0223	13.568	1295.5	0.0223
12	6.249	1494.6	0.0222	8.469	1394.4	0.0222	13.576	1296.3	0.0222
13	6.202	1489.7	0.0221	8.425	1394.4	0.0221	13.567	1298.9	0.0221
14	6.104	1480.2	0.0220	8.324	1393.3	0.0220	13.501	1302.9	0.0220
15	5.911	1460.5	0.0219	8.105	1386.7	0.0219	13.288	1305.6	0.0219
16	5.524	1416.9	0.0218	7.630	1363.0	0.0218	12.703	1298.5	0.0218
17	4.708	1315.6	0.0217	6.563	1290.2	0.0217	11.161	1252.2	0.0217
18	2.860	1052.4	0.0216	4.035	1065.5	0.0216	7.070	1073.7	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	10.981	1030.0	0.0234	14.185	881.8	0.0232	18.095	913.7	0.0232
2	15.982	1230.5	0.0233	20.780	1048.2	0.0232	26.227	1053.6	0.0231
3	18.743	1265.9	0.0232	24.565	1104.3	0.0231	30.776	1080.3	0.0230
4	19.745	1260.4	0.0231	26.097	1132.7	0.0230	32.540	1084.8	0.0229
5	20.072	1247.7	0.0229	26.699	1146.2	0.0228	33.176	1080.2	0.0228
6	20.166	1236.8	0.0228	26.941	1152.2	0.0227	33.399	1073.8	0.0227
7	20.191	1229.1	0.0227	27.049	1154.2	0.0226	33.486	1068.2	0.0226
8	20.203	1224.2	0.0226	27.105	1153.8	0.0225	33.529	1063.9	0.0225
9	20.219	1221.1	0.0225	27.139	1152.1	0.0224	33.563	1060.9	0.0224
10	20.243	1219.4	0.0224	27.164	1149.4	0.0223	33.604	1059.2	0.0223
11	20.279	1218.8	0.0223	27.189	1146.3	0.0222	33.663	1059.1	0.0222
12	20.328	1219.6	0.0222	27.215	1142.7	0.0221	33.746	1060.9	0.0221
13	20.379	1222.5	0.0221	27.216	1137.2	0.0220	33.819	1064.1	0.0220
14	20.393	1228.4	0.0220	27.110	1126.5	0.0219	33.774	1067.3	0.0219
15	20.246	1237.1	0.0219	26.724	1107.7	0.0218	33.402	1068.7	0.0219
16	19.572	1243.7	0.0218	25.602	1076.2	0.0217	32.144	1062.7	0.0218
17	17.252	1224.2	0.0217	22.409	1023.2	0.0217	28.352	1037.3	0.0217
18	11.268	1081.1	0.0216	14.560	897.6	0.0216	18.632	942.8	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-132. Burnup and TH Feedback Parameters by Axial Node for Assembly I14 (Cont'd)

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	21.946	938.2	0.0232
2	31.234	1053.4	0.0231
3	36.219	1070.7	0.0230
4	38.020	1064.7	0.0229
5	38.597	1053.6	0.0228
6	38.766	1044.6	0.0227
7	38.819	1038.5	0.0226
8	38.847	1034.6	0.0225
9	38.878	1032.2	0.0224
10	38.924	1030.7	0.0223
11	38.995	1030.4	0.0222
12	39.103	1031.7	0.0221
13	39.220	1035.1	0.0221
14	39.241	1040.8	0.0220
15	38.953	1048.9	0.0219
16	37.731	1055.4	0.0218
17	33.654	1041.6	0.0217
18	22.512	970.6	0.0216

Table 4-133. Burnup and TH Feedback Parameters by Axial Node for Assembly I17

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	3.557	1121.1	0.0239	5.036	1131.3	0.0240	8.813	1128.4	0.0240
2	4.940	1413.8	0.0238	6.979	1405.9	0.0239	12.136	1380.0	0.0239
3	6.023	1551.9	0.0237	8.463	1520.5	0.0237	14.512	1471.8	0.0237
4	6.600	1617.0	0.0235	9.222	1564.9	0.0236	15.611	1492.6	0.0236
5	6.884	1640.3	0.0234	9.574	1573.1	0.0234	16.047	1490.4	0.0234
6	7.039	1648.3	0.0232	9.755	1572.9	0.0232	16.240	1483.8	0.0233
7	7.130	1650.7	0.0231	9.858	1570.3	0.0231	16.341	1477.7	0.0231
8	7.181	1650.3	0.0229	9.915	1567.1	0.0229	16.399	1473.0	0.0230
9	7.208	1648.4	0.0228	9.945	1564.2	0.0228	16.438	1469.8	0.0228
10	7.219	1645.9	0.0226	9.961	1561.9	0.0226	16.473	1467.9	0.0227
11	7.223	1643.5	0.0225	9.974	1560.7	0.0225	16.518	1467.6	0.0225
12	7.234	1642.6	0.0223	9.999	1561.3	0.0224	16.602	1469.7	0.0224
13	7.239	1642.6	0.0222	10.027	1564.0	0.0222	16.716	1474.9	0.0223
14	7.161	1635.2	0.0221	9.951	1563.9	0.0221	16.702	1480.0	0.0221
15	6.956	1616.1	0.0220	9.709	1556.4	0.0220	16.456	1481.6	0.0220
16	6.549	1572.8	0.0218	9.188	1532.0	0.0218	15.761	1470.4	0.0219
17	5.777	1473.0	0.0217	8.138	1453.4	0.0217	14.109	1417.3	0.0217
18	4.193	1251.7	0.0216	5.901	1247.4	0.0216	10.228	1228.4	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
DP2	403.4 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-133. Burnup and TH Feedback Parameters by Axial Node for Assembly I17 (Cont'd)

Axial	Burnup	SP31 to SP32		Burnup	SP32 to DP1		Burnup	DP1 to DP2	
Node	SP32	T-Fuel	Spec.Vol	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol
1	14.385	1117.2	0.0240	18.479	942.0	0.0236	23.275	958.3	0.0236
2	19.533	1348.3	0.0238	25.559	1127.6	0.0235	32.215	1118.6	0.0235
3	22.851	1388.2	0.0237	30.060	1189.7	0.0234	37.626	1166.1	0.0234
4	24.131	1379.9	0.0235	31.953	1219.6	0.0233	39.809	1177.3	0.0232
5	24.509	1364.7	0.0234	32.656	1234.9	0.0232	40.570	1174.7	0.0231
6	24.628	1352.7	0.0232	32.946	1241.5	0.0230	40.846	1168.5	0.0230
7	24.684	1344.3	0.0231	33.091	1242.9	0.0229	40.965	1162.2	0.0228
8	24.726	1338.8	0.0229	33.171	1241.2	0.0227	41.027	1157.0	0.0227
9	24.771	1335.5	0.0228	33.220	1237.5	0.0226	41.073	1153.3	0.0226
10	24.831	1333.7	0.0226	33.257	1232.5	0.0225	41.124	1151.0	0.0225
11	24.923	1333.4	0.0225	33.305	1226.0	0.0223	41.202	1150.2	0.0224
12	25.095	1335.6	0.0224	33.403	1217.3	0.0222	41.349	1150.6	0.0222
13	25.329	1341.4	0.0223	33.524	1205.1	0.0221	41.527	1151.8	0.0221
14	25.423	1348.6	0.0221	33.438	1189.1	0.0220	41.491	1153.5	0.0220
15	25.254	1356.9	0.0220	32.972	1166.4	0.0219	41.024	1152.8	0.0219
16	24.423	1360.4	0.0219	31.627	1132.2	0.0218	39.501	1141.7	0.0218
17	21.945	1342.9	0.0217	28.163	1073.1	0.0217	35.313	1095.0	0.0217
18	15.952	1199.7	0.0216	19.986	936.9	0.0216	24.902	974.0	0.0216

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	27.766	959.2	0.0235
2	38.084	1113.3	0.0234
3	44.003	1137.3	0.0233
4	46.227	1128.8	0.0232
5	46.916	1115.6	0.0230
6	47.121	1104.8	0.0229
7	47.191	1097.2	0.0228
8	47.228	1092.0	0.0227
9	47.264	1088.6	0.0226
10	47.315	1086.4	0.0225
11	47.403	1085.3	0.0223
12	47.571	1085.5	0.0222
13	47.788	1087.7	0.0221
14	47.824	1093.2	0.0220
15	47.453	1102.2	0.0219
16	45.969	1110.0	0.0218
17	41.433	1092.5	0.0217
18	29.373	979.8	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-134. Burnup and TH Feedback Parameters by Axial Node for Assembly I19

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	3.129	1060.7	0.0238	4.431	1071.7	0.0238	7.765	1075.7	0.0237
2	4.739	1379.2	0.0237	6.657	1360.1	0.0237	11.415	1323.5	0.0236
3	5.893	1522.5	0.0236	8.202	1469.8	0.0235	13.763	1400.7	0.0235
4	6.492	1586.4	0.0235	8.965	1509.0	0.0234	14.795	1417.9	0.0233
5	6.784	1609.5	0.0233	9.313	1516.2	0.0233	15.188	1412.9	0.0232
6	6.944	1618.0	0.0232	9.492	1514.8	0.0231	15.359	1404.4	0.0231
7	7.041	1620.7	0.0230	9.596	1511.5	0.0230	15.452	1397.3	0.0229
8	7.098	1620.5	0.0229	9.657	1508.0	0.0228	15.507	1392.0	0.0228
9	7.130	1619.1	0.0227	9.693	1505.1	0.0227	15.547	1388.5	0.0227
10	7.148	1617.2	0.0226	9.716	1503.2	0.0226	15.585	1386.7	0.0225
11	7.159	1615.7	0.0224	9.736	1502.5	0.0224	15.635	1386.7	0.0224
12	7.179	1616.1	0.0223	9.774	1504.1	0.0223	15.726	1389.4	0.0223
13	7.197	1617.9	0.0222	9.818	1508.4	0.0222	15.855	1395.6	0.0222
14	7.127	1612.2	0.0221	9.757	1510.2	0.0221	15.862	1401.9	0.0221
15	6.920	1593.5	0.0219	9.523	1504.7	0.0219	15.643	1405.6	0.0219
16	6.482	1548.6	0.0218	8.982	1481.2	0.0218	14.973	1398.2	0.0218
17	5.587	1438.8	0.0217	7.803	1402.0	0.0217	13.252	1346.4	0.0217
18	3.689	1179.7	0.0216	5.186	1179.1	0.0216	8.982	1166.6	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	12.759	1073.8	0.0237	16.556	927.8	0.0235	21.100	951.7	0.0235
2	18.169	1291.2	0.0236	23.807	1106.1	0.0235	30.116	1104.1	0.0234
3	21.332	1325.1	0.0234	28.150	1170.9	0.0234	35.343	1141.2	0.0233
4	22.492	1316.5	0.0233	29.937	1204.0	0.0232	37.415	1152.5	0.0232
5	22.815	1300.7	0.0232	30.600	1221.4	0.0231	38.137	1150.2	0.0230
6	22.912	1288.3	0.0230	30.885	1229.4	0.0230	38.410	1144.3	0.0229
7	22.962	1279.9	0.0229	31.037	1232.0	0.0228	38.540	1138.3	0.0228
8	23.002	1274.5	0.0228	31.130	1231.5	0.0227	38.619	1133.5	0.0227
9	23.047	1271.2	0.0226	31.195	1229.1	0.0226	38.684	1130.1	0.0226
10	23.106	1269.3	0.0225	31.249	1225.4	0.0224	38.755	1128.1	0.0224
11	23.198	1268.8	0.0224	31.314	1220.3	0.0223	38.855	1127.5	0.0223
12	23.371	1270.5	0.0223	31.434	1213.1	0.0222	39.027	1128.2	0.0222
13	23.614	1276.0	0.0222	31.581	1202.3	0.0221	39.235	1129.8	0.0221
14	23.721	1283.1	0.0221	31.523	1187.3	0.0220	39.233	1131.9	0.0220
15	23.577	1292.2	0.0220	31.088	1164.7	0.0219	38.806	1131.9	0.0219
16	22.801	1300.1	0.0218	29.789	1129.1	0.0218	37.343	1121.8	0.0218
17	20.294	1285.4	0.0217	26.281	1067.7	0.0217	33.141	1079.7	0.0217
18	14.082	1152.0	0.0216	17.925	933.3	0.0216	22.634	971.9	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-134. Burnup and TH Feedback Parameters by Axial Node for Assembly I19 (Cont'd)

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	Spec.Vol
1	25.446	962.4	0.0234
2	35.768	1099.4	0.0234
3	41.488	1124.0	0.0232
4	43.606	1116.6	0.0231
5	44.266	1104.7	0.0230
6	44.477	1094.7	0.0229
7	44.566	1087.7	0.0228
8	44.625	1083.0	0.0226
9	44.684	1079.9	0.0225
10	44.759	1078.0	0.0224
11	44.870	1077.1	0.0223
12	45.064	1077.5	0.0222
13	45.311	1079.7	0.0221
14	45.379	1085.2	0.0220
15	45.046	1094.0	0.0219
16	43.623	1101.6	0.0218
17	39.097	1085.4	0.0217
18	27.001	987.9	0.0216

Table 4-135. Burnup and TH Feedback Parameters by Axial Node for Assembly I23

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	Spec.Vol
1	3.306	1087.3	0.0238	4.692	1099.0	0.0239	8.236	1103.1	0.0239
2	4.706	1379.8	0.0237	6.646	1371.1	0.0238	11.541	1349.1	0.0238
3	5.842	1523.1	0.0236	8.184	1487.2	0.0236	13.968	1438.7	0.0236
4	6.449	1590.3	0.0235	8.974	1533.1	0.0235	15.090	1463.0	0.0235
5	6.746	1616.8	0.0233	9.335	1543.7	0.0233	15.527	1460.6	0.0233
6	6.908	1626.3	0.0232	9.522	1543.7	0.0232	15.721	1453.7	0.0232
7	7.007	1629.5	0.0230	9.632	1541.2	0.0230	15.828	1447.4	0.0230
8	7.066	1629.5	0.0229	9.698	1538.4	0.0229	15.895	1442.7	0.0229
9	7.101	1628.3	0.0227	9.738	1535.9	0.0227	15.945	1439.7	0.0228
10	7.121	1626.7	0.0226	9.765	1534.3	0.0226	15.994	1438.2	0.0226
11	7.137	1625.4	0.0225	9.792	1533.9	0.0225	16.057	1438.5	0.0225
12	7.163	1626.1	0.0223	9.837	1535.6	0.0223	16.167	1441.5	0.0224
13	7.187	1628.1	0.0222	9.889	1539.7	0.0222	16.313	1447.6	0.0222
14	7.120	1622.4	0.0221	9.831	1540.9	0.0221	16.326	1453.4	0.0221
15	6.913	1603.9	0.0219	9.592	1534.6	0.0220	16.092	1455.8	0.0220
16	6.479	1556.4	0.0218	9.043	1508.5	0.0218	15.376	1445.8	0.0218
17	5.649	1451.4	0.0217	7.929	1426.5	0.0217	13.668	1389.0	0.0217
18	4.036	1228.3	0.0216	5.671	1223.7	0.0216	9.816	1207.3	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-135. Burnup and TH Feedback Parameters by Axial Node for Assembly I23 (Cont'd)

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	13.551	1103.1	0.0239	17.479	931.7	0.0235	22.108	950.4	0.0235
2	18.649	1331.1	0.0238	24.466	1115.5	0.0234	30.911	1108.8	0.0234
3	22.027	1372.0	0.0236	28.995	1176.0	0.0233	36.311	1148.1	0.0233
4	23.341	1364.7	0.0235	30.801	1195.8	0.0232	38.278	1149.9	0.0231
5	23.728	1349.1	0.0233	31.290	1192.7	0.0231	38.602	1131.5	0.0230
6	23.854	1336.3	0.0232	31.516	1196.8	0.0229	38.792	1124.0	0.0229
7	23.923	1327.7	0.0230	31.663	1198.1	0.0228	38.912	1117.9	0.0228
8	23.979	1322.3	0.0229	31.760	1196.7	0.0227	38.991	1112.9	0.0227
9	24.041	1319.1	0.0227	31.832	1193.7	0.0226	39.060	1109.3	0.0226
10	24.119	1317.5	0.0226	31.900	1189.5	0.0225	39.142	1107.1	0.0225
11	24.235	1317.3	0.0225	32.000	1185.3	0.0223	39.284	1107.2	0.0223
12	24.440	1319.7	0.0224	32.277	1188.5	0.0222	39.725	1115.9	0.0222
13	24.714	1325.5	0.0222	32.828	1209.1	0.0221	40.709	1143.7	0.0221
14	24.838	1333.0	0.0221	32.899	1198.0	0.0220	40.869	1147.8	0.0220
15	24.681	1341.9	0.0220	32.462	1175.8	0.0219	40.441	1147.8	0.0219
16	23.828	1349.0	0.0219	31.086	1141.3	0.0218	38.899	1137.8	0.0218
17	21.308	1331.4	0.0217	27.553	1080.1	0.0217	34.652	1092.0	0.0217
18	15.393	1188.3	0.0216	19.413	939.9	0.0216	24.281	973.8	0.0216

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	DP2 to SP33 Spec.Vol
1	26.485	956.0	0.0234
2	36.643	1102.0	0.0233
3	42.530	1124.8	0.0232
4	44.453	1108.8	0.0231
5	44.612	1083.9	0.0230
6	44.732	1072.5	0.0229
7	44.813	1065.3	0.0227
8	44.872	1060.4	0.0226
9	44.934	1057.1	0.0225
10	45.019	1055.0	0.0224
11	45.179	1054.6	0.0223
12	45.725	1062.0	0.0222
13	46.918	1084.6	0.0221
14	47.160	1091.7	0.0220
15	46.826	1100.7	0.0219
16	45.328	1109.0	0.0218
17	40.744	1092.5	0.0217
18	28.732	983.0	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-136. Burnup and TH Feedback Parameters by Axial Node for Assembly I27

Axial Node	Burnup SP29	SP28 to SP29 T-Fuel	SP28 to SP29 Spec.Vol	Burnup SP30	SP29 to SP30 T-Fuel	SP29 to SP30 Spec.Vol	Burnup SP31	SP30 to SP31 T-Fuel	SP30 to SP31 Spec.Vol
1	2.305	938.6	0.0233	3.287	954.5	0.0232	5.852	976.7	0.0232
2	3.734	1225.9	0.0232	5.249	1219.9	0.0232	9.044	1206.9	0.0232
3	4.724	1352.0	0.0231	6.562	1316.2	0.0231	11.030	1271.6	0.0231
4	5.235	1407.4	0.0230	7.207	1350.2	0.0230	11.901	1286.6	0.0230
5	5.498	1430.7	0.0229	7.521	1359.3	0.0229	12.270	1284.6	0.0228
6	5.639	1439.7	0.0228	7.679	1359.3	0.0228	12.427	1278.5	0.0227
7	5.718	1442.4	0.0227	7.763	1356.6	0.0227	12.501	1272.6	0.0226
8	5.763	1442.4	0.0226	7.810	1353.5	0.0225	12.541	1268.1	0.0225
9	5.788	1441.1	0.0225	7.837	1350.9	0.0224	12.569	1265.0	0.0224
10	5.800	1439.4	0.0224	7.851	1349.0	0.0223	12.593	1263.3	0.0223
11	5.803	1437.7	0.0223	7.859	1348.2	0.0222	12.620	1263.0	0.0222
12	5.796	1435.8	0.0221	7.858	1348.3	0.0221	12.648	1264.2	0.0221
13	5.765	1432.5	0.0220	7.834	1349.0	0.0220	12.661	1267.0	0.0221
14	5.683	1424.5	0.0219	7.752	1348.3	0.0220	12.614	1270.9	0.0220
15	5.506	1406.1	0.0219	7.550	1341.8	0.0219	12.415	1272.9	0.0219
16	5.141	1364.5	0.0218	7.100	1318.4	0.0218	11.854	1264.6	0.0218
17	4.373	1268.2	0.0217	6.095	1248.5	0.0217	10.390	1219.2	0.0217
18	2.645	1015.8	0.0216	3.732	1029.9	0.0216	6.550	1043.7	0.0216

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	9.872	1006.9	0.0233	13.524	920.1	0.0232	17.843	947.2	0.0232
2	14.620	1200.5	0.0232	19.901	1095.9	0.0232	25.743	1089.9	0.0232
3	17.323	1237.4	0.0231	23.553	1146.3	0.0231	30.106	1114.1	0.0231
4	18.334	1234.1	0.0230	24.998	1167.7	0.0230	31.733	1114.7	0.0230
5	18.674	1222.9	0.0229	25.555	1176.9	0.0228	32.301	1108.4	0.0228
6	18.782	1212.9	0.0228	25.772	1180.0	0.0227	32.485	1101.2	0.0227
7	18.823	1205.9	0.0227	25.860	1179.2	0.0226	32.536	1094.6	0.0226
8	18.851	1201.4	0.0226	25.896	1176.0	0.0225	32.543	1089.3	0.0225
9	18.883	1198.6	0.0225	25.905	1171.0	0.0224	32.537	1085.2	0.0224
10	18.925	1197.1	0.0224	25.899	1164.6	0.0223	32.528	1082.4	0.0223
11	18.980	1196.7	0.0223	25.884	1156.7	0.0222	32.520	1080.6	0.0222
12	19.053	1197.7	0.0222	25.859	1147.0	0.0221	32.512	1079.8	0.0221
13	19.126	1200.6	0.0221	25.803	1135.0	0.0220	32.484	1080.0	0.0220
14	19.153	1206.2	0.0220	25.661	1120.5	0.0219	32.371	1081.2	0.0220
15	19.010	1214.1	0.0219	25.283	1102.0	0.0218	32.000	1081.9	0.0219
16	18.351	1219.0	0.0218	24.245	1075.8	0.0217	30.850	1078.5	0.0218
17	16.131	1196.8	0.0217	21.258	1030.2	0.0217	27.318	1056.7	0.0217
18	10.476	1056.5	0.0216	13.808	906.4	0.0216	18.014	962.2	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10

Burnup - GWd/MTU
T-Fuel - °F
Spec. Vol. - ft^3 / lbm

Table 4-136. Burnup and TH Feedback Parameters by Axial Node for Assembly I27 (Cont'd)

Axial	Burnup	DP2 to SP33	
Node	SP33	T-Fuel	Spec.Vol
1	21.977	963.8	0.0233
2	30.986	1077.8	0.0232
3	35.744	1090.8	0.0231
4	37.371	1082.3	0.0229
5	37.858	1070.0	0.0228
6	37.970	1060.1	0.0227
7	37.973	1053.1	0.0226
8	37.953	1048.4	0.0225
9	37.933	1045.3	0.0224
10	37.921	1043.3	0.0223
11	37.919	1042.3	0.0222
12	37.928	1042.5	0.0222
13	37.934	1044.6	0.0221
14	37.886	1049.7	0.0220
15	37.603	1057.9	0.0219
16	36.506	1065.4	0.0218
17	32.720	1055.8	0.0217
18	22.011	987.0	0.0216

Table 4-137. Burnup and TH Feedback Parameters by Axial Node for Assembly I27a

Axial	Burnup	SP28 to SP29		Burnup	SP29 to SP30		Burnup	SP30 to SP31	
Node	SP29	T-Fuel	Spec.Vol	SP30	T-Fuel	Spec.Vol	SP31	T-Fuel	Spec.Vol
1	2.305	938.6	0.0233	3.287	954.5	0.0232	5.852	976.7	0.0232
2	3.734	1225.9	0.0232	5.249	1219.9	0.0232	9.044	1206.9	0.0232
3	4.724	1352.0	0.0231	6.562	1316.2	0.0231	11.030	1271.6	0.0231
4	5.235	1407.4	0.0230	7.207	1350.2	0.0230	11.901	1286.6	0.0230
5	5.498	1430.7	0.0229	7.521	1359.3	0.0229	12.270	1284.6	0.0228
6	5.639	1439.7	0.0228	7.679	1359.3	0.0228	12.427	1278.5	0.0227
7	5.718	1442.4	0.0227	7.763	1356.6	0.0227	12.501	1272.6	0.0226
8	5.763	1442.4	0.0226	7.810	1353.5	0.0225	12.541	1268.1	0.0225
9	5.788	1441.1	0.0225	7.837	1350.9	0.0224	12.569	1265.0	0.0224
10	5.800	1439.4	0.0224	7.851	1349.0	0.0223	12.593	1263.3	0.0223
11	5.803	1437.7	0.0223	7.859	1348.2	0.0222	12.620	1263.0	0.0222
12	5.796	1435.8	0.0221	7.858	1348.3	0.0221	12.648	1264.2	0.0221
13	5.765	1432.5	0.0220	7.834	1349.0	0.0220	12.661	1267.0	0.0221
14	5.683	1424.5	0.0219	7.752	1348.3	0.0220	12.614	1270.9	0.0220
15	5.506	1406.1	0.0219	7.550	1341.8	0.0219	12.415	1272.9	0.0219
16	5.141	1364.5	0.0218	7.100	1318.4	0.0218	11.854	1264.6	0.0218
17	4.373	1268.2	0.0217	6.095	1248.5	0.0217	10.390	1219.2	0.0217
18	2.645	1015.8	0.0216	3.732	1029.9	0.0216	6.550	1043.7	0.0216

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-137. Burnup and TH Feedback Parameters by Axial Node for Assembly I27a (Cont'd)

Axial Node	Burnup SP32	SP31 to SP32 T-Fuel	SP31 to SP32 Spec.Vol	Burnup DP1	SP32 to DP1 T-Fuel	SP32 to DP1 Spec.Vol	Burnup DP2	DP1 to DP2 T-Fuel	DP1 to DP2 Spec.Vol
1	9.875	1006.9	0.0233	13.044	926.9	0.0234	17.073	959.2	0.0234
2	14.626	1200.5	0.0232	19.843	1113.9	0.0234	25.765	1107.2	0.0233
3	17.332	1237.4	0.0231	23.819	1177.8	0.0233	30.619	1136.1	0.0232
4	18.344	1234.1	0.0230	25.448	1209.6	0.0231	32.508	1139.3	0.0231
5	18.685	1222.9	0.0229	26.108	1224.8	0.0230	33.211	1134.2	0.0229
6	18.793	1212.9	0.0228	26.389	1231.4	0.0229	33.474	1127.2	0.0228
7	18.834	1205.9	0.0227	26.527	1233.6	0.0228	33.589	1121.0	0.0227
8	18.863	1201.4	0.0226	26.609	1233.2	0.0226	33.658	1116.2	0.0226
9	18.895	1198.6	0.0225	26.666	1231.4	0.0225	33.718	1113.0	0.0225
10	18.937	1197.1	0.0224	26.713	1228.6	0.0224	33.784	1111.2	0.0224
11	18.993	1196.7	0.0223	26.760	1225.2	0.0223	33.869	1111.0	0.0223
12	19.066	1197.7	0.0222	26.807	1221.0	0.0222	33.975	1112.6	0.0222
13	19.140	1200.6	0.0221	26.821	1214.3	0.0221	34.062	1115.6	0.0221
14	19.166	1206.2	0.0220	26.714	1202.6	0.0220	34.022	1119.0	0.0220
15	19.024	1214.1	0.0219	26.309	1182.4	0.0219	33.639	1121.0	0.0219
16	18.364	1219.0	0.0218	25.150	1147.7	0.0218	32.336	1115.3	0.0218
17	16.141	1196.8	0.0217	21.934	1085.3	0.0217	28.463	1086.4	0.0217
18	10.482	1056.5	0.0216	14.158	940.4	0.0216	18.623	980.9	0.0216

Axial Node	Burnup SP33	DP2 to SP33 T-Fuel	DP2 to SP33 Spec.Vol
1	21.242	978.3	0.0234
2	31.177	1097.0	0.0233
3	36.495	1112.7	0.0232
4	38.422	1105.8	0.0230
5	39.065	1094.0	0.0229
6	39.270	1084.5	0.0228
7	39.349	1078.0	0.0227
8	39.403	1073.8	0.0226
9	39.460	1071.1	0.0225
10	39.531	1069.6	0.0224
11	39.630	1069.1	0.0223
12	39.760	1070.0	0.0222
13	39.890	1073.1	0.0221
14	39.921	1079.1	0.0220
15	39.630	1087.9	0.0219
16	38.368	1095.2	0.0218
17	34.191	1081.4	0.0217
18	22.819	1001.9	0.0216

Statepoint	EFPD / Cycle
SP31	363.1 / Cy9
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-138. Burnup and TH Feedback Parameters by Axial Node for Assembly J4

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	4.329	1206.6	0.0240	9.421	1213.1	0.0241	14.210	1192.8	0.0239
2	6.560	1446.5	0.0239	14.021	1396.1	0.0239	20.689	1323.4	0.0238
3	8.116	1599.0	0.0238	16.890	1485.2	0.0238	24.336	1352.0	0.0237
4	8.942	1666.1	0.0236	18.183	1499.7	0.0236	25.752	1344.8	0.0235
5	9.377	1693.2	0.0234	18.746	1496.1	0.0234	26.263	1329.6	0.0233
6	9.613	1705.0	0.0233	18.999	1488.2	0.0233	26.450	1316.9	0.0232
7	9.742	1709.1	0.0231	19.121	1480.9	0.0231	26.531	1308.3	0.0230
8	9.808	1709.3	0.0229	19.188	1475.6	0.0230	26.582	1303.2	0.0229
9	9.833	1707.1	0.0228	19.231	1472.5	0.0228	26.628	1300.4	0.0228
10	9.827	1703.4	0.0226	19.263	1471.6	0.0227	26.677	1299.2	0.0226
11	9.792	1698.4	0.0225	19.287	1472.9	0.0225	26.730	1299.7	0.0225
12	9.722	1691.3	0.0223	19.295	1476.4	0.0224	26.783	1302.3	0.0224
13	9.602	1680.7	0.0222	19.264	1481.9	0.0222	26.823	1308.0	0.0222
14	9.397	1663.3	0.0221	19.136	1488.4	0.0221	26.801	1318.0	0.0221
15	9.036	1633.3	0.0219	18.771	1492.0	0.0220	26.558	1331.9	0.0220
16	8.364	1572.8	0.0218	17.817	1480.7	0.0218	25.619	1341.9	0.0219
17	7.085	1438.2	0.0217	15.496	1416.8	0.0217	22.770	1317.0	0.0217
18	4.877	1196.3	0.0216	10.813	1218.1	0.0216	16.177	1192.8	0.0216

Table 4-139. Burnup and TH Feedback Parameters by Axial Node for Assembly J6

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	3.947	1159.4	0.0239	8.700	1183.1	0.0239	13.264	1174.3	0.0238
2	6.174	1405.1	0.0238	13.262	1364.8	0.0238	19.657	1306.7	0.0237
3	7.707	1557.3	0.0237	16.042	1450.0	0.0236	23.174	1330.6	0.0236
4	8.530	1629.6	0.0235	17.300	1466.8	0.0235	24.548	1323.3	0.0234
5	8.974	1660.4	0.0234	17.860	1463.0	0.0233	25.062	1308.8	0.0233
6	9.221	1673.2	0.0232	18.120	1454.8	0.0232	25.263	1296.8	0.0231
7	9.361	1678.2	0.0231	18.253	1447.3	0.0230	25.359	1288.7	0.0230
8	9.440	1679.4	0.0229	18.332	1441.8	0.0229	25.425	1283.8	0.0228
9	9.479	1678.3	0.0227	18.389	1438.6	0.0227	25.486	1281.1	0.0227
10	9.488	1675.9	0.0226	18.435	1437.7	0.0226	25.549	1280.0	0.0226
11	9.469	1672.2	0.0224	18.474	1439.1	0.0225	25.616	1280.3	0.0225
12	9.416	1666.4	0.0223	18.496	1442.7	0.0223	25.679	1282.6	0.0223
13	9.309	1656.9	0.0222	18.476	1447.8	0.0222	25.724	1287.9	0.0222
14	9.116	1640.7	0.0220	18.363	1454.3	0.0221	25.710	1297.4	0.0221
15	8.764	1610.6	0.0219	18.017	1458.6	0.0220	25.482	1310.8	0.0220
16	8.094	1545.8	0.0218	17.094	1449.5	0.0218	24.577	1320.7	0.0218
17	6.802	1408.9	0.0217	14.813	1382.3	0.0217	21.801	1302.3	0.0217
18	4.538	1159.0	0.0216	10.105	1187.7	0.0216	15.241	1177.7	0.0216

Statepoint	EFPD / Cycle
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-140. Burnup and TH Feedback Parameters by Axial Node for Assembly J10

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	4.294	1190.2	0.0239	9.295	1196.3	0.0240	13.963	1178.6	0.0239
2	6.526	1433.5	0.0238	13.867	1379.8	0.0239	20.378	1308.7	0.0237
3	8.025	1584.6	0.0237	16.618	1468.2	0.0237	23.878	1336.2	0.0236
4	8.804	1651.5	0.0236	17.826	1483.7	0.0235	25.198	1329.5	0.0234
5	9.209	1677.2	0.0234	18.341	1479.7	0.0234	25.659	1314.8	0.0233
6	9.426	1687.9	0.0232	18.567	1471.8	0.0232	25.819	1302.5	0.0231
7	9.542	1691.2	0.0231	18.671	1464.5	0.0231	25.881	1294.3	0.0230
8	9.598	1690.7	0.0229	18.724	1459.3	0.0229	25.918	1289.4	0.0229
9	9.614	1688.0	0.0228	18.754	1456.2	0.0228	25.950	1286.7	0.0227
10	9.599	1683.7	0.0226	18.772	1455.2	0.0226	25.985	1285.8	0.0226
11	9.555	1678.1	0.0225	18.781	1456.4	0.0225	26.022	1286.3	0.0225
12	9.477	1670.3	0.0223	18.773	1459.6	0.0224	26.058	1288.9	0.0223
13	9.350	1659.2	0.0222	18.729	1464.7	0.0222	26.082	1294.5	0.0222
14	9.146	1642.0	0.0220	18.598	1471.0	0.0221	26.055	1304.2	0.0221
15	8.798	1612.3	0.0219	18.252	1474.7	0.0220	25.829	1317.6	0.0220
16	8.154	1550.5	0.0218	17.347	1464.5	0.0218	24.942	1327.4	0.0218
17	6.903	1418.3	0.0217	15.094	1399.0	0.0217	22.185	1306.4	0.0217
18	4.694	1175.6	0.0216	10.440	1203.0	0.0216	15.665	1182.4	0.0216

Table 4-141. Burnup and TH Feedback Parameters by Axial Node for Assembly J12

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	4.248	1197.9	0.0240	9.283	1208.4	0.0240	14.052	1192.2	0.0239
2	6.397	1429.4	0.0239	13.733	1386.2	0.0239	20.364	1324.7	0.0238
3	7.929	1580.2	0.0237	16.567	1477.0	0.0237	23.987	1353.2	0.0237
4	8.740	1649.5	0.0236	17.834	1491.9	0.0236	25.377	1345.6	0.0235
5	9.153	1674.9	0.0234	18.353	1487.2	0.0234	25.840	1329.5	0.0233
6	9.379	1686.2	0.0233	18.590	1479.1	0.0233	26.013	1316.6	0.0232
7	9.510	1690.7	0.0231	18.715	1471.9	0.0231	26.101	1308.2	0.0230
8	9.582	1691.4	0.0229	18.790	1466.6	0.0230	26.164	1303.1	0.0229
9	9.616	1690.0	0.0228	18.843	1463.5	0.0228	26.223	1300.3	0.0228
10	9.622	1687.3	0.0226	18.889	1462.7	0.0227	26.288	1299.2	0.0226
11	9.608	1683.9	0.0225	18.943	1464.3	0.0225	26.374	1299.9	0.0225
12	9.582	1680.4	0.0223	19.023	1469.1	0.0224	26.511	1303.4	0.0224
13	9.524	1674.9	0.0222	19.102	1476.8	0.0222	26.676	1310.9	0.0222
14	9.356	1660.2	0.0221	19.030	1483.9	0.0221	26.712	1321.3	0.0221
15	9.004	1630.6	0.0219	18.676	1487.5	0.0220	26.479	1335.2	0.0220
16	8.326	1568.9	0.0218	17.711	1475.8	0.0218	25.526	1345.2	0.0219
17	7.045	1434.0	0.0217	15.388	1410.7	0.0217	22.669	1320.3	0.0217
18	4.887	1197.5	0.0216	10.813	1216.6	0.0216	16.190	1194.7	0.0216

Statepoint	EFPD / Cycle
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-142. Burnup and TH Feedback Parameters by Axial Node for Assembly J14

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	3.142	1033.4	0.0234	7.001	1081.8	0.0234	10.795	1098.6	0.0235
2	5.090	1269.7	0.0234	10.977	1257.1	0.0233	16.400	1230.5	0.0234
3	6.363	1403.1	0.0233	13.277	1328.4	0.0232	19.341	1261.1	0.0232
4	7.040	1467.6	0.0231	14.304	1344.2	0.0231	20.474	1252.7	0.0231
5	7.404	1498.2	0.0230	14.755	1341.4	0.0230	20.890	1239.7	0.0230
6	7.606	1512.4	0.0229	14.962	1334.2	0.0229	21.049	1229.3	0.0229
7	7.720	1518.3	0.0228	15.067	1327.7	0.0228	21.124	1222.4	0.0228
8	7.784	1519.9	0.0226	15.128	1322.9	0.0226	21.176	1218.3	0.0227
9	7.817	1519.4	0.0225	15.172	1320.1	0.0225	21.224	1216.1	0.0225
10	7.825	1517.5	0.0224	15.208	1319.4	0.0224	21.275	1215.3	0.0224
11	7.812	1514.4	0.0223	15.240	1320.7	0.0223	21.331	1215.8	0.0223
12	7.772	1509.5	0.0222	15.263	1324.2	0.0222	21.390	1218.0	0.0222
13	7.692	1501.0	0.0221	15.255	1329.6	0.0221	21.440	1222.9	0.0221
14	7.537	1485.5	0.0220	15.168	1336.0	0.0220	21.439	1231.5	0.0220
15	7.244	1455.0	0.0219	14.883	1339.8	0.0219	21.251	1243.5	0.0219
16	6.675	1394.8	0.0218	14.102	1329.0	0.0218	20.475	1253.3	0.0218
17	5.550	1272.5	0.0217	12.137	1267.8	0.0217	18.064	1236.4	0.0217
18	3.543	1034.7	0.0216	8.016	1092.1	0.0216	12.315	1107.6	0.0216

Table 4-143. Burnup and TH Feedback Parameters by Axial Node for Assembly J17

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	4.379	1203.4	0.0240	9.493	1208.6	0.0240	14.275	1190.5	0.0239
2	6.526	1437.1	0.0239	13.941	1389.3	0.0239	20.594	1323.1	0.0238
3	8.034	1588.7	0.0237	16.743	1481.1	0.0238	24.192	1353.7	0.0237
4	8.827	1655.8	0.0236	17.987	1495.6	0.0236	25.559	1346.3	0.0235
5	9.225	1680.2	0.0234	18.485	1490.8	0.0234	25.998	1330.1	0.0233
6	9.439	1690.6	0.0233	18.704	1482.6	0.0233	26.153	1317.1	0.0232
7	9.561	1694.6	0.0231	18.819	1475.3	0.0231	26.231	1308.6	0.0231
8	9.629	1694.9	0.0229	18.889	1470.1	0.0230	26.287	1303.6	0.0229
9	9.659	1693.2	0.0228	18.938	1467.1	0.0228	26.342	1300.8	0.0228
10	9.663	1690.4	0.0226	18.983	1466.3	0.0227	26.406	1299.6	0.0226
11	9.651	1687.2	0.0225	19.041	1468.0	0.0225	26.497	1300.3	0.0225
12	9.633	1684.4	0.0223	19.137	1473.1	0.0224	26.651	1303.9	0.0224
13	9.588	1679.8	0.0222	19.236	1481.2	0.0222	26.837	1311.4	0.0222
14	9.431	1665.8	0.0221	19.181	1488.5	0.0221	26.891	1321.8	0.0221
15	9.084	1636.7	0.0219	18.834	1492.1	0.0220	26.664	1335.7	0.0220
16	8.408	1576.6	0.0218	17.868	1480.2	0.0218	25.710	1345.6	0.0219
17	7.122	1441.6	0.0217	15.533	1415.9	0.0217	22.836	1319.5	0.0217
18	4.946	1203.7	0.0216	10.919	1220.2	0.0216	16.312	1194.7	0.0216

Statepoint	EFPD / Cycle
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-144. Burnup and TH Feedback Parameters by Axial Node for Assembly J19

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	3.870	1138.3	0.0239	8.492	1164.1	0.0238	12.915	1158.5	0.0238
2	6.065	1386.3	0.0238	12.981	1346.5	0.0237	19.226	1294.6	0.0237
3	7.566	1539.1	0.0236	15.696	1431.4	0.0236	22.676	1319.5	0.0235
4	8.358	1611.1	0.0235	16.894	1448.7	0.0234	23.985	1311.1	0.0234
5	8.763	1639.3	0.0233	17.381	1443.5	0.0233	24.421	1296.0	0.0232
6	8.987	1651.6	0.0232	17.607	1434.8	0.0231	24.591	1284.2	0.0231
7	9.122	1657.0	0.0230	17.735	1427.4	0.0230	24.688	1276.5	0.0230
8	9.203	1658.5	0.0229	17.819	1422.2	0.0229	24.764	1271.9	0.0228
9	9.250	1658.1	0.0227	17.886	1419.3	0.0227	24.839	1269.4	0.0227
10	9.272	1656.7	0.0226	17.950	1418.8	0.0226	24.923	1268.4	0.0226
11	9.279	1655.0	0.0224	18.027	1421.0	0.0225	25.033	1269.1	0.0224
12	9.280	1653.9	0.0223	18.140	1426.4	0.0223	25.202	1272.6	0.0223
13	9.255	1651.1	0.0222	18.257	1434.6	0.0222	25.404	1279.7	0.0222
14	9.115	1638.8	0.0220	18.225	1442.5	0.0221	25.475	1289.6	0.0221
15	8.782	1609.5	0.0219	17.909	1447.4	0.0219	25.276	1302.8	0.0220
16	8.106	1545.3	0.0218	16.987	1438.1	0.0218	24.370	1312.7	0.0218
17	6.781	1405.7	0.0217	14.677	1370.9	0.0217	21.568	1295.5	0.0217
18	4.483	1152.0	0.0216	9.945	1177.8	0.0216	14.995	1170.2	0.0216

Table 4-145. Burnup and TH Feedback Parameters by Axial Node for Assembly J20

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	2.966	1008.6	0.0234	6.612	1056.3	0.0233	10.214	1079.0	0.0234
2	5.000	1256.0	0.0233	10.687	1236.2	0.0233	15.915	1210.5	0.0233
3	6.268	1389.4	0.0232	12.940	1304.2	0.0232	18.784	1240.7	0.0232
4	6.936	1452.3	0.0231	13.937	1318.9	0.0230	19.883	1233.7	0.0231
5	7.291	1481.1	0.0230	14.370	1315.8	0.0229	20.282	1221.3	0.0229
6	7.487	1493.3	0.0229	14.567	1308.6	0.0228	20.433	1211.2	0.0228
7	7.599	1498.4	0.0227	14.667	1302.0	0.0227	20.506	1204.4	0.0227
8	7.663	1500.0	0.0226	14.729	1297.3	0.0226	20.560	1200.4	0.0226
9	7.699	1499.7	0.0225	14.776	1294.6	0.0225	20.612	1198.3	0.0225
10	7.713	1498.3	0.0224	14.819	1293.9	0.0224	20.670	1197.4	0.0224
11	7.709	1496.1	0.0223	14.862	1295.3	0.0223	20.737	1197.8	0.0223
12	7.684	1492.6	0.0222	14.903	1299.0	0.0222	20.813	1199.9	0.0222
13	7.620	1486.0	0.0221	14.918	1304.7	0.0221	20.885	1204.6	0.0221
14	7.482	1472.5	0.0219	14.852	1311.4	0.0220	20.902	1212.9	0.0220
15	7.200	1445.2	0.0218	14.584	1315.4	0.0219	20.727	1224.7	0.0219
16	6.636	1387.0	0.0218	13.822	1305.3	0.0218	19.970	1234.2	0.0218
17	5.493	1263.9	0.0217	11.859	1246.5	0.0217	17.567	1215.3	0.0217
18	3.277	999.5	0.0216	7.395	1056.0	0.0216	11.367	1076.6	0.0216

Statepoint	EFPD / Cycle
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Table 4-146. Burnup and TH Feedback Parameters by Axial Node for Assembly J23

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	4.016	1168.4	0.0240	8.804	1185.6	0.0239	13.387	1175.2	0.0238
2	6.296	1418.5	0.0239	13.444	1368.6	0.0238	19.869	1306.7	0.0237
3	7.860	1572.7	0.0237	16.256	1453.5	0.0237	23.415	1329.9	0.0236
4	8.669	1641.9	0.0236	17.471	1467.8	0.0235	24.732	1321.5	0.0234
5	9.073	1666.7	0.0234	17.950	1461.1	0.0233	25.152	1305.4	0.0233
6	9.293	1677.2	0.0232	18.165	1452.0	0.0232	25.306	1293.0	0.0231
7	9.424	1681.5	0.0231	18.285	1444.2	0.0230	25.393	1285.0	0.0230
8	9.504	1682.6	0.0229	18.365	1438.8	0.0229	25.463	1280.1	0.0229
9	9.548	1681.9	0.0228	18.429	1435.6	0.0228	25.533	1277.4	0.0227
10	9.570	1680.4	0.0226	18.493	1434.8	0.0226	25.615	1276.2	0.0226
11	9.580	1678.9	0.0225	18.576	1436.5	0.0225	25.728	1276.6	0.0225
12	9.591	1678.4	0.0223	18.703	1441.8	0.0224	25.910	1279.9	0.0223
13	9.576	1676.4	0.0222	18.840	1449.8	0.0222	26.131	1286.9	0.0222
14	9.444	1664.6	0.0221	18.821	1457.5	0.0221	26.215	1296.6	0.0221
15	9.111	1637.0	0.0219	18.510	1462.6	0.0220	26.021	1309.9	0.0220
16	8.429	1577.2	0.0218	17.585	1454.6	0.0218	25.119	1320.4	0.0218
17	7.085	1437.0	0.0217	15.248	1391.3	0.0217	22.295	1300.6	0.0217
18	4.717	1177.8	0.0216	10.388	1194.3	0.0216	15.575	1179.7	0.0216

Table 4-147. Burnup and TH Feedback Parameters by Axial Node for Assembly J27

Axial	Burnup	SP32 to DP1		Burnup	DP1 to DP2		Burnup	DP2 to SP33	
Node	DP1	T-Fuel	Spec.Vol	DP2	T-Fuel	Spec.Vol	SP33	T-Fuel	Spec.Vol
1	2.710	983.0	0.0232	6.101	1034.4	0.0232	9.550	1066.8	0.0233
2	4.619	1216.9	0.0232	9.918	1206.5	0.0231	14.886	1190.3	0.0232
3	5.821	1339.9	0.0231	12.036	1266.9	0.0230	17.567	1219.4	0.0231
4	6.431	1394.9	0.0230	12.934	1278.1	0.0229	18.548	1211.9	0.0230
5	6.744	1419.3	0.0229	13.307	1273.8	0.0228	18.882	1199.4	0.0228
6	6.911	1429.8	0.0227	13.466	1266.3	0.0227	18.995	1189.5	0.0227
7	7.003	1433.8	0.0226	13.540	1259.5	0.0226	19.042	1183.0	0.0226
8	7.054	1434.5	0.0225	13.583	1254.6	0.0225	19.074	1179.1	0.0225
9	7.080	1433.7	0.0224	13.613	1251.7	0.0224	19.107	1176.9	0.0224
10	7.088	1431.9	0.0223	13.642	1250.7	0.0223	19.147	1176.0	0.0223
11	7.081	1429.6	0.0222	13.674	1251.6	0.0222	19.196	1176.3	0.0223
12	7.056	1426.1	0.0221	13.704	1254.5	0.0221	19.255	1178.1	0.0222
13	6.998	1419.8	0.0220	13.712	1259.3	0.0220	19.310	1182.2	0.0221
14	6.874	1407.0	0.0219	13.650	1265.1	0.0219	19.320	1189.8	0.0220
15	6.624	1381.3	0.0218	13.413	1268.8	0.0219	19.167	1200.5	0.0219
16	6.124	1329.0	0.0217	12.739	1259.4	0.0218	18.497	1209.4	0.0218
17	5.082	1215.1	0.0217	10.952	1205.5	0.0217	16.297	1189.3	0.0217
18	3.024	965.4	0.0216	6.813	1022.3	0.0216	10.519	1052.6	0.0216

Statepoint	EFPD / Cycle
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Burnup	- GWd/MTU
T-Fuel	- °F
Spec. Vol.	- ft^3 / lbm

Control rod insertion time (by axial node) for each assembly with a control rod inserted during core operation is provided in Tables 4-148 through 4-189. This data was also obtained from the core follow calculations based on core operation data. In addition, boron letdown data for cycles 1-10 are also provided in Tables 4-190 through 4-201. Two types of boron data are provided. The first type, in Tables 4-190 through 4-200, are measured values presented at various times during each cycle (EFPD) along with power level and control rod insertion data at the time of the measurement. The power level for these tables are expressed in % of full power (%FP), where full power is defined for each cycle. 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 2-8 (for 0%WD) and Figure 2-9 (for 100%WD). Figures 2-10 and 2-11 provide similar information for bank 8 (APSRs). The second set of data is all-rods-out-critical-boron (AROCB) concentrations at hot full power conditions (Table 4-201). Both sets are based on core operation data for each cycle.

Cycle 1B of Crystal River Unit 3 contained four fuel assemblies from cycle 1 of Oconee Unit 1. Critical boron data for this cycle are provided in Table 4-202.

Table 4-148. Rod Insertion Time by Axial Node for Assembly A1

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2	SP2 to SP3	SP3 to SP4
1	268.80	142.20	29.10
2	268.80	142.20	29.10
3	268.80	142.20	29.10
4	268.80	134.91	12.02
5	268.80	127.78	6.57
6	268.80	126.76	0.00
7	268.80	126.28	0.00
8	268.80	125.99	0.00
9	268.80	125.84	0.00
10	268.80	125.83	0.00
11	268.80	125.96	0.00
12	268.80	126.21	0.00
13	268.77	126.67	0.00
14	265.13	127.51	0.00
15	179.03	116.74	0.00
16	41.67	30.17	0.00
17	0.00	4.67	0.00
18	0.00	0.00	0.00

Table 4-149. Rod Insertion Time by Axial Node for Assembly A5

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2	SP2 to SP3
1	239.78	125.52
2	124.80	117.60
3	5.03	46.54
4	0.00	4.51
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2

Table 4-150. Rod Insertion Time by Axial Node for Assembly A7

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2	SP2 to SP3	SP3 to SP4	SP4 to SP5
1	14.01	142.29	29.10	161.25
2	12.97	142.20	29.10	125.38
3	12.08	142.25	29.10	30.17
4	11.22	134.21	11.83	8.45
5	10.52	126.31	6.47	3.21
6	9.96	125.18	0.00	0.41
7	9.58	124.53	0.00	0.00
8	9.37	124.16	0.00	0.00
9	9.34	123.87	0.00	0.00
10	9.43	123.82	0.00	0.00
11	9.70	123.81	0.00	0.00
12	10.09	124.00	0.00	0.00
13	10.68	124.48	0.00	0.00
14	11.72	125.38	0.00	0.00
15	2.50	114.68	0.00	0.00
16	0.00	28.90	0.00	0.00
17	0.00	4.46	0.00	0.00
18	0.00	0.00	0.00	0.00

Table 4-151. Rod Insertion Time by Axial Node for Assembly A14

Axial Node	Time Rod Inserted (EFPD) SP16 to SP17	SP17 to SP18	SP18 to SP19	SP19 to SP20	SP20 to SP21
1	146.27	10.13	5.32	27.11	0.23
2	35.38	0.00	0.00	0.00	0.00
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

Statepoint	EFPD / Cycle	Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A	SP17	260.3 / Cy7
SP2	268.8 / Cy1B	SP18	291.0 / Cy7
SP3	411.0 / Cy1B	SP19	319.0 / Cy7
SP4	0.0 / Cy2	SP20	462.3 / Cy7
SP5	0.0 / Cy3	SP21	479.0 / Cy7
SP16	0.0 / Cy7		

Table 4-152. Rod Insertion Time by Axial Node for Assembly A18

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2
1	0.00
2	0.00
3	0.00
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	2.20
10	4.48
11	31.29
12	238.15
13	261.36
14	257.56
15	250.06
16	122.12
17	4.49
18	0.78

Table 4-153. Rod Insertion Time by Axial Node for Assembly A18a

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2
1	0.00
2	0.00
3	0.00
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	2.20
10	4.48
11	31.29
12	238.15
13	261.36
14	257.56
15	250.06
16	122.12
17	4.49
18	0.78

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B

Table 4-154. Rod Insertion Time by Axial Node for Assembly A18b

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2	SP2 to SP3
1	0.00	0.00
2	0.00	0.00
3	0.00	0.00
4	0.00	0.00
5	0.00	0.00
6	0.00	0.00
7	0.00	0.21
8	0.00	0.46
9	2.20	0.44
10	4.48	6.34
11	31.29	71.70
12	238.15	140.47
13	261.36	140.05
14	257.56	139.51
15	250.06	109.34
16	122.12	16.84
17	4.49	0.00
18	0.78	0.00

Table 4-155. Rod Insertion Time by Axial Node for Assembly A20

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2
1	224.35
2	225.46
3	227.76
4	230.06
5	232.01
6	233.45
7	234.37
8	234.74
9	234.54
10	233.79
11	232.47
12	230.64
13	228.83
14	225.25
15	164.24
16	37.78
17	0.00
18	0.00

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B

Table 4-156. Rod Insertion Time by Axial Node for Assembly A22

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2	SP2 to SP3
1	240.16	125.38
2	125.32	117.34
3	5.03	46.31
4	0.00	4.49
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Table 4-157. Rod Insertion Time by Axial Node for Assembly A23

Axial Node	Time Rod Inserted (EFPD) SP4 to SP5
1	165.61
2	166.50
3	166.50
4	166.50
5	166.56
6	166.56
7	166.50
8	166.50
9	166.50
10	166.50
11	166.56
12	166.50
13	166.50
14	166.20
15	137.89
16	64.84
17	10.12
18	0.99

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP4	0.0 / Cy2
SP5	0.0 / Cy3

Table 4-158. Rod Insertion Time by Axial Node for Assembly A23a

Axial Node	Time Rod Inserted (EFPD) SP4 to SP5
1	165.65
2	166.50
3	166.50
4	166.45
5	166.50
6	166.55
7	166.50
8	166.45
9	166.50
10	166.50
11	166.50
12	166.45
13	166.50
14	166.26
15	136.66
16	61.87
17	10.02
18	1.06

Table 4-159. Rod Insertion Time by Axial Node for Assembly A25

Axial Node	Time Rod Inserted (EFPD) SP5 to SP6	SP6 to SP7
1	168.38	81.60
2	168.50	81.50
3	168.50	81.50
4	168.44	81.50
5	168.50	81.50
6	168.50	81.50
7	168.50	81.56
8	168.50	81.56
9	168.50	81.50
10	168.50	81.50
11	168.50	81.44
12	168.50	81.50
13	168.50	81.50
14	165.24	76.88
15	111.40	3.04
16	15.24	0.00
17	5.49	0.00
18	0.26	0.00

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Table 4-160. Rod Insertion Time by Axial Node for Assembly A25a

Axial Node	Time Rod Inserted (EFPD) SP5 to SP6	SP6 to SP7
1	156.32	71.98
2	76.64	8.99
3	10.17	0.00
4	6.84	0.00
5	0.17	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Table 4-161. Rod Insertion Time by Axial Node for Assembly A26

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2	SP2 to SP3
1	13.23	0.00
2	12.27	0.00
3	11.36	0.00
4	10.46	0.00
5	9.73	0.00
6	9.19	0.00
7	8.86	0.20
8	8.67	0.44
9	8.66	0.42
10	8.80	6.32
11	9.16	71.66
12	9.73	140.55
13	10.58	140.21
14	11.95	139.62
15	2.69	109.45
16	0.00	16.83
17	0.00	0.00
18	0.00	0.00

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.9 / Cy1B
SP3	411.0 / Cy1B
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Table 4-162. Rod Insertion Time by Axial Node for Assembly A28

Axial Node	Time Rod Inserted (EFPD) SP4 to SP5
1	0.00
2	0.00
3	0.00
4	0.00
5	0.00
6	0.00
7	1.93
8	6.55
9	15.29
10	57.78
11	122.85
12	156.14
13	142.18
14	109.13
15	47.29
16	7.78
17	0.00
18	0.00

Table 4-163. Rod Insertion Time by Axial Node for Assembly A29

Axial Node	Time Rod Inserted (EFPD) SP5 to SP6	SP6 to SP7
1	168.59	81.50
2	168.50	81.55
3	168.50	81.50
4	168.50	81.50
5	168.50	81.50
6	168.55	81.50
7	168.50	81.50
8	168.50	81.50
9	168.50	81.50
10	168.50	81.50
11	168.55	81.45
12	168.50	81.50
13	168.50	81.50
14	165.37	76.92
15	114.16	3.00
16	16.44	0.00
17	6.04	0.00
18	0.27	0.00

Statepoint	EFPD / Cycle
SP4	0.0 / Cy2
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3

Table 4-164. Rod Insertion Time by Axial Node for Assembly O1

Axial Node	Time Rod Inserted (EFPD) SP1 to SP2	SP2 to SP3
1	309.60	142.20
2	309.60	142.20
3	309.60	142.20
4	309.60	133.93
5	54.07	126.00
6	0.00	125.02
7	0.00	124.60
8	0.00	124.32
9	0.00	124.16
10	0.00	124.09
11	0.00	124.14
12	0.00	124.22
13	0.00	124.55
14	0.00	125.39
15	0.00	114.38
16	0.00	28.95
17	0.00	4.64
18	0.00	0.00

Table 4-165. Rod Insertion Time by Axial Node for Assembly B8

Axial Node	Time Rod Inserted (EFPD) SP8 to SP9	SP9 to SP10
1	228.10	24.90
2	214.93	24.90
3	59.60	3.71
4	0.96	0.00
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Statepoint	EFPD / Cycle
SP1	0.0 / Cy1A
SP2	268.8 / Cy1B
SP3	411.0 / Cy1B
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Table 4-166. Rod Insertion Time by Axial Node for Assembly B20

Axial Node	Time Rod Inserted (EFPD) SP5 to SP6	SP6 to SP7	SP7 to SP8
1	156.20	71.87	4.16
2	76.25	8.91	2.59
3	9.87	0.00	0.00
4	6.68	0.00	0.00
5	0.15	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 4-167. Rod Insertion Time by Axial Node for Assembly B21

Axial Node	Time Rod Inserted (EFPD) SP8 to SP9	SP9 to SP10
1	228.22	24.80
2	228.10	24.90
3	228.10	24.90
4	228.04	24.90
5	228.10	24.95
6	228.10	24.90
7	228.10	24.90
8	228.10	24.90
9	228.10	24.90
10	228.10	24.90
11	228.10	24.90
12	228.05	24.95
13	228.15	24.85
14	228.10	24.90
15	214.72	24.90
16	52.72	3.90
17	1.17	0.00
18	0.11	0.00

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Table 4-168. Rod Insertion Time by Axial Node for Assembly B25

Axial Node	Time Rod Inserted (EFPD) SP5 to SP6	SP6 to SP7	SP7 to SP8
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	0.67	0.00	0.74
8	6.32	0.00	32.04
9	98.82	46.00	69.99
10	167.14	81.54	73.00
11	168.50	81.50	73.00
12	164.85	81.50	61.42
13	127.51	73.13	14.01
14	14.05	5.95	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 4-169. Rod Insertion Time by Axial Node for Assembly B27

Axial Node	Time Rod Inserted (EFPD) SP8 to SP9	SP9 to SP10
1	0.00	0.00
2	0.00	0.00
3	0.00	0.00
4	0.37	0.00
5	0.99	0.00
6	1.20	0.00
7	1.44	0.00
8	1.68	0.00
9	4.81	0.00
10	143.86	18.17
11	222.46	24.90
12	221.94	24.90
13	222.15	24.90
14	183.67	20.97
15	10.89	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Statepoint	EFPD / Cycle
SP5	0.0 / Cy3
SP6	168.5 / Cy3
SP7	250.0 / Cy3
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Table 4-170. Rod Insertion Time by Axial Node for Assembly B28

Axial Node	Time Rod Inserted (EFPD) SP8 to SP9	SP9 to SP10
1	228.10	24.81
2	215.00	24.90
3	59.96	3.71
4	0.91	0.00
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Table 4-171. Rod Insertion Time by Axial Node for Assembly B29

Axial Node	Time Rod Inserted (EFPD) SP8 to SP9	SP9 to SP10
1	228.01	24.90
2	228.10	24.90
3	228.05	24.95
4	228.10	24.90
5	228.10	24.90
6	228.06	24.94
7	228.10	24.94
8	228.10	24.90
9	228.10	24.90
10	228.10	24.90
11	228.10	24.90
12	228.10	24.90
13	228.14	24.86
14	228.06	24.94
15	215.12	24.90
16	54.83	3.93
17	1.28	0.00
18	0.12	0.00

Statepoint	EFPD / Cycle
SP8	0.0 / Cy4
SP9	228.1 / Cy4
SP10	253.0 / Cy4

Table 4-172. Rod Insertion Time by Axial Node for Assembly C15

Axial Node	Time Rod Inserted (EFPD) SP11 to SP12
1	89.33
2	60.71
3	4.47
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	0.00
10	0.00
11	0.00
12	0.00
13	0.00
14	0.00
15	0.00
16	0.00
17	0.00
18	0.00

Table 4-173. Rod Insertion Time by Axial Node for Assembly C15a

Axial Node	Time Rod Inserted (EFPD) SP11 to SP12
1	90.17
2	61.24
3	4.50
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	0.00
10	0.00
11	0.00
12	0.00
13	0.00
14	0.00
15	0.00
16	0.00
17	0.00
18	0.00

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5

Table 4-174. Rod Insertion Time by Axial Node for Assembly C20

Axial Node	Time Rod Inserted (EFPD) SP22 to SP23	SP23 to SP24	SP24 to SP25	SP25 to SP26	SP26 to SP27
1	24.83	4.04	20.57	1.81	19.48
2	0.00	0.00	0.00	0.00	0.00
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 4-175. Rod Insertion Time by Axial Node for Assembly C21

Axial Node	Time Rod Inserted (EFPD) SP11 to SP12
1	93.20
2	63.00
3	4.58
4	0.00
5	0.00
6	0.00
7	0.00
8	0.00
9	0.00
10	0.00
11	0.00
12	0.00
13	0.00
14	0.00
15	0.00
16	0.00
17	0.00
18	0.00

Statepoint	EFPD / Cycle	Statepoint	EFPD / Cycle
SP11	0.0 / Cy5	SP26	409.6 / Cy8
SP12	388.5 / Cy5	SP27	515.5 / Cy8
SP22	0.0 / Cy8		
SP23	97.6 / Cy8		
SP24	139.8 / Cy8		
SP25	404.0 / Cy8		

Table 4-176. Rod Insertion Time by Axial Node for Assembly D6

Axial Node	Time Rod Inserted (EFPD) SP13 to SP14	SP14 to SP15
1	67.10	17.77
2	2.34	0.00
3	0.00	0.00
4	0.00	0.00
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Table 4-177. Rod Insertion Time by Axial Node for Assembly D12

Axial Node	Time Rod Inserted (EFPD) SP11 to SP12
1	0.00
2	0.00
3	0.00
4	0.00
5	0.00
6	0.00
7	4.15
8	75.76
9	305.42
10	388.50
11	388.50
12	360.99
13	164.21
14	12.33
15	0.00
16	0.00
17	0.00
18	0.00

Statepoint	EFPD / Cycle
SP11	0.0 / Cy5
SP12	388.5 / Cy5
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Table 4-178. Rod Insertion Time by Axial Node for Assembly E14a

Axial Node	Time Rod Inserted (EFPD) SP13 to SP14	SP14 to SP15
1	67.05	17.47
2	2.34	0.00
3	0.00	0.00
4	0.00	0.00
5	0.00	0.00
6	0.00	0.00
7	0.00	0.00
8	0.00	0.00
9	0.00	0.00
10	0.00	0.00
11	0.00	0.00
12	0.00	0.00
13	0.00	0.00
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Table 4-179. Rod Insertion Time by Axial Node for Assembly E17

Axial Node	Time Rod Inserted (EFPD) SP13 to SP14	SP14 to SP15
1	0.00	0.00
2	4.68	0.00
3	32.61	0.00
4	75.80	166.76
5	96.00	285.33
6	96.00	295.87
7	96.00	295.96
8	96.00	296.12
9	96.00	296.28
10	93.68	296.55
11	62.50	296.84
12	23.88	157.42
13	0.00	16.40
14	0.00	0.00
15	0.00	0.00
16	0.00	0.00
17	0.00	0.00
18	0.00	0.00

Statepoint	EFPD / Cycle
SP13	0.0 / Cy6
SP14	96.0 / Cy6
SP15	400.0 / Cy6

Table 4-180. Rod Insertion Time by Axial Node for Assembly E25

Axial Node	Time Rod Inserted (EFPD) SP16 to SP17	SP17 to SP18	SP18 to SP19	SP19 to SP20	SP20 to SP21
1	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00
3	4.07	0.00	0.00	0.00	0.00
4	39.28	0.00	0.00	0.00	0.00
5	215.17	26.40	26.88	127.54	14.36
6	254.33	30.70	28.00	143.30	16.70
7	260.30	30.70	28.00	143.30	16.70
8	260.30	30.70	28.00	143.30	16.70
9	260.30	30.70	28.00	143.30	16.70
10	260.30	30.70	28.00	143.30	16.70
11	260.30	30.70	28.00	143.30	16.70
12	214.38	30.70	28.00	143.30	16.70
13	66.21	8.29	4.76	34.39	4.51
14	7.59	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 4-181. Rod Insertion Time by Axial Node for Assembly F17a

Axial Node	Time Rod Inserted (EFPD) SP16 to SP17	SP17 to SP18	SP18 to SP19	SP19 to SP20	SP20 to SP21
1	147.11	10.10	5.37	27.07	0.26
2	36.81	0.00	0.00	0.00	0.00
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

Statepoint	EFPD / Cycle
SP16	0.0 / Cy7
SP17	260.3 / Cy7
SP18	291.0 / Cy7
SP19	319.0 / Cy7
SP20	462.3 / Cy7
SP21	479.0 / Cy7

Table 4-182. Rod Insertion Time by Axial Node for Assembly F19a

Axial Node	Time Rod Inserted (EFPD) SP22 to SP23	SP23 to SP24	SP24 to SP25	SP25 to SP26	SP26 to SP27
1	24.88	4.06	20.60	1.83	19.43
2	0.00	0.00	0.00	0.00	0.00
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 4-183. Rod Insertion Time by Axial Node for Assembly G17

Axial Node	Time Rod Inserted (EFPD) SP22 to SP23	SP23 to SP24	SP24 to SP25	SP25 to SP26	SP26 to SP27
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	55.34	12.24	76.62	1.62	37.76
5	97.60	42.20	264.20	5.60	103.19
6	97.60	42.20	264.20	5.60	103.13
7	97.60	42.20	264.20	5.60	103.14
8	97.60	42.20	264.20	5.60	103.13
9	97.60	42.20	264.20	5.60	103.13
10	97.60	42.20	264.20	5.60	103.15
11	97.60	42.20	264.20	5.60	103.22
12	53.48	35.45	221.93	4.70	78.37
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

Statepoint	EFPD / Cycle
SP22	0.0 / Cy8
SP23	97.6 / Cy8
SP24	139.8 / Cy8
SP25	404.0 / Cy8
SP26	409.6 / Cy8
SP27	515.5 / Cy8

Table 4-184. Rod Insertion Time by Axial Node for Assembly G27a

Axial Node	Time Rod Inserted (EFPD) SP28 to SP29	SP29 to SP30	SP30 to SP31	SP31 to SP32
1	57.22	14.04	35.99	27.59
2	2.07	0.00	0.00	3.97
3	0.00	0.00	0.00	1.54
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 4-185. Rod Insertion Time by Axial Node for Assembly H12

Axial Node	Time Rod Inserted (EFPD) SP28 to SP29	SP29 to SP30	SP30 to SP31
1	0.00	0.00	0.00
2	0.00	0.00	0.00
3	0.00	0.00	0.00
4	46.98	10.10	25.14
5	158.80	60.20	144.10
6	158.80	60.20	144.10
7	158.80	60.20	144.10
8	158.80	60.20	144.10
9	158.80	60.20	144.10
10	158.80	60.20	144.10
11	158.80	60.20	144.10
12	132.03	57.92	137.61
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

Statepoint	EFPD / Cycle
SP28	0.0 / Cy9
SP29	158.8 / Cy9
SP30	219.0 / Cy9
SP31	363.1 / Cy9
SP32	0.0 / Cy10

Table 4-186. Rod Insertion Time by Axial Node for Assembly H27a

Axial Node	Time Rod Inserted (EFPD) SP28 to SP29	SP29 to SP30	SP30 to SP31
1	57.33	14.09	36.07
2	2.09	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	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 4-187. Rod Insertion Time by Axial Node for Assembly I12a

Axial Node	Time Rod Inserted (EFPD) SP32 to DP1	DP1 to DP2	DP2 to SP33
1	59.33	34.50	3.88
2	5.35	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	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

Statepoint	EFPD / Cycle	Datapoint	EFPD / Cycle
SP28	0.0 / Cy9	DP1	199.8 / Cy10
SP29	158.8 / Cy9	DP2	403.2 / Cy10
SP30	219.0 / Cy9		
SP31	363.1 / Cy9		
SP32	0.0 / Cy10		
SP33	573.7 / Cy10		

Table 4-188. Rod Insertion Time by Axial Node for Assembly I23

Axial Node	Time Rod Inserted (EFPD) SP32 to DP1	DP1 to DP2	DP2 to SP33
1	0.00	0.00	6.62
2	0.00	0.00	4.46
3	0.00	0.00	2.88
4	52.31	60.74	43.48
5	179.47	203.40	142.19
6	199.80	203.40	141.74
7	199.80	203.40	141.55
8	199.80	203.40	141.48
9	199.80	203.40	138.34
10	199.80	203.40	138.07
11	199.80	203.40	138.42
12	167.06	167.90	100.32
13	17.36	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 4-189. Rod Insertion Time by Axial Node for Assembly I27a

Axial Node	Time Rod Inserted (EFPD) SP32 to DP1	DP1 to DP2	DP2 to SP33
1	58.70	34.28	3.89
2	5.32	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	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

Datapoint or Statepoint	EFPD / Cycle
SP32	0.0 / Cy10
DP1	199.8 / Cy10
DP2	403.2 / Cy10
SP33	573.7 / Cy10

Table 4-190. Boron Letdown Data for Crystal River Unit 3 - Cycle 1A

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
0.0	16.2	1147	94	19	20
7.2	73.5	968	97	18	8
18.6	99.5	912	91	14	8
55.2	98.9	934	95	17	11
63.8	99.3	909	91	12	10
69.9	98.6	909	89	11	11
94.9	96.4	884	89	11	9
184.7	100.1	705	87	13	0
192.3	99.5	683	90	14	11
216.0	99.6	627	90	13	13
224.8	99.5	610	90	13	11
228.5	99.6	666	92	20	7
238.0	99.9	584	90	16	9
244.0	100.1	575	93	17	9
250.8	99.7	614	93	18	9
254.7	100.2	588	89	15	10

Full power = 2452 MWt

Table 4-191. Boron Letdown Data for Crystal River Unit 3 - Cycle 1B

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
269.4	41.4	843	87	13	35
269.8	39.6	783	93	17	34
272.0	74.9	748	89	15	19
280.2	94.0	558	83	13	11
287.2	94.6	571	86	13	12
306.2	98.5	513	86	13	12
313.2	98.9	441	84	12	11
337.2	95.0	419	86	14	11
345.7	94.1	346	86	11	10
364.2	99.9	309	89	12	12
377.6	99.9	246	86	13	15
389.5	99.8	279	87	13	13
401.7	98.9	290	100	83	22
419.3	97.8	272	100	81	23
427.1	98.1	229	100	81	23
431.8	73.3	231	100	71	20
437.1	72.1	229	100	73	18
440.1	73.3	242	100	73	17

Full power = 2452 MWt

Table 4-192. Boron Letdown Data for Crystal River Unit 3 - Cycle 2

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
0.6	41.4	930	84.2	11.4	35.8
0.8	41.2	930	84.7	12.5	27.7
0.9	41.1	930	85.2	12.5	45.1
2.1	74.9	826	85.6	11.7	32.5
3.0	90.0	809	89.7	12.3	31.9
4.4	100.4	778	89.8	15.4	28.0
11.4	100.0	809	90.5	14.8	23.9
15.8	98.3	735	93.3	18.9	21.8
22.5	99.6	709	89.8	15.3	21.4
29.3	98.6	683	91.7	14.2	21.9
35.3	99.1	666	88.9	13.1	21.7
42.3	99.7	644	89.8	14.1	18.5
50.0	72.5	623	69.8	0.0	21.9
55.8	99.5	614	87.7	12.3	17.2
60.8	100.2	592	88.3	13.0	16.5
69.1	83.7	571	78.3	3.5	19.8
75.2	91.5	558	81.2	6.6	17.3
83.1	99.7	528	87.9	11.0	15.5
89.8	99.9	506	85.0	9.9	12.9
97.8	100.1	480	88.5	10.1	14.9
104.7	99.9	463	87.8	8.9	13.9
116.4	99.9	441	87.8	8.9	12.7
122.5	99.8	406	86.6	11.0	11.3
129.1	99.2	385	86.5	8.3	12.0
135.9	99.3	372	86.0	6.8	11.3
139.9	100.0	346	85.3	6.8	9.2
148.6	91.4	333	79.4	5.9	9.2
156.4	93.4	320	85.5	6.8	19.9
161.4	99.6	316	96.2	18.8	18.2

Full power = 2452 MWt

Table 4-193. Boron Letdown Data for Crystal River Unit 3 - Cycle 3

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
0.7	40.0	1090	86.2	12.3	34.6
2.0	74.1	1020	88.1	12.5	30.5
4.0	99.2	947	90.2	14.5	24.1
6.7	99.7	951	87.3	11.1	25.7
12.6	77.3	908	77.5	5.0	23.6
26.8	96.5	891	88.2	12.4	23.6
32.6	99.1	843	88.0	12.0	23.0
50.7	96.1	822	88.0	14.0	19.0
66.0	98.9	757	91.0	12.9	25.7
69.9	99.4	746	92.2	14.0	26.8
85.0	99.5	692	92.2	13.7	28.3
100.2	97.3	666	94.3	20.4	24.6
111.2	98.0	636	90.1	12.9	24.3
130.5	96.9	562	92.2	17.0	24.5
143.8	97.5	528	96.1	18.9	24.3
163.9	99.3	467	96.2	20.2	21.4
174.0	99.9	432	93.0	18.4	22.7
184.2	99.9	394	92.3	19.4	22.3
212.9	100.0	324	92.9	19.3	23.4
227.5	99.5	272	94.7	19.2	25.7
246.4	99.9	229	92.9	18.3	25.0
262.9	99.8	250	100.0	82.3	27.5
283.8	99.7	190	100.0	82.4	27.2
304.0	100.0	130	100.0	86.4	30.6
322.0	100.0	86	100.0	85.0	30.6

Full power = 2452 MWt

Table 4-194. Boron Letdown Data for Crystal River Unit 3 - Cycle 4

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
0.39	39.9	1038	86.0	8.6	40.2
0.42	40.5	1038	88.2	11.2	27.3
0.49	40.7	1038	76.1	1.1	50.9
2.70	75.5	916	87.5	14.8	21.7
3.90	97.6	916	83.3	9.8	21.2
20.8	99.9	796	84.5	9.4	19.9
27.1	99.7	809	84.2	6.8	20.5
33.7	99.8	817	82.7	7.9	17.1
40.7	100.0	770	83.0	8.7	17.0
46.3	100.0	804	85.2	10.9	20.0
52.3	100.0	761	87.1	11.7	18.1
60.1	94.7	728	84.9	10.2	17.6
68.9	90.2	759	87.3	13.1	20.2
75.1	90.4	729	85.2	11.0	18.1
81.4	90.4	726	86.1	12.6	19.1
87.7	90.4	698	85.8	12.1	19.0
94.0	89.9	678	86.2	12.2	18.4
100.3	90.2	662	85.4	12.0	18.3
108.7	90.5	636	87.2	13.3	16.5
116.3	89.5	622	86.3	12.1	17.3
122.6	90.3	588	88.2	14.0	16.3
128.9	90.3	575	85.3	12.1	16.3
133.4	70.9	606	87.1	11.1	21.4
136.9	70.2	601	90.4	13.6	21.4
142.2	83.9	601	92.0	17.6	20.7
146.6	90.4	528	86.8	14.4	15.7
153.0	92.5	493	86.3	12.3	18.4
159.4	79.8	484	86.3	13.3	18.6
165.8	94.2	471	84.6	11.1	17.2
171.1	94.8	439	89.5	13.1	18.6
177.6	94.2	415	87.3	13.3	17.3
184.3	95.0	394	87.9	14.0	18.9
202.0	97.2	337	88.5	13.3	18.6
221.9	97.3	277	89.0	13.4	18.4
228.1	97.0	255	86.6	12.1	18.9
233.1	97.3	251	89.8	11.2	20.5
238.3	97.5	225	88.9	12.7	17.9
246.1	97.0	203	88.9	12.6	17.8

Full power = 2544 MWt

Table 4-194. Boron Letdown Data for Crystal River Unit 3 - Cycle 4 (Cont'd)

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
252.0	97.1	186	88.9	13.3	16.4
269.4	83.0	246	100.0	74.1	22.3
275.0	97.4	221	100.0	87.1	31.2
282.0	97.3	199	100.0	87.9	30.9
289.0	76.6	201	100.0	75.0	26.8
295.7	97.5	162	100.0	86.2	30.1
302.5	97.1	143	100.0	87.2	30.2
308.3	97.3	125	100.0	87.2	30.2
321.5	93.8	91	100.0	87.3	30.2
328.0	93.3	72	100.0	87.3	28.2
334.5	91.8	56	100.0	88.0	28.2

Full power = 2544 MWt

Table 4-195. Boron Letdown Data for Crystal River Unit 3 - Cycle 5

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
13.7	74.7	1077	100.0	89.0	26.0
23.7	74.3	1064	100.0	87.0	24.0
32.1	73.5	1056	100.0	87.4	20.8
42.2	71.1	1048	100.0	86.9	23.5
57.2	98.0	951	100.0	87.2	25.0
82.9	100.0	908	100.0	87.0	21.0
105.1	97.9	865	100.0	93.9	24.6
131.1	99.0	799	100.0	96.1	24.6
156.5	98.2	744	100.0	98.3	26.8
180.6	98.3	677	100.0	98.2	26.8
210.0	97.1	601	100.0	98.2	24.6
235.9	95.7	528	100.0	98.2	28.9
262.4	99.4	458	100.0	98.3	28.8
282.4	98.2	394	100.0	98.2	28.5
302.1	96.8	355	100.0	98.0	28.6
328.3	95.0	272	100.0	98.7	29.7
354.2	93.3	216	100.0	98.7	32.8
379.9	92.6	148	100.0	98.0	32.9
412.1	93.1	93	100.0	95.8	100.0
431.9	91.8	45	100.0	95.8	100.0
455.3	80.2	3	100.0	97.9	100.0
471.0	64.7	1	100.0	98.9	100.0
483.3	53.6	3	100.0	100.0	100.0

Full power = 2544 MWt

Table 4-196. Boron Letdown Data for Crystal River Unit 3 - Cycle 6

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
9.2	93.4	1017	100.0	92.5	41.5
22.3	95.4	1012	100.0	95.6	37.1
49.8	96.0	995	100.0	93.5	32.6
68.5	94.3	952	100.0	95.3	30.9
84.6	92.8	908	100.0	95.7	32.8
127.3	97.0	778	100.0	97.9	32.7
140.1	95.9	727	100.0	98.2	27.4
184.5	98.3	631	100.0	99.7	29.3
202.8	96.7	567	100.0	98.6	32.7
248.8	96.9	441	100.0	99.9	33.3
274.9	96.7	366	100.0	98.5	32.5
288.2	95.3	337	100.0	100.0	32.6
318.2	91.6	266	100.0	100.0	31.0
331.6	89.6	229	100.0	99.9	33.5
349.7	87.6	183	100.0	99.0	33.5
367.4	87.8	139	100.0	98.5	33.2
373.3	87.7	123	100.0	99.3	32.8
393.3	63.7	156	100.0	93.5	99.9
397.7	64.0	137	100.0	94.7	99.9
405.3	64.9	123	100.0	95.1	100.0

Full power = 2544 MWt

Table 4-197. Boron Letdown Data for Crystal River Unit 3 - Cycle 7

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
7.5	98.1	1478	100.0	88.4	35.1
41.4	99.8	1405	100.0	89.8	21.3
60.3	99.8	1367	100.0	91.7	27.8
81.7	99.7	1333	100.0	94.4	27.8
102.9	99.8	1290	100.0	94.9	28.0
122.3	100.1	1245	100.0	95.9	27.9
139.8	100.0	1204	100.0	93.9	27.9
160.5	99.8	1167	100.0	100.0	27.9
180.8	99.9	1102	100.0	95.9	28.4
202.8	100.3	1040	100.0	96.3	29.1
230.9	100.0	963	100.0	96.9	28.3
251.2	96.8	898	100.0	96.6	27.9
306.7	68.9	803	100.0	98.2	28.5
317.9	66.6	775	100.0	95.6	28.6
345.3	99.9	593	100.0	99.0	28.1
412.3	96.5	398	100.0	96.6	27.9
459.8	97.8	260	100.0	98.2	27.8
485.0	96.5	193	100.0	96.5	28.2

Full power = 2544 MWt

Table 4-198. Boron Letdown Data for Crystal River Unit 3 - Cycle 8

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
11.2	96.9	1537	100.0	97.2	31.5
52.4	95.6	1455	100.0	98.0	32.1
78.0	97.1	1411	100.0	98.9	31.7
111.4	98.3	1332	100.0	97.7	30.4
154.4	99.8	1176	100.0	98.6	31.5
194.8	99.0	1103	100.0	98.6	30.3
234.6	98.8	999	100.0	96.2	30.6
271.5	100.0	887	100.0	99.2	30.3
338.0	97.6	701	100.0	98.9	31.8
390.7	99.4	522	100.0	99.5	31.6
445.7	99.9	394	100.0	95.9	30.3
474.0	99.9	311	100.0	97.3	31.3
513.1	98.4	216	100.0	99.6	32.5

Full power = 2544 MWt

Table 4-199. Boron Letdown Data for Crystal River Unit 3 - Cycle 9

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
22.1	99.7	1608	100.0	95.5	31.6
61.5	99.7	1535	100.0	97.1	30.2
145.7	99.9	1329	100.0	97.0	29.6
192.8	99.8	1201	100.0	96.8	29.6
211.3	100.0	1157	100.0	98.0	30.4
262.0	100.2	994	100.0	97.1	29.4
303.7	100.0	869	100.0	97.1	29.5
345.7	100.0	750	100.0	97.0	30.0
397.9	100.0	577	100.0	97.7	29.5
432.5	99.9	473	100.0	97.9	30.2
452.4	99.9	412	100.0	98.0	30.2
495.4	100.0	283	100.0	96.9	30.2
543.4	100.0	136	100.0	96.1	30.3

Full power = 2544 MWt

Table 4-200. Boron Letdown Data for Crystal River Unit 3 - Cycle 10

EFPD	%FP	ppmB	%WD Bk 6	%WD Bk 7	%WD Bk 8
4.0	99.9	1752	99.8	93.5	29.8
27.3	99.9	1712	99.7	91.6	31.2
48.3	100.0	1660	99.7	96.0	30.5
76.1	100.1	1612	99.7	99.6	30.5
104.5	99.9	1547	99.7	97.9	30.4
124.8	100.1	1497	99.7	95.8	30.3
152.7	100.1	1422	99.7	96.0	30.6
174.0	99.9	1333	99.7	92.9	25.0
199.8	100.1	1259	99.7	95.8	29.9
227.9	99.8	1183	99.6	95.7	30.4
248.7	100.1	1124	99.6	96.1	30.2
276.7	100.0	1040	99.6	95.4	30.2
297.1	99.9	985	99.6	96.2	30.2
326.4	99.8	896	99.6	95.6	30.5
347.6	100.2	830	99.6	97.3	30.5
370.6	100.0	766	99.6	95.7	30.6
403.2	99.9	652	99.7	98.9	30.4
431.9	99.9	555	99.7	97.3	30.8
450.4	96.6	498	99.7	96.4	31.1
470.7	96.8	436	99.7	98.9	32.1
504.9	99.9	302	99.6	97.2	30.5
525.5	100.1	239	99.6	98.4	30.3
560.5	99.7	155	99.6	98.1	99.4
573.7	100.2	120	99.7	97.2	99.4
591.7	99.9	72	99.9	95.6	99.8

Full power = 2544 MWt

Table 4-201. All-Rods-Out-Critical-Boron Data for Crystal River Unit 3

Cycle 1A, AROCB

EFPD	ppmB
10	1080
25	1060
50	1035
75	1010
100	980
125	945
150	900
175	850
200	800
225	740
250	710
268.8	680

Cycle 1B, AROCB

EFPD	ppmB
275	700
300	635
325	565
350	490
375	425
400	350
425	280
440.1	245

Cycle 2, AROCB

EFPD	ppmB
10	880
25	800
50	730
75	660
100	590
125	520
150	450
166.5	415

Cycle 3, AROCB

EFPD	ppmB
10	980
25	960
50	890
75	820
100	745
125	660
150	595
175	510
200	440
225	360
250	295
275	215
300	145
323.0	95

Cycle 4, AROCB

EFPD	ppmB
10	940
25	925
50	860
75	790
100	720
125	660
150	595
175	530
200	460
223	385
250	310
275	250
300	175
325	110
336.6	60

Cycle 5, AROCB

EFPD	ppmB
10	1060
25	1020
50	980
75	920
100	875
125	825
150	765
175	700
200	615
225	550
250	495
275	420
300	350
325	270
350	210
375	160
400	120
425	60
450	40
475	20
484.4	5

Table 4-201. All-Rods-Out-Critical-Boron Data for Crystal River Unit 3 (Cont'd)

Cycle 6, AROCB		Cycle 7, AROCB		Cycle 8, AROCB	
EFPD	ppmB	EFPD	ppmB	EFPD	ppmB
10	1060	10	1500	10	1560
25	1010	25	1445	25	1500
50	985	50	1410	50	1470
75	920	75	1360	75	1400
100	860	100	1305	100	1340
125	785	125	1245	125	1280
150	710	150	1175	150	1205
175	655	175	1100	175	1130
200	600	200	1025	200	1065
225	525	225	950	225	1000
250	450	250	880	250	940
275	375	275	790	275	875
300	305	300	725	300	795
325	230	325	660	325	720
350	155	350	575	350	650
375	100	375	500	375	570
400	70	400	435	400	500
412.1	25	425	375	425	440
		450	290	450	375
		475	215	475	295
		497.9	150	500	220
				525	190
				535.9	170

Table 4-201. All-Rods-Out-Critical-Boron Data for Crystal River Unit 3 (Cont'd)

Cycle 9, AROCB		Cycle 10, AROCB	
EFPD	ppmB	EFPD	ppmB
10	1690	25	1726
25	1610	50	1653
50	1550	75	1579
75	1500	100	1505
100	1445	125	1431
125	1380	150	1358
150	1310	175	1284
175	1225	200	1210
200	1160	225	1136
225	1090	250	1063
250	1015	275	989
275	930	300	915
300	870	325	841
325	780	350	768
350	700	375	694
375	625	400	620
400	550	425	546
425	475	450	473
450	395	475	399
475	310	500	325
500	250	525	251
525	185	550	178
550	130	575	104
557.2	120	600	30

Table 4-202. Critical Boron Data for Oconee Unit 1

Cycle 1	
EFPD	ppmB*
10	1020
25	1010
50	960
75	905
100	820
125	735
150	655
175	575
200	495
225	415
250	335
275	255
300	175
309.3	145

* ppmB = AROCB - 100 ppmB

The 100 ppmb represents control rod insertion during cycle operation.
Full power for Oconee 1 = 2568 MWt

4.2 Statepoint Critical Condition Measurements

Measured critical conditions for 33 reactor startups (or statepoints) are provided in Table 4-203. The data includes the initial startup of the reactor or beginning-of-life (BOL), the beginning-of-cycle (BOC) of each reload core for cycles 2 through 10, and 23 reactor restarts during the first 10 cycles of Crystal River Unit 3. The cycle and statepoint 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 statepoint. In addition, Table 4-203 provides the measured soluble boron concentration (ppmB), rod bank positions, and temperature of the moderator or coolant in the reactor (for each statepoint) when criticality was achieved.

Table 4-204 provides shutdown and startup dates for each cycle and statepoint. 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 4-203. Statepoint Data for Crystal River Unit 3 - Measured Critical Conditions

Cycle(SP)	EFPD	Downtime (Hours)	ppmB	Rod Positions, cm above bottom of fuel Bk 5	Bk 6	Bk 7	Bk 8	T(coolant) (F)
1A(SP1)	0.0	0	1403	WD	WD	WD	150	532
1B(SP2)	268.8	4687	1106	WD*	WD	349	WD	531.5
1B(SP3)	411.0	355	493	342	87	17	163	535
2(SP4)	0.0	2328	1294	WD	WD	WD	150	532
3(SP5)	0.0	3936	1428	WD	WD	331	150	532
3(SP6)	168.5	403	737	237	17	17	150	535
3(SP7)	250.0	296	562	335	87	17	110	537
4(SP8)	0.0	1752	1384	WD	WD	335	150	532
4(SP9)	228.1	364	705	WD	220	17	86	532
4(SP10)	253.0	576	502	314	52	17	107	537
5(SP11)	0.0	3048	1540	WD	WD	359	120	532
5(SP12)	388.5	119	605	WD	WD	310	WD	537
6(SP13)	0.0	3912	1574	WD	WD	314	104	532
6(SP14)	96.0	4054	1211	WD	268	17	136	534
6(SP15)	400.0	250	390	310	52	17	WD	535
7(SP16)	0.0	2712	2033	WD	WD	WD	104	532
7(SP17)	260.3	453	1223	WD	146	17	115	532
7(SP18)	291.0	948	1149	WD	233	17	114	536
7(SP19)	319.0	2628	1048	WD	143	17	115	532
7(SP20)	462.3	53.5	563	335	85	17	115	531
7(SP21)	479.0	173	520	321	59	17	114	535
8(SP22)	0.0	2376	2101	WD	WD	WD	104	532
8(SP23)	97.6	372	1751	WD	227	17	122	535
8(SP24)	139.8	149	1612	WD	122	17	123	535
8(SP25)	404.0	1065	865	331	69	17	122	536
8(SP26)	409.6	117	865	331	69	17	122	536
8(SP27)	515.5	183	675	WD	261	17	WD	536
9(SP28)	0.0	1800	2212	WD	WD	WD	104	532
9(SP29)	158.8	51.5	1572	WD	118	17	122	535
9(SP30)	219.0	1275	1481	WD	181	17	123	535
9(SP31)	363.1	39	963	342	80	17	122	539
10(SP32)	0.0	1320	2326	WD	WD	323	122	532
10(SP33)	573.7	394	516	327	62	17	WD	536

Bk = Rod Bank

WD = Rod Withdrawn

* Bank 5 rod at location C11 (see Figure 3-13) was uncoupled and at 17 cm above bottom of fuel.

Table 4-204. Statepoint Data for Crystal River Unit 3 - Shutdown and Startup Dates

Cycle(SP)	EFPD	Shutdown Date	Startup Date
1A(SP1)	0.0	-	14 Jan 1977
1B(SP2)	268.8	03 Mar 1978	15 Sep 1978
1B(SP3)	411.0	03 Mar 1979	18 Mar 1979
2(SP4)*	0.0	23 Apr 1979	29 Jul 1979
3(SP5)*	0.0*	26 Feb 1980	08 Aug 1980
3(SP6)	168.5	17 Feb 1981	06 Mar 1981
3(SP7)	250.0	30 Jun 1981	13 Jul 1981
4(SP8)*	0.0	28 Sep 1981	10 Dec 1981
4(SP9)	228.1	14 Oct 1982	29 Oct 1982
4(SP10)	253.0	26 Nov 1982	20 Dec 1982
5(SP11)*	0.0	19 Mar 1983	24 Jul 1983
5(SP12)	388.5	05 Nov 1984	10 Nov 1984
6(SP13)*	0.0	08 Mar 1985	18 Aug 1985
6(SP14)	96.0	01 Jan 1986	19 Jun 1986
6(SP15)	400.0	21 Aug 1987	01 Sep 1987
7(SP16)*	0.0	18 Sep 1987	08 Jan 1988
7(SP17)	260.3	09 Oct 1988	27 Oct 1988
7(SP18)	291.0	07 Dec 1988	15 Jan 1989
7(SP19)	319.0	26 Feb 1989	16 Jun 1989
7(SP20)	462.3	22 Jan 1990	24 Jan 1990
7(SP21)	479.0	13 Feb 1990	20 Feb 1990
8(SP22)*	0.0	14 Mar 1990	21 Jun 1990
8(SP23)	97.6	10 Oct 1990	25 Oct 1990
8(SP24)	139.8	12 Dec 1990	18 Dec 1990
8(SP25)	404.0	11 Oct 1991	24 Nov 1991
8(SP26)	409.6	03 Dec 1991	08 Dec 1991
8(SP27)	515.5	27 Mar 1992	04 Apr 1992
9(SP28)*	0.0	30 Apr 1992	14 Jul 1992
9(SP29)	158.8	29 Dec 1992	31 Dec 1992
9(SP30)	219.0	04 Mar 1993	26 Apr 1993
9(SP31)	363.1	19 Sep 1993	20 Sep 1993
10(SP32)*	0.0	07 Apr 1994	01 Jun 1994
10(SP33)	573.7	10 Jan 1996	26 Jan 1996
	592.8 (EOC)	16 Feb 1996	

EOC = end-of-cycle

* Shutdown date is for previous cycle.

5.0 CONCLUSIONS

The data reported herein is acceptable for quality affecting activities and for use in analyses affecting procurement, construction, or fabrication. The classification analysis for the repository (which includes the waste package) carries TBV-228 because of the preliminary status of the basis for the MGR design. This report conservatively assumes that the resolution of TBV-228 will find the waste package to be quality affecting; consequently, use of any of the data reported herein does not need to carry TBV-228.

6.0 REFERENCES

1. *Quality Assurance Program for Framatome Cogema Fuels*, Document Number: 56-1177617-04, FCF, August 5, 1996.

2. *Classification of the Preliminary MGDS Repository Design*, Document Identifier Number (DI#) B00000000-01717-0200-00134 REV 00, Civilian Radioactive Waste Management System (CRWMS) Management and Operating Contractor (M&O).

3. QAP-2-0 Activity Evaluation, ID No WP-06, *Develop Technical Documents*, CRWMS M&O, August 3, 1997.

4. *Quality Assurance Requirements and Description*, DOE/RW-0333P, REV 7, DOE OCRWM.

5. *CR3 NEMO Depletion and Statepoints (HLW)*, Document Number: 32-1258296-01, FCF.