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Civilian Radioactive Waste Management System
Management & Operating Contractor

Summary Report of Commercial Reactor Criticality Data for LaSalle Unit 1

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September 1999

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HISTORY OF CHANGE PAGE

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TABLES (CONTINUED)

1. INTRODUCTION

The "Summary Report of Commercial Reactor Criticality Data for LaSalle Unit 1" contains the detailed information necessary to perform commercial reactor criticality (CRC) analyses for the LaSalle Unit 1 (LS1) reactor.

1.1 PURPOSE

The United States Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM) is developing a methodology for criticality analysis to support disposal of commercial spent nuclear fuel in a geologic repository. A revision to the *Disposal Criticality Analysis Methodology Topical Report* (DOE 1998a) on the disposal criticality analysis methodology will be submitted to the United States Nuclear Regulatory Commission (NRC) for formal review. This summary report provides data that will be used in analyses that will support the development of parts of the disposal criticality analysis methodology. This summary report was developed in accordance with QAP-3-5, REV 08.

1.2 OBJECTIVE

The objective of this report is to present the data required for performing analytical CRC evaluations for the LS1 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 5 statepoint calculations for Cycles 7 and 8 of LS1. 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 (CRWMS M&O). FCF requested and received permission from Commonwealth Edison, the owner/operator of LS1, to publish the non-proprietary information related to statepoint measurements that is recorded in this document. All the information contained in this report is documented in an FCF calculation file (FCF 1999). The data provided in FCF (1999) was obtained from various other reports, calculations, and drawings developed under a NRC approved quality assurance program (FCF 1997). The data has supported prior licensing submittals. The data has yet to be classified as "accepted data" per the retroactive procedural requirement of AP-SIII.2Q initiated by the July 27, 1999 issuance of the DOE Letter, "Accepted Data Call", from R. E. Spence to J. L. Younker (DOE 1999). The "accepted data" classification of this data is pending receipt of a DOE rationale concurrence letter approving the classification (TBV-1349).

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* (CRWMS M&O 1999a) has identified the waste package as a MGR (formerly MGDS) item important to safety and waste isolation. The Waste Package Operations responsible manager has evaluated the technical document development activity in accordance with QAP-2-0, *Conduct of Activities*. The QAP-2-0 activity evaluation, *Neutronics Methodology - SR*, WP-16 (CRWMS M&O 1999b), has determined that the preparation and review of this technical document is subject to *Quality Assurance Requirements and Description* (DOE 1998b) 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.

1.5 USE OF COMPUTER SOFTWARE

No computer software was used in the development of the data summary report.

2. REACTOR DESIGN INFORMATION

2.1 REACTOR DESCRIPTION

This section provides general material and geometry data for modeling the LS1 reactor and internals. LaSalle Unit 1 is a General Electric boiling water reactor (BWR) with a rated power of 3323 MWt. The reactor core for Cycles 4 through 8 consisted of 764 GE 8x8 fuel assemblies. Figure 2-1 illustrates a typical core cell with a control blade. Table 2-1 summarizes reactor vessel and structure design information. A brief discussion of the reactor vessel internals is provided below.

The reactor vessel internal shroud is a stainless steel cylinder, which surrounds the reactor core and serves as a barrier to separate the upward flow of the coolant through the reactor core from the downward flow of the coolant.

The fixed incore ion chambers provide continuous power range neutron flux monitoring. A probe tube in each incore assembly provides for a traversing ion chamber for calibration and axial detail. Source and intermediate range monitors are located in the core and are axially retractable. The incore location of the startup and source range instruments provides coverage of the large reactor core and provides an acceptable signal-to-noise ratio and neutron-to-gamma ratio. All incore instrument leads enter from the bottom and continuous neutron flux monitoring is provided during refueling.

There are two types of control blades currently being used, both of which are bottom-entry cruciform control rods. The original General Electric control blades consist of boron carbide powder in stainless steel tubes surrounded by a stainless steel sheath. The second type of blades are Asea-Atom control blades which are built from a solid bar of stainless steel which contain both boron carbide powder and hafnium.

The number of digits in the values cited herein may be the result of a calculation or may reflect input from another source; consequently, the number of digits should not be interpreted as an indication of accuracy.

Table 2-1. LaSalle Unit 1 Core Design Information

Reactor Vessel	
Inner diameter	642.62 cm (21 ft 1 in.)
Base metal material	SA-533 Grade B
Wall thickness	17.93 cm (7.06 in.) nominal
Clad material	stainless steel
Reactor Internals Material	
Shroud	stainless steel
Core support assembly	stainless steel
Fuel support plate	stainless steel
Control blade guide tubes	stainless steel
Incore instrument tubes	stainless steel
Core	
Equivalent core diameter	475.3 cm (187.1 in.)
Circumscribed core diameter (D_c)	504.5 cm (198.6 in.)
Core lattice pitch (control cell)	30.48 cm (12 in.)
Total fuel assemblies in core	764

2.2 FUEL ASSEMBLY DESIGN INFORMATION

This section provides a brief description of the fuel assembly design used in Cycles 4 through 8 of the LS1 reactor. Material and geometry data for the fuel assembly components are included. The fuel assembly U-235 weight percentage enrichments and gadolinia (Gd_2O_3) enrichments for each fuel design of Cycles 4 through 8 are included. All assemblies used in this analysis were of the GE8x8NB design.

GE8x8NB (GE9) fuel is designed and manufactured by GE. The fuel has ferrule type spacer grids, large diameter water rods which span 4 fuel rod positions, axially zoned enrichment, and integral burnable absorbers. Additionally, this fuel assembly has a 12-inch natural uranium blanket at the top. Figure 2-2 illustrates the GE8x8NB fuel assembly layout.

2.3 GENERAL FUEL BATCH DATA

Table 2-2 provides material and geometry data for each fuel batch in Cycles 4-8. The radial dimensions of the fuel clad and water tube are also included. This data can be used for fuel assembly modeling in the depletion calculations and reactor criticality calculations for the statepoints defined in Table 3-6.

Table 2-2. LaSalle Unit 1 Fuel Assembly Core Data

Description	Applicable Data
Fuel assembly array size and types	GE 8x8NB (GE9B)
Number of fuel pins (N_R) / assembly	60
Number of water rods	1
Number of assemblies in core	764
Number of control rods in core	185
System pressure	1020 psia (7.03266 MPa)
Active fuel height (H)	150.00 in. (381.00 cm)
Pin pitch	0.640 in. (1.6256 cm)
Assembly pitch (P)	6 in. (15.24 cm)
Fuel pin cladding outer diameter (OD)	0.483 in. (1.2268 cm)
Fuel pin cladding inner diameter (ID)	0.419 in. (1.06426 cm)
Fuel pin clad thickness	0.032 in. (0.08128 cm)
Fuel pin cladding material	Zircaloy
Fuel pellet diameter	0.411 in. (1.04394 cm)
Fuel material	UO_2
Water rod outside diameter	1.34 in. (3.4036 cm)
Water rod inside diameter	1.26 in. (3.2004 cm)
Water rod material	Zircaloy
Channel - inner width	5.278 in. (13.4061 cm)
- thickness	0.100 in. (0.254 cm) Cycles 4-7 fuel
- thickness	0.080 in. (0.203 cm) Cycle 14 fuel
Channel material	Zircaloy
Reference moderator density	0.7396 g/cm^3

Additional fuel cycle design, core operations, and reactor criticality statepoint information are provided in Section 4.

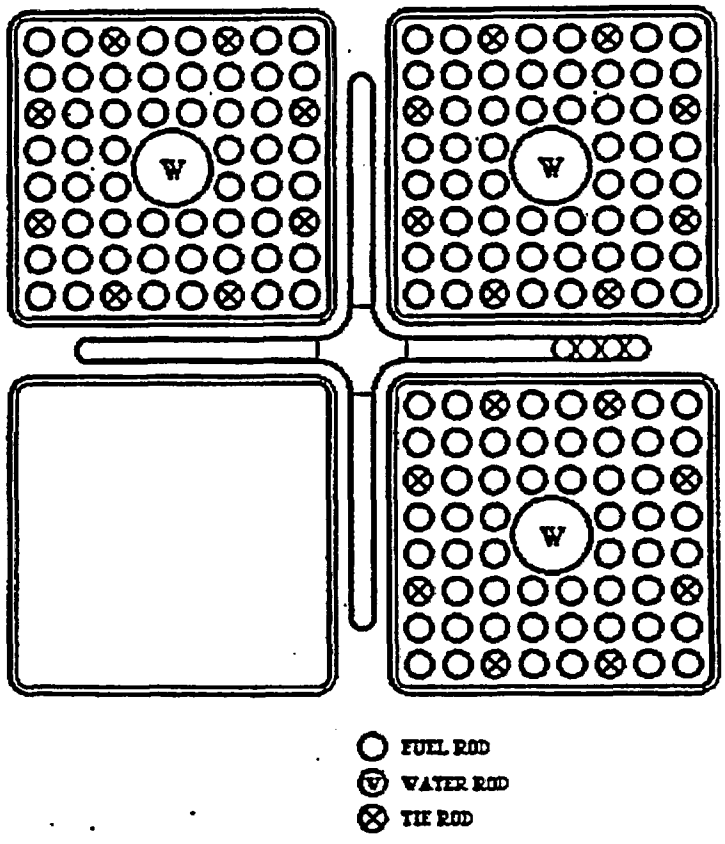

Figure 2-1. LS1 Typical Core Cell for GE8x8NB Assemblies

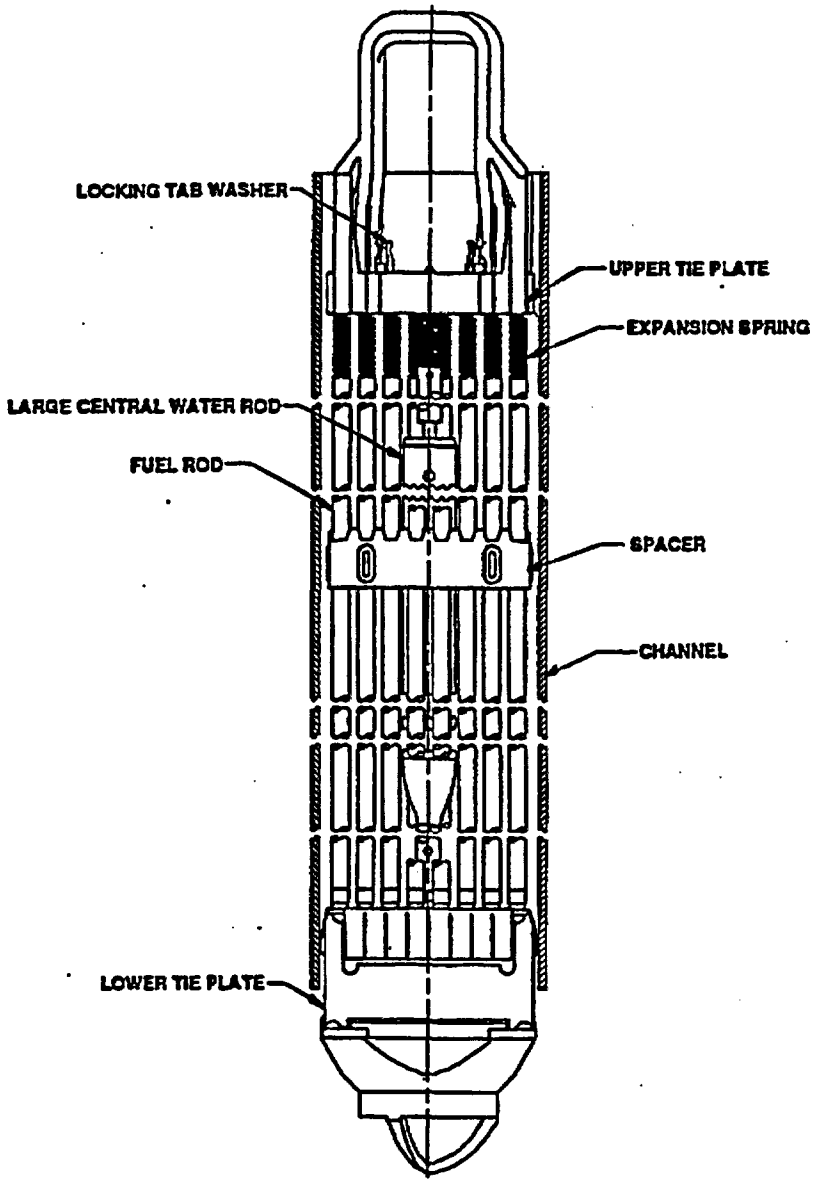

Figure 2-2. LS1 GE 8x8NB Fuel Assembly

3. FUEL CYCLE DESIGN INFORMATION

This section provides fuel assembly design data for Cycles 4 through 8 of the LS1 reactor. Material and geometry data for the fuel assembly components are presented in Section 3.1 and in Table 2-2. The fuel assembly locations, the fuel enrichments, and the burnable absorber enrichments for each assembly are presented in Section 3.4.

3.1 FUEL BATCH DATA

Material and geometry data for each fresh fuel batch are given in Table 3-1. This includes the fuel type, the SAS2H designation, the average enrichment, and the number of water rods. The radial dimensions of the fuel clad are also presented. 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 3-7. Table 3-2 provides the number and type of fuel assemblies in the core during each cycle.

The length of each fuel cycle, expressed as effective full power days (EFPD), is provided in Table 3-6.

Table 3-1. LS1 Fuel Assembly Cycle Description for Cycles 4-8

Cycle	SAS2H	Fresh Fuel Batch Type	Fuel Design	Fuel Type	Assembly U-235 wt%	No. of Water Rods
4	A	GE9B	GE 8x8	9	3.253	1
	B	GE9B	GE 8x8	8	3.007	1
5	C	GE9B	GE 8x8	10	3.027	1
6	D	GE9B	GE 8x8	11	3.133	1
	E	GE9B	GE 8x8	12	3.133	1
7	F	GE9B	GE 8x8	2	3.200	1
	G	GE9B	GE 8x8	1	3.220	1
8	H	GE9B	GE 8x8	5	3.420	1
	J	GE9B	GE 8x8	4	3.430	1

Description	Material	OD (cm)	ID (cm)
Fuel Clad	Zircaloy-2	1.2268	1.06426
Fuel Pellet	UO_2	1.0439	

Table 3-2. LS1 Fuel Assembly Types for Cycles 4-8

SAS2H ID	Fuel Type	Product Line	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8
--	2		33				
--	3		104				
--	5		231	176	44		
--	6		112	112	84		
--	7		112	112	72		
A	9	GE9	96	96	96	96	
B	8	GE9	76	76	76	68	
C	10	GE9		192	192	192	108
D	11	GE9			128	128	128
E	12	GE9			72	72	72
F	2	GE9				104	104
G	1	GE9				104	104
H	5	GE9					144
J	4	GE9					104
		Total =	764	764	764	764	764

The number of assemblies indicated is the total number of assemblies in the core. Only selected assemblies are considered for the LS1 depletion calculations.

Table 3-3 provides a summary of the average axial enrichments, gadolinia enrichments, and channel thickness for each axial zone. This composition is provided for the 25 node format in Table 3-4 and for the 10 node format in Table 3-5. The 25 node and 10 node formats are discussed in Section 4.1.

Table 3-3. LS1 Fuel Assembly Cross Section Properties

Cross Section ID	Number of Fuel Rods	Average Enrichment (wt% U-235)	Number of Gadolinia Rods	Gadolinia Enrichment (wt%)	Channel Thickness (in.)
100	48	0.71	0	0	0.100
101	60	0.71	0	0	0.100
102	60	3.50	4 / 6	5.0 / 4.0	0.100
103	60	3.65	6 / 6	5.0 / 4.0	0.100
104	60	3.65	4 / 6	5.0 / 4.0	0.100
105	60	3.50	7 / 3	5.0 / 4.0	0.100
106	49	0.71	0	0	0.100
107	60	0.71	0	0	0.100
108	60	3.23	9	3.0	0.100
109	60	3.37	2 / 9	4.0 / 3.0	0.100
110	60	3.37	9	3.0	0.100
111	60	3.23	5/4	4/3	0.100
112	51	0.71	0	0	0.100
113	60	0.71	0	0	0.100
114	60	3.27	4 / 5	5.0 / 4.0	0.100
115	60	3.38	4 / 5	5.0 / 4.0	0.100
116	60	3.27	9	5.0	0.100
117	49	0.71	0	0	0.100
150	60	0.71	0	.0	0.100
118	60	3.45	9	4.0	0.100
119	60	3.62	2 / 9	5.0 / 4.0	0.100
120	60	3.62	9	4.0	0.100
121	60	3.45	5 / 4	5.0 / 4.0	0.100
122	51	0.71	0	0	0.100
123	60	0.71	0	0	0.100
124	60	3.39	7	4.0	0.100
125	60	3.50	9	4.0	0.100
126	60	3.50	7	4.0	0.100
127	51	0.71	0	0	0.100
128	60	0.71	0	0	0.100
129	60	3.39	2 / 5	4.0 / 3.0	0.100
130	60	3.50	4 / 5	4.0 / 3.0	0.100
131	60	3.50	2 / 5	4.0 / 3.0	0.100
132	60	3.39	7	4.0	0.100

Table 3-3. LS1 Fuel Assembly Cross Section Properties (Continued)

Cross Section ID	Number of Fuel Rods per Assembly	Average Enrichment (wt% U-235)	Number of Gadolinia Rods	Gadolinia (wt%)	Channel Thickness (in.)
133	51	0.71	0	0	0.100
134	60	0.71	0	0	0.100
135	60	3.46	7	4.0	0.100
136	60	3.58	2 / 7	5.0 / 4.0	0.100
137	60	3.58	7	4.0	0.100
138	60	3.46	4 / 3	5.0 / 4.0	0.100
139	50	0.71	0	0	0.080
140	60	0.71	0	0	0.080
141	60	3.63	8	4.0	0.080
142	60	3.88	2 / 8	5.0 / 4.0	0.080
143	60	3.88	8	4.0	0.080
144	60	3.63	8	5.0	0.080
145	48	0.71	0	0	0.080
146	60	0.71	0	0	0.080
147	60	3.63	10	5.0	0.080
148	60	3.90	12	5.0	0.080
149	60	3.90	10	5.0	0.080

Table 3-4. LS1 25 Node Fuel Assembly Axial Composition

Cross Section Number by Node

Assembly Nodes	Node Length (in.)	(cm)	Type 8 (B) Fuel	Type 9 (A) Fuel	Type 10 (C) Fuel	Type 11 (D) Fuel	Type 12 (E) Fuel	Type 1 (G) Fuel	Type 2 (F) Fuel	Type 4 (J) Fuel	Type 5 (H) Fuel
25 (top)	6	15.24	106	100	112	127	122	117	133	145	139
24	6	15.24	107	101	113	128	123	150	134	146	140
23	6	15.24	108	102	114	129	124	118	135	147	141
22	6	15.24	108	102	114	129	124	118	135	147	141
21	6	15.24	108	102	114	129	124	118	135	147	141
20	6	15.24	109	103	115	130	125	119	136	148	142
19	6	15.24	109	103	115	130	125	119	136	148	142
18	6	15.24	109	103	115	130	125	119	136	148	142
17	6	15.24	110	104	115	131	126	120	137	149	143
16	6	15.24	110	104	115	131	126	120	137	149	143
15	6	15.24	110	104	115	131	126	120	137	149	143
14	6	15.24	110	104	115	131	126	120	137	149	143
13	6	15.24	110	104	115	131	126	120	137	149	143
12	6	15.24	110	104	115	131	126	120	137	149	143
11	6	15.24	110	104	115	131	126	120	137	149	143
10	6	15.24	110	104	115	131	126	120	137	149	143
9	6	15.24	110	104	115	131	126	120	137	149	143
8	6	15.24	111	105	116	132	124	120	138	147	144
7	6	15.24	111	105	116	132	124	120	138	147	144
6	6	15.24	111	105	116	132	124	120	138	147	144
5	6	15.24	111	105	116	132	124	120	138	147	144
4	6	15.24	111	105	116	132	124	120	138	147	144
3	6	15.24	111	105	116	132	124	120	138	147	144
2	6	15.24	111	105	116	132	124	120	138	147	144
1 (Bottom)	6	15.24	107	101	113	128	123	150	134	146	144
U-235 Enrichment (wt%)			3.007	3.253	3.027	3.133	3.133	3.220	3.200	3.430	3.420

Table 3-5. LS1 10 Node Fuel Assembly Axial Composition

Cross Section Number by Node

SAS2H Nodes	Node Length (in.)	(cm)	Type 8 (B) Fuel	Type 9 (A) Fuel	Type 10 (C) Fuel	Type 11 (D) Fuel	Type 12 (E) Fuel	Type 1 (G) Fuel	Type 2 (F) Fuel	Type 4 (J) Fuel	Type 5 (H) Fuel
10 (top)	6	15.24	106	100	112	127	122	117	145	145	139
9	6	15.24	107	101	113	128	123	150	134	146	140
8	18	45.72	108	102	114	129	124	118	135	147	141
7	18	45.72	109	103	115	130	125	119	136	148	142
6	18	45.72	110	104	115	131	126	120	137	149	143
5	18	45.72	110	104	115	131	126	120	137	149	143
4	18	45.72	110	104	115	131	126	120	137	149	143
3	24	60.96	111	105	116	132	124	121	138	147	144
2	18	45.72	111	105	116	132	124	121	138	147	144
1 (Bottom)	6	15.24	107	101	113	128	123	150	134	146	140
U-235 Enrichment (wt%)			3.007	3.253	3.027	3.133	3.133	3.220	3.200	3.430	3.420

3.2 OPERATING CYCLE SUMMARY

This section provides operating cycle and shutdown histories for LS1 Cycles 4 through 8.

Table 3-6 summarizes the LS1 core operating cycle history during Cycles 4 through 8. This table provides the cycle depletion as a function of EFPD. Shutdown history is provided in terms of calendar days between cycles.

Table 3-6. LS1 Core Operating Cycle History for Cycles 4-8

Cycle	Beginning of Cycle (BOC) (m-d-y)	End of Cycle (EOC) (m-d-y)	EFPD
4	01-05-90	02-16-91	375.32
5	05-12-91	10-03-92	467.14
6	01-30-93	02-18-94	316.01
7	06-24-94	01-25-96	495.23
8	04-21-96	N/A	N/A

N/A – Not applicable.

Shutdown History Between Cycles

Outage EOC to BOC	Calendar days
04 to 05	85
05 to 06	119
06 to 07	126
07 to 08	87

3.3 DATAPOINTS AND STATEPOINTS

A statepoint (SP) is defined as a point at which a reactor achieves criticality during the initial startup following a shutdown. Actual measured data must exist at the selected statepoint so that depletion and reactivity calculations can be performed. Statepoints of this type represent conditions that exist when a reactor first reaches a critical state at BOC and at restarts during cycle operation. At the point of the initial critical configuration for each BOC or restart statepoint, the reactor is considered to be at zero power. A datapoint (DP) is defined as a breakpoint in thermal hydraulic feedback and exposure data that is used in assembly fuel depletions prior to exposures where statepoint information is available.

The BOC and restart data for LaSalle Unit 1 contained in this document includes cores that contain both "fresh" (BOC) and burned fuel and cores that have all burned fuel (restarts). The depletion and reactivity calculations will encompass various fuel burnups, U-235 enrichments, and will include long and short decay times from shutdown to startup of various cycles. Key statepoints have been chosen for which the assembly history is available so that effective multiplication factors (k_{eff}) predicted by depletion and reactivity calculations can be compared to the known value of k_{eff}=1.0.

Table 4-317 provides the critical conditions for the BOCs and restarts during cycle operation for selected statepoints. The table also includes the statepoint number and EFPDs during the

cycle for which the statepoint is selected.

Some of the fuel assemblies present in Cycle 7 and Cycle 8 for the statepoint evaluations were initially inserted in the core during Cycles 4 through 6. The modeling of the fuel assemblies, which were inserted prior to Cycles 7 and 8, require fuel operating history from the time the fuel assembly was first inserted into the core. There are 6 datapoints occurring at BOC or middle of cycle (MOC) prior to the 5 statepoints. Thermal hydraulic feedback and exposure data are provided for each datapoint and statepoint in Section 4.1.

Table 3-7 provides shutdown and startup dates for Cycles 4 through 8. Table 4-317 provides the startup date for each statepoint. The cycle shutdown and startup dates were used in determining the downtime between cycles.

Table 3-7. LS1 Datapoints and Statepoints for SAS2H

Datapoint	Cycle	Cycle Time	Cycle Exposure (MWd/MTU)	Cycle EFPD
DP1	4	BOC	0.00	0
DP2	4	MOC	4963.00	208.56
	4	EOC	8931.57	375.32
DP3	5	BOC	0.00	0.00
DP4	5	MOC	5745.68	239.48
	5	EOC	11207.90	467.14
DP5	6	BOC	0.00	0.00
DP6	6	MOC	4752.16	196.09
	6	EOC	7658.39	316.01
SP7	7	BOC	0.00	0.00
SP8	7	MOC	4728.36	193.20
SP9	7	MOC	7507.28	306.75
	7	EOC	12119.87	495.23
SP10	8	BOC	0.00	0.00
SP11	8	MOC	89.80	3.67

3.4 FUEL ASSEMBLY HISTORY

The LS1 reactor core contains 764 fuel assemblies. The core loading is approximately 1/8 core symmetric. To aid in the depletion calculations and the generation of isotopic data for the statepoint calculations, the selection of fuel assemblies is reduced from 764 to the number described by the core symmetry. Table 3-8 traces each fuel assembly by identification and cycle from the time the assembly was first inserted into the reactor. The table includes only the fuel assemblies that contribute to the statepoint criticality calculations for Cycle 7 and Cycle 8. The coordinates provided in Figures 3-1 through 3-5 indicate the location of each assembly in each cycle. Fifteen of the 1/8 core Cycle 7 fuel assemblies inserted in Cycle 8 are outside of the selected 1/8 core of Cycle 8. This assembly selection process ensures that the complete depletion history is included in the calculation for all of the required fuel assemblies. The criticality calculations consider a total of 150 assemblies.

Each fuel assembly is given a unique alphanumeric designation, which is then used in tracking the assembly through its lifetime in the core. Unique assembly designations are assigned for each of the selected 150 fuel assemblies. Starting with the letters A and B for Cycle 4, each subsequent cycle is assigned a unique letter designation (C for Cycle 5, D and E for Cycle 6, F and G for Cycle 7, and H and J for Cycle 8). In addition to the letter designation, each fuel assembly is assigned a number.

Figure 4-1 indicates the location of the active blade locations. This data is applicable to the modeling of control blade insertions during the lifetime of the assembly. Information concerning the use of control blades and the mode of operation (control blades inserted) is given in Section 4.2.

j=	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i=16		A12 9								A11 9					
17			B9 8				B8 8		B10 8						
18				A1 9		A7 9		A5 9		A10 9					
19							B7 8								
20						A9 9				B6 8					
21	A4 9						B1 8	A8 9		A6 9					
22							B4 8		A3 9	B5 8					
23															
24		B2 8													
25															
26		B3 8		A2 9											
27															
28															
29															
30															

Fi	Fuel Assembly Designation (Ai and Bi are fresh fuel assemblies in Cycle 4)
N	Fuel Type (Types 8 and 9 are fresh fuel assemblies in Cycle 4)

Figure 3-1. LS1 Cycle 4 Fuel Assembly Identification, Location, and Type

j=	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i=16		C28 10	B6 8			C29 10	B9 8			C30 10	B5 8		A6 9		
17	C22 10		C23 10	B8 8	C24 10			A5 9	C25 10		C26 10	C27 10			
18					A7 9	C18 10		C19 10	B1 8	C20 10		C21 10			
19			C15 10				C16 10			C17 10	A10 9				
20						C13 10	A9 9				C14 10	A1 9			
21			C10 10		C11 10	B4 8			C12 10	A8 9					
22		C6 10				C7 10		C8 10	A3 9	C9 10		B10 8			
23							C4 10		A12 9	C5 10	A11 9				
24						C3 10				B7 8					
25				C2 10											
26			B3 8			C1 10									
27						A4 9	B2 8								
28		A2 9													
29															
30															

Fi N	Fuel Assembly Designation (Ci are fresh fuel assemblies in Cycle 5) Fuel Type (Type 10 are fresh fuel assemblies in Cycle 5)

Figure 3-2. LS1 Cycle 5 Fuel Assembly Identification, Location, and Type

j =	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i = 16	B6 8	E12 12	C20 10	B1 8	C29 10	D21 11	B7 8	C26 10	A3 9		A4 9	C14 10	A6 9		
17			D16 11	C6 10	E11 12	B9 8	D17 11	C10 10	D18 11	A12 9	D19 11	D20 11			
18		D12 11		E9 12	C16 10	E10 12	B3 8	D13 11	A10 9	D14 11	A9 9	D15 11	C5 10		
19				B10 8	B5 8	C9 10		A11 9	A8 9	C24 10	D11 11	C21 10	C17 10		
20		E7 12			C11 10	E8 12	C30 10	A5 9		D9 11	A1 9	D10 11			
21			E5 12			B4 8	D7 11	C23 10	E6 12	B8 8	D8 11	C8 10	C12 10		
22				E3 12				E4 12		D6 11	C28 10	C27 10			
23		C18 10					E2 12	B2 8	C1 10	D5 11	C25 10	C19 10			
24		D4 11			C7 10		C15 10		C13 10	A7 9					
25	E1 12		D2 11					D3 11							
26						D1 11	C22 10								
27						C4 10									
28		A2 9		C2 10		C3 10									
29															
30															

Fi	Fuel Assembly Designation (Di and Ei are fresh fuel assemblies in Cycle 6)
N	Fuel Type (Types 11 and 12 are fresh fuel assemblies in Cycle 6)

Figure 3-3. LS1 Cycle 6 Fuel Assembly Identification, Location, and Type

j =	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i = 16	C17 10	G15 1	D8 11	C19 10	C5 10	G16 1	D10 11	C25 10	C20 10	F17 2	C30 10	F18 2	D7 11	C29 10	A11 9
17		B10 8	G11 1	D5 11	G12 1	C7 10	G13 1	E8 12	G14 1	C23 10	F15 2	F16 2	C26 10	E9 12	A5 9
18	D1 11	G7 1	B2 8	G8 1	C27 10	G9 1	C6 10	G10 1	D9 11	F13 2	A6 9	F14 2	D19 11	D11 11	A12 9
19		D3 11	G4 1	C18 10	E12 12	E3 12	G5 1	D21 11	C15 10	G6 1	F12 2	C16 10	D17 11	E6 12	A8 9
20					C10 10	G3 1	E10 12	C24 10	E1 12	C1 10	F11 2	C9 10	D14 11	C21 10	B7 8
21						C11 10	F8 2	C12 10	F9 2	G2 1	F10 2	D15 11	E4 12	A1 9	B3 8
22					E5 12	F5 2	C13 10	F6 2	D20 11	F7 2	A4 9	D13 11	A3 9	A7 9	B9 8
23			G1 1			C3 10		D16 11	C28 10	D6 11	D18 11	C8 10	A9 9	B4 8	
24								C22 10	C2 10	E11 12	A2 9	C14 10	B5 8		
25			F4 2						E7	D12 11	A10 9	B1 8	B8 8		
26				F2 2		F3 2		D4 11			B6 8				
27	F1 2							C4 10							
28					D2 11	E2 12									
29															
30															

Fi	Fuel Assembly Designation (Fi and Gi are fresh fuel assemblies in Cycle 7)
N	Fuel Type (Types 1 and 2 are fresh fuel assemblies in Cycle 7)

Figure 3-4. LS1 Cycle 7 Fuel Assembly Identification, Location, and Type

j =	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i = 16	D4 11	H18 5	F3 2	D13 11	E6 12	J5 4	F17 2	E9 12	D15 11	J11 4	F6 2	F2 2	D10 11	E5 12	C4 10
17		D16 11	J6 4	G7 1	J12 4	F7 2	J4 4	F1 2	H10 5	E7 12	J10 4	H6 5	H7 5	E1 12	C5 10
18	F10 2		F4 2	H9 5	G12 1	J8 4	F14 2	J9 4	G14 1	H16 5	F16 2	H12 5	F15 2	D7 11	C2 10
19		G11 1		D12 11	D2 11	G15 1	J2 4	D3 11	E2 12	G5 1	H15 5	G9 1	D19 11	D21 11	C19 10
20				D14 11	G1 1	J13 4	G6 1	D11 11	G3 1	J7 4	H1 5	D20 11	D6 11	D9 11	C29 10
21						G10 1	H5 5	G4 1	J1 4	H2 5	C14 10	H11 5	F9 2	E8 12	C25 10
22							D8 11	J3 4	H13 5	G2 1	H17 5	H3 5	G16 1	E3 12	C1 10
23		F18 2		D5 11		G8 1		D18 11	D17 11	H8 5	H14 5	H4 5	E12 12	C26 10	
24				E4 12					D1 11	F11 2	G13 1	F5 2	C3 10		
25		E11 12								E13 2	C21 10	C27 10	C22 10		
26											C9 10				
27	F12 2								F8 2						
28									C12 10	C28 10					
29	E10 12														
30	C8 10			C17 10											

Fi	Fuel Assembly Designation (Hi and Ji are fresh fuel assemblies in Cycle 8)
N	Fuel Type (Types 4 and 5 are fresh fuel assemblies in Cycle 8)

Figure 3-5. LS1 Cycle 8 Fuel Assembly Identification, Location, and Type

Table 3-8. LS1 Fuel Assembly Location in Core for Cycles 4-8

SAS2H ID	Initial Insertion	Fuel Type	Cycle 4 i	Cycle 4 j	Cycle 5 i	Cycle 5 j	Cycle 6 i	Cycle 6 j	Cycle 7 i	Cycle 7 j	Cycle 8 i	Cycle 8 j
A1	Cycle 4	9	18	19	20	27	20	26	21	29		
A2	Cycle 4	9	26	19	28	17	28	17	24	26		
A3	Cycle 4	9	22	24	22	24	16	24	22	28		
A4	Cycle 4	9	21	16	27	21	16	26	22	26		
A5	Cycle 4	9	18	23	17	23	20	23	17	30		
A6	Cycle 4	9	21	25	16	28	16	28	18	26		
A7	Cycle 4	9	18	21	18	20	24	25	22	29		
A8	Cycle 4	9	21	23	21	25	19	24	19	30		
A9	Cycle 4	9	20	21	20	22	18	26	23	28		
A10	Cycle 4	9	18	25	19	26	18	24	25	26		
A11	Cycle 4	9	16	25	23	26	19	23	16	30		
A12	Cycle 4	9	16	17	23	24	17	25	18	30		
B1	Cycle 4	8	21	22	18	24	16	19	25	27		
B2	Cycle 4	8	24	17	27	22	23	23	18	18		
B3	Cycle 4	8	26	17	26	18	18	22	21	30		
B4	Cycle 4	8	22	22	21	21	21	21	23	29		
B5	Cycle 4	8	22	25	16	26	19	20	24	28		
B6	Cycle 4	8	20	25	16	18	16	16	26	26		
B7	Cycle 4	8	19	22	24	25	16	22	20	30		
B8	Cycle 4	8	17	22	17	19	21	25	25	28		
B9	Cycle 4	8	17	18	16	22	17	21	22	30		
B10	Cycle 4	8	17	24	22	27	19	19	17	17		

Table 3-8. LS1 Fuel Assembly Location in Core for 4-8 (Continued)

SAS2H ID	Initial Insertion	Fuel Type	Cycle 4 I	Cycle 4 J	Cycle 5 I	Cycle 5 J	Cycle 6 I	Cycle 6 J	Cycle 7 I	Cycle 7 J	Cycle 8 I	Cycle 8 J
C1	Cycle 5	10			26	21	23	24	20	25	22	30
C2	Cycle 5	10			25	19	28	19	24	24	18	30
C3	Cycle 5	10			24	21	28	21	23	21	24	28
C4	Cycle 5	10			23	22	27	21	27	23	16	30
C5	Cycle 5	10			23	25	18	28	16	20	17	30
C6	Cycle 5	10			22	17	17	19	18	22		
C7	Cycle 5	10			22	21	24	20	17	21		
C8	Cycle 5	10			22	23	21	27	23	27	30	16
C9	Cycle 5	10			22	25	19	21	20	27	26	26
C10	Cycle 5	10			21	18	17	23	20	20		
C11	Cycle 5	10			21	20	20	20	21	21		
C12	Cycle 5	10			21	24	21	28	21	23	28	24
C13	Cycle 5	10			20	21	24	24	22	22		
C14	Cycle 5	10			20	26	16	27	24	27	21	26
C15	Cycle 5	10			19	18	24	22	19	24		
C16	Cycle 5	10			19	22	18	20	19	27		
C17	Cycle 5	10			19	25	19	28	16	16	30	19
C18	Cycle 5	10			18	21	23	17	19	19		
C19	Cycle 5	10			18	23	23	27	16	19	19	30
C20	Cycle 5	10			18	25	16	18	16	24		
C21	Cycle 5	10			18	27	19	27	20	29	25	26
C22	Cycle 5	10			17	16	26	22	24	23	25	28
C23	Cycle 5	10			17	18	21	23	17	25		
C24	Cycle 5	10			17	20	19	25	20	23		
C25	Cycle 5	10			17	24	23	26	16	23	21	30
C26	Cycle 5	10			17	26	16	23	17	28	23	29
C27	Cycle 5	10			17	27	22	27	18	20	25	27
C28	Cycle 5	10			16	17	22	26	23	24	28	25
C29	Cycle 5	10			16	21	16	20	16	29	20	30
C30	Cycle 5	10			16	25	20	22	16	26		

Table 3-8. LS1 Fuel Assembly Location in Core for Cycles 4-8 (Continued)

SAS2H ID	Initial Insertion	Fuel Type	Cycle 4 i	Cycle 4 j	Cycle 5 i	Cycle 5 j	Cycle 6 i	Cycle 6 j	Cycle 7 i	Cycle 7 j	Cycle 8 i	Cycle 8 j
D1	Cycle 6	11					26	21	18	16	24	24
D2	Cycle 6	11					25	18	28	20	19	20
D3	Cycle 6	11					25	23	19	17	19	23
D4	Cycle 6	11					24	17	26	23	16	16
D5	Cycle 6	11					23	25	17	19	23	19
D6	Cycle 6	11					22	25	23	25	20	28
D7	Cycle 6	11					21	22	16	28	18	29
D8	Cycle 6	11					21	26	16	18	22	22
D9	Cycle 6	11					20	25	18	24	20	29
D10	Cycle 6	11					20	27	16	22	16	28
D11	Cycle 6	11					19	26	18	29	20	23
D12	Cycle 6	11					18	17	25	25	19	19
D13	Cycle 6	11					18	23	22	27	16	19
D14	Cycle 6	11					18	25	20	28	20	19
D15	Cycle 6	11					18	27	21	27	16	24
D16	Cycle 6	11					17	18	23	23	17	17
D17	Cycle 6	11					17	22	19	28	23	24
D18	Cycle 6	11					17	24	23	26	23	23
D19	Cycle 6	11					17	26	18	28	19	28
D20	Cycle 6	11					17	27	22	24	20	27
D21	Cycle 6	11					16	21	19	23	19	29
E1	Cycle 6	12					25	16	20	24	17	29
E2	Cycle 6	12					23	22	28	21	19	24
E3	Cycle 6	12					22	19	19	21	22	29
E4	Cycle 6	12					22	23	21	28	24	19
E5	Cycle 6	12					21	18	22	20	16	29
E6	Cycle 6	12					21	24	19	29	16	20
E7	Cycle 6	12					20	17	25	24	17	25
E8	Cycle 6	12					20	21	17	23	21	29
E9	Cycle 6	12					18	19	17	29	16	23
E10	Cycle 6	12					18	21	20	22	29	16
E11	Cycle 6	12					17	20	24	25	25	17
E12	Cycle 6	12					16	17	19	20	23	28

Table 3-8. LS1 Fuel Assembly Location in Core for Cycles 4-8 (Continued)

SAS2H ID	Initial Insertion	Fuel Type	Cycle 4 i	Cycle 4 j	Cycle 5 i	Cycle 5 j	Cycle 6 i	Cycle 6 j	Cycle 7 i	Cycle 7 j	Cycle 8 i	Cycle 8 j
D1	Cycle 6	11					26	21	18	16	24	24
D2	Cycle 6	11					25	18	28	20	19	20
D3	Cycle 6	11					25	23	19	17	19	23
D4	Cycle 6	11					24	17	26	23	16	16
D5	Cycle 6	11					23	25	17	19	23	19
D6	Cycle 6	11					22	25	23	25	20	28
D7	Cycle 6	11					21	22	16	28	18	29
D8	Cycle 6	11					21	26	16	18	22	22
D9	Cycle 6	11					20	25	18	24	20	29
D10	Cycle 6	11					20	27	16	22	16	28
D11	Cycle 6	11					19	26	18	29	20	23
D12	Cycle 6	11					18	17	25	25	19	19
D13	Cycle 6	11					18	23	22	27	16	19
D14	Cycle 6	11					18	25	20	28	20	19
D15	Cycle 6	11					18	27	21	27	16	24
D16	Cycle 6	11					17	18	23	23	17	17
D17	Cycle 6	11					17	22	19	28	23	24
D18	Cycle 6	11					17	24	23	26	23	23
D19	Cycle 6	11					17	26	18	28	19	28
D20	Cycle 6	11					17	27	22	24	20	27
D21	Cycle 6	11					16	21	19	23	19	29
E1	Cycle 6	12					25	16	20	24	17	29
E2	Cycle 6	12					23	22	28	21	19	24
E3	Cycle 6	12					22	19	19	21	22	29
E4	Cycle 6	12					22	23	21	28	24	19
E5	Cycle 6	12					21	18	22	20	16	29
E6	Cycle 6	12					21	24	19	29	16	20
E7	Cycle 6	12					20	17	25	24	17	25
E8	Cycle 6	12					20	21	17	23	21	29
E9	Cycle 6	12					18	19	17	29	16	23
E10	Cycle 6	12					18	21	20	22	29	16
E11	Cycle 6	12					17	20	24	25	25	17
E12	Cycle 6	12					16	17	19	20	23	28

Table 3-8. LS1 Fuel Assembly Location in Core for Cycles 4-8 (Continued)

SAS2H ID	Initial Insertion	Fuel Type	Cycle 4 I	Cycle 4 J	Cycle 5 I	Cycle 5 J	Cycle 6 I	Cycle 6 J	Cycle 7 I	Cycle 7 J	Cycle 8 I	Cycle 8 J
F1	Cycle 7	2							27	16	17	23
F2	Cycle 7	2							26	19	16	27
F3	Cycle 7	2							26	21	16	18
F4	Cycle 7	2							25	18	18	18
F5	Cycle 7	2							22	21	24	27
F6	Cycle 7	2							22	23	16	26
F7	Cycle 7	2							22	25	17	21
F8	Cycle 7	2							21	22	27	24
F9	Cycle 7	2							21	24	21	28
F10	Cycle 7	2							21	26	18	16
F11	Cycle 7	2							20	26	24	25
F12	Cycle 7	2							19	26	27	16
F13	Cycle 7	2							18	25	25	25
F14	Cycle 7	2							18	27	18	22
F15	Cycle 7	2							17	26	18	28
F16	Cycle 7	2							17	27	18	26
F17	Cycle 7	2							16	25	16	22
F18	Cycle 7	2							16	27	23	17
G1	Cycle 7	1							23	18	20	20
G2	Cycle 7	1							21	25	22	25
G3	Cycle 7	1							20	21	20	24
G4	Cycle 7	1							19	18	21	23
G5	Cycle 7	1							19	22	19	25
G6	Cycle 7	1							19	25	20	22
G7	Cycle 7	1							18	17	17	19
G8	Cycle 7	1							18	19	23	21
G9	Cycle 7	1							18	21	19	27
G10	Cycle 7	1							18	23	21	21
G11	Cycle 7	1							17	18	19	17
G12	Cycle 7	1							17	20	18	20
G13	Cycle 7	1							17	22	24	26
G14	Cycle 7	1							17	24	18	24
G15	Cycle 7	1							16	17	19	21
G16	Cycle 7	1							16	21	22	28

Table 3-8. Fuel Assembly Location in Core for LS1 Cycles 4-8 (Continued)

SAS2H ID	Initial Insertion	Fuel Type	Cycle 4 i	Cycle 4 j	Cycle 5 i	Cycle 5 j	Cycle 6 i	Cycle 6 j	Cycle 7 i	Cycle 7 j	Cycle 8 i	Cycle 8 j
H1	Cycle 8	5									20	26
H2	Cycle 8	5									21	25
H3	Cycle 8	5									22	27
H4	Cycle 8	5									23	27
H5	Cycle 8	5									21	22
H6	Cycle 8	5									17	27
H7	Cycle 8	5									17	28
H8	Cycle 8	5									23	25
H9	Cycle 8	5									18	19
H10	Cycle 8	5									17	24
H11	Cycle 8	5									21	27
H12	Cycle 8	5									18	27
H13	Cycle 8	5									22	24
H14	Cycle 8	5									23	26
H15	Cycle 8	5									19	26
H16	Cycle 8	5									18	25
H17	Cycle 8	5									22	26
H18	Cycle 8	5									16	17
J1	Cycle 8	4									21	24
J2	Cycle 8	4									19	22
J3	Cycle 8	4									22	23
J4	Cycle 8	4									17	22
J5	Cycle 8	4									16	21
J6	Cycle 8	4									17	18
J7	Cycle 8	4									20	25
J8	Cycle 8	4									18	21
J9	Cycle 8	4									18	23
J10	Cycle 8	4									17	26
J11	Cycle 8	4									16	25
J12	Cycle 8	4									17	20
J13	Cycle 8	4									20	21

4. CORE OPERATION AND STATEPOINT INFORMATION

This section provides core operation data for the depletion calculations required to generate isotopic concentrations for statepoint reactivity evaluations. This data includes burnup and thermal hydraulic feedback parameters as well as blade insertion history. 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. To adequately model the conditions for burnup calculations at each axial location, nodal core follow data for each fuel assembly in the reactor core is required. 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. Control blade insertion data is also provided.

The core follow calculations provide three-dimensional thermal-hydraulic (TH) feedback and burnup data. These data are presented at axial node locations. The nodal spacing for the axial nodes is presented in Table 4-1, where node 1 represents the bottom axial node in the reactor core. Tables 4-2 through 4-151 provide the 25-node axial burnup profiles and Tables 4-152 through 4-301 provide the 10-node axial burnup profiles for each assembly at each datapoint or statepoint along with axial fuel temperature and moderator density (specific gravity) (sp. gr.). Table 4-302 provides the uranium mass for the collapsed node format. The statepoint evaluations for LS1 occur at the beginning of Cycle 7 (0 EFPD), at two restarts during Cycle 7, at the beginning of Cycle 8 (0 EFPD), and one restart during Cycle 8. The modeling of the fuel assemblies requires the operating history from the time the fuel was initially inserted into the core. These data are provided as datapoints and statepoints for Cycles 4 through 8.

Control blade insertion time (by axial nodes) for each assembly with a control blade inserted during core operation is provided in Tables 4-304 through 4-308. The fuel assemblies that are exposed to control blades and the applicable control blade group are listed in Tables 4-303.

Table 4-1. LS1 Axial Nodes Spacing for Burnup Calculations

Axial Node	10 Node Spacing (cm)	25 Node Spacing (cm)
1 bottom	15.24	15.24
2	45.72	15.24
3	60.96	15.24
4	45.72	15.24
5	45.72	15.24
6	45.72	15.24
7	45.72	15.24
8	45.72	15.24
9	15.24	15.24
10[1]	15.24	15.24
11		15.24
12		15.24
13		15.24
14		15.24
15		15.24
16		15.24
17		15.24
18		15.24
19		15.24
20		15.24
21		15.24
22		15.24
23		15.24
24		15.24
25 top		15.24

[1] Top node for 10 node fuel assembly.

Table 4-2. LS1 Burnup and TH Feedback Parameters Assembly A1

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.138	625.7	0.7396	2.348	648.5	0.7396
2	0.000		0.7396	3.882	808.7	0.7396	8.028	910.7	0.7396
3	0.000		0.7295	5.431	873.4	0.7385	11.389	1028.6	0.7300
4	0.000	Data	0.6652	6.596	959.5	0.7073	13.657	1151.3	0.6878
5	0.000	Not	0.5953	7.393	1023.7	0.6611	14.846	1198.5	0.6317
6	0.000	Required	0.5311	7.934	1069.8	0.6055	15.429	1203.7	0.5716
7	0.000		0.4777	8.297	1102.1	0.5482	15.728	1195.8	0.5150
8	0.000		0.4342	8.561	1126.1	0.4956	15.928	1188.0	0.4656
9	0.000		0.3979	8.999	1167.3	0.4496	16.474	1201.2	0.4234
10	0.000		0.3675	9.018	1169.1	0.4103	16.436	1194.2	0.3871
11	0.000		0.3424	8.907	1158.5	0.3773	16.276	1188.2	0.3565
12	0.000		0.3213	8.724	1141.3	0.3495	16.062	1184.5	0.3303
13	0.000		0.3038	8.516	1122.0	0.3259	15.853	1184.4	0.3079
14	0.000		0.2889	8.285	1101.0	0.3057	15.614	1183.4	0.2885
15	0.000		0.2761	8.022	1077.6	0.2884	15.284	1175.3	0.2716
16	0.000		0.2654	7.713	1050.7	0.2734	14.806	1155.1	0.2569
17	0.000		0.2562	7.347	1019.8	0.2604	14.167	1123.2	0.2441
18	0.000		0.2486	6.769	973.1	0.2492	13.147	1073.6	0.2329
19	0.000		0.2422	6.411	945.3	0.2396	12.425	1034.4	0.2234
20	0.000		0.2363	6.080	920.3	0.2310	11.727	996.5	0.2152
21	0.000		0.2313	5.679	891.0	0.2234	10.888	953.2	0.2079
22	0.000		0.2269	5.048	846.9	0.2168	9.625	894.3	0.2017
23	0.000		0.2233	4.348	800.7	0.2114	8.201	831.5	0.1967
24	0.000		0.2211	2.032	665.1	0.2074	3.882	680.4	0.1930
25	0.000		0.2199	1.275	625.7	0.2057	2.411	633.2	0.1915

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.826	634.7	0.7396	4.920	617.6	0.7396	6.576	663.9	0.7396
2	13.395	869.4	0.7396	17.236	782.1	0.7396	22.686	962.5	0.7396
3	18.633	937.5	0.7312	23.444	804.5	0.7340	30.112	998.9	0.7323
4	21.649	988.3	0.6911	26.886	830.1	0.6978	33.939	1032.8	0.6951
5	23.043	1002.7	0.6380	28.504	843.9	0.6496	35.584	1035.2	0.6465
6	23.656	1004.8	0.5810	29.299	855.3	0.5975	36.277	1026.1	0.5944
7	23.957	1005.0	0.5268	29.784	866.9	0.5474	36.650	1016.2	0.5446
8	24.185	1007.0	0.4791	30.207	879.5	0.5025	37.014	1011.0	0.5002
9	24.915	1020.2	0.4379	31.236	899.1	0.4628	38.121	1017.8	0.4611
10	24.896	1021.6	0.4024	31.403	911.5	0.4282	38.233	1013.0	0.4270
11	24.710	1019.7	0.3722	31.380	922.6	0.3983	38.108	1004.1	0.3976
12	24.432	1015.1	0.3462	31.251	932.8	0.3724	37.849	992.9	0.3720
13	24.126	1008.1	0.3237	31.082	942.3	0.3496	37.534	980.5	0.3496
14	23.763	999.3	0.3042	30.845	951.2	0.3296	37.141	967.4	0.3299
15	23.299	989.9	0.2872	30.492	959.0	0.3121	36.621	953.5	0.3127
16	22.702	981.6	0.2728	29.986	965.5	0.2970	35.922	937.8	0.2977
17	21.853	967.1	0.2598	29.201	970.1	0.2835	34.912	919.9	0.2844
18	20.536	947.1	0.2486	27.910	972.0	0.2719	33.376	900.7	0.2728
19	19.401	920.0	0.2385	26.667	964.2	0.2612	31.883	881.7	0.2622
20	18.177	886.6	0.2296	25.180	945.6	0.2514	30.135	862.2	0.2526
21	16.606	842.3	0.2216	23.027	905.8	0.2423	27.556	831.4	0.2438
22	14.487	793.5	0.2149	20.203	859.9	0.2349	24.198	794.4	0.2365
23	12.076	740.7	0.2092	16.805	799.7	0.2285	20.054	745.5	0.2301
24	5.618	637.8	0.2051	7.729	659.9	0.2235	9.205	640.8	0.2254
25	3.403	605.1	0.2029	4.588	616.2	0.2201	5.417	606.0	0.2222

Table 4-2. LS1 Burnup and TH Feedback Parameters Assembly A1 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.566	661.5	0.7396	8.240	601.5	0.7396	8.517	588.9	0.7396
2	25.773	926.0	0.7396	27.765	688.7	0.7396	28.655	644.7	0.7396
3	33.816	947.9	0.7321	36.156	691.9	0.7336	37.071	648.6	0.7342
4	37.820	971.6	0.6952	40.333	702.5	0.6988	41.312	652.7	0.7001
5	39.475	972.9	0.6470	42.177	714.1	0.6536	43.233	660.2	0.6561
6	40.130	967.7	0.5955	43.046	727.4	0.6054	44.199	669.7	0.6092
7	40.458	961.6	0.5461	43.588	741.0	0.5593	44.847	680.3	0.5647
8	40.795	958.0	0.5020	44.121	753.6	0.5178	45.491	691.5	0.5247
9	41.940	963.1	0.4631	45.476	767.4	0.4808	46.974	704.7	0.4890
10	42.039	961.3	0.4292	45.699	776.7	0.4482	47.300	715.4	0.4576
11	41.893	958.5	0.3999	45.637	781.3	0.4196	47.332	725.4	0.4300
12	41.612	955.5	0.3743	45.403	784.5	0.3942	47.184	734.6	0.4054
13	41.273	952.3	0.3521	45.076	785.3	0.3717	46.936	743.2	0.3834
14	40.855	949.0	0.3324	44.641	784.2	0.3516	46.570	750.8	0.3637
15	40.308	945.4	0.3151	44.052	781.3	0.3337	46.036	756.8	0.3460
16	39.576	941.0	0.3001	43.254	776.9	0.3181	45.281	761.6	0.3305
17	38.519	934.8	0.2867	42.113	771.3	0.3043	44.169	764.9	0.3166
18	36.919	926.4	0.2751	40.419	765.0	0.2923	42.491	766.7	0.3047
19	35.329	913.9	0.2644	38.692	756.0	0.2812	40.746	764.7	0.2934
20	33.444	896.5	0.2547	36.623	744.1	0.2711	38.623	758.6	0.2832
21	30.600	863.9	0.2458	33.475	724.8	0.2617	35.337	743.4	0.2736
22	26.898	823.3	0.2386	29.415	702.7	0.2541	31.091	723.3	0.2659
23	22.256	768.4	0.2322	24.256	671.9	0.2470	25.613	690.2	0.2583
24	10.220	651.0	0.2276	11.078	608.2	0.2414	11.667	616.0	0.2520
25	5.986	611.4	0.2243	6.426	586.0	0.2367	6.725	589.7	0.2461

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.841	580.3	0.7396
2	29.450	616.9	0.7396
3	38.075	617.5	0.7347
4	42.356	619.7	0.7015
5	44.332	622.8	0.6585
6	45.381	627.4	0.613
7	46.144	633.9	0.5700
8	46.922	641.5	0.5317
9	48.576	651.4	0.4977
10	49.066	661.0	0.4681
11	49.276	671.5	0.4424
12	49.317	682.9	0.4198
13	49.267	695.0	0.3998
14	49.101	707.4	0.3819
15	48.769	720.2	0.3660
16	48.211	732.9	0.3518
17	47.289	745.3	0.3393
18	45.792	757.4	0.3287
19	44.168	765.5	0.3182
20	42.083	768.1	0.3083
21	38.668	759.4	0.2988
22	34.188	743.6	0.2912
23	28.177	709.5	0.2828
24	12.789	624.0	0.2763
25	7.289	593.3	0.2666

Table 4-3. LS1 Burnup and TH Feedback Parameters Assembly A2

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.234	631.5	0.7396	2.242	633.1	0.7396
2	0.000		0.7396	4.201	832.7	0.7396	7.670	843.2	0.7396
3	0.000		0.7327	5.814	900.8	0.7369	10.631	934.9	0.7355
4	0.000	Data	0.6718	6.910	984.3	0.7037	12.947	1036.9	0.6998
5	0.000	Not	0.6048	7.558	1037.5	0.6564	14.043	1085.4	0.6494
6	0.000	Required	0.5424	7.923	1068.9	0.6008	14.543	1100.5	0.5920
7	0.000		0.4901	8.121	1086.3	0.5448	14.758	1102.4	0.5357
8	0.000		0.4474	8.241	1097.0	0.4943	14.881	1102.7	0.4860
9	0.000		0.4116	8.548	1124.9	0.4506	15.338	1119.8	0.4434
10	0.000		0.3816	8.478	1118.5	0.4135	15.239	1116.5	0.4072
11	0.000		0.3571	8.311	1103.3	0.3823	15.021	1110.6	0.3766
12	0.000		0.3362	8.077	1082.4	0.3559	14.721	1103.2	0.3506
13	0.000		0.3187	7.801	1058.3	0.3335	14.362	1093.8	0.3283
14	0.000		0.3038	7.496	1032.3	0.3144	13.955	1082.5	0.3091
15	0.000		0.2910	7.172	1005.4	0.2981	13.508	1069.0	0.2925
16	0.000		0.2801	6.833	978.1	0.2839	13.019	1052.7	0.2780
17	0.000		0.2708	6.480	949.0	0.2717	12.448	1031.7	0.2652
18	0.000		0.2628	5.916	908.2	0.2611	11.557	995.9	0.2540
19	0.000		0.2562	5.585	884.3	0.2519	10.975	970.9	0.2443
20	0.000		0.2505	5.288	863.4	0.2438	10.409	944.6	0.2358
21	0.000		0.2455	4.940	839.6	0.2365	9.707	911.6	0.2282
22	0.000		0.2415	4.392	803.5	0.2302	8.596	861.3	0.2217
23	0.000		0.2378	3.781	765.2	0.2249	7.330	806.5	0.2164
24	0.000		0.2354	1.748	650.1	0.2213	3.443	669.9	0.2126
25	0.000		0.2342	1.090	616.4	0.2197	2.117	626.2	0.2110

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.537	625.1	0.7398	4.573	614.5	0.7396	5.818	636.9	0.7396
2	12.374	824.8	0.7396	16.061	772.0	0.7398	20.227	850.3	0.7396
3	17.314	888.7	0.7367	21.867	795.3	0.7385	27.015	869.1	0.7388
4	20.193	937.6	0.7034	25.265	820.1	0.7082	30.567	888.2	0.7096
5	21.542	954.5	0.6566	26.822	832.7	0.6657	32.142	889.5	0.6688
6	22.132	960.6	0.6034	27.570	842.6	0.6171	32.850	886.5	0.6222
7	22.399	964.1	0.5506	27.998	852.6	0.5685	33.241	883.7	0.5754
8	22.578	967.9	0.5029	28.352	863.5	0.5239	33.583	882.8	0.5319
9	23.223	980.8	0.4612	29.278	881.6	0.4840	34.597	889.5	0.4927
10	23.144	982.2	0.4255	29.372	892.9	0.4494	34.681	888.7	0.4583
11	22.915	981.5	0.3949	29.299	903.3	0.4193	34.578	886.4	0.4283
12	22.573	978.5	0.3688	29.102	913.0	0.3933	34.332	882.7	0.4023
13	22.147	973.9	0.3462	28.815	922.4	0.3706	33.984	878.1	0.3795
14	21.643	967.3	0.3265	28.440	931.3	0.3506	33.543	873.2	0.3594
15	21.064	958.3	0.3093	27.971	938.9	0.3329	32.997	867.4	0.3417
16	20.398	946.4	0.2943	27.388	944.7	0.3173	32.321	860.6	0.3258
17	19.587	930.6	0.2810	26.622	947.9	0.3033	31.441	852.2	0.3118
18	18.365	909.2	0.2694	25.404	948.1	0.2914	30.103	843.5	0.2997
19	17.369	883.1	0.2591	24.286	939.6	0.2802	28.839	833.1	0.2884
20	16.304	852.8	0.2499	22.953	921.1	0.2700	27.330	820.7	0.2782
21	14.940	814.3	0.2416	21.025	883.6	0.2606	25.061	797.2	0.2688
22	13.028	770.0	0.2346	18.432	840.4	0.2529	22.041	768.7	0.2612
23	10.864	723.3	0.2287	15.318	783.7	0.2462	18.289	728.1	0.2543
24	5.032	631.3	0.2247	7.001	653.0	0.2412	8.311	631.8	0.2492
25	3.023	601.4	0.2224	4.127	612.5	0.2380	4.848	600.3	0.2457

Table 4-3. LS1 Burnup and TH Feedback Parameters Assembly A2 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.558	634.7	0.7396	7.375	610.5	0.7396	7.719	595.9	0.7396
2	22.577	824.0	0.7396	25.121	728.2	0.7396	26.154	672.6	0.7396
3	29.799	833.0	0.7391	32.843	765.5	0.7396	34.061	694.4	0.7396
4	33.457	845.5	0.7106	36.735	750.5	0.7138	38.042	685.1	0.7152
5	35.040	846.4	0.6709	38.524	764.0	0.6767	39.918	694.0	0.6793
6	35.742	845.7	0.6256	39.446	778.6	0.6342	40.942	704.5	0.6384
7	36.136	846.1	0.5800	40.061	793.6	0.5911	41.665	715.7	0.5969
8	36.495	848.1	0.5373	40.642	809.0	0.5505	42.348	726.3	0.5577
9	37.578	856.3	0.4986	41.995	828.1	0.5130	43.816	738.9	0.5213
10	37.683	858.8	0.4645	42.276	840.9	0.4795	44.177	747.7	0.4886
11	37.594	860.5	0.4347	42.314	850.2	0.4497	44.284	755.3	0.4594
12	37.360	861.9	0.4087	42.158	855.9	0.4234	44.192	762.4	0.4334
13	37.017	862.5	0.3858	41.848	858.4	0.4000	43.942	769.2	0.4103
14	36.579	862.9	0.3656	41.400	857.6	0.3793	43.551	775.6	0.3896
15	36.031	862.6	0.3478	40.806	854.2	0.3608	43.010	781.7	0.3711
16	35.342	861.1	0.3316	40.040	848.5	0.3443	42.287	786.7	0.3545
17	34.434	857.7	0.3177	39.026	840.8	0.3296	41.306	790.5	0.3397
18	33.058	853.2	0.3055	37.523	831.6	0.3170	39.834	794.1	0.3271
19	31.727	845.2	0.2941	36.010	818.6	0.3051	38.327	794.6	0.3151
20	30.121	833.9	0.2837	34.162	801.6	0.2943	36.452	791.7	0.3043
21	27.850	810.7	0.2742	31.294	774.6	0.2844	33.462	777.6	0.2943
22	24.375	782.4	0.2665	27.856	744.2	0.2763	29.537	756.5	0.2861
23	20.226	740.4	0.2598	22.756	703.5	0.2690	24.379	717.7	0.2784
24	9.182	636.0	0.2544	10.269	620.6	0.2633	10.975	626.6	0.2723
25	5.328	603.7	0.2508	5.899	592.9	0.2590	6.263	595.5	0.2673

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.214	591.1	0.7396
2	27.574	652.1	0.7396
3	35.676	685.5	0.7396
4	39.714	655.5	0.7169
5	41.855	659.3	0.6824
6	42.761	665.3	0.6433
7	43.640	673.4	0.6038
8	44.479	682.9	0.5666
9	46.149	695.1	0.5322
10	46.689	706.3	0.5013
11	46.982	718.0	0.4739
12	47.082	730.3	0.4494
13	47.029	743.2	0.4276
14	46.838	756.4	0.4079
15	46.495	769.8	0.3901
16	45.968	783.3	0.3741
17	45.172	796.2	0.3596
18	43.870	808.3	0.3473
19	42.464	815.6	0.3353
20	40.600	816.4	0.3241
21	37.425	803.1	0.3136
22	33.201	782.1	0.3052
23	27.419	740.1	0.2968
24	12.325	636.9	0.2902
25	6.661	600.6	0.2837

Table 4-4. LS1 Burnup and TH Feedback Parameters Assembly A3

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.059	621.0	0.7396	2.091	634.9	0.7396
2	0.000		0.7396	3.603	788.2	0.7396	7.162	851.9	0.7396
3	0.000		0.7396	5.052	899.8	0.7396	10.279	1028.9	0.7364
4	0.000	Data	0.6954	6.162	926.4	0.7161	12.578	1077.6	0.7018
5	0.000	Not	0.6348	6.941	986.7	0.6748	13.909	1140.4	0.6523
6	0.000	Required	0.5743	7.478	1030.8	0.6244	14.593	1157.7	0.5960
7	0.000		0.5205	7.833	1061.1	0.5702	14.928	1155.3	0.5402
8	0.000		0.4761	8.079	1082.6	0.5184	15.131	1150.2	0.4901
9	0.000		0.4365	8.478	1118.5	0.4721	15.647	1164.1	0.4467
10	0.000		0.4039	8.455	1116.4	0.4321	15.556	1156.0	0.4093
11	0.000		0.3768	8.296	1102.0	0.3987	15.311	1145.9	0.3777
12	0.000		0.3541	8.057	1080.6	0.3706	14.975	1134.6	0.3510
13	0.000		0.3350	7.768	1055.4	0.3469	14.577	1122.0	0.3282
14	0.000		0.3189	7.449	1028.4	0.3267	14.134	1107.8	0.3086
15	0.000		0.3051	7.109	1000.3	0.3095	13.648	1091.4	0.2917
16	0.000		0.2934	6.749	971.5	0.2948	13.113	1072.0	0.2770
17	0.000		0.2834	6.350	940.6	0.2820	12.480	1046.7	0.2641
18	0.000		0.2749	5.780	898.3	0.2711	11.520	1006.0	0.2529
19	0.000		0.2679	5.446	874.5	0.2616	10.901	977.3	0.2433
20	0.000		0.2619	5.171	855.4	0.2532	10.337	949.1	0.2349
21	0.000		0.2567	4.853	833.8	0.2457	9.648	914.2	0.2276
22	0.000		0.2524	4.324	799.2	0.2391	8.530	861.5	0.2214
23	0.000		0.2487	3.723	761.6	0.2336	7.251	804.8	0.2163
24	0.000		0.2464	1.725	648.9	0.2297	3.399	668.4	0.2124
25	0.000		0.2452	1.074	615.6	0.2280	2.093	625.7	0.2110

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.005	658.0	0.7396	5.454	637.1	0.7396	6.535	626.4	0.7396
2	14.053	980.5	0.7396	19.105	865.8	0.7396	22.632	799.1	0.7396
3	19.611	1086.9	0.7275	25.962	901.1	0.7291	30.274	816.1	0.7307
4	22.796	1157.7	0.6838	29.678	937.2	0.6876	34.272	836.0	0.6916
5	24.171	1161.4	0.6279	31.276	952.8	0.6345	35.981	844.0	0.6417
6	24.663	1145.6	0.5696	31.906	962.6	0.5788	36.669	848.2	0.5893
7	24.830	1131.9	0.5165	32.205	972.1	0.5268	37.019	851.9	0.5399
8	24.961	1126.1	0.4682	32.489	983.2	0.4809	37.364	856.3	0.4961
9	25.625	1138.1	0.4277	33.429	1003.6	0.4411	38.429	865.5	0.4572
10	25.495	1134.9	0.3926	33.451	1015.0	0.4065	38.474	867.2	0.4231
11	25.164	1128.0	0.3629	33.259	1025.6	0.3769	38.265	866.0	0.3937
12	24.706	1118.2	0.3376	32.934	1035.8	0.3515	37.899	862.9	0.3681
13	24.162	1106.6	0.3158	32.521	1046.0	0.3295	37.427	858.6	0.3458
14	23.547	1093.1	0.2970	32.031	1055.8	0.3104	36.869	853.8	0.3263
15	22.860	1077.6	0.2807	31.461	1065.1	0.2935	36.223	848.1	0.3091
16	22.083	1059.2	0.2664	30.780	1072.8	0.2786	35.467	842.7	0.2940
17	21.150	1036.9	0.2538	29.904	1077.3	0.2653	34.575	841.5	0.2808
18	19.791	1008.0	0.2428	28.550	1077.7	0.2536	33.545	865.1	0.2704
19	18.659	972.1	0.2335	27.247	1064.0	0.2434	32.653	911.6	0.2621
20	17.452	929.0	0.2255	25.681	1034.3	0.2343	31.558	934.7	0.2538
21	15.901	874.5	0.2188	23.342	976.8	0.2264	29.070	921.2	0.2456
22	13.774	814.9	0.2131	20.298	912.5	0.2200	25.458	877.6	0.2387
23	11.404	755.2	0.2087	16.728	835.4	0.2147	20.924	808.1	0.2321
24	5.285	644.6	0.2054	7.864	673.1	0.2110	9.518	661.9	0.2273
25	3.200	610.1	0.2042	4.586	624.5	0.2092	5.583	616.0	0.2242

Table 4-4. LS1 Burnup and TH Feedback Parameters Assembly A3 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.761	687.6	0.7396	8.538	608.0	0.7396	8.875	595.2	0.7396
2	26.330	1019.2	0.7396	28.616	709.5	0.7396	29.571	663.5	0.7396
3	34.562	1029.1	0.7291	37.265	714.1	0.7310	38.376	665.6	0.7317
4	38.640	1040.6	0.6893	41.581	727.7	0.6937	42.761	674.4	0.6954
5	40.311	1035.2	0.6392	43.455	741.6	0.6467	44.761	684.0	0.6497
6	40.941	1026.7	0.5868	44.323	757.3	0.5978	45.730	695.3	0.6025
7	41.245	1020.1	0.5377	44.881	772.7	0.5517	46.385	707.4	0.5581
8	41.570	1017.2	0.4942	45.395	786.8	0.5105	47.034	719.4	0.5183
9	42.679	1023.5	0.4557	46.729	802.3	0.4735	48.499	733.4	0.4825
10	42.722	1023.3	0.4219	46.908	811.7	0.4406	48.777	744.2	0.4506
11	42.514	1023.4	0.3927	46.768	817.9	0.4117	48.746	754.0	0.4224
12	42.147	1023.3	0.3673	46.471	821.5	0.3862	48.510	763.0	0.3973
13	41.673	1023.0	0.3452	46.010	822.4	0.3638	48.123	771.3	0.3751
14	41.109	1022.1	0.3257	45.425	820.9	0.3438	47.602	778.6	0.3553
15	40.447	1019.8	0.3085	44.712	817.3	0.3259	46.940	784.5	0.3375
16	39.661	1015.5	0.2934	43.845	811.6	0.3101	46.110	788.8	0.3217
17	38.705	1006.3	0.2801	42.778	803.9	0.2962	45.063	791.1	0.3077
18	37.562	990.4	0.2698	41.485	793.6	0.2850	43.765	790.5	0.2962
19	36.687	965.1	0.2611	40.396	779.0	0.2754	42.624	784.5	0.2860
20	35.189	937.9	0.2528	38.663	763.3	0.2662	40.814	775.6	0.2765
21	32.388	897.6	0.2446	35.622	741.2	0.2576	37.520	758.4	0.2676
22	28.411	852.9	0.2374	31.162	717.1	0.2502	32.987	737.2	0.2602
23	23.356	793.2	0.2309	25.649	683.3	0.2433	27.020	701.9	0.2529
24	10.657	662.4	0.2261	11.620	613.9	0.2381	12.273	621.9	0.2474
25	6.234	618.5	0.2233	6.734	589.2	0.2339	7.071	593.1	0.2424

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.290	586.0	0.7396
2	30.707	632.9	0.7396
3	39.653	632.8	0.7325
4	44.094	635.9	0.6972
5	46.151	639.8	0.653
6	47.234	645.7	0.6073
7	48.023	653.5	0.5647
8	48.826	662.5	0.5268
9	50.485	674.1	0.4929
10	50.951	685.4	0.4629
11	51.116	697.5	0.4366
12	51.090	710.5	0.4136
13	50.917	724.1	0.3931
14	50.611	738.0	0.3748
15	50.160	752.0	0.3583
16	49.532	765.5	0.3434
17	48.667	778.0	0.3302
18	47.513	787.9	0.3189
19	46.433	792.2	0.3085
20	44.818	791.9	0.2986
21	41.151	779.8	0.2894
22	36.336	761.9	0.2820
23	29.817	724.3	0.2742
24	13.529	631.6	0.2680
25	7.711	597.5	0.2609

Table 4-5. LS1 Burnup and TH Feedback Parameters Assembly A4

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.093	623.0	0.7396	2.270	646.0	0.7396
2	0.000		0.7396	3.728	797.3	0.7396	7.776	900.7	0.7396
3	0.000		0.7305	5.255	861.1	0.7317	11.163	1023.3	0.7317
4	0.000	Data	0.6670	6.438	947.3	0.7096	13.555	1157.9	0.6903
5	0.000	Not	0.5971	7.266	1013.1	0.6647	14.836	1213.0	0.6338
6	0.000	Required	0.5325	7.829	1060.7	0.6100	15.457	1220.2	0.5730
7	0.000		0.4767	8.205	1093.6	0.5534	15.771	1212.5	0.5161
8	0.000		0.4347	8.478	1118.5	0.5009	15.981	1204.7	0.4667
9	0.000		0.3981	8.921	1159.8	0.4548	16.535	1218.5	0.4244
10	0.000		0.3675	8.933	1161.0	0.4151	16.484	1210.6	0.3879
11	0.000		0.3422	8.797	1148.1	0.3819	16.277	1201.9	0.3573
12	0.000		0.3211	8.568	1126.8	0.3542	15.969	1192.2	0.3312
13	0.000		0.3034	8.286	1101.1	0.3308	15.595	1181.0	0.3091
14	0.000		0.2884	7.976	1073.7	0.3109	15.170	1166.9	0.2900
15	0.000		0.2758	7.664	1046.5	0.2940	14.706	1149.1	0.2737
16	0.000		0.2650	7.366	1021.4	0.2794	14.210	1128.0	0.2595
17	0.000		0.2559	7.063	996.6	0.2667	13.636	1095.2	0.2472
18	0.000		0.2483	6.588	957.4	0.2556	12.715	1046.6	0.2364
19	0.000		0.2419	6.277	935.1	0.2458	12.088	1013.3	0.2271
20	0.000		0.2361	5.984	913.2	0.2370	11.466	980.0	0.2188
21	0.000		0.2310	5.610	886.1	0.2292	10.698	941.6	0.2114
22	0.000		0.2267	4.994	843.3	0.2223	9.494	887.4	0.2051
23	0.000		0.2232	4.306	798.0	0.2166	8.122	828.4	0.2000
24	0.000		0.2209	2.018	664.4	0.2124	3.860	679.8	0.1960
25	0.000		0.2197	1.265	625.2	0.2107	2.400	633.1	0.1945

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.700	632.2	0.7396	4.716	613.4	0.7396	6.411	666.5	0.7396
2	12.991	859.0	0.7396	16.596	766.7	0.7396	22.186	975.5	0.7396
3	18.265	928.2	0.7329	22.792	787.9	0.7355	29.520	1004.1	0.7333
4	21.400	978.1	0.6940	26.324	811.2	0.7006	33.306	1026.4	0.6971
5	22.675	991.6	0.6412	28.006	823.7	0.6530	34.916	1020.0	0.6493
6	23.518	993.1	0.5841	28.627	834.5	0.6012	35.575	1005.9	0.5978
7	23.827	992.6	0.5299	29.320	845.9	0.5515	35.920	993.1	0.5486
8	24.054	994.0	0.4822	29.745	858.3	0.5069	36.253	985.2	0.5048
9	24.781	1006.2	0.4409	30.771	877.4	0.4674	37.327	989.3	0.4660
10	24.748	1007.5	0.4051	30.828	889.5	0.4329	37.434	985.0	0.4321
11	24.521	1006.1	0.3749	30.671	901.0	0.4032	37.299	978.4	0.4028
12	24.161	1002.4	0.3490	30.670	911.7	0.3775	37.003	970.5	0.3775
13	23.709	996.8	0.3268	30.367	921.8	0.3552	36.595	961.7	0.3554
14	23.182	989.7	0.3076	29.979	931.3	0.3356	36.096	952.6	0.3361
15	22.587	980.6	0.2909	29.508	939.9	0.3185	35.504	942.7	0.3191
16	21.923	969.0	0.2763	28.945	946.9	0.3033	34.802	931.5	0.3040
17	21.126	953.9	0.2635	28.214	951.6	0.2898	33.909	918.6	0.2907
18	19.907	934.1	0.2524	27.021	953.4	0.2783	32.658	906.2	0.2792
19	18.676	907.9	0.2425	25.889	948.3	0.2676	31.256	893.1	0.2685
20	17.744	876.0	0.2336	24.609	929.1	0.2576	29.679	878.2	0.2586
21	16.268	833.6	0.2254	22.477	891.7	0.2484	27.248	848.7	0.2495
22	14.228	786.4	0.2186	19.769	848.2	0.2408	24.001	811.3	0.2420
23	11.687	735.0	0.2128	16.452	790.1	0.2340	19.912	759.0	0.2354
24	6.637	635.2	0.2084	7.651	655.2	0.2285	9.101	644.9	0.2302
25	3.353	603.5	0.2081	4.476	613.3	0.2249	5.344	608.1	0.2268

Table 4-6. LS1 Burnup and TH Feedback Parameters Assembly A4

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.850	677.6	0.7396	8.734	634.1	0.7396	9.932	623.3	0.7396
2	25.683	987.6	0.7396	29.227	804.5	0.7396	30.967	769.2	0.7396
3	33.613	1001.1	0.7320	37.913	819.8	0.7334	40.039	772.8	0.7343
4	37.496	1014.9	0.6953	42.212	849.9	0.6985	44.578	800.6	0.7005
5	39.055	1007.6	0.6474	44.092	873.9	0.6529	46.628	820.8	0.6563
6	39.641	997.3	0.5961	44.931	893.3	0.6038	47.697	836.7	0.6085
7	39.924	988.6	0.5473	45.418	909.3	0.5565	48.180	848.7	0.5621
8	40.219	983.3	0.5038	45.888	923.3	0.5135	48.732	859.0	0.5198
9	41.326	987.9	0.4853	47.209	940.7	0.4749	50.154	871.9	0.4814
10	41.418	985.6	0.4317	47.386	947.7	0.4409	50.374	877.4	0.4474
11	41.265	983.3	0.4028	47.260	949.9	0.4115	50.276	881.1	0.4178
12	40.953	981.1	0.3776	46.917	947.3	0.3857	49.957	884.2	0.3919
13	40.528	978.7	0.3556	46.421	941.6	0.3632	49.478	886.4	0.3692
14	40.009	976.9	0.3363	45.792	932.5	0.3436	48.866	888.7	0.3493
15	39.390	972.2	0.3193	45.025	920.5	0.3260	48.109	890.0	0.3317
16	38.644	966.2	0.3042	44.085	905.2	0.3106	47.160	888.7	0.3161
17	37.681	956.7	0.2908	42.880	886.3	0.2969	45.913	883.3	0.3021
18	36.242	945.0	0.2792	41.176	866.1	0.2850	44.145	875.0	0.2900
19	34.815	928.5	0.2685	39.457	844.4	0.2739	42.329	862.5	0.2788
20	33.076	907.6	0.2586	37.411	822.3	0.2640	40.168	846.8	0.2687
21	30.358	871.9	0.2496	34.252	791.5	0.2548	36.779	819.6	0.2594
22	26.758	829.9	0.2421	30.147	757.7	0.2473	32.398	787.1	0.2517
23	22.166	773.7	0.2356	24.868	714.1	0.2406	26.695	739.6	0.2449
24	10.138	653.0	0.2305	11.363	628.1	0.2357	12.208	639.9	0.2401
25	6.930	612.9	0.2272	6.599	598.1	0.2323	7.061	604.4	0.2364

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	10.221	616.5	0.7396
2	33.405	724.9	0.7396
3	42.671	726.6	0.7354
4	47.571	737.0	0.7032
5	49.738	744.5	0.6609
6	50.844	753.8	0.6153
7	51.605	765.7	0.5711
8	52.353	779.1	0.5305
9	54.017	796.0	0.4934
10	54.439	810.4	0.4604
11	54.539	824.8	0.4314
12	54.415	839.2	0.4059
13	54.132	853.9	0.3834
14	53.707	868.2	0.3635
15	53.126	881.9	0.3457
16	52.339	894.8	0.3298
17	51.227	905.6	0.3156
18	49.562	914.0	0.3033
19	47.752	914.4	0.2917
20	45.470	905.4	0.2810
21	41.739	877.5	0.2712
22	36.861	839.5	0.2631
23	30.343	781.0	0.2557
24	13.921	657.9	0.2508
25	7.992	613.4	0.2467

Table 4-8. LS1 Burnup and TH Feedback Parameters Assembly A5

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.108	623.9	0.7396	2.280	645.6	0.7396
2	0.000		0.7396	3.780	801.2	0.7396	7.787	896.5	0.7396
3	0.000		0.7311	5.313	865.2	0.7395	11.100	1010.8	0.7318
4	0.000	Data	0.6681	6.493	951.6	0.7094	13.423	1136.0	0.6914
5	0.000	Not	0.6983	7.317	1017.4	0.6644	14.701	1190.1	0.6382
6	0.000	Required	0.6332	7.872	1064.4	0.6096	15.347	1201.2	0.5761
7	0.000		0.4790	8.235	1096.5	0.5529	15.682	1197.8	0.5191
8	0.000		0.4347	8.493	1119.9	0.5004	15.902	1193.1	0.4693
9	0.000		0.3980	8.916	1159.6	0.4544	16.455	1208.9	0.4268
10	0.000		0.3672	8.913	1159.1	0.4150	16.402	1203.0	0.3902
11	0.000		0.3419	8.765	1145.1	0.3820	16.196	1195.8	0.3593
12	0.000		0.3208	8.624	1122.7	0.3544	15.887	1187.5	0.3332
13	0.000		0.3032	8.226	1095.7	0.3311	15.609	1177.8	0.3109
14	0.000		0.2882	7.898	1066.5	0.3114	15.083	1166.3	0.2918
15	0.000		0.2756	7.548	1036.7	0.2947	14.620	1152.6	0.2763
16	0.000		0.2648	7.184	1006.4	0.2803	14.111	1135.6	0.2609
17	0.000		0.2557	6.766	974.4	0.2680	13.613	1112.6	0.2482
18	0.000		0.2481	6.222	930.9	0.2573	12.690	1072.6	0.2372
19	0.000		0.2417	5.921	908.6	0.2481	12.010	1042.4	0.2278
20	0.000		0.2358	5.690	891.8	0.2396	11.456	1009.7	0.2195
21	0.000		0.2308	5.394	870.8	0.2319	10.740	966.6	0.2123
22	0.000		0.2266	4.841	833.0	0.2252	9.522	903.7	0.2060
23	0.000		0.2230	4.177	789.8	0.2195	8.089	836.4	0.2010
24	0.000		0.2209	1.944	660.5	0.2164	3.808	681.3	0.1972
25	0.000		0.2197	1.213	622.6	0.2137	2.351	633.3	0.1957

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.006	647.9	0.7396	5.842	659.0	0.7396	7.551	667.5	0.7396
2	14.019	930.9	0.7396	20.269	956.4	0.7396	25.617	953.1	0.7395
3	19.541	1020.2	0.7290	27.241	995.8	0.7287	33.580	971.0	0.7282
4	22.782	1088.9	0.6859	30.954	1031.5	0.6824	37.566	994.1	0.6825
5	24.285	1106.5	0.6291	32.572	1040.4	0.6259	39.256	1000.3	0.6270
6	24.908	1104.7	0.5689	33.245	1044.3	0.5671	39.960	1003.0	0.5696
7	25.183	1100.0	0.5130	33.597	1050.3	0.5132	40.376	1006.5	0.5171
8	25.394	1099.3	0.4648	33.924	1059.4	0.4667	40.734	1011.3	0.4714
9	26.118	1112.8	0.4238	34.897	1079.4	0.4269	41.806	1020.0	0.4320
10	26.039	1110.7	0.3886	34.946	1089.8	0.3925	41.850	1019.5	0.3980
11	25.745	1103.8	0.3587	34.781	1100.3	0.3630	41.632	1014.9	0.3687
12	25.308	1093.8	0.3333	34.473	1111.0	0.3379	41.240	1007.5	0.3436
13	24.776	1081.8	0.3116	34.067	1121.6	0.3161	40.730	998.5	0.3218
14	24.175	1068.5	0.2927	33.583	1131.5	0.2971	40.125	988.1	0.3028
15	23.514	1053.5	0.2764	33.022	1140.0	0.2804	39.424	976.2	0.2860
16	22.776	1036.7	0.2621	32.359	1146.3	0.2657	38.601	962.9	0.2713
17	21.909	1016.9	0.2496	31.522	1149.0	0.2525	37.623	951.2	0.2583
18	20.649	993.0	0.2386	30.232	1146.4	0.2408	36.347	952.4	0.2476
19	19.622	982.1	0.2290	28.990	1128.1	0.2306	34.925	937.8	0.2372
20	18.617	924.6	0.2207	27.455	1092.3	0.2214	33.110	915.5	0.2280
21	17.003	876.1	0.2135	25.109	1026.4	0.2138	30.274	877.8	0.2200
22	14.864	820.5	0.2073	21.991	954.3	0.2069	26.651	833.6	0.2131
23	12.378	762.4	0.2024	18.257	870.2	0.2016	21.955	774.6	0.2076
24	5.776	648.3	0.1987	8.487	689.7	0.1979	10.177	652.7	0.2037
25	3.602	612.0	0.1972	5.088	634.8	0.1962	6.033	612.2	0.2016

Table 4-6. LS1 Burnup and TH Feedback Parameters Assembly A5 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.338	639.6	0.7396	8.977	699.3	0.7396	9.199	683.1	0.7396
2	27.924	618.4	0.7396	29.766	678.3	0.7396	30.390	626.2	0.7396
3	36.284	623.8	0.7273	38.480	682.3	0.7284	39.188	628.9	0.7289
4	40.408	639.6	0.6850	42.774	693.6	0.6876	43.568	635.1	0.6887
5	42.189	650.5	0.6313	44.733	704.4	0.6355	45.601	642.1	0.6377
6	42.972	660.0	0.5766	45.697	716.5	0.5816	46.654	650.6	0.5847
7	43.455	668.2	0.5243	46.348	725.8	0.5313	47.401	660.1	0.5356
8	43.874	676.5	0.4795	46.909	734.9	0.4871	48.063	669.8	0.4922
9	45.038	686.5	0.4404	48.223	744.6	0.4482	49.489	681.0	0.4539
10	45.117	691.2	0.4065	48.390	750.2	0.4142	49.754	690.9	0.4204
11	44.930	695.1	0.3773	48.261	753.9	0.3848	49.724	701.0	0.3912
12	44.661	698.0	0.3520	47.925	756.1	0.3593	49.491	711.7	0.3659
13	44.069	900.3	0.3301	47.439	756.5	0.3371	49.105	722.3	0.3438
14	43.477	901.9	0.3109	46.829	755.3	0.3177	48.580	731.4	0.3243
15	42.788	903.4	0.2941	46.097	752.5	0.3005	47.908	737.6	0.3070
16	41.990	906.6	0.2794	45.228	747.9	0.2854	47.072	741.4	0.2916
17	41.163	926.0	0.2668	44.290	740.8	0.2725	46.136	741.6	0.2784
18	40.322	984.5	0.2574	43.286	730.4	0.2625	45.098	738.0	0.2680
19	38.952	991.6	0.2470	41.757	720.4	0.2519	43.627	733.4	0.2571
20	37.007	973.7	0.2373	39.627	709.0	0.2420	41.327	725.9	0.2469
21	33.886	935.4	0.2287	36.232	692.4	0.2332	37.795	711.4	0.2380
22	29.787	887.4	0.2216	31.627	674.3	0.2260	33.220	693.9	0.2308
23	24.599	816.9	0.2165	26.229	650.7	0.2197	27.382	667.8	0.2240
24	11.405	670.7	0.2114	12.141	601.7	0.2155	12.656	609.2	0.2197
25	6.714	621.1	0.2087	7.109	583.7	0.2125	7.383	587.4	0.2163

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.496	578.6	0.7396
2	31.193	610.9	0.7396
3	40.095	612.1	0.7295
4	44.627	615.0	0.6901
5	46.622	618.4	0.6402
6	47.763	623.3	0.5885
7	48.620	629.5	0.5408
8	49.412	636.9	0.4988
9	50.995	645.9	0.4617
10	51.407	654.4	0.4293
11	51.525	663.1	0.4011
12	51.440	671.6	0.3766
13	51.205	680.9	0.3551
14	50.634	690.3	0.3360
15	50.319	700.0	0.3190
16	49.637	709.6	0.3039
17	48.836	718.1	0.2908
18	47.888	723.9	0.2800
19	46.389	728.5	0.2690
20	44.206	729.6	0.2588
21	40.646	721.4	0.2498
22	35.763	708.2	0.2420
23	29.486	682.4	0.2351
24	13.633	616.0	0.2303
25	7.899	590.7	0.2259

Table 4-7. LS1 Burnup and TH Feedback Parameters Assembly A6

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.121	624.7	0.7396	2.171	636.3	0.7396
2	0.000		0.7396	3.845	806.0	0.7396	7.634	864.6	0.7396
3	0.000		0.7375	5.434	873.6	0.7345	10.930	981.4	0.7345
4	0.000	Data	0.6818	6.609	960.5	0.7099	13.324	1111.2	0.6969
5	0.000	Not	0.6186	7.350	1020.1	0.6555	14.642	1166.9	0.6441
6	0.000	Required	0.5542	7.786	1057.0	0.6118	15.036	1173.8	0.5853
7	0.000		0.5012	8.026	1077.9	0.5562	15.192	1163.8	0.5288
8	0.000		0.4576	8.180	1091.6	0.5051	15.258	1153.3	0.4795
9	0.000		0.4208	8.317	1122.1	0.4602	15.681	1163.6	0.4373
10	0.000		0.3899	8.447	1116.7	0.4219	15.520	1152.7	0.4012
11	0.000		0.3644	8.256	1098.4	0.3900	15.226	1140.6	0.3708
12	0.000		0.3430	7.997	1075.4	0.3630	14.858	1128.0	0.3452
13	0.000		0.3250	7.699	1049.5	0.3403	14.442	1114.4	0.3232
14	0.000		0.3097	7.376	1022.3	0.3210	13.990	1099.6	0.3043
15	0.000		0.2966	7.038	994.5	0.3045	13.505	1083.4	0.2880
16	0.000		0.2854	6.683	966.3	0.2903	12.979	1064.6	0.2737
17	0.000		0.2759	6.289	936.0	0.2779	12.361	1040.6	0.2612
18	0.000		0.2679	5.725	894.3	0.2673	11.418	1001.2	0.2503
19	0.000		0.2612	5.403	871.5	0.2582	10.824	973.8	0.2410
20	0.000		0.2555	5.143	853.4	0.2500	10.289	947.2	0.2327
21	0.000		0.2505	4.840	832.9	0.2426	9.624	913.1	0.2255
22	0.000		0.2484	4.313	798.5	0.2361	8.510	850.7	0.2193
23	0.000		0.2430	3.711	760.9	0.2308	7.226	803.8	0.2143
24	0.000		0.2408	1.722	648.8	0.2270	3.389	668.0	0.2106
25	0.000		0.2395	1.073	615.6	0.2253	2.086	625.3	0.2092

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.547	629.3	0.7396	4.816	616.3	0.7396	6.658	636.7	0.7396
2	12.672	847.0	0.7396	16.341	777.4	0.7396	20.457	846.2	0.7396
3	17.836	915.6	0.7352	22.477	794.6	0.7372	27.370	857.6	0.7378
4	20.944	962.7	0.6994	25.906	813.5	0.7047	30.970	870.3	0.7069
5	22.341	974.9	0.6499	27.489	823.6	0.6597	32.629	870.0	0.6642
6	22.671	977.4	0.5949	28.162	833.4	0.6097	33.199	868.3	0.6166
7	23.041	978.3	0.5417	28.518	844.9	0.5608	33.643	867.4	0.5698
8	23.129	979.9	0.4943	28.805	857.3	0.5167	33.836	867.8	0.5259
9	23.710	990.9	0.4531	29.684	876.4	0.4776	34.809	874.6	0.4884
10	23.656	991.4	0.4177	29.723	888.9	0.4434	34.853	875.2	0.4546
11	23.243	990.0	0.3876	29.585	900.5	0.4140	34.704	874.4	0.4252
12	22.630	986.9	0.3620	29.335	911.4	0.3885	34.427	872.4	0.3996
13	22.345	982.1	0.3398	29.004	921.8	0.3662	34.054	869.2	0.3772
14	21.793	976.2	0.3206	28.593	931.5	0.3466	33.596	865.7	0.3574
15	21.173	965.6	0.3038	28.096	940.0	0.3294	33.042	861.6	0.3400
16	20.466	953.7	0.2890	27.485	946.7	0.3140	32.360	856.3	0.3244
17	19.602	937.3	0.2761	26.681	950.9	0.3004	31.472	850.2	0.3106
18	18.317	915.0	0.2649	25.419	952.6	0.2889	30.127	844.2	0.2989
19	17.300	888.2	0.2548	24.308	948.0	0.2781	28.895	835.6	0.2879
20	16.254	857.0	0.2459	23.008	928.3	0.2680	27.430	823.6	0.2778
21	14.918	817.7	0.2380	21.113	890.6	0.2588	25.196	800.4	0.2685
22	12.883	772.2	0.2312	18.497	847.2	0.2513	22.168	772.1	0.2609
23	10.771	723.9	0.2256	15.306	788.5	0.2447	18.327	731.1	0.2542
24	4.961	630.5	0.2216	6.947	653.9	0.2396	8.268	632.4	0.2489
25	2.981	601.0	0.2195	4.089	612.7	0.2363	4.812	600.4	0.2453

Table 4-7. LS1 Burnup and TH Feedback Parameters Assembly A5 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.671	631.8	0.7396	8.000	650.3	0.7396	8.778	643.3	0.7396
2	22.677	807.1	0.7396	27.089	876.4	0.7396	29.427	839.8	0.7396
3	29.943	808.9	0.7383	35.370	904.0	0.7379	38.280	887.4	0.7379
4	33.610	816.5	0.7085	39.659	948.1	0.7079	42.799	910.6	0.7081
5	35.182	818.0	0.6672	41.444	972.4	0.6667	44.879	937.6	0.6672
6	35.868	819.6	0.6211	42.311	987.8	0.6205	45.848	951.5	0.6212
7	36.241	823.1	0.5757	42.791	997.2	0.5746	46.381	959.4	0.5754
8	36.573	827.6	0.5338	43.214	1005.2	0.5321	46.854	966.5	0.5328
9	37.630	837.4	0.4956	44.432	1019.5	0.4937	48.171	980.9	0.4942
10	37.711	841.7	0.4623	44.512	1019.4	0.4599	48.291	988.7	0.4602
11	37.593	845.3	0.4331	44.321	1012.9	0.4305	48.123	990.1	0.4306
12	37.343	848.5	0.4075	43.946	1001.6	0.4048	47.770	993.4	0.4047
13	36.991	851.0	0.3850	43.426	987.2	0.3822	47.268	996.1	0.3820
14	36.547	852.7	0.3651	42.778	969.7	0.3624	46.624	996.7	0.3620
15	36.002	853.6	0.3476	41.987	949.1	0.3449	45.810	993.2	0.3443
16	35.320	853.6	0.3318	41.006	924.6	0.3294	44.769	982.9	0.3286
17	34.419	852.2	0.3178	39.744	896.0	0.3156	43.364	963.7	0.3147
18	33.054	849.8	0.3060	38.007	867.6	0.3039	41.453	939.0	0.3029
19	31.769	843.6	0.2949	36.347	839.6	0.2931	39.581	910.0	0.2920
20	30.215	833.2	0.2846	34.451	815.3	0.2830	37.481	880.3	0.2820
21	27.784	810.6	0.2751	31.577	784.6	0.2738	34.273	840.4	0.2728
22	24.503	783.6	0.2675	27.813	752.6	0.2664	30.166	799.0	0.2654
23	20.281	742.1	0.2607	22.853	712.2	0.2598	24.853	747.6	0.2589
24	9.143	638.4	0.2552	10.367	628.1	0.2547	11.254	643.8	0.2539
25	5.292	603.7	0.2514	5.982	599.3	0.2511	6.486	608.2	0.2505

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	10.001	638.7	0.7396
2	32.838	800.7	0.7396
3	42.250	803.6	0.7384
4	46.966	817.8	0.7094
5	49.154	825.6	0.6698
6	50.252	835.3	0.6253
7	50.954	847.8	0.5808
8	51.620	862.4	0.5393
9	53.192	882.2	0.5014
10	53.519	898.7	0.4677
11	53.547	914.5	0.4382
12	53.387	930.4	0.4122
13	53.074	946.3	0.3892
14	52.615	962.1	0.3688
15	51.978	977.5	0.3507
16	51.086	991.6	0.3348
17	49.813	1002.5	0.3202
18	47.969	1008.6	0.3078
19	45.032	1002.7	0.2982
20	43.699	983.7	0.2856
21	40.016	941.0	0.2759
22	35.258	887.8	0.2680
23	28.991	815.7	0.2612
24	13.216	672.6	0.2561
25	7.588	622.9	0.2527

Table 4-8. LS1 Burnup and TH Feedback Parameters Assembly A7

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.160	627.0	0.7396	2.419	652.3	0.7396
2	0.000		0.7396	3.977	815.8	0.7396	8.327	932.0	0.7396
3	0.000		0.7311	5.806	885.8	0.7374	11.903	1064.7	0.7276
4	0.000	Data	0.6577	6.848	979.3	0.7040	14.307	1199.3	0.6818
5	0.000	Not	0.5976	7.693	1049.0	0.6547	16.635	1247.3	0.6216
6	0.000	Required	0.5325	8.248	1097.6	0.5982	16.104	1249.1	0.5587
7	0.000		0.4783	8.607	1130.4	0.5371	16.379	1238.4	0.5010
8	0.000		0.4340	8.865	1154.5	0.4842	16.657	1228.3	0.4518
9	0.000		0.3973	9.301	1196.5	0.4385	17.090	1240.5	0.4101
10	0.000		0.3685	9.298	1196.3	0.3995	17.022	1232.3	0.3744
11	0.000		0.3411	9.163	1182.1	0.3671	16.818	1224.9	0.3444
12	0.000		0.3189	8.923	1160.0	0.3400	16.534	1218.1	0.3189
13	0.000		0.3023	8.649	1134.3	0.3170	16.212	1212.1	0.2972
14	0.000		0.2873	8.346	1106.5	0.2976	15.846	1204.3	0.2784
15	0.000		0.2748	8.017	1077.1	0.2810	15.410	1191.2	0.2623
16	0.000		0.2638	7.655	1045.8	0.2667	14.873	1170.0	0.2482
17	0.000		0.2547	7.237	1010.8	0.2545	14.189	1138.5	0.2359
18	0.000		0.2471	6.619	951.3	0.2439	13.130	1088.3	0.2253
19	0.000		0.2408	6.237	932.1	0.2349	12.382	1048.3	0.2163
20	0.000		0.2349	5.900	907.0	0.2268	11.667	1008.8	0.2084
21	0.000		0.2298	5.505	878.6	0.2196	10.809	962.4	0.2016
22	0.000		0.2256	4.887	836.1	0.2133	9.519	899.3	0.1958
23	0.000		0.2221	4.199	791.2	0.2082	8.070	833.0	0.1911
24	0.000		0.2200	1.953	660.9	0.2043	3.801	680.2	0.1875
25	0.000		0.2188	1.228	623.4	0.2028	2.362	653.0	0.1861

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.231	652.5	0.7396	6.035	657.1	0.7396	6.920	614.0	0.7396
2	14.645	952.1	0.7396	20.927	943.2	0.7396	23.739	744.9	0.7396
3	20.571	1036.7	0.7255	28.035	978.5	0.7246	31.477	757.9	0.7274
4	23.829	1101.7	0.6782	31.758	1013.0	0.6776	35.561	781.5	0.6843
5	25.248	1116.5	0.6175	33.330	1024.7	0.6165	37.467	804.1	0.6299
6	25.768	1112.9	0.5551	33.955	1032.6	0.5582	38.426	827.3	0.5745
7	25.967	1106.9	0.4988	34.279	1042.3	0.5040	39.042	848.2	0.5240
8	26.125	1105.3	0.4511	34.583	1053.6	0.4578	39.573	864.6	0.4800
9	26.621	1118.2	0.4108	35.552	1075.5	0.4184	40.793	883.6	0.4415
10	26.724	1115.9	0.3762	35.604	1087.6	0.3844	40.968	892.9	0.4077
11	26.436	1109.2	0.3471	35.480	1099.3	0.3555	40.877	897.0	0.3783
12	26.032	1099.8	0.3222	35.195	1110.9	0.3307	40.606	896.5	0.3527
13	25.565	1088.5	0.3009	34.859	1121.8	0.3092	40.225	893.1	0.3303
14	25.039	1076.2	0.2825	34.451	1131.8	0.2904	39.743	887.4	0.3107
15	24.430	1063.0	0.2665	33.941	1140.2	0.2739	39.139	880.3	0.2934
16	23.707	1049.0	0.2525	33.295	1146.9	0.2594	38.374	871.4	0.2782
17	22.827	1034.5	0.2403	32.442	1149.2	0.2465	37.380	860.8	0.2647
18	21.558	1019.3	0.2296	31.147	1146.9	0.2351	35.936	850.0	0.2529
19	20.528	999.0	0.2202	29.917	1130.0	0.2250	34.534	837.7	0.2423
20	19.419	971.0	0.2120	28.406	1097.0	0.2160	32.623	823.5	0.2330
21	17.847	924.0	0.2048	26.055	1034.3	0.2081	30.121	799.2	0.2247
22	15.639	866.3	0.1986	22.911	964.7	0.2014	26.541	770.1	0.2179
23	13.057	800.4	0.1937	19.104	881.1	0.1960	22.088	728.9	0.2119
24	6.108	663.9	0.1902	8.933	695.5	0.1922	10.299	634.5	0.2078
25	3.719	621.0	0.1887	5.379	638.3	0.1905	6.125	601.7	0.2046

Table 4-8. LS1 Burnup and TH Feedback Parameters Assembly A7 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.571	625.4	0.7396	8.028	588.0	0.7396	8.218	579.8	0.7396
2	25.701	774.5	0.7396	27.023	643.2	0.7396	27.559	616.6	0.7396
3	33.773	778.3	0.7288	35.292	644.5	0.7300	35.901	617.8	0.7305
4	37.954	788.9	0.6874	39.583	649.5	0.6902	40.204	620.8	0.6912
5	39.899	793.2	0.6351	41.618	655.8	0.6400	42.302	624.8	0.6419
6	40.889	796.6	0.5816	42.754	664.1	0.5891	43.496	630.2	0.5920
7	41.539	800.4	0.5328	43.565	673.5	0.5428	44.374	636.6	0.5467
8	42.113	805.2	0.4897	44.306	683.3	0.5025	45.188	643.4	0.5074
9	43.418	814.5	0.4518	45.806	694.9	0.4669	46.778	652.1	0.4729
10	43.637	819.8	0.4184	46.177	704.1	0.4357	47.230	659.9	0.4427
11	43.588	824.6	0.3892	46.257	712.0	0.4083	47.393	668.1	0.4165
12	43.356	829.1	0.3637	46.132	718.6	0.3841	47.352	676.4	0.3934
13	43.011	833.3	0.3414	45.865	723.5	0.3627	47.167	684.6	0.3729
14	42.560	836.9	0.3217	45.484	726.6	0.3435	46.844	692.6	0.3547
15	41.979	839.6	0.3043	44.905	728.0	0.3263	46.357	699.9	0.3383
16	41.228	841.2	0.2889	44.152	727.9	0.3109	45.665	706.2	0.3234
17	40.234	841.2	0.2754	43.190	726.1	0.2970	44.696	711.7	0.3102
18	38.778	839.8	0.2635	41.630	723.4	0.2851	43.236	716.9	0.2987
19	37.335	835.0	0.2529	40.101	718.0	0.2740	41.718	717.1	0.2878
20	35.548	826.2	0.2434	38.169	710.3	0.2640	39.784	714.8	0.2778
21	32.670	806.2	0.2349	35.084	696.5	0.2550	36.590	705.5	0.2687
22	28.858	780.6	0.2281	31.000	680.3	0.2478	32.378	692.3	0.2616
23	24.022	740.0	0.2220	25.735	655.4	0.2406	26.861	667.1	0.2540
24	11.203	641.0	0.2177	11.841	601.8	0.2349	12.430	606.8	0.2472
25	6.619	604.9	0.2138	6.988	582.3	0.2286	7.232	584.7	0.2392

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.443	574.2	0.7396
2	28.177	595.9	0.7396
3	36.585	599.8	0.731
4	40.905	600.8	0.6924
5	43.033	602.4	0.6438
6	44.277	605.2	0.5948
7	45.225	609.0	0.5506
8	46.125	613.7	0.5124
9	47.828	620.0	0.4790
10	48.392	626.3	0.4501
11	48.680	633.3	0.4253
12	48.777	641.2	0.4039
13	48.745	650.0	0.3852
14	48.586	659.6	0.3688
15	48.272	669.8	0.3544
16	47.760	680.6	0.3416
17	46.970	691.5	0.3303
18	45.688	702.5	0.3210
19	44.306	711.0	0.3118
20	42.447	715.6	0.3031
21	39.197	712.2	0.2948
22	34.846	703.5	0.2885
23	28.927	678.9	0.2804
24	13.333	611.9	0.2720
25	7.877	586.9	0.2606

Table 4-9. LS1 Burnup and TH Feedback Parameters Assembly A8

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	0.975	616.0	0.7396	2.067	641.0	0.7396
2	0.000		0.7396	3.354	770.4	0.7396	7.218	882.0	0.7396
3	0.000		0.7384	4.777	877.6	0.7396	10.479	1085.3	0.7332
4	0.000	Data	0.6838	6.925	908.9	0.7184	12.897	1140.9	0.6949
5	0.000	Not	0.6186	6.767	972.8	0.6797	14.267	1204.3	0.6428
6	0.000	Required	0.5553	7.367	1021.5	0.6305	14.956	1215.4	0.5858
7	0.000		0.5008	7.779	1056.4	0.5768	15.297	1206.5	0.5309
8	0.000		0.4556	8.075	1082.2	0.5247	15.509	1186.2	0.4817
9	0.000		0.4176	8.517	1122.1	0.4776	16.039	1207.0	0.4390
10	0.000		0.3857	8.516	1122.0	0.4367	15.947	1195.6	0.4018
11	0.000		0.3593	8.359	1107.7	0.4025	15.688	1183.4	0.3703
12	0.000		0.3374	8.110	1085.3	0.3739	15.333	1170.6	0.3438
13	0.000		0.3169	7.808	1058.9	0.3497	14.920	1157.3	0.3211
14	0.000		0.3034	7.478	1030.6	0.3294	14.470	1143.2	0.3016
15	0.000		0.2902	7.132	1002.2	0.3120	13.993	1128.0	0.2847
16	0.000		0.2789	6.772	973.3	0.2971	13.476	1110.2	0.2701
17	0.000		0.2694	6.378	942.7	0.2844	12.879	1087.2	0.2572
18	0.000		0.2615	6.629	901.9	0.2734	11.966	1047.5	0.2459
19	0.000		0.2548	6.552	882.0	0.2639	11.424	1019.6	0.2365
20	0.000		0.2492	6.382	888.6	0.2552	10.842	989.8	0.2282
21	0.000		0.2443	6.111	851.2	0.2471	10.286	950.0	0.2211
22	0.000		0.2402	4.596	816.6	0.2400	9.120	889.5	0.2149
23	0.000		0.2365	3.960	776.2	0.2341	7.727	824.4	0.2100
24	0.000		0.2342	1.835	654.7	0.2298	3.614	675.5	0.2060
25	0.000		0.2330	1.139	618.9	0.2280	2.221	629.7	0.2045

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.923	653.8	0.7396	5.319	634.2	0.7396	7.015	666.6	0.7396
2	13.824	858.7	0.7396	18.717	854.4	0.7396	24.113	957.5	0.7396
3	19.456	1059.8	0.7276	25.640	890.0	0.7295	31.992	972.0	0.7284
4	22.779	1130.3	0.6834	29.514	927.0	0.6881	36.068	989.1	0.6872
5	24.261	1139.4	0.6270	31.236	943.6	0.6348	37.803	990.2	0.6347
6	24.814	1128.4	0.5683	31.935	953.9	0.5792	38.495	989.7	0.5801
7	25.016	1117.2	0.5143	32.268	963.2	0.5273	38.676	993.8	0.5294
8	25.170	1112.6	0.4572	32.573	974.1	0.4816	39.210	996.3	0.4845
9	25.651	1124.7	0.4267	33.626	994.0	0.4417	40.281	1006.5	0.4451
10	25.727	1122.1	0.3916	33.547	1004.8	0.4070	40.311	1007.2	0.4110
11	25.387	1116.6	0.3616	33.341	1014.9	0.3773	40.083	1003.6	0.3814
12	24.912	1106.1	0.3362	32.993	1024.5	0.3516	39.640	997.1	0.3561
13	24.353	1094.7	0.3144	32.558	1034.0	0.3297	39.108	988.8	0.3340
14	23.731	1081.4	0.2955	32.052	1043.0	0.3105	38.490	979.3	0.3148
15	23.049	1065.7	0.2792	31.476	1051.3	0.2936	37.785	968.4	0.2979
16	22.287	1047.2	0.2649	30.800	1058.1	0.2787	36.984	956.4	0.2830
17	21.380	1024.6	0.2523	29.942	1062.0	0.2655	35.981	946.2	0.2700
18	20.069	995.1	0.2413	28.627	1061.7	0.2538	34.701	949.0	0.2592
19	19.013	960.6	0.2320	27.392	1047.6	0.2436	33.312	938.6	0.2489
20	17.694	918.4	0.2240	25.890	1018.0	0.2345	31.651	916.9	0.2396
21	16.389	865.3	0.2171	23.625	982.1	0.2265	28.812	879.5	0.2314
22	14.252	808.5	0.2112	20.594	900.5	0.2199	25.190	836.2	0.2247
23	11.600	751.0	0.2067	16.988	827.1	0.2145	20.729	777.4	0.2190
24	5.462	642.9	0.2031	7.791	679.6	0.2106	9.468	652.0	0.2150
25	3.302	609.0	0.2016	4.638	623.1	0.2087	5.575	611.7	0.2129

Table 4-9. LS1 Burnup and TH Feedback Parameters Assembly A8 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU) 0.00 Cy 7	Fuel Temp. (K) 0.00 Cy 7	Mod. Dens. (g/cm³) 0.00 Cy 7	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU) 193.2 Cy 7	Fuel Temp. (K) 193.2 Cy 7	Mod. Dens. (g/cm³) 193.2 Cy 7	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7
1	7.803	639.8	0.7396	8.401	596.7	0.7396	8.626	583.4	0.7396
2	26.467	824.6	0.7396	28.242	673.7	0.7396	28.889	628.7	0.7396
3	34.740	828.9	0.7293	36.841	677.9	0.7304	37.694	631.2	0.7308
4	38.832	842.4	0.6893	41.201	687.8	0.6917	42.017	637.2	0.6929
5	40.735	850.4	0.6384	43.166	697.6	0.6424	44.053	643.9	0.6446
6	41.493	858.2	0.5853	44.089	707.5	0.5909	45.063	652.3	0.5941
7	41.931	865.2	0.5358	44.680	717.0	0.5425	45.748	661.4	0.5457
8	42.323	872.2	0.4916	45.204	725.2	0.4991	46.366	670.6	0.5041
9	43.488	883.8	0.4527	46.512	734.2	0.4603	47.780	681.2	0.4659
10	43.658	888.7	0.4187	46.664	739.4	0.4263	48.017	689.6	0.4322
11	43.341	892.6	0.3893	46.504	743.1	0.3967	47.936	697.9	0.4028
12	42.943	895.7	0.3638	46.141	745.3	0.3710	47.648	705.6	0.3772
13	42.430	898.1	0.3417	45.641	746.2	0.3486	47.219	713.0	0.3548
14	41.825	899.8	0.3223	45.027	745.6	0.3291	46.667	719.5	0.3351
15	41.130	901.0	0.3053	44.299	743.5	0.3118	45.989	724.8	0.3176
16	40.332	903.9	0.2904	43.444	739.8	0.2965	45.168	728.5	0.3024
17	39.497	922.9	0.2776	42.519	734.1	0.2836	44.258	729.9	0.2891
18	38.653	981.3	0.2683	41.535	725.2	0.2735	43.252	727.7	0.2787
19	37.315	988.4	0.2578	40.060	716.7	0.2628	41.747	724.5	0.2678
20	35.424	970.5	0.2481	38.003	706.5	0.2529	39.634	716.6	0.2576
21	32.404	932.8	0.2394	34.717	690.4	0.2440	36.223	705.5	0.2485
22	28.407	885.0	0.2323	30.418	672.6	0.2368	31.765	689.2	0.2412
23	23.383	815.8	0.2261	24.966	649.2	0.2304	26.062	664.1	0.2347
24	10.672	668.5	0.2218	11.380	600.2	0.2260	11.868	608.7	0.2301
25	6.243	620.0	0.2192	6.620	582.7	0.2230	6.878	586.0	0.2268

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU) 495.2 Cy 7	Fuel Temp. (K) 495.2 Cy 7	Mod. Dens. (g/cm³) 495.2 Cy 7
1	8.891	576.6	0.7396
2	29.624	606.5	0.7396
3	38.422	607.7	0.7314
4	42.689	610.2	0.6942
5	44.978	613.1	0.6489
6	46.070	617.6	0.5976
7	46.859	623.4	0.5516
8	47.601	630.4	0.5102
9	49.166	639.0	0.4733
10	49.544	647.1	0.4409
11	49.611	655.7	0.4125
12	49.476	664.6	0.3879
13	49.201	673.8	0.3663
14	48.804	683.2	0.3471
15	48.280	692.6	0.3301
16	47.607	701.7	0.3149
17	46.825	709.8	0.3018
18	45.914	715.7	0.2911
19	44.485	720.5	0.2801
20	42.393	721.9	0.2698
21	38.868	714.6	0.2605
22	34.214	702.3	0.2530
23	28.104	677.4	0.2461
24	12.784	612.6	0.2410
25	7.357	588.7	0.2366

Table 4-10. LS1 Burnup and TH Feedback Parameters Assembly A9

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.061	621.1	0.7396	2.231	645.4	0.7396
2	0.000		0.7396	3.634	790.5	0.7396	7.647	897.1	0.7396
3	0.000		0.7356	5.121	905.4	0.7396	10.943	1099.9	0.7309
4	0.000	Data	0.6777	6.274	934.9	0.7127	13.271	1143.8	0.6902
5	0.000	Not	0.6113	7.096	999.2	0.6703	14.555	1199.3	0.6383
6	0.000	Required	0.5477	7.678	1047.7	0.6176	15.212	1208.5	0.5781
7	0.000		0.4935	8.078	1082.5	0.5614	15.556	1201.6	0.5223
8	0.000		0.4487	8.373	1108.9	0.5086	15.785	1193.5	0.4728
9	0.000		0.4110	8.631	1161.3	0.4617	16.350	1206.7	0.4300
10	0.000		0.3794	8.857	1163.8	0.4214	16.314	1199.0	0.3931
11	0.000		0.3532	8.739	1142.7	0.3878	16.140	1192.2	0.3618
12	0.000		0.3313	8.541	1124.3	0.3592	15.905	1187.6	0.3353
13	0.000		0.3130	8.312	1103.4	0.3350	15.677	1187.6	0.3123
14	0.000		0.2975	8.056	1080.6	0.3144	15.422	1187.6	0.2926
15	0.000		0.2844	7.759	1054.7	0.2969	15.077	1182.0	0.2763
16	0.000		0.2732	7.402	1024.4	0.2818	14.579	1165.1	0.2603
17	0.000		0.2637	6.982	990.0	0.2687	13.917	1136.6	0.2472
18	0.000		0.2558	6.371	942.2	0.2577	12.883	1088.4	0.2358
19	0.000		0.2492	6.007	914.9	0.2481	12.172	1050.5	0.2263
20	0.000		0.2436	5.703	892.6	0.2397	11.601	1011.9	0.2181
21	0.000		0.2385	5.348	867.6	0.2321	10.683	965.5	0.2110
22	0.000		0.2341	4.767	828.1	0.2255	9.418	901.0	0.2049
23	0.000		0.2305	4.104	785.2	0.2200	7.982	833.6	0.2001
24	0.000		0.2282	1.807	658.5	0.2160	3.750	679.9	0.1963
25	0.000		0.2270	1.192	621.5	0.2143	2.319	632.6	0.1949

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.112	858.2	0.7396	5.725	846.3	0.7396	7.421	855.6	0.7396
2	14.381	968.4	0.7396	19.695	899.7	0.7396	25.261	954.8	0.7396
3	19.941	1061.3	0.7260	26.801	935.6	0.7268	33.293	983.9	0.7269
4	23.124	1128.0	0.6804	30.505	972.5	0.6829	37.353	1014.6	0.6837
5	24.648	1139.3	0.6225	32.134	987.4	0.6272	39.017	1017.7	0.6292
6	25.121	1132.6	0.5629	32.631	996.6	0.5697	39.632	1010.5	0.5728
7	25.374	1125.1	0.5080	33.212	1006.1	0.5165	39.921	1002.5	0.5203
8	25.681	1123.4	0.4605	33.575	1017.9	0.4702	40.241	998.8	0.4746
9	26.316	1137.1	0.4199	34.588	1039.2	0.4303	41.346	1006.7	0.4351
10	26.256	1135.1	0.3848	34.683	1051.3	0.3957	41.400	1003.2	0.4009
11	26.001	1128.8	0.3549	34.576	1063.0	0.3661	41.208	995.8	0.3715
12	25.643	1118.7	0.3295	34.359	1074.3	0.3406	40.879	988.2	0.3462
13	25.257	1106.2	0.3076	34.105	1084.9	0.3185	40.495	975.2	0.3242
14	24.820	1092.0	0.2886	33.791	1095.0	0.2991	40.044	963.8	0.3050
15	24.277	1076.7	0.2720	33.367	1104.8	0.2821	39.471	951.5	0.2880
16	23.567	1060.6	0.2576	32.773	1114.4	0.2671	38.708	937.8	0.2730
17	22.663	1042.6	0.2448	31.865	1122.5	0.2538	37.691	921.1	0.2597
18	21.344	1021.6	0.2336	30.695	1126.6	0.2420	36.193	903.2	0.2479
19	20.238	993.5	0.2241	29.451	1116.0	0.2316	34.716	885.3	0.2375
20	19.038	957.0	0.2158	27.888	1085.1	0.2223	32.911	867.2	0.2284
21	17.424	904.9	0.2087	25.489	1023.3	0.2144	30.110	837.9	0.2204
22	15.210	846.7	0.2027	22.338	954.4	0.2077	26.426	800.7	0.2138
23	12.676	784.2	0.1980	18.589	872.4	0.2023	21.916	750.4	0.2082
24	5.921	657.6	0.1945	8.662	691.2	0.1986	10.205	644.5	0.2045
25	3.600	617.7	0.1931	5.201	635.5	0.1968	6.065	607.9	0.2024

Table 4-10. LS1 Burnup and TH Feedback Parameters Assembly A9 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.517	673.1	0.7396	9.034	691.7	0.7396	9.254	682.9	0.7396
2	28.534	953.5	0.7396	29.974	651.0	0.7396	30.571	623.2	0.7396
3	37.164	970.2	0.7289	38.816	652.0	0.7282	39.494	624.2	0.7287
4	41.380	981.8	0.6842	43.169	659.2	0.6872	43.883	628.5	0.6883
5	43.050	992.6	0.6303	44.980	667.9	0.6357	45.769	633.7	0.6377
6	43.623	986.7	0.5746	45.742	678.9	0.5828	46.696	640.8	0.5860
7	43.869	980.6	0.5227	46.200	691.6	0.5342	47.136	648.6	0.5385
8	44.168	977.6	0.4774	46.713	704.6	0.4919	47.737	657.1	0.4975
9	45.314	983.5	0.4380	48.097	719.1	0.4551	49.223	667.1	0.4619
10	45.358	982.2	0.4041	48.320	730.3	0.4234	49.635	675.9	0.4313
11	45.148	979.7	0.3748	48.257	739.6	0.3957	49.658	684.5	0.4049
12	44.798	976.8	0.3497	48.018	746.7	0.3716	49.405	693.2	0.3817
13	44.390	973.5	0.3277	47.686	751.7	0.3502	49.154	701.6	0.3612
14	43.911	969.6	0.3084	47.248	754.3	0.3310	48.792	709.4	0.3428
15	43.306	965.3	0.2916	46.653	755.0	0.3139	48.268	716.9	0.3263
16	42.601	959.6	0.2764	45.833	754.0	0.2985	47.509	723.3	0.3114
17	41.418	950.7	0.2631	44.712	751.6	0.2848	46.437	728.6	0.2980
18	39.633	939.1	0.2513	43.072	748.0	0.2728	44.838	733.0	0.2864
19	38.237	923.7	0.2409	41.376	741.6	0.2619	43.165	734.4	0.2756
20	36.277	903.7	0.2317	39.270	732.2	0.2522	41.029	732.2	0.2660
21	33.199	869.3	0.2236	35.937	716.3	0.2436	37.602	722.2	0.2574
22	29.162	827.5	0.2169	31.589	697.3	0.2365	33.116	707.7	0.2505
23	24.139	770.5	0.2113	26.078	668.4	0.2299	27.328	679.4	0.2434
24	11.251	653.9	0.2075	12.093	607.4	0.2248	12.642	612.3	0.2374
25	6.655	613.2	0.2053	7.080	585.2	0.2202	7.355	587.5	0.2310

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.529	677.3	0.7396
2	31.297	605.9	0.7396
3	40.298	606.3	0.7293
4	44.713	607.6	0.6895
5	46.631	610.2	0.6399
6	47.536	613.9	0.5893
7	48.167	619.0	0.5432
8	48.673	624.6	0.5034
9	50.489	632.1	0.4692
10	50.932	639.6	0.4401
11	51.100	647.8	0.4153
12	51.105	657.1	0.3940
13	51.024	667.1	0.3763
14	50.841	677.6	0.3588
15	50.505	689.2	0.3442
16	49.938	701.1	0.3312
17	49.056	713.0	0.3197
18	47.637	724.4	0.3099
19	46.088	733.1	0.3005
20	44.031	737.6	0.2917
21	40.524	732.4	0.2836
22	35.670	721.6	0.2773
23	29.630	693.2	0.2697
24	13.663	618.4	0.2623
25	7.863	590.3	0.2526

Table 4-11. LS1 Burnup and TH Feedback Parameters Assembly A10

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.254	632.7	0.7396	2.414	644.7	0.7396
2	0.000		0.7396	4.281	838.6	0.7396	8.303	898.0	0.7396
3	0.000		0.7305	6.984	913.2	0.7353	11.824	1016.3	0.7305
4	0.000	Data	0.6868	7.190	1006.9	0.6993	14.132	1137.4	0.6876
5	0.000	Not	0.5970	7.820	1068.6	0.6477	15.252	1183.7	0.6292
6	0.000	Required	0.5330	8.327	1104.6	0.5884	15.708	1189.7	0.5666
7	0.000		0.4800	8.650	1125.1	0.5303	15.885	1184.1	0.5087
8	0.000		0.4368	8.699	1138.9	0.4791	15.989	1178.7	0.4595
9	0.000		0.4010	8.043	1171.6	0.4354	16.455	1193.5	0.4180
10	0.000		0.3710	8.981	1165.6	0.3983	16.343	1187.4	0.3828
11	0.000		0.3462	8.801	1148.5	0.3672	16.101	1179.9	0.3531
12	0.000		0.3255	8.545	1124.7	0.3412	15.770	1170.8	0.3280
13	0.000		0.3081	8.241	1097.0	0.3193	15.378	1160.1	0.3065
14	0.000		0.2933	7.907	1067.5	0.3007	14.933	1147.2	0.2882
15	0.000		0.2807	7.553	1037.1	0.2848	14.446	1131.7	0.2723
16	0.000		0.2699	7.178	1005.9	0.2711	13.904	1112.5	0.2584
17	0.000		0.2607	6.763	972.6	0.2593	13.262	1086.6	0.2462
18	0.000		0.2531	6.171	927.1	0.2491	12.285	1045.0	0.2356
19	0.000		0.2466	5.616	900.9	0.2403	11.630	1013.6	0.2265
20	0.000		0.2410	5.512	879.1	0.2325	11.006	981.2	0.2184
21	0.000		0.2359	5.154	854.2	0.2254	10.234	940.8	0.2114
22	0.000		0.2316	4.580	815.7	0.2192	8.026	882.6	0.2054
23	0.000		0.2281	3.932	774.5	0.2142	7.653	820.6	0.2005
24	0.000		0.2259	1.819	653.6	0.2105	3.590	675.0	0.1969
25	0.000		0.2247	1.138	616.6	0.2089	2.216	629.6	0.1955

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.162	648.6	0.7396	5.547	634.1	0.7396	7.287	669.6	0.7396
2	14.598	935.6	0.7396	19.421	849.4	0.7396	24.892	964.5	0.7396
3	20.205	1016.9	0.7282	26.266	882.0	0.7300	32.785	986.2	0.7293
4	23.338	1077.1	0.6838	29.943	918.2	0.6886	36.761	1011.1	0.6881
5	24.657	1092.5	0.6255	31.626	936.3	0.6341	38.371	1014.3	0.6345
6	25.100	1091.5	0.5641	32.141	948.3	0.5764	38.954	1011.6	0.5779
7	25.235	1088.2	0.5079	32.426	958.9	0.5229	39.208	1008.8	0.5252
8	25.342	1088.6	0.4601	32.695	970.5	0.4767	39.482	1009.3	0.4795
9	25.990	1102.7	0.4198	33.620	990.7	0.4370	40.531	1020.1	0.4402
10	25.866	1101.7	0.3854	33.641	1001.4	0.4029	40.539	1019.0	0.4064
11	25.655	1098.3	0.3562	33.482	1011.3	0.3738	40.302	1013.9	0.3774
12	25.115	1087.9	0.3314	33.146	1020.7	0.3488	39.900	1006.4	0.3525
13	24.584	1077.3	0.3102	32.736	1029.9	0.3271	39.387	997.5	0.3309
14	23.979	1065.0	0.2918	32.245	1038.7	0.3083	38.782	987.7	0.3120
15	23.303	1050.8	0.2758	31.670	1046.6	0.2917	38.080	976.9	0.2955
16	22.535	1034.0	0.2619	30.981	1052.8	0.2771	37.251	965.2	0.2808
17	21.610	1013.5	0.2496	30.096	1056.0	0.2641	36.208	952.1	0.2678
18	20.263	987.3	0.2388	28.738	1055.1	0.2528	34.690	939.1	0.2564
19	19.119	953.6	0.2294	27.417	1041.2	0.2425	33.195	925.2	0.2462
20	17.881	913.5	0.2212	25.808	1012.8	0.2334	31.376	908.7	0.2370
21	16.281	861.9	0.2140	23.488	958.6	0.2252	28.613	878.3	0.2288
22	14.115	806.1	0.2080	20.425	898.4	0.2185	25.002	834.8	0.2221
23	11.683	748.7	0.2031	16.844	825.5	0.2129	20.584	777.3	0.2164
24	5.409	641.6	0.1997	7.721	669.8	0.2089	9.425	653.5	0.2124
25	3.272	607.8	0.1982	4.592	622.4	0.2068	5.650	612.8	0.2102

Table 4-11. LS1 Burnup and TH Feedback Parameters Assembly A10 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU) 0.00 Cy 7	Fuel Temp. (K) 0.00 Cy 7	Mod. Dens. (g/cm³) 0.00 Cy 7	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU) 193.2 Cy 7	Fuel Temp. (K) 193.2 Cy 7	Mod. Dens. (g/cm³) 193.2 Cy 7	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7
1	8.366	571.2	0.7396	8.914	593.6	0.7396	9.136	583.1	0.7396
2	28.077	940.4	0.7396	29.639	658.2	0.7396	30.256	625.4	0.7396
3	36.607	950.0	0.7292	38.328	661.6	0.7305	39.037	627.1	0.7310
4	40.611	968.7	0.6884	42.581	670.2	0.6915	43.341	631.9	0.6926
5	42.261	972.6	0.6357	44.403	680.3	0.6414	45.220	637.3	0.6434
6	42.649	973.6	0.5799	45.196	692.5	0.5888	46.089	644.5	0.5920
7	43.108	974.2	0.5278	45.683	706.3	0.5401	46.659	652.5	0.5446
8	43.397	976.2	0.4825	46.209	720.9	0.4979	47.270	660.7	0.5036
9	44.517	986.0	0.4433	47.597	737.6	0.4612	48.756	670.3	0.4681
10	44.640	988.1	0.4095	47.831	751.3	0.4296	49.072	678.5	0.4376
11	44.309	989.0	0.3806	47.775	762.8	0.4022	49.094	686.3	0.4113
12	43.910	989.4	0.3558	47.611	771.7	0.3781	48.907	694.2	0.3882
13	43.397	989.4	0.3340	47.091	777.9	0.3569	48.564	702.1	0.3677
14	42.790	989.1	0.3151	46.536	781.4	0.3379	48.085	710.0	0.3495
15	42.083	988.4	0.2984	45.846	782.6	0.3209	47.457	717.5	0.3331
16	41.246	987.3	0.2837	44.995	781.6	0.3057	46.683	724.6	0.3184
17	40.190	985.5	0.2706	43.896	778.7	0.2920	45.643	730.9	0.3052
18	38.646	981.9	0.2591	42.286	774.3	0.2802	44.091	737.2	0.2938
19	37.076	971.6	0.2487	40.697	768.4	0.2692	42.435	740.6	0.2831
20	35.113	952.0	0.2394	38.451	755.0	0.2593	40.300	740.9	0.2734
21	32.056	913.5	0.2311	35.103	735.7	0.2504	36.665	732.6	0.2646
22	28.081	865.7	0.2242	30.741	712.7	0.2432	32.370	718.4	0.2576
23	23.088	801.2	0.2185	25.223	679.8	0.2365	26.662	688.4	0.2505
24	10.592	665.0	0.2145	11.616	611.8	0.2314	12.102	615.5	0.2446
25	6.209	619.2	0.2122	6.682	587.8	0.2271	6.974	589.0	0.2386

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU) 495.2 Cy 7	Fuel Temp. (K) 495.2 Cy 7	Mod. Dens. (g/cm³) 495.2 Cy 7
1	9.452	579.6	0.7396
2	31.103	613.8	0.7396
3	39.982	614.2	0.7316
4	44.322	616.2	0.6941
5	46.249	618.8	0.6459
6	47.194	623.1	0.5958
7	47.864	628.7	0.5498
8	48.590	635.2	0.5104
9	50.217	643.3	0.4764
10	50.669	651.1	0.4475
11	50.840	659.8	0.4229
12	50.815	669.4	0.4016
13	50.647	679.9	0.3831
14	50.353	691.1	0.3667
15	49.928	703.1	0.3521
16	49.338	715.3	0.3391
17	48.489	727.5	0.3273
18	47.119	739.3	0.3174
19	45.695	748.0	0.3076
20	43.621	752.0	0.2986
21	39.988	745.5	0.2900
22	35.302	733.0	0.2834
23	29.011	702.3	0.2768
24	13.188	622.0	0.2690
25	7.521	592.4	0.2601

Table 4-12. LS1 Burnup and TH Feedback Parameters Assembly A11

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.5 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.5 Cy 4	208.5 Cy 4	208.5 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.378	640.2	0.7396	2.637	652.3	0.7396
2	0.000		0.7396	4.677	869.6	0.7396	9.069	936.5	0.7396
3	0.000		0.7319	6.538	954.9	0.7306	12.909	1073.0	0.7253
4	0.000	Data	0.6694	7.836	1051.3	0.6877	15.295	1199.3	0.6762
5	0.000	Not	0.6002	8.677	1127.6	0.6283	16.343	1237.6	0.6096
6	0.000	Required	0.5359	8.951	1162.7	0.5639	16.704	1236.0	0.5430
7	0.000		0.4824	9.136	1180.5	0.5043	16.813	1226.4	0.4847
8	0.000		0.4389	9.253	1191.6	0.4539	16.667	1218.5	0.4385
9	0.000		0.4027	9.586	1224.6	0.4115	17.308	1232.0	0.3964
10	0.000		0.3725	9.501	1216.3	0.3768	17.166	1225.1	0.3625
11	0.000		0.3474	9.294	1195.9	0.3460	16.898	1217.2	0.3341
12	0.000		0.3266	9.010	1168.3	0.3212	16.539	1207.9	0.3102
13	0.000		0.3090	8.678	1137.0	0.3002	16.113	1196.3	0.2898
14	0.000		0.2942	8.313	1103.6	0.2826	15.627	1181.6	0.2723
15	0.000		0.2815	7.921	1068.7	0.2675	15.077	1162.6	0.2571
16	0.000		0.2707	7.501	1032.7	0.2545	14.448	1137.9	0.2439
17	0.000		0.2614	7.028	993.7	0.2434	13.688	1105.0	0.2325
18	0.000		0.2538	6.380	941.4	0.2338	12.585	1054.8	0.2226
19	0.000		0.2473	5.925	908.9	0.2256	11.762	1018.0	0.2140
20	0.000		0.2418	5.541	881.2	0.2184	11.007	978.4	0.2066
21	0.000		0.2368	5.119	851.6	0.2121	10.141	935.4	0.2001
22	0.000		0.2325	4.509	811.1	0.2065	8.887	876.5	0.1946
23	0.000		0.2290	3.862	770.2	0.2020	7.527	816.0	0.1901
24	0.000		0.2267	1.797	652.7	0.1986	3.549	673.7	0.1868
25	0.000		0.2255	1.135	618.7	0.1972	2.211	629.3	0.1854

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.026	630.0	0.7396	4.959	608.9	0.7396	6.680	668.3	0.7396
2	14.101	846.6	0.7396	17.356	744.3	0.7396	22.915	972.6	0.7396
3	19.526	897.1	0.7292	23.606	782.5	0.7326	30.244	995.3	0.7302
4	22.575	939.9	0.6852	27.049	784.9	0.6935	33.947	1019.0	0.6902
5	23.879	957.0	0.6272	28.602	799.4	0.6419	35.496	1018.6	0.6385
6	24.354	964.7	0.5671	29.297	812.4	0.5880	36.138	1014.0	0.5851
7	24.528	969.1	0.5126	29.694	825.6	0.5387	36.535	1014.0	0.5366
8	24.642	973.2	0.4660	30.036	839.7	0.4957	36.868	1013.2	0.4941
9	25.274	986.5	0.4261	30.986	859.6	0.4578	37.908	1021.1	0.4565
10	25.164	988.6	0.3921	31.085	872.9	0.4250	37.996	1020.1	0.4241
11	24.884	987.9	0.3632	30.989	884.9	0.3967	37.838	1014.7	0.3959
12	24.484	985.0	0.3387	30.766	895.6	0.3722	37.616	1006.9	0.3713
13	23.990	980.3	0.3176	30.420	906.4	0.3509	37.073	997.6	0.3500
14	23.411	973.9	0.2993	29.986	916.1	0.3322	36.520	987.4	0.3313
15	22.737	965.4	0.2834	29.444	925.1	0.3158	35.845	976.2	0.3149
16	21.947	954.6	0.2696	28.762	932.5	0.3014	35.016	963.9	0.3005
17	20.975	940.3	0.2576	27.864	937.7	0.2887	33.989	953.2	0.2879
18	19.664	921.5	0.2473	26.487	940.0	0.2782	32.645	955.9	0.2778
19	18.365	896.2	0.2380	25.196	933.6	0.2680	31.199	943.3	0.2676
20	17.104	864.9	0.2295	23.697	917.3	0.2586	29.447	923.0	0.2581
21	15.546	824.1	0.2218	21.598	881.4	0.2496	26.868	885.7	0.2481
22	13.464	777.8	0.2153	18.852	839.4	0.2425	23.520	841.3	0.2417
23	11.163	728.5	0.2097	15.600	782.8	0.2358	19.408	781.8	0.2352
24	5.176	633.0	0.2058	7.130	652.3	0.2303	8.833	653.4	0.2300
25	3.135	602.2	0.2030	4.218	611.5	0.2261	5.178	613.0	0.2262

Table 4-12. LS1 Burnup and TH Feedback Parameters Assembly A11 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.495	642.6	0.7396	8.115	598.1	0.7396	8.319	581.2	0.7396
2	25.404	842.4	0.7396	27.239	677.8	0.7396	27.828	622.3	0.7396
3	33.194	852.6	0.7308	35.362	681.8	0.7318	36.050	625.2	0.7323
4	37.040	869.8	0.6919	39.383	692.2	0.6942	40.128	630.5	0.6953
5	38.852	877.5	0.6417	41.166	702.5	0.6456	41.979	636.9	0.6476
6	39.344	883.7	0.5896	42.041	713.7	0.5950	42.937	644.8	0.5980
7	39.780	888.5	0.5419	42.845	724.2	0.5484	43.632	653.5	0.5524
8	40.166	893.9	0.4998	43.168	733.4	0.5067	44.249	662.7	0.5117
9	41.275	903.8	0.4625	44.446	743.6	0.4694	45.640	673.8	0.4750
10	41.387	906.9	0.4300	44.643	749.1	0.4367	45.938	683.9	0.4428
11	41.248	909.3	0.4017	44.561	752.6	0.4080	45.966	695.1	0.4145
12	40.940	911.1	0.3770	44.285	754.6	0.3831	45.811	707.6	0.3897
13	40.509	912.6	0.3555	43.860	755.2	0.3612	45.508	720.4	0.3680
14	39.964	913.6	0.3367	43.299	754.2	0.3420	45.048	731.2	0.3488
15	39.295	914.4	0.3201	42.589	751.5	0.3251	44.406	738.5	0.3315
16	38.488	917.2	0.3056	41.711	746.9	0.3102	43.564	742.4	0.3163
17	37.609	936.5	0.2934	40.728	740.1	0.2976	42.682	742.7	0.3032
18	36.711	997.3	0.2841	39.671	730.2	0.2877	41.491	738.6	0.2929
19	35.314	1004.2	0.2736	38.121	720.6	0.2770	39.900	734.4	0.2819
20	33.427	985.2	0.2635	36.056	709.6	0.2668	37.788	727.2	0.2713
21	30.653	945.1	0.2541	32.911	693.1	0.2573	34.487	712.6	0.2616
22	26.614	894.6	0.2465	28.672	675.4	0.2495	30.280	695.4	0.2538
23	22.106	823.1	0.2396	23.761	652.1	0.2427	24.911	669.4	0.2466
24	10.083	670.9	0.2342	10.790	601.2	0.2373	11.300	608.7	0.2411
25	6.866	621.6	0.2304	6.258	583.5	0.2333	6.529	587.1	0.2368

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.614	578.5	0.7398
2	28.650	612.1	0.7396
3	36.979	613.3	0.7329
4	41.103	615.6	0.6957
5	43.014	619.2	0.6501
6	44.058	624.0	0.6019
7	44.859	629.9	0.5576
8	45.601	637.0	0.5181
9	47.147	645.9	0.4827
10	47.586	654.1	0.4516
11	47.767	662.5	0.4242
12	47.744	670.9	0.4002
13	47.586	679.6	0.3789
14	47.276	688.7	0.3600
15	46.790	698.3	0.3431
16	46.104	708.0	0.3281
17	45.261	716.8	0.3160
18	44.266	722.9	0.3044
19	42.751	727.8	0.2932
20	40.640	729.1	0.2825
21	37.239	721.4	0.2726
22	32.630	708.6	0.2645
23	27.050	683.3	0.2570
24	12.283	615.2	0.2512
25	7.041	590.5	0.2461

Table 4-13. LS1 Burnup and TH Feedback Parameters Assembly A12

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.128	625.0	0.7396	2.435	656.2	0.7396
2	0.000		0.7396	3.821	804.2	0.7396	8.308	946.6	0.7396
3	0.000		0.7352	5.343	867.3	0.7388	11.807	1083.1	0.7274
4	0.000	Data	0.6777	6.489	951.2	0.7078	14.116	1220.1	0.6812
5	0.000	Not	0.6121	7.274	1013.6	0.6619	15.251	1284.6	0.6215
6	0.000	Required	0.5496	7.809	1059.0	0.6071	15.764	1261.6	0.5601
7	0.000		0.4982	8.176	1091.2	0.5509	16.018	1247.3	0.5045
8	0.000		0.4520	8.452	1116.1	0.4989	16.194	1234.6	0.4565
9	0.000		0.4148	8.902	1158.0	0.4532	16.731	1245.6	0.4165
10	0.000		0.3834	8.934	1161.1	0.4138	16.678	1234.8	0.3800
11	0.000		0.3573	8.831	1151.3	0.3807	16.488	1223.9	0.3501
12	0.000		0.3355	8.844	1133.8	0.3530	16.207	1212.1	0.3247
13	0.000		0.3170	8.406	1111.9	0.3295	15.860	1198.7	0.3031
14	0.000		0.3015	8.138	1087.8	0.3095	15.452	1181.6	0.2844
15	0.000		0.2882	7.851	1062.6	0.2924	14.983	1159.7	0.2684
16	0.000		0.2769	7.547	1038.8	0.2776	14.441	1131.8	0.2545
17	0.000		0.2673	7.196	1007.4	0.2647	13.772	1095.5	0.2424
18	0.000		0.2594	6.633	962.4	0.2536	12.735	1043.6	0.2318
19	0.000		0.2527	6.293	938.3	0.2440	12.018	1004.5	0.2229
20	0.000		0.2470	5.982	913.1	0.2353	11.345	968.2	0.2150
21	0.000		0.2420	5.604	885.7	0.2277	10.551	928.3	0.2080
22	0.000		0.2375	4.989	842.9	0.2210	9.334	873.6	0.2020
23	0.000		0.2337	4.306	798.0	0.2165	7.970	815.9	0.1972
24	0.000		0.2313	2.023	684.7	0.2113	3.767	674.5	0.1934
25	0.000		0.2300	1.273	625.6	0.2096	2.384	630.3	0.1919

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.258	653.1	0.7396	5.555	628.7	0.7396	7.255	666.6	0.7396
2	14.884	958.5	0.7396	19.316	822.0	0.7396	24.721	858.4	0.7396
3	20.463	1035.9	0.7250	25.955	845.5	0.7281	32.489	887.4	0.7278
4	23.498	1090.7	0.6774	29.448	874.6	0.6848	36.332	1017.5	0.6850
5	24.724	1097.6	0.6175	30.934	891.7	0.6299	37.853	1020.6	0.6312
6	25.144	1090.6	0.5570	31.562	905.6	0.5739	38.399	1013.6	0.5759
7	25.307	1083.5	0.5028	31.923	918.9	0.5228	38.668	1005.4	0.5252
8	25.450	1081.0	0.4565	32.269	932.6	0.4782	38.964	1001.3	0.4810
9	26.139	1092.7	0.4169	33.269	954.6	0.4394	40.053	1009.0	0.4424
10	26.065	1091.1	0.3826	33.381	967.8	0.4055	40.129	1005.9	0.4089
11	25.813	1086.3	0.3536	33.295	979.8	0.3765	39.964	999.0	0.3800
12	25.438	1079.1	0.3288	33.074	991.1	0.3514	39.641	990.2	0.3552
13	24.971	1069.8	0.3075	32.755	1002.1	0.3297	39.208	980.5	0.3335
14	24.420	1059.1	0.2891	32.343	1012.5	0.3107	38.675	970.4	0.3146
15	23.779	1046.2	0.2731	31.830	1022.2	0.2941	38.030	959.4	0.2980
16	23.027	1030.7	0.2592	31.185	1030.4	0.2798	37.240	947.5	0.2834
17	22.097	1011.8	0.2470	30.324	1035.7	0.2666	36.207	933.6	0.2705
18	20.731	988.6	0.2365	28.976	1037.1	0.2555	34.688	920.0	0.2593
19	19.602	960.2	0.2278	27.700	1025.8	0.2456	33.240	906.5	0.2494
20	18.346	921.6	0.2196	26.117	1001.1	0.2365	31.471	892.1	0.2402
21	16.723	869.5	0.2124	23.807	951.3	0.2281	28.771	882.9	0.2319
22	14.539	812.7	0.2062	20.793	894.6	0.2211	25.217	824.0	0.2250
23	12.082	753.0	0.2012	17.208	823.4	0.2152	20.827	769.4	0.2190
24	5.623	642.3	0.1975	7.907	688.4	0.2108	9.565	650.9	0.2147
25	3.425	608.1	0.1958	4.718	621.2	0.2082	5.650	611.5	0.2120

Table 4-13. LS1 Burnup and TH Feedback Parameters Assembly A12 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.445	683.5	0.7396	9.084	699.3	0.7396	9.316	684.2	0.7396
2	28.280	997.3	0.7396	30.130	678.9	0.7396	30.785	629.6	0.7396
3	36.673	1014.0	0.7271	38.862	683.1	0.7282	39.626	632.3	0.7287
4	40.655	1034.2	0.6842	43.046	695.1	0.6868	43.884	639.3	0.6880
5	42.154	1031.0	0.6305	44.736	706.7	0.6348	45.656	647.1	0.6370
6	42.838	1021.9	0.5756	45.408	718.3	0.5815	46.425	656.4	0.5849
7	42.848	1013.7	0.5252	45.768	728.9	0.5323	46.909	666.6	0.5367
8	43.113	1009.0	0.4812	46.192	737.7	0.4888	47.416	676.7	0.4941
9	44.240	1014.5	0.4429	47.462	746.9	0.4506	48.796	687.9	0.4563
10	44.302	1012.4	0.4096	47.600	761.8	0.4171	49.024	697.0	0.4232
11	44.119	1009.9	0.3810	47.466	765.0	0.3882	48.974	705.7	0.3945
12	43.778	1007.3	0.3562	47.149	758.5	0.3631	48.741	714.6	0.3694
13	43.325	1004.6	0.3346	46.697	758.6	0.3412	48.368	722.8	0.3474
14	42.771	1001.6	0.3157	46.120	755.1	0.3220	47.860	730.2	0.3282
15	42.099	997.7	0.2991	45.403	752.2	0.3051	47.194	735.7	0.3111
16	41.267	991.8	0.2845	44.601	747.6	0.2901	46.322	738.9	0.2959
17	40.168	982.6	0.2715	43.307	741.5	0.2769	45.140	740.2	0.2824
18	38.560	970.3	0.2603	41.586	734.3	0.2654	43.416	739.9	0.2707
19	36.981	952.6	0.2503	39.856	724.8	0.2551	41.649	735.9	0.2602
20	35.044	930.3	0.2410	37.731	713.1	0.2457	39.456	728.6	0.2505
21	32.046	892.2	0.2327	34.449	695.8	0.2371	36.034	713.7	0.2417
22	28.112	846.1	0.2257	30.193	676.7	0.2300	31.604	695.7	0.2344
23	23.192	785.8	0.2198	24.847	652.1	0.2239	25.991	668.8	0.2281
24	10.673	659.6	0.2155	11.403	601.4	0.2195	11.912	608.7	0.2235
25	6.280	616.7	0.2129	6.671	583.4	0.2166	6.941	587.1	0.2202

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.603	578.0	0.7396
2	31.568	609.6	0.7396
3	40.511	610.9	0.7293
4	44.823	613.9	0.6894
5	46.662	617.6	0.6396
6	47.526	622.9	0.5886
7	48.127	629.4	0.5419
8	48.766	637.0	0.5007
9	50.306	646.1	0.4642
10	50.682	654.7	0.4323
11	50.781	663.4	0.4044
12	50.698	672.3	0.3802
13	50.477	681.5	0.3588
14	50.122	690.6	0.3399
15	49.610	700.3	0.3231
16	48.890	709.6	0.3081
17	47.850	718.6	0.2948
18	46.256	727.1	0.2833
19	44.568	732.2	0.2726
20	42.386	732.8	0.2628
21	38.831	724.3	0.2537
22	34.165	710.6	0.2462
23	28.137	683.7	0.2394
24	12.876	615.2	0.2342
25	7.449	590.3	0.2299

Table 4-14. LS1 Burnup and TH Feedback Parameters Assembly B1

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.016	618.6	0.7396	2.254	650.9	0.7396
2	0.000		0.7396	3.634	783.9	0.7396	8.031	948.9	0.7396
3	0.000		0.7396	5.110	905.6	0.7396	11.704	1200.9	0.7263
4	0.000	Data	0.6947	6.395	945.3	0.7112	14.133	1236.5	0.6801
5	0.000	Not	0.6330	7.316	1018.5	0.6658	15.360	1276.0	0.6209
6	0.000	Required	0.5714	7.935	1071.7	0.6102	15.907	1266.6	0.5598
7	0.000		0.5171	8.344	1108.2	0.5525	16.161	1248.6	0.5041
8	0.000		0.4711	8.658	1137.1	0.4991	16.340	1229.4	0.4558
9	0.000		0.4319	9.221	1191.0	0.4520	16.952	1235.6	0.4145
10	0.000		0.3987	9.214	1190.3	0.4116	16.861	1225.0	0.3784
11	0.000		0.3713	9.023	1171.8	0.3779	16.600	1216.2	0.3481
12	0.000		0.3483	8.735	1144.4	0.3501	16.249	1208.4	0.3225
13	0.000		0.3291	8.398	1113.1	0.3268	15.851	1200.5	0.3006
14	0.000		0.3129	8.033	1080.3	0.3072	15.416	1192.2	0.2819
15	0.000		0.2991	7.646	1046.8	0.2908	14.935	1180.8	0.2657
16	0.000		0.2874	7.236	1012.2	0.2765	14.387	1164.1	0.2517
17	0.000		0.2775	6.774	974.8	0.2645	13.719	1139.7	0.2394
18	0.000		0.2693	6.134	925.6	0.2541	12.736	1100.3	0.2285
19	0.000		0.2626	5.774	898.9	0.2453	12.053	1064.5	0.2194
20	0.000		0.2567	5.605	879.6	0.2373	11.430	1026.7	0.2116
21	0.000		0.2517	5.194	857.8	0.2300	10.641	977.9	0.2048
22	0.000		0.2476	4.630	819.6	0.2236	9.573	910.5	0.1991
23	0.000		0.2441	3.952	776.3	0.2183	7.859	836.9	0.1945
24	0.000		0.2419	1.816	653.9	0.2145	3.603	676.4	0.1912
25	0.000		0.2406	1.124	618.3	0.2129	2.203	629.7	0.1900

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.084	653.7	0.7396	5.717	647.7	0.7396	7.424	667.6	0.7396
2	14.510	950.4	0.7396	19.847	887.6	0.7396	24.938	931.0	0.7396
3	20.067	1016.1	0.7253	26.732	923.4	0.7266	32.766	946.2	0.7265
4	23.277	1074.2	0.6787	30.486	961.5	0.6823	36.776	968.2	0.6830
5	24.738	1092.1	0.6197	32.174	978.0	0.6259	38.646	975.1	0.6282
6	25.308	1094.0	0.5590	32.885	988.2	0.5678	39.295	978.3	0.5715
7	25.546	1092.6	0.5039	33.252	997.7	0.5145	39.688	980.5	0.5194
8	25.748	1094.6	0.4566	33.606	1009.1	0.4684	40.076	983.3	0.4742
9	26.531	1108.0	0.4163	34.636	1027.9	0.4287	41.209	992.2	0.4350
10	26.435	1107.6	0.3814	34.687	1039.3	0.3942	41.310	996.5	0.4012
11	26.106	1102.3	0.3518	34.498	1050.2	0.3648	41.124	996.7	0.3720
12	25.643	1093.5	0.3267	34.169	1060.6	0.3396	40.784	995.6	0.3470
13	25.100	1082.2	0.3052	33.753	1071.0	0.3179	40.402	998.7	0.3256
14	24.494	1069.1	0.2866	33.265	1080.5	0.2990	39.859	994.0	0.3065
15	23.816	1054.2	0.2705	32.695	1089.3	0.2824	39.174	984.1	0.2898
16	23.042	1037.4	0.2564	32.016	1097.3	0.2678	38.340	970.9	0.2747
17	22.110	1018.1	0.2441	31.157	1103.1	0.2548	37.284	954.6	0.2614
18	20.820	996.2	0.2333	29.887	1104.8	0.2432	35.808	937.8	0.2498
19	19.708	986.3	0.2240	28.612	1091.3	0.2330	34.292	918.6	0.2394
20	18.526	928.9	0.2158	27.044	1060.2	0.2240	32.449	897.1	0.2301
21	16.913	876.6	0.2088	24.647	999.8	0.2159	29.633	865.4	0.2223
22	14.769	824.4	0.2028	21.568	932.6	0.2093	26.113	833.3	0.2162
23	12.251	768.5	0.1982	17.858	853.9	0.2040	21.690	777.4	0.2108
24	5.586	649.2	0.1949	8.224	686.3	0.2005	9.986	657.0	0.2074
25	3.354	612.1	0.1934	4.885	632.4	0.1986	5.879	614.9	0.2052

Table 4-14. LS1 Burnup and TH Feedback Parameters Assembly B1 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.112	629.4	0.7396	8.483	581.5	0.7396	8.605	574.9	0.7396
2	26.882	772.8	0.7396	27.835	619.3	0.7396	28.214	599.8	0.7396
3	35.057	779.5	0.7278	36.161	621.7	0.7286	36.595	601.9	0.7290
4	39.227	795.9	0.6860	40.415	626.3	0.6879	40.877	604.5	0.6887
5	41.115	809.2	0.6331	42.402	631.7	0.6367	42.898	607.6	0.6380
6	41.978	822.2	0.5784	43.389	638.6	0.5839	43.830	611.7	0.5860
7	42.475	834.2	0.5279	44.031	646.8	0.5354	44.622	616.3	0.5382
8	42.951	844.7	0.4837	44.658	655.3	0.4928	45.304	621.4	0.4965
9	44.183	856.3	0.4450	46.056	664.9	0.4553	46.786	627.4	0.4598
10	44.336	862.6	0.4115	46.351	673.1	0.4227	47.117	632.6	0.4278
11	44.190	867.4	0.3824	46.329	680.4	0.3942	47.150	637.8	0.3999
12	43.878	870.9	0.3572	46.121	686.6	0.3694	46.997	643.1	0.3755
13	43.510	872.6	0.3358	45.832	691.3	0.3478	46.782	648.3	0.3542
14	42.978	873.9	0.3163	45.380	694.9	0.3284	46.345	653.6	0.3351
15	42.299	874.7	0.2993	44.722	697.4	0.3111	45.781	658.8	0.3181
16	41.480	874.0	0.2842	43.905	698.7	0.2957	44.996	663.8	0.3029
17	40.394	872.8	0.2709	42.842	698.9	0.2822	43.981	668.6	0.2895
18	38.948	876.5	0.2594	41.379	697.9	0.2704	42.582	673.0	0.2780
19	37.658	904.8	0.2498	40.025	694.0	0.2604	41.230	675.2	0.2680
20	36.032	932.8	0.2415	38.290	687.5	0.2516	39.496	675.3	0.2590
21	33.076	914.6	0.2335	35.165	676.9	0.2432	36.316	670.8	0.2505
22	29.357	889.4	0.2275	31.193	662.7	0.2368	32.267	662.2	0.2441
23	24.269	824.0	0.2215	25.765	642.3	0.2304	26.655	644.4	0.2375
24	11.283	677.5	0.2180	11.954	598.3	0.2285	12.360	599.4	0.2333
25	6.602	625.0	0.2152	6.846	581.0	0.2227	7.162	581.4	0.2287

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.797	572.1	0.7396
2	28.713	591.4	0.7396
3	37.150	592.9	0.7294
4	41.450	593.9	0.6896
5	43.499	595.4	0.6396
6	44.575	597.8	0.5884
7	45.326	601.0	0.5415
8	46.079	604.9	0.5008
9	47.628	609.7	0.4650
10	48.067	614.6	0.4341
11	48.197	620.0	0.4073
12	48.150	625.9	0.3841
13	48.028	632.3	0.3639
14	47.734	639.3	0.3456
15	47.278	646.7	0.3298
16	46.645	654.4	0.3154
17	45.763	662.2	0.3028
18	44.472	669.8	0.2919
19	43.230	675.2	0.2821
20	41.540	677.6	0.2732
21	38.323	675.6	0.2649
22	34.155	668.5	0.2584
23	28.244	650.9	0.2514
24	13.095	602.7	0.2468
25	7.625	583.0	0.2406

Table 4-15. LS1 Burnup and TH Feedback Parameters Assembly B2

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.363	639.6	0.7396	2.694	658.1	0.7396
2	0.000		0.7396	4.757	876.9	0.7396	9.553	982.6	0.7396
3	0.000		0.7281	6.744	972.4	0.7285	13.406	1107.1	0.7215
4	0.000	Data	0.6616	8.116	1087.7	0.6822	15.602	1204.9	0.6680
5	0.000	Not	0.5896	8.878	1157.9	0.6190	16.557	1229.1	0.6003
6	0.000	Required	0.5244	9.252	1194.0	0.5522	16.907	1226.0	0.5331
7	0.000		0.4710	9.436	1212.2	0.4920	17.029	1218.2	0.4752
8	0.000		0.4279	9.560	1224.6	0.4416	17.103	1212.0	0.4276
9	0.000		0.3923	9.687	1268.3	0.3994	17.828	1224.3	0.3879
10	0.000		0.3625	9.894	1258.7	0.3637	17.505	1220.6	0.3542
11	0.000		0.3380	9.666	1235.4	0.3343	17.250	1217.1	0.3261
12	0.000		0.3177	9.354	1204.1	0.3097	16.903	1212.7	0.3025
13	0.000		0.3006	8.991	1168.7	0.2892	16.489	1206.4	0.2824
14	0.000		0.2861	8.596	1131.4	0.2719	16.023	1197.6	0.2651
15	0.000		0.2738	8.179	1093.3	0.2572	15.504	1185.1	0.2502
16	0.000		0.2633	7.742	1054.8	0.2446	14.922	1167.6	0.2372
17	0.000		0.2544	7.262	1014.3	0.2338	14.239	1143.5	0.2258
18	0.000		0.2469	6.698	961.0	0.2245	13.254	1106.4	0.2158
19	0.000		0.2407	6.180	928.9	0.2166	12.516	1070.7	0.2072
20	0.000		0.2349	5.821	902.4	0.2095	11.765	1031.8	0.1995
21	0.000		0.2300	5.416	873.3	0.2031	10.903	981.9	0.1929
22	0.000		0.2259	4.790	830.4	0.1976	8.693	916.0	0.1872
23	0.000		0.2225	4.079	784.3	0.1930	8.066	843.6	0.1826
24	0.000		0.2203	1.868	658.6	0.1896	3.710	680.3	0.1793
25	0.000		0.2192	1.163	620.2	0.1884	2.276	631.9	0.1780

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.989	625.3	0.7396	4.840	604.6	0.7396	6.885	624.3	0.7396
2	14.164	818.8	0.7396	16.988	717.9	0.7396	20.387	789.8	0.7396
3	19.294	853.3	0.7273	22.792	731.2	0.7312	27.130	818.7	0.7327
4	22.068	888.6	0.6819	25.885	748.6	0.6912	30.820	861.6	0.6952
5	23.294	905.7	0.6237	27.328	760.6	0.6396	32.625	912.0	0.6469
6	23.805	916.1	0.5646	28.052	772.5	0.5870	34.260	961.3	0.5972
7	24.049	924.0	0.5117	28.521	785.4	0.5396	35.117	994.2	0.5505
8	24.227	930.8	0.4664	28.934	799.1	0.4984	35.622	1002.1	0.5083
9	24.951	943.9	0.4269	29.965	817.4	0.4616	36.794	1014.4	0.4703
10	24.890	948.1	0.3931	30.131	831.1	0.4298	37.258	1041.0	0.4381
11	24.658	949.6	0.3644	30.105	843.9	0.4022	37.234	1041.2	0.4093
12	24.302	949.0	0.3400	29.939	855.8	0.3783	36.950	1030.6	0.3841
13	23.852	946.6	0.3190	29.665	867.0	0.3573	36.573	1021.4	0.3622
14	23.319	942.1	0.3008	29.295	877.6	0.3389	36.042	1007.2	0.3429
15	22.704	935.8	0.2849	28.824	886.9	0.3227	35.378	990.5	0.3258
16	21.990	927.1	0.2710	28.231	894.8	0.3083	34.567	972.0	0.3109
17	21.129	915.5	0.2588	27.459	900.7	0.2955	33.543	951.1	0.2978
18	19.921	901.3	0.2484	26.289	903.9	0.2848	32.125	930.2	0.2865
19	18.859	881.0	0.2388	25.178	900.0	0.2744	30.733	908.7	0.2758
20	17.714	855.1	0.2299	23.845	887.6	0.2645	29.139	888.6	0.2661
21	16.182	817.6	0.2218	21.857	858.2	0.2552	26.678	853.3	0.2569
22	14.173	778.6	0.2162	19.280	823.0	0.2479	23.508	811.1	0.2494
23	11.787	733.3	0.2095	16.050	773.4	0.2411	19.487	756.8	0.2427
24	5.343	633.4	0.2052	7.274	651.4	0.2363	8.851	646.6	0.2381
25	3.183	601.6	0.2020	4.239	610.4	0.2312	5.124	609.1	0.2335

Table 4-15. LS1 Burnup and TH Feedback Parameters Assembly B2 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.671	672.3	0.7396	8.053	627.7	0.7396	8.780	637.8	0.7396
2	23.649	953.1	0.7396	26.768	771.7	0.7396	28.827	802.3	0.7396
3	31.020	974.1	0.7320	34.906	791.6	0.7336	37.600	828.7	0.7341
4	34.838	991.9	0.6944	39.213	825.9	0.6983	42.158	872.6	0.6997
5	36.670	981.7	0.6464	41.607	852.3	0.6531	44.782	903.1	0.6554
6	38.106	968.1	0.5970	43.142	874.8	0.6059	46.450	921.1	0.6088
7	38.884	957.3	0.5506	44.193	895.8	0.5611	47.596	934.3	0.5642
8	39.352	952.4	0.5088	44.943	918.1	0.5197	48.447	948.4	0.5228
9	40.639	954.4	0.4709	46.425	942.1	0.4819	50.053	966.1	0.4848
10	40.961	948.7	0.4388	46.950	950.7	0.4490	50.639	974.9	0.4516
11	40.925	947.1	0.4101	46.947	953.4	0.4196	50.691	983.0	0.4219
12	40.640	947.0	0.3850	46.630	950.7	0.3938	50.418	989.5	0.3958
13	40.281	946.7	0.3632	46.162	943.4	0.3712	49.967	992.0	0.3730
14	39.732	947.0	0.3440	45.616	933.8	0.3513	49.308	990.1	0.3528
15	39.066	946.7	0.3269	44.698	921.4	0.3337	48.431	981.4	0.3350
16	38.245	945.4	0.3118	43.653	904.4	0.3181	47.287	965.5	0.3192
17	37.193	941.7	0.2985	42.316	881.3	0.3043	45.779	942.8	0.3053
18	35.728	935.5	0.2872	40.501.	855.0	0.2925	43.767	915.4	0.2934
19	34.248	923.9	0.2764	38.669	829.2	0.2815	41.725	887.3	0.2822
20	32.513	905.8	0.2666	36.592	805.0	0.2716	39.439	860.3	0.2723
21	29.784	872.3	0.2574	33.440	776.0	0.2622	36.025	827.6	0.2630
22	26.267	830.9	0.2499	29.448	744.7	0.2547	31.729	791.3	0.2555
23	21.724	774.7	0.2432	24.285	705.8	0.2480	26.155	744.6	0.2488
24	9.924	658.6	0.2386	11.160	628.9	0.2437	12.095	648.7	0.2445
25	5.727	614.5	0.2343	6.423	599.7	0.2395	6.963	611.6	0.2405

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	10.193	651.9	0.7396
2	32.656	827.6	0.7396
3	41.857	832.5	0.7347
4	46.701	846.4	0.7014
5	49.330	846.8	0.6584
6	50.990	846.2	0.613
7	52.180	849.5	0.5694
8	53.138	857.6	0.5288
9	54.922	871.3	0.4913
10	55.667	883.8	0.4584
11	55.907	898.8	0.4288
12	55.844	916.8	0.4028
13	55.607	933.5	0.3799
14	55.170	952.3	0.3597
15	54.518	971.8	0.3416
16	53.688	990.7	0.3255
17	52.256	1006.5	0.3111
18	50.360	1017.1	0.2987
19	48.317	1017.0	0.2870
20	45.674	1002.7	0.2784
21	42.037	965.2	0.2688
22	37.116	912.6	0.2588
23	30.685	837.9	0.2515
24	14.348	690.6	0.2473
25	8.255	633.8	0.2434

Table 4-16. LS1 Burnup and TH Feedback Parameters Assembly B3

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.356	639.1	0.7396	2.489	642.8	0.7396
2	0.000		0.7396	4.880	870.8	0.7396	8.749	903.9	0.7396
3	0.000		0.7344	6.640	958.5	0.7309	12.255	1004.9	0.7287
4	0.000	Data	0.6756	7.766	1057.0	0.6887	14.290	1091.5	0.6841
5	0.000	Not	0.6095	8.419	1115.0	0.6306	15.204	1121.2	0.6243
6	0.000	Required	0.5472	8.726	1143.5	0.5676	15.557	1126.5	0.5612
7	0.000		0.4946	8.865	1156.6	0.5088	15.692	1126.0	0.5039
8	0.000		0.4515	8.955	1165.2	0.4590	15.778	1125.6	0.4555
9	0.000		0.4153	9.335	1202.2	0.4168	16.296	1141.6	0.4147
10	0.000		0.3850	9.234	1192.3	0.3810	16.190	1141.0	0.3801
11	0.000		0.3599	9.023	1171.8	0.3511	15.968	1139.7	0.3510
12	0.000		0.3388	8.747	1145.5	0.3263	15.671	1137.3	0.3265
13	0.000		0.3211	8.429	1116.0	0.3054	15.314	1132.7	0.3054
14	0.000		0.3059	8.081	1084.6	0.2876	14.903	1125.4	0.2874
15	0.000		0.2931	7.709	1052.0	0.2724	14.435	1114.4	0.2718
16	0.000		0.2820	7.313	1018.6	0.2593	13.899	1098.5	0.2581
17	0.000		0.2725	6.871	982.5	0.2481	13.255	1076.0	0.2461
18	0.000		0.2647	6.241	933.5	0.2384	12.300	1040.5	0.2357
19	0.000		0.2580	5.831	903.1	0.2301	11.689	1009.3	0.2268
20	0.000		0.2523	5.455	876.5	0.2227	10.898	976.5	0.2185
21	0.000		0.2474	5.058	848.5	0.2162	10.073	935.9	0.2114
22	0.000		0.2432	4.463	808.6	0.2105	8.870	880.1	0.2053
23	0.000		0.2397	3.806	767.3	0.2059	7.488	818.1	0.2003
24	0.000		0.2373	1.742	650.0	0.2025	3.449	671.0	0.1969
25	0.000		0.2361	1.083	616.2	0.2012	2.109	628.3	0.1954

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.208	647.7	0.7396	5.697	639.6	0.7396	7.484	673.0	0.7396
2	14.842	921.9	0.7396	19.765	856.7	0.7396	25.110	955.0	0.7396
3	20.183	985.2	0.7281	26.419	894.5	0.7297	32.896	984.0	0.7291
4	23.057	1045.7	0.6840	29.914	936.5	0.6880	36.779	1017.6	0.6876
5	24.260	1067.4	0.6258	31.408	957.1	0.6332	38.362	1025.5	0.6335
6	24.670	1071.8	0.5647	31.980	968.7	0.5753	38.815	1023.8	0.5765
7	24.806	1071.9	0.5088	32.244	978.0	0.5216	39.143	1020.6	0.5238
8	24.931	1074.9	0.4612	32.516	988.8	0.4765	39.401	1019.4	0.4779
9	25.637	1089.4	0.4210	33.465	1006.9	0.4357	40.426	1026.1	0.4385
10	25.531	1089.4	0.3868	33.488	1016.6	0.4017	40.418	1023.4	0.4048
11	25.241	1084.1	0.3578	33.313	1025.4	0.3727	40.179	1017.7	0.3760
12	24.828	1076.2	0.3331	33.009	1033.8	0.3478	39.789	1010.1	0.3511
13	24.330	1064.4	0.3119	32.615	1041.8	0.3263	39.294	1001.3	0.3296
14	23.754	1052.0	0.2936	32.138	1049.6	0.3076	38.703	991.5	0.3109
15	23.096	1037.8	0.2777	31.586	1058.4	0.2911	38.000	980.3	0.2944
16	22.338	1021.4	0.2638	30.856	1061.1	0.2765	37.148	967.5	0.2798
17	21.420	1001.9	0.2516	29.967	1062.5	0.2635	36.063	952.1	0.2668
18	20.138	978.9	0.2409	28.640	1058.9	0.2523	34.539	936.1	0.2555
19	18.976	948.2	0.2316	27.273	1042.8	0.2420	32.968	919.6	0.2453
20	17.707	910.3	0.2231	25.603	1012.0	0.2328	31.073	902.1	0.2361
21	16.053	858.8	0.2158	23.190	956.3	0.2247	28.244	870.5	0.2280
22	13.962	807.0	0.2096	20.197	894.4	0.2179	24.683	829.1	0.2212
23	11.677	752.4	0.2046	16.669	822.1	0.2122	20.331	772.8	0.2165
24	5.269	641.6	0.2012	7.605	671.2	0.2086	9.341	655.5	0.2120
25	3.154	607.5	0.1996	4.492	623.4	0.2068	5.474	614.3	0.2098

Table 4-16. LS1 Burnup and TH Feedback Parameters Assembly B3 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU) 0.00 Cy 7	Fuel Temp. (K) 0.00 Cy 7	Mod. Dens. (g/cm³) 0.00 Cy 7	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU) 193.2 Cy 7	Fuel Temp. (K) 193.2 Cy 7	Mod. Dens. (g/cm³) 193.2 Cy 7	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7
1	8.603	675.9	0.7396	8.955	581.6	0.7396	9.095	574.8	0.7396
2	28.272	938.2	0.7396	29.211	618.4	0.7396	29.577	598.4	0.7396
3	36.638	954.0	0.7289	37.724	620.7	0.7297	38.140	600.3	0.7300
4	40.704	979.0	0.6878	41.876	625.4	0.6896	42.323	603.1	0.6903
5	42.344	986.9	0.6345	43.621	631.2	0.6379	44.106	606.6	0.6392
6	42.920	990.1	0.5782	44.325	638.3	0.5835	44.862	611.3	0.5856
7	43.164	992.4	0.5257	44.708	646.1	0.5330	45.305	616.9	0.5359
8	43.441	995.0	0.4803	45.122	653.9	0.4892	45.785	623.0	0.4930
9	44.522	1002.9	0.4410	46.345	662.0	0.4511	47.081	629.8	0.4557
10	44.521	1003.9	0.4074	46.453	668.3	0.4184	47.258	636.3	0.4238
11	44.283	1004.1	0.3788	46.306	673.6	0.3902	47.176	642.6	0.3962
12	43.892	1003.9	0.3537	45.986	677.8	0.3656	46.920	648.6	0.3721
13	43.395	1003.7	0.3322	45.540	680.8	0.3440	46.536	654.6	0.3510
14	42.799	1002.9	0.3134	44.977	682.7	0.3251	46.031	660.3	0.3323
15	42.087	1001.7	0.2968	44.283	683.8	0.3083	45.389	665.4	0.3156
16	41.219	999.4	0.2821	43.417	683.9	0.2934	44.567	669.7	0.3008
17	40.101	994.7	0.2690	42.284	683.0	0.2801	43.471	673.4	0.2876
18	38.529	988.0	0.2576	40.684	681.4	0.2685	41.899	676.2	0.2761
19	36.863	974.6	0.2472	38.964	678.2	0.2578	40.187	677.0	0.2654
20	34.817	954.2	0.2380	36.827	672.8	0.2484	38.035	675.5	0.2559
21	31.893	915.4	0.2297	33.837	663.2	0.2399	34.679	668.9	0.2474
22	27.744	866.6	0.2228	29.374	651.0	0.2329	30.413	658.6	0.2403
23	22.831	801.4	0.2171	24.135	632.7	0.2268	24.986	640.7	0.2338
24	10.552	669.4	0.2136	11.134	593.6	0.2226	11.517	597.3	0.2295
25	6.164	622.1	0.2114	6.463	578.6	0.2194	6.658	580.4	0.2254

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU) 495.2 Cy 7	Fuel Temp. (K) 495.2 Cy 7	Mod. Dens. (g/cm³) 495.2 Cy 7
1	9.255	570.1	0.7396
2	29.985	585.7	0.7396
3	38.594	587.4	0.7303
4	42.797	588.5	0.6911
5	44.610	590.1	0.6405
6	45.411	592.6	0.5876
7	45.817	596.0	0.5388
8	46.469	599.9	0.4968
9	47.854	604.8	0.4605
10	48.122	609.8	0.4297
11	48.141	615.4	0.4032
12	47.994	621.5	0.3804
13	47.729	628.2	0.3605
14	47.348	635.2	0.3430
15	46.835	642.6	0.3275
16	46.144	650.2	0.3136
17	45.179	657.8	0.3013
18	43.732	665.2	0.2906
19	42.117	671.0	0.2806
20	40.019	674.2	0.2714
21	36.624	671.9	0.2631
22	32.245	665.2	0.2563
23	26.519	647.6	0.2493
24	12.211	600.5	0.2444
25	7.010	581.9	0.2385

Table 4-17. LS1 Burnup and TH Feedback Parameters Assembly B4

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.027	619.2	0.7396	2.253	650.0	0.7396
2	0.000		0.7396	3.558	785.6	0.7396	8.013	944.4	0.7396
3	0.000		0.7396	5.128	907.1	0.7396	11.887	1193.6	0.7271
4	0.000	Data	0.7014	6.412	946.6	0.7108	14.092	1229.2	0.6812
5	0.000	Not	0.6422	7.348	1021.3	0.6650	15.337	1269.1	0.6220
6	0.000	Required	0.5818	7.984	1076.0	0.6090	15.914	1261.2	0.5607
7	0.000		0.5271	8.408	1114.0	0.5510	16.194	1242.6	0.5045
8	0.000		0.4804	8.732	1144.1	0.4975	16.391	1226.5	0.4560
9	0.000		0.4404	9.301	1198.8	0.4501	17.013	1233.2	0.4144
10	0.000		0.4064	9.287	1197.5	0.4096	16.918	1223.0	0.3782
11	0.000		0.3782	9.084	1177.7	0.3760	16.645	1214.2	0.3478
12	0.000		0.3547	8.781	1148.7	0.3483	16.276	1205.9	0.3222
13	0.000		0.3350	8.425	1116.6	0.3251	15.848	1197.1	0.3005
14	0.000		0.3185	8.040	1080.9	0.3057	15.378	1186.7	0.2818
15	0.000		0.3044	7.634	1045.6	0.2892	14.862	1173.4	0.2658
16	0.000		0.2924	7.208	1009.9	0.2762	14.283	1165.1	0.2518
17	0.000		0.2824	6.782	971.6	0.2633	13.687	1129.3	0.2396
18	0.000		0.2740	6.077	921.2	0.2531	12.677	1088.9	0.2288
19	0.000		0.2671	5.696	893.3	0.2443	11.863	1052.4	0.2198
20	0.000		0.2612	5.404	872.5	0.2365	11.216	1014.8	0.2121
21	0.000		0.2560	5.078	849.9	0.2294	10.418	967.3	0.2053
22	0.000		0.2517	4.614	812.2	0.2232	9.162	901.8	0.1995
23	0.000		0.2482	3.850	770.0	0.2181	7.678	830.1	0.1952
24	0.000		0.2459	1.768	651.4	0.2143	3.518	673.9	0.1919
25	0.000		0.2446	1.095	616.8	0.2129	2.150	628.2	0.1907

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.101	654.7	0.7396	5.800	651.4	0.7396	7.569	671.8	0.7396
2	14.544	954.3	0.7396	20.098	903.8	0.7396	25.406	950.7	0.7396
3	20.137	1023.8	0.7253	27.069	941.9	0.7260	33.612	981.1	0.7282
4	23.376	1084.8	0.6786	30.845	980.2	0.6808	37.710	1017.6	0.6817
5	24.839	1102.0	0.6190	32.513	995.3	0.6233	39.516	1029.8	0.6255
6	25.405	1101.1	0.5578	33.200	1004.4	0.5644	40.223	1031.7	0.5676
7	25.644	1097.8	0.5025	33.564	1013.8	0.5109	40.570	1030.1	0.5145
8	25.658	1099.2	0.4551	33.928	1025.2	0.4648	40.926	1029.4	0.4688
9	25.657	1113.2	0.4148	34.980	1044.8	0.4251	42.035	1034.5	0.4293
10	25.564	1113.4	0.3798	35.044	1057.2	0.3907	42.056	1030.7	0.3952
11	25.229	1108.4	0.3502	34.860	1059.2	0.3614	41.799	1024.2	0.3661
12	25.753	1100.1	0.3252	34.531	1061.1	0.3363	41.373	1015.6	0.3411
13	25.191	1089.5	0.3038	34.112	1092.7	0.3147	40.839	1005.5	0.3195
14	24.564	1077.4	0.2853	33.619	1103.8	0.2959	40.215	994.2	0.3007
15	23.871	1063.9	0.2693	33.048	1114.0	0.2794	39.492	981.2	0.2842
16	23.094	1049.0	0.2553	32.372	1122.4	0.2647	38.633	965.8	0.2696
17	22.176	1032.5	0.2431	31.608	1127.0	0.2517	37.547	947.4	0.2566
18	20.922	1014.8	0.2323	30.241	1125.9	0.2403	36.030	927.2	0.2451
19	19.858	989.9	0.2229	28.983	1109.6	0.2300	34.513	906.8	0.2349
20	18.728	956.6	0.2147	27.441	1076.0	0.2209	32.702	886.1	0.2258
21	17.144	905.0	0.2076	25.061	1013.6	0.2130	29.889	853.6	0.2179
22	15.008	850.6	0.2017	21.969	944.0	0.2065	26.235	813.7	0.2113
23	12.475	790.6	0.1970	18.222	862.7	0.2011	21.686	759.8	0.2058
24	6.712	658.9	0.1937	8.430	690.4	0.1977	10.094	651.5	0.2025
25	3.435	618.0	0.1923	5.023	635.1	0.1959	5.964	612.1	0.2005

Table 4-17. LS1 Burnup and TH Feedback Parameters Assembly B4 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.678	674.8	0.7396	8.954	577.6	0.7396	9.062	572.4	0.7396
2	28.536	933.4	0.7396	29.298	607.1	0.7396	29.609	592.6	0.7396
3	37.212	948.3	0.7265	38.082	609.0	0.7271	38.433	594.4	0.7274
4	41.594	973.3	0.6827	42.528	612.4	0.6843	42.902	596.6	0.6849
5	43.485	982.4	0.6273	44.476	616.7	0.6302	44.881	599.1	0.6313
6	44.205	986.9	0.5702	45.322	622.4	0.5747	45.765	602.8	0.5763
7	44.573	989.8	0.5177	45.809	628.9	0.5239	46.300	607.1	0.5264
8	44.942	991.6	0.4721	46.305	636.0	0.4801	46.846	611.7	0.4832
9	46.097	998.1	0.4328	47.601	643.8	0.4421	48.200	617.1	0.4459
10	46.121	998.6	0.3988	47.745	650.6	0.4094	48.399	622.2	0.4139
11	45.862	998.3	0.3698	47.594	656.8	0.3813	48.303	627.3	0.3865
12	45.434	998.0	0.3448	47.261	662.2	0.3570	48.027	632.6	0.3628
13	44.899	997.8	0.3232	46.804	666.7	0.3357	47.627	638.0	0.3421
14	44.271	997.3	0.3043	46.239	670.4	0.3170	47.119	643.6	0.3238
15	43.541	998.3	0.2877	45.555	673.1	0.3004	46.488	648.6	0.3076
16	42.665	993.9	0.2730	44.710	674.9	0.2855	45.694	653.6	0.2930
17	41.643	988.8	0.2599	43.601	675.7	0.2723	44.632	658.0	0.2800
18	39.966	980.5	0.2483	42.023	675.6	0.2607	43.095	662.0	0.2685
19	38.341	965.6	0.2380	40.367	673.8	0.2502	41.483	664.4	0.2582
20	36.367	943.7	0.2288	38.328	669.9	0.2408	39.425	664.7	0.2488
21	33.256	904.9	0.2207	35.068	661.4	0.2325	36.122	660.3	0.2406
22	29.216	857.2	0.2140	30.634	650.3	0.2256	31.608	652.6	0.2337
23	24.111	793.1	0.2085	25.412	632.5	0.2195	26.217	636.3	0.2273
24	11.280	667.1	0.2052	11.851	593.0	0.2164	12.209	595.0	0.2228
25	6.639	620.8	0.2031	6.926	578.0	0.2119	7.105	578.9	0.2182

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.225	569.1	0.7396
2	29.975	583.0	0.7396
3	38.636	584.7	0.7277
4	43.319	585.4	0.6856
5	45.320	586.6	0.6325
6	46.241	588.6	0.5782
7	46.826	591.3	0.5289
8	47.432	594.6	0.4866
9	48.857	598.5	0.4501
10	49.131	602.6	0.4190
11	49.116	607.1	0.3926
12	48.934	612.2	0.3700
13	48.635	617.8	0.3504
14	48.235	623.9	0.3333
15	47.720	630.4	0.3182
16	47.046	637.2	0.3048
17	46.108	644.3	0.2929
18	44.695	651.5	0.2825
19	43.166	657.5	0.2730
20	41.193	661.4	0.2642
21	37.874	660.4	0.2563
22	33.479	655.7	0.2498
23	27.630	640.7	0.2433
24	12.843	597.2	0.2377
25	7.423	580.1	0.2311

Table 4-18. LS1 Burnup and TH Feedback Parameters Assembly B5

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.115	624.5	0.7396	2.106	632.0	0.7396
2	0.000		0.7396	3.651	807.1	0.7396	7.432	854.9	0.7396
3	0.000		0.7396	5.443	933.4	0.7394	10.729	962.0	0.7357
4	0.000	Data	0.6979	6.604	961.4	0.7094	12.923	1068.9	0.7001
5	0.000	Not	0.6387	7.339	1020.7	0.6647	14.058	1113.6	0.6496
6	0.000	Required	0.5797	7.775	1057.7	0.6108	14.651	1121.3	0.5924
7	0.000		0.5274	8.020	1079.2	0.5550	14.754	1116.3	0.5363
8	0.000		0.4830	8.178	1093.2	0.5038	14.859	1109.3	0.4867
9	0.000		0.4454	8.588	1130.6	0.4586	15.373	1121.2	0.4441
10	0.000		0.4133	8.609	1123.3	0.4200	15.241	1116.1	0.4075
11	0.000		0.3866	8.311	1105.2	0.3879	14.983	1108.2	0.3768
12	0.000		0.3642	8.050	1081.8	0.3610	14.658	1101.0	0.3507
13	0.000		0.3452	7.752	1055.7	0.3381	14.286	1092.7	0.3284
14	0.000		0.3291	7.428	1028.2	0.3188	13.873	1082.7	0.3093
15	0.000		0.3154	7.085	999.8	0.3023	13.418	1070.4	0.2927
16	0.000		0.3035	6.723	970.8	0.2881	12.910	1054.6	0.2782
17	0.000		0.2935	6.316	939.2	0.2757	12.302	1033.1	0.2654
18	0.000		0.2851	5.731	895.8	0.2652	11.383	998.5	0.2543
19	0.000		0.2779	5.380	870.8	0.2561	10.758	971.0	0.2448
20	0.000		0.2718	5.086	850.4	0.2481	10.187	944.1	0.2363
21	0.000		0.2665	4.768	828.1	0.2408	9.497	910.3	0.2288
22	0.000		0.2621	4.221	793.3	0.2346	8.391	859.3	0.2224
23	0.000		0.2583	3.619	755.5	0.2294	7.099	802.2	0.2173
24	0.000		0.2559	1.662	645.8	0.2258	3.274	684.6	0.2138
25	0.000		0.2547	1.027	613.4	0.2242	1.994	622.6	0.2123

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.769	644.7	0.7396	5.348	644.6	0.7396	6.353	621.7	0.7396
2	13.428	914.8	0.7396	18.685	881.7	0.7396	21.884	774.4	0.7396
3	18.693	980.8	0.7326	25.185	918.4	0.7322	29.154	793.3	0.7342
4	21.579	1037.5	0.6944	28.726	957.0	0.6945	33.032	816.5	0.6992
5	22.984	1056.1	0.6428	30.330	972.8	0.6441	34.674	833.3	0.6523
6	23.619	1060.0	0.5859	31.000	981.1	0.5890	35.901	859.1	0.6011
7	23.723	1060.8	0.5311	31.315	989.3	0.5362	36.376	871.0	0.5510
8	23.872	1064.2	0.4829	31.607	999.9	0.4896	36.735	876.0	0.5058
9	24.579	1078.9	0.4416	32.663	1016.7	0.4492	37.771	882.0	0.4657
10	24.455	1079.5	0.4060	32.677	1029.2	0.4144	37.781	881.7	0.4311
11	24.141	1076.2	0.3759	32.390	1039.0	0.3845	37.686	879.6	0.4011
12	23.712	1067.3	0.3502	32.081	1048.4	0.3589	37.210	876.1	0.3761
13	23.206	1057.2	0.3281	31.689	1057.4	0.3386	36.766	871.4	0.3526
14	22.634	1045.3	0.3090	31.220	1065.6	0.3172	36.209	865.6	0.3327
15	21.992	1031.4	0.2924	30.663	1072.4	0.3001	35.556	858.6	0.3152
16	21.261	1016.2	0.2777	29.987	1076.9	0.2850	34.763	850.0	0.2997
17	20.383	996.0	0.2649	29.113	1077.2	0.2716	33.747	839.7	0.2859
18	19.142	973.5	0.2537	27.813	1072.4	0.2596	32.303	829.4	0.2738
19	18.072	943.3	0.2439	26.516	1054.5	0.2490	30.697	821.6	0.2631
20	16.931	906.2	0.2353	24.960	1022.1	0.2396	29.404	826.2	0.2544
21	15.431	856.0	0.2279	22.683	964.5	0.2314	28.992	816.7	0.2466
22	13.451	805.2	0.2216	19.797	901.6	0.2246	23.676	787.2	0.2396
23	11.157	750.7	0.2166	16.352	828.3	0.2190	19.529	741.5	0.2335
24	8.051	639.9	0.2133	7.425	673.1	0.2155	8.886	640.2	0.2297
25	3.011	606.3	0.2119	4.373	624.5	0.2137	5.276	610.0	0.2287

Table 4-18. LS1 Burnup and TH Feedback Parameters Assembly B5 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.168	642.8	0.7396	7.619	581.5	0.7396	7.664	575.2	0.7396
2	24.289	632.1	0.7396	25.278	621.7	0.7396	25.680	602.2	0.7396
3	32.011	642.4	0.7343	33.162	624.2	0.7351	33.625	604.6	0.7354
4	36.038	650.2	0.7000	37.269	628.6	0.7018	37.758	606.9	0.7025
5	38.024	677.7	0.6544	39.340	633.3	0.6576	39.859	609.7	0.6589
6	39.409	923.0	0.6046	40.820	638.6	0.6095	41.374	612.9	0.6114
7	40.031	942.3	0.5552	41.574	646.0	0.5619	42.178	617.5	0.5847
8	40.439	948.9	0.5102	42.130	654.4	0.5167	42.792	622.9	0.5222
9	41.537	957.2	0.4702	43.394	664.0	0.4800	44.123	629.2	0.4843
10	41.565	959.6	0.4355	43.558	671.9	0.4462	44.347	634.8	0.4513
11	41.360	961.0	0.4055	43.470	678.7	0.4168	44.317	640.3	0.4225
12	41.017	962.8	0.3795	43.223	684.4	0.3911	44.128	645.9	0.3972
13	40.590	966.4	0.3568	42.870	688.8	0.3684	43.832	651.3	0.3749
14	40.051	967.5	0.3368	42.385	692.0	0.3483	43.403	656.8	0.3552
15	39.396	967.3	0.3191	41.765	694.1	0.3304	42.835	661.9	0.3374
16	38.593	965.9	0.3034	40.978	695.1	0.3144	42.098	666.8	0.3216
17	37.648	962.0	0.2893	39.935	695.2	0.3002	41.098	671.0	0.3074
18	36.061	956.1	0.2770	38.435	694.4	0.2877	39.640	675.2	0.2951
19	34.555	944.1	0.2661	36.890	691.5	0.2765	38.120	677.7	0.2841
20	32.912	923.0	0.2571	35.141	685.8	0.2671	36.368	677.4	0.2745
21	30.212	886.4	0.2489	32.260	675.1	0.2586	33.433	672.0	0.2659
22	26.539	843.1	0.2417	28.357	661.7	0.2512	29.439	663.0	0.2585
23	21.868	783.6	0.2354	23.328	641.4	0.2443	24.221	644.7	0.2514
24	10.006	660.9	0.2316	10.655	597.2	0.2402	11.055	598.8	0.2489
25	5.938	619.6	0.2310	6.267	580.2	0.2383	6.468	580.9	0.2441

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.850	571.8	0.7396
2	26.181	591.6	0.7396
3	34.187	593.3	0.7357
4	38.336	594.2	0.7033
5	40.457	595.3	0.6603
6	42.005	597.0	0.6136
7	42.884	600.1	0.5677
8	43.547	603.8	0.5262
9	44.966	608.7	0.4893
10	45.282	613.8	0.4576
11	45.351	619.3	0.4298
12	45.271	625.4	0.4057
13	45.090	631.9	0.3848
14	44.785	638.9	0.3659
15	44.347	646.4	0.3492
16	43.741	654.0	0.3342
17	42.874	661.8	0.3208
18	41.543	669.4	0.3093
19	40.123	675.4	0.2986
20	38.424	678.6	0.2892
21	35.446	676.0	0.2807
22	31.339	669.2	0.2734
23	25.816	651.2	0.2660
24	11.776	602.0	0.2609
25	6.829	582.4	0.2560

Table 4-19. LS1 Burnup and TH Feedback Parameters Assembly B8

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.116	624.6	0.7396	2.178	637.4	0.7396
2	0.000		0.7396	3.888	809.6	0.7396	7.732	881.0	0.7396
3	0.000		0.7333	5.829	881.3	0.7388	11.141	994.4	0.7331
4	0.000	Data	0.6724	6.725	970.9	0.7076	13.341	1101.9	0.6945
5	0.000	Not	0.6049	7.472	1031.9	0.6611	14.439	1142.3	0.6412
6	0.000	Required	0.5418	7.903	1088.9	0.6057	14.908	1146.8	0.5823
7	0.000		0.4890	8.139	1089.7	0.5492	15.084	1139.7	0.5260
8	0.000		0.4459	8.294	1103.7	0.4978	15.181	1133.0	0.4787
9	0.000		0.4100	8.708	1141.8	0.4529	15.697	1144.9	0.4347
10	0.000		0.3798	8.633	1134.8	0.4146	15.572	1139.0	0.3986
11	0.000		0.3549	8.433	1116.3	0.3826	15.314	1132.3	0.3682
12	0.000		0.3341	8.162	1091.8	0.3559	14.980	1125.0	0.3424
13	0.000		0.3165	7.850	1064.2	0.3334	14.595	1116.6	0.3205
14	0.000		0.3016	7.513	1035.3	0.3143	14.178	1107.2	0.3016
15	0.000		0.2890	7.185	1006.3	0.2980	13.738	1096.8	0.2853
16	0.000		0.2782	6.810	977.7	0.2840	13.270	1084.4	0.2709
17	0.000		0.2690	6.427	947.7	0.2719	12.740	1068.2	0.2583
18	0.000		0.2612	5.889	907.3	0.2614	11.935	1039.4	0.2471
19	0.000		0.2547	5.611	887.2	0.2524	11.437	1016.3	0.2374
20	0.000		0.2491	5.408	872.8	0.2441	10.976	990.0	0.2288
21	0.000		0.2444	5.143	854.3	0.2364	10.325	951.9	0.2212
22	0.000		0.2403	4.614	818.7	0.2297	9.181	894.4	0.2147
23	0.000		0.2368	3.952	776.3	0.2242	7.759	828.5	0.2094
24	0.000		0.2344	1.809	653.6	0.2203	3.561	674.0	0.2057
25	0.000		0.2332	1.113	617.7	0.2186	2.164	627.8	0.2042

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.413	675.9	0.7396	6.112	851.4	0.7396	7.386	839.0	0.7396
2	15.562	1058.8	0.7396	20.980	893.6	0.7396	24.780	821.4	0.7396
3	21.059	1135.2	0.7212	27.731	923.9	0.7231	32.369	840.0	0.7250
4	23.904	1188.8	0.6725	31.091	959.9	0.6765	36.110	857.9	0.6809
5	24.996	1188.3	0.6128	32.452	979.3	0.6195	37.680	883.6	0.6268
6	25.288	1173.4	0.5527	32.855	994.8	0.5619	38.364	897.4	0.5721
7	25.317	1161.1	0.4984	33.189	1010.2	0.5095	38.902	921.2	0.5223
8	25.339	1154.9	0.4522	33.408	1025.1	0.4643	39.292	934.6	0.4784
9	25.966	1164.1	0.4130	34.320	1047.2	0.4255	40.436	953.7	0.4400
10	25.792	1160.0	0.3792	34.320	1061.0	0.3919	40.835	987.2	0.4074
11	25.453	1153.3	0.3506	34.142	1073.9	0.3631	40.784	998.1	0.3781
12	25.012	1144.5	0.3263	33.854	1086.3	0.3384	40.564	1004.0	0.3528
13	24.505	1134.6	0.3053	33.489	1097.9	0.3170	40.476	1028.4	0.3315
14	23.946	1123.3	0.2872	33.058	1108.5	0.2983	40.047	1028.6	0.3116
15	23.345	1110.4	0.2713	32.581	1117.2	0.2817	39.419	1017.0	0.2942
16	22.694	1095.8	0.2574	31.983	1123.4	0.2670	38.657	1000.8	0.2786
17	21.946	1078.9	0.2451	31.264	1125.8	0.2538	37.679	978.7	0.2646
18	20.889	1059.7	0.2339	30.191	1124.5	0.2420	36.310	954.0	0.2521
19	20.011	1031.4	0.2245	29.161	1111.7	0.2315	34.981	928.1	0.2411
20	19.023	993.6	0.2162	27.859	1085.8	0.2223	33.344	903.3	0.2315
21	17.531	936.2	0.2092	25.882	1031.5	0.2143	30.886	856.7	0.2232
22	15.451	876.5	0.2031	22.738	957.1	0.2074	27.157	824.4	0.2160
23	12.912	810.5	0.1982	19.001	884.8	0.2019	22.695	788.3	0.2100
24	8.911	686.2	0.1949	8.834	700.9	0.1983	10.667	655.4	0.2066
25	3.545	622.2	0.1936	5.252	640.7	0.1966	6.239	614.5	0.2048

Table 4-19. LS1 Burnup and TH Feedback Parameters Assembly B5 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.295	852.9	0.7396	8.625	580.2	0.7396	8.758	573.9	0.7396
2	27.359	855.4	0.7396	28.266	616.4	0.7396	28.622	597.3	0.7396
3	35.453	869.6	0.7257	36.516	619.4	0.7266	36.926	599.6	0.7269
4	39.392	894.1	0.6828	40.547	624.5	0.6848	40.988	602.6	0.6855
5	41.058	906.3	0.6300	42.320	630.4	0.6336	42.795	605.8	0.6350
6	41.800	913.7	0.5763	43.188	637.3	0.5818	43.709	609.9	0.5838
7	42.367	917.4	0.5273	43.692	645.0	0.5347	44.459	614.1	0.5374
8	42.792	922.0	0.4839	44.470	653.7	0.4930	45.089	618.9	0.4965
9	43.998	930.1	0.4458	45.849	663.6	0.4561	46.526	624.3	0.4603
10	44.390	929.1	0.4132	46.379	671.6	0.4244	47.104	628.8	0.4293
11	44.351	930.7	0.3841	46.476	679.6	0.3960	47.250	633.4	0.4013
12	44.139	931.8	0.3588	46.382	686.6	0.3710	47.209	638.4	0.3768
13	44.027	928.6	0.3373	46.354	691.6	0.3494	47.227	642.8	0.3556
14	43.595	928.2	0.3176	45.997	696.1	0.3296	46.924	648.0	0.3362
15	42.965	928.0	0.3000	45.426	699.7	0.3118	46.409	653.4	0.3187
16	42.187	925.9	0.2843	44.685	702.0	0.2960	45.724	658.8	0.3030
17	41.175	921.5	0.2702	43.688	702.9	0.2817	44.781	664.1	0.2889
18	39.760	915.5	0.2576	42.269	702.6	0.2690	43.413	669.1	0.2765
19	38.328	904.9	0.2485	40.791	699.8	0.2576	41.973	672.9	0.2652
20	36.582	888.6	0.2387	38.951	694.1	0.2474	40.160	674.6	0.2551
21	33.681	858.9	0.2282	35.859	682.7	0.2384	37.021	670.9	0.2462
22	29.836	821.7	0.2209	31.768	668.3	0.2308	32.652	663.2	0.2386
23	24.793	768.3	0.2147	26.344	646.5	0.2240	27.246	645.6	0.2316
24	11.658	658.2	0.2113	12.351	599.5	0.2200	12.769	599.6	0.2272
25	6.892	616.6	0.2098	7.245	581.5	0.2173	7.451	581.4	0.2235

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.942	571.6	0.7396
2	29.105	590.4	0.7396
3	37.488	592.2	0.7274
4	41.553	593.5	0.6865
5	43.392	595.1	0.6366
6	44.349	597.5	0.5863
7	45.156	600.7	0.5408
8	45.853	604.3	0.5008
9	47.376	609.1	0.4655
10	48.031	613.3	0.4354
11	48.267	616.3	0.4086
12	48.323	623.7	0.3851
13	48.442	629.4	0.3648
14	48.254	636.0	0.3464
15	47.863	643.1	0.3298
16	47.308	650.6	0.3151
17	46.497	658.3	0.3018
18	45.262	666.2	0.2900
19	43.929	672.6	0.2793
20	42.169	676.3	0.2695
21	39.010	674.5	0.2607
22	34.738	668.4	0.2533
23	28.643	651.4	0.2460
24	13.493	602.7	0.2409
25	7.823	583.0	0.2353

Table 4-20. LS1 Burnup and TH Feedback Parameters Assembly B7

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.075	622.1	0.7396	2.292	649.3	0.7396
2	0.000		0.7396	3.769	801.0	0.7396	8.150	936.5	0.7396
3	0.000		0.7315	5.399	872.1	0.7389	11.681	1064.6	0.7279
4	0.000	Data	0.6686	6.658	965.7	0.7073	13.930	1178.7	0.6840
5	0.000	Not	0.5988	7.627	1038.5	0.6597	15.086	1214.0	0.6263
6	0.000	Required	0.5339	8.097	1086.0	0.6024	15.639	1211.9	0.5653
7	0.000		0.4800	8.460	1118.6	0.5440	15.812	1200.7	0.5085
8	0.000		0.4359	8.723	1143.2	0.4910	16.093	1190.6	0.4594
9	0.000		0.3992	9.234	1192.3	0.4447	16.690	1201.2	0.4177
10	0.000		0.3685	9.215	1190.4	0.4051	16.622	1195.2	0.3814
11	0.000		0.3433	9.042	1173.6	0.3722	16.412	1190.6	0.3511
12	0.000		0.3222	8.782	1148.6	0.3447	16.121	1186.8	0.3263
13	0.000		0.3047	8.474	1120.1	0.3217	15.787	1183.7	0.3033
14	0.000		0.2898	8.139	1089.7	0.3022	15.418	1179.3	0.2844
15	0.000		0.2773	7.782	1058.3	0.2857	15.003	1172.5	0.2680
16	0.000		0.2665	7.404	1026.1	0.2716	14.528	1160.7	0.2538
17	0.000		0.2575	6.985	991.7	0.2595	13.950	1142.1	0.2413
18	0.000		0.2499	6.397	945.4	0.2491	13.084	1109.9	0.2301
19	0.000		0.2436	6.082	921.6	0.2401	12.498	1079.3	0.2207
20	0.000		0.2380	5.846	904.2	0.2318	11.934	1043.9	0.2125
21	0.000		0.2330	5.545	882.6	0.2243	11.158	994.5	0.2053
22	0.000		0.2288	4.970	842.6	0.2176	9.698	927.7	0.1991
23	0.000		0.2254	4.254	795.4	0.2121	8.345	852.5	0.1941
24	0.000		0.2232	1.949	681.0	0.2082	3.831	682.9	0.1905
25	0.000		0.2220	1.203	622.2	0.2067	2.338	633.3	0.1891

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.717	632.1	0.7396	4.643	608.7	0.7396	6.338	666.6	0.7396
2	13.211	849.4	0.7396	16.306	734.7	0.7396	21.642	953.3	0.7396
3	18.168	889.9	0.7311	22.024	750.7	0.7345	28.613	985.0	0.7327
4	20.992	926.7	0.6917	25.204	770.5	0.6995	32.042	1015.2	0.6968
5	22.353	940.2	0.6398	26.785	783.1	0.6533	33.644	1017.1	0.6499
6	22.994	948.1	0.5840	27.627	794.6	0.6033	34.403	1009.8	0.5998
7	23.331	950.4	0.5311	28.160	807.5	0.5554	34.867	1002.0	0.5519
8	23.584	955.2	0.4842	28.684	821.3	0.5124	35.308	998.3	0.5091
9	24.369	968.0	0.4431	29.781	840.4	0.4738	36.471	1004.0	0.4709
10	24.354	971.6	0.4076	29.972	854.6	0.4399	36.655	1001.7	0.4375
11	24.156	972.5	0.3774	29.978	867.5	0.4106	36.605	996.8	0.4085
12	23.843	970.9	0.3515	29.653	879.7	0.3852	36.398	989.5	0.3833
13	23.458	967.4	0.3291	29.641	891.0	0.3628	36.091	981.7	0.3611
14	23.009	962.1	0.3098	29.351	901.5	0.3431	35.694	972.6	0.3417
15	22.486	954.7	0.2929	28.970	911.1	0.3258	35.194	962.7	0.3244
16	21.865	945.0	0.2780	28.467	919.1	0.3103	34.561	951.9	0.3091
17	21.102	932.6	0.2649	27.786	924.7	0.2967	33.747	941.1	0.2955
18	20.004	917.5	0.2537	26.724	927.2	0.2849	32.578	932.3	0.2837
19	19.077	895.6	0.2434	25.714	921.5	0.2737	31.460	923.8	0.2726
20	18.067	868.1	0.2342	24.480	906.3	0.2634	30.076	911.9	0.2623
21	16.612	827.7	0.2259	22.620	873.1	0.2537	27.732	882.3	0.2528
22	14.618	786.3	0.2189	19.905	834.0	0.2460	24.557	841.0	0.2451
23	12.179	739.1	0.2132	16.579	781.3	0.2393	20.385	782.3	0.2384
24	6.625	638.2	0.2091	7.633	655.2	0.2348	9.317	658.2	0.2340
25	3.285	603.3	0.2065	4.395	612.9	0.2307	5.400	616.5	0.2304

Table 4-20. LS1 Burnup and TH Feedback Parameters Assembly B7 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.494	880.0	0.7396	7.881	889.9	0.7396	8.170	879.7	0.7396
2	25.024	871.3	0.7396	26.404	847.3	0.7396	26.823	814.9	0.7396
3	32.493	886.6	0.7317	34.126	851.1	0.7327	34.730	817.6	0.7331
4	36.162	1006.4	0.6951	37.932	858.9	0.6976	38.583	821.9	0.6985
5	37.763	1006.2	0.6480	39.668	866.7	0.6522	40.373	826.9	0.6540
6	38.497	1002.7	0.6979	40.552	875.5	0.6038	41.328	833.6	0.6066
7	38.942	1000.0	0.6501	41.146	884.3	0.5576	42.001	841.1	0.5614
8	39.377	999.1	0.6074	41.717	892.4	0.5160	42.654	848.9	0.5207
9	40.583	1005.2	0.4695	43.062	700.6	0.4785	44.087	857.6	0.4838
10	40.772	1005.9	0.4362	43.339	706.2	0.4454	44.438	864.7	0.4513
11	40.720	1005.7	0.4074	43.352	710.2	0.4165	44.522	871.7	0.4227
12	40.612	1005.5	0.3822	43.188	712.9	0.3911	44.425	878.4	0.3976
13	40.202	1005.1	0.3601	42.904	714.5	0.3687	44.204	884.7	0.3752
14	39.799	1004.2	0.3407	42.506	714.8	0.3489	43.862	890.4	0.3554
15	39.286	1002.4	0.3234	41.881	714.0	0.3313	43.385	895.3	0.3377
16	38.627	998.7	0.3080	41.293	712.3	0.3157	42.733	899.0	0.3220
17	37.764	991.6	0.2944	40.382	709.3	0.3017	41.847	701.6	0.3079
18	36.525	982.3	0.2825	39.080	705.4	0.2895	40.559	703.1	0.2956
19	35.301	967.4	0.2713	37.769	699.5	0.2781	39.229	702.1	0.2840
20	33.761	945.5	0.2610	36.083	691.3	0.2676	37.516	698.3	0.2732
21	31.131	909.0	0.2515	33.233	678.2	0.2578	34.667	688.2	0.2633
22	27.587	863.1	0.2439	29.424	662.8	0.2499	30.627	675.0	0.2552
23	22.676	800.3	0.2372	24.343	641.6	0.2431	25.324	653.2	0.2481
24	10.525	669.1	0.2328	11.189	598.0	0.2385	11.637	603.2	0.2434
25	6.089	622.0	0.2294	6.437	581.2	0.2346	6.671	583.9	0.2391

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.386	573.6	0.7396
2	27.502	596.5	0.7396
3	35.385	598.4	0.7338
4	39.269	600.1	0.6995
5	41.099	602.2	0.6557
6	42.115	605.6	0.6093
7	42.871	610.2	0.5653
8	43.621	615.6	0.5258
9	45.172	622.1	0.4901
10	45.640	628.7	0.4587
11	45.848	635.7	0.4314
12	45.883	643.3	0.4073
13	45.800	651.3	0.3860
14	45.599	659.5	0.3670
15	45.282	667.8	0.3500
16	44.749	676.2	0.3347
17	43.996	684.2	0.3210
18	42.830	691.7	0.3090
19	41.583	696.8	0.2974
20	39.902	698.8	0.2865
21	36.877	694.1	0.2765
22	32.776	684.1	0.2683
23	27.118	662.9	0.2607
24	12.464	607.8	0.2557
25	7.097	585.9	0.2502

Table 4-21. LS1 Burnup and TH Feedback Parameters Assembly B8

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.263	633.4	0.7396	2.605	659.0	0.7396
2	0.000		0.7396	4.404	849.1	0.7396	9.232	985.1	0.7396
3	0.000		0.7306	6.254	934.5	0.7321	12.899	1116.6	0.7225
4	0.000	Data	0.6668	7.602	1042.9	0.6906	15.228	1222.4	0.6708
5	0.000	Not	0.6965	8.443	1117.2	0.6320	16.274	1248.4	0.6050
6	0.000	Required	0.5314	8.936	1163.4	0.5673	16.728	1243.4	0.5388
7	0.000		0.4774	9.232	1192.1	0.5067	16.945	1233.4	0.4808
8	0.000		0.4334	9.449	1213.5	0.4547	17.097	1225.1	0.4328
9	0.000		0.3988	9.949	1264.4	0.4106	17.690	1236.9	0.3921
10	0.000		0.3662	9.907	1260.0	0.3733	17.614	1232.6	0.3578
11	0.000		0.3410	9.714	1240.2	0.3424	17.395	1229.3	0.3287
12	0.000		0.3200	9.428	1211.4	0.3167	17.080	1225.7	0.3044
13	0.000		0.3024	9.088	1178.0	0.2953	16.700	1220.6	0.2837
14	0.000		0.2876	8.718	1142.6	0.2772	16.268	1212.9	0.2660
15	0.000		0.2750	8.325	1106.5	0.2618	15.776	1200.6	0.2507
16	0.000		0.2643	7.914	1069.6	0.2486	15.216	1182.6	0.2374
17	0.000		0.2552	7.459	1030.6	0.2373	14.649	1158.9	0.2258
18	0.000		0.2477	6.808	977.5	0.2276	13.666	1118.1	0.2155
19	0.000		0.2415	6.399	945.6	0.2192	12.821	1080.2	0.2068
20	0.000		0.2356	6.040	916.5	0.2117	12.090	1039.9	0.1991
21	0.000		0.2306	5.626	888.2	0.2050	11.179	988.5	0.1923
22	0.000		0.2264	4.981	843.3	0.1993	9.851	922.3	0.1866
23	0.000		0.2230	4.246	794.9	0.1946	8.298	849.0	0.1820
24	0.000		0.2207	1.949	651.0	0.1911	3.823	682.3	0.1786
25	0.000		0.2196	1.215	622.9	0.1896	2.352	633.4	0.1773

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.710	668.7	0.7396	6.411	651.5	0.7396	8.014	660.7	0.7396
2	16.502	1011.5	0.7396	21.675	890.2	0.7396	26.603	898.9	0.7396
3	22.203	1078.5	0.7195	28.838	921.2	0.7219	34.618	926.7	0.7237
4	25.157	1136.1	0.6662	32.318	958.0	0.6719	38.579	965.8	0.6763
5	26.327	1146.2	0.6004	33.769	977.6	0.6101	40.244	984.6	0.6174
6	26.697	1139.4	0.5356	34.330	992.3	0.5487	40.915	993.2	0.5581
7	26.820	1131.7	0.4793	34.645	1006.6	0.4947	41.269	996.6	0.5050
8	26.924	1127.9	0.4327	34.936	1020.8	0.4492	41.599	999.9	0.4597
9	27.642	1138.0	0.3937	35.929	1042.0	0.4104	42.701	1009.4	0.4207
10	27.529	1135.0	0.3603	35.985	1055.3	0.3772	42.742	1008.1	0.3873
11	27.231	1128.6	0.3322	35.843	1067.7	0.3490	42.630	1002.0	0.3588
12	26.811	1120.1	0.3084	35.571	1079.6	0.3248	42.165	993.1	0.3343
13	26.308	1110.3	0.2881	35.209	1091.1	0.3040	41.666	982.3	0.3132
14	25.735	1099.4	0.2705	34.764	1101.6	0.2858	41.079	970.3	0.2948
15	25.090	1087.3	0.2552	34.226	1110.5	0.2698	40.383	957.1	0.2785
16	24.356	1073.7	0.2418	33.576	1117.6	0.2557	39.547	941.9	0.2642
17	23.486	1058.4	0.2301	32.742	1120.6	0.2432	38.489	923.9	0.2514
18	22.278	1041.6	0.2197	31.526	1119.9	0.2321	37.018	903.8	0.2402
19	21.197	1017.0	0.2107	30.308	1108.4	0.2221	35.535	883.5	0.2301
20	19.889	983.2	0.2027	28.795	1083.3	0.2132	33.748	862.8	0.2211
21	18.284	929.5	0.1956	26.409	1029.4	0.2053	30.938	832.2	0.2131
22	16.055	872.4	0.1897	23.309	954.7	0.1986	27.297	794.6	0.2064
23	13.409	808.2	0.1849	19.459	882.3	0.1931	22.882	744.4	0.2006
24	6.164	666.7	0.1816	9.102	700.6	0.1896	10.656	645.4	0.1974
25	3.734	622.3	0.1802	5.439	640.6	0.1878	6.308	608.2	0.1951

Table 4-21. LS1 Burnup and TH Feedback Parameters Assembly B8 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.991	660.3	0.7396	9.180	671.7	0.7396	9.257	668.2	0.7396
2	29.343	677.6	0.7396	29.842	690.7	0.7396	30.043	681.0	0.7396
3	37.903	694.6	0.7247	38.476	693.1	0.7252	38.703	683.3	0.7254
4	42.077	921.7	0.6788	42.696	695.6	0.6799	42.940	684.8	0.6803
5	43.825	932.6	0.6216	44.498	698.5	0.6236	44.761	686.4	0.6244
6	44.519	935.6	0.5836	45.266	602.4	0.5668	45.554	688.7	0.5679
7	44.878	936.2	0.5112	45.714	607.2	0.5157	46.033	691.5	0.5174
8	45.215	937.2	0.4563	46.153	612.7	0.4721	46.507	694.7	0.4743
9	46.363	943.3	0.4274	47.421	619.2	0.4345	47.813	698.1	0.4371
10	46.416	944.9	0.3940	47.687	625.3	0.4026	48.016	601.7	0.4057
11	46.201	944.5	0.3854	47.480	631.3	0.3764	47.952	605.4	0.3791
12	45.619	943.5	0.3409	47.197	636.8	0.3521	47.713	609.4	0.3563
13	45.323	942.6	0.3196	46.789	641.7	0.3317	47.351	613.6	0.3366
14	44.727	941.4	0.3011	46.267	645.9	0.3137	46.877	616.1	0.3192
15	44.019	939.8	0.2847	45.619	649.3	0.2977	46.277	622.5	0.3039
16	43.164	937.3	0.2702	44.809	651.6	0.2834	45.515	627.0	0.2901
17	42.071	932.7	0.2574	43.747	653.6	0.2707	44.600	631.4	0.2779
18	40.647	925.6	0.2461	42.239	654.5	0.2595	43.036	635.6	0.2672
19	38.974	914.1	0.2358	40.654	653.8	0.2492	41.484	638.7	0.2572
20	37.048	896.7	0.2267	38.683	651.2	0.2398	39.527	640.0	0.2481
21	33.931	864.7	0.2185	35.601	644.7	0.2315	36.322	637.8	0.2399
22	29.896	624.0	0.2117	31.357	635.8	0.2245	32.123	632.6	0.2330
23	24.673	767.6	0.2058	25.869	621.2	0.2178	26.606	620.6	0.2262
24	11.724	656.1	0.2027	12.210	588.5	0.2138	12.496	588.6	0.2216
25	6.906	614.0	0.2001	7.150	575.7	0.2096	7.292	575.6	0.2163

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.357	566.4	0.7396
2	30.298	576.1	0.7396
3	38.986	578.2	0.7256
4	43.234	578.6	0.6809
5	45.071	579.6	0.6253
6	45.690	581.0	0.5693
7	46.404	582.9	0.5193
8	46.919	585.2	0.4767
9	48.277	588.0	0.4402
10	48.535	590.8	0.4094
11	48.528	594.1	0.3836
12	48.356	597.7	0.3616
13	48.069	601.6	0.3428
14	47.680	606.6	0.3265
15	47.173	611.6	0.3123
16	46.512	617.2	0.2998
17	45.603	623.1	0.2889
18	44.248	629.3	0.2795
19	42.787	634.4	0.2707
20	40.893	638.0	0.2626
21	37.685	637.9	0.2550
22	33.427	634.5	0.2487
23	27.710	623.2	0.2416
24	12.994	589.6	0.2363
25	7.540	576.2	0.2288

Table 4-22. LS1 Burnup and TH Feedback Parameters Assembly B9

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.5 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.5 Cy 4	208.5 Cy 4	208.5 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.186	628.8	0.7396	2.641	660.0	0.7396
2	0.000		0.7396	4.150	829.6	0.7396	9.028	990.4	0.7396
3	0.000		0.7276	5.895	907.8	0.7350	12.715	1125.2	0.7233
4	0.000	Data	0.6816	7.156	1005.6	0.6977	14.846	1230.4	0.6732
5	0.000	Not	0.6908	7.943	1072.4	0.6442	16.790	1250.5	0.6101
6	0.000	Required	0.6269	8.414	1114.6	0.5834	16.162	1237.8	0.5467
7	0.000		0.4744	8.702	1141.3	0.5248	16.316	1221.1	0.4904
8	0.000		0.4318	8.919	1161.8	0.4729	16.424	1207.3	0.4428
9	0.000		0.3964	9.410	1209.6	0.4283	16.679	1215.2	0.4027
10	0.000		0.3665	9.390	1207.6	0.3902	16.696	1207.4	0.3681
11	0.000		0.3419	9.235	1192.4	0.3587	16.694	1201.6	0.3391
12	0.000		0.3213	9.005	1170.0	0.3322	16.420	1196.2	0.3144
13	0.000		0.3040	8.732	1144.1	0.3099	16.098	1190.1	0.2934
14	0.000		0.2893	8.435	1116.5	0.2910	15.728	1181.2	0.2753
15	0.000		0.2768	8.126	1088.6	0.2749	15.303	1167.2	0.2596
16	0.000		0.2662	7.808	1060.6	0.2609	14.811	1146.6	0.2460
17	0.000		0.2572	7.454	1030.3	0.2488	14.211	1117.9	0.2342
18	0.000		0.2497	6.891	984.1	0.2384	13.298	1078.5	0.2237
19	0.000		0.2434	6.546	958.9	0.2292	12.615	1041.9	0.2148
20	0.000		0.2377	6.221	932.0	0.2210	11.940	1005.3	0.2068
21	0.000		0.2327	5.819	902.2	0.2137	11.091	960.6	0.1998
22	0.000		0.2284	5.169	856.1	0.2074	9.828	902.8	0.1937
23	0.000		0.2249	4.417	805.9	0.2022	8.328	837.0	0.1885
24	0.000		0.2226	2.034	665.5	0.1984	3.858	678.8	0.1852
25	0.000		0.2214	1.265	625.4	0.1988	2.370	631.4	0.1839

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.409	655.6	0.7396	6.272	660.6	0.7396	8.044	672.0	0.7396
2	15.604	957.9	0.7396	21.508	930.5	0.7396	26.691	939.3	0.7396
3	21.176	1023.2	0.7231	28.391	961.9	0.7233	34.676	957.7	0.7241
4	24.112	1083.6	0.6738	31.804	996.7	0.6762	38.532	1005.6	0.6775
5	25.294	1102.1	0.6118	33.183	1011.4	0.6164	40.060	1018.7	0.6194
6	25.669	1102.4	0.5493	33.696	1021.9	0.5553	40.594	1020.5	0.5607
7	25.776	1098.5	0.4939	33.948	1033.1	0.5017	40.827	1018.8	0.5077
8	25.872	1097.7	0.4472	34.198	1045.0	0.4563	41.075	1018.7	0.4626
9	26.564	1108.5	0.4077	35.138	1064.6	0.4174	42.094	1025.7	0.4238
10	26.448	1105.7	0.3739	35.167	1076.5	0.3840	42.098	1023.5	0.3904
11	26.154	1098.7	0.3452	35.015	1087.8	0.3554	41.890	1018.5	0.3620
12	25.754	1088.8	0.3208	34.760	1098.9	0.3310	41.645	1011.4	0.3374
13	25.281	1077.2	0.3000	34.406	1109.6	0.3098	41.106	1003.2	0.3161
14	24.744	1064.4	0.2819	33.986	1119.4	0.2913	40.574	993.5	0.2976
15	24.134	1050.5	0.2662	33.475	1127.8	0.2751	39.931	982.2	0.2812
16	23.434	1035.0	0.2525	32.849	1134.1	0.2607	39.142	968.4	0.2667
17	22.694	1017.5	0.2406	32.035	1136.3	0.2480	38.128	951.8	0.2539
18	21.402	997.6	0.2300	30.810	1133.5	0.2367	36.681	933.8	0.2425
19	20.329	970.4	0.2207	29.548	1117.5	0.2266	35.192	915.7	0.2324
20	19.142	935.9	0.2124	27.975	1085.5	0.2176	33.381	897.2	0.2233
21	17.512	885.6	0.2052	25.576	1024.8	0.2095	30.570	866.0	0.2154
22	15.388	833.9	0.1990	22.512	955.4	0.2028	26.949	825.7	0.2086
23	12.880	776.1	0.1939	18.747	871.7	0.1972	22.368	770.1	0.2029
24	6.913	652.6	0.1904	8.716	694.7	0.1937	10.479	657.1	0.1995
25	3.659	613.8	0.1888	5.191	637.2	0.1918	6.189	615.1	0.1974

Table 4-22. LS1 Burnup and TH Feedback Parameters Assembly B9 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	9.138	673.2	0.7396	9.368	674.0	0.7396	9.459	669.8	0.7396
2	29.724	919.3	0.7396	30.322	596.8	0.7396	30.559	584.7	0.7396
3	38.279	935.6	0.7247	38.965	599.1	0.7253	39.234	587.0	0.7255
4	42.353	964.7	0.6790	43.096	602.2	0.6803	43.385	588.8	0.6808
5	43.974	977.4	0.6221	44.783	605.7	0.6245	45.097	591.1	0.6254
6	44.655	984.0	0.5643	45.450	610.3	0.5679	45.798	594.1	0.5694
7	44.820	988.4	0.5118	45.814	615.7	0.5170	46.202	597.8	0.5190
8	45.094	992.1	0.4668	46.194	621.5	0.4736	46.626	601.8	0.4761
9	46.174	1000.7	0.4281	47.392	627.9	0.4382	47.873	606.2	0.4394
10	46.189	1002.2	0.3947	47.509	633.6	0.4042	48.039	610.7	0.4080
11	45.982	1002.4	0.3662	47.395	638.7	0.3767	47.876	615.4	0.3812
12	45.635	1002.1	0.3416	47.131	643.4	0.3530	47.764	620.2	0.3582
13	45.190	1001.2	0.3203	46.757	647.4	0.3322	47.443	625.1	0.3381
14	44.649	1000.0	0.3016	46.273	650.6	0.3139	47.012	630.1	0.3203
15	43.990	997.7	0.2851	45.656	653.0	0.2976	46.445	634.8	0.3045
16	43.174	993.6	0.2705	44.868	654.6	0.2831	45.704	639.3	0.2903
17	42.111	987.0	0.2576	43.820	655.5	0.2701	44.699	643.4	0.2776
18	40.600	978.1	0.2461	42.311	655.6	0.2586	43.227	646.9	0.2665
19	39.014	964.6	0.2358	40.700	654.1	0.2483	41.637	648.9	0.2563
20	37.062	945.6	0.2267	38.693	651.0	0.2389	39.630	648.9	0.2470
21	33.974	909.6	0.2186	35.483	644.1	0.2306	36.380	645.1	0.2387
22	29.982	863.4	0.2117	31.327	635.0	0.2235	32.163	638.3	0.2316
23	24.848	799.2	0.2060	25.927	620.3	0.2171	26.607	624.6	0.2250
24	11.708	671.1	0.2026	12.185	588.0	0.2129	12.489	590.2	0.2203
25	6.890	623.1	0.2003	7.128	575.4	0.2091	7.279	576.4	0.2165

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.565	566.8	0.7396
2	30.828	576.9	0.7396
3	39.632	579.0	0.7257
4	43.696	579.7	0.6814
5	45.428	580.8	0.6263
6	46.160	582.4	0.5708
7	46.605	584.7	0.5210
8	47.077	587.3	0.4788
9	48.385	590.6	0.4427
10	48.612	593.9	0.4121
11	48.617	597.6	0.3862
12	48.482	601.6	0.3640
13	48.246	606.5	0.3449
14	47.907	611.5	0.3283
15	47.440	617.1	0.3137
16	46.806	623.1	0.3007
17	45.910	629.2	0.2893
18	44.549	635.5	0.2795
19	43.054	640.9	0.2704
20	41.109	644.5	0.2619
21	37.850	644.0	0.2541
22	33.556	640.1	0.2477
23	27.791	627.7	0.2408
24	13.023	591.8	0.2351
25	7.543	577.1	0.2281

Table 4-23. LS1 Burnup and TH Feedback Parameters Assembly B10

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.5 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.5 Cy 4	208.5 Cy 4	208.5 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.354	639.0	0.7396	2.676	657.4	0.7396
2	0.000		0.7396	4.725	874.4	0.7396	9.500	879.2	0.7396
3	0.000		0.7284	6.700	989.0	0.7288	13.331	1103.6	0.7219
4	0.000	Data	0.6623	8.068	1083.4	0.6829	15.530	1201.9	0.6687
5	0.000	Not	0.5903	8.835	1153.8	0.6201	16.496	1226.8	0.6013
6	0.000	Required	0.5252	9.217	1190.6	0.5534	16.856	1224.0	0.5342
7	0.000		0.4718	9.408	1209.4	0.4932	16.988	1216.6	0.4762
8	0.000		0.4286	9.541	1222.7	0.4428	17.070	1210.3	0.4285
9	0.000		0.3929	9.975	1267.1	0.4004	17.606	1223.0	0.3887
10	0.000		0.3631	9.690	1258.3	0.3646	17.492	1219.4	0.3549
11	0.000		0.3385	9.669	1235.7	0.3349	17.246	1216.2	0.3267
12	0.000		0.3180	9.364	1205.1	0.3103	16.909	1212.2	0.3030
13	0.000		0.3009	9.007	1170.2	0.2897	16.606	1206.5	0.2828
14	0.000		0.2864	8.617	1133.3	0.2723	16.048	1198.1	0.2654
15	0.000		0.2740	8.205	1095.6	0.2575	15.537	1186.0	0.2505
16	0.000		0.2635	7.772	1057.6	0.2448	14.962	1168.6	0.2375
17	0.000		0.2545	7.294	1017.0	0.2339	14.284	1145.0	0.2260
18	0.000		0.2470	6.631	963.6	0.2246	13.303	1108.2	0.2159
19	0.000		0.2408	6.214	931.5	0.2166	12.567	1072.6	0.2073
20	0.000		0.2349	5.854	904.8	0.2095	11.845	1033.6	0.1996
21	0.000		0.2300	5.443	875.2	0.2030	10.948	983.4	0.1929
22	0.000		0.2259	4.813	831.9	0.1975	9.629	917.2	0.1872
23	0.000		0.2225	4.096	785.4	0.1930	8.093	844.5	0.1826
24	0.000		0.2203	1.874	657.0	0.1896	3.722	680.5	0.1793
25	0.000		0.2191	1.167	620.4	0.1883	2.283	632.1	0.1780

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.970	625.2	0.7396	4.821	604.6	0.7396	6.812	620.8	0.7396
2	14.101	816.6	0.7396	16.927	718.0	0.7396	20.126	774.4	0.7396
3	19.222	853.5	0.7276	22.724	731.4	0.7314	26.747	797.0	0.7337
4	22.000	888.9	0.6824	25.621	748.7	0.6916	30.226	823.4	0.6972
5	23.234	905.8	0.6244	27.271	760.7	0.6403	31.927	841.3	0.6499
6	23.763	916.0	0.5654	28.001	772.6	0.5877	33.003	866.6	0.6010
7	24.003	923.6	0.5125	28.474	785.4	0.5403	33.608	876.3	0.5553
8	24.167	930.3	0.4670	28.892	799.0	0.4989	34.060	879.0	0.5145
9	24.918	943.2	0.4274	29.926	817.1	0.4621	35.164	884.2	0.4774
10	24.885	947.3	0.3936	30.100	830.8	0.4301	35.320	883.0	0.4451
11	24.641	948.7	0.3649	30.081	843.4	0.4025	35.284	880.2	0.4170
12	24.294	948.1	0.3403	29.922	855.2	0.3785	35.051	876.1	0.3925
13	23.852	945.6	0.3193	29.656	866.4	0.3575	34.719	871.1	0.3709
14	23.328	941.1	0.3010	29.293	876.6	0.3391	34.274	865.0	0.3518
15	22.720	934.6	0.2851	28.828	886.1	0.3227	33.710	857.7	0.3350
16	22.013	926.0	0.2711	28.242	894.0	0.3083	32.998	848.5	0.3201
17	21.158	914.6	0.2588	27.474	899.6	0.2955	32.073	837.2	0.3069
18	19.954	900.3	0.2485	26.319	903.1	0.2848	30.756	825.7	0.2957
19	18.895	880.0	0.2388	25.189	899.0	0.2743	29.611	816.9	0.2851
20	17.751	854.4	0.2299	23.857	886.6	0.2645	28.242	821.3	0.2757
21	16.215	817.1	0.2217	21.877	857.4	0.2551	26.119	812.0	0.2668
22	14.201	778.2	0.2152	19.298	822.4	0.2478	23.123	783.6	0.2590
23	11.808	733.0	0.2095	16.063	773.0	0.2410	19.211	739.6	0.2519
24	5.353	633.3	0.2051	7.280	651.3	0.2363	8.741	640.2	0.2472
25	3.168	601.6	0.2020	4.242	610.3	0.2311	5.160	610.3	0.2435

Table 4-23. LS1 Burnup and TH Feedback Parameters Assembly B10 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.617	641.6	0.7396	7.711	628.6	0.7396	8.455	639.7	0.7396
2	22.666	836.7	0.7396	25.769	778.4	0.7396	27.907	812.8	0.7396
3	29.697	853.6	0.7338	33.712	800.5	0.7352	36.425	843.4	0.7355
4	33.357	875.4	0.6981	37.890	837.3	0.7016	40.975	891.1	0.7025
5	35.202	893.3	0.6519	40.117	865.6	0.6579	43.443	923.6	0.6594
6	36.629	938.6	0.6042	41.797	884.9	0.6121	45.232	938.7	0.6140
7	37.356	955.1	0.5587	42.793	905.9	0.5678	46.317	951.2	0.5698
8	37.834	958.3	0.5176	43.549	928.1	0.5271	47.166	964.5	0.5290
9	38.984	964.5	0.4804	45.001	953.0	0.4894	48.746	983.1	0.4911
10	39.140	964.6	0.4478	45.302	965.2	0.4563	49.126	994.8	0.4575
11	39.081	964.1	0.4195	45.270	967.5	0.4270	49.150	1003.2	0.4279
12	38.871	964.6	0.3947	45.005	962.8	0.4014	48.915	1007.7	0.4020
13	38.658	966.9	0.3729	44.676	953.3	0.3789	48.495	1009.1	0.3793
14	38.112	967.0	0.3537	43.976	940.3	0.3590	47.869	1005.1	0.3592
15	37.638	965.6	0.3368	43.199	923.6	0.3414	47.019	994.2	0.3414
16	36.805	962.8	0.3214	42.207	903.1	0.3258	45.901	976.7	0.3256
17	35.842	957.6	0.3078	40.917	877.7	0.3118	44.428	949.4	0.3116
18	34.474	950.7	0.2963	39.179	849.9	0.3000	42.487	918.4	0.2996
19	33.138	938.4	0.2854	37.475	823.3	0.2889	40.629	887.1	0.2885
20	31.705	917.2	0.2758	35.683	798.0	0.2791	38.492	855.4	0.2787
21	29.295	880.9	0.2666	32.843	768.8	0.2699	35.355	818.7	0.2696
22	25.944	838.2	0.2588	29.020	738.0	0.2621	31.203	779.9	0.2618
23	21.524	780.8	0.2517	23.994	700.3	0.2550	25.760	733.5	0.2549
24	9.854	660.3	0.2469	11.051	626.8	0.2505	11.930	643.4	0.2505
25	5.813	619.7	0.2439	6.482	598.2	0.2474	6.985	608.2	0.2474

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.961	658.3	0.7396
2	31.931	852.9	0.7396
3	41.129	858.6	0.7357
4	45.861	872.7	0.7033
5	48.312	871.3	0.6612
6	50.035	866.2	0.6166
7	51.129	866.9	0.5732
8	52.058	873.1	0.5330
9	53.801	885.9	0.4956
10	54.348	899.2	0.4623
11	54.562	914.7	0.4330
12	54.631	931.5	0.4071
13	54.326	949.7	0.3843
14	53.929	969.4	0.3639
15	53.312	990.0	0.3458
16	52.412	1009.6	0.3296
17	51.111	1025.4	0.3151
18	49.249	1034.6	0.3026
19	47.275	1031.2	0.2909
20	45.025	1011.6	0.2805
21	41.409	968.9	0.2708
22	36.689	912.5	0.2627
23	30.163	835.9	0.2555
24	14.166	689.6	0.2508
25	8.263	633.0	0.2478

Table 4-24. LS1 Burnup and TH Feedback Parameters Assembly C1

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.543	638.0	0.7396	2.776	625.1	0.7396
2	0.000		0.7396	5.182	856.3	0.7396	9.387	806.2	0.7396
3	0.000		0.7342	7.196	933.6	0.7342	13.258	881.6	0.7364
4	0.000	Data	0.6972	8.386	1015.6	0.6972	15.477	951.3	0.7023
5	0.000	Not	0.6468	8.629	1048.0	0.6468	16.313	979.4	0.6552
6	0.000	Required	0.5913	8.698	1052.9	0.5913	16.513	989.1	0.6030
7	0.000		0.5380	8.653	1049.7	0.5380	16.540	994.3	0.5522
8	0.000		0.4910	8.660	1050.3	0.4910	16.648	1001.8	0.5067
9	0.000		0.4502	9.200	1075.9	0.4502	17.289	1024.4	0.4663
10	0.000		0.4151	9.173	1073.9	0.4151	17.361	1032.0	0.4312
11	0.000		0.3850	9.063	1065.5	0.3850	17.323	1037.6	0.4009
12	0.000		0.3592	8.910	1054.0	0.3592	17.231	1042.3	0.3746
13	0.000		0.3370	8.730	1040.6	0.3370	17.110	1046.9	0.3516
14	0.000		0.3178	8.526	1025.7	0.3178	16.959	1051.1	0.3315
15	0.000		0.3009	8.294	1009.0	0.3009	16.765	1054.1	0.3136
16	0.000		0.2862	8.023	989.8	0.2862	16.504	1054.8	0.2977
17	0.000		0.2732	7.697	967.3	0.2732	16.135	1051.5	0.2835
18	0.000		0.2619	7.296	940.4	0.2619	15.601	1041.1	0.2709
19	0.000		0.2519	6.804	908.4	0.2519	14.831	1019.7	0.2596
20	0.000		0.2434	6.205	871.1	0.2434	13.752	984.0	0.2498
21	0.000		0.2362	5.362	821.3	0.2362	12.077	925.2	0.2415
22	0.000		0.2304	4.488	772.7	0.2304	10.171	857.5	0.2348
23	0.000		0.2258	3.618	727.4	0.2258	8.153	788.1	0.2291
24	0.000		0.2228	1.599	631.6	0.2228	3.659	657.3	0.2255
25	0.000		0.2214	0.963	603.8	0.2214	2.150	616.2	0.2237

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	3.734	618.5	0.7396	4.763	665.6	0.7396	6.044	640.4	0.7396
2	12.818	791.3	0.7396	16.272	980.4	0.7396	20.456	858.6	0.7396
3	17.620	840.5	0.7387	22.151	1020.1	0.7341	27.487	898.4	0.7347
4	20.675	895.1	0.7042	25.261	1042.7	0.6998	31.220	948.4	0.7014
5	22.471	955.4	0.6598	26.763	1029.0	0.6548	33.060	974.8	0.6570
6	23.368	1014.6	0.6100	27.531	1010.4	0.6049	34.009	990.3	0.6078
7	23.831	1053.6	0.5597	27.888	995.4	0.5554	34.485	1000.7	0.5583
8	24.023	1061.3	0.5127	28.025	987.7	0.5095	34.753	1012.2	0.5124
9	24.799	1073.6	0.4713	28.810	988.8	0.4690	35.713	1027.9	0.4717
10	25.171	1102.1	0.4365	29.120	980.3	0.4349	35.999	1025.7	0.4371
11	25.103	1099.2	0.4050	29.024	976.5	0.4041	35.834	1019.5	0.4063
12	24.848	1083.6	0.3775	28.753	974.5	0.3772	35.448	1009.3	0.3793
13	24.579	1070.0	0.3539	28.470	972.3	0.3540	35.000	994.8	0.3561
14	24.218	1050.6	0.3331	28.097	970.7	0.3334	34.429	977.7	0.3356
15	23.782	1028.8	0.3147	27.647	968.8	0.3154	33.742	957.7	0.3176
16	23.257	1005.6	0.2986	27.096	965.2	0.2993	32.902	933.9	0.3016
17	22.695	980.5	0.2843	26.389	959.2	0.2852	31.843	905.7	0.2876
18	21.747	954.4	0.2717	25.471	949.8	0.2726	30.637	876.7	0.2751
19	20.675	929.8	0.2606	24.301	936.8	0.2616	29.010	849.0	0.2642
20	19.305	907.0	0.2512	22.786	917.9	0.2521	27.171	825.5	0.2549
21	17.121	868.4	0.2429	20.335	884.2	0.2437	24.311	796.8	0.2467
22	14.513	817.9	0.2360	17.357	839.7	0.2367	20.623	762.6	0.2399
23	11.551	754.8	0.2304	13.854	778.8	0.2311	16.635	718.8	0.2343
24	6.132	640.6	0.2268	6.139	650.2	0.2274	7.376	628.7	0.2308
25	2.973	605.7	0.2250	3.534	610.6	0.2256	4.223	599.2	0.2290

Table 4-24. LS1 Burnup and TH Feedback Parameters Assembly C1 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	8.810	641.9	0.7396	8.192	649.4	0.7396	8.196	672.9	0.7396
2	22.894	653.6	0.7396	26.931	652.8	0.7396	26.943	598.6	0.7396
3	30.616	695.4	0.7349	35.374	661.6	0.7350	35.388	601.7	0.735
4	34.728	947.2	0.7018	39.673	675.8	0.7024	39.689	607.3	0.7025
5	36.743	972.2	0.6576	41.734	679.6	0.6594	41.752	613.0	0.6594
6	37.745	979.8	0.6085	42.798	684.3	0.6118	42.817	615.8	0.6118
7	38.234	981.7	0.6593	43.403	693.5	0.5840	43.424	621.5	0.5841
8	38.525	985.3	0.6134	43.661	906.8	0.5195	43.685	630.2	0.5197
9	39.646	994.1	0.4728	45.101	924.8	0.4797	45.127	636.0	0.4798
10	39.619	992.2	0.4381	45.633	938.0	0.4454	45.661	641.9	0.4456
11	39.637	989.7	0.4074	45.623	952.6	0.4148	45.653	647.8	0.4151
12	39.241	988.2	0.3805	45.305	967.9	0.3881	45.336	650.7	0.3883
13	38.794	988.3	0.3573	45.027	982.6	0.3646	45.059	653.7	0.3649
14	38.258	993.5	0.3368	44.651	996.8	0.3440	44.684	656.7	0.3442
15	37.633	1002.7	0.3187	44.168	1009.6	0.3256	44.202	659.7	0.3258
16	36.829	1008.1	0.3027	43.487	1020.9	0.3093	43.520	656.7	0.3095
17	35.722	1000.9	0.2885	42.470	1029.2	0.2947	42.503	656.7	0.2949
18	34.270	979.4	0.2759	41.048	1032.0	0.2818	41.081	656.7	0.2820
19	32.545	951.0	0.2649	39.255	1026.7	0.2702	39.287	653.7	0.2704
20	30.477	919.2	0.2554	36.972	1006.0	0.2602	37.004	653.7	0.2604
21	27.302	877.4	0.2472	33.322	984.1	0.2514	33.352	647.8	0.2517
22	23.428	828.9	0.2403	28.768	907.2	0.2441	28.794	636.0	0.2443
23	18.729	768.9	0.2346	23.083	829.6	0.2380	23.084	621.5	0.2382
24	8.325	649.6	0.2311	10.338	675.5	0.2343	10.347	587.8	0.2345
25	4.767	610.9	0.2292	5.884	624.2	0.2323	5.889	576.7	0.2324

Table 4-25. LS1 Burnup and TH Feedback Parameters Assembly C2

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.704	646.6	0.7396	3.158	637.3	0.7396
2	0.000		0.7396	5.654	889.0	0.7396	10.612	858.6	0.7396
3	0.000		0.7298	7.763	971.8	0.7298	14.787	946.5	0.7306
4	0.000	Data	0.6870	8.996	1060.4	0.6870	17.064	1022.6	0.6889
5	0.000	Not	0.6299	9.461	1098.1	0.6299	17.889	1050.7	0.6336
6	0.000	Required	0.5692	9.542	1102.4	0.5692	18.070	1058.5	0.5762
7	0.000		0.5135	9.512	1100.1	0.5135	18.088	1062.3	0.5214
8	0.000		0.4660	9.532	1101.5	0.4660	18.190	1068.9	0.4761
9	0.000		0.4257	9.890	1130.1	0.4257	18.818	1090.7	0.4352
10	0.000		0.3912	9.655	1127.3	0.3912	18.873	1098.0	0.4009
11	0.000		0.3617	9.725	1116.8	0.3617	18.616	1104.1	0.3715
12	0.000		0.3367	9.643	1102.5	0.3367	18.701	1109.6	0.3461
13	0.000		0.3154	9.330	1085.9	0.3154	18.548	1114.6	0.3241
14	0.000		0.2969	9.090	1067.5	0.2969	18.360	1119.0	0.3048
15	0.000		0.2809	8.822	1047.4	0.2809	18.131	1122.2	0.2878
16	0.000		0.2668	8.516	1025.0	0.2668	17.850	1124.3	0.2727
17	0.000		0.2545	8.161	999.5	0.2545	17.481	1123.2	0.2592
18	0.000		0.2438	7.738	970.1	0.2438	16.959	1114.9	0.2471
19	0.000		0.2344	7.223	935.6	0.2344	16.176	1092.7	0.2364
20	0.000		0.2263	6.592	895.0	0.2263	15.038	1052.1	0.2271
21	0.000		0.2195	5.705	841.2	0.2195	13.232	982.5	0.2191
22	0.000		0.2139	4.789	789.1	0.2139	11.173	902.8	0.2126
23	0.000		0.2096	3.892	741.4	0.2098	9.008	822.4	0.2074
24	0.000		0.2066	1.743	638.1	0.2066	4.105	672.1	0.2040
25	0.000		0.2053	1.060	608.0	0.2053	2.444	625.3	0.2024

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.364	634.3	0.7396	5.065	630.5	0.7396	5.870	609.7	0.7396
2	14.601	851.9	0.7396	17.108	818.1	0.7396	19.758	735.7	0.7396
3	20.126	890.6	0.7326	22.932	835.3	0.7338	26.246	752.6	0.7354
4	22.624	923.3	0.6945	25.797	854.9	0.6976	29.441	774.3	0.7018
5	23.759	932.0	0.6438	26.788	861.6	0.6494	30.680	791.1	0.6572
6	23.941	932.1	0.5896	26.999	865.1	0.5976	31.117	806.7	0.6095
7	23.923	929.2	0.5385	27.003	867.8	0.5486	31.331	821.4	0.5639
8	23.986	926.1	0.4935	27.083	869.9	0.5048	31.630	837.2	0.5228
9	24.644	928.5	0.4540	27.791	876.0	0.4657	32.785	870.2	0.4881
10	24.651	924.7	0.4198	27.808	877.2	0.4319	33.803	949.4	0.4554
11	24.526	919.3	0.3904	27.686	877.6	0.4024	34.029	978.7	0.4248
12	24.332	913.1	0.3651	27.487	876.9	0.3770	33.921	986.5	0.3974
13	24.116	908.1	0.3432	27.262	876.0	0.3549	33.917	1005.8	0.3748
14	23.829	900.5	0.3237	26.967	874.9	0.3353	33.685	1002.5	0.3530
15	23.478	891.2	0.3062	26.603	873.3	0.3176	33.083	990.5	0.3337
16	23.056	880.5	0.2906	26.157	870.4	0.3019	32.548	982.8	0.3170
17	22.623	868.2	0.2768	25.586	865.7	0.2878	31.765	963.9	0.3016
18	21.821	855.0	0.2644	24.829	859.1	0.2753	30.714	940.3	0.2881
19	20.850	841.4	0.2538	23.789	850.9	0.2644	29.390	917.3	0.2764
20	19.496	826.0	0.2444	22.336	839.2	0.2551	27.567	888.3	0.2663
21	17.325	800.7	0.2368	19.972	817.0	0.2475	24.685	847.8	0.2580
22	14.759	767.0	0.2305	17.134	786.6	0.2413	21.175	801.3	0.2512
23	11.874	721.4	0.2250	13.826	741.7	0.2357	17.005	743.9	0.2451
24	5.368	629.1	0.2210	6.228	636.9	0.2313	7.582	635.2	0.2402
25	3.139	598.9	0.2183	3.608	602.7	0.2282	4.333	601.1	0.2367

Table 4-25. LS1 Burnup and TH Feedback Parameters Assembly C2 (Continued)

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.173	591.6	0.7396	6.943	608.7	0.7396	6.952	589.0	0.7396
2	20.731	665.4	0.7396	23.016	713.4	0.7396	23.041	642.7	0.7396
3	27.484	676.1	0.7363	30.157	717.5	0.7377	30.188	644.6	0.7377
4	30.602	690.4	0.7041	33.648	727.3	0.7076	33.679	650.7	0.7076
5	32.166	703.3	0.6616	35.143	735.7	0.6678	35.177	659.7	0.6679
6	32.726	716.1	0.6163	35.870	746.7	0.6255	35.907	668.6	0.6256
7	33.051	727.8	0.5730	36.390	759.7	0.5850	36.430	678.0	0.5851
8	33.447	738.3	0.5337	36.987	773.3	0.5479	37.030	687.3	0.5481
9	34.685	747.3	0.4981	38.434	787.7	0.5136	38.479	693.6	0.5137
10	35.717	748.9	0.4676	39.571	795.1	0.4834	39.618	700.0	0.4835
11	35.978	752.7	0.4376	39.993	806.5	0.4540	40.041	703.2	0.4541
12	35.908	756.9	0.4106	40.104	819.5	0.4275	40.152	703.2	0.4276
13	35.924	759.2	0.3877	40.277	831.0	0.4046	40.325	703.2	0.4047
14	35.624	762.7	0.3663	40.169	844.5	0.3833	40.207	703.2	0.3833
15	35.153	766.2	0.3471	39.876	858.6	0.3639	39.925	706.4	0.3641
16	34.534	768.0	0.3303	39.528	871.9	0.3469	39.576	703.2	0.3470
17	33.848	768.8	0.3149	38.905	884.6	0.3313	38.953	703.2	0.3315
18	32.804	768.6	0.3012	37.997	895.4	0.3175	38.044	700.0	0.3176
19	31.471	767.5	0.2896	36.764	903.4	0.3057	36.809	693.6	0.3057
20	29.721	776.7	0.2803	35.003	902.6	0.2958	35.048	693.6	0.2959
21	27.165	816.2	0.2747	32.137	878.0	0.2890	32.178	681.1	0.2891
22	23.573	804.0	0.2685	28.100	843.9	0.2821	28.136	665.6	0.2822
23	18.965	753.9	0.2616	22.701	786.8	0.2747	22.731	647.6	0.2748
24	8.427	639.8	0.2559	10.129	658.8	0.2688	10.137	601.7	0.2689
25	4.602	605.0	0.2521	5.729	613.1	0.2649	5.736	582.2	0.2649

Table 4-28. LS1 Burnup and TH Feedback Parameters Assembly C3

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.827	653.2	0.7396	3.256	636.5	0.7396
2	0.000		0.7396	6.103	921.0	0.7396	11.026	856.1	0.7396
3	0.000		0.7253	8.379	1015.1	0.7253	15.258	936.4	0.7284
4	0.000	Data	0.6770	9.606	1107.4	0.6770	17.419	1003.6	0.6843
5	0.000	Not	0.6145	9.951	1135.0	0.6145	18.091	1028.3	0.6270
6	0.000	Required	0.5513	9.903	1131.1	0.5513	18.158	1037.2	0.5682
7	0.000		0.4958	9.785	1121.7	0.4958	18.114	1042.9	0.5181
8	0.000		0.4498	9.747	1118.6	0.4498	18.181	1051.1	0.4699
9	0.000		0.4110	10.070	1144.7	0.4110	18.788	1073.7	0.4309
10	0.000		0.3777	10.017	1140.3	0.3777	18.845	1082.5	0.3973
11	0.000		0.3495	9.883	1129.5	0.3495	18.805	1090.2	0.3684
12	0.000		0.3254	9.705	1116.3	0.3254	18.714	1097.3	0.3435
13	0.000		0.3048	9.498	1099.0	0.3048	18.587	1103.9	0.3218
14	0.000		0.2870	9.264	1080.8	0.2870	18.427	1110.0	0.3028
15	0.000		0.2715	9.001	1060.8	0.2715	18.229	1115.4	0.2860
16	0.000		0.2579	8.701	1038.5	0.2579	17.979	1119.6	0.2710
17	0.000		0.2460	8.348	1012.6	0.2460	17.640	1120.8	0.2576
18	0.000		0.2355	7.925	983.0	0.2355	17.146	1114.9	0.2457
19	0.000		0.2263	7.408	947.8	0.2263	16.391	1095.2	0.2351
20	0.000		0.2185	6.773	906.5	0.2185	15.278	1056.7	0.2257
21	0.000		0.2118	5.872	851.1	0.2118	13.484	988.7	0.2178
22	0.000		0.2064	4.934	797.1	0.2064	11.414	909.2	0.2112
23	0.000		0.2022	4.009	747.4	0.2022	9.212	827.7	0.2060
24	0.000		0.1992	1.794	640.4	0.1992	4.193	673.9	0.2026
25	0.000		0.1980	1.094	609.5	0.1980	2.496	628.1	0.2008

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.255	620.5	0.7396	4.796	613.9	0.7396	5.086	641.0	0.7396
2	14.437	789.6	0.7396	16.223	762.7	0.7396	20.454	860.6	0.7396
3	19.582	816.7	0.7320	21.759	765.2	0.7338	27.141	900.0	0.7344
4	22.129	844.0	0.6933	24.458	781.6	0.6976	30.486	950.4	0.6992
5	22.992	857.8	0.6427	25.398	790.0	0.6502	31.786	982.5	0.6530
6	23.177	866.5	0.5901	25.645	796.8	0.6007	32.266	1002.6	0.6037
7	23.210	872.2	0.5416	25.734	803.1	0.5546	32.604	1016.0	0.5588
8	23.324	875.8	0.4988	25.898	808.7	0.5134	32.794	1027.3	0.5143
9	24.013	881.9	0.4600	26.659	816.6	0.4757	33.748	1044.6	0.4757
10	24.060	881.2	0.4263	26.740	820.7	0.4425	33.889	1050.4	0.4416
11	23.988	878.7	0.3970	26.693	823.6	0.4134	33.821	1048.4	0.4122
12	23.842	874.6	0.3714	26.586	825.8	0.3878	33.604	1040.2	0.3883
13	23.643	869.3	0.3490	26.381	827.4	0.3653	33.278	1027.4	0.3635
14	23.398	863.0	0.3293	26.144	828.3	0.3453	32.855	1010.7	0.3435
15	23.098	855.5	0.3117	25.847	828.6	0.3276	32.326	990.4	0.3257
16	22.729	846.6	0.2960	25.472	827.9	0.3116	31.661	965.6	0.3099
17	22.253	837.0	0.2820	24.979	826.0	0.2973	30.808	935.7	0.2958
18	21.607	826.2	0.2695	24.305	822.6	0.2846	29.741	904.3	0.2834
19	20.692	815.1	0.2586	23.345	817.6	0.2736	28.405	876.2	0.2726
20	19.389	802.0	0.2494	21.972	809.7	0.2643	26.883	849.1	0.2635
21	17.270	780.1	0.2418	19.695	792.1	0.2569	23.853	816.6	0.2559
22	14.750	750.6	0.2356	16.947	767.4	0.2509	20.656	778.7	0.2499
23	11.896	710.3	0.2299	13.718	728.4	0.2451	16.689	730.6	0.2443
24	8.376	624.6	0.2257	6.178	631.8	0.2404	7.496	633.2	0.2398
25	3.139	596.2	0.2223	3.571	599.5	0.2361	4.305	601.6	0.2360

Table 4-26. LS1 Burnup and TH Feedback Parameters Assembly C3 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm³) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm³) 3.67 Cy 8
1	6.631	639.5	0.7396	6.230	650.5	0.7396	6.238	685.6	0.7396
2	22.808	841.7	0.7396	26.849	853.1	0.7396	26.873	639.3	0.7396
3	30.132	877.4	0.7347	34.856	859.6	0.7349	34.894	641.9	0.7349
4	33.813	924.8	0.7002	38.743	874.7	0.7012	38.774	650.7	0.7012
5	35.335	953.0	0.6547	40.355	881.7	0.6570	40.390	662.7	0.6571
6	35.917	967.5	0.6058	41.046	890.3	0.6095	41.084	671.8	0.6097
7	36.198	973.7	0.5588	41.468	901.6	0.5638	41.508	678.0	0.5640
8	36.512	977.2	0.5161	41.943	914.6	0.5220	41.987	690.5	0.5222
9	37.517	984.7	0.4773	43.163	932.3	0.4837	43.209	696.6	0.4839
10	37.859	984.8	0.4432	43.477	948.8	0.4499	43.625	703.2	0.4500
11	37.573	982.2	0.4135	43.557	961.0	0.4201	43.606	706.4	0.4203
12	37.345	980.6	0.3876	43.497	975.6	0.3940	43.547	709.6	0.3941
13	37.028	981.9	0.3646	43.346	990.2	0.3708	43.396	709.6	0.3710
14	36.650	988.5	0.3445	43.125	1004.2	0.3503	43.174	706.4	0.3505
15	36.198	999.9	0.3268	42.813	1016.9	0.3320	42.861	703.2	0.3322
16	35.688	1008.1	0.3106	42.327	1028.3	0.3156	42.374	700.0	0.3158
17	34.710	1004.4	0.2964	41.549	1037.6	0.3009	41.595	696.8	0.3010
18	33.525	986.9	0.2837	40.414	1042.3	0.2878	40.458	690.5	0.2879
19	32.018	962.1	0.2728	38.863	1038.2	0.2762	38.905	684.2	0.2763
20	30.095	933.8	0.2634	36.752	1020.6	0.2661	36.792	678.0	0.2663
21	27.068	893.6	0.2557	33.271	980.0	0.2578	33.307	665.8	0.2578
22	23.396	845.5	0.2493	28.930	923.1	0.2507	28.962	653.7	0.2509
23	18.909	783.3	0.2436	23.436	843.9	0.2446	23.462	636.0	0.2447
24	8.506	655.6	0.2392	10.633	682.4	0.2401	10.644	593.3	0.2401
25	4.872	613.9	0.2356	6.071	628.3	0.2366	6.077	579.5	0.2368

Table 4-27. LS1 Burnup and TH Feedback Parameters Assembly C4

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.788	651.1	0.7396	3.261	638.4	0.7396
2	0.000		0.7396	5.916	907.5	0.7396	10.807	861.0	0.7396
3	0.000		0.7270	8.083	994.0	0.7270	15.048	942.4	0.7290
4	0.000	Data	0.6810	9.297	1063.4	0.6810	17.221	1011.9	0.6855
5	0.000	Not	0.6206	9.700	1114.9	0.6206	17.981	1037.7	0.6285
6	0.000	Required	0.5583	9.721	1116.6	0.5583	18.103	1047.1	0.5695
7	0.000		0.5027	9.659	1111.6	0.5027	18.126	1053.7	0.5160
8	0.000		0.4560	9.684	1112.0	0.4560	18.249	1063.1	0.4704
9	0.000		0.4165	10.017	1140.3	0.4165	18.900	1087.0	0.4310
10	0.000		0.3826	9.985	1137.8	0.3826	18.988	1096.8	0.3971
11	0.000		0.3537	9.866	1128.1	0.3537	18.972	1105.3	0.3680
12	0.000		0.3292	9.699	1114.8	0.3292	18.900	1113.2	0.3428
13	0.000		0.3082	9.500	1099.1	0.3082	18.789	1120.6	0.3219
14	0.000		0.2900	9.274	1081.6	0.2900	18.642	1127.2	0.3018
15	0.000		0.2742	9.019	1062.2	0.2742	18.452	1132.7	0.2848
16	0.000		0.2603	8.728	1040.5	0.2603	18.199	1135.9	0.2697
17	0.000		0.2481	8.387	1015.6	0.2481	17.843	1134.7	0.2582
18	0.000		0.2375	7.976	986.6	0.2375	17.320	1125.2	0.2441
19	0.000		0.2282	7.469	951.9	0.2282	16.637	1102.2	0.2335
20	0.000		0.2202	6.839	910.7	0.2202	15.401	1061.2	0.2242
21	0.000		0.2133	5.934	854.8	0.2133	13.689	991.9	0.2163
22	0.000		0.2079	4.989	800.2	0.2079	11.500	911.3	0.2098
23	0.000		0.2035	4.056	749.9	0.2035	9.276	828.7	0.2045
24	0.000		0.2005	1.817	641.4	0.2005	4.227	674.5	0.2010
25	0.000		0.1992	1.107	610.1	0.1992	2.617	626.5	0.1993

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.628	644.8	0.7396	5.419	640.0	0.7396	6.261	612.0	0.7396
2	15.662	899.8	0.7396	18.273	858.5	0.7396	20.942	737.1	0.7396
3	21.144	950.3	0.7300	24.370	885.7	0.7310	27.635	749.4	0.7336
4	23.846	994.6	0.6887	27.290	913.1	0.6914	30.861	769.5	0.6974
5	24.732	1007.2	0.6347	28.240	921.4	0.6396	32.076	787.3	0.6502
6	24.866	1006.5	0.5782	28.386	922.9	0.5851	32.488	805.6	0.6005
7	24.827	1001.1	0.5259	28.340	922.0	0.5342	32.691	823.1	0.5536
8	24.892	996.1	0.4808	28.397	921.0	0.4897	32.964	838.6	0.5117
9	25.570	998.5	0.4416	29.112	925.6	0.4507	33.897	854.6	0.4738
10	25.581	991.9	0.4077	29.111	924.2	0.4170	34.019	863.7	0.4404
11	25.452	982.2	0.3787	28.963	921.8	0.3879	33.941	869.0	0.4110
12	25.247	971.0	0.3536	28.736	918.9	0.3627	33.738	870.6	0.3852
13	24.991	959.0	0.3317	28.480	916.4	0.3408	33.446	869.6	0.3625
14	24.689	946.3	0.3125	28.136	913.6	0.3214	33.072	865.8	0.3423
15	24.330	932.7	0.2955	27.751	910.2	0.3043	32.605	859.7	0.3243
16	23.888	917.7	0.2803	27.276	905.9	0.2890	32.017	851.4	0.3082
17	23.313	900.6	0.2668	26.648	899.3	0.2754	31.249	841.1	0.2938
18	22.545	881.9	0.2548	25.807	890.2	0.2632	30.238	828.8	0.2810
19	21.522	864.0	0.2443	24.694	879.0	0.2525	28.826	814.7	0.2699
20	20.128	845.2	0.2351	23.163	864.8	0.2434	27.169	797.5	0.2603
21	17.910	816.4	0.2275	20.744	838.5	0.2358	24.360	772.6	0.2524
22	15.260	778.4	0.2212	17.781	802.7	0.2294	20.830	741.9	0.2459
23	12.256	728.4	0.2158	14.307	752.0	0.2239	16.796	700.9	0.2398
24	8.541	631.9	0.2120	8.442	640.6	0.2199	7.490	618.4	0.2349
25	3.243	600.6	0.2098	3.738	604.9	0.2172	4.281	591.4	0.2309

Table 4-27. LS1 Burnup and TH Feedback Parameters Assembly C4 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.629	598.4	0.7396	7.116	590.7	0.7396	7.126	585.6	0.7396
2	22.067	683.2	0.7396	23.498	652.7	0.7396	23.521	635.6	0.7396
3	28.692	690.0	0.7345	30.654	654.8	0.7357	30.682	641.9	0.7357
4	32.346	703.1	0.6999	34.096	659.9	0.7028	34.128	647.8	0.7028
5	33.680	715.5	0.6549	35.522	665.4	0.6601	35.555	656.7	0.6602
6	34.219	729.0	0.6076	36.185	672.8	0.6164	36.221	662.7	0.6156
7	34.544	742.2	0.5831	36.666	682.1	0.5737	36.705	674.9	0.5739
8	34.930	754.6	0.5230	37.227	692.8	0.5363	37.268	681.1	0.5365
9	35.982	767.9	0.4863	38.491	705.9	0.5022	38.535	690.5	0.5023
10	36.188	777.4	0.4537	38.891	718.1	0.4720	38.937	696.8	0.4722
11	36.176	785.2	0.4249	39.079	730.6	0.4454	39.127	703.2	0.4455
12	36.033	792.0	0.3993	39.135	743.9	0.4216	39.183	703.2	0.4218
13	35.791	797.8	0.3765	39.094	757.3	0.4003	39.143	706.4	0.4005
14	35.482	803.1	0.3562	38.963	770.6	0.3811	39.012	706.4	0.3812
15	35.032	807.6	0.3381	38.724	783.8	0.3637	38.773	706.4	0.3639
16	34.459	810.4	0.3218	38.344	796.6	0.3480	38.392	703.1	0.3481
17	33.713	811.8	0.3072	37.754	808.4	0.3336	37.802	703.1	0.3338
18	32.698	811.4	0.2943	36.674	818.1	0.3208	36.922	703.2	0.3209
19	31.360	808.3	0.2829	35.618	824.1	0.3095	35.664	696.8	0.3095
20	29.543	801.2	0.2732	33.798	823.6	0.2995	33.843	693.6	0.2996
21	26.590	784.4	0.2653	30.665	810.8	0.2915	30.707	684.2	0.2915
22	22.940	759.5	0.2588	26.683	787.3	0.2849	26.721	671.9	0.2850
23	18.427	718.4	0.2525	21.614	742.8	0.2781	21.645	650.7	0.2782
24	8.167	625.9	0.2469	9.528	636.3	0.2716	9.542	601.7	0.2716
25	4.640	595.0	0.2419	5.328	599.9	0.2646	5.333	582.2	0.2647

Table 4-28. LS1 Burnup and TH Feedback Parameters Assembly C5

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.519	636.8	0.7396	2.661	620.2	0.7396
2	0.000		0.7396	5.082	849.6	0.7396	8.947	783.4	0.7396
3	0.000		0.7353	6.991	920.4	0.7353	12.636	848.7	0.7382
4	0.000	Data	0.7004	8.084	994.1	0.7004	14.596	911.4	0.7073
5	0.000	Not	0.6528	8.482	1022.5	0.6528	15.394	938.7	0.6643
6	0.000	Required	0.6000	8.548	1027.3	0.6000	15.628	950.5	0.6156
7	0.000		0.5483	8.517	1025.0	0.5483	15.707	958.3	0.5672
8	0.000		0.5021	8.533	1026.2	0.5021	15.661	988.1	0.5228
9	0.000		0.4613	8.669	1050.8	0.4613	16.532	992.5	0.4824
10	0.000		0.4260	8.851	1049.6	0.4260	16.637	1001.6	0.4470
11	0.000		0.3958	8.757	1042.6	0.3958	16.633	1008.3	0.4163
12	0.000		0.3896	8.624	1032.8	0.3896	16.579	1014.3	0.3894
13	0.000		0.3470	8.464	1021.2	0.3470	16.494	1020.0	0.3658
14	0.000		0.3274	8.282	1008.1	0.3274	16.377	1024.8	0.3450
15	0.000		0.3102	8.071	993.2	0.3102	16.218	1028.8	0.3266
16	0.000		0.2951	7.822	976.9	0.2951	15.992	1030.7	0.3102
17	0.000		0.2818	7.521	955.4	0.2818	15.661	1028.3	0.2955
18	0.000		0.2702	7.150	930.8	0.2702	15.171	1019.3	0.2825
19	0.000		0.2600	6.690	901.2	0.2600	14.453	999.9	0.2709
20	0.000		0.2512	6.120	865.9	0.2512	13.434	967.1	0.2607
21	0.000		0.2437	5.302	817.9	0.2437	11.626	912.2	0.2520
22	0.000		0.2377	4.443	770.4	0.2377	9.982	848.4	0.2448
23	0.000		0.2330	3.581	725.5	0.2330	8.004	781.7	0.2390
24	0.000		0.2298	1.576	630.6	0.2298	3.576	654.5	0.2353
25	0.000		0.2284	0.944	603.0	0.2284	2.090	614.3	0.2334

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	3.913	637.3	0.7396	4.669	636.3	0.7396	5.339	601.2	0.7396
2	13.306	866.0	0.7396	15.854	850.0	0.7396	18.118	707.8	0.7396
3	18.258	920.3	0.7377	21.396	874.9	0.7378	24.353	758.7	0.7396
4	20.787	958.1	0.7069	24.111	897.9	0.7078	27.519	758.7	0.7124
5	21.857	964.0	0.6647	25.011	901.7	0.6667	28.790	783.4	0.6751
6	21.828	958.8	0.6173	25.170	900.2	0.6206	29.278	808.0	0.6333
7	21.814	951.2	0.5699	25.140	898.2	0.5744	29.540	826.6	0.5909
8	21.894	945.2	0.5283	25.210	896.9	0.5316	29.876	845.8	0.5508
9	22.588	947.0	0.4868	25.939	901.3	0.4925	30.867	865.2	0.5131
10	22.629	941.8	0.4520	25.975	900.7	0.4579	31.023	874.3	0.4790
11	22.540	935.0	0.4216	25.876	899.4	0.4279	30.939	875.4	0.4483
12	22.390	927.3	0.3954	25.710	897.4	0.4017	30.718	871.3	0.4211
13	22.200	919.0	0.3722	25.503	895.3	0.3785	30.408	863.5	0.3968
14	21.969	910.1	0.3517	25.254	893.0	0.3580	30.018	853.0	0.3763
15	21.683	900.2	0.3336	24.944	890.0	0.3398	29.532	840.1	0.3580
16	21.313	889.2	0.3173	24.541	885.9	0.3234	28.909	824.3	0.3388
17	20.813	876.4	0.3028	23.991	879.8	0.3089	28.088	805.2	0.3234
18	20.134	862.4	0.2898	23.244	871.4	0.2959	27.035	784.2	0.3096
19	19.223	848.3	0.2784	22.249	861.3	0.2844	25.750	764.8	0.2976
20	17.983	832.6	0.2685	20.898	848.0	0.2744	24.155	748.9	0.2873
21	16.995	805.9	0.2601	18.701	823.7	0.2659	21.769	736.8	0.2792
22	13.609	769.6	0.2531	16.022	790.8	0.2589	18.748	716.4	0.2722
23	10.882	722.2	0.2472	12.650	743.3	0.2529	15.142	689.0	0.2664
24	4.837	629.0	0.2434	5.694	636.7	0.2490	6.706	616.5	0.2622
25	2.789	599.1	0.2412	3.260	602.9	0.2466	3.897	596.4	0.2613

Table 4-28. L81 Burnup and TH Feedback Parameters Assembly C5 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.944	624.0	0.7396	7.483	660.2	0.7396	7.491	685.8	0.7396
2	20.087	788.9	0.7396	24.655	899.6	0.7396	24.678	635.6	0.7396
3	26.673	885.4	0.7392	32.244	909.7	0.7377	32.272	641.9	0.7377
4	30.350	856.9	0.7116	35.889	923.5	0.7092	35.920	650.7	0.7092
5	31.817	882.1	0.6748	37.348	922.8	0.6716	37.381	658.7	0.6717
6	32.428	898.3	0.6333	37.954	922.4	0.6301	37.990	665.8	0.6302
7	32.776	909.6	0.6916	38.343	925.6	0.6886	38.383	678.0	0.6887
8	33.189	920.3	0.6519	38.844	933.1	0.6493	38.887	687.3	0.6495
9	34.310	938.1	0.6144	40.134	947.3	0.6124	40.179	693.6	0.6125
10	34.648	963.8	0.4804	40.602	958.4	0.4786	40.650	703.2	0.4788
11	34.650	976.2	0.4495	40.769	972.6	0.4479	40.816	706.4	0.4481
12	34.616	1004.1	0.4222	40.903	987.2	0.4207	40.953	709.6	0.4208
13	35.001	1113.8	0.3985	41.382	995.6	0.3968	41.432	709.6	0.3970
14	34.770	1140.8	0.3759	41.339	1012.7	0.3743	41.389	709.6	0.3744
15	34.200	1126.5	0.3555	40.989	1033.0	0.3538	41.039	709.6	0.3540
16	33.409	1098.4	0.3376	40.409	1052.8	0.3356	40.459	709.6	0.3357
17	32.363	1062.0	0.3216	39.637	1069.5	0.3192	39.686	706.4	0.3194
18	31.045	1020.7	0.3074	38.316	1078.9	0.3046	38.364	703.1	0.3047
19	29.487	980.0	0.2951	36.745	1077.6	0.2917	36.792	700.0	0.2919
20	27.609	939.6	0.2847	34.690	1060.6	0.2806	34.735	693.6	0.2808
21	24.860	890.6	0.2763	31.459	1015.5	0.2714	31.501	684.2	0.2716
22	21.431	838.6	0.2692	27.323	953.1	0.2635	27.361	671.9	0.2637
23	17.299	776.1	0.2634	22.131	867.1	0.2571	22.161	647.6	0.2573
24	7.673	651.6	0.2591	9.934	690.6	0.2524	9.948	601.7	0.2526
25	4.441	611.8	0.2581	5.725	633.1	0.2512	5.733	585.0	0.2513

Table 4-29. LS1 Burnup and TH Feedback Parameters Assembly C6

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.776	650.4	0.7396	3.644	660.7	0.7396
2	0.000		0.7396	5.945	909.6	0.7396	12.304	964.5	0.7396
3	0.000		0.7265	6.193	1001.8	0.7265	16.807	1065.4	0.7208
4	0.000	Data	0.6791	9.468	1096.6	0.6791	18.977	1139.2	0.6679
5	0.000	Not	0.6173	9.898	1130.7	0.6173	19.583	1154.3	0.6032
6	0.000	Required	0.5540	9.921	1132.6	0.5540	19.600	1153.8	0.5406
7	0.000		0.4980	9.844	1126.4	0.4980	19.526	1154.1	0.4869
8	0.000		0.4512	9.830	1125.3	0.4512	19.564	1158.6	0.4423
9	0.000		0.4116	10.166	1152.5	0.4116	20.165	1161.0	0.4043
10	0.000		0.3781	10.104	1147.4	0.3781	20.180	1158.7	0.3717
11	0.000		0.3497	9.949	1134.5	0.3497	20.102	1195.6	0.3439
12	0.000		0.3256	9.748	1118.7	0.3256	19.973	1202.1	0.3199
13	0.000		0.3050	9.521	1100.8	0.3050	19.813	1208.1	0.2992
14	0.000		0.2872	9.277	1081.8	0.2872	19.622	1212.9	0.2809
15	0.000		0.2717	9.014	1061.5	0.2717	19.393	1216.0	0.2648
16	0.000		0.2581	8.727	1040.4	0.2581	19.106	1216.0	0.2506
17	0.000		0.2462	8.403	1016.8	0.2462	18.723	1210.6	0.2376
18	0.000		0.2356	8.020	989.6	0.2356	18.181	1198.3	0.2261
19	0.000		0.2263	7.549	957.3	0.2263	17.391	1168.0	0.2159
20	0.000		0.2183	6.958	918.3	0.2183	16.254	1121.1	0.2071
21	0.000		0.2115	6.083	863.7	0.2115	14.417	1043.3	0.1995
22	0.000		0.2060	5.145	809.0	0.2060	12.257	952.7	0.1934
23	0.000		0.2017	4.187	756.7	0.2017	9.693	858.8	0.1885
24	0.000		0.1985	1.870	643.8	0.1985	4.508	685.9	0.1849
25	0.000		0.1973	1.138	611.4	0.1973	2.698	633.5	0.1835

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.498	677.1	0.7396	6.526	665.5	0.7396	7.714	634.3	0.7396
2	18.484	1031.6	0.7396	21.713	946.4	0.7396	25.293	807.1	0.7396
3	24.499	1090.8	0.7165	28.442	979.5	0.7196	32.976	836.2	0.7227
4	27.190	1141.4	0.6651	31.410	1016.5	0.6677	38.602	885.3	0.6746
5	27.879	1149.7	0.6005	32.216	1035.5	0.6047	37.946	927.7	0.6163
6	27.822	1142.3	0.5383	32.215	1043.8	0.5437	38.377	953.3	0.5588
7	27.648	1132.4	0.4850	32.066	1047.5	0.4908	38.655	991.3	0.5075
8	27.604	1124.4	0.4409	32.029	1048.5	0.4486	38.779	1014.2	0.4634
9	28.213	1126.1	0.4035	32.669	1053.1	0.4091	39.696	1039.2	0.4253
10	28.168	1116.3	0.3715	32.698	1050.8	0.3770	39.764	1051.9	0.3927
11	27.984	1109.0	0.3442	32.405	1047.9	0.3495	39.552	1050.2	0.3642
12	27.743	1098.3	0.3206	32.143	1044.8	0.3259	39.181	1040.2	0.3393
13	27.456	1086.2	0.3002	31.833	1041.4	0.3054	38.711	1025.7	0.3176
14	27.116	1072.3	0.2823	31.467	1037.6	0.2873	38.146	1007.9	0.2986
15	26.701	1055.1	0.2664	31.022	1033.2	0.2713	37.458	986.7	0.2819
16	26.184	1034.3	0.2524	30.463	1027.1	0.2571	36.698	961.0	0.2670
17	25.617	1009.2	0.2398	29.739	1018.8	0.2444	35.601	930.3	0.2538
18	24.658	981.8	0.2286	28.805	1008.4	0.2331	34.138	896.2	0.2420
19	23.554	955.8	0.2187	27.617	996.2	0.2231	32.542	865.0	0.2316
20	22.096	929.8	0.2100	26.032	978.5	0.2144	30.573	838.7	0.2227
21	19.772	891.8	0.2027	23.435	941.6	0.2069	27.510	803.7	0.2152
22	16.954	843.0	0.1966	20.216	890.2	0.2008	23.735	766.0	0.2089
23	13.671	779.6	0.1916	16.343	819.6	0.1957	19.160	721.0	0.2039
24	6.210	653.3	0.1884	7.430	669.8	0.1922	8.728	632.1	0.2004
25	3.685	613.3	0.1868	4.358	622.0	0.1904	5.087	601.4	0.1984

Table 4-29. LS1 Burnup and TH Feedback Parameters Assembly C6 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU) 495.2 Cy 7	Fuel Temp. (K) 495.2 Cy 7	Mod. Dens. (g/cm³) 495.2 Cy 7
1	8.453	640.0	0.7396	9.892	652.6	0.7396
2	27.609	822.4	0.7396	31.408	841.0	0.7396
3	35.817	858.2	0.7239	40.394	847.7	0.7255
4	39.679	916.3	0.6776	44.703	866.6	0.6812
5	41.532	958.2	0.6211	46.477	876.8	0.6271
6	42.153	985.7	0.5847	47.219	885.4	0.5729
7	42.440	1001.6	0.5138	47.658	897.4	0.5236
8	42.739	1013.1	0.4695	48.137	911.9	0.4804
9	43.756	1028.4	0.4309	49.387	931.1	0.4423
10	43.852	1032.7	0.3978	49.687	948.2	0.4094
11	43.643	1033.1	0.3690	49.673	964.9	0.3806
12	43.269	1032.7	0.3439	49.493	981.8	0.3554
13	42.797	1032.4	0.3220	49.216	999.2	0.3333
14	42.233	1032.6	0.3028	48.842	1016.4	0.3137
15	41.638	1031.4	0.2858	48.329	1033.2	0.2965
16	40.633	1024.6	0.2708	47.590	1048.7	0.2811
17	39.420	1006.9	0.2573	46.609	1061.3	0.2673
18	37.858	979.0	0.2453	45.022	1067.5	0.2550
19	36.046	946.6	0.2349	43.160	1063.7	0.2440
20	33.832	912.9	0.2258	40.748	1044.9	0.2344
21	30.453	871.2	0.2181	36.899	1001.6	0.2261
22	26.297	823.7	0.2119	32.043	940.7	0.2193
23	21.226	765.6	0.2067	25.912	855.8	0.2136
24	9.703	652.3	0.2034	11.965	690.6	0.2102
25	5.645	613.1	0.2012	6.934	633.4	0.2079

Table 4-30. LS1 Burnup and TH Feedback Parameters Assembly C7

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.791	651.3	0.7396	3.407	646.4	0.7396
2	0.000		0.7396	5.959	910.5	0.7396	11.467	898.8	0.7396
3	0.000		0.7286	8.169	1000.1	0.7286	15.793	989.6	0.7262
4	0.000	Data	0.6798	9.407	1091.9	0.6798	17.993	1063.1	0.6791
5	0.000	Not	0.6185	9.823	1124.7	0.6185	18.695	1086.1	0.6187
6	0.000	Required	0.5554	9.850	1126.9	0.5554	18.788	1091.5	0.5576
7	0.000		0.4993	9.789	1122.0	0.4993	18.776	1095.5	0.5035
8	0.000		0.4525	9.796	1122.5	0.4525	18.872	1102.8	0.4579
9	0.000		0.4129	10.157	1151.8	0.4129	19.512	1126.1	0.4190
10	0.000		0.3790	10.121	1148.8	0.3790	19.587	1135.5	0.3855
11	0.000		0.3502	9.994	1138.5	0.3502	19.559	1144.0	0.3568
12	0.000		0.3258	9.817	1124.2	0.3258	19.472	1151.7	0.3321
13	0.000		0.3050	9.608	1107.6	0.3050	19.350	1159.3	0.3106
14	0.000		0.2870	9.376	1089.5	0.2870	19.195	1166.0	0.2918
15	0.000		0.2713	9.121	1069.9	0.2713	19.005	1171.7	0.2761
16	0.000		0.2575	8.838	1048.6	0.2575	18.763	1175.3	0.2602
17	0.000		0.2454	8.517	1025.0	0.2454	18.430	1174.2	0.2469
18	0.000		0.2347	8.138	997.9	0.2347	17.941	1164.6	0.2351
19	0.000		0.2254	7.670	965.5	0.2254	17.194	1140.5	0.2246
20	0.000		0.2172	7.076	928.0	0.2172	16.083	1097.1	0.2154
21	0.000		0.2103	6.190	870.2	0.2103	14.285	1023.4	0.2075
22	0.000		0.2047	5.244	814.5	0.2047	12.134	937.2	0.2011
23	0.000		0.2003	4.289	762.1	0.2003	9.828	848.4	0.1960
24	0.000		0.1971	1.934	646.7	0.1971	4.500	682.2	0.1925
25	0.000		0.1958	1.182	613.3	0.1958	2.694	631.3	0.1909

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.150	669.6	0.7396	5.960	642.0	0.7396	7.123	632.7	0.7396
2	17.343	1002.0	0.7396	19.928	855.0	0.7396	23.518	807.8	0.7396
3	23.082	1053.4	0.7227	26.242	877.6	0.7240	30.511	838.5	0.7265
4	25.721	1094.3	0.6739	29.092	903.9	0.6772	34.313	887.5	0.6831
5	26.474	1099.1	0.6134	29.934	915.2	0.6192	35.669	928.1	0.6291
6	26.621	1094.6	0.5534	30.029	921.4	0.5614	36.167	951.3	0.5742
7	26.604	1094.3	0.5010	30.038	924.7	0.5105	36.481	987.3	0.5245
8	26.567	1091.2	0.4566	30.117	926.8	0.4668	36.818	1009.6	0.4807
9	27.242	1094.5	0.4185	30.836	932.6	0.4288	37.818	1035.1	0.4422
10	27.257	1088.6	0.3857	30.853	932.8	0.3961	37.978	1048.2	0.4090
11	27.114	1078.0	0.3575	30.707	932.4	0.3677	37.823	1047.3	0.3798
12	26.880	1064.3	0.3332	30.467	931.7	0.3433	37.481	1038.0	0.3543
13	26.591	1049.0	0.3121	30.170	930.6	0.3220	37.029	1023.9	0.3320
14	26.257	1032.9	0.2936	29.825	929.2	0.3033	36.486	1006.3	0.3124
15	25.871	1015.5	0.2774	29.427	927.6	0.2869	35.842	984.9	0.2953
16	25.412	996.7	0.2629	28.974	926.4	0.2724	35.081	958.7	0.2802
17	24.875	979.3	0.2503	28.570	945.9	0.2604	34.273	925.5	0.2675
18	24.324	974.1	0.2398	28.441	1003.6	0.2514	33.623	884.5	0.2576
19	23.348	955.0	0.2298	27.499	1008.7	0.2413	32.259	852.7	0.2471
20	21.920	929.4	0.2207	25.921	987.5	0.2316	30.306	825.5	0.2375
21	19.691	889.6	0.2129	23.300	947.8	0.2235	27.238	794.2	0.2294
22	16.779	839.3	0.2065	20.071	893.9	0.2168	23.481	758.6	0.2228
23	13.530	774.6	0.2012	16.199	819.5	0.2110	18.938	716.2	0.2171
24	6.137	649.7	0.1975	7.324	666.8	0.2069	8.584	630.0	0.2131
25	3.511	610.6	0.1956	4.268	619.0	0.2043	4.979	600.3	0.2105

Table 4-30. LS1 Burnup and TH Feedback Parameters Assembly C7 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.898	642.9	0.7396	9.367	655.3	0.7396
2	25.862	840.3	0.7396	29.963	858.3	0.7396
3	33.821	879.9	0.7274	38.651	867.0	0.7284
4	37.762	938.9	0.6851	42.817	884.5	0.6877
5	39.408	980.3	0.6323	44.542	890.7	0.6367
6	40.078	1005.7	0.5782	45.280	896.1	0.5844
7	40.484	1019.6	0.5284	45.786	904.2	0.5360
8	40.891	1030.3	0.4842	46.334	915.6	0.4928
9	41.998	1047.0	0.4453	47.650	932.8	0.4544
10	42.195	1052.8	0.4118	48.026	947.9	0.4210
11	42.061	1056.1	0.3824	48.075	963.5	0.3917
12	41.739	1059.3	0.3566	47.944	980.2	0.3660
13	41.298	1061.0	0.3341	47.701	997.7	0.3433
14	40.742	1058.9	0.3144	47.348	1016.1	0.3234
15	40.040	1049.8	0.2971	46.851	1035.0	0.3058
16	39.165	1032.0	0.2818	46.164	1052.7	0.2902
17	38.170	1003.6	0.2688	45.300	1065.2	0.2767
18	37.245	963.4	0.2586	44.378	1065.5	0.2656
19	35.637	929.1	0.2481	42.723	1061.0	0.2545
20	33.444	896.7	0.2384	40.344	1043.4	0.2444
21	30.073	857.4	0.2304	36.515	1001.2	0.2358
22	25.954	812.9	0.2238	31.706	941.2	0.2287
23	20.943	758.9	0.2181	25.647	857.3	0.2226
24	9.532	649.7	0.2143	11.803	691.2	0.2187
25	5.525	612.0	0.2117	6.825	634.0	0.2160

Table 4-31. LS1 Burnup and TH Feedback Parameters Assembly C8

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.788	651.1	0.7396	3.262	638.4	0.7396
2	0.000		0.7396	5.921	907.9	0.7396	10.817	881.3	0.7396
3	0.000		0.7271	8.091	994.6	0.7271	15.063	942.9	0.7291
4	0.000	Data	0.6812	9.308	1084.2	0.6812	17.239	1012.5	0.6857
5	0.000	Not	0.6210	9.714	1116.0	0.6210	17.883	1038.3	0.6288
6	0.000	Required	0.5588	9.738	1117.7	0.5588	18.128	1047.9	0.5696
7	0.000		0.5032	9.675	1112.9	0.5032	18.153	1054.6	0.5164
8	0.000		0.4564	9.680	1113.3	0.4564	18.276	1063.9	0.4708
9	0.000		0.4169	10.034	1141.7	0.4169	18.928	1087.9	0.4314
10	0.000		0.3829	10.001	1139.0	0.3829	19.016	1097.8	0.3975
11	0.000		0.3540	9.882	1129.4	0.3540	19.000	1106.3	0.3683
12	0.000		0.3295	9.714	1116.0	0.3295	18.927	1114.2	0.3431
13	0.000		0.3085	9.514	1100.2	0.3085	18.816	1121.6	0.3213
14	0.000		0.2903	9.288	1082.7	0.2903	18.668	1128.2	0.3021
15	0.000		0.2744	9.033	1063.2	0.2744	18.478	1133.7	0.2851
16	0.000		0.2606	8.741	1041.4	0.2606	18.225	1137.1	0.2700
17	0.000		0.2484	8.400	1016.6	0.2484	17.869	1135.8	0.2565
18	0.000		0.2377	7.988	987.4	0.2377	17.344	1126.2	0.2444
19	0.000		0.2285	7.480	952.6	0.2285	16.580	1103.2	0.2338
20	0.000		0.2204	6.849	911.3	0.2204	15.424	1062.3	0.2245
21	0.000		0.2138	5.943	855.3	0.2138	13.610	992.8	0.2166
22	0.000		0.2081	4.997	800.7	0.2081	11.518	912.0	0.2100
23	0.000		0.2037	4.062	750.2	0.2037	8.291	829.3	0.2048
24	0.000		0.2007	1.819	641.5	0.2007	4.232	674.6	0.2012
25	0.000		0.1995	1.108	610.1	0.1995	2.620	625.6	0.1996

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.625	644.5	0.7396	5.414	639.6	0.7396	6.257	612.1	0.7396
2	15.657	898.5	0.7396	18.264	858.0	0.7396	20.939	737.6	0.7396
3	21.140	948.7	0.7302	24.362	885.2	0.7312	27.631	749.7	0.7337
4	23.648	993.2	0.6890	27.288	912.5	0.6917	30.863	769.7	0.6977
5	24.741	1006.1	0.6352	28.244	920.7	0.6401	32.084	787.5	0.6507
6	24.882	1005.7	0.5787	28.397	922.3	0.5857	32.502	805.8	0.6010
7	24.847	1000.5	0.5286	28.356	921.5	0.5349	32.709	823.2	0.5543
8	24.915	995.6	0.4814	28.417	920.6	0.4904	32.985	838.7	0.5124
9	25.595	998.2	0.4422	29.133	925.3	0.4513	33.920	854.7	0.4745
10	25.608	991.5	0.4084	29.137	924.1	0.4176	34.047	863.9	0.4411
11	25.481	982.3	0.3793	28.990	921.5	0.3886	33.971	869.2	0.4117
12	25.276	971.2	0.3542	28.765	918.9	0.3634	33.770	871.0	0.3859
13	25.021	959.2	0.3322	28.490	916.4	0.3414	33.479	869.8	0.3631
14	24.719	946.6	0.3130	28.166	913.5	0.3220	33.106	866.1	0.3429
15	24.380	933.0	0.2960	27.782	910.3	0.3048	32.639	859.9	0.3249
16	23.917	917.9	0.2808	27.305	906.0	0.2895	32.051	851.7	0.3088
17	23.342	900.8	0.2673	26.679	899.6	0.2758	31.284	841.4	0.2943
18	22.573	882.2	0.2552	25.836	890.3	0.2637	30.272	829.2	0.2815
19	21.550	864.4	0.2447	24.724	879.3	0.2530	28.960	814.9	0.2704
20	20.156	845.5	0.2358	23.212	864.9	0.2439	27.203	797.9	0.2607
21	17.835	816.7	0.2279	20.772	838.9	0.2362	24.392	772.7	0.2529
22	15.283	778.7	0.2216	17.807	803.1	0.2299	20.960	742.2	0.2463
23	12.275	728.7	0.2162	14.328	762.2	0.2243	16.821	701.1	0.2403
24	8.547	632.0	0.2124	6.449	640.7	0.2203	7.498	618.5	0.2353
25	3.247	600.6	0.2101	3.741	604.9	0.2178	4.286	591.5	0.2318

Table 4-31. LS1 Burnup and TH Feedback Parameters Assembly C8 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.626	598.6	0.7396	7.116	590.8	0.7396	7.124	585.8	0.7396
2	22.068	683.4	0.7396	23.498	652.8	0.7396	23.621	635.8	0.7396
3	28.991	690.3	0.7347	30.653	654.8	0.7359	30.680	638.9	0.7359
4	32.349	703.3	0.7002	34.098	659.9	0.7030	34.128	647.8	0.7031
5	33.889	716.7	0.6554	35.830	665.3	0.6605	35.862	653.7	0.6606
6	34.233	729.0	0.6082	36.200	672.8	0.6160	36.235	662.7	0.6161
7	34.663	742.3	0.5636	36.684	682.0	0.5743	36.722	671.9	0.5744
8	34.952	754.7	0.5235	37.247	692.6	0.5370	37.288	681.1	0.5371
9	36.006	766.0	0.4888	38.614	705.8	0.5027	38.658	690.5	0.5029
10	36.216	777.4	0.4544	38.919	718.1	0.4726	38.965	696.8	0.4728
11	36.208	785.2	0.4255	39.109	730.6	0.4459	39.157	703.2	0.4461
12	36.085	792.0	0.3999	39.168	744.0	0.4222	39.216	703.2	0.4223
13	35.825	797.8	0.3771	39.129	757.3	0.4009	39.178	706.4	0.4010
14	35.497	803.2	0.3568	38.899	770.7	0.3817	39.048	706.4	0.3818
15	35.068	807.7	0.3386	38.762	783.8	0.3643	38.811	706.4	0.3644
16	34.505	810.7	0.3223	38.382	796.7	0.3485	38.431	706.4	0.3486
17	33.760	812.1	0.3077	37.793	808.6	0.3342	37.841	703.2	0.3343
18	32.734	811.6	0.2948	36.813	818.3	0.3213	36.961	703.2	0.3216
19	31.395	808.5	0.2834	35.658	824.3	0.3099	35.704	696.8	0.3100
20	29.579	801.4	0.2737	33.838	824.1	0.3000	33.883	693.6	0.3001
21	26.624	784.7	0.2657	30.704	811.2	0.2919	30.748	684.2	0.2920
22	22.972	769.7	0.2593	26.720	787.7	0.2853	26.758	671.9	0.2855
23	18.454	718.6	0.2529	21.545	743.2	0.2785	21.576	650.7	0.2788
24	8.167	626.1	0.2474	9.539	636.4	0.2720	9.553	601.7	0.2721
25	4.644	594.9	0.2423	5.331	600.0	0.2650	5.338	582.2	0.2652

Table 4-32. LS1 Burnup and TH Feedback Parameters Assembly C9

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.648	643.5	0.7396	2.955	629.3	0.7396
2	0.000		0.7396	5.621	879.6	0.7396	10.014	825.9	0.7396
3	0.000		0.7310	7.683	965.0	0.7310	14.107	906.6	0.7333
4	0.000	Data	0.6895	8.699	1053.2	0.6895	16.366	978.1	0.6950
5	0.000	Not	0.6341	9.309	1084.3	0.6341	17.143	1005.2	0.6433
6	0.000	Required	0.5751	9.314	1084.7	0.5751	17.261	1013.7	0.5879
7	0.000	·	0.5206	9.221	1077.5	0.5206	17.223	1017.8	0.5358
8	0.000		0.4740	9.201	1076.0	0.4740	17.294	1024.8	0.4904
9	0.000		0.4340	9.529	1101.4	0.4340	17.909	1045.9	0.4506
10	0.000		0.3997	9.486	1098.0	0.3997	17.962	1054.4	0.4163
11	0.000		0.3705	9.359	1088.2	0.3705	17.907	1060.1	0.3867
12	0.000		0.3455	9.190	1075.2	0.3455	17.801	1065.1	0.3611
13	0.000		0.3239	8.995	1060.4	0.3239	17.667	1070.0	0.3387
14	0.000		0.3053	8.778	1044.2	0.3053	17.504	1074.3	0.3192
15	0.000		0.2891	8.532	1026.1	0.2891	17.298	1077.5	0.3018
16	0.000		0.2749	8.247	1005.6	0.2749	17.025	1078.6	0.2863
17	0.000		0.2623	7.907	981.8	0.2623	16.642	1076.0	0.2725
18	0.000		0.2514	7.491	953.4	0.2514	16.089	1064.1	0.2603
19	0.000		0.2419	6.982	919.9	0.2419	15.290	1041.3	0.2495
20	0.000		0.2337	6.360	880.6	0.2337	14.168	1003.2	0.2400
21	0.000		0.2267	5.488	828.5	0.2267	12.427	940.6	0.2319
22	0.000		0.2211	4.580	777.7	0.2211	10.441	868.7	0.2252
23	0.000		0.2168	3.685	730.8	0.2168	8.345	795.4	0.2200
24	0.000		0.2138	1.629	633.0	0.2138	3.744	660.0	0.2165
25	0.000		0.2126	0.984	604.7	0.2126	2.206	617.8	0.2147

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.725	671.4	0.7396	5.849	676.0	0.7396	7.193	644.6	0.7396
2	16.106	1023.0	0.7396	19.739	1008.3	0.7396	23.918	856.2	0.7396
3	21.868	1097.4	0.7272	26.278	1046.3	0.7257	31.427	882.0	0.7274
4	24.869	1150.4	0.6836	29.302	1079.9	0.6812	34.953	921.3	0.6854
5	25.483	1154.1	0.6280	30.163	1087.1	0.6251	36.170	950.4	0.6322
6	25.479	1141.9	0.5706	30.164	1087.9	0.5676	36.434	972.6	0.5772
7	25.302	1128.2	0.5186	29.982	1087.1	0.5157	36.430	987.7	0.5284
8	25.249	1116.1	0.4742	29.910	1084.2	0.4714	36.473	997.7	0.4821
9	25.839	1113.7	0.4361	30.513	1086.2	0.4335	37.194	1008.1	0.4438
10	25.769	1101.6	0.4032	30.410	1081.1	0.4009	37.081	1007.2	0.4106
11	25.578	1088.9	0.3748	30.188	1076.4	0.3728	36.791	1001.2	0.3819
12	25.323	1074.9	0.3504	29.905	1072.1	0.3485	36.395	991.4	0.3571
13	25.028	1060.0	0.3291	29.584	1068.2	0.3274	35.927	978.7	0.3355
14	24.691	1044.1	0.3104	29.220	1064.1	0.3088	35.384	963.6	0.3164
15	24.295	1027.1	0.2939	28.792	1059.3	0.2923	34.744	945.8	0.2998
16	23.801	1007.6	0.2793	28.258	1053.3	0.2777	33.960	925.4	0.2847
17	23.159	985.4	0.2662	27.558	1044.4	0.2645	32.965	902.1	0.2714
18	22.328	952.1	0.2545	26.636	1031.3	0.2529	31.734	878.1	0.2596
19	21.265	940.5	0.2441	25.447	1013.1	0.2424	30.262	856.6	0.2494
20	19.872	918.8	0.2349	23.872	987.4	0.2331	28.356	832.6	0.2402
21	17.665	882.9	0.2270	21.839	943.1	0.2251	25.367	800.4	0.2322
22	15.007	833.7	0.2204	18.242	886.8	0.2183	21.718	763.2	0.2255
23	11.972	769.6	0.2152	14.598	814.6	0.2131	17.347	716.6	0.2201
24	5.360	648.6	0.2119	6.636	685.7	0.2097	7.733	626.5	0.2166
25	3.128	610.8	0.2104	3.797	620.2	0.2081	4.445	597.0	0.2145

Table 4-32. LS1 Burnup and TH Feedback Parameters Assembly C9 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.856	630.4	0.7396	8.740	616.1	0.7396	8.748	685.8	0.7396
2	25.893	789.7	0.7396	28.372	727.8	0.7396	28.395	635.6	0.7396
3	33.862	808.4	0.7286	36.766	731.0	0.7304	36.794	641.9	0.7304
4	37.660	841.4	0.6882	40.749	743.1	0.6922	40.778	644.6	0.6922
5	39.087	867.9	0.6370	42.348	754.4	0.6439	42.381	656.7	0.644
6	39.520	889.8	0.5838	42.883	768.0	0.5939	43.017	659.7	0.594
7	39.645	906.9	0.5342	43.337	783.6	0.5472	43.375	671.9	0.5474
8	39.788	920.5	0.4904	43.725	800.9	0.5059	43.765	678.0	0.5061
9	40.618	935.5	0.4520	44.634	821.0	0.4692	44.676	684.2	0.4693
10	40.559	943.0	0.4186	45.014	838.6	0.4370	45.059	693.6	0.4371
11	40.297	946.9	0.3896	44.978	855.6	0.4087	45.024	696.6	0.4089
12	39.921	949.7	0.3645	44.629	873.0	0.3839	44.677	703.2	0.3841
13	39.488	951.8	0.3426	44.649	894.6	0.3623	44.697	703.2	0.3625
14	38.934	953.1	0.3232	44.326	911.4	0.3427	44.374	703.2	0.3429
15	38.287	952.1	0.3061	43.656	926.0	0.3252	43.904	703.2	0.3253
16	37.469	947.3	0.2910	43.193	938.6	0.3095	43.241	703.2	0.3097
17	36.401	937.1	0.2773	42.249	949.3	0.2955	42.296	700.0	0.2956
18	35.058	921.7	0.2653	40.975	955.2	0.2829	41.021	696.6	0.2830
19	33.441	902.1	0.2548	39.339	953.6	0.2716	39.384	693.6	0.2720
20	31.352	879.4	0.2454	37.121	941.6	0.2618	37.164	687.4	0.2619
21	28.108	845.7	0.2373	33.601	911.5	0.2531	33.641	678.0	0.2533
22	24.123	804.9	0.2306	28.954	867.0	0.2460	28.989	662.7	0.2461
23	19.278	750.7	0.2250	23.208	800.5	0.2398	23.236	641.9	0.2400
24	8.594	641.3	0.2214	10.378	661.9	0.2360	10.391	598.9	0.2361
25	4.914	605.0	0.2192	5.877	615.1	0.2329	5.883	579.5	0.2330

Table 4-33. LS1 Burnup and TH Feedback Parameters Assembly C10

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.732	648.1	0.7396	3.832	656.8	0.7396
2	0.000		0.7396	5.768	697.0	0.7396	11.867	944.0	0.7396
3	0.000		0.7281	7.926	983.1	0.7281	16.254	1042.9	0.7233
4	0.000	Data	0.6831	9.180	1074.4	0.6831	18.448	1116.8	0.6729
5	0.000	Not	0.6236	9.648	1110.6	0.6236	19.136	1137.6	0.6103
6	0.000	Required	0.5616	9.719	1116.4	0.5616	19.232	1139.5	0.5485
7	0.000		0.5055	9.682	1113.5	0.5055	19.220	1141.7	0.4946
8	0.000		0.4584	9.696	1114.6	0.4584	19.306	1147.8	0.4494
9	0.000		0.4183	10.051	1143.1	0.4183	19.833	1171.5	0.4108
10	0.000		0.3841	10.006	1139.5	0.3841	19.888	1180.3	0.3777
11	0.000		0.3552	9.867	1128.2	0.3552	19.837	1188.2	0.3494
12	0.000		0.3306	9.680	1113.3	0.3306	19.829	1195.2	0.3250
13	0.000		0.3096	9.465	1096.4	0.3096	19.687	1201.8	0.3038
14	0.000		0.2915	9.233	1078.4	0.2915	19.513	1207.0	0.2852
15	0.000		0.2757	8.983	1059.5	0.2757	19.302	1210.6	0.2688
16	0.000		0.2619	8.716	1039.6	0.2619	19.037	1210.7	0.2541
17	0.000		0.2496	8.424	1018.3	0.2496	18.688	1205.6	0.2410
18	0.000		0.2388	8.093	994.7	0.2388	18.201	1191.5	0.2294
19	0.000		0.2292	7.691	966.9	0.2292	17.487	1164.0	0.2190
20	0.000		0.2209	7.170	932.1	0.2209	16.433	1118.4	0.2100
21	0.000		0.2137	6.338	879.2	0.2137	14.661	1042.5	0.2022
22	0.000		0.2078	5.414	824.3	0.2078	12.543	953.9	0.1958
23	0.000		0.2031	4.450	770.7	0.2031	10.198	861.5	0.1908
24	0.000		0.1997	2.012	650.2	0.1997	4.687	687.7	0.1872
25	0.000		0.1984	1.228	615.3	0.1984	2.816	634.5	0.1856

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.266	669.0	0.7396	6.485	685.6	0.7396	7.693	629.1	0.7396
2	17.716	999.5	0.7396	21.539	1038.6	0.7396	24.933	792.4	0.7396
3	23.578	1056.6	0.7222	28.164	1072.7	0.7208	32.425	816.7	0.7232
4	26.270	1103.3	0.6720	31.046	1102.1	0.6703	35.651	856.1	0.6760
5	27.008	1108.1	0.6101	31.781	1101.6	0.6086	37.023	889.1	0.6185
6	27.000	1098.1	0.5491	31.725	1094.1	0.5481	37.326	917.3	0.5615
7	26.870	1086.9	0.4958	31.651	1087.3	0.4953	37.434	940.1	0.5111
8	26.688	1080.5	0.4512	31.537	1082.4	0.4510	37.648	959.0	0.4680
9	27.854	1084.2	0.4132	32.220	1085.0	0.4134	38.550	977.6	0.4305
10	27.535	1077.2	0.3806	32.178	1081.4	0.3811	38.577	983.5	0.3980
11	27.371	1066.7	0.3527	31.990	1077.6	0.3534	38.366	981.5	0.3696
12	27.128	1054.3	0.3287	31.722	1074.0	0.3296	38.015	974.4	0.3450
13	26.838	1040.9	0.3078	31.408	1070.3	0.3088	37.594	965.3	0.3235
14	26.508	1026.9	0.2895	31.053	1066.5	0.2905	37.230	954.6	0.3052
15	26.133	1012.4	0.2733	30.645	1061.5	0.2744	37.227	999.4	0.2905
16	25.695	997.4	0.2589	30.163	1054.9	0.2600	36.742	999.1	0.2758
17	25.168	982.2	0.2460	29.587	1044.7	0.2472	35.833	972.1	0.2617
18	24.511	966.0	0.2346	28.805	1029.3	0.2357	34.651	937.1	0.2490
19	23.659	956.5	0.2244	27.810	1008.7	0.2255	33.259	905.3	0.2381
20	22.425	941.5	0.2165	26.383	981.6	0.2166	31.397	871.7	0.2285
21	20.237	908.5	0.2079	23.670	937.7	0.2089	28.337	831.4	0.2202
22	17.459	858.9	0.2015	20.661	882.7	0.2025	24.516	788.6	0.2136
23	14.145	790.9	0.1963	16.750	812.2	0.1972	19.814	736.5	0.2079
24	6.452	656.5	0.1927	7.643	667.1	0.1936	9.031	637.1	0.2041
25	3.805	614.5	0.1908	4.482	620.7	0.1918	5.249	603.3	0.2017

Table 4-33. LS1 Burnup and TH Feedback Parameters Assembly C10 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU) 495.2 Cy 7	Fuel Temp. (K) 495.2 Cy 7	Mod. Dens. (g/cm³) 495.2 Cy 7
1	8.019	604.6	0.7396	8.985	621.6	0.7398
2	26.232	703.9	0.7396	28.956	746.3	0.7398
3	34.116	724.7	0.7248	37.365	753.6	0.7269
4	37.632	756.3	0.6798	41.309	769.0	0.6848
5	39.245	783.6	0.6251	42.887	780.3	0.6334
6	39.739	805.6	0.5709	43.555	792.4	0.5822
7	39.993	823.3	0.5225	44.004	806.2	0.5363
8	40.325	837.7	0.4807	44.543	821.1	0.4962
9	41.339	851.7	0.4437	45.600	839.0	0.4601
10	41.422	858.7	0.4111	46.094	854.8	0.4282
11	41.241	862.6	0.3825	46.116	870.4	0.3999
12	40.907	864.7	0.3576	45.980	885.9	0.3748
13	40.495	865.6	0.3357	45.759	901.1	0.3528
14	40.124	864.9	0.3168	45.561	916.1	0.3335
15	40.061	857.3	0.3014	45.601	923.6	0.3171
16	39.622	850.6	0.2863	45.195	934.6	0.3014
17	38.637	841.1	0.2718	44.346	946.0	0.2867
18	37.243	827.3	0.2588	43.166	955.7	0.2734
19	35.733	813.1	0.2476	41.795	967.7	0.2621
20	33.612	806.0	0.2380	39.900	969.9	0.2522
21	30.702	800.1	0.2301	36.687	961.0	0.2446
22	27.046	819.8	0.2252	32.655	921.0	0.2389
23	22.090	789.7	0.2202	26.697	850.0	0.2332
24	10.112	662.6	0.2165	12.344	688.8	0.2294
25	5.857	617.7	0.2136	7.146	633.4	0.2266

Table 4-34. LS1 Burnup and TH Feedback Parameters Assembly C11

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.681	640.1	0.7396	3.263	650.1	0.7396
2	0.000		0.7396	5.274	862.6	0.7396	10.929	909.8	0.7396
3	0.000		0.7331	7.264	938.3	0.7331	15.084	1004.1	0.7282
4	0.000	Data	0.6945	8.455	1020.5	0.6945	17.258	1081.3	0.6840
5	0.000	Not	0.6421	8.954	1057.3	0.6421	18.046	1104.1	0.6268
6	0.000	Required	0.5846	9.097	1068.1	0.5846	18.243	1108.6	0.5580
7	0.000		0.5298	9.121	1069.9	0.5298	18.310	1112.2	0.5145
8	0.000		0.4819	9.179	1074.3	0.4819	18.456	1119.5	0.4886
9	0.000		0.4406	9.559	1103.7	0.4406	19.132	1144.7	0.4289
10	0.000		0.4051	9.546	1102.7	0.4051	19.230	1154.2	0.3947
11	0.000		0.3749	9.439	1094.4	0.3749	19.223	1162.9	0.3653
12	0.000		0.3491	9.280	1082.1	0.3491	19.156	1171.0	0.3398
13	0.000		0.3270	9.088	1067.4	0.3270	19.051	1178.6	0.3177
14	0.000		0.3079	8.876	1051.5	0.3079	18.913	1185.2	0.2983
15	0.000		0.2912	8.646	1034.4	0.2912	18.739	1190.2	0.2810
16	0.000		0.2766	8.399	1016.5	0.2766	18.517	1192.4	0.2657
17	0.000		0.2638	8.134	997.6	0.2638	18.220	1189.6	0.2519
18	0.000		0.2524	7.854	978.1	0.2524	17.806	1177.7	0.2398
19	0.000		0.2422	7.533	956.2	0.2422	17.186	1151.6	0.2289
20	0.000		0.2332	7.109	928.1	0.2332	16.237	1107.1	0.2185
21	0.000		0.2254	6.359	880.5	0.2254	14.659	1033.0	0.2113
22	0.000		0.2189	5.483	828.3	0.2189	12.615	947.1	0.2046
23	0.000		0.2138	4.536	775.4	0.2138	10.221	857.5	0.1994
24	0.000		0.2101	2.060	652.4	0.2101	4.709	686.4	0.1956
25	0.000		0.2086	1.253	616.4	0.2086	2.823	634.0	0.1939

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.296	623.3	0.7396	5.161	647.9	0.7396	6.548	647.4	0.7396
2	14.579	808.4	0.7396	17.434	892.3	0.7396	21.854	876.7	0.7396
3	19.875	849.8	0.7316	23.397	923.2	0.7307	29.013	918.5	0.7314
4	22.590	889.3	0.6923	26.327	951.5	0.6916	32.614	973.9	0.6933
5	23.668	912.4	0.6411	27.550	971.1	0.6413	34.233	1008.3	0.6440
6	24.239	942.2	0.5872	28.500	1024.5	0.5886	35.347	1022.9	0.5918
7	24.401	949.9	0.5360	28.770	1040.2	0.5375	35.780	1037.6	0.5403
8	24.520	947.7	0.4905	28.879	1038.8	0.4918	36.061	1053.4	0.4944
9	25.201	948.1	0.4504	29.574	1040.8	0.4516	36.965	1073.0	0.4539
10	25.220	941.7	0.4158	29.659	1035.8	0.4173	36.999	1077.6	0.4190
11	25.114	933.7	0.3859	29.423	1031.4	0.3876	36.819	1073.5	0.3890
12	24.934	924.7	0.3601	29.220	1028.1	0.3616	36.506	1063.1	0.3630
13	24.706	916.0	0.3376	28.988	1027.5	0.3393	36.123	1049.1	0.3404
14	24.436	904.7	0.3176	28.699	1024.8	0.3194	35.654	1032.6	0.3205
15	24.116	893.4	0.3000	28.351	1020.6	0.3017	35.092	1013.4	0.3028
16	23.723	880.6	0.2841	27.921	1015.4	0.2858	34.377	988.4	0.2870
17	23.225	865.5	0.2699	27.363	1006.8	0.2716	33.442	956.4	0.2730
18	22.598	849.7	0.2572	26.644	994.1	0.2588	32.288	920.8	0.2604
19	21.814	838.1	0.2463	25.734	976.3	0.2478	30.847	886.9	0.2495
20	20.907	841.1	0.2377	24.628	949.4	0.2389	29.414	854.7	0.2406
21	19.076	830.1	0.2304	22.472	907.2	0.2313	26.742	817.3	0.2330
22	16.629	795.4	0.2237	19.519	857.0	0.2244	23.200	776.8	0.2263
23	13.451	744.1	0.2176	16.677	792.2	0.2183	18.617	728.7	0.2204
24	6.143	638.4	0.2131	7.247	659.1	0.2138	8.603	635.3	0.2162
25	3.712	609.1	0.2124	4.357	618.8	0.2136	5.125	602.8	0.2165

Table 4-34. LS1 Burnup and TH Feedback Parameters Assembly C11 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.351	646.0	0.7396	8.779	652.5	0.7396
2	24.342	860.6	0.7396	28.400	854.6	0.7396
3	32.187	901.5	0.7318	36.955	862.2	0.7323
4	36.184	956.0	0.6943	41.165	877.9	0.6959
5	38.019	987.2	0.6455	43.069	884.1	0.6487
6	39.202	997.4	0.5933	44.307	888.4	0.5981
7	39.677	1003.6	0.5422	44.919	899.3	0.5486
8	40.002	1010.2	0.4982	45.425	914.0	0.5039
9	40.982	1021.8	0.4557	46.650	934.2	0.4641
10	41.025	1023.1	0.4208	46.891	950.9	0.4296
11	40.837	1021.9	0.3907	46.892	967.1	0.3997
12	40.514	1020.4	0.3646	46.755	983.3	0.3735
13	40.126	1019.6	0.3420	46.645	999.2	0.3507
14	39.662	1020.4	0.3220	46.251	1014.6	0.3304
15	39.098	1020.1	0.3043	45.647	1029.3	0.3123
16	38.355	1016.8	0.2885	45.250	1042.9	0.2962
17	37.326	1001.7	0.2743	44.344	1054.6	0.2816
18	36.013	976.2	0.2617	43.092	1060.3	0.2686
19	34.478	950.4	0.2507	41.511	1055.9	0.2571
20	32.721	919.4	0.2417	39.642	1036.0	0.2474
21	29.752	879.9	0.2341	36.096	992.5	0.2391
22	25.852	834.6	0.2273	31.518	934.0	0.2318
23	20.875	776.2	0.2214	25.600	851.3	0.2255
24	9.626	658.8	0.2172	11.858	688.8	0.2214
25	6.706	616.2	0.2164	6.969	631.9	0.2201

Table 4-35. LS1 Burnup and TH Feedback Parameters Assembly C12

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.816	652.6	0.7396	3.248	636.2	0.7396
2	0.000		0.7396	6.063	918.1	0.7396	10.982	854.4	0.7396
3	0.000		0.7257	8.330	1011.6	0.7257	15.180	934.4	0.7288
4	0.000	Data	0.6779	9.561	1103.9	0.6779	17.345	1001.5	0.6851
5	0.000	Not	0.6160	9.914	1132.0	0.6160	18.028	1026.4	0.6283
6	0.000	Required	0.5531	9.873	1128.7	0.5531	18.105	1035.4	0.5697
7	0.000		0.4975	9.769	1119.6	0.4975	18.068	1041.4	0.5167
8	0.000		0.4514	9.723	1116.7	0.4514	18.139	1049.7	0.4714
9	0.000		0.4126	10.047	1142.6	0.4126	18.747	1072.2	0.4323
10	0.000		0.3792	9.994	1138.5	0.3792	18.605	1081.2	0.3986
11	0.000		0.3508	9.860	1127.7	0.3508	18.765	1088.8	0.3696
12	0.000		0.3267	9.682	1113.5	0.3267	18.674	1095.9	0.3447
13	0.000		0.3061	9.474	1097.1	0.3061	18.547	1102.6	0.3230
14	0.000		0.2882	9.241	1079.1	0.2882	18.387	1108.6	0.3039
15	0.000		0.2726	8.978	1059.1	0.2726	18.189	1114.0	0.2870
16	0.000		0.2590	8.678	1036.8	0.2590	17.939	1118.2	0.2720
17	0.000		0.2470	8.328	1011.3	0.2470	17.600	1119.3	0.2586
18	0.000		0.2365	7.903	981.6	0.2365	17.107	1113.4	0.2466
19	0.000		0.2273	7.387	946.4	0.2273	16.354	1093.9	0.2360
20	0.000		0.2195	6.765	905.3	0.2195	15.243	1055.4	0.2266
21	0.000		0.2128	5.856	850.1	0.2128	13.454	987.7	0.2187
22	0.000		0.2074	4.920	795.4	0.2074	11.388	908.4	0.2121
23	0.000		0.2031	3.998	746.9	0.2031	8.189	827.0	0.2068
24	0.000		0.2001	1.790	640.2	0.2001	4.185	673.7	0.2034
25	0.000		0.1989	1.090	609.3	0.1989	2.488	626.0	0.2017

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.228	619.9	0.7396	4.767	613.7	0.7396	6.054	640.6	0.7396
2	14.344	787.5	0.7396	16.120	751.5	0.7396	20.341	859.6	0.7396
3	19.472	814.4	0.7324	21.637	764.0	0.7342	27.006	899.0	0.7347
4	22.022	841.6	0.6940	24.338	780.2	0.6983	30.335	949.5	0.6999
5	22.897	855.5	0.6439	25.291	788.7	0.6514	31.685	981.3	0.6540
6	23.094	864.3	0.5915	25.549	795.4	0.6021	32.156	1001.6	0.6050
7	23.137	870.2	0.5431	25.647	801.5	0.5561	32.404	1014.8	0.5581
8	23.258	874.0	0.5001	25.818	807.1	0.5149	32.702	1026.2	0.5157
9	23.950	880.3	0.4615	26.584	816.5	0.4772	33.659	1043.6	0.4771
10	24.000	879.7	0.4277	26.669	819.5	0.4440	33.804	1049.1	0.4432
11	23.930	877.4	0.3984	26.624	822.3	0.4148	33.739	1047.2	0.4135
12	23.787	873.5	0.3728	26.501	824.6	0.3893	33.628	1039.2	0.3876
13	23.590	868.3	0.3503	26.319	826.3	0.3666	33.204	1026.3	0.3647
14	23.345	862.0	0.3305	26.083	827.4	0.3466	32.764	1009.8	0.3447
15	23.046	854.6	0.3129	25.787	827.7	0.3288	32.257	989.6	0.3268
16	22.679	846.1	0.2971	25.414	827.0	0.3128	31.594	964.8	0.3110
17	22.203	836.3	0.2831	24.923	825.3	0.2984	30.743	935.0	0.2969
18	21.559	825.6	0.2706	24.250	822.0	0.2857	29.678	903.6	0.2845
19	20.646	814.4	0.2597	23.293	817.0	0.2747	28.345	874.6	0.2737
20	19.347	801.5	0.2504	21.924	809.0	0.2654	26.628	848.6	0.2645
21	17.233	779.6	0.2428	19.653	791.5	0.2579	23.905	818.1	0.2569
22	14.719	750.5	0.2366	16.912	766.9	0.2519	20.615	778.3	0.2509
23	11.869	710.1	0.2309	13.688	728.1	0.2462	16.655	730.4	0.2453
24	6.366	624.7	0.2267	6.168	631.8	0.2414	7.485	633.1	0.2408
25	3.130	596.2	0.2233	3.561	599.4	0.2371	4.294	601.6	0.2370

Table 4-35. LS1 Burnup and TH Feedback Parameters Assembly C12 (Continued)

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.798	639.4	0.7396	8.196	650.5	0.7396	8.204	585.8	0.7396
2	22.690	841.0	0.7396	26.721	852.3	0.7396	26.744	635.8	0.7396
3	29.991	876.6	0.7350	34.711	858.5	0.7352	34.739	641.9	0.7352
4	33.676	924.0	0.7009	38.692	873.6	0.7018	38.624	653.7	0.7018
5	35.207	952.0	0.6557	40.215	880.6	0.6579	40.249	659.7	0.658
6	35.800	966.5	0.6070	40.918	889.5	0.6107	40.955	668.8	0.6108
7	36.091	972.7	0.5602	41.349	900.6	0.5651	41.389	678.0	0.5652
8	36.412	976.1	0.5175	41.832	913.7	0.5233	41.875	687.3	0.5235
9	37.421	983.6	0.4786	43.055	931.3	0.4850	43.101	696.8	0.4852
10	37.567	983.6	0.4445	43.374	945.9	0.4511	43.422	703.2	0.4513
11	37.484	981.2	0.4148	43.459	950.2	0.4214	43.508	706.4	0.4216
12	37.262	979.6	0.3887	43.405	974.7	0.3952	43.454	706.4	0.3953
13	36.948	981.0	0.3658	43.256	989.3	0.3720	43.306	709.6	0.3722
14	36.573	987.6	0.3457	43.038	1003.3	0.3514	43.087	706.4	0.3516
15	36.122	998.9	0.3277	42.728	1016.1	0.3331	42.776	703.2	0.3333
16	35.616	1007.2	0.3117	42.244	1027.4	0.3167	42.292	703.2	0.3168
17	34.640	1003.6	0.2974	41.469	1036.7	0.3019	41.516	696.8	0.3021
18	33.457	986.1	0.2848	40.336	1041.4	0.2888	40.380	690.5	0.2889
19	31.953	961.4	0.2737	38.789	1037.4	0.2772	38.831	684.2	0.2773
20	30.035	933.1	0.2643	36.683	1020.0	0.2671	36.723	678.0	0.2672
21	27.016	893.1	0.2566	33.209	979.1	0.2586	33.248	668.8	0.2588
22	23.352	845.2	0.2503	28.879	922.5	0.2517	28.911	653.7	0.2517
23	18.871	782.8	0.2446	23.392	843.6	0.2455	23.418	636.0	0.2455
24	8.494	655.5	0.2401	10.620	682.3	0.2409	10.632	596.1	0.2410
25	4.661	613.9	0.2365	6.059	628.2	0.2375	6.065	579.5	0.2376

Table 4-36. LS1 Burnup and TH Feedback Parameters Assembly C13

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.674	639.7	0.7396	3.251	649.8	0.7396
2	0.000		0.7396	5.248	860.6	0.7396	10.882	908.3	0.7396
3	0.000		0.7331	7.228	935.9	0.7331	15.022	1002.2	0.7283
4	0.000	Data	0.6948	8.418	1017.9	0.6948	17.208	1079.5	0.6842
5	0.000	Not	0.6426	8.920	1054.7	0.6426	17.991	1102.4	0.6272
6	0.000	Required	0.5852	9.065	1085.7	0.5852	18.191	1107.0	0.5684
7	0.000		0.5304	9.092	1067.7	0.5304	18.260	1110.4	0.5149
8	0.000		0.4825	9.151	1072.2	0.4825	18.408	1117.9	0.4690
9	0.000		0.4411	9.531	1101.6	0.4411	19.084	1143.0	0.4293
10	0.000		0.4056	9.620	1100.7	0.4056	19.183	1162.4	0.3949
11	0.000		0.3753	9.413	1092.3	0.3753	19.177	1161.2	0.3656
12	0.000		0.3495	9.254	1080.1	0.3495	19.109	1169.1	0.3401
13	0.000		0.3274	9.083	1065.5	0.3274	19.004	1176.7	0.3180
14	0.000		0.3083	8.851	1049.6	0.3083	18.857	1183.3	0.2985
15	0.000		0.2916	8.622	1032.7	0.2916	18.693	1188.2	0.2813
16	0.000		0.2770	8.376	1014.8	0.2770	18.472	1190.6	0.2659
17	0.000		0.2640	8.112	996.1	0.2640	18.176	1187.8	0.2522
18	0.000		0.2526	7.833	976.6	0.2526	17.763	1176.7	0.2399
19	0.000		0.2425	7.513	954.9	0.2425	17.145	1149.7	0.2291
20	0.000		0.2335	7.090	928.9	0.2335	16.198	1105.6	0.2196
21	0.000		0.2256	6.343	879.6	0.2256	14.524	1031.6	0.2114
22	0.000		0.2192	5.489	827.4	0.2192	12.485	946.0	0.2048
23	0.000		0.2140	4.524	774.7	0.2140	10.196	856.7	0.1998
24	0.000		0.2104	2.056	652.2	0.2104	4.699	686.1	0.1957
25	0.000		0.2089	1.250	616.3	0.2089	2.816	633.8	0.1941

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.036	607.7	0.7396	4.907	648.5	0.7396	6.318	649.0	0.7396
2	13.677	743.4	0.7396	16.557	695.6	0.7396	21.139	690.6	0.7396
3	18.729	774.9	0.7316	22.232	920.7	0.7319	28.049	934.7	0.7321
4	21.631	816.6	0.6927	25.176	939.3	0.6940	31.610	986.5	0.6947
5	23.045	889.1	0.6433	26.648	933.7	0.6459	33.367	1011.4	0.6469
6	23.983	925.8	0.5921	27.516	924.9	0.5960	34.356	1022.1	0.5965
7	24.573	958.2	0.5430	28.050	917.4	0.5477	34.963	1028.8	0.5478
8	24.897	983.0	0.4972	28.351	914.4	0.5028	35.384	1039.7	0.5025
9	25.764	999.3	0.4565	29.247	918.2	0.4626	36.490	1059.1	0.4622
10	26.194	1028.3	0.4229	29.647	914.3	0.4291	36.922	1062.1	0.4283
11	26.211	1030.4	0.3918	29.658	913.5	0.3983	36.923	1061.1	0.3976
12	26.030	1020.4	0.3642	29.483	914.3	0.3710	36.677	1054.5	0.3704
13	25.820	1011.1	0.3403	29.278	914.9	0.3475	36.341	1042.5	0.3470
14	25.514	996.5	0.3192	28.977	915.6	0.3265	35.865	1026.6	0.3263
15	25.139	979.4	0.3005	28.603	915.7	0.3080	35.265	1006.4	0.3080
16	24.694	960.7	0.2840	28.149	914.6	0.2915	34.620	981.1	0.2917
17	24.154	940.7	0.2693	27.581	911.0	0.2769	33.684	950.0	0.2774
18	23.480	919.9	0.2564	26.859	904.9	0.2639	32.453	916.6	0.2647
19	22.604	899.7	0.2451	25.905	895.0	0.2526	31.095	885.1	0.2538
20	21.401	880.3	0.2357	24.682	880.1	0.2431	29.387	856.1	0.2443
21	19.275	846.9	0.2275	22.230	852.6	0.2349	26.548	820.7	0.2362
22	16.631	804.4	0.2207	19.271	816.2	0.2280	23.017	781.2	0.2294
23	13.496	748.5	0.2147	15.658	763.6	0.2220	18.657	732.4	0.2236
24	6.137	638.7	0.2102	7.099	646.1	0.2173	8.465	635.8	0.2192
25	3.606	603.9	0.2076	4.136	608.0	0.2144	4.901	603.2	0.2164

Table 4-36. LS1 Burnup and TH Feedback Parameters Assembly C13 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU) 495.2 Cy 7	Fuel Temp. (K) 495.2 Cy 7	Mod. Dens. (g/cm³) 495.2 Cy 7
1	7.121	646.0	0.7396	8.524	650.6	0.7396
2	23.649	864.0	0.7396	27.676	851.8	0.7396
3	31.235	903.1	0.7324	35.988	859.6	0.7329
4	35.162	952.0	0.6957	40.079	874.5	0.6972
5	37.074	975.6	0.6483	42.063	879.3	0.6514
6	38.117	983.5	0.5981	43.176	884.7	0.6026
7	38.734	985.0	0.5493	43.808	893.9	0.5554
8	39.170	987.2	0.5041	44.503	906.7	0.5113
9	40.324	994.3	0.4636	45.883	923.5	0.4717
10	40.732	990.7	0.4298	46.419	935.8	0.4379
11	40.711	987.5	0.3992	46.559	949.3	0.4075
12	40.453	985.7	0.3722	46.472	964.0	0.3805
13	40.116	985.6	0.3488	46.301	978.4	0.3571
14	39.655	987.8	0.3282	46.006	993.1	0.3362
15	39.071	990.1	0.3099	45.580	1007.3	0.3178
16	38.315	988.5	0.2936	44.968	1020.4	0.3013
17	37.309	978.2	0.2792	44.076	1031.1	0.2866
18	36.052	960.1	0.2665	42.876	1036.2	0.2735
19	34.533	937.4	0.2553	41.316	1032.3	0.2619
20	32.643	912.6	0.2459	39.235	1014.8	0.2519
21	29.538	877.0	0.2377	35.673	974.2	0.2432
22	25.656	833.0	0.2309	31.127	917.9	0.2359
23	20.803	774.8	0.2251	25.268	839.3	0.2297
24	9.469	655.1	0.2207	11.606	683.0	0.2254
25	5.469	614.0	0.2181	6.676	628.7	0.2228

Table 4-37. LS1 Burnup and TH Feedback Parameters Assembly C14

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.583	640.2	0.7396	2.878	628.5	0.7396
2	0.000		0.7396	5.296	884.1	0.7396	9.708	820.3	0.7396
3	0.000		0.7331	7.325	942.3	0.7331	13.650	898.9	0.7349
4	0.000	Data	0.6946	8.519	1025.2	0.6946	15.877	970.3	0.6988
5	0.000	Not	0.6425	8.989	1058.4	0.6425	16.712	998.4	0.6495
6	0.000	Required	0.5857	9.045	1064.2	0.5857	16.917	1008.0	0.5955
7	0.000		0.5316	9.014	1061.8	0.5316	16.950	1012.8	0.5437
8	0.000		0.4845	9.030	1063.0	0.4845	17.063	1020.2	0.4979
9	0.000		0.4437	9.378	1089.6	0.4437	17.704	1042.7	0.4575
10	0.000		0.4087	9.351	1087.5	0.4087	17.773	1050.2	0.4226
11	0.000		0.3788	9.238	1078.8	0.3788	17.731	1055.8	0.3925
12	0.000		0.3531	9.078	1066.6	0.3531	17.633	1060.7	0.3663
13	0.000		0.3311	8.890	1052.5	0.3311	17.504	1065.4	0.3437
14	0.000		0.3121	8.677	1036.7	0.3121	17.343	1069.5	0.3237
15	0.000		0.2955	8.438	1019.3	0.2955	17.141	1072.5	0.3061
16	0.000		0.2809	8.181	999.5	0.2809	16.873	1073.2	0.2904
17	0.000		0.2681	7.829	976.4	0.2681	16.499	1069.8	0.2764
18	0.000		0.2569	7.419	948.6	0.2569	15.957	1059.3	0.2640
19	0.000		0.2471	6.917	915.7	0.2471	15.171	1037.1	0.2529
20	0.000		0.2387	6.305	877.2	0.2387	14.069	1000.0	0.2432
21	0.000		0.2315	5.449	826.3	0.2315	12.359	938.6	0.2350
22	0.000		0.2258	4.562	776.6	0.2258	10.416	868.2	0.2282
23	0.000		0.2213	3.686	730.6	0.2213	8.364	796.4	0.2228
24	0.000		0.2182	1.635	633.2	0.2182	3.771	661.0	0.2193
25	0.000		0.2169	0.987	604.9	0.2169	2.225	618.6	0.2176

Node No.	Datapoint 6 (195.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	195.1 Cy 6	195.1 Cy 6	195.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.487	660.7	0.7396	5.491	662.9	0.7396	6.074	695.8	0.7396
2	15.252	970.7	0.7396	18.513	951.2	0.7396	20.326	676.2	0.7396
3	20.659	1028.2	0.7316	24.592	976.1	0.7307	26.761	682.9	0.7328
4	23.276	1063.6	0.6930	27.371	1000.7	0.6921	29.760	694.6	0.6971
5	24.054	1058.2	0.6426	28.140	999.4	0.6421	30.733	707.2	0.6513
6	24.078	1041.6	0.5886	28.114	992.4	0.5888	30.944	721.8	0.6031
7	23.934	1025.9	0.5377	27.921	985.6	0.5386	31.000	737.5	0.5580
8	23.924	1015.1	0.4930	27.877	980.9	0.4944	31.199	753.1	0.5181
9	24.563	1014.9	0.4539	28.640	984.2	0.4556	32.117	769.9	0.4825
10	24.547	1007.5	0.4203	28.600	980.9	0.4224	32.256	781.8	0.4513
11	24.399	998.3	0.3912	28.327	977.4	0.3935	32.217	790.9	0.4236
12	24.175	987.8	0.3659	28.081	974.0	0.3684	32.058	796.9	0.3988
13	23.917	976.6	0.3439	27.793	970.3	0.3465	31.816	800.1	0.3766
14	23.619	965.1	0.3246	27.466	966.3	0.3272	31.497	800.6	0.3568
15	23.272	953.2	0.3074	27.082	961.3	0.3101	31.091	799.1	0.3386
16	22.843	940.1	0.2922	26.603	954.6	0.2948	30.563	795.7	0.3225
17	22.285	925.3	0.2786	25.973	945.0	0.2813	29.858	790.6	0.3079
18	21.539	909.3	0.2664	25.131	932.3	0.2691	28.915	783.7	0.2950
19	20.549	893.6	0.2557	24.025	917.3	0.2583	27.674	774.7	0.2837
20	19.209	875.6	0.2462	22.635	898.2	0.2488	26.000	762.6	0.2737
21	17.079	844.7	0.2382	20.145	866.1	0.2408	23.307	742.8	0.2654
22	14.627	802.0	0.2316	17.238	824.3	0.2341	20.011	718.3	0.2586
23	11.612	745.2	0.2261	13.808	767.3	0.2286	16.003	683.3	0.2524
24	5.187	637.5	0.2226	6.147	645.8	0.2249	7.052	610.7	0.2489
25	3.012	603.6	0.2206	3.546	608.3	0.2230	4.004	587.0	0.2426

Table 4-37. LS1 Burnup and TH Feedback Parameters Assembly C14 (Continued)

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.318	585.4	0.7396	6.644	580.4	0.7396	6.655	629.0	0.7396
2	21.065	638.9	0.7396	22.019	620.7	0.7396	22.084	794.6	0.7396
3	27.658	642.9	0.7336	28.766	622.6	0.7345	28.838	820.6	0.7345
4	30.708	649.7	0.6989	31.859	625.6	0.7010	31.850	855.0	0.7011
5	31.765	658.6	0.6546	32.966	629.0	0.6583	33.063	878.7	0.6585
6	32.056	665.6	0.6083	33.354	633.9	0.6140	33.456	899.1	0.6142
7	32.212	675.5	0.5653	33.620	640.1	0.5732	33.725	911.6	0.5733
8	32.611	685.5	0.5276	34.049	647.6	0.5376	34.157	924.1	0.5377
9	33.540	696.8	0.4935	35.237	656.8	0.5060	35.349	941.2	0.5060
10	33.767	705.8	0.4639	35.619	666.0	0.4786	35.732	945.6	0.4788
11	33.808	714.2	0.4374	35.624	675.7	0.4546	35.937	945.6	0.4547
12	33.725	722.2	0.4137	35.916	686.3	0.4333	36.029	945.6	0.4333
13	33.554	729.8	0.3922	35.929	697.6	0.4143	36.041	941.2	0.4143
14	33.301	736.9	0.3729	35.865	709.3	0.3971	35.975	932.6	0.3971
15	32.953	743.2	0.3553	35.708	721.4	0.3814	35.816	919.9	0.3814
16	32.475	748.6	0.3393	35.418	733.5	0.3672	35.520	899.1	0.3671
17	31.810	753.1	0.3249	34.932	745.2	0.3542	35.028	874.7	0.3542
18	30.894	756.0	0.3121	34.173	755.7	0.3424	34.263	851.1	0.3424
19	29.664	757.3	0.3007	33.056	763.2	0.3319	33.139	824.4	0.3318
20	27.971	755.2	0.2910	31.406	766.1	0.3225	31.483	802.2	0.3225
21	25.182	744.6	0.2829	28.612	759.1	0.3149	28.682	777.1	0.3148
22	21.721	726.8	0.2763	24.617	743.5	0.3088	24.679	749.3	0.3088
23	17.396	693.7	0.2699	19.980	709.3	0.3019	20.010	709.6	0.3019
24	7.632	615.1	0.2634	8.715	621.8	0.2939	8.738	627.3	0.2938
25	4.294	588.8	0.2572	4.634	592.0	0.2849	4.647	598.8	0.2848

Table 4-38. LS1 Burnup and TH Feedback Parameters Assembly C15

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.716	647.2	0.7396	3.493	655.5	0.7396
2	0.000		0.7396	5.711	893.0	0.7396	11.708	936.0	0.7396
3	0.000		0.7287	7.831	976.5	0.7287	16.009	1031.3	0.7240
4	0.000	Data	0.6846	9.036	1063.5	0.6846	18.136	1104.5	0.6746
5	0.000	Not	0.6264	9.456	1095.5	0.6264	18.799	1124.3	0.6133
6	0.000	Required	0.5655	9.511	1100.0	0.5655	18.888	1128.0	0.5524
7	0.000		0.5103	9.451	1095.3	0.5103	18.873	1131.5	0.4991
8	0.000		0.4635	9.445	1094.8	0.4635	18.952	1139.0	0.4541
9	0.000		0.4238	9.780	1121.3	0.4238	19.572	1163.6	0.4155
10	0.000		0.3897	9.735	1117.7	0.3897	19.632	1172.6	0.3824
11	0.000		0.3608	9.608	1107.6	0.3608	19.599	1181.1	0.3540
12	0.000		0.3362	9.441	1094.5	0.3362	19.519	1188.9	0.3294
13	0.000		0.3152	9.252	1079.9	0.3152	19.407	1195.6	0.3080
14	0.000		0.2969	9.047	1064.3	0.2968	19.263	1201.2	0.2893
15	0.000		0.2810	8.828	1047.9	0.2810	19.081	1204.6	0.2727
16	0.000		0.2669	8.594	1030.6	0.2669	18.847	1204.6	0.2578
17	0.000		0.2545	8.346	1012.7	0.2545	18.538	1199.1	0.2446
18	0.000		0.2434	8.083	994.0	0.2434	18.122	1185.4	0.2327
19	0.000		0.2336	7.774	972.6	0.2336	17.515	1159.2	0.2222
20	0.000		0.2248	7.352	944.1	0.2248	16.594	1116.6	0.2129
21	0.000		0.2171	6.689	894.8	0.2171	14.936	1044.3	0.2048
22	0.000		0.2108	5.686	840.1	0.2108	12.885	958.8	0.1982
23	0.000		0.2057	4.703	784.4	0.2057	10.545	867.5	0.1930
24	0.000		0.2021	2.141	658.1	0.2021	4.873	690.6	0.1892
25	0.000		0.2006	1.304	618.6	0.2006	2.926	636.4	0.1878

Node No.	Datapoint 6 (195.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	195.1 Cy 6	195.1 Cy 6	195.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.086	659.6	0.7396	6.171	671.7	0.7396	6.912	605.7	0.7396
2	17.183	964.3	0.7396	20.662	984.2	0.7396	23.031	715.3	0.7396
3	23.034	1029.6	0.7236	27.283	1022.7	0.7234	30.347	738.5	0.7285
4	25.656	1093.5	0.6748	30.324	1054.9	0.6749	33.868	767.7	0.6824
5	26.788	1119.4	0.6136	31.259	1055.4	0.6148	35.210	795.1	0.6280
6	26.955	1127.0	0.5527	31.361	1045.7	0.5548	35.665	819.7	0.5736
7	26.933	1126.3	0.4991	31.268	1035.2	0.5017	35.662	840.6	0.5249
8	26.984	1123.6	0.4539	31.265	1027.4	0.4569	36.095	857.9	0.4828
9	27.646	1127.7	0.4155	31.920	1026.4	0.4188	36.961	873.8	0.4455
10	27.628	1120.1	0.3826	31.860	1020.3	0.3862	36.977	879.5	0.4127
11	27.470	1108.0	0.3544	31.565	1015.0	0.3582	36.771	878.7	0.3838
12	27.221	1091.8	0.3301	31.384	1010.4	0.3341	36.422	873.5	0.3585
13	26.917	1073.8	0.3090	31.052	1006.4	0.3130	35.981	865.3	0.3363
14	26.564	1054.5	0.2906	30.672	1002.6	0.2946	35.480	854.6	0.3167
15	26.161	1033.6	0.2743	30.231	998.6	0.2784	34.849	842.3	0.2993
16	25.657	1010.6	0.2598	29.699	993.3	0.2639	34.138	829.4	0.2839
17	25.044	984.4	0.2469	29.030	985.4	0.2510	33.211	811.1	0.2699
18	24.291	956.3	0.2355	28.189	973.3	0.2395	32.075	790.7	0.2573
19	23.352	929.4	0.2253	27.130	957.0	0.2292	30.772	774.2	0.2463
20	22.067	902.4	0.2163	25.694	934.3	0.2202	29.270	769.8	0.2376
21	19.925	864.3	0.2085	23.238	898.3	0.2124	26.622	767.3	0.2302
22	17.217	817.2	0.2021	20.131	847.9	0.2060	23.202	737.0	0.2241
23	13.998	758.3	0.1969	16.358	785.0	0.2007	18.855	701.3	0.2185
24	6.417	644.5	0.1932	7.486	655.5	0.1970	8.607	622.4	0.2143
25	3.763	608.0	0.1914	4.393	614.0	0.1950	5.077	598.9	0.2131

Table 4-38. LS1 Burnup and TH Feedback Parameters Assembly C15 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.385	607.6	0.7396	8.606	653.4	0.7396
2	24.458	719.5	0.7396	28.517	654.7	0.7396
3	32.206	742.8	0.7280	36.962	661.3	0.7288
4	35.024	776.0	0.6861	41.001	678.4	0.6884
5	37.888	801.7	0.6342	42.683	687.6	0.6384
6	38.202	820.6	0.5822	43.424	697.7	0.5880
7	38.513	834.5	0.5351	43.690	910.2	0.5422
8	38.633	845.3	0.4938	44.391	925.0	0.5016
9	39.785	858.1	0.4567	45.579	944.8	0.4648
10	39.641	861.1	0.4238	45.834	961.7	0.4321
11	39.654	863.5	0.3947	45.845	978.9	0.4029
12	39.321	865.6	0.3691	45.707	996.2	0.3772
13	38.909	869.3	0.3467	45.483	1013.2	0.3545
14	38.607	884.7	0.3272	45.245	1028.2	0.3345
15	38.402	953.5	0.3109	45.213	1035.0	0.3174
16	38.523	1079.6	0.2968	45.321	1033.8	0.3026
17	37.711	1098.4	0.2819	44.688	1041.2	0.2874
18	36.391	1068.5	0.2680	43.318	1045.9	0.2735
19	34.622	1026.8	0.2559	41.692	1040.5	0.2611
20	33.001	979.1	0.2460	39.640	1019.1	0.2507
21	29.952	922.5	0.2378	36.109	976.0	0.2420
22	25.074	852.1	0.2311	31.550	918.3	0.2349
23	21.141	790.9	0.2251	25.607	839.4	0.2285
24	9.651	658.9	0.2208	11.797	683.6	0.2242
25	5.649	614.4	0.2190	6.850	628.4	0.2221

Table 4-39. LS1 Burnup and TH Feedback Parameters Assembly C16

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.693	646.0	0.7396	3.305	648.2	0.7396
2	0.000		0.7396	5.695	884.8	0.7396	11.013	892.1	0.7396
3	0.000		0.7302	7.640	963.4	0.7302	15.141	980.6	0.7284
4	0.000	Data	0.6881	8.840	1048.8	0.6881	17.323	1055.0	0.6845
5	0.000	Not	0.6317	9.328	1085.8	0.6317	18.124	1080.0	0.6271
6	0.000	Required	0.5714	9.457	1095.8	0.5714	18.344	1087.3	0.5675
7	0.000		0.5155	9.473	1097.0	0.5155	18.427	1092.8	0.5133
8	0.000		0.4577	9.523	1100.9	0.4577	18.582	1101.4	0.4570
9	0.000		0.4269	9.698	1130.7	0.4269	19.251	1125.9	0.4272
10	0.000		0.3920	9.674	1128.8	0.3920	19.344	1135.9	0.3930
11	0.000		0.3624	9.757	1119.4	0.3624	19.330	1144.7	0.3836
12	0.000		0.3372	9.687	1105.9	0.3372	19.253	1152.7	0.3383
13	0.000		0.3156	9.383	1090.0	0.3156	19.135	1160.1	0.3163
14	0.000		0.2970	9.156	1072.6	0.2970	18.982	1166.6	0.2970
15	0.000		0.2808	8.908	1053.8	0.2808	18.794	1171.9	0.2799
16	0.000		0.2666	8.637	1033.8	0.2666	18.586	1175.6	0.2647
17	0.000		0.2541	8.336	1012.0	0.2541	18.267	1176.6	0.2510
18	0.000		0.2431	7.991	987.6	0.2431	17.837	1168.3	0.2389
19	0.000		0.2333	7.571	958.8	0.2333	17.166	1148.6	0.2280
20	0.000		0.2249	7.033	923.2	0.2249	16.136	1105.1	0.2185
21	0.000		0.2176	6.199	870.7	0.2176	14.384	1031.6	0.2104
22	0.000		0.2117	5.292	817.3	0.2117	12.310	948.1	0.2038
23	0.000		0.2069	4.364	766.1	0.2069	10.044	857.2	0.1986
24	0.000		0.2036	1.985	649.0	0.2036	4.642	686.6	0.1949
25	0.000		0.2022	1.212	614.8	0.2022	2.765	634.1	0.1933

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.053	670.0	0.7396	6.139	671.8	0.7396	7.644	648.6	0.7396
2	16.975	1010.3	0.7396	20.450	983.6	0.7396	24.754	956.8	0.7396
3	22.691	1077.5	0.7249	26.932	1021.6	0.7243	32.258	995.7	0.7261
4	25.431	1131.0	0.6782	29.920	1058.1	0.6776	35.789	939.0	0.6819
5	26.302	1138.0	0.6192	30.867	1069.5	0.6190	37.095	968.9	0.6263
6	26.423	1128.2	0.5593	31.010	1072.9	0.5595	37.482	959.6	0.5691
7	26.378	1116.7	0.5058	30.973	1074.1	0.5062	37.598	1003.1	0.5169
8	26.421	1104.9	0.4605	31.007	1072.7	0.4612	37.732	1012.0	0.4719
9	27.072	1103.2	0.4220	31.675	1075.3	0.4229	38.511	1021.9	0.4331
10	27.057	1092.9	0.3889	31.631	1070.9	0.3900	38.445	1019.9	0.3997
11	26.921	1081.3	0.3605	31.468	1066.6	0.3617	38.194	1012.1	0.3710
12	26.712	1069.0	0.3360	31.232	1062.7	0.3374	37.827	1000.5	0.3462
13	26.450	1055.6	0.3147	30.946	1059.1	0.3161	37.373	985.9	0.3248
14	26.138	1041.3	0.2960	30.606	1054.9	0.2975	36.836	969.1	0.3056
15	25.766	1024.9	0.2796	30.200	1049.9	0.2810	36.198	949.6	0.2889
16	25.317	1005.5	0.2649	29.703	1042.7	0.2664	35.426	927.1	0.2739
17	24.748	982.3	0.2517	29.064	1032.6	0.2532	34.453	901.4	0.2605
18	24.025	957.6	0.2400	28.245	1018.6	0.2414	33.303	875.1	0.2487
19	23.076	935.2	0.2296	27.171	1000.7	0.2310	31.918	851.6	0.2384
20	21.771	913.4	0.2204	25.694	976.7	0.2218	30.100	827.0	0.2293
21	19.573	879.2	0.2126	23.186	935.1	0.2138	27.137	795.1	0.2214
22	16.673	833.5	0.2061	20.065	881.6	0.2073	23.475	758.6	0.2148
23	13.715	772.5	0.2009	16.320	812.2	0.2020	19.023	713.9	0.2093
24	6.299	650.6	0.1973	7.494	667.5	0.1984	8.705	627.3	0.2056
25	3.723	611.7	0.1956	4.403	621.0	0.1967	5.065	597.7	0.2034

Table 4-39. LS1 Burnup and TH Feedback Parameters Assembly C16 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU) 495.2 Cy 7	Fuel Temp. (K) 495.2 Cy 7	Mod. Dens. (g/cm³) 495.2 Cy 7
1	8.240	634.1	0.7396	9.192	620.6	0.7396
2	26.803	799.6	0.7396	29.442	739.8	0.7396
3	34.608	822.2	0.7273	37.917	744.4	0.7291
4	38.645	860.1	0.6848	41.964	768.3	0.6890
5	40.171	888.6	0.6312	43.672	770.6	0.6384
6	40.723	910.4	0.5767	44.425	784.5	0.5862
7	40.959	926.6	0.5246	44.889	800.5	0.5379
8	41.188	939.9	0.4800	45.360	817.8	0.4955
9	42.080	955.6	0.4411	46.529	838.1	0.4582
10	42.068	963.5	0.4075	46.755	856.0	0.4255
11	41.849	968.1	0.3785	46.767	873.0	0.3971
12	41.505	971.4	0.3534	46.635	890.4	0.3722
13	41.070	974.2	0.3315	46.471	912.2	0.3504
14	40.540	975.2	0.3122	46.149	929.3	0.3309
15	39.885	972.7	0.2952	45.670	944.0	0.3134
16	39.058	964.8	0.2799	44.997	957.1	0.2978
17	37.993	950.3	0.2663	44.048	967.1	0.2837
18	36.687	929.9	0.2542	42.793	971.6	0.2711
19	35.128	906.3	0.2436	41.188	967.5	0.2600
20	33.111	880.0	0.2343	39.003	953.1	0.2500
21	29.869	844.5	0.2263	35.360	918.5	0.2414
22	25.860	802.5	0.2197	30.765	872.0	0.2342
23	20.933	748.4	0.2140	24.900	803.1	0.2280
24	9.580	642.7	0.2102	11.425	665.5	0.2240
25	6.547	606.1	0.2079	6.553	617.5	0.2208

Table 4-40. L51 Burnup and TH Feedback Parameters Assembly C17

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.693	646.0	0.7396	3.141	637.0	0.7396
2	0.000		0.7396	5.624	886.8	0.7396	10.561	857.1	0.7396
3	0.000		0.7300	7.728	969.4	0.7300	14.728	944.9	0.7308
4	0.000	Data	0.6876	8.859	1057.7	0.6876	17.006	1021.2	0.6894
5	0.000	Not	0.6308	9.429	1093.6	0.6308	17.841	1049.4	0.6344
6	0.000	Required	0.5704	9.517	1100.5	0.5704	18.031	1057.4	0.5761
7	0.000		0.5146	9.491	1098.4	0.5146	18.054	1061.3	0.5223
8	0.000		0.4671	9.513	1100.1	0.4671	18.159	1067.9	0.4759
9	0.000		0.4267	9.872	1128.6	0.4267	18.788	1089.7	0.4360
10	0.000		0.3920	9.637	1125.6	0.3920	18.844	1097.1	0.4016
11	0.000		0.3625	9.707	1116.4	0.3625	18.787	1103.2	0.3722
12	0.000		0.3375	9.625	1101.1	0.3375	18.671	1108.6	0.3468
13	0.000		0.3161	9.312	1084.5	0.3161	18.518	1113.6	0.3247
14	0.000		0.2976	9.072	1066.2	0.2976	18.329	1117.9	0.3054
15	0.000		0.2815	8.803	1046.0	0.2815	18.100	1121.2	0.2884
16	0.000		0.2676	8.498	1023.7	0.2676	17.819	1123.2	0.2732
17	0.000		0.2552	8.144	998.3	0.2552	17.451	1122.1	0.2597
18	0.000		0.2444	7.722	969.0	0.2444	16.929	1113.7	0.2476
19	0.000		0.2350	7.209	934.7	0.2350	16.148	1091.6	0.2369
20	0.000		0.2268	6.680	894.3	0.2268	15.012	1051.0	0.2276
21	0.000		0.2200	5.695	840.6	0.2200	13.210	981.6	0.2195
22	0.000		0.2145	4.762	788.6	0.2145	11.155	902.1	0.2131
23	0.000		0.2101	3.886	741.1	0.2101	8.994	821.9	0.2079
24	0.000		0.2071	1.740	637.9	0.2071	4.099	672.0	0.2044
25	0.000		0.2059	1.058	607.9	0.2059	2.440	625.2	0.2028

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.341	633.9	0.7396	5.040	630.3	0.7396	6.142	628.7	0.7396
2	14.730	850.2	0.7396	17.032	817.4	0.7396	20.568	803.6	0.7396
3	20.048	889.1	0.7329	22.849	834.7	0.7340	27.292	829.7	0.7352
4	22.748	921.6	0.6950	25.717	854.5	0.6980	30.695	869.0	0.7014
5	23.893	930.6	0.6445	26.717	861.0	0.6500	32.113	901.1	0.6561
6	23.885	930.7	0.5904	26.937	864.4	0.5985	32.691	929.6	0.6070
7	23.874	928.0	0.5394	26.948	867.1	0.5495	33.009	954.9	0.5594
8	23.941	925.0	0.4944	27.032	869.1	0.5056	33.363	977.7	0.5167
9	24.603	927.6	0.4548	27.743	875.1	0.4665	34.356	1002.1	0.4780
10	24.612	923.9	0.4206	27.762	876.3	0.4326	34.489	1012.2	0.4413
11	24.488	918.6	0.3911	27.642	876.8	0.4031	34.366	1011.9	0.4110
12	24.294	912.6	0.3658	27.445	876.6	0.3777	34.079	1003.9	0.3848
13	24.078	907.6	0.3438	27.220	875.4	0.3556	33.702	990.7	0.3619
14	23.791	900.0	0.3243	26.925	874.4	0.3358	33.208	973.6	0.3416
15	23.441	890.7	0.3068	26.662	872.6	0.3182	32.698	952.8	0.3235
16	23.019	880.0	0.2912	26.117	870.0	0.3024	31.652	928.1	0.3076
17	22.488	867.9	0.2773	25.647	865.3	0.2883	30.920	899.3	0.2931
18	21.785	854.6	0.2649	24.791	858.8	0.2758	29.772	869.2	0.2806
19	20.818	841.1	0.2541	23.753	850.4	0.2649	28.395	844.1	0.2699
20	19.466	826.7	0.2449	22.303	838.9	0.2556	26.595	818.9	0.2607
21	17.300	800.6	0.2372	19.943	816.5	0.2480	23.795	788.4	0.2530
22	14.738	766.8	0.2310	17.111	786.4	0.2417	20.449	754.1	0.2467
23	11.857	721.2	0.2254	13.807	741.6	0.2361	16.478	712.0	0.2410
24	5.361	629.1	0.2214	6.220	638.6	0.2318	7.398	625.5	0.2366
25	3.134	598.9	0.2188	3.603	602.7	0.2286	4.259	597.4	0.2335

Table 4-40. LS1 Burnup and TH Feedback Parameters Assembly C17 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.553	603.0	0.7396	7.849	643.5	0.7396	7.857	585.8	0.7396
2	21.891	706.8	0.7396	25.682	631.9	0.7396	25.703	629.0	0.7396
3	29.029	729.7	0.7363	33.512	640.7	0.7366	33.536	630.2	0.7366
4	32.726	761.8	0.7041	37.374	653.1	0.7052	37.401	638.9	0.7052
5	34.374	788.0	0.6611	39.031	653.7	0.6636	39.059	641.9	0.6636
6	35.129	808.8	0.6142	39.789	654.0	0.6182	39.821	653.7	0.6182
7	35.589	825.6	0.5685	40.289	657.0	0.5737	40.324	662.7	0.5738
8	36.073	841.8	0.5261	40.860	663.7	0.5323	40.898	671.9	0.5325
9	37.202	858.6	0.4872	42.162	677.0	0.4940	42.203	681.1	0.4942
10	37.416	869.4	0.4526	42.641	689.9	0.4600	42.684	687.3	0.4602
11	37.341	876.3	0.4222	42.648	904.6	0.4298	42.694	696.8	0.4300
12	37.077	878.3	0.3956	42.589	921.3	0.4034	42.636	700.0	0.4036
13	36.699	876.2	0.3723	42.431	939.5	0.3800	42.479	703.2	0.3803
14	36.177	874.6	0.3518	42.141	959.2	0.3592	42.189	703.2	0.3593
15	35.503	866.3	0.3330	41.698	979.3	0.3403	41.746	703.1	0.3405
16	34.652	853.0	0.3165	41.058	998.0	0.3234	41.106	703.2	0.3236
17	33.572	834.6	0.3016	40.142	1012.8	0.3081	40.189	700.0	0.3083
18	32.242	812.6	0.2886	38.893	1020.2	0.2945	38.940	700.0	0.2946
19	30.680	790.8	0.2776	37.292	1016.7	0.2826	37.338	695.8	0.2827
20	28.697	769.8	0.2680	35.131	1000.6	0.2723	35.176	690.6	0.2724
21	25.675	745.1	0.2601	31.699	984.4	0.2637	31.741	684.2	0.2638
22	22.074	717.8	0.2537	27.439	909.3	0.2565	27.476	668.8	0.2567
23	17.767	683.2	0.2479	22.144	832.6	0.2500	22.174	647.8	0.2501
24	7.983	616.6	0.2436	10.043	678.4	0.2454	10.056	598.9	0.2455
25	4.684	601.0	0.2422	5.910	629.8	0.2447	5.917	582.2	0.2448

Table 4-41. LS1 Burnup and TH Feedback Parameters Assembly C18

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.723	647.6	0.7396	3.519	656.6	0.7396
2	0.000		0.7396	5.741	895.1	0.7396	11.820	842.4	0.7396
3	0.000		0.7284	7.893	980.6	0.7284	16.200	1041.2	0.7235
4	0.000	Data	0.6837	9.148	1072.0	0.6837	18.398	1117.3	0.6735
5	0.000	Not	0.6245	9.619	1108.5	0.6245	19.095	1136.4	0.6110
6	0.000	Required	0.5626	9.695	1114.5	0.5626	19.196	1138.6	0.5493
7	0.000		0.5066	9.661	1111.6	0.5066	19.188	1140.7	0.4955
8	0.000		0.4594	9.677	1113.1	0.4594	19.276	1146.8	0.4502
9	0.000		0.4193	10.033	1141.7	0.4193	19.903	1170.5	0.4116
10	0.000		0.3850	9.989	1138.1	0.3850	19.958	1179.2	0.3784
11	0.000		0.3560	9.851	1126.9	0.3560	19.908	1187.0	0.3500
12	0.000		0.3314	9.663	1111.9	0.3314	19.800	1194.1	0.3256
13	0.000		0.3104	9.449	1095.1	0.3104	19.659	1200.7	0.3044
14	0.000		0.2922	9.217	1077.2	0.2922	19.485	1205.9	0.2858
15	0.000		0.2763	8.968	1058.3	0.2763	19.274	1209.4	0.2693
16	0.000		0.2625	8.701	1038.5	0.2625	19.010	1209.7	0.2546
17	0.000		0.2503	8.410	1017.3	0.2503	18.662	1204.5	0.2416
18	0.000		0.2394	8.080	993.8	0.2394	18.176	1190.5	0.2299
19	0.000		0.2299	7.680	965.2	0.2299	17.464	1162.9	0.2195
20	0.000		0.2214	7.160	931.4	0.2214	16.412	1117.5	0.2104
21	0.000		0.2142	6.331	878.8	0.2142	14.843	1041.8	0.2028
22	0.000		0.2083	5.408	823.9	0.2083	12.528	953.3	0.1962
23	0.000		0.2036	4.444	770.4	0.2036	10.165	861.1	0.1912
24	0.000		0.2002	2.010	650.1	0.2002	4.682	687.6	0.1875
25	0.000		0.1989	1.226	615.2	0.1989	2.611	634.7	0.1861

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.248	668.7	0.7396	6.484	688.3	0.7396	7.497	624.3	0.7396
2	17.657	998.3	0.7396	21.471	1037.2	0.7396	24.631	774.2	0.7396
3	23.609	1055.2	0.7224	28.087	1071.5	0.7210	32.049	795.9	0.7235
4	26.207	1102.0	0.6724	30.975	1100.6	0.6707	35.444	831.5	0.6767
5	26.954	1106.6	0.6107	31.719	1100.4	0.6092	36.612	862.6	0.6196
6	26.952	1097.0	0.5495	31.670	1093.0	0.5488	36.929	890.5	0.5632
7	26.827	1085.9	0.4966	31.500	1086.1	0.4960	37.053	914.3	0.5131
8	26.647	1079.6	0.4519	31.490	1081.4	0.4517	37.306	934.7	0.4704
9	27.515	1083.3	0.4139	32.176	1084.1	0.4141	38.233	954.6	0.4333
10	27.498	1076.6	0.3813	32.135	1080.5	0.3817	38.287	962.6	0.4009
11	27.335	1066.1	0.3533	31.948	1076.9	0.3540	38.097	962.2	0.3725
12	27.092	1053.7	0.3293	31.681	1073.2	0.3301	37.763	956.6	0.3478
13	26.803	1040.2	0.3083	31.368	1069.6	0.3093	37.357	948.9	0.3263
14	26.473	1026.3	0.2900	31.013	1065.8	0.2910	37.004	949.0	0.3078
15	26.098	1011.8	0.2738	30.606	1060.9	0.2749	37.006	953.6	0.2933
16	25.662	996.9	0.2593	30.125	1054.2	0.2604	36.530	954.0	0.2784
17	25.136	981.7	0.2465	29.530	1043.6	0.2476	35.632	958.3	0.2642
18	24.480	967.5	0.2350	28.769	1028.5	0.2361	34.452	924.7	0.2512
19	23.630	956.0	0.2248	27.777	1008.1	0.2259	33.081	893.9	0.2402
20	22.398	941.4	0.2159	26.352	981.0	0.2170	31.233	861.7	0.2304
21	20.214	908.4	0.2083	23.844	937.3	0.2093	28.195	823.1	0.2221
22	17.440	858.6	0.2019	20.639	882.4	0.2029	24.398	782.0	0.2165
23	14.128	790.6	0.1967	16.731	812.0	0.1977	19.720	731.8	0.2098
24	8.446	656.8	0.1930	7.636	667.0	0.1940	8.988	635.1	0.2058
25	3.800	614.4	0.1912	4.477	620.7	0.1922	5.219	602.0	0.2032

Table 4-41. LS1 Burnup and TH Feedback Parameters Assembly C18 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.910	603.2	0.7396	6.878	621.6	0.7396
2	25.886	698.6	0.7396	28.622	747.2	0.7396
3	33.677	718.1	0.7250	36.949	755.2	0.7272
4	37.353	748.3	0.6803	40.851	770.4	0.6853
5	38.783	776.4	0.6281	42.407	780.4	0.6343
6	39.281	798.6	0.5725	43.068	790.4	0.5837
7	39.575	817.6	0.5246	43.523	801.7	0.5382
8	39.953	834.0	0.4833	44.080	814.5	0.4984
9	41.012	850.4	0.4456	45.383	830.9	0.4627
10	41.143	860.1	0.4144	45.693	845.7	0.4310
11	41.000	866.1	0.3859	45.760	860.8	0.4028
12	40.696	869.9	0.3608	45.648	876.4	0.3779
13	40.303	871.6	0.3388	45.455	892.2	0.3557
14	39.934	869.5	0.3198	45.271	907.0	0.3364
15	39.652	858.8	0.3043	45.314	917.2	0.3200
16	39.290	848.0	0.2889	44.909	930.1	0.3041
17	38.286	834.9	0.2741	44.058	942.9	0.2891
18	36.983	818.7	0.2609	42.879	953.4	0.2757
19	35.473	803.3	0.2495	41.516	966.0	0.2642
20	33.661	795.8	0.2397	39.636	968.8	0.2543
21	30.475	790.2	0.2319	36.453	960.4	0.2465
22	26.843	809.6	0.2269	32.351	920.9	0.2408
23	21.927	781.8	0.2219	26.539	850.3	0.2352
24	10.037	659.4	0.2182	12.273	689.0	0.2313
25	5.808	615.9	0.2162	7.102	633.7	0.2284

Table 4-42. LS1 Burnup and TH Feedback Parameters Assembly C19

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU) 0.00 Cy 5	Fuel Temp. (K) 0.00 Cy 5	Mod. Dens. (g/cm³) 0.00 Cy 5	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU) 239.5 Cy 5	Fuel Temp. (K) 239.5 Cy 5	Mod. Dens. (g/cm³) 239.5 Cy 5	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU) 0.00 Cy 6	Fuel Temp. (K) 0.00 Cy 6	Mod. Dens. (g/cm³) 0.00 Cy 6
1	0.000		0.7396	1.713	647.1	0.7396	3.387	649.7	0.7396
2	0.000		0.7396	5.696	891.9	0.7396	11.365	910.9	0.7396
3	0.000		0.7293	7.806	974.8	0.7293	16.626	1004.1	0.7267
4	0.000	Data	0.6858	9.026	1062.7	0.6858	17.811	1079.1	0.6805
5	0.000	Not	0.6280	9.494	1098.7	0.6280	18.546	1100.8	0.6211
6	0.000	Required	0.5669	9.591	1106.3	0.5669	18.692	1104.9	0.5605
7	0.000		0.5108	9.579	1105.3	0.5108	18.716	1107.9	0.5062
8	0.000		0.4633	9.611	1107.8	0.4633	18.825	1114.3	0.4604
9	0.000		0.4229	9.574	1136.9	0.4229	19.452	1137.4	0.4212
10	0.000		0.3883	9.938	1133.9	0.3883	19.525	1145.9	0.3874
11	0.000		0.3590	9.807	1123.4	0.3590	19.484	1153.6	0.3585
12	0.000		0.3341	9.625	1108.9	0.3341	19.382	1160.6	0.3336
13	0.000		0.3128	9.411	1092.2	0.3128	19.243	1167.1	0.3120
14	0.000		0.2944	9.174	1073.8	0.2944	19.069	1172.7	0.2930
15	0.000		0.2784	8.913	1054.2	0.2784	18.858	1177.1	0.2762
16	0.000		0.2645	8.624	1032.8	0.2645	18.602	1180.0	0.2613
17	0.000		0.2522	8.296	1009.1	0.2522	18.265	1179.2	0.2479
18	0.000		0.2413	7.910	982.0	0.2413	17.783	1170.7	0.2359
19	0.000		0.2318	7.438	949.8	0.2318	17.043	1147.4	0.2253
20	0.000		0.2236	6.847	911.2	0.2236	15.941	1104.3	0.2160
21	0.000		0.2166	5.980	857.5	0.2166	14.132	1029.3	0.2081
22	0.000		0.2110	5.063	804.3	0.2110	12.021	941.9	0.2017
23	0.000		0.2065	4.139	754.2	0.2065	9.742	852.4	0.1967
24	0.000		0.2034	1.651	643.4	0.2034	4.484	684.1	0.1931
25	0.000		0.2021	1.133	611.2	0.2021	2.671	632.5	0.1915

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU) 196.1 Cy 6	Fuel Temp. (K) 196.1 Cy 6	Mod. Dens. (g/cm³) 196.1 Cy 6	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU) 0.00 Cy 7	Fuel Temp. (K) 0.00 Cy 7	Mod. Dens. (g/cm³) 0.00 Cy 7	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU) 193.2 Cy 7	Fuel Temp. (K) 193.2 Cy 7	Mod. Dens. (g/cm³) 193.2 Cy 7
1	4.289	615.0	0.7396	4.605	611.4	0.7396	5.496	602.5	0.7396
2	14.512	769.6	0.7396	16.218	743.0	0.7396	18.583	715.0	0.7396
3	19.654	796.3	0.7310	21.736	755.2	0.7329	24.619	737.7	0.7354
4	22.251	824.8	0.6907	24.475	770.3	0.6954	27.995	766.1	0.7015
5	23.224	841.7	0.6385	25.518	777.5	0.6467	29.380	789.0	0.6575
6	23.547	854.5	0.5850	25.898	784.0	0.5961	30.056	809.5	0.6116
7	23.706	864.4	0.5358	26.111	789.9	0.5495	30.528	827.8	0.5687
8	23.808	871.3	0.4926	26.364	795.5	0.5080	31.009	844.3	0.5297
9	24.657	879.7	0.4539	27.188	803.9	0.4703	32.059	861.0	0.4930
10	24.734	880.7	0.4200	27.303	808.1	0.4371	32.273	868.4	0.4598
11	24.670	879.0	0.3904	27.270	811.6	0.4079	32.252	869.3	0.4300
12	24.518	876.2	0.3647	27.142	814.3	0.3822	32.073	865.6	0.4033
13	24.306	869.8	0.3421	26.951	816.7	0.3596	31.786	858.3	0.3796
14	24.041	863.0	0.3222	26.702	818.5	0.3395	31.406	848.6	0.3585
15	23.723	855.2	0.3046	26.394	819.7	0.3217	30.931	836.4	0.3397
16	23.341	846.1	0.2888	26.013	819.8	0.3057	30.340	821.4	0.3227
17	22.862	835.9	0.2747	25.523	818.5	0.2912	29.594	803.4	0.3074
18	22.224	824.8	0.2621	24.862	815.9	0.2785	28.643	783.5	0.2938
19	21.319	813.3	0.2511	23.917	811.4	0.2674	27.414	764.6	0.2820
20	20.020	799.5	0.2418	22.551	803.9	0.2581	25.802	748.5	0.2723
21	17.879	777.5	0.2342	20.258	787.0	0.2507	23.316	736.1	0.2649
22	15.318	748.3	0.2280	17.471	762.7	0.2447	20.185	714.6	0.2589
23	12.383	707.7	0.2223	14.163	724.2	0.2389	16.441	688.2	0.2533
24	5.620	623.4	0.2177	6.400	629.8	0.2337	7.408	616.2	0.2477
25	3.294	595.2	0.2141	3.710	598.2	0.2289	4.335	595.6	0.2444

Table 4-42. LS1 Burnup and TH Feedback Parameters Assembly C19 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.116	625.7	0.7396	7.652	660.0	0.7396	7.659	582.6	0.7396
2	20.584	793.2	0.7396	25.076	892.7	0.7396	25.097	629.0	0.7396
3	27.336	818.2	0.7352	32.670	898.7	0.7346	32.696	636.0	0.7346
4	30.777	850.8	0.7016	36.157	910.5	0.7012	36.185	641.9	0.7012
5	32.327	871.7	0.6587	37.703	910.1	0.6585	37.733	647.8	0.6586
6	33.114	886.1	0.6137	38.487	909.9	0.6142	38.520	656.7	0.6144
7	33.667	896.8	0.5716	39.076	912.8	0.5725	39.112	665.6	0.5726
8	34.225	907.1	0.5330	39.715	919.4	0.5342	39.754	674.9	0.5344
9	35.405	924.7	0.4966	41.058	932.9	0.4982	41.100	684.2	0.4984
10	35.805	950.6	0.4636	41.592	944.2	0.4655	41.636	690.6	0.4657
11	35.881	964.4	0.4336	41.638	958.6	0.4356	41.684	696.8	0.4358
12	35.903	993.7	0.4070	42.035	973.6	0.4090	42.082	700.0	0.4092
13	36.308	1102.0	0.3842	42.651	983.5	0.3859	42.698	700.0	0.3862
14	38.094	1129.8	0.3622	42.638	1001.4	0.3639	42.685	700.0	0.3641
15	35.542	1116.6	0.3421	42.216	1022.3	0.3439	42.263	700.0	0.3440
16	34.790	1090.2	0.3243	41.685	1042.9	0.3258	41.731	696.6	0.3260
17	33.827	1055.3	0.3083	40.902	1059.9	0.3097	40.948	696.6	0.3098
18	32.625	1016.4	0.2943	39.807	1070.2	0.2952	39.852	693.6	0.2953
19	31.135	977.7	0.2822	38.312	1069.7	0.2826	38.357	693.6	0.2827
20	29.245	938.1	0.2721	36.257	1053.8	0.2716	36.300	687.3	0.2720
21	26.398	889.8	0.2645	32.943	1010.6	0.2633	32.983	678.0	0.2635
22	22.663	837.8	0.2582	28.725	950.6	0.2562	28.761	665.6	0.2563
23	18.592	775.4	0.2524	23.408	865.9	0.2498	23.438	647.6	0.2500
24	8.380	652.0	0.2469	10.662	691.6	0.2443	10.675	598.9	0.2445
25	4.875	611.4	0.2439	6.160	633.1	0.2414	6.167	582.2	0.2416

Table 4-43. LS1 Burnup and TH Feedback Parameters Assembly C20

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.632	642.8	0.7396	3.216	644.6	0.7396
2	0.000		0.7396	5.443	874.2	0.7396	10.859	892.0	0.7396
3	0.000		0.7316	7.620	955.3	0.7316	15.177	992.0	0.7290
4	0.000	Data	0.6908	8.776	1044.0	0.6908	17.530	1076.6	0.6850
5	0.000	Not	0.6356	9.295	1083.2	0.6356	18.374	1103.1	0.6272
6	0.000	Required	0.5759	9.423	1093.1	0.5759	18.543	1106.5	0.5673
7	0.000		0.5200	9.426	1093.4	0.5200	18.548	1106.5	0.5130
8	0.000		0.4720	9.471	1096.9	0.4720	18.637	1110.3	0.4667
9	0.000		0.4309	9.852	1127.0	0.4309	19.266	1131.1	0.4271
10	0.000		0.3958	9.823	1124.7	0.3958	19.309	1137.2	0.3930
11	0.000		0.3660	9.690	1114.1	0.3660	19.234	1142.2	0.3638
12	0.000		0.3406	9.501	1099.2	0.3406	19.097	1146.6	0.3387
13	0.000		0.3189	9.281	1082.1	0.3189	18.924	1150.7	0.3170
14	0.000		0.3003	9.037	1063.5	0.3003	18.719	1154.1	0.2979
15	0.000		0.2841	8.766	1043.3	0.2841	18.473	1156.2	0.2811
16	0.000		0.2699	8.482	1021.0	0.2699	18.164	1155.8	0.2661
17	0.000		0.2576	8.109	995.9	0.2576	17.753	1150.8	0.2528
18	0.000		0.2466	7.689	966.8	0.2466	17.174	1137.1	0.2409
19	0.000		0.2371	7.176	932.5	0.2371	16.334	1109.6	0.2304
20	0.000		0.2289	6.546	892.2	0.2289	15.142	1063.9	0.2213
21	0.000		0.2220	5.658	838.4	0.2220	13.289	990.1	0.2136
22	0.000		0.2164	4.742	786.6	0.2164	11.183	906.5	0.2073
23	0.000		0.2121	3.839	738.6	0.2121	8.972	823.4	0.2024
24	0.000		0.2091	1.708	636.5	0.2091	4.065	671.9	0.1989
25	0.000		0.2079	1.035	606.9	0.2079	2.420	625.3	0.1976

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.099	679.1	0.7396	6.121	664.6	0.7396	7.327	635.5	0.7396
2	17.230	1050.6	0.7396	20.480	949.5	0.7396	24.158	815.0	0.7396
3	23.101	1113.1	0.7229	27.056	981.1	0.7233	31.811	837.7	0.7254
4	25.907	1157.6	0.6746	30.109	1016.0	0.6758	35.180	876.0	0.6809
5	26.763	1169.1	0.6146	31.057	1029.3	0.6169	36.638	907.8	0.6256
6	26.828	1148.6	0.5543	31.163	1035.2	0.5576	36.996	936.1	0.5694
7	26.733	1138.9	0.5009	31.087	1038.0	0.5047	37.238	952.4	0.5185
8	26.761	1132.6	0.4559	31.120	1038.8	0.4599	37.502	982.0	0.4745
9	27.436	1137.2	0.4177	31.828	1043.6	0.4217	38.422	1000.4	0.4361
10	27.428	1132.1	0.3848	31.806	1041.6	0.3888	38.458	1005.5	0.4028
11	27.283	1125.3	0.3566	31.645	1039.2	0.3607	38.277	1003.8	0.3741
12	27.060	1116.9	0.3323	31.403	1036.4	0.3365	38.043	1004.5	0.3495
13	26.781	1106.6	0.3113	31.104	1033.5	0.3153	38.015	1028.6	0.3291
14	26.437	1093.3	0.2928	30.739	1030.4	0.2968	37.670	1021.4	0.3097
15	26.008	1076.1	0.2765	30.282	1026.4	0.2804	36.863	999.3	0.2922
16	25.484	1054.4	0.2621	29.701	1021.0	0.2659	35.957	971.3	0.2767
17	24.759	1027.9	0.2493	28.943	1013.4	0.2530	34.818	939.5	0.2630
18	23.847	998.7	0.2379	27.968	1004.4	0.2415	33.443	907.3	0.2510
19	22.673	970.4	0.2278	26.720	994.0	0.2313	31.843	880.0	0.2407
20	21.133	941.8	0.2190	25.062	977.6	0.2224	29.812	852.0	0.2316
21	18.758	900.5	0.2114	22.425	942.2	0.2147	26.693	817.2	0.2237
22	15.853	848.3	0.2052	19.226	891.5	0.2084	22.932	778.5	0.2173
23	12.780	781.6	0.2003	15.482	820.9	0.2034	18.430	730.5	0.2121
24	8.766	653.2	0.1970	8.976	668.9	0.1999	8.309	634.0	0.2086
25	3.389	613.4	0.1958	4.072	621.3	0.1984	4.613	601.9	0.2065

Table 4-43. LS1 Burnup and TH Feedback Parameters Assembly C20 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.735	602.7	0.7396	8.704	621.7	0.7396
2	25.403	697.4	0.7396	28.128	746.4	0.7396
3	33.222	716.8	0.7288	36.447	762.1	0.7289
4	37.052	744.3	0.6843	40.487	766.2	0.6890
5	38.625	768.1	0.6317	42.221	777.1	0.6395
6	39.259	788.2	0.5782	43.038	789.8	0.5890
7	39.641	804.6	0.5294	43.626	804.4	0.5428
8	40.025	818.9	0.4868	44.236	820.6	0.5021
9	41.069	834.0	0.4492	45.545	840.1	0.4655
10	41.179	843.2	0.4163	45.684	857.4	0.4331
11	41.044	848.9	0.3874	45.967	874.2	0.4045
12	40.835	852.0	0.3625	45.960	890.0	0.3785
13	40.795	850.6	0.3415	46.079	902.7	0.3579
14	40.352	850.8	0.3218	45.633	918.7	0.3378
15	39.634	849.4	0.3040	45.323	935.9	0.3197
16	38.683	843.8	0.2881	44.572	952.8	0.3036
17	37.456	832.8	0.2740	43.511	967.1	0.2891
18	35.951	817.1	0.2616	42.129	977.8	0.2763
19	34.198	799.0	0.2508	40.486	987.8	0.2654
20	32.002	779.8	0.2414	38.179	977.7	0.2552
21	28.668	755.4	0.2335	34.472	945.8	0.2467
22	24.655	728.2	0.2270	29.870	905.2	0.2400
23	19.838	695.2	0.2217	24.201	831.8	0.2340
24	8.959	621.8	0.2183	11.025	678.7	0.2303
25	5.265	603.4	0.2180	6.460	628.1	0.2298

Table 4-44. LS1 Burnup and TH Feedback Parameters Assembly C21

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.372	629.0	0.7396	2.586	624.1	0.7396
2	0.000		0.7396	4.679	816.3	0.7396	8.655	797.5	0.7396
3	0.000		0.7395	6.287	876.1	0.7395	12.151	925.8	0.7396
4	0.000	Data	0.7108	7.339	943.2	0.7108	14.287	941.2	0.7110
5	0.000	Not	0.6899	7.838	977.0	0.6899	15.241	973.5	0.6896
6	0.000	Required	0.6219	8.044	991.3	0.6219	15.611	985.4	0.6218
7	0.000		0.5723	8.138	997.9	0.5723	15.788	991.5	0.5729
8	0.000		0.5258	8.246	1005.6	0.5258	16.002	999.4	0.5273
9	0.000		0.4832	8.637	1033.8	0.4832	16.710	1023.2	0.4858
10	0.000		0.4458	8.661	1035.5	0.4458	16.833	1030.8	0.4492
11	0.000		0.4139	8.590	1030.3	0.4139	16.829	1036.0	0.4177
12	0.000		0.3864	8.470	1021.8	0.3864	16.769	1040.6	0.3902
13	0.000		0.3625	8.318	1010.7	0.3625	16.671	1044.8	0.3661
14	0.000		0.3419	8.139	998.0	0.3419	16.537	1048.3	0.3450
15	0.000		0.3238	7.932	983.5	0.3238	16.357	1050.4	0.3263
16	0.000		0.3079	7.688	966.6	0.3079	16.103	1049.8	0.3096
17	0.000		0.2940	7.388	946.4	0.2940	15.738	1044.7	0.2948
18	0.000		0.2817	7.017	922.1	0.2817	15.212	1032.6	0.2816
19	0.000		0.2710	6.580	893.0	0.2710	14.458	1010.0	0.2698
20	0.000		0.2617	6.000	858.7	0.2617	13.411	974.1	0.2595
21	0.000		0.2539	5.203	812.2	0.2539	11.791	916.5	0.2508
22	0.000		0.2476	4.380	767.0	0.2476	9.986	851.3	0.2437
23	0.000		0.2426	3.659	724.4	0.2426	8.042	785.1	0.2380
24	0.000		0.2393	1.678	630.7	0.2393	3.632	657.0	0.2342
25	0.000		0.2378	0.944	603.0	0.2378	2.132	616.3	0.2325

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.150	657.7	0.7396	6.122	659.4	0.7396	6.023	615.8	0.7396
2	14.120	963.4	0.7396	17.393	953.0	0.7396	20.290	754.1	0.7396
3	19.359	1137.6	0.7338	23.414	995.1	0.7326	26.969	768.4	0.7348
4	22.056	1098.2	0.6989	26.336	1027.2	0.6967	30.214	790.1	0.7019
5	22.988	1096.1	0.6526	27.257	1025.6	0.6499	31.394	808.0	0.6589
6	23.148	1076.3	0.6021	27.337	1014.1	0.5993	31.723	825.6	0.6124
7	23.112	1056.6	0.5534	27.218	1002.3	0.5508	31.614	840.7	0.5673
8	23.181	1043.4	0.5092	27.227	993.6	0.5071	31.979	852.1	0.5259
9	23.679	1042.6	0.4700	27.929	994.4	0.4684	32.826	862.8	0.4880
10	23.693	1032.7	0.4355	27.902	988.6	0.4345	32.843	866.2	0.4541
11	23.748	1020.2	0.4058	27.714	982.7	0.4051	32.654	866.1	0.4245
12	23.535	1006.8	0.3799	27.459	976.9	0.3796	32.361	863.3	0.3984
13	23.307	995.5	0.3576	27.186	970.7	0.3574	32.019	858.1	0.3765
14	23.009	981.6	0.3376	26.846	965.0	0.3376	31.586	851.3	0.3550
15	22.641	965.8	0.3198	26.433	958.9	0.3201	31.059	842.9	0.3388
16	22.177	948.5	0.3040	25.916	951.6	0.3044	30.402	832.8	0.3206
17	21.564	928.5	0.2899	25.225	941.4	0.2905	29.554	821.5	0.3061
18	20.756	906.3	0.2774	24.313	927.7	0.2780	28.462	808.6	0.2934
19	19.733	885.7	0.2653	23.171	912.4	0.2669	27.110	794.3	0.2820
20	18.405	864.7	0.2565	21.693	893.4	0.2571	25.375	776.9	0.2720
21	16.340	832.5	0.2481	19.368	861.5	0.2488	22.673	752.0	0.2634
22	13.890	789.3	0.2411	16.557	819.2	0.2416	19.400	722.6	0.2563
23	11.130	735.2	0.2357	13.279	762.3	0.2363	15.603	685.0	0.2503
24	4.896	634.6	0.2321	5.937	644.2	0.2327	6.860	611.7	0.2458
25	2.697	602.6	0.2305	3.422	607.5	0.2311	3.901	588.1	0.2429

Table 4-44. LS1 Burnup and TH Feedback Parameters Assembly C21 (Continue)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.384	697.7	0.7396	6.805	686.4	0.7396	6.819	605.4	0.7396
2	21.404	681.9	0.7396	22.649	640.1	0.7396	22.691	704.0	0.7396
3	28.314	688.8	0.7358	29.766	642.7	0.7368	29.816	709.8	0.7369
4	31.688	701.8	0.7043	33.225	647.7	0.7067	33.280	725.8	0.7068
5	32.995	716.2	0.6633	34.633	653.4	0.6676	34.691	735.8	0.6677
6	33.467	730.4	0.6192	35.239	661.2	0.6259	35.302	752.7	0.6261
7	33.702	746.0	0.5763	35.643	671.2	0.5858	35.709	763.1	0.5860
8	34.003	761.1	0.5368	36.137	682.8	0.5491	36.205	770.0	0.5493
9	34.890	776.8	0.5002	37.353	696.8	0.5162	37.424	780.6	0.5165
10	35.109	788.6	0.4674	37.690	710.4	0.4852	37.762	784.2	0.4854
11	35.007	798.7	0.4383	37.806	724.2	0.4586	37.880	791.3	0.4589
12	34.786	807.2	0.4125	37.809	738.7	0.4350	37.882	787.7	0.4353
13	34.502	814.1	0.3894	37.747	753.4	0.4139	37.819	784.2	0.4141
14	34.116	819.7	0.3688	37.573	767.7	0.3947	37.644	780.6	0.3949
15	33.617	823.2	0.3503	37.274	781.3	0.3772	37.345	780.6	0.3774
16	32.973	824.6	0.3338	36.816	794.2	0.3613	36.883	770.0	0.3616
17	32.116	823.9	0.3190	36.125	805.9	0.3469	36.190	759.6	0.3471
18	30.996	820.3	0.3059	35.136	815.5	0.3340	35.199	752.7	0.3342
19	29.586	813.3	0.2943	33.802	821.0	0.3223	33.862	742.6	0.3225
20	27.753	801.7	0.2840	31.954	819.9	0.3119	32.011	732.5	0.3121
21	24.865	780.1	0.2753	28.871	805.9	0.3031	28.922	712.6	0.3033
22	21.338	751.5	0.2681	24.995	781.3	0.2958	25.041	696.8	0.2960
23	17.051	709.7	0.2619	20.039	736.5	0.2889	20.076	658.6	0.2891
24	7.511	621.7	0.2567	8.782	632.4	0.2823	8.798	607.3	0.2825
25	4.235	592.8	0.2529	4.879	597.6	0.2763	4.887	585.0	0.2765

Table 4-45. LS1 Burnup and TH Feedback Parameters Assembly C22

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.934	659.0	0.7396	3.737	657.0	0.7396
2	0.000		0.7396	6.373	940.8	0.7396	12.520	947.7	0.7396
3	0.000		0.7205	8.696	1038.1	0.7205	17.049	1044.8	0.7187
4	0.000	Data	0.6668	9.957	1135.5	0.6668	19.235	1119.6	0.6631
5	0.000	Not	0.5998	10.314	1164.8	0.5998	19.836	1140.3	0.5964
6	0.000	Required	0.5348	10.253	1159.7	0.5348	19.836	1145.5	0.5334
7	0.000		0.4797	10.114	1148.3	0.4797	19.745	1149.7	0.4803
8	0.000		0.4346	10.055	1143.4	0.4346	19.763	1156.3	0.4363
9	0.000		0.3966	10.376	1169.8	0.3966	20.347	1179.4	0.3988
10	0.000		0.3642	10.308	1164.1	0.3642	20.374	1188.0	0.3666
11	0.000		0.3369	10.160	1152.0	0.3369	20.313	1195.6	0.3393
12	0.000		0.3137	9.979	1137.3	0.3137	20.209	1202.5	0.3158
13	0.000		0.2939	9.780	1121.3	0.2939	20.079	1208.7	0.2953
14	0.000		0.2768	9.565	1104.2	0.2768	19.919	1213.7	0.2773
15	0.000		0.2617	9.335	1086.3	0.2617	19.718	1216.4	0.2614
16	0.000		0.2486	9.085	1067.2	0.2486	19.455	1216.2	0.2472
17	0.000		0.2370	8.809	1046.6	0.2370	19.106	1208.6	0.2345
18	0.000		0.2268	8.496	1023.6	0.2268	18.628	1193.7	0.2234
19	0.000		0.2179	8.103	995.4	0.2179	17.930	1166.7	0.2133
20	0.000		0.2099	7.663	958.2	0.2099	16.888	1123.4	0.2045
21	0.000		0.2030	6.677	900.4	0.2030	15.100	1050.3	0.1967
22	0.000		0.1972	5.695	840.6	0.1972	12.958	963.3	0.1904
23	0.000		0.1926	4.693	783.9	0.1926	10.887	870.8	0.1854
24	0.000		0.1892	2.149	656.5	0.1892	4.917	692.4	0.1817
25	0.000		0.1878	1.321	619.4	0.1878	2.970	637.7	0.1801

	Datapoint 6 (195.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	195.1 Cy 6	195.1 Cy 6	195.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.145	647.4	0.7398	6.001	646.9	0.7396	6.883	614.6	0.7396
2	17.345	905.8	0.7396	20.105	879.0	0.7396	22.916	747.7	0.7396
3	23.202	955.0	0.7221	26.598	907.0	0.7238	30.127	788.7	0.7283
4	25.978	1004.8	0.6713	29.607	937.2	0.6763	33.532	793.3	0.6816
5	26.820	1025.9	0.6094	30.522	946.8	0.6162	34.747	814.2	0.6270
6	26.896	1032.7	0.5493	30.609	948.3	0.5561	35.090	832.4	0.5734
7	26.801	1032.3	0.4989	30.502	946.7	0.5067	35.204	848.5	0.5254
8	26.802	1030.8	0.4525	30.491	945.1	0.4628	35.416	864.9	0.4837
9	27.442	1035.8	0.4144	31.161	949.1	0.4246	36.525	898.6	0.4476
10	27.397	1029.4	0.3816	31.100	947.0	0.3919	37.465	930.6	0.4177
11	27.220	1019.1	0.3540	30.901	944.0	0.3640	37.582	1008.1	0.3884
12	26.969	1006.3	0.3299	30.630	941.4	0.3398	37.370	1013.3	0.3622
13	26.675	992.1	0.3090	30.315	938.6	0.3188	37.260	1031.7	0.3403
14	26.339	977.2	0.2907	29.957	935.7	0.3002	36.833	1025.5	0.3200
15	25.947	961.2	0.2744	29.539	932.3	0.2839	36.240	1009.8	0.3018
16	25.471	943.5	0.2600	29.027	927.6	0.2692	35.599	998.5	0.2862
17	24.874	923.9	0.2472	28.375	920.5	0.2562	34.674	974.9	0.2718
18	24.118	902.1	0.2357	27.539	910.2	0.2446	33.602	946.7	0.2590
19	23.146	881.2	0.2256	26.487	897.5	0.2343	32.105	920.3	0.2480
20	21.813	859.7	0.2167	25.000	880.9	0.2254	30.246	889.4	0.2384
21	19.593	828.5	0.2093	22.541	852.0	0.2178	27.243	848.5	0.2302
22	16.670	788.6	0.2030	19.482	813.0	0.2115	23.533	802.0	0.2235
23	13.702	736.9	0.1977	15.822	759.2	0.2060	19.017	744.9	0.2173
24	6.294	635.3	0.1936	7.238	644.5	0.2017	8.638	637.7	0.2126
25	3.731	602.4	0.1912	4.250	607.0	0.1989	5.007	602.8	0.2092

Table 4-45. LS1 Burnup and TH Feedback Parameters Assembly C22 (Continue)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.253	698.7	0.7396	8.191	619.7	0.7396	8.196	576.1	0.7396
2	24.070	686.6	0.7396	26.758	743.4	0.7396	26.770	605.4	0.7396
3	31.589	700.8	0.7276	34.753	748.0	0.7296	34.770	610.2	0.7296
4	35.190	721.2	0.6849	38.647	760.9	0.6896	38.666	615.6	0.6897
5	36.571	739.0	0.6330	40.089	771.8	0.6410	40.109	618.7	0.641
6	37.055	754.6	0.5819	40.758	784.5	0.5929	40.781	627.8	0.593
7	37.284	767.3	0.5361	41.190	798.8	0.5496	41.215	633.1	0.5498
8	37.584	777.4	0.4980	41.693	813.2	0.5112	41.719	636.0	0.5114
9	38.768	785.9	0.4603	43.088	828.6	0.4764	43.117	644.6	0.4766
10	39.703	785.4	0.4304	44.120	835.8	0.4463	44.160	647.6	0.4466
11	39.838	787.4	0.4011	44.414	847.6	0.4174	44.446	653.7	0.4176
12	39.649	790.1	0.3751	44.404	861.2	0.3914	44.437	656.7	0.3916
13	39.644	790.7	0.3529	44.450	872.8	0.3691	44.484	659.7	0.3693
14	39.141	793.6	0.3325	44.224	886.7	0.3485	44.258	659.7	0.3488
15	38.572	796.3	0.3143	43.834	900.9	0.3302	43.869	662.7	0.3304
16	37.934	796.6	0.2985	43.354	913.7	0.3141	43.388	659.7	0.3143
17	36.995	795.0	0.2841	42.663	925.9	0.2994	42.698	656.7	0.2996
18	35.789	791.0	0.2711	41.469	935.2	0.2862	41.502	656.7	0.2864
19	34.348	785.9	0.2600	40.090	940.4	0.2748	40.122	653.7	0.2750
20	32.626	790.2	0.2507	38.207	935.3	0.2652	38.237	647.6	0.2653
21	29.842	828.2	0.2449	35.138	903.7	0.2581	35.166	641.9	0.2583
22	25.996	811.8	0.2386	30.779	863.4	0.2512	30.803	630.2	0.2514
23	21.023	759.0	0.2319	24.950	800.2	0.2441	24.970	618.7	0.2443
24	9.531	644.4	0.2286	11.388	685.1	0.2389	11.377	587.6	0.2390
25	5.514	608.4	0.2230	6.534	618.3	0.2352	6.539	576.7	0.2353

Table 4-46. LS1 Burnup and TH Feedback Parameters Assembly C23

Node No.	Datapoint 3 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	2.003	662.6	0.7396	3.794	656.3	0.7396
2	0.000		0.7396	6.638	960.6	0.7396	12.750	945.0	0.7396
3	0.000		0.7187	9.030	1063.0	0.7187	17.271	1036.1	0.7184
4	0.000	Data	0.6626	10.259	1160.2	0.6626	19.377	1106.3	0.6625
5	0.000	Not	0.5934	10.652	1184.7	0.5934	19.916	1126.9	0.5952
6	0.000	Required	0.5272	10.447	1175.9	0.5272	19.885	1133.1	0.5318
7	0.000		0.4720	10.283	1162.2	0.4720	19.784	1138.6	0.4785
8	0.000		0.4273	10.206	1155.8	0.4273	19.792	1145.8	0.4347
9	0.000		0.3897	10.508	1161.0	0.3897	20.363	1169.1	0.3973
10	0.000		0.3578	10.427	1174.2	0.3578	20.384	1178.1	0.3653
11	0.000		0.3309	10.274	1161.4	0.3309	20.322	1186.2	0.3381
12	0.000		0.3081	10.089	1146.2	0.3081	20.221	1193.7	0.3147
13	0.000		0.2886	9.887	1129.8	0.2886	20.095	1200.6	0.2943
14	0.000		0.2717	9.670	1112.5	0.2717	19.940	1206.1	0.2765
15	0.000		0.2569	9.437	1094.2	0.2569	19.744	1209.5	0.2606
16	0.000		0.2439	9.184	1074.7	0.2439	19.488	1209.2	0.2465
17	0.000		0.2324	8.899	1053.2	0.2324	19.143	1203.8	0.2338
18	0.000		0.2222	8.564	1028.4	0.2222	18.661	1190.6	0.2225
19	0.000		0.2131	8.137	997.6	0.2131	17.953	1165.7	0.2124
20	0.000		0.2053	7.571	958.8	0.2053	16.807	1124.5	0.2034
21	0.000		0.1984	6.680	900.6	0.1984	15.134	1052.7	0.1958
22	0.000		0.1928	5.699	840.8	0.1928	12.899	966.1	0.1894
23	0.000		0.1884	4.683	783.3	0.1884	10.600	872.3	0.1844
24	0.000		0.1851	2.125	655.4	0.1851	4.690	692.3	0.1808
25	0.000		0.1838	1.302	618.5	0.1838	2.842	637.3	0.1792

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.607	674.3	0.7396	6.684	670.8	0.7396	8.053	646.2	0.7396
2	18.798	1018.7	0.7396	22.165	965.6	0.7396	26.246	848.8	0.7396
3	24.838	1079.1	0.7177	28.914	998.0	0.7186	34.049	880.9	0.7214
4	27.524	1134.9	0.6623	31.846	1033.3	0.6649	37.644	933.2	0.6715
5	28.216	1160.0	0.5959	32.606	1043.5	0.6002	38.896	974.2	0.6110
6	28.169	1148.5	0.5328	32.560	1043.5	0.5383	39.204	1004.8	0.5519
7	28.006	1142.3	0.4796	32.376	1040.2	0.4854	39.258	1026.1	0.5000
8	27.952	1136.2	0.4357	32.294	1036.3	0.4416	39.356	1042.4	0.4557
9	28.641	1138.0	0.3985	32.895	1038.0	0.4043	40.148	1059.8	0.4175
10	28.464	1126.3	0.3668	32.791	1034.1	0.3726	40.062	1061.7	0.3848
11	28.270	1116.4	0.3398	32.671	1030.3	0.3455	39.772	1055.2	0.3568
12	28.006	1099.7	0.3166	32.283	1026.8	0.3222	39.357	1043.5	0.3326
13	27.698	1082.6	0.2964	31.953	1023.6	0.3019	38.856	1027.9	0.3116
14	27.346	1064.1	0.2787	31.578	1020.3	0.2841	38.264	1008.5	0.2932
15	26.933	1044.3	0.2631	31.144	1017.2	0.2685	37.559	984.9	0.2770
16	26.435	1022.7	0.2493	30.625	1014.2	0.2545	36.705	956.4	0.2626
17	25.811	998.3	0.2369	29.978	1010.9	0.2420	35.654	923.3	0.2497
18	25.020	972.1	0.2259	29.135	1003.5	0.2309	34.372	888.8	0.2382
19	24.000	946.3	0.2161	28.021	990.3	0.2210	32.845	857.5	0.2281
20	22.617	919.3	0.2074	26.472	967.4	0.2122	30.925	830.4	0.2192
21	20.335	880.1	0.2000	23.678	925.9	0.2047	27.882	798.6	0.2116
22	17.532	831.3	0.1938	20.653	872.8	0.1984	24.129	763.2	0.2055
23	14.230	769.6	0.1888	16.762	804.0	0.1932	19.651	719.3	0.2003
24	6.521	649.3	0.1853	7.674	663.6	0.1897	8.964	631.6	0.1959
25	3.863	610.8	0.1835	4.612	616.3	0.1878	5.235	601.0	0.1947

Table 4-45. LS1 Burnup and TH Feedback Parameters Assembly C23 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.793	639.0	0.7396	10.048	640.8	0.7396
2	28.412	816.5	0.7396	31.816	799.9	0.7396
3	38.607	847.8	0.7228	40.823	806.6	0.7248
4	40.600	899.1	0.6748	45.087	826.2	0.6792
5	42.330	936.9	0.6164	46.794	839.2	0.6239
6	42.812	951.4	0.5588	47.459	853.0	0.5690
7	42.972	976.6	0.5075	47.824	868.7	0.5198
8	43.150	988.3	0.4832	48.219	885.6	0.4769
9	44.049	1004.5	0.4247	49.377	906.3	0.4391
10	44.009	1011.1	0.3916	49.561	924.5	0.4063
11	43.739	1014.2	0.3632	49.494	941.5	0.3780
12	43.340	1016.6	0.3388	49.289	957.9	0.3534
13	42.850	1018.3	0.3175	48.988	974.3	0.3317
14	42.256	1018.0	0.2988	48.581	990.8	0.3128
15	41.517	1012.8	0.2822	48.025	1007.2	0.2958
16	40.579	1000.2	0.2675	47.251	1022.2	0.2808
17	39.380	978.4	0.2544	46.171	1033.2	0.2672
18	37.893	949.0	0.2427	44.733	1037.7	0.2551
19	36.134	916.9	0.2323	42.913	1032.0	0.2442
20	33.973	884.8	0.2233	40.639	1012.5	0.2346
21	30.621	845.4	0.2157	36.711	970.1	0.2264
22	26.506	801.6	0.2094	31.911	912.5	0.2196
23	21.458	748.1	0.2041	25.840	833.2	0.2137
24	9.859	644.6	0.2008	11.954	680.5	0.2102
25	5.741	608.3	0.1985	6.919	627.1	0.2076

Table 4-47. LS1 Burnup and TH Feedback Parameters Assembly C24

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.906	657.5	0.7396	3.657	654.0	0.7396
2	0.000		0.7396	6.354	939.4	0.7396	12.335	934.6	0.7396
3	0.000		0.7220	8.697	1038.2	0.7220	16.825	1027.4	0.7213
4	0.000	Data	0.6695	9.944	1134.4	0.6695	18.965	1098.3	0.6687
5	0.000	Not	0.6031	10.283	1162.2	0.6031	19.637	1117.6	0.6035
6	0.000	Required	0.5378	10.220	1157.0	0.5378	19.623	1121.7	0.5405
7	0.000		0.4822	10.082	1145.6	0.4822	19.429	1125.4	0.4867
8	0.000		0.4368	10.025	1141.0	0.4368	19.449	1132.0	0.4422
9	0.000		0.3986	10.337	1166.7	0.3986	20.028	1164.6	0.4044
10	0.000		0.3660	10.262	1160.4	0.3660	20.056	1163.8	0.3716
11	0.000		0.3386	10.110	1147.9	0.3386	19.994	1171.7	0.3442
12	0.000		0.3153	9.923	1132.7	0.3153	19.889	1176.9	0.3204
13	0.000		0.2954	9.717	1116.2	0.2954	19.757	1185.5	0.2998
14	0.000		0.2782	9.495	1098.7	0.2782	19.598	1191.1	0.2815
15	0.000		0.2631	9.255	1080.1	0.2631	19.398	1194.7	0.2654
16	0.000		0.2498	8.994	1060.3	0.2498	19.143	1195.2	0.2510
17	0.000		0.2380	8.704	1038.7	0.2380	18.805	1190.9	0.2382
18	0.000		0.2276	8.368	1014.1	0.2276	18.338	1179.4	0.2266
19	0.000		0.2184	7.945	984.4	0.2184	17.682	1157.1	0.2164
20	0.000		0.2103	7.394	946.9	0.2103	16.866	1119.1	0.2072
21	0.000		0.2034	6.627	891.0	0.2034	14.946	1050.0	0.1994
22	0.000		0.1977	5.566	833.1	0.1977	12.845	964.6	0.1930
23	0.000		0.1932	4.562	776.8	0.1932	10.456	870.8	0.1878
24	0.000		0.1900	2.059	652.4	0.1900	4.800	691.1	0.1842
25	0.000		0.1887	1.257	616.6	0.1887	2.878	636.4	0.1827

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.480	675.0	0.7396	6.543	669.3	0.7396	7.284	605.7	0.7396
2	18.419	1022.2	0.7396	21.752	962.0	0.7396	24.095	713.4	0.7396
3	24.386	1078.5	0.7199	28.436	994.4	0.7206	31.444	733.0	0.7239
4	27.013	1125.2	0.6672	31.302	1028.5	0.6692	34.771	762.7	0.6770
5	27.631	1129.7	0.6029	31.979	1037.2	0.6065	35.858	790.2	0.6203
6	27.510	1119.2	0.5406	31.849	1035.6	0.5455	36.095	815.6	0.5652
7	27.297	1107.7	0.4874	31.606	1031.4	0.4927	36.168	837.5	0.5170
8	27.244	1100.7	0.4433	31.527	1027.7	0.4487	36.325	855.5	0.4758
9	27.556	1103.8	0.4060	32.158	1030.4	0.4113	37.176	871.6	0.4392
10	27.798	1095.6	0.3739	32.076	1026.9	0.3793	37.187	879.1	0.4070
11	27.604	1083.1	0.3466	31.855	1023.0	0.3520	36.979	880.1	0.3788
12	27.340	1068.3	0.3232	31.562	1018.8	0.3284	36.639	876.5	0.3540
13	27.035	1052.4	0.3027	31.229	1014.6	0.3080	36.215	869.6	0.3322
14	26.691	1035.7	0.2848	30.856	1010.7	0.2899	35.716	860.3	0.3130
15	26.295	1018.2	0.2690	30.429	1006.2	0.2740	35.140	849.1	0.2959
16	25.823	999.3	0.2549	29.925	1001.7	0.2598	34.472	837.2	0.2807
17	25.235	978.0	0.2423	29.301	996.6	0.2472	33.606	819.6	0.2668
18	24.485	954.6	0.2311	28.491	988.2	0.2358	32.516	800.2	0.2544
19	23.532	932.0	0.2211	27.437	974.3	0.2258	31.225	784.0	0.2436
20	22.232	908.0	0.2122	25.972	951.9	0.2168	29.692	779.4	0.2349
21	20.039	872.0	0.2046	23.478	912.6	0.2091	26.995	785.9	0.2276
22	17.296	825.5	0.1983	20.324	861.5	0.2028	23.510	744.3	0.2214
23	14.019	765.5	0.1932	16.471	795.1	0.1975	19.059	706.9	0.2159
24	6.390	647.0	0.1896	7.498	659.4	0.1939	8.652	624.2	0.2117
25	3.771	609.3	0.1878	4.391	615.8	0.1919	5.092	599.8	0.2104

Table 4-47. LS1 Burnup and TH Feedback Parameters Assembly C24 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.726	606.3	0.7396	9.134	651.2	0.7396
2	25.455	711.3	0.7396	29.335	839.4	0.7396
3	33.189	730.5	0.7254	37.705	843.1	0.7268
4	36.782	759.6	0.6808	41.528	860.5	0.6842
5	38.087	784.3	0.6268	42.987	872.4	0.6325
6	38.496	804.4	0.5742	43.559	885.1	0.5819
7	38.687	819.7	0.5279	43.933	899.7	0.5368
8	38.850	831.3	0.4876	44.391	915.4	0.4973
9	39.891	842.6	0.4513	45.577	935.7	0.4612
10	39.948	848.1	0.4191	45.839	953.0	0.4291
11	39.785	851.3	0.3907	45.859	970.5	0.4005
12	39.447	854.0	0.3656	45.739	987.8	0.3752
13	39.060	858.7	0.3436	45.542	1004.8	0.3528
14	38.695	875.6	0.3245	45.342	1019.9	0.3331
15	38.635	945.4	0.3086	45.355	1026.6	0.3165
16	38.812	1072.3	0.2950	45.625	1025.9	0.3019
17	38.090	1095.6	0.2803	44.887	1033.7	0.2870
18	36.850	1071.4	0.2685	43.715	1040.1	0.2730
19	35.322	1034.1	0.2543	42.164	1037.0	0.2606
20	33.493	989.4	0.2445	40.122	1018.2	0.2502
21	30.412	934.5	0.2362	36.587	977.5	0.2415
22	26.480	874.7	0.2295	32.004	922.2	0.2343
23	21.436	801.6	0.2235	25.987	844.2	0.2279
24	9.739	683.1	0.2192	11.925	686.0	0.2237
25	5.684	616.2	0.2172	6.906	629.6	0.2214

Table 4-48. LS1 Burnup and TH Feedback Parameters Assembly C25

Node No.	Datapoint 3 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	239.5 Cy 6	239.5 Cy 6	239.5 Cy 6	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.512	636.4	0.7396	3.252	653.4	0.7396
2	0.000		0.7396	5.065	848.4	0.7396	10.936	926.3	0.7396
3	0.000		0.7349	7.005	921.4	0.7349	15.147	1028.5	0.7276
4	0.000	Data	0.6989	8.207	1002.8	0.6989	17.382	1111.0	0.6827
5	0.000	Not	0.6491	8.749	1042.0	0.6491	18.182	1132.7	0.6253
6	0.000	Required	0.5934	8.931	1055.6	0.5934	18.371	1133.3	0.5666
7	0.000		0.5390	8.981	1059.3	0.5390	18.411	1132.5	0.5134
8	0.000		0.4909	9.051	1064.6	0.4909	18.521	1135.9	0.4676
9	0.000		0.4489	9.431	1093.7	0.4489	19.165	1158.6	0.4282
10	0.000		0.4129	9.415	1092.5	0.4129	19.225	1165.2	0.3940
11	0.000		0.3824	9.298	1083.4	0.3824	19.176	1171.2	0.3648
12	0.000		0.3562	9.127	1070.4	0.3562	19.067	1176.6	0.3395
13	0.000		0.3338	8.924	1055.0	0.3338	18.921	1181.7	0.3175
14	0.000		0.3144	8.697	1038.2	0.3144	18.740	1185.7	0.2982
15	0.000		0.2976	8.446	1019.9	0.2976	18.517	1188.2	0.2811
16	0.000		0.2829	8.164	999.7	0.2829	18.229	1187.7	0.2659
17	0.000		0.2699	7.839	977.1	0.2699	17.838	1181.8	0.2524
18	0.000		0.2586	7.451	950.7	0.2586	17.280	1166.9	0.2403
19	0.000		0.2486	6.981	919.8	0.2486	16.472	1137.7	0.2296
20	0.000		0.2401	6.408	883.6	0.2401	15.331	1090.3	0.2204
21	0.000		0.2329	5.585	834.2	0.2329	13.535	1013.9	0.2125
22	0.000		0.2271	4.721	785.4	0.2271	11.470	927.5	0.2062
23	0.000		0.2224	3.849	739.1	0.2224	9.266	840.8	0.2012
24	0.000		0.2191	1.721	637.1	0.2191	4.227	679.2	0.1975
25	0.000		0.2178	1.041	607.2	0.2178	2.523	629.9	0.1960

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.378	629.2	0.7396	5.085	631.1	0.7396	6.334	638.3	0.7396
2	14.876	831.5	0.7396	17.216	822.4	0.7396	21.244	843.6	0.7396
3	20.232	871.4	0.7307	23.112	843.9	0.7320	28.116	871.0	0.7323
4	23.008	912.7	0.6903	26.081	867.0	0.6938	31.570	908.4	0.6950
5	24.091	935.1	0.6382	27.224	874.3	0.6442	33.045	935.1	0.6469
6	24.451	949.0	0.5839	27.604	876.7	0.5922	33.698	957.6	0.5962
7	24.592	957.3	0.5332	27.754	877.8	0.5431	34.110	979.8	0.5481
8	24.757	961.8	0.4881	27.928	878.9	0.4990	34.478	996.6	0.5045
9	25.501	970.1	0.4482	28.719	884.7	0.4596	35.465	1013.8	0.4653
10	25.548	969.0	0.4137	28.774	885.7	0.4253	35.575	1018.7	0.4309
11	25.433	963.6	0.3839	28.660	885.8	0.3956	35.443	1017.1	0.4010
12	25.223	955.2	0.3581	28.449	885.7	0.3697	35.243	1018.1	0.3753
13	24.953	945.1	0.3356	28.179	885.7	0.3471	35.251	1043.3	0.3537
14	24.632	933.8	0.3158	27.855	885.3	0.3272	34.848	1036.1	0.3332
15	24.250	921.1	0.2983	27.466	884.5	0.3096	34.206	1013.3	0.3148
16	23.785	907.3	0.2827	26.983	882.2	0.2938	33.396	984.7	0.2985
17	23.190	891.5	0.2687	26.354	878.1	0.2799	32.385	952.4	0.2840
18	22.408	874.6	0.2564	25.519	871.6	0.2673	31.149	919.6	0.2714
19	21.375	858.0	0.2457	24.416	863.1	0.2565	29.686	891.3	0.2607
20	19.986	840.0	0.2365	22.926	851.0	0.2473	27.799	861.1	0.2514
21	17.794	812.1	0.2289	20.532	827.4	0.2397	24.891	823.7	0.2436
22	15.187	775.5	0.2227	17.635	794.6	0.2336	21.399	782.4	0.2373
23	12.219	726.8	0.2173	14.220	746.8	0.2280	17.219	732.4	0.2317
24	5.523	630.9	0.2132	6.402	638.6	0.2235	7.720	633.2	0.2272
25	3.234	599.8	0.2107	3.712	603.5	0.2204	4.442	601.3	0.2242

Table 4-48. LS1 Burnup and TH Feedback Parameters Assembly C25 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.766	605.3	0.7396	7.798	625.9	0.7396	7.803	576.1	0.7396
2	22.622	713.5	0.7396	25.606	766.4	0.7396	25.623	615.4	0.7396
3	29.883	732.9	0.7336	33.390	771.0	0.7351	33.409	615.8	0.7351
4	33.590	760.6	0.6982	37.274	783.2	0.7018	37.295	621.5	0.7018
5	35.268	783.6	0.6523	39.075	791.8	0.6585	39.098	627.3	0.6585
6	36.088	803.1	0.6039	40.044	802.3	0.6126	40.069	633.1	0.6126
7	36.631	818.7	0.5576	40.765	815.0	0.5683	40.793	641.9	0.5685
8	37.110	832.2	0.5153	41.451	830.1	0.5276	41.481	647.8	0.5277
9	38.209	846.0	0.4766	42.804	849.1	0.4898	42.837	656.7	0.4900
10	38.381	853.8	0.4425	43.195	865.7	0.4562	43.230	662.7	0.4564
11	38.290	859.0	0.4125	43.319	882.4	0.4264	43.356	668.8	0.4266
12	38.110	861.5	0.3864	43.343	898.6	0.4002	43.382	674.9	0.4004
13	38.102	859.5	0.3642	43.501	912.0	0.3774	43.540	674.9	0.3777
14	37.697	859.2	0.3435	43.299	928.7	0.3564	43.339	678.0	0.3566
15	37.042	857.6	0.3249	42.856	946.4	0.3374	42.896	678.0	0.3376
16	36.188	852.0	0.3083	42.205	963.8	0.3205	42.245	678.0	0.3207
17	35.094	841.7	0.2935	41.288	979.2	0.3053	41.328	678.0	0.3055
18	33.737	826.8	0.2806	40.068	991.3	0.2919	40.108	678.0	0.2920
19	32.126	809.0	0.2694	38.582	1002.5	0.2804	38.621	674.9	0.2806
20	30.068	788.9	0.2598	36.421	993.3	0.2699	36.458	668.8	0.2702
21	26.933	763.1	0.2519	32.909	960.3	0.2612	32.944	662.7	0.2614
22	23.181	734.5	0.2455	28.666	919.0	0.2543	28.698	653.7	0.2545
23	18.675	700.2	0.2398	23.194	843.3	0.2479	23.219	633.1	0.2481
24	8.382	622.7	0.2354	10.507	682.3	0.2432	10.518	593.3	0.2434
25	4.899	603.9	0.2339	6.125	629.8	0.2418	6.131	579.5	0.2420

Table 4-49. LS1 Burnup and TH Feedback Parameters Assembly C25

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.514	635.5	0.7396	3.034	641.0	0.7396
2	0.000		0.7396	5.066	648.5	0.7396	10.245	674.6	0.7396
3	0.000		0.7350	7.014	921.9	0.7350	14.403	972.5	0.7319
4	0.000	Data	0.6992	8.223	1003.9	0.6992	16.757	1059.0	0.6916
5	0.000	Not	0.6495	8.762	1043.0	0.6495	17.655	1087.8	0.6375
6	0.000	Required	0.5937	8.935	1055.9	0.5937	17.878	1091.9	0.5801
7	0.000		0.5394	8.978	1059.1	0.5394	17.915	1091.4	0.5266
8	0.000		0.4911	9.050	1064.5	0.4911	18.030	1094.9	0.4802
9	0.000		0.4492	9.441	1094.5	0.4492	18.677	1116.1	0.4401
10	0.000		0.4131	9.429	1093.6	0.4131	18.730	1121.6	0.4054
11	0.000		0.3824	9.312	1084.5	0.3824	18.560	1125.5	0.3756
12	0.000		0.3562	9.139	1071.3	0.3562	18.530	1129.2	0.3500
13	0.000		0.3338	8.936	1055.9	0.3338	18.365	1132.4	0.3277
14	0.000		0.3144	8.708	1039.0	0.3144	18.166	1134.8	0.3082
15	0.000		0.2975	8.454	1020.5	0.2975	17.920	1135.6	0.2910
16	0.000		0.2828	8.163	999.7	0.2828	17.600	1133.1	0.2756
17	0.000		0.2699	7.821	975.8	0.2699	17.168	1125.4	0.2621
18	0.000		0.2585	7.410	948.0	0.2585	16.561	1109.0	0.2500
19	0.000		0.2486	6.908	915.1	0.2486	15.701	1079.7	0.2393
20	0.000		0.2401	6.293	876.5	0.2401	14.512	1034.4	0.2300
21	0.000		0.2330	5.431	825.3	0.2330	12.697	953.7	0.2221
22	0.000		0.2273	4.540	775.5	0.2273	10.652	884.9	0.2157
23	0.000		0.2228	3.659	729.4	0.2228	8.516	808.9	0.2107
24	0.000		0.2197	1.614	632.3	0.2197	3.830	664.9	0.2072
25	0.000		0.2185	0.970	604.1	0.2185	2.266	621.2	0.2057

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.168	629.7	0.7396	5.408	689.0	0.7396	6.874	652.7	0.7396
2	14.212	833.7	0.7396	18.194	1064.7	0.7396	22.638	896.2	0.7396
3	19.502	872.5	0.7324	24.234	1095.2	0.7279	30.002	930.8	0.7288
4	22.255	902.8	0.6948	27.109	1114.4	0.6674	33.410	976.1	0.6893
5	23.271	911.9	0.6449	28.066	1108.2	0.6360	34.685	1000.9	0.6391
6	23.524	914.3	0.6921	28.272	1097.7	0.5826	35.045	1016.2	0.5885
7	23.571	915.1	0.5425	28.267	1089.6	0.5330	35.126	1023.9	0.5370
8	23.693	916.6	0.4982	28.353	1084.1	0.4894	35.254	1027.7	0.4930
9	24.399	920.3	0.4588	29.082	1087.6	0.4509	36.041	1033.0	0.4541
10	24.426	918.2	0.4245	29.092	1085.0	0.4173	35.988	1027.3	0.4204
11	24.297	913.6	0.3948	28.948	1082.7	0.3882	35.733	1017.3	0.3912
12	24.085	907.2	0.3690	28.721	1080.4	0.3628	35.358	1004.2	0.3658
13	23.822	899.6	0.3465	28.441	1077.6	0.3407	34.897	988.4	0.3436
14	23.519	891.6	0.3267	28.117	1074.6	0.3213	34.365	970.6	0.3241
15	23.161	883.1	0.3092	27.731	1070.3	0.3040	33.740	950.5	0.3069
16	22.732	874.9	0.2936	27.258	1063.6	0.2886	32.989	927.8	0.2917
17	22.252	872.1	0.2801	26.714	1052.5	0.2752	32.117	901.7	0.2783
18	21.685	897.1	0.2694	25.302	1032.6	0.2644	31.313	871.5	0.2673
19	21.783	949.2	0.2609	25.902	1004.1	0.2559	30.493	840.3	0.2586
20	20.882	973.0	0.2525	24.786	974.1	0.2474	28.981	812.1	0.2500
21	18.866	958.3	0.2448	22.448	930.7	0.2396	26.171	779.8	0.2422
22	16.107	899.4	0.2375	19.282	879.4	0.2323	22.481	745.2	0.2351
23	12.825	815.6	0.2308	15.425	811.5	0.2257	17.956	703.4	0.2289
24	6.684	661.8	0.2260	6.850	664.8	0.2211	7.967	622.2	0.2245
25	3.285	616.0	0.2232	3.949	619.6	0.2185	4.559	595.0	0.2218

Table 4-49. LS1 Burnup and TH Feedback Parameters Assembly C26 (Continued)

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.446	620.4	0.7396	8.307	614.6	0.7396	8.313	679.3	0.7396
2	24.581	759.3	0.7396	27.055	727.4	0.7396	27.074	622.1	0.7396
3	32.182	778.7	0.7300	35.120	733.2	0.7317	35.142	624.4	0.7318
4	35.853	809.4	0.6921	38.898	746.8	0.6960	39.022	630.2	0.6961
5	37.329	833.7	0.6439	40.651	758.5	0.6507	40.678	638.9	0.6507
6	37.859	854.6	0.5933	41.387	772.5	0.6030	41.417	647.6	0.6031
7	38.085	873.3	0.5453	41.843	788.4	0.5579	41.876	653.7	0.5580
8	38.334	889.0	0.5021	42.333	805.4	0.5171	42.369	665.8	0.5172
9	39.257	907.1	0.4535	43.534	825.4	0.4801	43.572	671.9	0.4803
10	39.293	919.1	0.4297	43.797	842.2	0.4474	43.838	681.1	0.4476
11	39.130	931.7	0.4003	43.639	857.7	0.4186	43.882	687.3	0.4188
12	38.878	948.9	0.3748	43.772	871.9	0.3932	43.815	687.3	0.3933
13	38.645	957.1	0.3523	43.613	885.5	0.3706	43.657	690.5	0.3708
14	38.095	979.0	0.3325	43.335	899.2	0.3505	43.380	693.6	0.3507
15	37.472	979.3	0.3148	42.889	913.5	0.3325	42.933	690.5	0.3327
16	36.655	969.7	0.2989	42.239	927.2	0.3164	42.283	690.5	0.3166
17	35.661	952.3	0.2850	41.374	937.9	0.3021	41.417	687.3	0.3023
18	34.680	927.6	0.2734	40.438	941.7	0.2898	40.479	681.1	0.2900
19	33.643	898.3	0.2638	39.330	935.8	0.2793	39.370	678.0	0.2794
20	31.909	869.3	0.2549	37.426	921.7	0.2695	37.464	671.9	0.2697
21	28.812	833.3	0.2469	33.955	891.4	0.2609	33.990	662.7	0.2611
22	24.782	792.7	0.2397	29.384	849.6	0.2533	29.416	650.7	0.2535
23	19.794	740.6	0.2334	23.536	787.2	0.2466	23.561	633.1	0.2467
24	8.787	637.6	0.2290	10.492	657.3	0.2422	10.503	593.3	0.2424
25	5.003	602.7	0.2263	5.920	612.6	0.2388	5.925	576.7	0.2389

Table 4-50. LS1 Burnup and TH Feedback Parameters Assembly C27

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.381	629.5	0.7396	2.667	628.0	0.7396
2	0.000		0.7396	4.603	817.8	0.7396	8.950	815.8	0.7396
3	0.000		0.7390	6.378	881.7	0.7390	12.671	896.8	0.7383
4	0.000	Data	0.7094	7.500	954.0	0.7094	14.934	975.8	0.7068
5	0.000	Not	0.6670	8.022	989.8	0.6670	15.889	1007.7	0.6623
6	0.000	Required	0.6175	8.220	1003.7	0.6175	16.204	1016.5	0.6117
7	0.000		0.5668	8.296	1009.1	0.5668	16.320	1019.5	0.5614
8	0.000		0.5196	8.388	1015.7	0.5196	16.487	1025.2	0.5154
9	0.000		0.4772	8.774	1043.9	0.4772	17.166	1047.9	0.4741
10	0.000		0.4400	8.783	1044.5	0.4400	17.254	1054.1	0.4380
11	0.000		0.4084	8.694	1038.0	0.4084	17.215	1058.0	0.4070
12	0.000		0.3812	8.557	1027.9	0.3812	17.121	1061.4	0.3800
13	0.000		0.3575	8.389	1015.8	0.3575	16.994	1064.7	0.3565
14	0.000		0.3371	8.195	1001.9	0.3371	16.832	1067.2	0.3358
15	0.000		0.3193	7.971	986.2	0.3193	16.621	1068.2	0.3175
16	0.000		0.3037	7.706	968.1	0.3037	16.334	1066.3	0.3012
17	0.000		0.2900	7.390	946.6	0.2900	15.934	1059.6	0.2867
18	0.000		0.2780	7.004	921.3	0.2780	15.370	1045.8	0.2739
19	0.000		0.2674	6.533	891.3	0.2674	14.576	1020.9	0.2625
20	0.000		0.2584	5.960	856.3	0.2584	13.485	982.4	0.2526
21	0.000		0.2508	5.152	809.4	0.2508	11.817	921.7	0.2441
22	0.000		0.2447	4.318	763.7	0.2447	9.942	853.7	0.2372
23	0.000		0.2398	3.497	721.3	0.2398	7.988	785.6	0.2318
24	0.000		0.2366	1.553	629.6	0.2366	3.608	657.1	0.2282
25	0.000		0.2353	0.932	602.5	0.2353	2.126	616.5	0.2265

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	3.639	632.2	0.7396	4.509	627.3	0.7396	5.699	634.5	0.7396
2	13.070	848.2	0.7396	15.339	813.1	0.7396	19.282	834.9	0.7396
3	18.114	898.5	0.7383	20.901	833.0	0.7388	25.880	869.1	0.7385
4	20.677	937.9	0.7077	23.834	853.0	0.7094	29.405	914.9	0.7093
5	21.997	951.3	0.6649	25.007	859.4	0.6684	30.983	947.8	0.6687
6	22.364	955.5	0.6163	25.402	862.7	0.6218	31.689	973.9	0.6225
7	22.483	955.8	0.5676	25.543	865.4	0.5749	32.079	995.4	0.5756
8	22.633	954.4	0.5225	25.713	867.8	0.5310	32.466	1014.5	0.5314
9	23.356	958.0	0.4818	26.486	873.9	0.4910	33.488	1036.9	0.4911
10	23.389	953.6	0.4462	26.531	875.4	0.4558	33.614	1044.3	0.4553
11	23.271	947.0	0.4155	26.419	876.1	0.4253	33.473	1041.6	0.4243
12	23.075	938.8	0.3888	26.223	876.1	0.3986	33.175	1032.3	0.3973
13	22.828	929.1	0.3654	25.975	876.0	0.3753	32.792	1020.2	0.3737
14	22.533	918.6	0.3449	25.676	875.5	0.3546	32.348	1007.3	0.3530
15	22.174	907.0	0.3267	25.309	874.5	0.3363	31.811	992.4	0.3346
16	21.724	894.4	0.3105	24.843	872.5	0.3200	31.107	971.9	0.3184
17	21.141	880.6	0.2961	24.232	869.1	0.3055	30.154	943.3	0.3040
18	20.379	865.8	0.2834	23.427	863.9	0.2927	28.934	909.9	0.2912
19	19.379	850.7	0.2721	22.364	856.4	0.2813	27.462	876.1	0.2801
20	18.044	833.2	0.2624	20.935	845.2	0.2716	25.632	848.1	0.2705
21	15.968	804.7	0.2543	18.662	822.3	0.2634	22.861	812.3	0.2624
22	13.528	767.0	0.2475	15.935	790.1	0.2567	19.554	772.7	0.2557
23	10.607	718.5	0.2418	12.761	741.9	0.2508	15.646	725.2	0.2500
24	4.829	626.9	0.2379	5.671	635.3	0.2465	6.940	630.5	0.2458
25	2.797	597.7	0.2358	3.253	601.6	0.2439	3.963	600.3	0.2434

Table 4-50. LS1 Burnup and TH Feedback Parameters Assembly C27 (Continued)

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.420	636.9	0.7396	7.804	649.5	0.7396	7.813	589.0	0.7396
2	21.570	835.2	0.7396	25.654	856.8	0.7396	25.679	842.7	0.7396
3	28.833	872.5	0.7384	33.654	866.3	0.7382	33.685	850.7	0.7382
4	32.744	923.8	0.7092	37.741	879.9	0.7092	37.774	858.7	0.7092
5	34.570	958.4	0.6687	39.590	881.7	0.6694	39.626	865.8	0.6695
6	35.424	979.7	0.6225	40.476	884.3	0.6243	40.514	871.9	0.6244
7	35.905	993.1	0.5754	41.035	890.4	0.5785	41.076	881.1	0.5786
8	36.368	1004.1	0.5310	41.620	900.3	0.5351	41.663	887.3	0.5353
9	37.492	1019.8	0.4904	42.948	916.7	0.4953	42.994	896.8	0.4955
10	37.668	1027.4	0.4546	43.302	931.3	0.4599	43.349	700.0	0.4601
11	37.551	1031.1	0.4235	43.372	947.0	0.4290	43.421	706.4	0.4292
12	37.271	1033.9	0.3964	43.284	963.5	0.4019	43.333	706.4	0.4020
13	36.893	1034.7	0.3726	43.103	980.6	0.3780	43.153	709.6	0.3781
14	36.427	1031.3	0.3517	42.836	998.3	0.3569	42.886	709.6	0.3571
15	35.829	1021.9	0.3333	42.434	1016.0	0.3381	42.482	703.2	0.3383
16	35.016	1005.4	0.3170	41.808	1033.3	0.3213	41.856	703.2	0.3215
17	33.904	981.9	0.3026	40.856	1048.3	0.3064	40.902	696.8	0.3066
18	32.481	952.7	0.2898	39.533	1057.8	0.2931	39.578	693.6	0.2932
19	30.801	923.8	0.2787	37.858	1058.2	0.2813	37.901	687.3	0.2814
20	28.767	896.3	0.2691	35.687	1045.2	0.2708	35.729	684.2	0.2709
21	25.738	862.6	0.2609	32.241	1006.7	0.2618	32.279	671.9	0.2619
22	22.115	823.5	0.2541	27.961	949.2	0.2542	27.994	656.7	0.2543
23	17.759	771.1	0.2482	22.569	865.4	0.2478	22.596	638.9	0.2479
24	7.910	651.6	0.2441	10.167	690.3	0.2433	10.179	596.1	0.2434
25	4.518	612.6	0.2417	5.803	633.1	0.2408	5.809	579.5	0.2409

Table 4-51. LS1 Burnup and TH Feedback Parameters Assembly C28

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.934	659.0	0.7396	3.737	657.0	0.7396
2	0.000		0.7396	6.373	940.8	0.7396	12.523	948.0	0.7396
3	0.000		0.7205	8.698	1038.3	0.7205	17.055	1045.1	0.7187
4	0.000	Data	0.6668	9.963	1136.0	0.6668	19.245	1120.0	0.6631
5	0.000	Not	0.5998	10.318	1165.1	0.5998	19.845	1140.7	0.5963
6	0.000	Required	0.5348	10.257	1160.0	0.5348	19.845	1146.0	0.5333
7	0.000		0.4796	10.119	1148.7	0.4796	19.754	1150.0	0.4802
8	0.000		0.4345	10.060	1143.8	0.4345	19.772	1156.7	0.4362
9	0.000		0.3966	10.380	1170.2	0.3966	20.356	1179.8	0.3987
10	0.000		0.3641	10.310	1164.4	0.3641	20.382	1188.3	0.3665
11	0.000		0.3368	10.165	1152.4	0.3368	20.321	1195.8	0.3392
12	0.000		0.3137	9.984	1137.7	0.3137	20.217	1202.8	0.3157
13	0.000		0.2938	9.784	1121.6	0.2938	20.087	1209.1	0.2953
14	0.000		0.2767	9.570	1104.6	0.2767	19.927	1214.0	0.2773
15	0.000		0.2616	9.340	1086.7	0.2616	19.726	1216.7	0.2614
16	0.000		0.2485	9.089	1067.5	0.2485	19.483	1215.6	0.2472
17	0.000		0.2370	8.813	1046.8	0.2370	19.114	1208.9	0.2346
18	0.000		0.2268	8.501	1023.9	0.2268	18.636	1194.0	0.2233
19	0.000		0.2178	8.107	995.7	0.2178	17.937	1166.9	0.2133
20	0.000		0.2099	7.567	958.5	0.2099	16.894	1123.8	0.2044
21	0.000		0.2029	6.681	900.6	0.2029	15.107	1050.5	0.1967
22	0.000		0.1972	5.699	840.8	0.1972	12.963	953.5	0.1904
23	0.000		0.1926	4.697	784.1	0.1926	10.593	870.9	0.1853
24	0.000		0.1891	2.150	656.6	0.1891	4.919	692.5	0.1816
25	0.000		0.1878	1.322	619.4	0.1878	2.972	637.7	0.1800

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.142	647.2	0.7396	5.997	646.8	0.7396	6.881	614.7	0.7396
2	17.340	905.2	0.7396	20.099	878.9	0.7396	22.915	748.1	0.7396
3	23.200	954.3	0.7221	26.595	906.9	0.7238	30.130	767.1	0.7263
4	25.980	1004.1	0.6713	29.608	937.0	0.6753	33.538	793.7	0.6816
5	26.822	1025.3	0.6095	30.523	948.7	0.6162	34.754	814.6	0.6270
6	26.899	1032.2	0.5493	30.611	948.2	0.5582	35.096	832.7	0.5734
7	26.805	1031.9	0.4969	30.505	946.6	0.5068	35.210	848.7	0.5254
8	26.807	1030.5	0.4526	30.494	944.8	0.4629	35.422	865.2	0.4838
9	27.448	1035.6	0.4144	31.166	949.0	0.4246	36.533	898.8	0.4475
10	27.404	1029.3	0.3818	31.105	946.7	0.3920	37.475	931.0	0.4177
11	27.227	1019.0	0.3540	30.907	943.9	0.3640	37.592	1008.4	0.3884
12	26.977	1006.3	0.3299	30.636	941.1	0.3399	37.381	1013.8	0.3622
13	26.683	992.1	0.3090	30.322	938.5	0.3188	37.271	1032.1	0.3403
14	26.347	977.2	0.2907	29.964	935.6	0.3002	36.844	1025.8	0.3199
15	25.955	961.2	0.2744	29.546	932.2	0.2839	36.251	1010.2	0.3018
16	25.479	943.6	0.2600	29.035	927.6	0.2692	35.611	998.8	0.2861
17	24.881	923.8	0.2472	28.383	920.6	0.2562	34.685	975.2	0.2718
18	24.125	902.1	0.2357	27.546	910.2	0.2446	33.512	947.0	0.2590
19	23.164	881.3	0.2256	26.474	897.4	0.2343	32.115	920.5	0.2480
20	21.821	859.7	0.2167	25.008	880.9	0.2254	30.257	889.7	0.2383
21	19.601	828.6	0.2092	22.548	851.6	0.2178	27.253	848.7	0.2301
22	16.877	788.6	0.2030	19.490	813.1	0.2116	23.543	802.2	0.2234
23	13.710	737.0	0.1976	15.829	759.1	0.2060	19.026	745.0	0.2173
24	6.296	635.3	0.1936	7.239	644.4	0.2017	8.639	637.7	0.2126
25	3.733	602.4	0.1912	4.252	607.0	0.1989	5.009	602.8	0.2092

Table 4-51. LS1 Burnup and TH Feedback Parameters Assembly C28 (Continued)

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.251	598.7	0.7396	8.190	619.7	0.7396	8.195	576.1	0.7396
2	24.071	686.8	0.7396	26.761	743.7	0.7396	26.775	605.4	0.7396
3	31.594	701.0	0.7276	34.761	748.2	0.7296	34.778	610.2	0.7297
4	35.199	721.6	0.6850	38.558	761.0	0.6896	38.577	615.8	0.6897
5	36.579	739.1	0.6330	40.100	772.0	0.6410	40.120	618.7	0.641
6	37.064	754.8	0.5820	40.769	784.7	0.5929	40.792	627.3	0.593
7	37.292	767.6	0.5361	41.201	799.0	0.5496	41.225	630.2	0.5498
8	37.593	777.7	0.4960	41.704	813.4	0.5112	41.731	638.9	0.5114
9	38.778	786.2	0.4603	43.100	828.7	0.4764	43.129	644.8	0.4766
10	39.713	785.4	0.4304	44.133	836.0	0.4463	44.163	647.8	0.4465
11	39.849	787.5	0.4011	44.428	847.9	0.4174	44.460	653.7	0.4176
12	39.661	790.2	0.3750	44.418	861.4	0.3914	44.451	656.7	0.3916
13	39.556	790.8	0.3529	44.464	873.0	0.3690	44.498	659.7	0.3692
14	39.153	793.6	0.3325	44.239	886.9	0.3485	44.273	659.7	0.3488
15	38.584	796.4	0.3143	43.849	901.2	0.3302	43.884	662.7	0.3304
16	37.947	796.7	0.2985	43.370	914.0	0.3141	43.404	659.7	0.3142
17	37.007	795.1	0.2840	42.577	926.0	0.2993	42.611	659.7	0.2995
18	35.800	791.1	0.2711	41.483	935.4	0.2862	41.516	656.7	0.2864
19	34.359	786.0	0.2600	40.105	940.7	0.2748	40.136	650.7	0.2749
20	32.538	790.3	0.2507	38.222	935.5	0.2651	38.252	647.8	0.2653
21	29.853	828.3	0.2449	35.152	903.9	0.2581	35.180	641.9	0.2582
22	26.006	811.8	0.2385	30.792	863.6	0.2512	30.817	633.1	0.2513
23	21.033	759.2	0.2319	24.983	800.5	0.2441	24.983	618.7	0.2442
24	9.533	644.5	0.2266	11.370	665.1	0.2388	11.379	587.8	0.2389
25	5.516	608.4	0.2230	6.537	618.3	0.2351	6.541	573.9	0.2353

Table 4-52. LS1 Burnup and TH Feedback Parameters Assembly C29

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.882	656.2	0.7396	3.675	656.4	0.7396
2	0.000		0.7396	6.253	932.0	0.7396	12.391	947.0	0.7396
3	0.000		0.7230	8.587	1030.1	0.7230	16.960	1046.4	0.7209
4	0.000	Data	0.6714	9.882	1129.4	0.6714	19.179	1121.2	0.6675
5	0.000	Not	0.6055	10.270	1161.1	0.6055	19.776	1138.9	0.6016
6	0.000	Required	0.5403	10.231	1157.9	0.5403	19.752	1140.2	0.5381
7	0.000		0.4843	10.102	1147.3	0.4843	19.637	1141.4	0.4841
8	0.000		0.4385	10.051	1143.1	0.4385	19.640	1146.0	0.4395
9	0.000		0.4001	10.370	1169.4	0.4001	20.210	1167.8	0.4017
10	0.000		0.3672	10.293	1163.0	0.3672	20.220	1175.5	0.3693
11	0.000		0.3395	10.131	1149.7	0.3395	20.135	1182.3	0.3417
12	0.000		0.3162	9.931	1133.4	0.3162	20.006	1188.6	0.3180
13	0.000		0.2962	9.712	1115.8	0.2962	19.852	1194.4	0.2975
14	0.000		0.2789	9.477	1097.3	0.2789	19.669	1199.1	0.2794
15	0.000		0.2639	9.222	1077.6	0.2639	19.447	1202.1	0.2634
16	0.000		0.2506	8.941	1056.3	0.2506	19.165	1202.0	0.2492
17	0.000		0.2389	8.625	1032.9	0.2389	18.781	1198.7	0.2364
18	0.000		0.2285	8.249	1005.8	0.2285	18.277	1184.4	0.2250
19	0.000		0.2195	7.781	973.1	0.2195	17.541	1160.8	0.2149
20	0.000		0.2115	7.184	933.0	0.2115	16.479	1121.1	0.2059
21	0.000		0.2048	6.292	876.4	0.2048	14.704	1049.4	0.1982
22	0.000		0.1994	5.334	819.7	0.1994	12.573	961.7	0.1919
23	0.000		0.1950	4.357	765.8	0.1950	10.200	867.5	0.1869
24	0.000		0.1918	1.963	648.0	0.1918	4.677	689.7	0.1834
25	0.000		0.1906	1.198	614.0	0.1906	2.806	635.8	0.1819

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.454	672.1	0.7396	6.217	637.0	0.7396	7.299	627.4	0.7396
2	18.324	1007.5	0.7396	20.749	833.6	0.7396	24.048	784.9	0.7396
3	24.299	1058.0	0.7186	27.285	856.5	0.7205	31.327	801.4	0.7236
4	26.968	1100.1	0.6648	30.194	885.7	0.6693	34.644	830.2	0.6767
5	27.627	1106.0	0.6000	30.988	902.6	0.6076	35.771	854.4	0.6203
6	27.539	1099.9	0.5380	30.994	914.6	0.5484	36.067	876.2	0.5656
7	27.345	1092.4	0.4854	30.868	923.1	0.4975	36.163	893.4	0.5176
8	27.283	1086.2	0.4420	30.644	928.3	0.4547	36.290	905.0	0.4761
9	27.888	1089.5	0.4050	31.503	935.3	0.4178	37.060	915.4	0.4390
10	27.872	1087.1	0.3734	31.493	936.1	0.3860	37.085	918.6	0.4067
11	27.705	1079.4	0.3462	31.324	935.8	0.3585	36.882	913.9	0.3784
12	27.485	1070.9	0.3228	31.095	934.7	0.3348	36.577	907.9	0.3538
13	27.303	1068.3	0.3030	30.892	931.9	0.3145	36.257	898.7	0.3325
14	26.998	1057.0	0.2850	30.570	929.7	0.2962	35.798	888.1	0.3134
15	26.597	1040.8	0.2688	30.147	926.8	0.2799	35.214	875.7	0.2963
16	26.096	1021.2	0.2545	29.612	922.4	0.2653	34.486	861.2	0.2811
17	25.460	998.4	0.2417	28.929	916.4	0.2524	33.574	844.3	0.2675
18	24.655	973.6	0.2303	28.113	914.9	0.2411	32.494	825.2	0.2556
19	23.629	949.6	0.2202	27.303	943.1	0.2320	31.372	803.3	0.2456
20	22.258	924.8	0.2114	26.141	971.2	0.2242	29.871	780.1	0.2370
21	20.030	889.6	0.2041	23.742	948.2	0.2169	27.060	752.8	0.2293
22	17.381	851.1	0.1987	20.836	914.6	0.2115	23.669	722.0	0.2235
23	14.098	787.6	0.1939	16.952	840.9	0.2062	19.186	685.6	0.2177
24	6.423	655.7	0.1903	7.711	676.2	0.2020	8.690	614.7	0.2133
25	3.795	614.4	0.1885	4.516	624.6	0.1996	5.037	590.3	0.2099

Table 4-62. LS1 Burnup and TH Feedback Parameters Assembly C29 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm³) 306.8 Cy 7	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm³) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm³) 3.67 Cy 8
1	7.656	597.3	0.7396	8.212	594.9	0.7396	8.218	579.3	0.7396
2	25.095	674.0	0.7396	26.658	661.8	0.7396	26.676	618.8	0.7396
3	32.602	681.8	0.7249	34.432	664.7	0.7265	34.454	624.4	0.7265
4	36.062	698.3	0.6797	38.027	672.7	0.6836	38.051	630.2	0.6836
5	37.335	711.4	0.6254	39.443	681.3	0.6322	39.469	636.0	0.6322
6	37.787	727.6	0.5733	40.073	692.1	0.5831	40.102	644.8	0.5832
7	38.040	744.8	0.5277	40.529	704.8	0.5406	40.561	653.7	0.5408
8	38.317	761.4	0.4881	41.026	718.5	0.5039	41.060	659.7	0.5041
9	39.272	780.1	0.4525	42.236	734.9	0.4707	42.273	668.8	0.4710
10	39.419	796.5	0.4214	42.607	749.6	0.4418	42.646	674.9	0.4420
11	39.372	815.0	0.3941	42.771	763.7	0.4162	42.813	684.2	0.4164
12	39.257	838.1	0.3704	42.850	776.9	0.3937	42.892	684.2	0.3939
13	39.130	862.3	0.3496	42.899	789.1	0.3735	42.943	690.5	0.3737
14	38.806	879.9	0.3304	42.760	802.0	0.3549	42.803	687.4	0.3550
15	38.275	886.5	0.3128	42.417	815.6	0.3376	42.460	687.3	0.3378
16	37.532	884.6	0.2967	41.859	829.1	0.3219	41.903	690.5	0.3221
17	36.560	876.8	0.2822	41.049	841.1	0.3077	41.092	687.3	0.3078
18	35.383	864.3	0.2695	39.984	849.5	0.2949	40.027	687.3	0.2950
19	34.124	847.0	0.2587	38.745	851.0	0.2836	38.786	681.1	0.2837
20	32.450	825.7	0.2493	36.984	844.5	0.2735	37.025	681.1	0.2737
21	29.403	797.6	0.2410	33.686	825.9	0.2649	33.724	671.9	0.2651
22	25.712	763.2	0.2347	29.576	795.6	0.2580	29.610	659.7	0.2581
23	20.817	718.4	0.2285	23.979	747.9	0.2512	24.007	641.9	0.2513
24	9.407	627.8	0.2237	10.830	641.0	0.2458	10.842	596.1	0.2460
25	5.413	596.6	0.2195	6.157	603.1	0.2399	6.164	582.2	0.2401

Table 4-53. LS1 Burnup and TH Feedback Parameters Assembly C30

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.397	630.3	0.7396	3.077	650.0	0.7396
2	0.000		0.7396	4.659	821.5	0.7396	10.319	910.3	0.7396
3	0.000		0.7382	6.453	886.4	0.7382	14.430	1015.9	0.7300
4	0.000	Data	0.7070	7.622	962.2	0.7070	16.747	1106.9	0.6879
5	0.000	Not	0.6627	8.214	1003.3	0.6627	17.650	1133.0	0.6331
6	0.000	Required	0.6110	8.471	1021.7	0.6110	17.914	1133.6	0.5763
7	0.000		0.5587	8.587	1030.1	0.5587	18.003	1131.3	0.5239
8	0.000		0.5105	8.706	1038.8	0.5105	18.148	1133.5	0.4781
9	0.000		0.4674	9.115	1069.4	0.4674	18.818	1155.9	0.4381
10	0.000		0.4301	9.125	1070.2	0.4301	18.893	1161.5	0.4032
11	0.000		0.3984	9.025	1062.6	0.3984	18.844	1166.0	0.3734
12	0.000		0.3713	8.865	1050.6	0.3713	18.732	1170.2	0.3476
13	0.000		0.3480	8.671	1036.3	0.3480	18.580	1173.9	0.3251
14	0.000		0.3278	8.452	1020.3	0.3278	18.391	1176.5	0.3054
15	0.000		0.3103	8.206	1002.7	0.3103	18.154	1177.3	0.2879
16	0.000		0.2950	7.927	983.1	0.2950	17.844	1174.6	0.2725
17	0.000		0.2815	7.602	960.9	0.2815	17.421	1166.0	0.2587
18	0.000		0.2698	7.213	934.9	0.2698	16.826	1148.1	0.2465
19	0.000		0.2595	6.742	904.5	0.2595	15.982	1116.5	0.2358
20	0.000		0.2507	6.171	869.0	0.2507	14.815	1067.8	0.2264
21	0.000		0.2433	5.361	821.2	0.2433	13.021	992.3	0.2185
22	0.000		0.2373	4.521	774.5	0.2373	10.988	908.4	0.2122
23	0.000		0.2325	3.681	730.6	0.2325	8.859	826.2	0.2073
24	0.000		0.2292	1.646	633.7	0.2292	4.038	673.6	0.2035
25	0.000		0.2278	0.992	605.1	0.2278	2.407	626.7	0.2020

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.962	679.2	0.7396	6.070	674.3	0.7396	7.541	653.0	0.7396
2	16.752	1056.8	0.7396	20.300	994.9	0.7396	24.800	883.6	0.7396
3	22.533	1130.6	0.7232	26.842	1031.4	0.7227	32.448	917.7	0.7246
4	25.341	1179.9	0.6755	29.874	1064.7	0.6752	36.100	968.7	0.6793
5	26.230	1178.5	0.6171	30.800	1070.3	0.6169	37.437	1004.2	0.6234
6	26.338	1162.7	0.5588	30.894	1068.0	0.5588	37.803	1028.4	0.5668
7	26.279	1147.7	0.5069	30.810	1064.4	0.5070	37.887	1043.7	0.5152
8	26.307	1136.1	0.4624	30.810	1060.2	0.4628	38.009	1055.0	0.4705
9	26.956	1135.0	0.4243	31.481	1062.0	0.4249	38.818	1067.9	0.4319
10	26.925	1123.6	0.3912	31.413	1057.9	0.3920	38.736	1068.6	0.3985
11	26.738	1110.2	0.3627	31.200	1054.0	0.3638	38.434	1058.3	0.3698
12	26.468	1095.0	0.3382	30.907	1050.6	0.3394	38.000	1045.2	0.3450
13	26.146	1079.0	0.3168	30.563	1047.3	0.3182	37.475	1028.7	0.3234
14	25.774	1062.0	0.2982	30.170	1044.2	0.2995	36.860	1008.9	0.3045
15	25.337	1043.8	0.2817	29.711	1041.0	0.2831	36.127	985.0	0.2879
16	24.802	1023.6	0.2671	29.166	1038.0	0.2685	35.237	956.5	0.2731
17	24.120	1001.0	0.2541	28.449	1034.4	0.2555	34.131	923.8	0.2600
18	23.241	976.8	0.2425	27.519	1026.9	0.2439	32.774	890.1	0.2484
19	22.114	953.2	0.2323	26.297	1013.2	0.2335	31.144	859.2	0.2381
20	20.638	928.3	0.2233	24.651	989.2	0.2245	29.127	832.0	0.2292
21	18.340	889.0	0.2156	22.031	945.4	0.2166	26.051	799.9	0.2215
22	15.613	837.9	0.2093	18.864	888.8	0.2102	22.353	764.0	0.2152
23	12.533	772.7	0.2048	15.170	815.6	0.2053	17.964	719.6	0.2102
24	5.680	649.9	0.2011	8.864	666.5	0.2017	8.126	630.1	0.2068
25	3.339	611.4	0.1997	4.009	620.1	0.2003	4.711	599.9	0.2051

Table 4-53. LS1 Burnup and TH Feedback Parameters Assembly C30 (Continued)

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU) 306.8 Cy 7	Fuel Temp. (K) 306.8 Cy 7	Mod. Dens. (g/cm^3) 306.8 Cy 7	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU) 495.2 Cy 7	Fuel Temp. (K) 495.2 Cy 7	Mod. Dens. (g/cm^3) 495.2 Cy 7
1	8.229	633.2	0.7396	9.395	634.8	0.7396
2	26.846	799.2	0.7396	30.076	785.9	0.7396
3	35.031	826.2	0.7257	38.842	792.1	0.7276
4	39.024	858.8	0.6822	43.069	810.1	0.6862
5	40.607	900.9	0.6282	44.857	823.5	0.6351
6	41.146	924.3	0.5732	45.587	837.5	0.5827
7	41.354	941.4	0.5226	46.005	853.3	0.5344
8	41.576	955.5	0.4781	46.448	870.2	0.4916
9	42.509	973.3	0.4395	47.643	890.7	0.4537
10	42.495	983.2	0.4057	47.849	908.4	0.4204
11	42.260	993.1	0.3767	47.815	924.8	0.3916
12	41.921	1007.2	0.3517	47.658	940.0	0.3664
13	41.495	1022.2	0.3299	47.408	954.9	0.3443
14	40.933	1030.3	0.3107	47.027	970.5	0.3247
15	40.171	1025.9	0.2936	46.454	987.1	0.3073
16	39.175	1009.6	0.2784	45.634	1002.6	0.2919
17	37.896	984.1	0.2649	44.490	1015.0	0.2780
18	36.324	953.1	0.2529	42.981	1020.8	0.2657
19	34.458	920.3	0.2424	41.071	1016.7	0.2546
20	32.201	888.2	0.2332	38.623	999.4	0.2449
21	28.817	848.8	0.2255	34.781	959.2	0.2365
22	24.756	804.6	0.2192	30.052	903.7	0.2297
23	19.891	750.3	0.2141	24.185	826.7	0.2240
24	9.008	643.3	0.2106	11.017	675.3	0.2204
25	5.204	607.1	0.2088	6.321	623.7	0.2181

Table 4-54. LS1 Burnup and TH Feedback Parameters Assembly D1

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.481	652.5	0.7396	2.432	657.4	0.7396
2	0.000		0.7396	5.443	962.9	0.7396	8.915	984.8	0.7396
3	0.000		0.7223	7.352	1061.2	0.7223	12.044	1091.2	0.7210
4	0.000	Data	0.6712	8.257	1148.3	0.6712	13.393	1162.6	0.6689
5	0.000	Not	0.6073	8.421	1164.9	0.6073	13.547	1160.9	0.6047
6	0.000	Required	0.5445	8.286	1151.2	0.5445	13.265	1136.8	0.5425
7	0.000		0.4905	8.105	1133.2	0.4905	12.936	1113.0	0.4892
8	0.000		0.4461	7.997	1122.5	0.4461	12.723	1096.5	0.4456
9	0.000		0.4089	8.174	1140.0	0.4089	12.927	1100.7	0.4091
10	0.000		0.3771	8.051	1127.8	0.3771	12.739	1090.6	0.3779
11	0.000		0.3502	7.860	1109.2	0.3502	12.478	1079.5	0.3513
12	0.000		0.3274	7.640	1088.1	0.3274	12.188	1069.1	0.3287
13	0.000		0.3079	7.406	1066.4	0.3079	11.889	1058.9	0.3092
14	0.000		0.2910	7.166	1044.2	0.2910	11.582	1049.2	0.2923
15	0.000		0.2763	6.909	1021.1	0.2763	11.256	1038.9	0.2774
16	0.000		0.2635	6.625	996.3	0.2635	10.890	1026.9	0.2642
17	0.000		0.2522	6.280	967.0	0.2522	10.428	1010.0	0.2527
18	0.000		0.2425	5.726	921.9	0.2425	9.654	979.1	0.2426
19	0.000		0.2342	5.362	893.5	0.2342	9.104	953.7	0.2338
20	0.000		0.2268	5.008	866.8	0.2268	8.532	924.8	0.2261
21	0.000		0.2204	4.624	838.8	0.2204	7.868	889.2	0.2193
22	0.000		0.2149	3.944	791.5	0.2149	6.714	832.0	0.2136
23	0.000		0.2105	3.156	740.0	0.2105	5.354	768.2	0.2091
24	0.000		0.2078	1.236	627.9	0.2078	2.130	640.2	0.2062
25	0.000		0.2067	0.725	600.6	0.2067	1.232	606.1	0.2050

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.586	632.3	0.7396	4.397	647.2	0.7396	6.011	665.7	0.7396
2	13.226	868.5	0.7396	16.114	921.5	0.7396	21.312	959.6	0.7396
3	17.809	931.9	0.7251	21.561	983.8	0.7246	27.780	983.1	0.7239
4	19.987	1002.2	0.6783	24.213	1056.2	0.6778	30.648	1002.4	0.6774
5	20.625	1045.8	0.6197	25.093	1095.4	0.6194	31.489	998.8	0.6205
6	20.637	1073.3	0.5605	25.216	1113.8	0.5604	31.554	993.6	0.5633
7	20.502	1091.9	0.5074	25.134	1122.7	0.5069	31.461	992.7	0.5118
8	20.451	1107.6	0.4620	25.129	1130.6	0.4613	31.506	997.1	0.4876
9	20.661	1128.0	0.4232	25.643	1148.4	0.4222	32.167	1010.4	0.4293
10	20.698	1130.5	0.3900	25.622	1155.7	0.3888	32.172	1022.0	0.3965
11	20.358	1122.8	0.3617	25.221	1162.5	0.3602	32.030	1036.6	0.3682
12	19.915	1107.5	0.3375	24.828	1171.3	0.3357	31.818	1053.9	0.3438
13	19.409	1087.4	0.3168	24.360	1178.1	0.3146	31.554	1073.5	0.3225
14	18.849	1063.4	0.2988	23.790	1176.3	0.2962	31.207	1095.4	0.3038
15	18.223	1035.6	0.2832	23.069	1159.6	0.2801	30.723	1119.2	0.2872
16	17.495	1003.1	0.2694	22.172	1130.4	0.2661	30.051	1142.3	0.2726
17	16.597	965.5	0.2574	21.042	1091.6	0.2538	29.098	1160.6	0.2596
18	15.319	923.6	0.2471	19.492	1047.8	0.2432	27.651	1171.6	0.2481
19	14.274	884.6	0.2381	18.146	1001.6	0.2341	26.240	1164.9	0.2378
20	13.226	848.9	0.2303	16.779	955.1	0.2262	24.609	1137.3	0.2287
21	12.029	810.6	0.2235	15.180	899.7	0.2194	22.395	1075.5	0.2207
22	10.204	764.8	0.2177	12.691	840.0	0.2136	19.247	995.3	0.2138
23	8.065	714.9	0.2131	10.194	773.6	0.2091	15.365	894.9	0.2084
24	3.239	621.9	0.2104	4.120	643.5	0.2062	6.351	689.1	0.2050
25	1.853	595.7	0.2091	2.353	607.9	0.2049	3.618	632.2	0.2034

Table 4-54. LS1 Burnup and TH Feedback Parameters Assembly D1 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	6.035	639.5	0.7396
2	21.389	846.7	0.7396
3	27.874	867.9	0.724
4	30.751	904.5	0.6775
5	31.598	929.7	0.6206
6	31.667	947.0	0.5636
7	31.579	969.1	0.5122
8	31.625	973.6	0.4679
9	32.290	991.8	0.4296
10	32.296	996.4	0.3968
11	32.153	991.8	0.3685
12	31.941	991.8	0.3440
13	31.675	982.6	0.3227
14	31.327	978.1	0.3040
15	30.839	960.2	0.2874
16	30.163	942.7	0.2728
17	29.205	921.2	0.2597
18	27.753	900.3	0.2483
19	26.336	875.9	0.2380
20	24.698	848.3	0.2288
21	22.475	814.1	0.2208
22	19.317	777.8	0.2140
23	15.421	729.8	0.2085
24	8.375	630.4	0.2051
25	3.630	596.2	0.2035

Table 4-55. LS1 Burnup and TH Feedback Parameters Assembly D2

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.714	668.0	0.7396	2.687	681.9	0.7396
2	0.000		0.7396	6.201	1035.5	0.7396	10.443	1110.8	0.7396
3	0.000		0.7120	8.224	1145.0	0.7120	13.743	1228.0	0.7078
4	0.000	Data	0.6502	9.025	1228.0	0.6502	14.886	1289.3	0.6424
5	0.000	Not	0.5790	9.015	1226.9	0.5790	14.777	1271.3	0.5695
6	0.000	Required	0.5144	8.747	1198.5	0.5144	14.317	1236.9	0.5051
7	0.000		0.4621	8.496	1172.5	0.4621	13.896	1207.3	0.4534
8	0.000		0.4200	8.358	1158.5	0.4200	13.643	1187.6	0.4121
9	0.000		0.3846	8.543	1177.4	0.3846	13.847	1190.8	0.3775
10	0.000		0.3544	8.428	1165.6	0.3544	13.666	1179.6	0.3480
11	0.000		0.3289	8.244	1147.0	0.3289	13.415	1168.4	0.3230
12	0.000		0.3073	8.031	1125.9	0.3073	13.135	1157.3	0.3017
13	0.000		0.2887	7.807	1104.1	0.2887	12.844	1146.2	0.2833
14	0.000		0.2727	7.576	1082.1	0.2727	12.545	1135.2	0.2673
15	0.000		0.2586	7.334	1059.5	0.2586	12.229	1123.2	0.2531
16	0.000		0.2462	7.069	1035.4	0.2462	11.879	1109.7	0.2407
17	0.000		0.2354	6.749	1007.1	0.2354	11.439	1090.9	0.2297
18	0.000		0.2259	6.216	961.7	0.2259	10.682	1056.7	0.2199
19	0.000		0.2178	5.881	934.3	0.2178	10.141	1026.2	0.2114
20	0.000		0.2105	5.548	907.9	0.2105	9.552	989.6	0.2041
21	0.000		0.2041	5.162	878.3	0.2041	8.827	943.4	0.1977
22	0.000		0.1987	4.433	825.2	0.1987	7.553	873.6	0.1922
23	0.000		0.1944	3.565	766.3	0.1944	6.038	798.2	0.1879
24	0.000		0.1915	1.409	637.3	0.1915	2.428	651.6	0.1849
25	0.000		0.1904	0.831	606.2	0.1904	1.416	612.9	0.1839

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.161	640.2	0.7396	4.716	618.7	0.7396	5.385	602.3	0.7396
2	15.063	895.3	0.7396	16.967	781.1	0.7396	19.135	705.3	0.7396
3	19.667	945.0	0.7146	22.077	806.3	0.7179	24.712	714.3	0.7216
4	21.451	999.6	0.6578	24.158	842.4	0.6653	27.027	729.3	0.6737
5	21.679	1029.7	0.5931	24.613	871.2	0.6055	27.679	742.2	0.6197
6	21.402	1046.4	0.5333	24.522	895.5	0.5498	27.811	757.0	0.5697
7	21.058	1053.6	0.4828	24.323	915.0	0.5015	27.857	773.6	0.5265
8	20.819	1054.9	0.4404	24.190	929.5	0.4601	27.980	791.4	0.4892
9	21.069	1059.2	0.4039	24.552	945.2	0.4234	28.637	812.4	0.4554
10	20.818	1052.7	0.3730	24.354	952.7	0.3918	28.683	830.2	0.4261
11	20.459	1042.7	0.3466	24.030	957.6	0.3648	28.587	847.2	0.4004
12	20.037	1029.7	0.3240	23.635	961.5	0.3414	28.427	865.2	0.3779
13	19.577	1014.5	0.3044	23.196	964.5	0.3212	28.273	887.4	0.3585
14	19.082	997.2	0.2873	22.712	966.1	0.3034	28.009	905.0	0.3404
15	18.543	977.8	0.2723	22.167	965.2	0.2878	27.645	919.8	0.3239
16	17.936	956.1	0.2590	21.529	960.8	0.2739	27.170	933.3	0.3092
17	17.205	932.0	0.2474	20.737	952.1	0.2616	26.514	944.8	0.2961
18	16.133	906.7	0.2376	19.578	939.8	0.2514	25.454	953.2	0.2852
19	15.277	882.2	0.2294	18.583	920.6	0.2424	24.450	952.5	0.2749
20	14.283	851.7	0.2215	17.402	895.4	0.2339	23.130	940.7	0.2652
21	13.014	812.4	0.2143	15.833	856.5	0.2261	21.170	908.3	0.2560
22	11.050	765.3	0.2084	13.487	809.5	0.2199	18.241	862.2	0.2490
23	8.710	712.5	0.2034	10.629	750.1	0.2146	14.468	794.8	0.2428
24	3.478	618.7	0.2001	4.239	632.1	0.2112	5.794	648.9	0.2389
25	1.979	592.6	0.1980	2.382	599.1	0.2085	3.192	606.8	0.2347

Table 4-55. LS1 Burnup and TH Feedback Parameters Assembly D2 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	5.397	598.9	0.7396
2	19.178	708.2	0.7396
3	24.770	736.4	0.7217
4	27.093	763.8	0.6739
5	27.753	792.1	0.6199
6	27.891	814.1	0.5701
7	27.943	836.7	0.5271
8	28.070	852.2	0.4897
9	28.732	871.9	0.4560
10	28.779	875.9	0.4267
11	28.684	879.9	0.4009
12	28.524	879.9	0.3784
13	28.370	879.9	0.3589
14	28.105	875.9	0.3407
15	27.740	871.9	0.3243
16	27.263	863.9	0.3095
17	26.607	863.9	0.2964
18	25.553	888.0	0.2855
19	24.581	1029.2	0.2754
20	23.266	1053.4	0.2657
21	21.295	1001.0	0.2564
22	18.349	925.5	0.2493
23	14.555	840.6	0.2431
24	5.830	666.1	0.2392
25	3.211	616.0	0.2350

Table 4-56. LS1 Burnup and TH Feedback Parameters Assembly D3

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.142	630.4	0.7396	2.018	649.4	0.7396
2	0.000		0.7396	4.254	858.3	0.7396	7.449	942.8	0.7396
3	0.000		0.7340	5.875	933.8	0.7340	10.248	1042.8	0.7300
4	0.000	Data	0.6974	6.849	1016.8	0.6974	11.703	1116.7	0.6890
5	0.000	Not	0.6476	7.313	1057.6	0.6476	12.167	1116.7	0.6358
6	0.000	Required	0.5922	7.510	1075.9	0.5922	12.207	1092.0	0.5796
7	0.000		0.5383	7.571	1081.6	0.5383	12.110	1067.7	0.5271
8	0.000		0.4904	7.611	1085.4	0.4904	12.047	1052.2	0.4813
9	0.000		0.4488	7.889	1112.0	0.4488	12.361	1057.6	0.4419
10	0.000		0.4131	7.848	1108.0	0.4131	12.257	1048.1	0.4080
11	0.000		0.3826	7.713	1095.1	0.3826	12.058	1038.6	0.3791
12	0.000		0.3567	7.521	1076.9	0.3567	11.809	1030.3	0.3542
13	0.000		0.3346	7.303	1056.7	0.3346	11.539	1022.7	0.3327
14	0.000		0.3155	7.068	1035.3	0.3155	11.254	1015.5	0.3141
15	0.000		0.2990	6.814	1012.8	0.2990	10.944	1007.5	0.2979
16	0.000		0.2846	6.532	988.3	0.2846	10.593	997.7	0.2835
17	0.000		0.2720	6.192	959.7	0.2720	10.148	982.9	0.2709
18	0.000		0.2612	5.646	915.6	0.2612	9.393	954.4	0.2600
19	0.000		0.2521	5.293	888.3	0.2521	8.870	931.8	0.2505
20	0.000		0.2440	4.951	862.6	0.2440	8.330	906.2	0.2422
21	0.000		0.2370	4.581	835.7	0.2370	7.704	874.2	0.2349
22	0.000		0.2309	3.912	789.3	0.2309	6.590	821.4	0.2286
23	0.000		0.2261	3.136	738.8	0.2261	5.274	761.8	0.2237
24	0.000		0.2230	1.233	627.7	0.2230	2.107	638.4	0.2205
25	0.000		0.2218	0.721	600.4	0.2218	1.215	605.0	0.2192

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.149	630.8	0.7396	3.952	646.3	0.7396	5.533	663.4	0.7396
2	11.679	861.6	0.7396	14.602	926.9	0.7396	19.824	961.9	0.7396
3	16.025	932.9	0.7313	19.859	996.0	0.7295	26.150	989.4	0.7275
4	18.334	1005.4	0.6919	22.653	1071.1	0.6884	29.158	1008.7	0.6855
5	19.256	1046.6	0.6401	23.796	1107.3	0.6353	30.228	1001.9	0.6329
6	19.580	1071.5	0.5844	24.180	1120.7	0.5789	30.622	994.0	0.5780
7	19.641	1088.5	0.5314	24.288	1125.3	0.5257	30.605	991.8	0.5267
8	19.739	1104.1	0.4846	24.417	1130.6	0.4788	30.779	995.8	0.4815
9	20.266	1125.1	0.4440	25.039	1148.9	0.4383	31.550	1009.3	0.4422
10	20.188	1127.7	0.4090	24.897	1153.1	0.4035	31.632	1020.6	0.4082
11	19.913	1120.1	0.3791	24.754	1158.7	0.3737	31.543	1034.9	0.3789
12	19.516	1105.6	0.3535	24.403	1166.8	0.3481	31.368	1051.5	0.3535
13	19.054	1086.9	0.3315	23.979	1173.5	0.3259	31.138	1070.1	0.3312
14	18.542	1065.4	0.3125	23.459	1172.0	0.3067	30.829	1090.8	0.3118
15	17.962	1040.3	0.2980	22.791	1156.6	0.2900	30.383	1112.9	0.2947
16	17.275	1010.0	0.2815	21.942	1128.7	0.2754	29.747	1134.7	0.2795
17	16.403	972.6	0.2690	20.845	1091.1	0.2626	28.823	1152.6	0.2661
18	15.136	930.1	0.2581	19.312	1048.3	0.2516	27.396	1163.8	0.2541
19	14.114	890.5	0.2487	17.998	1003.4	0.2422	26.027	1158.0	0.2436
20	13.095	854.2	0.2406	16.675	958.9	0.2341	24.458	1132.4	0.2342
21	11.935	815.6	0.2335	15.131	905.7	0.2271	22.319	1072.9	0.2260
22	10.142	768.9	0.2275	12.887	847.2	0.2211	19.230	994.1	0.2190
23	8.041	718.4	0.2228	10.233	780.8	0.2163	15.399	894.5	0.2133
24	3.244	623.4	0.2197	4.158	646.7	0.2131	6.389	689.1	0.2096
25	1.856	596.7	0.2185	2.380	610.1	0.2119	3.650	632.5	0.2081

Table 4-55. LS1 Burnup and TH Feedback Parameters Assembly D3 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	6.545	598.9	0.7396
2	19.865	700.7	0.7396
3	26.202	716.6	0.7276
4	29.217	739.8	0.6857
5	30.292	763.8	0.6331
6	30.592	777.8	0.5784
7	30.680	795.8	0.5271
8	30.659	814.1	0.4820
9	31.634	829.1	0.4428
10	31.719	840.6	0.4088
11	31.634	858.1	0.3794
12	31.472	908.6	0.3540
13	31.281	1088.2	0.3320
14	30.983	1145.4	0.3125
15	30.635	1134.8	0.2953
16	29.895	1113.8	0.2801
17	28.984	1078.1	0.2665
18	27.530	1043.6	0.2545
19	26.163	1005.6	0.2439
20	24.575	964.7	0.2345
21	22.424	912.8	0.2263
22	19.321	858.1	0.2192
23	15.472	788.5	0.2136
24	8.420	651.0	0.2099
25	3.667	610.3	0.2084

Table 4-57. LS1 Burnup and TH Feedback Parameters Assembly D4

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.592	659.9	0.7396	2.627	688.8	0.7396
2	0.000		0.7396	5.768	993.4	0.7396	10.197	1143.6	0.7396
3	0.000		0.7170	7.670	1091.0	0.7170	13.403	1266.0	0.7078
4	0.000	Data	0.6611	8.467	1169.6	0.6611	14.514	1323.9	0.6439
5	0.000	Not	0.5950	8.517	1174.7	0.5950	14.432	1299.3	0.5733
6	0.000	Required	0.5328	8.313	1163.9	0.5328	14.022	1261.7	0.5104
7	0.000		0.4804	8.106	1133.3	0.4804	13.644	1231.3	0.4591
8	0.000		0.4376	8.000	1122.8	0.4376	13.427	1211.9	0.4177
9	0.000		0.4012	8.196	1142.2	0.4012	13.655	1217.6	0.3829
10	0.000		0.3702	8.102	1132.9	0.3702	13.501	1207.1	0.3532
11	0.000		0.3438	7.942	1117.2	0.3438	13.278	1196.3	0.3278
12	0.000		0.3214	7.755	1099.1	0.3214	13.030	1185.9	0.3061
13	0.000		0.3021	7.557	1080.3	0.3021	12.771	1176.6	0.2873
14	0.000		0.2853	7.352	1061.2	0.2853	12.503	1165.1	0.2709
15	0.000		0.2706	7.141	1041.9	0.2706	12.221	1153.3	0.2564
16	0.000		0.2576	6.920	1022.1	0.2576	11.913	1139.1	0.2436
17	0.000		0.2462	6.676	1000.7	0.2462	11.542	1118.6	0.2323
18	0.000		0.2362	6.258	965.2	0.2362	10.890	1081.9	0.2223
19	0.000		0.2274	6.053	948.3	0.2274	10.469	1049.2	0.2137
20	0.000		0.2195	5.825	929.6	0.2195	9.976	1010.5	0.2061
21	0.000		0.2123	5.492	903.6	0.2123	9.288	961.0	0.1995
22	0.000		0.2062	4.750	847.6	0.2062	7.987	888.3	0.1937
23	0.000		0.2012	3.825	783.5	0.2012	6.397	809.3	0.1892
24	0.000		0.1979	1.512	643.0	0.1979	2.578	655.9	0.1858
25	0.000		0.1967	0.887	608.2	0.1967	1.501	615.4	0.1847

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.928	628.9	0.7396	4.431	613.1	0.7396	5.158	606.1	0.7396
2	14.209	843.3	0.7396	15.957	760.7	0.7396	18.341	721.2	0.7396
3	18.581	885.4	0.7163	20.808	784.9	0.7198	23.708	731.3	0.7236
4	20.307	934.2	0.6626	22.615	818.1	0.6703	25.951	746.8	0.6790
5	20.593	964.8	0.6020	23.299	842.3	0.6145	26.603	758.0	0.6287
6	20.426	985.6	0.5456	23.283	861.3	0.5619	26.765	770.1	0.5815
7	20.206	999.4	0.4965	23.175	875.7	0.5155	26.850	783.4	0.5394
8	20.108	1009.9	0.4544	23.156	886.0	0.4744	27.031	797.4	0.5020
9	20.508	1025.3	0.4174	23.639	897.0	0.4375	27.756	814.7	0.4674
10	20.417	1031.0	0.3857	23.577	900.9	0.4054	27.885	828.7	0.4369
11	20.208	1032.2	0.3585	23.385	903.1	0.3777	27.878	842.4	0.4101
12	19.921	1028.7	0.3350	23.110	904.8	0.3536	27.786	856.3	0.3864
13	19.576	1020.9	0.3146	22.779	906.6	0.3326	27.634	870.0	0.3653
14	19.181	1009.6	0.2966	22.398	908.5	0.3142	27.431	884.0	0.3466
15	18.729	994.6	0.2807	21.956	909.9	0.2979	27.163	897.8	0.3299
16	18.208	976.2	0.2666	21.431	909.3	0.2834	26.802	911.1	0.3149
17	17.577	954.2	0.2542	20.776	906.1	0.2706	26.288	922.6	0.3015
18	16.621	929.2	0.2435	19.778	900.6	0.2596	25.399	931.7	0.2901
19	15.848	901.1	0.2339	18.928	890.2	0.2495	24.560	932.6	0.2791
20	14.948	869.7	0.2253	17.912	875.1	0.2405	23.431	923.2	0.2689
21	13.719	829.8	0.2176	16.458	846.4	0.2323	21.620	894.2	0.2594
22	11.729	781.7	0.2113	14.149	807.5	0.2259	18.773	852.3	0.2522
23	9.282	725.8	0.2061	11.221	752.3	0.2204	14.983	789.4	0.2450
24	3.716	623.5	0.2026	4.491	633.4	0.2166	6.035	648.2	0.2421
25	2.109	595.0	0.2004	2.517	599.6	0.2136	3.326	606.8	0.2379

Table 4-57. LS1 Burnup and TH Feedback Parameters Assembly D4 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.170	598.9	0.7396
2	18.384	708.2	0.7396
3	23.765	733.1	0.7238
4	26.018	767.3	0.6792
5	26.680	803.0	0.629
6	26.849	829.1	0.5818
7	26.941	856.1	0.5399
8	27.126	879.9	0.5025
9	27.858	900.3	0.4679
10	27.988	904.5	0.4373
11	27.982	908.6	0.4105
12	27.889	904.5	0.3868
13	27.739	912.8	0.3657
14	27.547	960.2	0.3470
15	27.320	1161.6	0.3303
16	26.969	1217.1	0.3153
17	26.450	1189.0	0.3018
18	25.554	1150.8	0.2903
19	24.705	1098.4	0.2792
20	23.566	1048.5	0.2690
21	21.741	982.6	0.2595
22	18.879	917.0	0.2523
23	15.069	836.7	0.2460
24	6.073	672.2	0.2421
25	3.347	621.7	0.2379

Table 4-58. LS1 Burnup and TH Feedback Parameters Assembly D5

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.139	630.3	0.7396	2.015	649.3	0.7396
2	0.000		0.7396	4.243	857.4	0.7396	7.434	842.2	0.7396
3	0.000		0.7341	5.862	932.6	0.7341	10.228	1041.7	0.7301
4	0.000	Data	0.6977	6.835	1014.6	0.6977	11.683	1115.7	0.6893
5	0.000	Not	0.6480	7.300	1056.4	0.6480	12.149	1115.9	0.6361
6	0.000	Required	0.5927	7.498	1074.6	0.5927	12.191	1091.4	0.5800
7	0.000		0.5389	7.561	1080.7	0.5389	12.096	1067.1	0.5276
8	0.000		0.4909	7.602	1084.5	0.4909	12.033	1051.4	0.4818
9	0.000		0.4493	7.681	1111.2	0.4493	12.348	1056.8	0.4423
10	0.000		0.4135	7.640	1107.3	0.4135	12.245	1047.5	0.4084
11	0.000		0.3831	7.705	1094.3	0.3831	12.047	1038.2	0.3795
12	0.000		0.3571	7.614	1076.3	0.3571	11.798	1029.7	0.3545
13	0.000		0.3350	7.297	1056.1	0.3350	11.529	1022.1	0.3331
14	0.000		0.3159	7.062	1034.8	0.3159	11.244	1014.9	0.3144
15	0.000		0.2993	6.808	1012.2	0.2993	10.935	1007.0	0.2981
16	0.000		0.2849	6.526	987.8	0.2849	10.584	997.2	0.2838
17	0.000		0.2723	6.187	959.3	0.2723	10.139	982.4	0.2712
18	0.000		0.2616	5.640	915.2	0.2616	9.384	954.0	0.2602
19	0.000		0.2524	5.288	887.9	0.2524	8.861	931.2	0.2507
20	0.000		0.2443	4.947	862.3	0.2443	8.322	905.7	0.2424
21	0.000		0.2372	4.576	835.4	0.2372	7.697	873.9	0.2351
22	0.000		0.2312	3.908	789.0	0.2312	6.584	821.2	0.2289
23	0.000		0.2264	3.133	738.6	0.2264	5.269	761.6	0.2239
24	0.000		0.2233	1.232	627.7	0.2233	2.105	638.3	0.2207
25	0.000		0.2221	0.720	600.4	0.2221	1.214	605.0	0.2195

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.142	630.6	0.7396	3.944	646.2	0.7396	5.524	663.3	0.7396
2	11.654	860.7	0.7396	14.572	926.1	0.7396	19.792	961.7	0.7396
3	16.995	932.1	0.7314	19.822	994.9	0.7295	26.113	989.4	0.7276
4	18.303	1004.5	0.6921	22.616	1070.1	0.6886	29.120	1008.6	0.6857
5	19.227	1045.8	0.6405	23.761	1106.3	0.6357	30.191	1001.9	0.6332
6	19.533	1070.5	0.5849	24.148	1119.9	0.5794	30.489	993.9	0.5784
7	19.616	1087.4	0.5319	24.259	1124.6	0.5261	30.573	991.5	0.5271
8	19.716	1103.2	0.4850	24.390	1129.9	0.4792	30.748	995.4	0.4818
9	20.244	1124.2	0.4444	25.013	1146.2	0.4388	31.519	1008.8	0.4426
10	20.168	1126.9	0.4094	24.972	1152.2	0.4039	31.602	1020.1	0.4086
11	19.893	1119.3	0.3795	24.731	1158.2	0.3741	31.514	1034.3	0.3792
12	19.497	1104.8	0.3538	24.381	1166.2	0.3484	31.340	1050.9	0.3537
13	19.036	1086.2	0.3319	23.958	1172.9	0.3263	31.111	1069.5	0.3316
14	18.525	1064.7	0.3128	23.438	1171.3	0.3070	30.802	1090.2	0.3121
15	17.948	1039.6	0.2963	22.771	1165.9	0.2903	30.357	1112.3	0.2950
16	17.259	1009.3	0.2819	21.923	1128.2	0.2756	29.721	1133.9	0.2798
17	16.388	972.3	0.2692	20.826	1090.4	0.2629	28.798	1152.0	0.2664
18	15.122	929.7	0.2583	19.294	1047.7	0.2519	27.371	1163.1	0.2543
19	14.101	890.2	0.2490	17.981	1002.6	0.2425	26.003	1157.3	0.2438
20	13.083	853.9	0.2406	16.659	958.3	0.2343	24.435	1131.7	0.2344
21	11.924	815.2	0.2338	15.116	905.2	0.2273	22.298	1072.3	0.2262
22	10.132	768.6	0.2278	12.675	846.9	0.2213	19.212	993.6	0.2192
23	8.033	718.2	0.2230	10.223	780.6	0.2165	15.384	894.1	0.2136
24	3.240	623.3	0.2200	4.154	646.7	0.2133	6.383	689.0	0.2098
25	1.854	598.7	0.2187	2.377	610.0	0.2121	3.648	632.5	0.2083

Table 4-58. LS1 Burnup and TH Feedback Parameters Assembly D5 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm³) 3.67 Cy 8
1	6.636	698.9	0.7396
2	19.833	700.7	0.7396
3	26.165	716.6	0.7276
4	29.179	739.8	0.6858
5	30.256	760.3	0.6334
6	30.659	777.6	0.5787
7	30.648	795.8	0.5275
8	30.627	810.4	0.4823
9	31.604	832.9	0.4431
10	31.690	844.4	0.4092
11	31.606	860.0	0.3798
12	31.444	908.6	0.3543
13	31.253	1083.1	0.3323
14	30.956	1145.4	0.3128
15	30.609	1134.8	0.2955
16	29.869	1113.8	0.2803
17	28.938	1073.1	0.2668
18	27.504	1038.8	0.2548
19	26.129	1005.6	0.2441
20	24.652	964.7	0.2347
21	22.403	912.6	0.2265
22	19.302	852.2	0.2195
23	15.456	784.9	0.2138
24	6.414	651.0	0.2101
25	3.663	610.3	0.2085

Table 4-59. LS1 Burnup and TH Feedback Parameters Assembly D6

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.424	648.8	0.7396	2.424	662.6	0.7396
2	0.000		0.7396	5.268	948.8	0.7396	8.936	1015.5	0.7396
3	0.000		0.7231	7.208	1048.0	0.7231	12.184	1138.3	0.7195
4	0.000	Data	0.6722	8.228	1145.4	0.6722	13.661	1213.0	0.6654
5	0.000	Not	0.6076	8.524	1175.4	0.6076	13.910	1204.8	0.5992
6	0.000	Required	0.5434	8.497	1172.6	0.5434	13.693	1172.6	0.5355
7	0.000		0.4880	8.390	1161.7	0.4880	13.407	1143.0	0.4815
8	0.000		0.4423	8.327	1155.4	0.4423	13.216	1122.3	0.4375
9	0.000		0.4040	8.544	1177.5	0.4040	13.439	1123.2	0.4006
10	0.000		0.3713	8.435	1166.3	0.3713	13.253	1111.0	0.3691
11	0.000		0.3438	8.243	1146.9	0.3438	12.986	1099.2	0.3425
12	0.000		0.3206	8.013	1124.1	0.3206	12.686	1088.2	0.3199
13	0.000		0.3008	7.763	1099.9	0.3008	12.371	1078.2	0.3005
14	0.000		0.2838	7.499	1074.9	0.2838	12.045	1068.8	0.2836
15	0.000		0.2690	7.219	1049.0	0.2690	11.697	1058.5	0.2688
16	0.000		0.2562	6.908	1021.1	0.2562	11.304	1046.2	0.2559
17	0.000		0.2449	6.530	988.2	0.2449	10.808	1028.8	0.2444
18	0.000		0.2353	5.937	938.8	0.2353	9.989	996.4	0.2345
19	0.000		0.2271	5.543	907.6	0.2271	9.400	969.3	0.2259
20	0.000		0.2199	5.167	876.7	0.2199	8.794	938.3	0.2183
21	0.000		0.2136	4.763	848.8	0.2136	8.095	900.2	0.2117
22	0.000		0.2082	4.055	799.0	0.2082	6.895	840.2	0.2062
23	0.000		0.2040	3.242	745.5	0.2040	5.493	773.9	0.2017
24	0.000		0.2012	1.276	630.0	0.2012	2.197	642.7	0.1989
25	0.000		0.2001	0.761	602.0	0.2001	1.276	607.7	0.1978

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.656	637.4	0.7396	4.234	621.3	0.7396	5.177	620.2	0.7396
2	13.521	892.2	0.7396	15.683	802.2	0.7396	18.711	776.5	0.7396
3	18.180	951.0	0.7234	20.845	837.2	0.7257	24.857	792.9	0.7288
4	20.336	1009.3	0.6743	23.343	880.7	0.6801	27.427	812.3	0.6873
5	20.911	1038.7	0.6135	24.126	908.3	0.6234	28.373	824.2	0.6355
6	20.860	1054.0	0.5534	24.206	926.1	0.5665	28.619	838.4	0.5834
7	20.671	1063.1	0.5003	24.092	936.5	0.5153	28.684	849.8	0.5381
8	20.578	1072.3	0.4556	24.037	941.8	0.4710	28.609	863.6	0.4943
9	21.014	1092.7	0.4174	24.524	949.0	0.4324	29.513	880.5	0.4570
10	20.948	1104.4	0.3848	24.453	948.3	0.3992	29.599	892.9	0.4244
11	20.734	1109.6	0.3567	24.222	945.8	0.3708	29.622	905.3	0.3961
12	20.400	1106.2	0.3327	23.876	944.2	0.3464	29.334	918.2	0.3716
13	19.992	1097.2	0.3121	23.463	943.5	0.3254	29.083	931.6	0.3502
14	19.517	1082.8	0.2941	22.991	943.9	0.3071	28.777	945.6	0.3315
15	18.966	1063.6	0.2784	22.440	943.9	0.2911	28.391	959.7	0.3149
16	18.316	1039.7	0.2646	21.776	941.9	0.2770	27.884	973.3	0.3002
17	17.503	1011.1	0.2525	20.924	936.5	0.2647	27.167	985.2	0.2872
18	16.309	978.3	0.2421	19.672	928.4	0.2541	26.017	994.3	0.2761
19	15.299	942.8	0.2329	18.575	916.5	0.2446	24.909	993.3	0.2657
20	14.223	905.0	0.2249	17.390	901.8	0.2363	23.568	979.4	0.2562
21	12.814	858.2	0.2178	15.864	873.3	0.2289	21.604	941.7	0.2474
22	10.927	801.5	0.2120	13.545	831.4	0.2229	18.646	889.3	0.2406
23	8.589	739.2	0.2074	10.685	769.9	0.2179	14.823	816.2	0.2349
24	3.428	628.6	0.2045	4.271	639.9	0.2148	5.986	658.2	0.2316
25	1.947	598.3	0.2031	2.399	603.5	0.2129	3.321	613.0	0.2289

Table 4-59. LS1 Burnup and TH Feedback Parameters Assembly D6 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	5.195	619.0	0.7396
2	18.771	774.8	0.7396
3	24.731	792.1	0.7289
4	27.509	821.6	0.6874
5	28.460	840.6	0.6358
6	28.711	860.0	0.5837
7	28.781	879.9	0.5364
8	28.910	896.2	0.4947
9	29.617	908.6	0.4574
10	29.705	917.0	0.4248
11	29.628	917.0	0.3965
12	29.439	912.8	0.3720
13	29.188	912.8	0.3505
14	28.879	900.3	0.3317
15	28.491	892.1	0.3151
16	27.981	879.9	0.3005
17	27.260	863.9	0.2874
18	26.106	848.3	0.2763
19	24.994	832.9	0.2659
20	23.647	810.4	0.2564
21	21.676	784.9	0.2477
22	18.709	753.4	0.2408
23	14.673	710.1	0.2351
24	6.006	618.9	0.2318
25	3.332	593.4	0.2291

Table 4-60. LS1 Burnup and TH Feedback Parameters Assembly D7

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.763	671.3	0.7396	2.924	680.6	0.7396
2	0.000		0.7396	6.413	1056.7	0.7396	10.624	1105.6	0.7396
3	0.000		0.7073	8.584	1181.6	0.7073	14.065	1221.3	0.7051
4	0.000	Data	0.6395	9.602	1280.2	0.6395	15.344	1285.9	0.6381
5	0.000	Not	0.5633	9.573	1288.1	0.5633	15.356	1275.1	0.5599
6	0.000	Required	0.4960	9.368	1265.3	0.4960	15.000	1247.9	0.4934
7	0.000		0.4428	9.149	1241.4	0.4428	14.641	1223.2	0.4409
8	0.000		0.4005	9.008	1226.2	0.4005	14.395	1205.0	0.3991
9	0.000		0.3651	9.178	1244.5	0.3651	14.571	1206.0	0.3644
10	0.000		0.3353	9.031	1228.6	0.3353	14.357	1194.6	0.3350
11	0.000		0.3104	8.827	1206.9	0.3104	14.089	1183.7	0.3103
12	0.000		0.2892	8.595	1182.7	0.2892	13.798	1173.7	0.2893
13	0.000		0.2711	8.348	1157.5	0.2711	13.495	1164.4	0.2712
14	0.000		0.2555	8.086	1131.3	0.2555	13.179	1155.4	0.2555
15	0.000		0.2420	7.804	1103.6	0.2420	12.839	1145.9	0.2417
16	0.000		0.2301	7.488	1073.8	0.2301	12.456	1135.0	0.2296
17	0.000		0.2197	7.106	1038.6	0.2197	11.975	1119.1	0.2188
18	0.000		0.2108	6.501	985.7	0.2108	11.167	1087.2	0.2093
19	0.000		0.2031	6.093	951.6	0.2031	10.559	1056.7	0.2012
20	0.000		0.1964	5.692	919.3	0.1964	9.895	1017.9	0.1940
21	0.000		0.1906	5.249	884.9	0.1906	9.092	967.4	0.1878
22	0.000		0.1856	4.479	828.5	0.1856	7.750	892.5	0.1825
23	0.000		0.1816	3.594	768.2	0.1816	6.190	812.1	0.1783
24	0.000		0.1790	1.428	638.4	0.1790	2.503	656.7	0.1756
25	0.000		0.1780	0.850	607.2	0.1780	1.470	615.9	0.1745

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.410	654.3	0.7396	4.849	606.2	0.7396	5.756	617.8	0.7396
2	15.953	959.7	0.7396	17.472	731.5	0.7396	20.413	763.7	0.7396
3	20.903	1023.9	0.7106	22.869	755.3	0.7133	26.491	779.7	0.7177
4	22.903	1091.2	0.6483	25.140	786.0	0.6547	29.088	802.6	0.6649
5	23.222	1121.2	0.5777	25.654	808.9	0.5888	29.839	819.7	0.6052
6	22.966	1131.2	0.5136	25.549	827.2	0.5290	29.960	836.3	0.5509
7	22.611	1131.6	0.4610	25.314	841.9	0.4796	29.952	853.4	0.5054
8	22.335	1128.6	0.4183	25.146	855.5	0.4392	30.008	870.6	0.4674
9	22.537	1131.2	0.3824	25.474	871.6	0.4047	30.600	891.3	0.4338
10	22.218	1120.7	0.3521	25.244	883.2	0.3753	30.565	907.0	0.4049
11	21.791	1105.1	0.3284	24.926	897.5	0.3504	30.417	920.9	0.3796
12	21.303	1086.0	0.3045	24.735	938.0	0.3305	30.359	931.9	0.3585
13	20.771	1064.2	0.2855	25.067	1067.4	0.3174	30.749	936.8	0.3424
14	20.196	1040.2	0.2692	24.770	1113.0	0.2999	30.593	948.7	0.3241
15	19.563	1013.7	0.2548	24.110	1108.5	0.2824	30.112	964.1	0.3066
16	18.842	984.0	0.2422	23.255	1086.3	0.2668	29.434	979.5	0.2911
17	17.970	950.9	0.2311	22.188	1055.0	0.2533	28.512	992.4	0.2775
18	16.736	916.1	0.2215	20.730	1020.1	0.2420	27.142	1000.3	0.2661
19	15.678	880.9	0.2131	19.412	981.2	0.2318	25.784	996.7	0.2555
20	14.651	846.1	0.2057	18.001	940.5	0.2231	24.178	979.4	0.2460
21	13.193	806.4	0.1991	16.261	888.7	0.2153	21.866	938.7	0.2371
22	11.182	761.0	0.1938	13.803	831.6	0.2093	18.837	884.0	0.2304
23	8.832	710.7	0.1894	10.685	765.0	0.2041	14.940	810.2	0.2245
24	3.566	619.4	0.1866	4.388	637.9	0.2010	6.070	656.3	0.2212
25	2.057	593.9	0.1854	2.496	602.4	0.1986	3.399	612.0	0.2180

Table 4-60. LS1 Burnup and TH Feedback Parameters Assembly D7 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.771	608.9	0.7396
2	20.459	719.6	0.7396
3	26.648	733.1	0.7179
4	29.161	753.4	0.665
5	29.908	774.3	0.6055
6	30.035	795.8	0.5513
7	30.032	814.1	0.5060
8	30.091	825.3	0.4679
9	30.687	840.6	0.4345
10	30.655	852.2	0.4054
11	30.508	856.1	0.3801
12	30.449	852.2	0.3590
13	30.637	844.4	0.3429
14	30.680	840.6	0.3248
15	30.196	829.1	0.3071
16	29.516	821.6	0.2915
17	28.591	810.4	0.2780
18	27.220	806.7	0.2666
19	25.858	792.1	0.2559
20	24.249	781.4	0.2463
21	22.030	756.8	0.2375
22	18.894	733.1	0.2307
23	14.985	694.1	0.2249
24	6.088	613.1	0.2216
25	3.409	590.6	0.2183

Table 4-61. LS1 Burnup and TH Feedback Parameters Assembly D8

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.476	652.2	0.7396	2.424	657.1	0.7396
2	0.000		0.7396	6.425	961.2	0.7396	8.888	983.4	0.7396
3	0.000		0.7225	7.329	1059.1	0.7225	12.012	1089.8	0.7212
4	0.000	Data	0.6717	8.235	1146.1	0.6717	13.362	1161.1	0.6694
5	0.000	Not	0.6080	8.401	1162.6	0.6080	13.520	1159.7	0.6054
6	0.000	Required	0.5453	8.269	1149.5	0.5453	13.241	1135.7	0.5432
7	0.000		0.4913	8.090	1131.7	0.4913	12.914	1111.9	0.4899
8	0.000		0.4469	7.984	1121.3	0.4469	12.703	1095.4	0.4463
9	0.000		0.4096	8.162	1138.8	0.4096	12.909	1099.8	0.4097
10	0.000		0.3778	8.040	1126.8	0.3778	12.722	1089.6	0.3784
11	0.000		0.3509	7.850	1108.2	0.3509	12.460	1078.5	0.3518
12	0.000		0.3280	7.631	1087.3	0.3280	12.173	1068.1	0.3292
13	0.000		0.3085	7.399	1065.5	0.3085	11.876	1058.3	0.3097
14	0.000		0.2915	7.158	1043.5	0.2915	11.569	1048.4	0.2927
15	0.000		0.2768	6.901	1020.4	0.2768	11.244	1038.4	0.2778
16	0.000		0.2640	6.617	995.6	0.2640	10.878	1028.3	0.2647
17	0.000		0.2526	6.273	968.5	0.2526	10.417	1009.5	0.2531
18	0.000		0.2429	5.720	921.5	0.2429	9.643	978.4	0.2430
19	0.000		0.2346	5.356	893.1	0.2346	9.094	953.1	0.2342
20	0.000		0.2273	5.002	866.4	0.2273	8.523	924.4	0.2265
21	0.000		0.2208	4.619	838.4	0.2208	7.860	888.8	0.2197
22	0.000		0.2153	3.941	791.3	0.2153	6.708	831.7	0.2139
23	0.000		0.2110	3.153	739.8	0.2110	5.349	768.0	0.2094
24	0.000		0.2081	1.234	627.8	0.2081	2.128	640.2	0.2065
25	0.000		0.2071	0.724	600.6	0.2071	1.231	606.1	0.2053

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.574	632.1	0.7396	4.383	647.0	0.7396	5.997	665.7	0.7396
2	13.187	857.5	0.7396	16.068	920.4	0.7396	21.267	959.7	0.7396
3	17.764	930.9	0.7253	21.508	982.7	0.7248	27.729	983.2	0.7240
4	19.942	1000.9	0.6787	24.161	1055.1	0.6782	30.598	1002.5	0.6777
5	20.584	1044.5	0.6203	25.046	1094.4	0.6200	31.443	998.9	0.6209
6	20.600	1072.1	0.5612	25.176	1113.1	0.5609	31.510	993.4	0.5638
7	20.469	1090.8	0.5081	25.096	1121.9	0.5076	31.420	992.4	0.5124
8	20.420	1106.5	0.4627	25.095	1130.0	0.4619	31.467	996.7	0.4681
9	20.833	1127.0	0.4238	25.610	1147.6	0.4228	32.130	1010.1	0.4298
10	20.671	1129.5	0.3906	25.492	1155.2	0.3893	32.137	1021.5	0.3970
11	20.333	1121.9	0.3623	25.193	1162.0	0.3607	31.996	1036.2	0.3687
12	19.892	1106.7	0.3380	24.801	1170.6	0.3362	31.786	1053.4	0.3442
13	19.387	1086.6	0.3173	24.335	1177.5	0.3150	31.523	1072.9	0.3229
14	18.829	1062.7	0.2993	23.766	1176.6	0.2966	31.177	1094.8	0.3041
15	18.203	1034.9	0.2838	23.046	1159.0	0.2805	30.693	1116.5	0.2876
16	17.476	1002.5	0.2699	22.150	1129.9	0.2664	30.022	1141.6	0.2729
17	16.580	965.0	0.2578	21.020	1090.7	0.2542	29.069	1160.1	0.2599
18	15.302	923.3	0.2475	19.471	1047.2	0.2436	27.623	1171.0	0.2484
19	14.259	884.4	0.2385	18.127	1001.0	0.2344	26.213	1164.0	0.2381
20	13.212	848.6	0.2306	16.761	954.5	0.2266	24.584	1136.5	0.2289
21	12.016	810.2	0.2238	15.164	899.3	0.2197	22.373	1075.0	0.2209
22	10.193	764.5	0.2181	12.677	839.6	0.2139	19.228	994.8	0.2141
23	8.057	714.8	0.2134	10.183	773.3	0.2093	15.349	894.5	0.2086
24	3.235	621.8	0.2107	4.116	643.5	0.2065	6.344	689.0	0.2052
25	1.850	595.6	0.2094	2.350	607.9	0.2052	3.613	632.1	0.2036

Table 4-61. LS1 Burnup and TH Feedback Parameters Assembly D8 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	6.020	636.0	0.7396
2	21.339	825.0	0.7396
3	27.819	852.2	0.7241
4	30.700	900.3	0.6779
5	31.552	929.7	0.6211
6	31.625	955.8	0.5841
7	31.539	973.6	0.5126
8	31.589	987.2	0.4684
9	32.258	1015.0	0.4301
10	32.267	1024.4	0.3972
11	32.128	1034.0	0.3689
12	31.920	1043.6	0.3444
13	31.659	1053.3	0.3230
14	31.313	1053.3	0.3043
15	30.828	1048.5	0.2877
16	30.152	1024.4	0.2731
17	29.194	1001.0	0.2600
18	27.741	969.1	0.2485
19	26.325	942.7	0.2382
20	24.688	908.6	0.2290
21	22.467	867.9	0.2210
22	19.309	817.8	0.2142
23	15.415	763.8	0.2087
24	6.374	648.0	0.2053
25	3.629	607.5	0.2037

Table 4-62. LS1 Burnup and TH Feedback Parameters Assembly D9

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.686	666.2	0.7396	2.728	667.4	0.7396
2	0.000		0.7396	6.136	1029.1	0.7396	9.933	1036.3	0.7396
3	0.000		0.7125	8.192	1141.8	0.7125	13.226	1145.8	0.7122
4	0.000	Data	0.6506	9.054	1231.1	0.6506	14.490	1213.5	0.6507
5	0.000	Not	0.5787	9.104	1236.5	0.5787	14.509	1208.1	0.5795
6	0.000	Required	0.5133	8.884	1213.0	0.5133	14.138	1182.3	0.5147
7	0.000		0.4603	8.665	1190.0	0.4603	13.772	1157.8	0.4620
8	0.000		0.4177	8.539	1177.0	0.4177	13.541	1140.5	0.4198
9	0.000		0.3819	8.725	1196.2	0.3819	13.745	1143.5	0.3843
10	0.000		0.3514	8.697	1182.9	0.3514	13.654	1133.2	0.3542
11	0.000		0.3258	8.399	1162.6	0.3258	13.292	1122.9	0.3286
12	0.000		0.3040	8.171	1139.7	0.3040	12.999	1112.6	0.3070
13	0.000		0.2855	7.928	1116.8	0.2855	12.695	1102.6	0.2883
14	0.000		0.2694	7.675	1091.5	0.2694	12.380	1093.2	0.2721
15	0.000		0.2555	7.407	1066.3	0.2555	12.050	1083.6	0.2579
16	0.000		0.2433	7.114	1039.5	0.2433	11.694	1073.8	0.2454
17	0.000		0.2327	6.765	1008.6	0.2327	11.268	1062.1	0.2344
18	0.000		0.2235	6.202	960.6	0.2235	10.530	1036.1	0.2247
19	0.000		0.2155	5.828	930.1	0.2155	9.992	1012.3	0.2162
20	0.000		0.2085	5.452	900.5	0.2085	9.384	979.6	0.2087
21	0.000		0.2024	5.033	868.7	0.2024	8.643	936.1	0.2021
22	0.000		0.1971	4.296	815.6	0.1971	7.373	868.6	0.1965
23	0.000		0.1930	3.442	758.3	0.1930	5.880	794.3	0.1922
24	0.000		0.1903	1.357	634.5	0.1903	2.356	649.7	0.1894
25	0.000		0.1892	0.801	604.6	0.1892	1.371	611.6	0.1882

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.041	642.8	0.7396	4.816	643.2	0.7396	6.290	656.0	0.7396
2	14.729	910.9	0.7396	17.461	897.8	0.7396	22.168	913.5	0.7396
3	19.580	981.3	0.7175	23.194	963.8	0.7193	28.888	936.1	0.7207
4	21.755	1063.2	0.6823	25.895	1042.7	0.6863	31.859	980.8	0.6700
5	22.279	1111.7	0.6965	26.694	1086.7	0.6023	32.756	969.3	0.6091
6	22.167	1137.5	0.5336	26.691	1104.6	0.5399	32.845	977.3	0.5497
7	21.933	1150.9	0.4797	26.483	1109.0	0.4857	32.761	988.3	0.4977
8	21.796	1160.6	0.4352	26.356	1110.6	0.4406	32.786	1001.9	0.4538
9	22.148	1175.9	0.3976	26.757	1118.9	0.4025	33.404	1021.7	0.4161
10	21.929	1173.0	0.3656	26.525	1116.7	0.3701	33.341	1037.4	0.3839
11	21.545	1160.4	0.3386	26.117	1112.6	0.3428	33.109	1054.1	0.3563
12	21.070	1141.8	0.3156	25.620	1109.0	0.3194	32.793	1071.5	0.3327
13	20.538	1119.0	0.2959	25.080	1107.6	0.2994	32.432	1089.0	0.3121
14	19.952	1092.4	0.2789	24.514	1111.0	0.2820	32.038	1106.1	0.2941
15	19.297	1061.5	0.2640	23.900	1117.8	0.2668	31.581	1122.0	0.2782
16	18.552	1025.7	0.2510	23.159	1118.5	0.2535	30.975	1135.8	0.2640
17	17.662	984.7	0.2396	22.173	1102.5	0.2417	30.091	1148.4	0.2515
18	16.415	941.8	0.2298	20.723	1069.3	0.2314	28.688	1151.3	0.2405
19	15.390	902.6	0.2213	19.420	1025.6	0.2224	27.280	1140.4	0.2306
20	14.327	867.5	0.2138	18.038	977.8	0.2146	25.609	1110.8	0.2217
21	13.054	828.3	0.2072	16.346	918.7	0.2078	23.294	1049.9	0.2138
22	11.104	780.9	0.2017	13.911	855.0	0.2022	20.007	972.2	0.2074
23	8.796	727.7	0.1973	11.017	784.2	0.1977	15.951	876.2	0.2022
24	3.560	627.1	0.1948	4.483	647.5	0.1950	6.613	683.0	0.1991
25	2.049	598.7	0.1935	2.570	609.8	0.1937	3.771	628.6	0.1975

Table 4-62. LS1 Burnup and TH Feedback Parameters Assembly D9 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	6.302	598.9	0.7396
2	22.206	689.6	0.7396
3	28.914	697.2	0.7208
4	31.909	710.1	0.6701
5	32.611	726.4	0.6093
6	32.906	746.6	0.650
7	32.828	767.2	0.4982
8	32.857	781.4	0.4544
9	33.480	799.4	0.4167
10	33.420	810.4	0.3845
11	33.191	821.6	0.3571
12	32.875	821.6	0.3334
13	32.514	821.6	0.3128
14	32.119	817.6	0.2948
15	31.661	814.1	0.2788
16	31.053	808.7	0.2646
17	30.167	799.4	0.2520
18	28.761	788.5	0.2410
19	27.351	781.4	0.2311
20	25.676	767.3	0.2222
21	23.356	750.0	0.2143
22	20.061	723.1	0.2079
23	15.995	690.9	0.2026
24	6.631	613.1	0.1996
25	3.780	587.9	0.1979

Table 4-63. LS1 Burnup and TH Feedback Parameters Assembly D10

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.372	645.4	0.7396	2.245	649.0	0.7396
2	0.000		0.7396	5.056	927.6	0.7396	8.242	941.5	0.7396
3	0.000		0.7273	6.835	1014.6	0.7273	11.175	1037.9	0.7265
4	0.000	Data	0.6826	7.671	1091.1	0.6826	12.484	1107.0	0.6810
5	0.000	Not	0.6253	7.808	1104.2	0.6253	12.613	1108.9	0.6234
6	0.000	Required	0.5671	7.656	1089.7	0.5671	12.330	1088.4	0.5652
7	0.000		0.5150	7.480	1071.2	0.5150	11.992	1066.6	0.5135
8	0.000		0.4712	7.340	1060.1	0.4712	11.777	1052.3	0.4700
9	0.000		0.4340	7.492	1074.2	0.4340	11.978	1059.7	0.4333
10	0.000		0.4022	7.378	1063.6	0.4022	11.603	1050.5	0.4017
11	0.000		0.3751	7.206	1047.8	0.3751	11.662	1040.3	0.3748
12	0.000		0.3521	7.022	1031.2	0.3521	11.309	1030.1	0.3517
13	0.000		0.3330	6.863	1017.1	0.3330	11.082	1020.2	0.3322
14	0.000		0.3165	6.663	999.6	0.3165	10.816	1010.7	0.3148
15	0.000		0.2998	6.437	980.3	0.2998	10.520	1000.6	0.2989
16	0.000		0.2860	6.185	959.1	0.2860	10.184	988.9	0.2850
17	0.000		0.2739	5.876	933.9	0.2739	9.768	972.7	0.2727
18	0.000		0.2634	5.368	894.0	0.2634	9.029	942.9	0.2619
19	0.000		0.2544	5.040	869.2	0.2544	8.627	920.0	0.2526
20	0.000		0.2465	4.721	845.8	0.2465	8.009	894.7	0.2444
21	0.000		0.2395	4.375	821.1	0.2395	7.413	863.6	0.2372
22	0.000		0.2336	3.746	776.2	0.2336	6.350	813.0	0.2311
23	0.000		0.2289	3.014	731.1	0.2289	5.095	755.8	0.2262
24	0.000		0.2258	1.186	625.2	0.2258	2.036	636.3	0.2230
25	0.000		0.2246	0.694	599.0	0.2246	1.175	603.9	0.2216

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.610	646.2	0.7396	4.400	644.8	0.7396	5.868	655.6	0.7396
2	13.318	936.2	0.7396	16.147	912.5	0.7396	20.907	918.4	0.7396
3	17.912	1014.9	0.7250	21.627	978.4	0.7253	27.360	941.1	0.7257
4	20.050	1093.8	0.6782	24.278	1056.5	0.6789	30.274	963.6	0.6807
5	20.622	1135.5	0.6190	25.118	1100.0	0.6200	31.168	968.2	0.6242
6	20.567	1158.7	0.5590	25.180	1119.5	0.5600	31.277	972.3	0.5666
7	20.378	1174.1	0.5055	25.033	1126.6	0.5059	31.216	979.9	0.5147
8	20.289	1187.3	0.4604	24.968	1130.7	0.4602	31.273	990.7	0.4701
9	20.676	1207.1	0.4222	25.422	1142.2	0.4216	31.926	1006.6	0.4320
10	20.503	1207.3	0.3894	25.255	1143.2	0.3885	31.917	1023.1	0.3991
11	20.173	1197.8	0.3613	24.921	1142.5	0.3602	31.755	1039.1	0.3708
12	19.773	1182.3	0.3375	24.513	1141.2	0.3361	31.528	1056.2	0.3484
13	19.346	1161.5	0.3174	24.071	1138.6	0.3156	31.274	1074.4	0.3253
14	18.827	1135.7	0.2995	23.518	1132.8	0.2974	30.924	1094.3	0.3067
15	18.202	1103.1	0.2839	22.823	1120.9	0.2815	30.439	1115.4	0.2901
16	17.482	1064.4	0.2703	21.960	1100.3	0.2677	29.776	1135.8	0.2755
17	16.653	1020.0	0.2586	20.865	1070.0	0.2557	28.644	1152.7	0.2625
18	15.269	971.5	0.2482	19.346	1032.9	0.2451	27.426	1163.4	0.2510
19	14.228	926.7	0.2396	18.027	990.8	0.2362	26.051	1157.5	0.2408
20	13.180	884.9	0.2320	16.674	948.7	0.2285	24.449	1131.6	0.2317
21	11.984	839.9	0.2256	15.084	892.9	0.2220	22.260	1071.8	0.2238
22	10.167	766.6	0.2201	12.808	834.3	0.2164	19.140	993.1	0.2171
23	8.056	730.6	0.2157	10.144	769.0	0.2121	15.294	893.2	0.2117
24	3.246	627.4	0.2127	4.113	642.2	0.2090	6.327	688.1	0.2081
25	1.659	599.0	0.2117	2.351	607.2	0.2079	3.602	631.4	0.2067

Table 4-63. LS1 Burnup and TH Feedback Parameters Assembly D10 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.889	629.2	0.7396
2	20.973	799.5	0.7396
3	27.441	817.8	0.7258
4	30.363	848.3	0.6808
5	31.263	871.9	0.6244
6	31.376	888.0	0.5669
7	31.320	908.6	0.5150
8	31.381	925.5	0.4705
9	32.037	938.3	0.4324
10	32.029	942.7	0.3995
11	31.867	942.7	0.3712
12	31.639	938.3	0.3468
13	31.383	929.7	0.3257
14	31.030	917.0	0.3070
15	30.543	908.6	0.2904
16	29.877	896.2	0.2758
17	28.940	875.9	0.2628
18	27.619	863.9	0.2512
19	26.139	844.4	0.2410
20	24.631	821.6	0.2319
21	22.335	795.7	0.2240
22	19.205	760.3	0.2173
23	15.348	716.6	0.2119
24	6.349	624.6	0.2084
25	3.614	596.2	0.2069

Table 4-64. LS1 Burnup and TH Feedback Parameters Assembly D11

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.662	654.5	0.7396	2.755	673.0	0.7396
2	0.000		0.7396	6.083	1023.9	0.7396	10.081	1069.4	0.7396
3	0.000		0.7137	8.158	1138.4	0.7137	13.437	1186.6	0.7113
4	0.000	Data	0.6532	9.010	1226.4	0.6532	14.688	1252.6	0.6488
5	0.000	Not	0.5824	9.008	1228.2	0.5824	14.586	1238.3	0.5774
6	0.000	Required	0.5178	8.716	1195.5	0.5178	14.104	1204.8	0.5130
7	0.000		0.4653	8.438	1168.6	0.4653	13.645	1174.4	0.4611
8	0.000		0.4232	8.273	1149.9	0.4232	13.354	1153.5	0.4196
9	0.000		0.3878	8.432	1166.0	0.3878	13.524	1155.3	0.3848
10	0.000		0.3578	8.295	1152.1	0.3578	13.313	1143.1	0.3552
11	0.000		0.3324	8.094	1132.1	0.3324	13.034	1130.5	0.3301
12	0.000		0.3109	7.868	1110.0	0.3109	12.731	1118.1	0.3088
13	0.000		0.2924	7.633	1087.5	0.2924	12.421	1105.2	0.2904
14	0.000		0.2764	7.391	1064.8	0.2764	12.104	1094.5	0.2744
15	0.000		0.2624	7.134	1041.3	0.2624	11.768	1082.2	0.2602
16	0.000		0.2501	6.850	1015.9	0.2501	11.392	1068.1	0.2477
17	0.000		0.2394	6.504	985.9	0.2394	10.919	1049.0	0.2368
18	0.000		0.2300	5.945	939.5	0.2300	10.128	1015.0	0.2271
19	0.000		0.2220	5.579	910.4	0.2220	9.559	986.3	0.2187
20	0.000		0.2150	5.223	883.0	0.2150	8.962	953.3	0.2113
21	0.000		0.2088	4.831	853.8	0.2088	8.259	912.4	0.2049
22	0.000		0.2035	4.127	803.9	0.2035	7.044	849.3	0.1995
23	0.000		0.1993	3.306	749.6	0.1993	5.617	780.4	0.1952
24	0.000		0.1965	1.301	631.4	0.1965	2.246	644.8	0.1924
25	0.000		0.1955	0.767	602.8	0.1955	1.307	609.0	0.1913

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.942	634.5	0.7396	4.395	607.7	0.7396	4.971	596.3	0.7396
2	14.439	872.5	0.7396	16.022	739.6	0.7396	17.933	686.7	0.7396
3	19.062	920.6	0.7161	21.081	761.2	0.7212	23.423	696.0	0.7246
4	20.927	973.1	0.6644	23.214	791.8	0.6717	25.781	710.0	0.6795
5	21.189	1003.0	0.6021	23.691	817.3	0.6144	26.454	722.5	0.6277
6	20.892	1019.4	0.5437	23.587	841.0	0.5606	26.571	736.8	0.5796
7	20.507	1026.1	0.4936	23.366	861.6	0.5138	26.595	753.0	0.5382
8	20.215	1026.0	0.4513	23.208	878.8	0.4734	26.691	770.1	0.5023
9	20.411	1028.3	0.4146	23.539	896.6	0.4372	27.313	790.3	0.4695
10	20.113	1020.5	0.3833	23.323	907.6	0.4058	27.335	807.2	0.4409
11	19.714	1009.8	0.3568	22.996	917.3	0.3789	27.226	822.9	0.4157
12	19.262	996.6	0.3341	22.612	926.6	0.3556	27.045	837.9	0.3933
13	18.778	981.5	0.3144	22.188	935.0	0.3353	26.811	852.2	0.3732
14	18.263	964.6	0.2971	21.709	940.0	0.3173	26.514	866.2	0.3551
15	17.704	946.0	0.2820	21.153	940.4	0.3014	26.132	879.7	0.3388
16	17.074	925.2	0.2687	20.489	935.6	0.2872	25.631	892.6	0.3242
17	16.311	902.1	0.2569	19.657	926.1	0.2747	24.937	903.7	0.3113
18	15.186	876.2	0.2470	18.435	912.8	0.2642	23.817	912.0	0.3006
19	14.244	848.3	0.2380	17.349	893.6	0.2544	22.733	912.1	0.2900
20	13.229	818.0	0.2299	16.139	868.1	0.2457	21.397	901.8	0.2803
21	12.006	782.0	0.2227	14.619	830.8	0.2377	19.509	872.7	0.2709
22	10.139	739.1	0.2168	12.376	785.9	0.2313	16.714	831.0	0.2639
23	7.963	692.7	0.2119	9.702	730.4	0.2259	13.189	770.4	0.2576
24	3.167	611.7	0.2088	3.847	624.5	0.2225	5.231	639.0	0.2534
25	1.801	588.9	0.2068	2.159	595.0	0.2196	2.872	601.5	0.2486

Table 4-64. LS1 Burnup and TH Feedback Parameters Assembly D11 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.884	602.2	0.7396
2	17.977	712.0	0.7396
3	23.480	733.1	0.7246
4	25.647	763.6	0.6796
5	26.526	784.9	0.628
6	26.648	803.0	0.58
7	26.676	817.8	0.5387
8	26.776	832.9	0.5028
9	27.402	848.3	0.4700
10	27.427	860.0	0.4414
11	27.321	871.9	0.4161
12	27.162	921.2	0.3937
13	26.959	1113.8	0.3737
14	26.673	1172.5	0.3555
15	26.290	1167.0	0.3391
16	25.782	1129.5	0.3244
17	25.081	1093.3	0.3114
18	23.954	1058.3	0.3007
19	22.881	1015.0	0.2902
20	21.517	978.1	0.2803
21	19.615	917.0	0.2710
22	16.807	863.9	0.2640
23	13.263	792.1	0.2576
24	5.261	648.0	0.2534
25	2.888	607.5	0.2487

Table 4-65. LS1 Burnup and TH Feedback Parameters Assembly D12

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.773	672.0	0.7396	2.867	673.1	0.7396
2	0.000		0.7396	6.422	1057.6	0.7396	10.401	1066.2	0.7396
3	0.000		0.7067	8.552	1178.3	0.7067	13.783	1178.5	0.7063
4	0.000	Data	0.6388	9.427	1271.8	0.6388	15.066	1249.2	0.6386
5	0.000	Not	0.5631	9.470	1276.6	0.5631	15.116	1250.4	0.5635
6	0.000	Required	0.4966	9.253	1252.7	0.4966	14.805	1233.8	0.4976
7	0.000		0.4440	9.038	1229.4	0.4440	14.492	1216.6	0.4450
8	0.000		0.4019	8.916	1216.4	0.4019	14.294	1203.5	0.4031
9	0.000		0.3667	9.119	1238.1	0.3667	14.623	1207.9	0.3680
10	0.000		0.3369	9.022	1227.7	0.3369	14.370	1198.3	0.3384
11	0.000		0.3118	8.878	1212.3	0.3118	14.166	1188.1	0.3134
12	0.000		0.2905	8.712	1194.9	0.2905	13.943	1178.5	0.2920
13	0.000		0.2720	8.527	1175.7	0.2720	13.701	1168.9	0.2736
14	0.000		0.2561	8.312	1153.8	0.2561	13.428	1159.3	0.2575
15	0.000		0.2421	8.055	1128.2	0.2421	13.105	1148.4	0.2434
16	0.000		0.2299	7.741	1097.8	0.2299	12.707	1134.7	0.2309
17	0.000		0.2192	7.340	1060.1	0.2192	12.188	1115.7	0.2200
18	0.000		0.2100	6.700	1002.8	0.2100	11.341	1083.3	0.2104
19	0.000		0.2022	6.266	965.9	0.2022	10.716	1054.3	0.2020
20	0.000		0.1953	5.848	931.7	0.1953	10.065	1020.0	0.1946
21	0.000		0.1893	5.399	896.4	0.1893	9.287	973.6	0.1882
22	0.000		0.1842	4.621	838.6	0.1842	7.961	901.2	0.1827
23	0.000		0.1801	3.724	776.7	0.1801	6.395	820.6	0.1783
24	0.000		0.1773	1.489	641.7	0.1773	2.604	660.4	0.1755
25	0.000		0.1764	0.889	609.3	0.1764	1.634	618.1	0.1744

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.735	613.9	0.7396	4.091	597.3	0.7396	4.625	593.6	0.7396
2	13.581	776.4	0.7396	14.830	698.4	0.7396	16.618	677.9	0.7396
3	17.889	806.7	0.7166	19.472	713.8	0.7187	21.649	685.8	0.7224
4	19.679	843.0	0.6596	21.459	734.9	0.6672	23.618	697.0	0.6758
5	20.076	868.8	0.5974	22.015	752.3	0.6102	24.618	706.0	0.6244
6	20.040	889.8	0.5416	22.122	768.3	0.5593	24.787	716.2	0.5768
7	19.947	907.1	0.4952	22.153	782.4	0.5164	24.998	727.8	0.5406
8	19.938	922.1	0.4555	22.246	794.3	0.4790	25.279	740.0	0.5072
9	20.402	941.3	0.4199	22.812	806.3	0.4446	26.071	755.0	0.4759
10	20.390	953.0	0.3890	22.855	812.9	0.4143	26.298	767.4	0.4482
11	20.276	960.5	0.3623	22.779	817.5	0.3875	26.400	779.6	0.4233
12	20.083	963.0	0.3388	22.618	821.3	0.3638	26.416	792.0	0.4009
13	19.822	961.4	0.3184	22.390	825.3	0.3430	26.365	804.5	0.3808
14	19.484	956.0	0.3002	22.087	829.6	0.3246	26.241	817.4	0.3627
15	19.056	947.2	0.2843	21.694	833.9	0.3083	26.027	830.5	0.3485
16	18.517	935.6	0.2702	21.185	837.6	0.2939	25.695	843.7	0.3321
17	17.818	921.1	0.2578	20.510	840.5	0.2815	25.187	856.3	0.3195
18	16.750	903.4	0.2474	19.458	842.6	0.2714	24.281	867.6	0.3095
19	15.636	881.0	0.2377	18.534	841.3	0.2616	23.422	872.6	0.2991
20	14.616	853.1	0.2289	17.466	835.4	0.2527	22.307	868.9	0.2893
21	13.521	815.7	0.2207	16.013	816.1	0.2441	20.585	848.4	0.2796
22	11.524	769.6	0.2141	13.765	785.3	0.2376	17.883	815.5	0.2725
23	9.123	716.0	0.2082	10.911	735.7	0.2313	14.277	762.2	0.2655
24	3.670	619.6	0.2043	4.370	626.4	0.2265	5.720	637.1	0.2602
25	2.094	592.4	0.2007	2.450	594.8	0.2211	3.140	600.2	0.2529

Table 4-65. LS1 Burnup and TH Feedback Parameters Assembly D12 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.638	602.2	0.7396
2	16.664	719.6	0.7398
3	21.709	743.2	0.7228
4	23.889	781.4	0.676
5	24.597	810.4	0.6247
6	24.672	832.9	0.5792
7	25.089	856.1	0.5410
8	25.375	875.9	0.5077
9	26.171	892.1	0.4764
10	26.399	896.2	0.4487
11	26.601	896.2	0.4236
12	26.616	892.1	0.4012
13	26.465	892.1	0.3811
14	26.339	884.0	0.3630
15	26.124	879.9	0.3468
16	25.790	871.9	0.3324
17	25.280	863.9	0.3197
18	24.381	892.1	0.3097
19	23.554	1034.0	0.2993
20	22.443	1053.4	0.2895
21	20.710	1001.0	0.2798
22	17.993	934.0	0.2726
23	14.964	840.6	0.2657
24	5.757	669.2	0.2602
25	3.160	618.8	0.2530

Table 4-66. LS1 Burnup and TH Feedback Parameters Assembly D13

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.723	668.6	0.7396	2.867	678.6	0.7396
2	0.000		0.7396	6.216	1037.0	0.7396	10.336	1089.9	0.7396
3	0.000		0.7113	8.224	1145.0	0.7113	13.685	1200.5	0.7082
4	0.000	Data	0.6486	9.015	1226.9	0.6486	14.728	1262.4	0.6433
5	0.000	Not	0.5769	9.020	1227.5	0.5769	14.668	1250.8	0.5706
6	0.000	Required	0.5121	8.786	1202.6	0.5121	14.283	1224.1	0.5058
7	0.000		0.4597	8.569	1180.0	0.4597	13.936	1201.6	0.4538
8	0.000		0.4175	8.452	1168.0	0.4175	13.731	1186.6	0.4120
9	0.000		0.3820	8.648	1188.2	0.3820	13.966	1193.2	0.3771
10	0.000		0.3516	8.543	1177.4	0.3516	13.812	1184.9	0.3472
11	0.000		0.3260	8.375	1160.2	0.3260	13.592	1176.1	0.3220
12	0.000		0.3043	8.179	1140.5	0.3043	13.345	1167.6	0.3004
13	0.000		0.2856	7.970	1119.9	0.2856	13.085	1159.1	0.2818
14	0.000		0.2694	7.752	1098.6	0.2694	12.815	1150.5	0.2654
15	0.000		0.2552	7.523	1077.1	0.2552	12.531	1141.5	0.2512
16	0.000		0.2428	7.276	1054.2	0.2428	12.225	1131.9	0.2384
17	0.000		0.2318	6.987	1028.1	0.2318	11.860	1119.7	0.2272
18	0.000		0.2221	6.490	984.8	0.2221	11.190	1092.4	0.2172
19	0.000		0.2138	6.190	959.6	0.2138	10.717	1065.9	0.2086
20	0.000		0.2064	5.870	933.4	0.2064	10.148	1028.8	0.2009
21	0.000		0.1998	5.476	902.3	0.1998	9.400	978.5	0.1941
22	0.000		0.1942	4.711	845.1	0.1942	8.063	902.7	0.1885
23	0.000		0.1897	3.794	781.4	0.1897	6.459	818.9	0.1840
24	0.000		0.1868	1.506	642.7	0.1868	2.611	659.5	0.1810
25	0.000		0.1857	0.890	609.3	0.1857	1.526	617.3	0.1799

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.980	629.7	0.7396	4.496	614.5	0.7396	5.183	603.5	0.7396
2	14.369	845.0	0.7396	16.156	765.7	0.7396	18.404	711.1	0.7396
3	18.777	886.5	0.7165	21.048	790.0	0.7198	23.784	720.7	0.7236
4	20.534	935.3	0.6620	23.090	823.9	0.6696	26.057	735.7	0.6782
5	20.847	956.3	0.6000	23.605	848.6	0.6123	26.743	748.9	0.6265
6	20.703	987.0	0.5423	23.616	868.6	0.5586	26.938	759.1	0.5782
7	20.501	999.6	0.4927	23.532	883.6	0.5115	27.054	772.8	0.5358
8	20.383	1007.3	0.4504	23.499	895.0	0.4702	27.234	787.5	0.4983
9	20.738	1018.0	0.4132	23.947	907.4	0.4331	27.940	805.8	0.4639
10	20.587	1016.3	0.3815	23.837	913.0	0.4011	28.041	821.0	0.4339
11	20.326	1014.6	0.3545	23.602	916.5	0.3736	28.009	836.0	0.4076
12	19.998	1007.4	0.3312	23.291	918.8	0.3497	27.894	850.7	0.3843
13	19.622	997.2	0.3109	22.929	920.7	0.3289	27.724	865.4	0.3637
14	19.204	984.3	0.2932	22.523	922.4	0.3106	27.501	879.6	0.3452
15	18.736	968.5	0.2775	22.058	922.6	0.2945	27.212	893.6	0.3286
16	18.208	949.9	0.2637	21.515	920.7	0.2801	26.830	906.5	0.3137
17	17.579	928.2	0.2513	20.845	915.2	0.2673	26.296	917.6	0.3004
18	16.607	904.1	0.2408	19.812	906.9	0.2564	25.363	925.9	0.2891
19	15.793	877.6	0.2311	18.894	893.0	0.2462	24.450	926.3	0.2781
20	14.839	848.7	0.2226	17.793	873.8	0.2372	23.232	916.6	0.2681
21	13.581	812.0	0.2150	16.279	841.3	0.2291	21.363	888.0	0.2587
22	11.595	767.6	0.2088	13.956	800.5	0.2227	18.503	846.5	0.2516
23	9.181	715.6	0.2036	11.061	745.8	0.2172	14.750	784.3	0.2453
24	3.684	619.9	0.2003	4.435	631.2	0.2136	5.939	645.9	0.2414
25	2.098	593.1	0.1979	2.493	598.4	0.2105	3.278	605.5	0.2368

Table 4-66. LS1 Burnup and TH Feedback Parameters Assembly D13 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.196	602.2	0.7396
2	18.449	715.8	0.7396
3	23.844	743.2	0.7236
4	26.126	774.3	0.6784
5	26.822	810.4	0.6268
6	27.036	884.0	0.5786
7	27.198	1093.3	0.5363
8	27.395	1183.5	0.4988
9	28.106	1211.4	0.4643
10	28.205	1200.2	0.4341
11	28.170	1183.5	0.4077
12	28.052	1167.0	0.3843
13	27.678	1145.4	0.3636
14	27.652	1129.5	0.3451
15	27.360	1113.8	0.3285
16	26.975	1098.4	0.3136
17	26.438	1073.1	0.3002
18	25.499	1053.3	0.2889
19	24.580	1024.4	0.2780
20	23.354	987.2	0.2679
21	21.473	934.0	0.2585
22	18.600	879.9	0.2514
23	14.828	806.7	0.2452
24	5.973	660.0	0.2412
25	3.297	616.0	0.2366

Table 4-67. LS1 Burnup and TH Feedback Parameters Assembly D14

Node No.	Datapoint 5 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.709	667.7	0.7396	2.881	681.8	0.7396
2	0.000		0.7396	6.165	1033.9	0.7396	10.421	1109.8	0.7396
3	0.000		0.7123	8.205	1143.1	0.7123	13.717	1226.7	0.7078
4	0.000	Data	0.6505	9.006	1226.0	0.6505	14.862	1288.4	0.6426
5	0.000	Not	0.5794	8.998	1225.1	0.5794	14.756	1270.6	0.5699
6	0.000	Required	0.5149	8.733	1197.1	0.5149	14.298	1236.0	0.5053
7	0.000		0.4625	8.482	1171.1	0.4625	13.877	1206.4	0.4537
8	0.000		0.4204	8.346	1157.3	0.4204	13.625	1185.6	0.4124
9	0.000		0.3850	8.532	1176.2	0.3850	13.831	1190.0	0.3778
10	0.000		0.3547	8.417	1164.5	0.3547	13.651	1179.0	0.3483
11	0.000		0.3293	8.235	1146.1	0.3293	13.401	1167.6	0.3233
12	0.000		0.3076	8.023	1125.1	0.3076	13.121	1156.3	0.3019
13	0.000		0.2891	7.799	1103.3	0.2891	12.831	1145.4	0.2835
14	0.000		0.2730	7.568	1081.3	0.2730	12.533	1134.5	0.2675
15	0.000		0.2589	7.326	1058.8	0.2589	12.218	1122.6	0.2533
16	0.000		0.2465	7.082	1034.8	0.2465	11.868	1109.1	0.2409
17	0.000		0.2356	6.742	1006.5	0.2356	11.428	1090.3	0.2298
18	0.000		0.2261	6.209	961.1	0.2261	10.671	1056.1	0.2200
19	0.000		0.2180	5.675	933.8	0.2180	10.130	1025.5	0.2117
20	0.000		0.2107	5.542	907.5	0.2107	9.542	989.1	0.2043
21	0.000		0.2043	5.157	878.0	0.2043	8.616	942.9	0.1978
22	0.000		0.1989	4.429	824.9	0.1989	7.545	873.3	0.1923
23	0.000		0.1946	3.562	766.1	0.1946	6.032	797.9	0.1880
24	0.000		0.1917	1.407	637.2	0.1917	2.425	651.5	0.1851
25	0.000		0.1906	0.830	606.2	0.1906	1.415	612.9	0.1841

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.157	640.3	0.7396	4.713	618.9	0.7396	5.381	602.2	0.7396
2	15.046	895.7	0.7396	16.953	781.5	0.7396	19.119	705.1	0.7396
3	19.647	945.5	0.7147	22.060	806.7	0.7179	24.694	714.3	0.7217
4	21.431	1000.0	0.6579	24.141	842.6	0.6654	27.007	729.1	0.6739
5	21.660	1029.9	0.6932	24.595	871.3	0.6056	27.660	742.1	0.6198
6	21.382	1046.4	0.5335	24.503	895.7	0.5499	27.790	756.9	0.5697
7	21.039	1053.6	0.4828	24.303	914.9	0.5017	27.836	773.6	0.5266
8	20.800	1054.8	0.4405	24.170	929.4	0.4801	27.959	791.3	0.4892
9	21.050	1058.9	0.4041	24.531	944.9	0.4234	28.616	812.4	0.4555
10	20.800	1052.4	0.3732	24.334	952.4	0.3919	28.562	830.1	0.4262
11	20.441	1042.3	0.3468	24.010	957.4	0.3649	28.567	847.2	0.4005
12	20.020	1029.4	0.3241	23.616	961.2	0.3415	28.407	865.1	0.3780
13	19.561	1014.2	0.3045	23.178	964.2	0.3213	28.254	887.4	0.3585
14	19.067	998.9	0.2874	22.695	965.6	0.3035	27.990	904.9	0.3404
15	18.528	977.6	0.2723	22.150	964.9	0.2878	27.627	919.7	0.3239
16	17.921	955.7	0.2591	21.512	960.5	0.2739	27.152	933.3	0.3092
17	17.191	931.8	0.2474	20.721	951.6	0.2617	26.496	944.6	0.2962
18	16.119	906.5	0.2377	19.563	939.7	0.2514	25.436	953.0	0.2853
19	15.263	882.0	0.2294	18.668	920.5	0.2424	24.433	952.3	0.2750
20	14.270	851.4	0.2216	17.387	895.1	0.2339	23.114	940.6	0.2653
21	13.003	812.2	0.2144	15.820	856.3	0.2261	21.155	908.1	0.2560
22	11.040	765.1	0.2084	13.476	809.4	0.2199	18.228	862.1	0.2490
23	8.702	712.4	0.2034	10.619	749.8	0.2146	14.457	794.8	0.2428
24	3.475	618.7	0.2002	4.236	632.1	0.2112	5.791	648.9	0.2389
25	1.977	592.5	0.1981	2.380	599.1	0.2086	3.189	606.8	0.2347

Table 4-67. LS1 Burnup and TH Feedback Parameters Assembly D14 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.393	598.9	0.7396
2	19.163	712.0	0.7396
3	24.751	733.1	0.7217
4	27.074	767.3	0.6741
5	27.733	788.5	0.6201
6	27.870	814.1	0.5702
7	27.922	836.7	0.5271
8	28.049	852.2	0.4898
9	28.710	867.9	0.4580
10	28.758	876.9	0.4267
11	28.664	879.9	0.4010
12	28.604	879.9	0.3784
13	28.351	879.8	0.3589
14	28.086	875.9	0.3408
15	27.722	871.9	0.3243
16	27.245	863.9	0.3095
17	26.589	853.9	0.2964
18	25.636	892.1	0.2855
19	24.564	1029.2	0.2754
20	23.250	1053.3	0.2657
21	21.280	1001.0	0.2564
22	18.336	925.5	0.2493
23	14.544	840.6	0.2431
24	5.827	666.1	0.2392
25	3.209	618.9	0.2350

Table 4-68. LS1 Burnup and TH Feedback Parameters Assembly D15

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 5	196.1 Cy 5	196.1 Cy 5	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.499	653.7	0.7396	2.525	665.6	0.7396
2	0.000		0.7396	5.522	870.2	0.7396	9.303	1033.7	0.7396
3	0.000		0.7215	7.489	1073.9	0.7215	12.578	1154.6	0.7179
4	0.000	Data	0.6696	8.357	1158.4	0.6896	13.856	1224.5	0.6624
5	0.000	Not	0.6059	8.393	1162.0	0.6059	13.802	1208.6	0.5965
6	0.000	Required	0.5444	8.118	1134.5	0.5444	13.307	1171.4	0.5346
7	0.000		0.4923	7.833	1106.6	0.4923	12.820	1138.1	0.4830
8	0.000		0.4495	7.665	1090.5	0.4495	12.515	1116.1	0.4411
9	0.000		0.4135	7.806	1104.0	0.4135	12.676	1119.2	0.4059
10	0.000		0.3827	7.676	1091.6	0.3827	12.467	1106.7	0.3758
11	0.000		0.3566	7.487	1073.7	0.3566	12.194	1093.5	0.3502
12	0.000		0.3343	7.280	1054.6	0.3343	11.904	1080.7	0.3282
13	0.000		0.3151	7.070	1035.5	0.3151	11.613	1068.3	0.3092
14	0.000		0.2984	6.855	1016.4	0.2984	11.317	1056.1	0.2927
15	0.000		0.2838	6.628	996.6	0.2838	11.004	1043.2	0.2780
16	0.000		0.2709	6.375	975.0	0.2709	10.648	1028.1	0.2651
17	0.000		0.2595	6.059	948.8	0.2595	10.189	1007.5	0.2536
18	0.000		0.2497	5.635	906.9	0.2497	9.415	972.4	0.2436
19	0.000		0.2412	5.203	881.4	0.2412	8.877	944.6	0.2349
20	0.000		0.2337	4.886	857.8	0.2337	8.334	915.0	0.2273
21	0.000		0.2271	4.537	832.6	0.2271	7.705	879.7	0.2207
22	0.000		0.2214	3.883	787.4	0.2214	6.583	823.9	0.2150
23	0.000		0.2170	3.117	737.6	0.2170	5.261	762.4	0.2105
24	0.000		0.2140	1.229	627.5	0.2140	2.106	638.7	0.2076
25	0.000		0.2129	0.722	600.5	0.2129	1.222	605.5	0.2065

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.849	643.5	0.7396	4.493	628.5	0.7396	5.364	615.4	0.7396
2	14.180	918.2	0.7396	16.442	829.8	0.7396	19.309	758.0	0.7396
3	18.907	979.1	0.7217	21.614	867.7	0.7240	25.322	771.6	0.7272
4	20.895	1042.2	0.6710	24.171	916.5	0.6765	27.961	791.4	0.6841
5	21.189	1074.7	0.6097	24.693	948.1	0.6188	28.677	805.2	0.6315
6	20.857	1090.3	0.5499	24.502	968.3	0.5616	28.686	819.6	0.5796
7	20.430	1096.1	0.4978	24.157	980.2	0.5107	28.556	835.4	0.5330
8	20.141	1097.7	0.4541	23.917	987.4	0.4669	28.535	851.8	0.4925
9	20.368	1104.1	0.4171	24.217	998.2	0.4293	29.097	872.0	0.4565
10	20.098	1098.2	0.3855	23.961	1000.3	0.3971	29.045	888.0	0.4253
11	19.715	1087.5	0.3587	23.575	999.9	0.3696	28.851	903.4	0.3981
12	19.276	1073.3	0.3356	23.129	998.8	0.3461	28.593	918.7	0.3744
13	18.804	1056.3	0.3158	22.650	997.8	0.3257	28.299	934.0	0.3535
14	18.297	1036.8	0.2985	22.134	996.4	0.3079	27.960	949.0	0.3350
15	17.738	1014.5	0.2833	21.556	993.5	0.2922	27.548	963.2	0.3186
16	17.096	989.4	0.2699	20.871	987.2	0.2784	27.010	976.0	0.3040
17	16.299	960.5	0.2583	19.996	975.8	0.2662	26.254	986.5	0.2911
18	15.135	928.3	0.2481	18.725	960.4	0.2557	25.060	993.4	0.2800
19	14.187	895.7	0.2393	17.621	938.3	0.2464	23.917	989.9	0.2696
20	13.204	862.0	0.2315	16.438	910.6	0.2381	22.551	973.7	0.2601
21	12.027	822.0	0.2247	14.949	869.7	0.2308	20.606	934.7	0.2514
22	10.190	772.6	0.2190	12.711	819.6	0.2249	17.711	881.4	0.2444
23	8.027	718.3	0.2145	10.011	757.3	0.2200	14.035	808.0	0.2387
24	3.204	621.3	0.2116	3.998	635.2	0.2170	5.640	653.8	0.2353
25	1.822	594.5	0.2103	2.252	601.5	0.2155	3.126	610.4	0.2327

Table 4-68. LS1 Burnup and TH Feedback Parameters Assembly D15 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.377	602.2	0.7396
2	19.351	704.5	0.7398
3	25.376	723.1	0.7272
4	28.023	750.0	0.6842
5	28.745	770.8	0.6318
6	28.759	788.5	0.58
7	28.634	806.7	0.5335
8	28.617	821.6	0.4930
9	29.183	836.7	0.4570
10	29.134	848.3	0.4258
11	28.942	856.1	0.3987
12	28.684	856.1	0.3749
13	28.389	852.2	0.3540
14	28.050	852.2	0.3355
15	27.636	844.4	0.3191
16	27.096	836.7	0.3045
17	26.336	821.6	0.2915
18	25.138	806.7	0.2803
19	23.990	788.5	0.2699
20	22.619	770.8	0.2604
21	20.667	746.6	0.2517
22	17.764	719.8	0.2448
23	14.077	684.6	0.2390
24	5.657	610.3	0.2356
25	3.139	599.0	0.2332

Table 4-69. LS1 Burnup and TH Feedback Parameters Assembly D16

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.775	672.1	0.7396	2.869	673.1	0.7396
2	0.000		0.7396	6.425	1057.9	0.7396	10.406	1066.5	0.7396
3	0.000		0.7066	8.655	1178.6	0.7066	13.787	1178.6	0.7062
4	0.000	Data	0.6385	9.428	1272.0	0.6385	15.069	1249.5	0.6383
5	0.000	Not	0.5627	9.469	1276.5	0.5627	15.115	1250.4	0.5631
6	0.000	Required	0.4961	9.251	1252.5	0.4961	14.803	1233.8	0.4970
7	0.000		0.4435	9.035	1229.1	0.4435	14.488	1216.4	0.4446
8	0.000		0.4015	8.913	1216.0	0.4015	14.290	1203.3	0.4027
9	0.000		0.3663	9.116	1237.8	0.3663	14.519	1207.8	0.3676
10	0.000		0.3365	9.019	1227.4	0.3365	14.366	1198.1	0.3380
11	0.000		0.3114	8.875	1212.0	0.3114	14.163	1188.1	0.3130
12	0.000		0.2901	8.710	1194.7	0.2901	13.939	1178.1	0.2917
13	0.000		0.2718	8.524	1175.4	0.2718	13.698	1168.9	0.2733
14	0.000		0.2558	8.310	1153.6	0.2558	13.425	1159.1	0.2572
15	0.000		0.2418	8.053	1128.0	0.2418	13.101	1148.0	0.2431
16	0.000		0.2296	7.739	1097.6	0.2296	12.704	1134.5	0.2308
17	0.000		0.2190	7.338	1059.9	0.2190	12.185	1115.6	0.2197
18	0.000		0.2098	6.699	1002.7	0.2098	11.338	1083.0	0.2101
19	0.000		0.2019	6.265	965.8	0.2019	10.714	1054.1	0.2017
20	0.000		0.1951	5.847	931.6	0.1951	10.062	1019.7	0.1944
21	0.000		0.1891	5.397	896.2	0.1891	9.285	973.5	0.1880
22	0.000		0.1840	4.620	838.5	0.1840	7.959	901.1	0.1825
23	0.000		0.1799	3.724	776.7	0.1799	6.393	820.4	0.1781
24	0.000		0.1771	1.489	641.7	0.1771	2.604	660.4	0.1752
25	0.000		0.1761	0.890	609.3	0.1761	1.534	618.0	0.1741

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.822	619.3	0.7396	4.252	605.2	0.7396	5.386	632.9	0.7396
2	13.933	803.7	0.7396	15.495	736.9	0.7396	19.223	827.6	0.7396
3	18.456	847.1	0.7134	20.558	770.5	0.7173	25.131	848.4	0.7212
4	20.374	895.3	0.6553	22.820	810.6	0.6644	27.716	873.2	0.6729
5	20.790	924.6	0.5909	23.462	838.1	0.6056	28.522	886.1	0.6167
6	20.703	943.0	0.5332	23.518	856.0	0.5521	28.721	897.5	0.5685
7	20.544	956.0	0.4852	23.440	866.3	0.5065	28.792	909.5	0.5248
8	20.504	969.3	0.4449	23.446	872.2	0.4670	28.942	921.3	0.4857
9	21.191	1009.1	0.4103	24.169	876.9	0.4317	29.835	935.4	0.4501
10	22.190	1117.1	0.3828	25.103	868.5	0.4020	30.798	937.9	0.4191
11	22.274	1145.8	0.3536	25.159	864.9	0.3723	30.972	947.9	0.3893
12	22.038	1144.6	0.3279	24.908	863.0	0.3464	30.870	960.6	0.3634
13	21.978	1163.1	0.3073	24.824	859.9	0.3251	30.913	971.6	0.3414
14	21.557	1148.0	0.2878	24.407	860.4	0.3055	30.657	985.8	0.3216
15	20.969	1121.4	0.2706	23.826	861.3	0.2884	30.244	1000.8	0.3043
16	20.362	1100.8	0.2565	23.203	859.3	0.2741	29.766	1014.0	0.2892
17	19.456	1063.8	0.2435	22.252	853.6	0.2610	28.949	1026.3	0.2757
18	18.156	1022.1	0.2325	20.883	844.9	0.2501	27.686	1036.2	0.2642
19	17.085	982.7	0.2230	19.720	833.5	0.2404	26.638	1037.6	0.2538
20	15.923	939.8	0.2143	18.557	833.4	0.2323	25.231	1024.2	0.2447
21	14.480	886.7	0.2065	17.426	872.8	0.2269	23.558	975.4	0.2374
22	12.339	826.1	0.2003	15.073	845.8	0.2209	20.513	916.7	0.2305
23	9.785	758.3	0.1950	11.986	781.9	0.2150	16.412	837.4	0.2241
24	3.971	636.1	0.1918	4.872	645.4	0.2114	6.780	669.6	0.2204
25	2.286	602.6	0.1899	2.808	609.9	0.2097	3.684	621.6	0.2187

Table 4-69. LS1 Burnup and TH Feedback Parameters Assembly D16 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	5.408	632.6	0.7396
2	19.298	838.0	0.7398
3	25.229	884.0	0.7213
4	27.828	942.7	0.6731
5	28.645	991.8	0.6189
6	28.853	1034.0	0.5686
7	28.931	1068.1	0.5248
8	29.087	1098.4	0.4859
9	29.984	1119.0	0.4501
10	30.946	1113.8	0.4191
11	31.119	1108.6	0.3893
12	31.016	1103.5	0.3633
13	31.057	1093.3	0.3414
14	30.801	1093.3	0.3216
15	30.388	1093.3	0.3042
16	29.909	1088.2	0.2891
17	29.089	1073.1	0.2756
18	27.820	1043.6	0.2641
19	26.666	1015.0	0.2538
20	25.351	978.1	0.2446
21	23.666	925.5	0.2373
22	20.607	867.9	0.2304
23	16.489	803.0	0.2240
24	6.815	663.1	0.2203
25	3.904	618.9	0.2166

Table 4-70. LS1 Burnup and TH Feedback Parameters Assembly D17

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.710	667.8	0.7396	2.917	685.7	0.7396
2	0.000		0.7396	6.181	1033.5	0.7396	10.526	1128.6	0.7396
3	0.000		0.7111	8.222	1144.8	0.7111	13.851	1247.4	0.7054
4	0.000	Data	0.6480	9.062	1232.0	0.6480	15.032	1309.5	0.6379
5	0.000	Not	0.5758	9.092	1235.2	0.5758	14.979	1294.1	0.5637
6	0.000	Required	0.5107	8.857	1210.1	0.5107	14.585	1265.1	0.4987
7	0.000		0.4582	8.626	1185.9	0.4582	14.216	1240.5	0.4468
8	0.000		0.4160	8.494	1172.3	0.4160	13.991	1224.1	0.4054
9	0.000		0.3805	8.680	1191.5	0.3805	14.209	1229.7	0.3708
10	0.000		0.3503	8.569	1180.0	0.3503	14.043	1220.1	0.3413
11	0.000		0.3249	8.401	1162.8	0.3249	13.818	1210.2	0.3164
12	0.000		0.3033	8.208	1143.4	0.3033	13.570	1200.7	0.2951
13	0.000		0.2846	8.004	1123.2	0.2846	13.310	1191.1	0.2768
14	0.000		0.2685	7.788	1102.3	0.2685	13.037	1181.5	0.2607
15	0.000		0.2544	7.558	1080.4	0.2544	12.741	1170.4	0.2465
16	0.000		0.2420	7.307	1057.1	0.2420	12.407	1156.6	0.2340
17	0.000		0.2311	7.007	1029.9	0.2311	11.986	1136.8	0.2229
18	0.000		0.2214	6.602	985.8	0.2214	11.258	1101.2	0.2131
19	0.000		0.2132	6.204	960.7	0.2132	10.750	1068.8	0.2048
20	0.000		0.2058	5.899	935.6	0.2058	10.183	1029.7	0.1972
21	0.000		0.1992	5.519	905.7	0.1992	9.447	979.1	0.1907
22	0.000		0.1936	4.757	848.4	0.1936	8.116	903.5	0.1851
23	0.000		0.1891	3.837	784.3	0.1891	6.512	821.1	0.1807
24	0.000		0.1861	1.528	643.9	0.1861	2.643	680.4	0.1776
25	0.000		0.1849	0.905	610.1	0.1849	1.550	618.1	0.1766

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.336	649.8	0.7396	4.945	624.7	0.7396	6.696	607.6	0.7396
2	15.666	942.1	0.7396	17.746	804.7	0.7396	20.161	723.5	0.7396
3	20.438	1001.6	0.7116	23.082	834.6	0.7149	26.024	734.0	0.7189
4	22.299	1063.4	0.6511	25.276	876.8	0.6590	28.480	751.3	0.6681
5	22.652	1092.5	0.5831	25.773	909.1	0.5959	29.200	766.3	0.6110
6	22.280	1104.4	0.5211	25.690	935.0	0.5375	29.359	782.9	0.5584
7	21.930	1106.2	0.4693	25.476	954.1	0.4876	29.404	801.2	0.5135
8	21.673	1103.1	0.4267	25.316	968.0	0.4453	29.509	820.2	0.4750
9	21.904	1104.4	0.3907	25.655	983.7	0.4087	30.150	842.6	0.4407
10	21.633	1094.2	0.3601	25.430	990.5	0.3773	30.167	860.9	0.4110
11	21.283	1080.2	0.3341	25.094	995.5	0.3506	30.051	878.0	0.3850
12	20.836	1063.3	0.3118	24.697	1000.0	0.3276	29.877	895.6	0.3623
13	20.372	1044.3	0.2925	24.256	1003.4	0.3077	29.715	918.3	0.3427
14	19.869	1023.4	0.2767	23.761	1004.6	0.2902	29.432	935.9	0.3246
15	19.316	1000.4	0.2610	23.169	1001.9	0.2748	29.037	950.8	0.3084
16	18.686	974.8	0.2480	22.509	994.3	0.2612	28.516	964.4	0.2939
17	17.933	946.9	0.2366	21.867	981.2	0.2491	27.800	975.5	0.2811
18	16.851	918.0	0.2269	20.466	963.9	0.2389	26.681	982.7	0.2702
19	15.991	890.3	0.2188	19.435	939.7	0.2301	25.615	979.6	0.2601
20	14.992	857.4	0.2111	18.218	909.7	0.2218	24.225	964.5	0.2506
21	13.685	816.0	0.2041	16.584	866.7	0.2143	22.163	927.3	0.2416
22	11.655	768.1	0.1982	14.150	816.5	0.2081	19.088	876.5	0.2346
23	9.222	714.9	0.1933	11.186	765.0	0.2030	15.167	804.9	0.2287
24	3.717	620.0	0.1901	4.506	634.8	0.1996	6.142	653.6	0.2250
25	2.131	593.5	0.1882	2.553	600.8	0.1972	3.413	609.6	0.2212

Table 4-70. LS1 Burnup and TH Feedback Parameters Assembly D17 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.720	639.5	0.7398
2	20.237	842.3	0.7396
3	26.121	879.9	0.7191
4	28.587	921.2	0.6683
5	29.314	951.4	0.6112
6	29.477	969.1	0.5587
7	29.528	987.2	0.5138
8	29.633	996.4	0.4752
9	30.277	1010.3	0.4409
10	30.295	1015.0	0.4112
11	30.180	1019.7	0.3852
12	30.006	1019.7	0.3625
13	29.842	1010.3	0.3428
14	29.557	1001.0	0.3248
15	29.160	991.8	0.3085
16	28.633	989.1	0.2940
17	27.912	942.7	0.2811
18	26.787	917.0	0.2703
19	25.713	884.0	0.2602
20	24.316	856.1	0.2506
21	22.235	821.6	0.2417
22	19.160	784.9	0.2347
23	15.225	736.4	0.2287
24	6.166	630.4	0.2251
25	3.427	601.8	0.2213

Table 4-71. LS1 Burnup and TH Feedback Parameters Assembly D18

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.592	659.9	0.7396	2.828	688.9	0.7396
2	0.000		0.7396	5.768	993.4	0.7396	10.201	1144.3	0.7396
3	0.000		0.7170	7.670	1091.0	0.7170	13.407	1266.6	0.7078
4	0.000	Data	0.6611	8.467	1169.6	0.6611	14.518	1324.6	0.6438
5	0.000	Not	0.5950	8.517	1174.7	0.5950	14.435	1299.6	0.5733
6	0.000	Required	0.5328	8.314	1154.0	0.5328	14.025	1262.1	0.5103
7	0.000		0.4804	8.106	1133.3	0.4804	13.646	1231.6	0.4591
8	0.000		0.4376	8.000	1122.6	0.4376	13.429	1212.3	0.4177
9	0.000		0.4013	8.196	1142.2	0.4013	13.658	1218.0	0.3829
10	0.000		0.3702	8.103	1133.0	0.3702	13.503	1207.3	0.3531
11	0.000		0.3438	7.943	1117.3	0.3438	13.281	1196.6	0.3278
12	0.000		0.3214	7.756	1099.2	0.3214	13.032	1186.1	0.3061
13	0.000		0.3021	7.558	1080.4	0.3021	12.773	1175.8	0.2872
14	0.000		0.2853	7.353	1061.3	0.2853	12.505	1165.2	0.2709
15	0.000		0.2706	7.142	1042.0	0.2706	12.223	1153.5	0.2564
16	0.000		0.2577	6.921	1022.2	0.2577	11.915	1139.2	0.2436
17	0.000		0.2462	6.677	1000.8	0.2462	11.544	1118.8	0.2323
18	0.000		0.2362	6.258	965.2	0.2362	10.892	1082.2	0.2222
19	0.000		0.2274	6.054	948.4	0.2274	10.471	1049.3	0.2137
20	0.000		0.2195	5.826	929.9	0.2195	9.976	1010.3	0.2061
21	0.000		0.2124	5.493	903.7	0.2124	9.289	961.0	0.1994
22	0.000		0.2062	4.750	847.9	0.2062	7.988	888.4	0.1937
23	0.000		0.2012	3.825	783.5	0.2012	6.398	809.5	0.1891
24	0.000		0.1979	1.512	643.0	0.1979	2.578	655.9	0.1857
25	0.000		0.1967	0.887	609.2	0.1967	1.501	615.4	0.1847

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.930	628.9	0.7396	4.433	613.1	0.7396	5.160	606.1	0.7396
2	14.214	843.3	0.7396	15.963	760.6	0.7396	18.346	721.1	0.7396
3	18.586	885.5	0.7163	20.814	785.0	0.7197	23.712	731.2	0.7236
4	20.312	934.3	0.6625	22.821	818.2	0.6702	25.955	746.7	0.6790
5	20.598	965.0	0.6019	23.305	842.4	0.6144	26.607	757.9	0.6287
6	20.429	985.6	0.5455	23.287	861.5	0.5619	26.767	769.9	0.5814
7	20.209	999.4	0.4965	23.178	875.7	0.5154	26.852	783.3	0.5394
8	20.111	1010.0	0.4544	23.158	885.9	0.4744	27.033	797.4	0.5019
9	20.510	1025.2	0.4174	23.641	897.0	0.4374	27.758	814.7	0.4673
10	20.419	1031.0	0.3857	23.579	900.9	0.4054	27.887	828.7	0.4369
11	20.211	1032.2	0.3585	23.388	903.1	0.3777	27.881	842.4	0.4101
12	19.924	1028.8	0.3350	23.113	904.8	0.3535	27.789	856.3	0.3864
13	19.579	1021.0	0.3145	22.782	906.6	0.3326	27.638	870.1	0.3653
14	19.184	1009.7	0.2968	22.401	908.5	0.3142	27.435	884.0	0.3466
15	18.732	994.7	0.2807	21.960	910.0	0.2979	27.167	897.8	0.3299
16	18.210	976.2	0.2666	21.434	909.5	0.2834	26.806	911.1	0.3149
17	17.579	954.2	0.2542	20.779	906.2	0.2706	26.292	922.7	0.3016
18	16.623	929.2	0.2435	19.781	900.6	0.2596	25.403	931.8	0.2901
19	15.650	901.1	0.2338	18.930	890.2	0.2495	24.564	932.6	0.2791
20	14.950	869.8	0.2252	17.914	876.1	0.2405	23.434	923.3	0.2689
21	13.720	829.8	0.2178	16.459	846.4	0.2323	21.623	894.4	0.2594
22	11.730	781.7	0.2113	14.150	807.5	0.2259	18.776	852.5	0.2522
23	9.283	725.8	0.2061	11.222	752.3	0.2204	14.985	789.5	0.2460
24	3.716	623.5	0.2026	4.492	633.5	0.2166	6.036	648.2	0.2421
25	2.110	595.0	0.2004	2.517	599.5	0.2136	3.327	606.8	0.2379

Table 4-71. LS1 Burnup and TH Feedback Parameters Assembly D18 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.183	636.1	0.7396
2	18.424	851.1	0.7396
3	23.810	884.0	0.7237
4	26.084	929.7	0.6791
5	26.723	960.2	0.6289
6	26.888	982.6	0.5816
7	26.975	991.8	0.5396
8	27.159	1005.6	0.5020
9	27.887	1019.7	0.4674
10	28.017	1024.4	0.4369
11	28.012	1029.2	0.4101
12	27.920	1029.2	0.3884
13	27.769	1029.2	0.3653
14	27.565	1024.4	0.3466
15	27.294	1010.3	0.3299
16	26.929	991.8	0.3149
17	26.409	964.7	0.3015
18	25.513	934.0	0.2900
19	24.656	900.3	0.2790
20	23.529	871.9	0.2689
21	21.707	829.1	0.2594
22	18.849	788.5	0.2522
23	15.045	743.2	0.2460
24	6.082	636.2	0.2421
25	3.341	601.8	0.2379

Table 4-72. LS1 Burnup and TH Feedback Parameters Assembly D19

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.639	683.0	0.7396	2.829	683.8	0.7396
2	0.000		0.7396	5.959	1011.8	0.7396	10.289	1126.2	0.7396
3	0.000		0.7154	7.962	1119.1	0.7154	13.633	1254.9	0.7087
4	0.000	Data	0.6572	8.778	1201.8	0.6572	14.787	1316.8	0.6444
5	0.000	Not	0.5889	8.759	1199.6	0.5889	14.619	1289.2	0.5729
6	0.000	Required	0.5258	8.458	1168.7	0.5258	14.072	1244.7	0.5096
7	0.000		0.4738	8.167	1139.3	0.4738	13.569	1207.6	0.4586
8	0.000		0.4317	8.004	1123.2	0.4317	13.263	1183.2	0.4177
9	0.000		0.3964	8.165	1138.1	0.3964	13.434	1184.9	0.3835
10	0.000		0.3662	8.044	1127.2	0.3662	13.234	1171.6	0.3542
11	0.000		0.3406	7.859	1109.1	0.3406	12.987	1157.9	0.3294
12	0.000		0.3188	7.651	1089.2	0.3188	12.679	1144.8	0.3082
13	0.000		0.3000	7.436	1069.0	0.3000	12.385	1131.9	0.2898
14	0.000		0.2838	7.217	1048.8	0.2838	12.085	1118.8	0.2738
15	0.000		0.2696	6.987	1028.1	0.2696	11.767	1105.0	0.2597
16	0.000		0.2570	6.734	1005.8	0.2570	11.405	1087.9	0.2472
17	0.000		0.2460	6.420	976.8	0.2460	10.937	1064.4	0.2362
18	0.000		0.2364	6.895	935.5	0.2364	10.147	1025.0	0.2265
19	0.000		0.2281	5.572	909.8	0.2281	9.593	992.0	0.2182
20	0.000		0.2208	5.262	885.9	0.2208	9.025	958.5	0.2109
21	0.000		0.2143	4.909	859.5	0.2143	8.349	914.0	0.2046
22	0.000		0.2087	4.220	810.3	0.2087	7.142	849.9	0.1991
23	0.000		0.2043	3.395	755.3	0.2043	5.711	780.9	0.1949
24	0.000		0.2012	1.342	633.6	0.2012	2.295	645.6	0.1918
25	0.000		0.2002	0.790	604.0	0.2002	1.337	609.6	0.1908

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.335	655.7	0.7396	4.966	627.1	0.7396	5.818	614.2	0.7396
2	15.749	972.0	0.7396	17.920	817.1	0.7396	20.669	748.8	0.7396
3	20.653	1040.5	0.7130	23.445	853.1	0.7161	26.809	762.0	0.7201
4	22.539	1110.0	0.6537	25.699	900.9	0.6610	29.365	782.7	0.6701
5	22.679	1140.7	0.5861	26.096	935.9	0.5980	30.002	799.6	0.6130
6	22.228	1150.4	0.5240	25.829	961.9	0.5391	29.984	817.5	0.5598
7	21.715	1149.4	0.4720	25.440	979.9	0.4887	29.853	836.4	0.5138
8	21.355	1143.9	0.4294	25.166	992.6	0.4461	29.632	855.5	0.4744
9	21.526	1143.9	0.3935	25.442	1008.3	0.4095	30.399	878.0	0.4396
10	21.199	1131.1	0.3632	25.162	1015.4	0.3784	30.341	895.6	0.4093
11	20.762	1114.2	0.3374	24.768	1021.9	0.3518	30.149	911.9	0.3830
12	20.270	1094.3	0.3154	24.324	1029.3	0.3291	29.893	927.3	0.3599
13	19.748	1072.3	0.2964	23.843	1036.0	0.3095	29.595	942.7	0.3397
14	19.189	1048.2	0.2800	23.304	1038.8	0.2922	29.235	957.9	0.3217
15	18.582	1021.8	0.2656	22.673	1035.0	0.2770	28.777	972.9	0.3058
16	17.891	992.7	0.2529	21.808	1023.6	0.2636	28.171	987.0	0.2917
17	17.048	960.4	0.2417	20.942	1005.2	0.2518	27.331	998.2	0.2792
18	15.837	925.9	0.2321	19.679	982.4	0.2416	26.044	1005.1	0.2685
19	14.839	890.7	0.2237	18.378	953.1	0.2326	24.794	1000.6	0.2586
20	13.800	854.9	0.2164	17.096	919.2	0.2247	23.311	982.7	0.2493
21	12.553	813.6	0.2100	15.499	872.6	0.2177	21.233	941.2	0.2409
22	10.637	765.1	0.2046	13.158	819.6	0.2120	18.213	885.7	0.2342
23	8.384	712.6	0.2003	10.359	756.3	0.2074	14.420	810.7	0.2287
24	3.361	619.6	0.1974	4.152	635.0	0.2043	5.815	655.1	0.2254
25	1.922	593.7	0.1961	2.349	601.3	0.2027	3.235	611.0	0.2226

Table 4-72. LS1 Burnup and TH Feedback Parameters Assembly D19 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.638	625.7	0.7398
2	20.732	787.1	0.7398
3	26.888	810.4	0.7202
4	29.451	836.7	0.6702
5	30.095	863.9	0.6133
6	30.082	884.0	0.5601
7	29.955	900.3	0.5143
8	29.938	917.0	0.4748
9	30.608	929.7	0.4399
10	30.451	934.0	0.4097
11	30.259	934.0	0.3833
12	30.003	934.0	0.3603
13	29.703	925.5	0.3400
14	29.342	921.2	0.3220
15	28.881	908.6	0.3061
16	28.272	896.2	0.2919
17	27.428	879.9	0.2794
18	26.138	860.0	0.2687
19	24.882	844.4	0.2588
20	23.393	821.6	0.2496
21	21.308	795.8	0.2411
22	18.279	763.8	0.2344
23	14.472	716.6	0.2289
24	6.837	624.6	0.2255
25	3.247	596.2	0.2228

Table 4-73. LS1 Burnup and TH Feedback Parameters Assembly D20

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (195.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 6	0.00 Cy 5	195.1 Cy 5	195.1 Cy 6	195.1 Cy 5	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.506	654.2	0.7396	2.557	668.3	0.7396
2	0.000		0.7396	5.520	970.0	0.7396	9.384	1047.2	0.7396
3	0.000		0.7217	7.448	1070.1	0.7217	12.632	1170.6	0.7172
4	0.000	Data	0.6705	8.276	1150.2	0.6705	13.851	1237.8	0.6613
5	0.000	Not	0.6076	8.286	1151.2	0.6076	13.745	1217.5	0.5955
6	0.000	Required	0.5470	8.000	1122.8	0.5470	13.218	1176.3	0.5341
7	0.000		0.4952	7.712	1095.0	0.4952	12.719	1141.3	0.4830
8	0.000		0.4526	7.847	1079.4	0.4526	12.416	1118.1	0.4414
9	0.000		0.4167	7.695	1093.4	0.4167	12.587	1122.6	0.4064
10	0.000		0.3859	7.573	1081.8	0.3859	12.388	1110.5	0.3764
11	0.000		0.3597	7.393	1065.0	0.3597	12.124	1097.3	0.3508
12	0.000		0.3372	7.195	1046.6	0.3372	11.844	1084.5	0.3289
13	0.000		0.3180	6.994	1028.7	0.3180	11.564	1072.4	0.3099
14	0.000		0.3012	6.789	1010.6	0.3012	11.280	1060.4	0.2933
15	0.000		0.2865	6.576	992.1	0.2865	10.981	1047.5	0.2786
16	0.000		0.2735	6.339	972.0	0.2735	10.640	1032.2	0.2657
17	0.000		0.2620	6.041	947.3	0.2620	10.195	1010.9	0.2541
18	0.000		0.2520	5.632	906.7	0.2520	9.431	975.1	0.2441
19	0.000		0.2434	5.218	862.6	0.2434	8.907	946.6	0.2354
20	0.000		0.2358	4.918	860.2	0.2358	8.378	916.5	0.2278
21	0.000		0.2291	4.584	835.9	0.2291	7.762	881.0	0.2211
22	0.000		0.2233	3.935	790.9	0.2233	6.643	824.9	0.2154
23	0.000		0.2187	3.166	740.7	0.2187	5.318	763.3	0.2109
24	0.000		0.2157	1.253	628.8	0.2157	2.136	639.2	0.2078
25	0.000		0.2145	0.735	601.1	0.2145	1.239	605.8	0.2067

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.916	645.8	0.7396	4.652	638.8	0.7396	5.960	644.6	0.7396
2	14.409	931.6	0.7396	17.025	880.5	0.7396	21.268	871.8	0.7396
3	19.262	1005.4	0.7200	22.699	938.7	0.7219	27.857	893.9	0.7240
4	21.320	1082.5	0.6674	25.225	1006.6	0.6717	30.701	919.7	0.6767
5	21.604	1120.5	0.6041	25.747	1043.1	0.6107	31.371	931.9	0.6194
6	21.232	1136.0	0.5430	25.464	1057.2	0.5507	31.220	943.0	0.5628
7	20.795	1142.3	0.4901	25.033	1058.1	0.4979	30.928	954.9	0.5123
8	20.589	1150.1	0.4463	24.788	1055.1	0.4534	30.624	967.0	0.4692
9	20.949	1171.6	0.4092	25.184	1057.6	0.4158	31.405	983.2	0.4318
10	20.836	1180.6	0.3774	25.024	1050.2	0.3836	31.362	993.6	0.3996
11	20.574	1180.8	0.3502	24.710	1042.0	0.3561	31.177	1005.3	0.3718
12	20.201	1171.1	0.3268	24.295	1035.5	0.3325	30.902	1018.0	0.3478
13	19.758	1154.3	0.3068	23.830	1032.1	0.3122	30.585	1031.7	0.3270
14	19.257	1132.3	0.2893	23.326	1031.6	0.2945	30.229	1045.6	0.3087
15	18.680	1104.8	0.2742	22.753	1032.3	0.2792	29.800	1059.3	0.2926
16	17.993	1071.5	0.2609	22.048	1029.5	0.2656	29.225	1071.8	0.2782
17	17.124	1032.2	0.2493	21.104	1018.0	0.2536	28.384	1081.9	0.2656
18	15.874	989.0	0.2391	19.731	999.4	0.2432	27.073	1088.0	0.2544
19	14.854	948.9	0.2304	18.542	974.5	0.2341	25.808	1080.5	0.2443
20	13.827	906.6	0.2229	17.329	947.8	0.2261	24.348	1056.6	0.2353
21	12.604	859.9	0.2164	15.810	907.0	0.2192	22.265	1004.2	0.2272
22	10.706	803.7	0.2109	13.513	855.0	0.2134	19.189	936.3	0.2205
23	8.482	742.2	0.2066	10.706	785.8	0.2088	15.292	849.4	0.2152
24	3.410	631.0	0.2036	4.334	647.6	0.2059	6.278	671.8	0.2119
25	1.951	600.5	0.2027	2.464	609.1	0.2048	3.543	621.7	0.2104

Table 4-73. LS1 Burnup and TH Feedback Parameters Assembly D20 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.981	629.2	0.7396
2	21.335	803.7	0.7396
3	27.941	829.1	0.7241
4	30.795	867.9	0.677
5	31.472	896.2	0.6197
6	31.326	917.0	0.5631
7	31.039	938.3	0.5126
8	30.939	955.8	0.4695
9	31.523	969.1	0.4321
10	31.483	982.6	0.3999
11	31.297	978.1	0.3721
12	31.022	978.1	0.3481
13	30.704	973.6	0.3272
14	30.346	964.7	0.3090
15	29.913	947.0	0.2928
16	29.334	929.7	0.2784
17	28.488	908.6	0.2657
18	27.171	884.0	0.2546
19	25.900	860.0	0.2445
20	24.434	836.7	0.2354
21	22.342	803.0	0.2274
22	19.256	767.3	0.2207
23	16.346	723.1	0.2154
24	6.301	627.6	0.2121
25	3.655	596.2	0.2105

Table 4-74. LS1 Burnup and TH Feedback Parameters Assembly D21

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.747	670.3	0.7396	2.681	677.5	0.7396
2	0.000		0.7396	6.323	1047.7	0.7396	10.446	1090.4	0.7396
3	0.000		0.7083	8.439	1166.7	0.7083	13.844	1208.1	0.7059
4	0.000	Data	0.6422	9.301	1258.0	0.6422	15.086	1275.5	0.6381
5	0.000	Not	0.5677	9.310	1258.9	0.5677	15.045	1266.4	0.5633
6	0.000	Required	0.5020	9.047	1230.4	0.5020	14.641	1241.2	0.4980
7	0.000		0.4499	8.796	1203.7	0.4499	14.261	1218.5	0.4461
8	0.000		0.4082	8.656	1189.0	0.4082	14.032	1203.1	0.4047
9	0.000		0.3731	8.646	1209.0	0.3731	14.253	1208.5	0.3700
10	0.000		0.3433	8.737	1197.5	0.3433	14.088	1198.8	0.3406
11	0.000		0.3184	8.571	1180.2	0.3184	13.865	1189.1	0.3158
12	0.000		0.2971	8.385	1161.2	0.2971	13.621	1179.3	0.2948
13	0.000		0.2789	8.188	1141.4	0.2789	13.368	1169.9	0.2763
14	0.000		0.2630	7.975	1120.4	0.2630	13.095	1159.9	0.2604
15	0.000		0.2490	7.735	1097.2	0.2490	12.788	1148.9	0.2462
16	0.000		0.2367	7.461	1071.3	0.2367	12.430	1135.2	0.2338
17	0.000		0.2259	7.125	1040.5	0.2259	11.976	1116.2	0.2228
18	0.000		0.2164	6.569	991.5	0.2164	11.216	1084.2	0.2131
19	0.000		0.2083	6.224	962.4	0.2083	10.702	1058.5	0.2046
20	0.000		0.2011	5.886	934.7	0.2011	10.152	1027.1	0.1971
21	0.000		0.1948	5.494	903.7	0.1948	9.445	982.4	0.1906
22	0.000		0.1893	4.734	846.7	0.1893	8.138	909.1	0.1849
23	0.000		0.1849	3.828	783.7	0.1849	6.548	826.2	0.1804
24	0.000		0.1820	1.535	644.3	0.1820	2.672	662.4	0.1774
25	0.000		0.1809	0.913	610.6	0.1809	1.570	619.2	0.1763

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (305.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	305.8 Cy 7	305.8 Cy 7	305.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.623	605.9	0.7396	4.086	608.8	0.7396	5.634	661.1	0.7396
2	13.232	746.5	0.7396	14.930	754.2	0.7396	19.956	944.2	0.7396
3	17.645	785.7	0.7153	19.967	795.9	0.7189	26.065	972.4	0.7194
4	19.590	835.0	0.6802	22.336	847.3	0.6887	28.737	999.3	0.6701
5	20.076	874.2	0.6000	23.104	883.4	0.6133	29.564	1004.6	0.6156
6	20.061	904.3	0.5463	23.258	905.8	0.5625	29.757	1008.2	0.5652
7	19.953	926.0	0.5008	23.241	918.2	0.5181	29.816	1015.3	0.5207
8	19.819	941.9	0.4611	23.258	925.1	0.4782	29.950	1025.9	0.4808
9	20.329	957.6	0.4248	23.731	933.8	0.4411	30.632	1045.4	0.4439
10	20.196	960.3	0.3929	23.605	934.8	0.4086	30.673	1061.3	0.4114
11	19.913	955.3	0.3652	23.312	933.4	0.3802	30.557	1078.5	0.3829
12	19.549	945.3	0.3412	22.935	931.6	0.3556	30.358	1096.0	0.3579
13	19.134	932.0	0.3203	22.528	932.7	0.3343	30.123	1113.2	0.3361
14	18.671	916.7	0.3019	22.176	948.3	0.3159	29.924	1128.8	0.3170
15	18.147	899.5	0.2856	22.219	1032.1	0.3005	30.030	1135.3	0.3007
16	17.564	882.0	0.2713	22.688	1191.1	0.2872	30.373	1132.6	0.2865
17	16.793	858.0	0.2583	21.935	1212.5	0.2727	29.795	1140.4	0.2717
18	15.670	831.4	0.2474	20.597	1173.8	0.2597	28.615	1146.4	0.2584
19	14.840	808.9	0.2376	19.442	1117.7	0.2481	27.270	1137.0	0.2464
20	14.170	800.6	0.2300	18.384	1054.3	0.2386	25.917	1107.0	0.2383
21	13.206	782.9	0.2228	16.929	979.6	0.2301	23.847	1047.0	0.2274
22	11.461	754.0	0.2171	14.631	902.2	0.2235	20.716	971.3	0.2202
23	9.185	710.4	0.2117	11.691	817.6	0.2176	16.642	877.5	0.2140
24	3.749	620.2	0.2085	4.784	658.4	0.2142	6.951	685.2	0.2102
25	2.237	598.1	0.2086	2.807	614.3	0.2135	4.030	629.9	0.2092

Table 4-74. LS1 Burnup and TH Feedback Parameters Assembly D21 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.647	602.2	0.7396
2	20.010	712.0	0.7396
3	26.119	723.1	0.7195
4	28.796	739.8	0.6703
5	29.629	760.3	0.6159
6	29.828	781.4	0.5655
7	29.894	799.4	0.5212
8	30.030	814.1	0.4814
9	30.717	832.9	0.4444
10	30.760	840.6	0.4120
11	30.645	844.4	0.3834
12	30.447	848.3	0.3585
13	30.211	844.4	0.3366
14	30.010	836.7	0.3176
15	30.114	829.1	0.3012
16	30.454	817.8	0.2869
17	29.874	810.4	0.2721
18	28.591	799.4	0.2588
19	27.344	792.1	0.2467
20	25.986	774.3	0.2367
21	23.910	753.4	0.2278
22	20.772	729.8	0.2206
23	16.686	690.9	0.2144
24	6.970	616.0	0.2106
25	4.039	587.9	0.2095

Table 4-75. LS1 Burnup and TH Feedback Parameters Assembly E1

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.558	657.5	0.7396	2.828	692.7	0.7396
2	0.000		0.7396	5.652	982.1	0.7396	10.227	1169.3	0.7396
3	0.000		0.7186	7.545	1078.7	0.7186	13.477	1301.7	0.7068
4	0.000	Data	0.6646	8.343	1156.4	0.6646	14.576	1358.4	0.6428
5	0.000	Not	0.6007	8.375	1159.7	0.6007	14.425	1323.7	0.5731
6	0.000	Required	0.5400	8.138	1135.9	0.5400	13.933	1276.6	0.5114
7	0.000		0.4884	7.892	1111.8	0.4884	13.474	1238.4	0.4611
8	0.000		0.4459	7.726	1095.8	0.4459	13.167	1212.0	0.4203
9	0.000		0.4105	7.726	1095.8	0.4105	13.112	1204.2	0.3864
10	0.000		0.3803	7.610	1084.8	0.3803	12.909	1189.4	0.3577
11	0.000		0.3545	7.464	1071.1	0.3545	12.683	1175.9	0.3330
12	0.000		0.3324	7.295	1055.5	0.3324	12.438	1163.2	0.3118
13	0.000		0.3132	7.116	1039.2	0.3132	12.183	1150.6	0.2934
14	0.000		0.2964	6.931	1022.7	0.2964	11.920	1137.9	0.2772
15	0.000		0.2818	6.739	1005.8	0.2818	11.639	1123.6	0.2629
16	0.000		0.2687	6.534	988.1	0.2687	11.323	1105.9	0.2503
17	0.000		0.2573	6.288	967.4	0.2573	10.919	1081.3	0.2391
18	0.000		0.2472	5.842	930.9	0.2472	10.200	1040.2	0.2293
19	0.000		0.2384	5.644	915.2	0.2384	9.763	1005.5	0.2211
20	0.000		0.2306	5.453	900.3	0.2306	9.308	968.7	0.2138
21	0.000		0.2234	5.195	880.6	0.2234	8.718	924.4	0.2074
22	0.000		0.2171	4.513	830.7	0.2171	7.514	859.1	0.2017
23	0.000		0.2120	3.646	771.4	0.2120	6.036	788.9	0.1972
24	0.000		0.2085	1.462	640.2	0.2085	2.473	650.8	0.1936
25	0.000		0.2072	0.857	607.6	0.2072	1.443	612.9	0.1924

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.600	607.7	0.7396	4.069	609.4	0.7396	5.558	657.0	0.7396
2	13.147	756.4	0.7396	14.868	757.0	0.7396	19.703	925.0	0.7396
3	17.444	796.8	0.7163	19.771	796.3	0.7198	25.618	950.4	0.7207
4	19.229	845.7	0.6644	21.942	843.0	0.6723	28.101	977.4	0.6741
5	19.562	882.0	0.6081	22.622	874.3	0.6203	28.773	985.5	0.6227
6	19.406	908.2	0.5569	22.508	892.9	0.5718	28.831	991.9	0.5744
7	19.171	926.1	0.5122	22.350	903.1	0.5284	28.777	1001.3	0.5309
8	19.014	939.2	0.4727	22.237	909.1	0.4891	28.797	1013.3	0.4915
9	18.143	953.6	0.4376	22.431	917.9	0.4533	29.220	1034.5	0.4558
10	18.959	955.1	0.4063	22.250	918.3	0.4213	29.201	1049.7	0.4234
11	18.675	950.3	0.3785	21.954	916.6	0.3932	29.072	1065.7	0.3949
12	18.315	940.6	0.3548	21.581	914.9	0.3687	28.869	1082.2	0.3699
13	17.904	928.1	0.3339	21.181	916.4	0.3474	28.632	1098.3	0.3480
14	17.452	912.9	0.3165	20.850	933.0	0.3290	28.438	1112.0	0.3287
15	16.955	895.9	0.2992	20.925	1016.1	0.3136	28.567	1117.5	0.3123
16	16.412	878.3	0.2848	21.341	1173.6	0.3000	28.952	1114.4	0.2977
17	15.692	854.5	0.2718	20.762	1198.6	0.2852	28.431	1120.2	0.2827
18	14.615	828.4	0.2608	19.500	1165.8	0.2720	27.216	1125.0	0.2692
19	13.867	806.4	0.2511	18.448	1113.6	0.2602	26.065	1115.0	0.2569
20	13.295	798.2	0.2434	17.505	1053.3	0.2508	24.823	1085.2	0.2467
21	12.443	780.4	0.2362	16.168	979.5	0.2420	22.676	1026.9	0.2377
22	10.788	750.4	0.2303	13.954	901.7	0.2351	19.850	954.6	0.2303
23	8.611	706.5	0.2248	11.087	814.0	0.2290	15.872	864.4	0.2240
24	3.536	619.4	0.2213	4.557	656.9	0.2254	6.624	679.1	0.2200
25	2.098	597.4	0.2212	2.656	613.2	0.2246	3.810	625.9	0.2190

Table 4-75. LS1 Burnup and TH Feedback Parameters Assembly E1 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.573	608.8	0.7396
2	19.750	723.3	0.7396
3	25.678	736.3	0.7208
4	28.166	760.2	0.6744
5	28.843	777.7	0.623
6	28.907	799.2	0.5748
7	28.859	821.4	0.5313
8	28.883	836.5	0.4920
9	29.311	855.8	0.4562
10	29.294	863.7	0.4240
11	29.166	867.7	0.3954
12	28.962	863.7	0.3704
13	28.724	859.8	0.3485
14	28.528	851.9	0.3291
15	28.654	840.3	0.3127
16	29.035	825.1	0.2981
17	28.512	817.6	0.2830
18	27.294	806.5	0.2695
19	26.139	792.0	0.2573
20	24.893	777.7	0.2470
21	22.940	756.7	0.2380
22	19.906	729.6	0.2306
23	15.917	694.0	0.2242
24	6.643	616.0	0.2202
25	3.820	590.6	0.2192

Table 4-76. LS1 Burnup and TH Feedback Parameters Assembly E2

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 5	196.1 Cy 5	196.1 Cy 5	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.572	658.5	0.7396	2.715	678.4	0.7396
2	0.000		0.7396	5.767	993.0	0.7396	9.912	1093.7	0.7396
3	0.000		0.7156	7.825	1105.3	0.7156	13.277	1215.6	0.7107
4	0.000	Data	0.6563	8.656	1209.4	0.6563	14.672	1280.4	0.6476
5	0.000	Not	0.5849	9.136	1239.3	0.5849	14.850	1261.9	0.5751
6	0.000	Required	0.5178	9.111	1238.6	0.5178	14.627	1226.8	0.5092
7	0.000		0.4623	9.008	1225.6	0.4623	14.351	1196.9	0.4556
8	0.000		0.4177	8.901	1214.2	0.4177	14.114	1174.9	0.4128
9	0.000		0.3808	8.929	1217.1	0.3808	14.103	1168.3	0.3771
10	0.000		0.3497	8.806	1204.1	0.3497	13.897	1164.6	0.3471
11	0.000		0.3237	8.640	1186.8	0.3237	13.658	1142.6	0.3218
12	0.000		0.3015	8.427	1164.9	0.3015	13.379	1131.9	0.3002
13	0.000		0.2826	8.187	1140.8	0.2826	13.077	1121.9	0.2816
14	0.000		0.2663	7.926	1116.3	0.2663	12.757	1112.2	0.2655
15	0.000		0.2522	7.644	1088.1	0.2522	12.409	1102.1	0.2514
16	0.000		0.2398	7.326	1058.4	0.2398	12.013	1090.0	0.2389
17	0.000		0.2290	6.931	1022.7	0.2290	11.504	1072.4	0.2279
18	0.000		0.2197	6.285	967.1	0.2197	10.638	1039.4	0.2183
19	0.000		0.2119	5.871	933.2	0.2119	10.019	1009.6	0.2101
20	0.000		0.2050	5.483	902.6	0.2050	9.381	974.6	0.2029
21	0.000		0.1991	5.083	872.2	0.1991	8.656	930.9	0.1966
22	0.000		0.1939	4.341	818.6	0.1939	7.388	864.7	0.1913
23	0.000		0.1898	3.480	760.6	0.1898	5.905	792.7	0.1870
24	0.000		0.1870	1.391	636.3	0.1870	2.411	651.6	0.1842
25	0.000		0.1860	0.825	605.9	0.1860	1.414	613.2	0.1831

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.812	628.6	0.7396	4.292	610.6	0.7396	4.883	597.3	0.7396
2	13.830	843.5	0.7396	15.607	751.4	0.7396	17.866	690.0	0.7396
3	18.445	884.4	0.7184	20.568	772.8	0.7217	22.952	698.5	0.7251
4	20.416	929.8	0.6651	22.793	802.3	0.6726	25.378	711.0	0.6805
5	20.924	957.1	0.6030	23.491	825.0	0.6153	26.237	721.3	0.6286
6	20.912	976.0	0.5444	23.640	844.8	0.5609	26.570	733.1	0.5796
7	20.758	985.5	0.4939	23.619	861.6	0.5134	26.761	747.0	0.5370
8	20.584	991.0	0.4511	23.552	875.4	0.4722	26.925	762.5	0.5003
9	20.676	1000.0	0.4145	23.765	891.2	0.4360	27.422	781.9	0.4677
10	20.446	997.6	0.3829	23.593	898.9	0.4043	27.482	798.2	0.4388
11	20.141	992.1	0.3559	23.328	904.2	0.3769	27.437	813.9	0.4132
12	19.762	983.4	0.3328	22.980	908.4	0.3532	27.305	829.7	0.3907
13	19.333	972.5	0.3128	22.576	911.8	0.3325	27.110	845.3	0.3706
14	18.858	959.4	0.2953	22.120	914.3	0.3144	26.852	860.3	0.3526
15	18.327	944.2	0.2799	21.598	915.3	0.2986	26.512	874.5	0.3364
16	17.718	926.8	0.2663	20.975	913.6	0.2844	26.061	887.9	0.3219
17	16.961	906.9	0.2544	20.184	909.1	0.2720	25.417	899.6	0.3091
18	15.812	884.9	0.2445	18.978	901.4	0.2619	24.331	909.3	0.2988
19	14.859	859.5	0.2354	17.922	887.7	0.2523	23.297	911.1	0.2884
20	13.830	830.8	0.2273	16.738	867.6	0.2436	22.012	902.9	0.2787
21	12.588	794.5	0.2198	15.228	833.9	0.2354	20.163	876.0	0.2692
22	10.650	749.7	0.2137	12.933	791.2	0.2290	17.343	836.0	0.2622
23	8.383	700.6	0.2084	10.159	734.3	0.2233	13.712	774.8	0.2557
24	3.405	615.6	0.2053	4.114	627.2	0.2197	5.537	641.2	0.2511
25	1.944	590.8	0.2027	2.316	596.3	0.2163	3.048	602.5	0.2457

Table 4-76. LS1 Burnup and TH Feedback Parameters Assembly E2 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.897	605.5	0.7396
2	17.612	719.5	0.7396
3	23.012	743.0	0.7252
4	25.447	774.1	0.6806
5	26.311	792.0	0.6289
6	26.649	810.2	0.58
7	26.842	817.6	0.5376
8	27.010	832.7	0.5008
9	27.511	848.0	0.4682
10	27.573	855.8	0.4392
11	27.531	867.7	0.4137
12	27.411	916.7	0.3912
13	27.256	1103.0	0.3711
14	27.008	1165.6	0.3530
15	26.666	1144.9	0.3367
16	26.209	1113.3	0.3221
17	25.657	1072.7	0.3093
18	24.463	1033.6	0.2988
19	23.420	991.4	0.2885
20	22.126	951.1	0.2787
21	20.265	900.0	0.2693
22	17.431	844.2	0.2623
23	13.781	774.1	0.2557
24	8.566	645.0	0.2511
25	3.064	607.4	0.2458

Table 4-77. LS1 Burnup and TH Feedback Parameters Assembly E3

Node No.	Datapoint 5 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.773	671.9	0.7396	2.901	676.8	0.7396
2	0.000		0.7396	6.439	1058.9	0.7396	10.535	1085.4	0.7396
3	0.000		0.7078	8.573	1179.9	0.7078	13.915	1196.7	0.7068
4	0.000	Data	0.6412	9.410	1269.3	0.6412	15.119	1261.0	0.6393
5	0.000	Not	0.5864	9.403	1268.5	0.5864	15.072	1253.9	0.5846
6	0.000	Required	0.5004	9.144	1240.2	0.5004	14.683	1230.8	0.4989
7	0.000		0.4480	8.894	1213.4	0.4480	14.314	1210.1	0.4467
8	0.000		0.4064	8.709	1194.0	0.4064	14.035	1194.0	0.4051
9	0.000		0.3720	8.687	1191.7	0.3720	14.000	1191.8	0.3708
10	0.000		0.3429	8.538	1176.1	0.3429	13.783	1180.6	0.3418
11	0.000		0.3185	8.362	1158.3	0.3185	13.547	1170.2	0.3173
12	0.000		0.2976	8.167	1138.8	0.2976	13.292	1160.2	0.2963
13	0.000		0.2796	7.959	1118.3	0.2796	13.026	1150.6	0.2782
14	0.000		0.2639	7.738	1097.0	0.2639	12.747	1141.1	0.2623
15	0.000		0.2502	7.500	1074.5	0.2502	12.449	1131.4	0.2484
16	0.000		0.2382	7.235	1050.0	0.2382	12.120	1121.1	0.2361
17	0.000		0.2276	6.907	1020.6	0.2276	11.708	1107.6	0.2251
18	0.000		0.2184	6.333	971.1	0.2184	10.951	1079.3	0.2154
19	0.000		0.2105	5.885	942.4	0.2105	10.424	1052.2	0.2069
20	0.000		0.2034	5.647	915.4	0.2034	9.838	1015.8	0.1996
21	0.000		0.1972	5.279	886.9	0.1972	9.123	967.2	0.1931
22	0.000		0.1920	4.537	832.4	0.1920	7.821	893.9	0.1876
23	0.000		0.1877	3.655	772.0	0.1877	6.272	814.3	0.1833
24	0.000		0.1849	1.472	640.7	0.1849	2.580	659.7	0.1803
25	0.000		0.1838	0.678	608.6	0.1838	1.516	617.6	0.1792

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.221	643.2	0.7396	4.979	641.2	0.7396	6.418	653.5	0.7396
2	15.321	909.7	0.7396	17.974	885.8	0.7396	22.555	901.7	0.7396
3	20.227	977.3	0.7128	23.746	949.9	0.7154	29.292	925.1	0.7180
4	22.333	1058.0	0.6532	26.393	1029.8	0.6588	32.249	951.2	0.6648
5	22.806	1107.7	0.5849	27.174	1078.5	0.5930	33.132	959.9	0.6026
6	22.707	1138.5	0.5217	27.214	1101.3	0.5306	33.251	966.6	0.5433
7	22.506	1153.6	0.4687	27.061	1109.3	0.4771	33.202	975.8	0.4918
8	22.360	1167.2	0.4250	26.941	1113.6	0.4327	33.218	987.8	0.4482
9	22.532	1188.8	0.3884	27.183	1125.4	0.3953	33.686	1008.1	0.4112
10	22.313	1188.6	0.3572	26.956	1124.1	0.3635	33.624	1023.2	0.3794
11	21.969	1177.3	0.3306	26.689	1120.2	0.3365	33.428	1039.2	0.3521
12	21.539	1159.2	0.3080	26.131	1115.5	0.3133	33.149	1056.1	0.3287
13	21.068	1138.3	0.2886	25.636	1111.5	0.2935	32.835	1073.5	0.3083
14	20.581	1117.6	0.2717	25.124	1107.3	0.2763	32.496	1090.5	0.2905
15	20.048	1094.4	0.2569	24.550	1100.8	0.2612	32.086	1106.8	0.2747
16	19.404	1064.5	0.2439	23.833	1088.5	0.2478	31.521	1122.2	0.2605
17	18.563	1025.1	0.2324	22.851	1065.7	0.2360	30.669	1135.5	0.2480
18	17.296	980.1	0.2224	21.386	1034.5	0.2257	29.292	1144.6	0.2371
19	16.242	936.0	0.2137	20.089	997.5	0.2167	27.944	1139.3	0.2272
20	15.123	893.4	0.2061	18.712	959.9	0.2068	26.344	1116.5	0.2183
21	13.770	845.2	0.1994	17.019	912.6	0.2020	24.092	1061.4	0.2103
22	11.689	790.1	0.1939	14.525	858.4	0.1963	20.791	986.9	0.2038
23	9.258	732.0	0.1894	11.545	791.7	0.1918	16.650	889.4	0.1985
24	3.841	630.2	0.1867	4.823	653.2	0.1891	7.059	689.4	0.1954
25	2.230	600.6	0.1854	2.791	613.5	0.1877	4.057	632.2	0.1937

Table 4-77. LS1 Burnup and TH Feedback Parameters Assembly E3 (continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.427	689.1	0.7396
2	22.683	653.4	0.7396
3	29.327	663.0	0.7181
4	32.287	672.1	0.6649
5	33.175	687.7	0.6029
6	33.297	697.1	0.5438
7	33.254	716.5	0.4922
8	33.275	733.0	0.4487
9	33.748	749.8	0.4118
10	33.688	756.7	0.3800
11	33.494	763.6	0.3528
12	33.217	770.6	0.3294
13	32.903	770.6	0.3090
14	32.583	767.1	0.2911
15	32.162	763.6	0.2752
16	31.586	760.2	0.2612
17	30.732	753.3	0.2486
18	29.352	743.0	0.2377
19	28.002	736.3	0.2277
20	26.399	726.3	0.2188
21	24.142	710.0	0.2108
22	20.834	687.7	0.2043
23	16.684	660.0	0.1990
24	7.072	599.0	0.1958
25	4.064	582.3	0.1941

Table 4-78. LS1 Burnup and TH Feedback Parameters Assembly E4

	Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.570	658.3	0.7396	2.712	678.3	0.7396
2	0.000		0.7396	5.762	992.5	0.7396	8.904	1093.2	0.7396
3	0.000		0.7158	7.819	1104.8	0.7158	13.268	1215.1	0.7108
4	0.000	Data	0.6585	8.852	1209.0	0.6585	14.664	1279.7	0.6478
5	0.000	Not	0.5853	9.132	1238.9	0.5853	14.844	1261.6	0.5755
6	0.000	Required	0.5182	9.108	1236.3	0.5182	14.623	1226.6	0.5096
7	0.000		0.4627	9.005	1225.2	0.4627	14.347	1196.7	0.4560
8	0.000		0.4180	8.899	1214.0	0.4180	14.111	1174.7	0.4129
9	0.000		0.3811	8.926	1216.8	0.3811	14.100	1168.3	0.3774
10	0.000		0.3500	8.804	1203.9	0.3500	13.894	1154.4	0.3474
11	0.000		0.3239	8.638	1186.6	0.3239	13.655	1142.4	0.3221
12	0.000		0.3018	8.425	1164.7	0.3018	13.376	1131.7	0.3005
13	0.000		0.2829	8.185	1140.6	0.2829	13.074	1121.8	0.2819
14	0.000		0.2666	7.925	1115.0	0.2666	12.754	1112.2	0.2657
15	0.000		0.2524	7.642	1087.9	0.2524	12.406	1102.0	0.2516
16	0.000		0.2400	7.323	1058.1	0.2400	12.010	1090.0	0.2391
17	0.000		0.2292	6.929	1022.5	0.2292	11.501	1072.3	0.2282
18	0.000		0.2200	6.283	967.0	0.2200	10.635	1039.3	0.2185
19	0.000		0.2121	5.869	933.1	0.2121	10.016	1009.5	0.2103
20	0.000		0.2053	5.480	902.4	0.2053	9.378	974.6	0.2031
21	0.000		0.1993	5.081	872.0	0.1993	8.653	930.8	0.1968
22	0.000		0.1941	4.339	818.4	0.1941	7.385	864.6	0.1915
23	0.000		0.1900	3.478	760.5	0.1900	5.902	792.6	0.1872
24	0.000		0.1873	1.390	636.2	0.1873	2.410	651.6	0.1844
25	0.000		0.1862	0.825	605.9	0.1862	1.413	613.1	0.1833

	Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.810	628.6	0.7396	4.291	610.7	0.7396	4.882	597.3	0.7396
2	13.925	843.8	0.7396	15.603	751.5	0.7396	17.559	689.6	0.7396
3	18.439	884.6	0.7185	20.562	772.8	0.7217	22.943	698.3	0.7252
4	20.408	929.9	0.6653	22.787	802.5	0.6727	25.368	710.8	0.6806
5	20.919	957.2	0.6033	23.486	825.0	0.6156	26.228	721.0	0.6288
6	20.907	974.9	0.5447	23.634	844.7	0.5612	26.562	733.0	0.5799
7	20.753	985.4	0.4942	23.613	861.5	0.5136	26.752	746.8	0.5373
8	20.579	990.8	0.4514	23.547	875.4	0.4725	26.916	762.2	0.5006
9	20.571	999.8	0.4147	23.759	891.0	0.4363	27.414	781.8	0.4680
10	20.441	997.7	0.3831	23.686	898.6	0.4045	27.473	798.1	0.4390
11	20.136	991.9	0.3562	23.321	903.9	0.3771	27.429	813.9	0.4135
12	19.757	983.2	0.3331	22.974	908.2	0.3534	27.298	829.6	0.3909
13	19.328	972.4	0.3130	22.571	911.8	0.3327	27.103	845.1	0.3708
14	18.853	959.2	0.2955	22.115	914.3	0.3147	26.846	860.2	0.3528
15	18.323	944.1	0.2801	21.591	915.1	0.2988	26.506	874.6	0.3366
16	17.714	926.7	0.2665	20.971	913.6	0.2848	26.055	887.7	0.3221
17	16.958	906.9	0.2546	20.179	908.8	0.2723	25.412	899.6	0.3093
18	15.808	884.8	0.2447	18.974	901.4	0.2621	24.326	909.2	0.2990
19	14.855	859.5	0.2356	17.918	887.7	0.2525	23.292	911.0	0.2886
20	13.827	830.8	0.2275	16.734	867.5	0.2438	22.008	902.9	0.2789
21	12.684	794.4	0.2200	15.225	834.1	0.2356	20.159	875.9	0.2694
22	10.648	749.8	0.2139	12.930	791.1	0.2292	17.340	836.0	0.2625
23	8.380	700.6	0.2088	10.156	734.3	0.2235	13.709	774.8	0.2559
24	3.404	615.6	0.2055	4.113	627.2	0.2199	5.537	641.2	0.2513
25	1.942	590.8	0.2029	2.314	596.3	0.2165	3.047	602.6	0.2459

Table 4-78. LS1 Burnup and TH Feedback Parameters Assembly E4 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.895	602.2	0.7396
2	17.605	719.5	0.7396
3	23.003	743.0	0.7253
4	25.437	774.1	0.6808
5	26.302	792.0	0.6291
6	26.640	806.5	0.5802
7	26.834	821.4	0.5377
8	27.001	832.7	0.5010
9	27.503	848.1	0.4684
10	27.565	859.8	0.4395
11	27.623	867.7	0.4139
12	27.404	916.7	0.3914
13	27.249	1103.0	0.3714
14	27.002	1165.6	0.3533
15	26.660	1144.9	0.3369
16	26.203	1113.3	0.3224
17	25.652	1072.7	0.3095
18	24.458	1033.6	0.2991
19	23.416	996.0	0.2887
20	22.122	951.1	0.2790
21	20.261	900.0	0.2695
22	17.428	844.2	0.2625
23	13.779	777.7	0.2559
24	8.565	642.1	0.2513
25	3.063	607.4	0.2480

Table 4-79. LS1 Burnup and TH Feedback Parameters Assembly E5

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.737	669.6	0.7396	2.906	681.3	0.7396
2	0.000		0.7396	6.321	1047.1	0.7396	10.582	1110.2	0.7396
3	0.000		0.7092	8.461	1168.4	0.7092	13.992	1229.4	0.7056
4	0.000	Data	0.6436	9.352	1262.9	0.6436	15.256	1296.5	0.6374
5	0.000	Not	0.5892	9.388	1266.9	0.5892	15.248	1288.5	0.5619
6	0.000	Required	0.5029	9.142	1240.0	0.5029	14.874	1265.2	0.4958
7	0.000		0.4501	8.888	1212.8	0.4501	14.500	1243.7	0.4435
8	0.000		0.4082	8.693	1192.3	0.4082	14.210	1227.0	0.4019
9	0.000		0.3736	8.664	1189.3	0.3736	14.166	1224.4	0.3677
10	0.000		0.3445	8.512	1173.6	0.3445	13.941	1211.7	0.3388
11	0.000		0.3200	8.340	1156.1	0.3200	13.702	1200.1	0.3145
12	0.000		0.2991	8.151	1137.2	0.2991	13.448	1189.0	0.2937
13	0.000		0.2810	7.950	1117.4	0.2810	13.182	1178.1	0.2756
14	0.000		0.2654	7.735	1096.7	0.2654	12.901	1167.0	0.2599
15	0.000		0.2516	7.497	1074.2	0.2516	12.590	1154.9	0.2460
16	0.000		0.2395	7.225	1049.1	0.2395	12.227	1140.0	0.2337
17	0.000		0.2288	6.876	1017.8	0.2288	11.747	1118.9	0.2228
18	0.000		0.2196	6.280	966.7	0.2196	10.915	1081.9	0.2131
19	0.000		0.2117	5.921	937.2	0.2117	10.340	1049.2	0.2048
20	0.000		0.2048	5.592	911.1	0.2048	9.751	1011.2	0.1977
21	0.000		0.1986	5.241	884.1	0.1986	9.057	963.4	0.1913
22	0.000		0.1932	4.517	831.0	0.1932	7.778	891.0	0.1859
23	0.000		0.1890	3.648	771.6	0.1890	6.253	812.9	0.1816
24	0.000		0.1861	1.473	640.8	0.1861	2.581	659.7	0.1786
25	0.000		0.1850	0.676	608.7	0.1850	1.622	618.0	0.1776

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.208	642.0	0.7396	4.980	642.6	0.7396	6.468	656.9	0.7396
2	15.286	904.2	0.7396	17.978	891.6	0.7396	22.677	912.5	0.7396
3	20.231	971.1	0.7130	23.774	953.3	0.7166	29.415	933.0	0.7177
4	22.392	1050.7	0.6534	26.441	1028.1	0.6590	32.369	957.4	0.6641
5	22.693	1099.0	0.6851	27.216	1071.3	0.6931	33.245	966.1	0.6017
6	22.788	1125.5	0.6219	27.224	1089.6	0.6307	33.347	974.3	0.5422
7	22.657	1139.6	0.4685	27.023	1094.5	0.4771	33.272	985.4	0.4907
8	22.381	1151.4	0.4247	26.663	1097.2	0.4325	33.285	999.0	0.4473
9	22.527	1171.0	0.3881	27.066	1106.6	0.3953	33.703	1020.4	0.4104
10	22.300	1170.6	0.3570	26.621	1103.6	0.3637	33.625	1035.9	0.3788
11	21.959	1160.2	0.3305	26.451	1098.8	0.3368	33.425	1051.9	0.3517
12	21.539	1143.3	0.3080	26.003	1094.2	0.3138	33.152	1068.7	0.3283
13	21.067	1122.6	0.2885	25.524	1093.1	0.2941	32.845	1085.5	0.3080
14	20.549	1099.3	0.2716	25.034	1097.7	0.2768	32.514	1101.2	0.2901
15	19.960	1072.7	0.2569	24.503	1107.3	0.2618	32.127	1115.7	0.2743
16	19.255	1040.8	0.2439	23.829	1112.5	0.2484	31.582	1128.8	0.2602
17	18.348	1002.4	0.2324	22.863	1102.6	0.2365	30.726	1140.1	0.2477
18	17.034	950.9	0.2225	21.388	1076.3	0.2263	29.322	1147.5	0.2368
19	15.968	920.6	0.2139	20.084	1038.5	0.2171	27.944	1139.8	0.2268
20	14.898	882.8	0.2063	18.731	995.5	0.2093	26.334	1113.6	0.2178
21	13.620	839.1	0.1997	17.058	938.5	0.2023	24.068	1055.3	0.2099
22	11.607	787.4	0.1942	14.572	875.0	0.1965	20.757	979.7	0.2034
23	9.223	731.0	0.1898	11.581	800.0	0.1920	16.609	883.3	0.1981
24	3.636	629.9	0.1870	4.837	655.0	0.1892	7.036	687.1	0.1950
25	2.231	600.3	0.1856	2.798	614.0	0.1877	4.043	631.0	0.1932

Table 4-79. LS1 Burnup and TH Feedback Parameters Assembly E5 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.482	605.5	0.7396
2	22.719	704.4	0.7396
3	29.487	716.5	0.7177
4	32.426	733.0	0.6642
5	33.307	749.8	0.6018
6	33.416	774.1	0.5427
7	33.346	792.0	0.4912
8	33.344	810.2	0.4479
9	33.787	828.9	0.4110
10	33.712	840.3	0.3795
11	33.513	844.2	0.3523
12	33.240	844.2	0.3289
13	32.933	844.2	0.3085
14	32.601	840.3	0.2907
15	32.211	828.9	0.2748
16	31.664	821.4	0.2607
17	30.806	813.9	0.2481
18	29.400	806.5	0.2372
19	28.019	795.6	0.2273
20	26.404	777.7	0.2183
21	24.133	760.1	0.2103
22	20.614	733.0	0.2038
23	16.655	697.1	0.1985
24	7.055	616.0	0.1954
25	4.053	590.6	0.1937

Table 4-80. LS1 Burnup and TH Feedback Parameters Assembly E6

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.670	665.0	0.7396	2.739	670.2	0.7396
2	0.000		0.7396	6.109	1026.0	0.7396	10.005	1052.0	0.7396
3	0.000		0.7121	8.215	1143.6	0.7121	13.369	1165.0	0.7111
4	0.000	Data	0.6493	9.158	1241.7	0.6493	14.707	1232.6	0.6481
5	0.000	Not	0.5759	9.290	1256.1	0.5759	14.794	1224.7	0.5765
6	0.000	Required	0.5091	9.136	1239.3	0.5091	14.482	1197.4	0.5097
7	0.000		0.4552	8.955	1219.9	0.4552	14.149	1171.7	0.4565
8	0.000		0.4121	8.811	1204.7	0.4121	13.886	1151.9	0.4139
9	0.000		0.3764	8.814	1205.0	0.3764	13.858	1146.9	0.3788
10	0.000		0.3463	8.668	1189.7	0.3463	13.636	1134.5	0.3491
11	0.000		0.3211	8.483	1170.6	0.3211	13.380	1123.1	0.3241
12	0.000		0.2996	8.264	1148.6	0.2996	13.093	1112.2	0.3027
13	0.000		0.2812	8.026	1124.9	0.2812	12.790	1102.0	0.2843
14	0.000		0.2654	7.772	1100.2	0.2654	12.474	1092.3	0.2683
15	0.000		0.2516	7.499	1074.4	0.2516	12.138	1082.5	0.2543
16	0.000		0.2395	7.198	1046.7	0.2395	11.772	1072.6	0.2420
17	0.000		0.2290	6.830	1013.6	0.2290	11.321	1060.0	0.2311
18	0.000		0.2200	6.215	961.3	0.2200	10.525	1033.1	0.2216
19	0.000		0.2122	5.823	929.4	0.2122	9.962	1008.4	0.2134
20	0.000		0.2054	5.447	899.8	0.2054	9.352	976.5	0.2061
21	0.000		0.1994	5.055	870.1	0.1994	8.641	932.6	0.1996
22	0.000		0.1942	4.318	816.9	0.1942	7.380	866.5	0.1941
23	0.000		0.1901	3.461	759.4	0.1901	5.896	793.8	0.1899
24	0.000		0.1875	1.382	635.8	0.1875	2.404	651.8	0.1871
25	0.000		0.1864	0.820	605.6	0.1864	1.405	612.8	0.1859

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.842	629.0	0.7396	4.275	605.5	0.7396	4.793	692.6	0.7396
2	14.052	846.0	0.7396	15.585	730.6	0.7396	17.289	673.3	0.7396
3	18.585	888.1	0.7185	20.505	760.0	0.7217	22.611	681.4	0.7248
4	20.507	934.5	0.6651	22.671	777.5	0.6725	24.973	693.4	0.6798
5	20.826	962.0	0.6029	23.285	800.1	0.6152	25.760	704.1	0.6279
6	20.813	978.9	0.5446	23.355	822.0	0.5615	26.030	716.7	0.5797
7	20.581	987.7	0.4945	23.282	841.5	0.5150	26.186	731.4	0.5384
8	20.347	990.2	0.4522	23.182	858.3	0.4748	26.334	747.7	0.5029
9	20.382	995.7	0.4158	23.361	876.6	0.4395	26.811	767.7	0.4717
10	20.098	990.3	0.3845	23.167	887.2	0.4082	26.852	784.6	0.4437
11	19.743	981.7	0.3578	22.885	895.5	0.3812	26.790	800.6	0.4191
12	19.329	970.8	0.3349	22.506	902.9	0.3577	26.651	816.6	0.3972
13	18.875	958.1	0.3150	22.095	908.6	0.3372	26.451	832.0	0.3776
14	18.383	943.4	0.2976	21.631	912.4	0.3191	26.183	846.6	0.3597
15	17.847	927.1	0.2825	21.101	913.2	0.3032	25.833	860.3	0.3436
16	17.252	908.6	0.2690	20.484	910.3	0.2890	25.381	873.0	0.3290
17	16.540	888.3	0.2572	19.723	903.7	0.2765	24.760	884.0	0.3161
18	15.449	865.8	0.2473	18.558	893.8	0.2661	23.706	892.8	0.3056
19	14.543	840.4	0.2382	17.632	876.1	0.2564	22.696	894.1	0.2950
20	13.535	811.9	0.2299	16.351	855.9	0.2474	21.412	885.9	0.2851
21	12.309	776.5	0.2223	14.845	821.2	0.2391	19.570	859.8	0.2755
22	10.397	734.0	0.2161	12.568	776.3	0.2325	16.774	821.0	0.2683
23	8.173	688.5	0.2107	9.846	723.3	0.2265	13.216	762.3	0.2616
24	3.315	611.1	0.2076	3.979	623.0	0.2229	5.317	636.3	0.2567
25	1.892	588.5	0.2051	2.239	594.0	0.2194	2.923	599.9	0.2509

Table 4-80. LS1 Burnup and TH Feedback Parameters Assembly E6 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	4.805	598.9	0.7396
2	17.331	704.4	0.7396
3	22.668	726.3	0.7249
4	25.038	760.2	0.68
5	25.834	792.0	0.6282
6	26.123	863.7	0.5801
7	26.324	1062.7	0.5390
8	26.490	1155.6	0.5035
9	26.972	1182.9	0.4721
10	27.012	1177.4	0.4440
11	26.947	1161.0	0.4192
12	26.805	1144.9	0.3972
13	26.602	1129.0	0.3774
14	26.331	1113.3	0.3596
15	25.978	1097.9	0.3434
16	25.522	1077.7	0.3289
17	24.896	1052.9	0.3159
18	23.837	1028.6	0.3054
19	22.621	1000.6	0.2948
20	21.530	968.6	0.2849
21	19.677	920.9	0.2753
22	16.867	863.7	0.2681
23	13.292	799.2	0.2614
24	6.350	656.9	0.2565
25	2.941	613.1	0.2507

Table 4-81. LS1 Burnup and TH Feedback Parameters Assembly E7

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.772	671.9	0.7396	2.859	672.2	0.7396
2	0.000		0.7396	6.442	1059.2	0.7396	10.403	1062.6	0.7396
3	0.000		0.7069	8.595	1182.2	0.7069	13.805	1174.4	0.7068
4	0.000	Data	0.6393	9.465	1276.4	0.6393	15.084	1245.0	0.6396
5	0.000	Not	0.5638	9.484	1277.5	0.5638	15.106	1245.5	0.5648
6	0.000	Required	0.4975	9.234	1250.0	0.4975	14.760	1228.6	0.4989
7	0.000		0.4451	8.980	1222.6	0.4451	14.407	1211.3	0.4465
8	0.000		0.4035	8.791	1202.6	0.4035	14.134	1196.9	0.4047
9	0.000		0.3691	8.771	1200.5	0.3691	14.106	1195.5	0.3703
10	0.000		0.3403	8.630	1185.8	0.3403	13.898	1184.1	0.3413
11	0.000		0.3160	8.472	1169.5	0.3160	13.677	1173.5	0.3168
12	0.000		0.2953	8.300	1152.1	0.2953	13.442	1163.0	0.2958
13	0.000		0.2773	8.115	1133.6	0.2773	13.194	1152.6	0.2777
14	0.000		0.2617	7.909	1113.5	0.2617	12.923	1142.0	0.2619
15	0.000		0.2479	7.670	1090.5	0.2479	12.611	1130.1	0.2478
16	0.000		0.2358	7.387	1064.0	0.2358	12.237	1115.5	0.2354
17	0.000		0.2252	7.022	1030.8	0.2252	11.747	1095.9	0.2245
18	0.000		0.2159	6.404	977.1	0.2159	10.918	1063.5	0.2149
19	0.000		0.2081	6.021	945.4	0.2081	10.364	1037.8	0.2066
20	0.000		0.2012	5.670	917.2	0.2012	9.805	1007.8	0.1992
21	0.000		0.1951	5.306	889.0	0.1951	9.142	966.1	0.1927
22	0.000		0.1898	4.576	835.2	0.1898	7.882	896.7	0.1871
23	0.000		0.1855	3.702	775.1	0.1855	6.355	818.4	0.1827
24	0.000		0.1827	1.497	642.1	0.1827	2.627	661.7	0.1797
25	0.000		0.1816	0.893	609.5	0.1816	1.547	618.9	0.1785

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.911	625.7	0.7396	4.356	606.6	0.7396	5.070	605.2	0.7396
2	14.261	830.3	0.7396	15.817	736.0	0.7396	18.171	718.9	0.7396
3	18.790	870.4	0.7154	20.774	757.1	0.7189	23.631	728.4	0.7230
4	20.655	916.0	0.6590	22.890	785.6	0.6670	25.974	743.2	0.6763
5	21.030	944.7	0.6953	23.452	807.6	0.6085	26.704	754.4	0.6236
6	20.925	964.8	0.6370	23.501	826.1	0.5547	26.935	766.6	0.5753
7	20.748	979.6	0.4878	23.443	840.7	0.5086	27.075	780.2	0.5336
8	20.635	993.7	0.4463	23.420	852.0	0.4687	27.254	794.3	0.4972
9	20.675	1017.3	0.4106	23.753	863.8	0.4335	27.831	811.7	0.4643
10	20.837	1032.7	0.3798	23.743	867.4	0.4023	27.998	824.6	0.4345
11	20.718	1042.0	0.3531	23.638	869.2	0.3761	28.062	837.1	0.4079
12	20.499	1043.4	0.3299	23.433	871.0	0.3512	28.027	849.8	0.3843
13	20.206	1039.3	0.3097	23.168	873.3	0.3305	27.924	862.9	0.3634
14	19.837	1030.4	0.2919	22.811	876.1	0.3123	27.752	876.5	0.3448
15	19.376	1017.0	0.2761	22.371	878.9	0.2962	27.489	890.4	0.3283
16	18.808	999.8	0.2622	21.817	880.7	0.2820	27.109	904.4	0.3137
17	18.077	978.9	0.2500	21.088	880.9	0.2695	26.539	917.3	0.3007
18	16.980	954.5	0.2396	19.965	880.2	0.2592	25.552	928.5	0.2901
19	16.045	924.8	0.2301	19.018	878.0	0.2495	24.644	931.8	0.2796
20	15.048	890.2	0.2215	17.964	868.6	0.2407	23.497	924.1	0.2697
21	13.782	844.7	0.2136	16.532	847.6	0.2325	21.720	896.0	0.2601
22	11.752	790.2	0.2072	14.216	812.6	0.2260	18.874	854.7	0.2529
23	9.302	729.6	0.2017	11.267	755.0	0.2201	15.057	791.2	0.2463
24	3.613	626.1	0.1983	4.603	634.8	0.2161	6.161	649.0	0.2418
25	2.164	596.5	0.1958	2.595	599.8	0.2123	3.411	607.1	0.2368

Table 4-81. LS1 Burnup and TH Feedback Parameters Assembly E7 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.094	639.6	0.7396
2	18.251	859.8	0.7396
3	23.733	900.0	0.7231
4	26.088	951.1	0.6765
5	26.825	982.3	0.6238
6	27.059	996.0	0.5755
7	27.200	1000.6	0.5338
8	27.380	1005.2	0.4973
9	27.960	1019.3	0.4643
10	28.128	1024.0	0.4345
11	28.192	1024.0	0.4079
12	28.157	1024.0	0.3843
13	28.053	1019.3	0.3634
14	27.879	1009.9	0.3447
15	27.613	996.0	0.3283
16	27.228	973.3	0.3136
17	26.652	948.7	0.3007
18	25.658	916.7	0.2901
19	24.742	883.7	0.2795
20	23.589	859.8	0.2697
21	21.802	821.4	0.2601
22	18.944	777.7	0.2529
23	15.114	733.0	0.2463
24	6.186	633.3	0.2417
25	3.425	601.8	0.2368

Table 4-82. LS1 Burnup and TH Feedback Parameters Assembly E8

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.868	664.9	0.7396	2.807	678.0	0.7396
2	0.000		0.7396	6.109	1026.0	0.7396	10.254	1093.7	0.7396
3	0.000		0.7125	8.231	1145.2	0.7125	13.667	1212.9	0.7085
4	0.000	Data	0.6500	9.155	1241.4	0.6500	14.874	1281.0	0.6430
5	0.000	Not	0.5771	9.244	1251.1	0.5771	15.034	1275.7	0.5690
6	0.000	Required	0.5108	9.044	1229.4	0.5108	14.722	1255.5	0.5028
7	0.000		0.4572	8.818	1205.4	0.4572	14.389	1236.5	0.4497
8	0.000		0.4146	8.628	1185.6	0.4146	14.100	1219.1	0.4075
9	0.000		0.3795	8.589	1181.5	0.3795	14.037	1215.0	0.3729
10	0.000		0.3500	8.423	1164.5	0.3500	13.791	1201.2	0.3437
11	0.000		0.3251	8.238	1145.9	0.3251	13.534	1188.9	0.3191
12	0.000		0.3039	8.036	1125.9	0.3039	13.266	1177.7	0.2980
13	0.000		0.2856	7.822	1105.0	0.2856	12.989	1167.2	0.2798
14	0.000		0.2698	7.596	1083.6	0.2698	12.700	1156.7	0.2638
15	0.000		0.2559	7.350	1060.6	0.2559	12.385	1145.4	0.2498
16	0.000		0.2437	7.070	1035.1	0.2437	12.023	1132.1	0.2373
17	0.000		0.2330	6.718	1004.0	0.2330	11.551	1112.9	0.2263
18	0.000		0.2237	6.125	953.9	0.2237	10.728	1077.0	0.2165
19	0.000		0.2157	5.771	925.2	0.2157	10.159	1044.6	0.2081
20	0.000		0.2088	5.449	900.0	0.2088	9.574	1006.4	0.2009
21	0.000		0.2027	5.106	873.9	0.2027	8.883	958.1	0.1946
22	0.000		0.1973	4.393	822.2	0.1973	7.614	886.0	0.1892
23	0.000		0.1930	3.638	764.4	0.1930	6.104	808.5	0.1849
24	0.000		0.1901	1.424	638.1	0.1901	2.512	657.8	0.1816
25	0.000		0.1890	0.847	607.0	0.1890	1.478	616.8	0.1807

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.170	646.0	0.7396	4.927	641.1	0.7396	6.347	652.2	0.7396
2	15.182	922.5	0.7396	17.831	885.2	0.7396	22.345	895.7	0.7396
3	20.128	990.2	0.7139	23.632	947.8	0.7164	29.083	917.3	0.7190
4	22.310	1069.4	0.6551	26.343	1025.7	0.6605	32.090	941.9	0.6665
5	22.862	1117.0	0.5867	27.193	1072.6	0.5948	33.043	950.7	0.6045
6	22.823	1144.3	0.5228	27.289	1094.5	0.5318	33.228	958.3	0.5448
7	22.654	1161.0	0.4691	27.166	1102.1	0.4778	33.225	968.7	0.4929
8	22.500	1176.0	0.4250	27.042	1107.1	0.4331	33.254	982.1	0.4493
9	22.643	1196.7	0.3883	27.259	1119.5	0.3957	33.713	1003.7	0.4122
10	22.399	1198.9	0.3571	27.014	1119.4	0.3639	33.644	1019.7	0.3805
11	22.048	1186.7	0.3306	26.642	1116.2	0.3368	33.452	1036.4	0.3533
12	21.625	1170.8	0.3080	26.197	1112.1	0.3137	33.190	1053.7	0.3298
13	21.151	1150.5	0.2885	25.702	1108.6	0.2938	32.882	1071.7	0.3093
14	20.609	1125.0	0.2716	25.138	1105.0	0.2765	32.509	1090.4	0.2914
15	19.967	1092.9	0.2567	24.483	1099.5	0.2614	32.022	1109.1	0.2758
16	19.206	1055.1	0.2436	23.626	1087.0	0.2480	31.361	1127.0	0.2615
17	18.259	1011.9	0.2323	22.531	1063.1	0.2363	30.408	1141.6	0.2491
18	16.912	966.4	0.2223	20.970	1029.5	0.2261	28.932	1150.4	0.2382
19	15.621	923.3	0.2138	19.610	988.9	0.2173	27.502	1143.1	0.2283
20	14.722	882.9	0.2065	18.209	945.4	0.2095	25.841	1116.5	0.2195
21	13.422	837.4	0.2001	16.515	891.7	0.2029	23.548	1057.5	0.2116
22	11.401	784.6	0.1946	14.034	833.1	0.1974	20.231	980.8	0.2051
23	9.037	728.7	0.1903	11.108	768.9	0.1929	16.135	883.2	0.1999
24	3.751	629.0	0.1875	4.629	643.2	0.1901	6.813	686.2	0.1968
25	2.161	600.0	0.1863	2.680	607.8	0.1889	3.916	630.5	0.1951

Table 4-82. LS1 Burnup and TH Feedback Parameters Assembly E8 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.357	592.3	0.7396
2	22.380	678.5	0.7396
3	29.125	684.5	0.719
4	32.136	697.1	0.6668
5	33.093	710.0	0.6047
6	33.284	729.6	0.5451
7	33.286	746.4	0.4933
8	33.321	767.1	0.4499
9	33.784	781.2	0.4129
10	33.719	795.6	0.3811
11	33.528	799.2	0.3539
12	33.268	806.5	0.3304
13	32.960	806.5	0.3099
14	32.585	799.2	0.2920
15	32.097	795.6	0.2761
16	31.434	788.4	0.2621
17	30.479	781.2	0.2498
18	29.001	774.1	0.2387
19	27.589	767.1	0.2289
20	25.904	753.3	0.2200
21	23.606	736.3	0.2121
22	20.281	710.0	0.2057
23	16.175	678.3	0.2004
24	6.829	607.4	0.1972
25	3.923	585.1	0.1955

Table 4-83. LS1 Burnup and TH Feedback Parameters Assembly E9

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.625	662.0	0.7396	2.694	670.2	0.7396
2	0.000		0.7396	5.919	1007.5	0.7396	9.806	1050.6	0.7396
3	0.000		0.7148	7.950	1117.4	0.7148	13.109	1165.8	0.7120
4	0.000	Data	0.6552	8.864	1210.2	0.6552	14.454	1239.8	0.6501
5	0.000	Not	0.5845	8.990	1223.6	0.5845	14.604	1244.1	0.5783
6	0.000	Required	0.5189	8.829	1206.6	0.5189	14.367	1230.7	0.5126
7	0.000		0.4651	8.634	1186.2	0.4651	14.092	1216.7	0.4591
8	0.000		0.4220	8.474	1169.7	0.4220	13.854	1203.2	0.4163
9	0.000		0.3865	8.486	1168.9	0.3865	13.836	1201.5	0.3810
10	0.000		0.3565	8.334	1155.5	0.3565	13.638	1190.2	0.3512
11	0.000		0.3311	8.186	1140.7	0.3311	13.425	1179.2	0.3260
12	0.000		0.3095	8.022	1124.5	0.3095	13.189	1168.8	0.3045
13	0.000		0.2908	7.843	1107.1	0.2908	12.960	1158.9	0.2858
14	0.000		0.2744	7.643	1088.0	0.2744	12.697	1148.5	0.2694
15	0.000		0.2601	7.411	1066.2	0.2601	12.393	1136.6	0.2550
16	0.000		0.2475	7.134	1040.9	0.2475	12.024	1121.9	0.2422
17	0.000		0.2365	6.772	1008.7	0.2365	11.530	1101.0	0.2308
18	0.000		0.2269	6.161	956.8	0.2269	10.684	1064.6	0.2209
19	0.000		0.2188	5.794	927.1	0.2188	10.111	1034.1	0.2124
20	0.000		0.2117	5.468	901.4	0.2117	9.543	999.3	0.2048
21	0.000		0.2054	5.133	875.9	0.2054	8.887	955.0	0.1983
22	0.000		0.1998	4.433	825.0	0.1998	7.654	886.0	0.1926
23	0.000		0.1954	3.587	767.6	0.1954	6.167	810.1	0.1881
24	0.000		0.1924	1.449	639.5	0.1924	2.548	658.9	0.1849
25	0.000		0.1912	0.862	607.6	0.1912	1.501	617.5	0.1837

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.857	632.9	0.7396	4.278	604.2	0.7396	4.864	596.9	0.7396
2	14.040	861.7	0.7396	15.607	724.9	0.7396	17.448	688.7	0.7396
3	18.553	905.9	0.7190	20.420	744.2	0.7220	22.789	697.5	0.7253
4	20.503	955.1	0.6661	22.617	771.6	0.6731	25.201	711.0	0.6810
5	20.989	983.6	0.6039	23.300	794.5	0.6159	26.064	722.4	0.6291
6	20.947	1000.6	0.5448	23.439	815.9	0.5615	26.405	735.5	0.5804
7	20.767	1009.0	0.4938	23.419	835.4	0.5141	26.613	750.5	0.5380
8	20.657	1011.4	0.4508	23.352	853.2	0.4735	26.789	766.8	0.5018
9	20.605	1017.3	0.4141	23.560	873.7	0.4380	27.291	787.1	0.4700
10	20.339	1011.3	0.3826	23.400	887.5	0.4070	27.363	803.5	0.4414
11	20.017	1001.6	0.3559	23.180	901.0	0.3800	27.352	818.5	0.4160
12	19.648	989.1	0.3327	22.921	915.6	0.3566	27.283	832.5	0.3934
13	19.237	974.3	0.3126	22.618	930.6	0.3360	27.158	845.7	0.3729
14	18.778	957.7	0.2950	22.231	940.6	0.3177	26.947	859.1	0.3545
15	18.251	939.2	0.2795	21.722	943.2	0.3013	26.614	872.7	0.3379
16	17.627	918.6	0.2659	21.064	938.4	0.2866	26.125	885.9	0.3231
17	16.840	895.4	0.2538	20.199	927.6	0.2737	25.406	897.5	0.3099
18	15.863	870.0	0.2436	18.916	913.1	0.2628	24.233	906.4	0.2993
19	14.711	841.8	0.2343	17.810	892.5	0.2527	23.131	906.7	0.2885
20	13.723	811.7	0.2260	16.621	866.3	0.2435	21.818	896.7	0.2784
21	12.545	775.8	0.2183	15.140	828.4	0.2349	19.976	868.3	0.2685
22	10.572	734.1	0.2120	12.891	783.6	0.2282	17.188	827.7	0.2612
23	8.459	689.4	0.2067	10.175	727.9	0.2222	13.629	768.0	0.2543
24	3.473	611.9	0.2033	4.158	625.0	0.2183	5.550	639.4	0.2494
25	1.999	589.1	0.2009	2.360	595.3	0.2149	3.082	602.0	0.2441

Table 4-83. LS1 Burnup and TH Feedback Parameters Assembly E9 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.677	602.2	0.7396
2	17.493	715.7	0.7396
3	22.848	739.7	0.7254
4	25.268	767.1	0.6811
5	26.137	788.4	0.6295
6	26.484	810.2	0.5808
7.	26.696	825.1	0.5385
8	26.877	844.2	0.5023
9	27.383	859.8	0.4705
10	27.456	863.7	0.4419
11	27.446	867.7	0.4165
12	27.377	867.7	0.3938
13	27.251	863.7	0.3734
14	27.040	863.7	0.3549
15	26.705	855.8	0.3383
16	26.213	844.2	0.3234
17	25.492	836.5	0.3103
18	24.316	821.4	0.2995
19	23.209	806.5	0.2888
20	21.890	784.6	0.2787
21	20.041	760.2	0.2688
22	17.244	729.6	0.2614
23	13.673	690.8	0.2546
24	5.668	613.1	0.2497
25	3.095	599.0	0.2444

Table 4-84. LS1 Burnup and TH Feedback Parameters Assembly E10

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.740	669.7	0.7396	2.909	681.3	0.7396
2	0.000		0.7396	6.328	1047.6	0.7396	10.573	1110.9	0.7396
3	0.000		0.7091	8.468	1169.1	0.7091	14.003	1230.1	0.7055
4	0.000	Data	0.6433	9.358	1263.6	0.6433	15.265	1297.1	0.6372
5	0.000	Not	0.5688	9.392	1267.3	0.5688	15.253	1288.6	0.5616
6	0.000	Required	0.5025	9.144	1240.2	0.5025	14.677	1265.4	0.4955
7	0.000		0.4498	8.889	1212.9	0.4498	14.502	1243.9	0.4432
8	0.000		0.4079	8.694	1192.4	0.4079	14.212	1227.2	0.4016
9	0.000		0.3734	8.664	1189.3	0.3734	14.166	1224.4	0.3674
10	0.000		0.3443	8.512	1173.6	0.3443	13.942	1211.8	0.3386
11	0.000		0.3198	8.340	1156.1	0.3198	13.702	1200.1	0.3143
12	0.000		0.2989	8.151	1137.2	0.2989	13.448	1189.0	0.2935
13	0.000		0.2808	7.950	1117.4	0.2808	13.182	1178.1	0.2754
14	0.000		0.2652	7.734	1096.6	0.2652	12.901	1167.2	0.2597
15	0.000		0.2514	7.497	1074.2	0.2514	12.590	1154.9	0.2458
16	0.000		0.2393	7.224	1049.0	0.2393	12.227	1140.2	0.2335
17	0.000		0.2287	6.875	1017.7	0.2287	11.747	1119.1	0.2226
18	0.000		0.2195	6.279	966.6	0.2195	10.914	1081.9	0.2130
19	0.000		0.2115	5.921	937.2	0.2115	10.339	1049.0	0.2047
20	0.000		0.2046	5.591	911.0	0.2046	9.760	1011.2	0.1975
21	0.000		0.1984	5.240	884.0	0.1984	9.056	963.4	0.1912
22	0.000		0.1931	4.516	830.9	0.1931	7.777	891.0	0.1858
23	0.000		0.1889	3.647	771.5	0.1889	6.251	812.8	0.1815
24	0.000		0.1859	1.473	640.8	0.1859	2.580	659.6	0.1785
25	0.000		0.1849	0.878	609.4	0.1849	1.522	618.0	0.1774

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (305.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	305.8 Cy 7	305.8 Cy 7	305.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.211	642.0	0.7396	4.984	642.9	0.7396	6.472	656.9	0.7396
2	15.297	904.2	0.7396	17.989	891.6	0.7396	22.689	912.6	0.7396
3	20.243	971.2	0.7129	23.787	953.5	0.7155	29.429	933.1	0.7176
4	22.402	1050.8	0.6532	26.452	1028.3	0.6587	32.380	957.4	0.6639
5	22.900	1099.2	0.5849	27.223	1071.3	0.5929	33.253	966.2	0.6014
6	22.792	1125.6	0.5216	27.228	1089.6	0.5304	33.353	974.4	0.5420
7	22.658	1139.7	0.4683	27.025	1094.7	0.4768	33.275	985.4	0.4904
8	22.382	1151.3	0.4244	26.664	1097.2	0.4323	33.267	999.1	0.4470
9	22.627	1171.0	0.3878	27.068	1108.6	0.3950	33.704	1020.5	0.4102
10	22.299	1170.5	0.3568	26.820	1103.6	0.3635	33.625	1036.0	0.3786
11	21.958	1160.1	0.3303	26.449	1098.7	0.3366	33.424	1052.0	0.3515
12	21.538	1143.2	0.3078	26.002	1094.2	0.3137	33.151	1068.7	0.3282
13	21.066	1122.5	0.2884	25.523	1093.1	0.2938	32.844	1085.5	0.3076
14	20.547	1099.1	0.2715	25.032	1097.7	0.2767	32.513	1101.3	0.2899
15	19.959	1072.5	0.2567	24.501	1107.1	0.2616	32.125	1115.7	0.2741
16	19.254	1040.7	0.2437	23.827	1112.3	0.2483	31.580	1128.6	0.2600
17	18.347	1002.3	0.2323	22.861	1102.5	0.2364	30.724	1140.1	0.2475
18	17.032	960.8	0.2223	21.386	1076.3	0.2261	29.320	1147.5	0.2368
19	15.967	920.6	0.2138	20.082	1038.4	0.2171	27.942	1139.8	0.2266
20	14.897	882.8	0.2062	18.728	995.2	0.2091	26.331	1113.6	0.2177
21	13.618	839.0	0.1996	17.055	938.4	0.2022	24.065	1055.3	0.2098
22	11.605	787.3	0.1941	14.569	874.8	0.1965	20.764	979.7	0.2033
23	9.221	731.0	0.1898	11.579	800.0	0.1918	16.606	883.2	0.1979
24	3.836	629.9	0.1869	4.837	655.0	0.1890	7.035	687.0	0.1949
25	2.231	600.3	0.1856	2.798	614.0	0.1876	4.043	631.0	0.1932

Table 4-84. LS1 Burnup and TH Feedback Parameters Assembly E10 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.486	605.5	0.7398
2	22.731	704.4	0.7398
3	29.480	713.2	0.7177
4	32.437	733.0	0.6641
5	33.315	749.6	0.6017
6	33.421	770.6	0.5424
7	33.349	791.9	0.4909
8	33.346	810.2	0.4476
9	33.788	828.9	0.4108
10	33.712	840.3	0.3793
11	33.512	844.2	0.3521
12	33.240	848.1	0.3287
13	32.932	844.2	0.3084
14	32.599	836.5	0.2905
15	32.209	828.9	0.2747
16	31.663	825.1	0.2605
17	30.804	813.9	0.2480
18	29.398	806.5	0.2370
19	28.016	792.0	0.2271
20	26.402	781.2	0.2182
21	24.130	760.1	0.2102
22	20.811	733.0	0.2037
23	16.652	697.1	0.1984
24	7.054	616.0	0.1953
25	4.053	590.6	0.1935

Table 4-85. LS1 Burnup and TH Feedback Parameters Assembly E11

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.770	671.7	0.7396	2.856	672.1	0.7396
2	0.000		0.7396	6.436	1058.6	0.7396	10.393	1062.1	0.7396
3	0.000		0.7070	8.587	1161.3	0.7070	13.793	1173.7	0.7069
4	0.000	Data	0.6396	9.459	1274.7	0.6396	15.073	1244.1	0.6399
5	0.000	Not	0.5641	9.479	1276.9	0.5641	15.097	1244.8	0.5651
6	0.000	Required	0.4978	9.229	1249.4	0.4978	14.751	1227.9	0.4992
7	0.000		0.4454	8.975	1222.0	0.4454	14.399	1210.8	0.4468
8	0.000		0.4038	8.786	1202.0	0.4038	14.126	1196.4	0.4051
9	0.000		0.3695	8.766	1199.9	0.3695	14.098	1195.0	0.3706
10	0.000		0.3406	8.625	1185.3	0.3406	13.891	1183.8	0.3416
11	0.000		0.3163	8.467	1169.0	0.3163	13.670	1173.2	0.3170
12	0.000		0.2955	8.295	1151.6	0.2955	13.435	1162.7	0.2961
13	0.000		0.2776	8.110	1133.1	0.2776	13.187	1152.3	0.2780
14	0.000		0.2619	7.904	1113.0	0.2619	12.917	1141.8	0.2621
15	0.000		0.2481	7.655	1090.0	0.2481	12.604	1129.8	0.2481
16	0.000		0.2361	7.382	1063.5	0.2361	12.230	1116.2	0.2356
17	0.000		0.2254	7.017	1030.4	0.2254	11.740	1095.6	0.2247
18	0.000		0.2162	6.398	976.6	0.2162	10.912	1063.5	0.2151
19	0.000		0.2083	6.016	944.9	0.2083	10.357	1037.6	0.2068
20	0.000		0.2014	5.665	916.8	0.2014	9.798	1007.5	0.1994
21	0.000		0.1953	5.301	888.6	0.1953	9.135	965.8	0.1929
22	0.000		0.1900	4.571	834.8	0.1900	7.876	896.5	0.1873
23	0.000		0.1857	3.698	774.9	0.1857	6.349	818.1	0.1829
24	0.000		0.1829	1.496	642.0	0.1829	2.625	661.5	0.1799
25	0.000		0.1818	0.892	609.4	0.1818	1.548	618.9	0.1788

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.807	625.6	0.7396	4.352	608.6	0.7396	6.065	605.1	0.7396
2	14.245	829.8	0.7396	15.800	735.9	0.7396	18.150	718.6	0.7396
3	18.770	869.8	0.7156	20.752	756.9	0.7181	23.604	728.1	0.7231
4	20.636	915.4	0.6592	22.869	785.4	0.6673	25.947	742.8	0.6765
5	21.014	944.1	0.5955	23.432	807.1	0.6088	26.679	754.0	0.6239
6	20.911	964.4	0.5373	23.482	825.5	0.5550	26.912	766.4	0.5756
7	20.734	979.3	0.4882	23.426	840.4	0.5089	27.053	779.9	0.5339
8	20.622	993.2	0.4466	23.404	851.6	0.4691	27.233	794.0	0.4975
9	20.862	1016.9	0.4110	23.737	863.4	0.4338	27.810	811.4	0.4646
10	20.825	1032.2	0.3801	23.727	866.8	0.4026	27.977	824.2	0.4348
11	20.705	1041.4	0.3534	23.623	868.9	0.3763	28.042	836.7	0.4082
12	20.487	1043.0	0.3302	23.419	870.7	0.3516	28.009	849.5	0.3846
13	20.194	1038.9	0.3099	23.144	873.0	0.3308	27.907	862.7	0.3637
14	19.828	1029.9	0.2922	22.797	875.7	0.3125	27.735	876.2	0.3452
15	19.365	1016.6	0.2764	22.357	878.5	0.2964	27.472	890.2	0.3286
16	18.797	999.4	0.2624	21.804	880.4	0.2822	27.092	904.0	0.3140
17	18.067	978.6	0.2502	21.076	880.7	0.2698	26.523	917.0	0.3011
18	16.950	954.1	0.2398	19.953	879.9	0.2595	25.537	928.3	0.2905
19	16.035	924.6	0.2304	19.006	875.7	0.2498	24.628	931.5	0.2799
20	15.038	889.9	0.2217	17.952	868.4	0.2410	23.482	923.8	0.2699
21	13.773	844.6	0.2138	16.521	847.3	0.2327	21.706	895.8	0.2604
22	11.744	790.1	0.2074	14.206	812.3	0.2263	18.861	854.4	0.2532
23	9.295	729.5	0.2019	11.259	754.9	0.2203	15.046	791.0	0.2468
24	3.811	626.1	0.1985	4.600	634.7	0.2163	6.158	649.0	0.2421
25	2.181	596.4	0.1960	2.592	599.8	0.2125	3.408	607.1	0.2371

Table 4-85. LS1 Burnup and TH Feedback Parameters Assembly E11 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.089	639.5	0.7396
2	18.229	855.3	0.7396
3	23.706	900.0	0.7232
4	26.061	951.1	0.6766
5	26.799	977.8	0.6241
6	27.035	991.4	0.5758
7	27.177	998.0	0.5341
8	27.358	1000.6	0.4976
9	27.939	1019.3	0.4647
10	28.107	1024.0	0.4348
11	28.172	1024.0	0.4082
12	28.138	1019.3	0.3846
13	28.035	1014.6	0.3637
14	27.882	1009.9	0.3451
15	27.598	998.0	0.3288
16	27.211	973.3	0.3140
17	26.636	946.7	0.3010
18	25.643	916.7	0.2904
19	24.727	887.8	0.2799
20	23.673	855.8	0.2699
21	21.788	821.4	0.2604
22	18.931	777.7	0.2531
23	15.103	733.0	0.2465
24	6.182	630.3	0.2420
25	3.422	601.8	0.2370

Table 4-86. LS1 Burnup and TH Feedback Parameters Assembly E12

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.669	664.9	0.7396	2.755	672.1	0.7396
2	0.000		0.7396	6.043	1019.6	0.7396	10.004	1062.8	0.7396
3	0.000		0.7111	8.101	1132.3	0.7111	13.359	1182.4	0.7089
4	0.000	Data	0.6480	9.010	1225.8	0.6480	14.690	1255.8	0.6438
5	0.000	Not	0.5755	9.116	1237.2	0.5755	14.778	1252.6	0.5709
6	0.000	Required	0.5100	8.959	1220.3	0.5100	14.497	1230.7	0.5058
7	0.000		0.4570	8.798	1203.3	0.4570	14.214	1209.4	0.4534
8	0.000		0.4143	8.702	1193.2	0.4143	14.022	1192.8	0.4113
9	0.000		0.3787	8.777	1201.1	0.3787	14.080	1190.1	0.3762
10	0.000		0.3484	8.730	1196.2	0.3484	13.961	1177.9	0.3465
11	0.000		0.3227	8.659	1188.6	0.3227	13.824	1166.8	0.3213
12	0.000		0.3006	8.561	1178.6	0.3006	13.661	1156.1	0.2995
13	0.000		0.2815	8.433	1165.5	0.2815	13.470	1145.7	0.2807
14	0.000		0.2647	8.262	1148.3	0.2647	13.235	1135.3	0.2642
15	0.000		0.2501	8.025	1124.8	0.2501	12.926	1123.7	0.2496
16	0.000		0.2372	7.716	1094.9	0.2372	12.524	1108.9	0.2368
17	0.000		0.2261	7.297	1055.7	0.2261	11.972	1088.1	0.2256
18	0.000		0.2165	6.601	993.9	0.2165	11.046	1053.1	0.2158
19	0.000		0.2084	6.145	955.5	0.2084	10.383	1022.6	0.2073
20	0.000		0.2014	5.733	922.2	0.2014	9.730	988.3	0.1998
21	0.000		0.1953	5.322	890.2	0.1953	9.003	945.2	0.1934
22	0.000		0.1899	4.563	834.2	0.1899	7.722	878.4	0.1878
23	0.000		0.1857	3.686	774.1	0.1857	6.220	804.9	0.1833
24	0.000		0.1828	1.500	642.3	0.1828	2.584	657.6	0.1804
25	0.000		0.1817	0.898	609.7	0.1817	1.529	616.6	0.1792

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.899	631.6	0.7396	4.339	606.2	0.7396	5.348	624.6	0.7396
2	14.211	859.4	0.7396	15.601	740.3	0.7396	19.107	792.6	0.7396
3	18.848	909.6	0.7141	20.977	773.5	0.7178	25.029	809.8	0.7220
4	20.878	866.8	0.6560	23.375	816.5	0.6646	27.720	831.2	0.6739
5	21.386	1003.0	0.5901	24.159	850.5	0.6043	28.663	843.0	0.6189
6	21.383	1027.9	0.5301	24.355	875.9	0.5488	28.999	853.6	0.5674
7	21.301	1046.2	0.4804	24.409	893.7	0.5015	29.203	865.1	0.5228
8	21.269	1061.1	0.4391	24.471	906.2	0.4611	29.431	878.0	0.4836
9	21.523	1079.6	0.4036	24.629	920.3	0.4253	30.025	896.6	0.4484
10	21.420	1081.1	0.3725	24.761	925.1	0.3935	30.140	911.4	0.4167
11	21.205	1073.7	0.3455	24.560	927.0	0.3658	30.121	926.4	0.3888
12	20.903	1060.6	0.3222	24.259	927.2	0.3417	30.007	942.0	0.3643
13	20.553	1045.8	0.3022	23.901	926.1	0.3208	29.831	957.5	0.3429
14	20.279	1042.3	0.2857	23.596	921.6	0.3034	29.695	972.2	0.3244
15	20.417	1084.2	0.2739	23.646	909.9	0.2898	29.849	981.3	0.3090
16	19.993	1082.1	0.2605	23.135	898.2	0.2756	29.483	994.2	0.2940
17	19.069	1047.1	0.2474	22.106	884.3	0.2622	28.609	1008.1	0.2801
18	17.668	1004.3	0.2362	20.575	867.5	0.2510	27.230	1022.0	0.2685
19	16.518	962.3	0.2287	19.282	849.3	0.2411	26.092	1036.4	0.2582
20	15.309	916.6	0.2180	17.990	839.0	0.2325	24.809	1037.3	0.2488
21	13.895	863.4	0.2101	16.486	827.9	0.2250	23.126	1020.7	0.2409
22	11.813	805.5	0.2039	14.552	846.2	0.2211	20.609	968.5	0.2352
23	9.365	742.2	0.1986	11.788	807.7	0.2166	16.830	884.4	0.2296
24	3.879	632.1	0.1953	4.913	658.2	0.2133	7.114	687.2	0.2256
25	2.244	600.6	0.1931	2.820	614.9	0.2105	4.082	632.0	0.2231

Table 4-86. LS1 Burnup and TH Feedback Parameters Assembly E12 (Continued)

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.360	698.9	0.7396
2	19.146	693.2	0.7398
3	25.078	706.7	0.7221
4	27.776	729.6	0.6741
5	28.725	749.8	0.6192
6	29.066	767.1	0.5676
7	29.275	784.8	0.5232
8	29.506	795.6	0.4842
9	30.106	817.6	0.4489
10	30.223	825.1	0.4173
11	30.204	825.1	0.3894
12	30.089	821.4	0.3649
13	29.913	821.4	0.3434
14	29.775	813.9	0.3250
15	29.926	802.9	0.3095
16	29.557	792.0	0.2944
17	28.679	777.7	0.2805
18	27.296	763.6	0.2689
19	26.154	749.8	0.2586
20	24.868	739.7	0.2492
21	23.178	716.5	0.2413
22	20.654	694.0	0.2356
23	16.865	663.0	0.2299
24	7.129	604.6	0.2259
25	4.089	582.3	0.2234

Table 4-87. LS1 Burnup and TH Feedback Parameters Assembly F1

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.476	653.0	0.7396	2.015	616.6	0.7396
2	0.000		0.7396	5.479	970.2	0.7396	7.501	794.9	0.7396
3	0.000		0.7168	7.527	1083.1	0.7168	10.466	869.2	0.7198
4	0.000	Data	0.6577	8.612	1191.5	0.6577	12.094	941.6	0.6658
5	0.000	Not	0.5853	8.909	1223.1	0.5853	12.608	972.3	0.6009
6	0.000	Required	0.5175	8.862	1218.1	0.5175	12.625	981.6	0.5399
7	0.000		0.4822	8.746	1205.7	0.4822	12.623	983.6	0.4891
8	0.000		0.4182	8.659	1196.5	0.4182	12.456	986.6	0.4470
9	0.000		0.3814	8.789	1210.2	0.3814	12.709	1004.7	0.4108
10	0.000		0.3502	8.638	1194.3	0.3502	12.672	1006.8	0.3793
11	0.000		0.3241	8.409	1170.4	0.3241	12.375	1011.6	0.3527
12	0.000		0.3020	8.132	1142.2	0.3020	12.350	1050.3	0.3320
13	0.000		0.2832	7.822	1111.5	0.2832	12.989	1210.5	0.3166
14	0.000		0.2672	7.480	1078.6	0.2672	12.661	1249.9	0.2992
15	0.000		0.2535	7.095	1042.8	0.2535	12.349	1226.4	0.2804
16	0.000		0.2417	6.651	1003.1	0.2417	11.651	1180.6	0.2642
17	0.000		0.2317	6.102	956.3	0.2317	10.746	1119.3	0.2507
18	0.000		0.2235	5.300	892.0	0.2235	9.433	1037.1	0.2397
19	0.000		0.2167	4.769	852.0	0.2167	8.503	977.4	0.2306
20	0.000		0.2110	4.329	820.3	0.2110	7.705	927.0	0.2231
21	0.000		0.2060	3.945	793.6	0.2060	6.981	881.7	0.2166
22	0.000		0.2017	3.307	751.3	0.2017	5.835	818.3	0.2112
23	0.000		0.1982	2.604	707.2	0.1982	4.569	753.6	0.2069
24	0.000		0.1956	1.007	616.0	0.1956	1.797	634.3	0.2041
25	0.000		0.1957	0.653	597.1	0.1957	1.142	606.6	0.2034

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.216	638.8	0.7396	3.237	632.1	0.7396
2	11.908	883.6	0.7396	11.989	862.0	0.7396
3	16.297	945.9	0.7227	16.403	913.9	0.7228
4	18.440	990.4	0.6727	18.560	974.3	0.6729
5	19.076	1001.3	0.6123	19.203	1006.1	0.6127
6	19.137	1005.2	0.5551	19.268	1024.8	0.5555
7	19.095	1010.6	0.5062	19.228	1034.3	0.5065
8	19.114	1018.4	0.4646	19.249	1043.9	0.4648
9	19.564	1036.6	0.4282	19.703	1063.3	0.4283
10	19.547	1047.8	0.3962	19.687	1068.2	0.3964
11	19.465	1058.7	0.3689	19.606	1073.2	0.3691
12	19.530	1067.3	0.3463	19.671	1073.2	0.3464
13	20.179	1068.3	0.3289	20.318	1063.3	0.3289
14	20.165	1079.3	0.3092	20.303	1058.4	0.3092
15	19.810	1094.6	0.2908	19.945	1043.9	0.2908
16	19.262	1109.5	0.2747	19.393	1024.8	0.2748
17	18.447	1118.5	0.2610	18.573	1001.5	0.2611
18	17.084	1113.5	0.2495	17.204	974.3	0.2496
19	15.951	1093.3	0.2393	16.064	943.6	0.2393
20	14.775	1056.8	0.2301	14.880	909.7	0.2301
21	13.425	999.1	0.2220	13.518	861.4	0.2220
22	11.298	915.5	0.2153	11.378	812.0	0.2153
23	8.818	822.2	0.2099	8.880	748.5	0.2100
24	3.538	659.0	0.2067	3.564	635.7	0.2067
25	2.206	620.5	0.2053	2.222	607.2	0.2054

Table 4-88. LS1 Burnup and TH Feedback Parameters Assembly F2

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.324	642.9	0.7396	2.123	645.2	0.7396
2	0.000		0.7396	4.897	816.9	0.7396	7.872	931.7	0.7396
3	0.000		0.7260	6.748	1011.6	0.7260	11.033	1060.8	0.7238
4	0.000	Data	0.6779	7.834	1112.7	0.6779	12.860	1185.2	0.6725
5	0.000	Not	0.6147	8.259	1155.1	0.6147	13.490	1222.2	0.6081
6	0.000	Required	0.5499	8.344	1163.7	0.5499	13.531	1214.1	0.5398
7	0.000		0.4927	8.323	1161.6	0.4927	13.414	1196.8	0.4826
8	0.000		0.4453	8.318	1161.1	0.4453	13.345	1185.4	0.4359
9	0.000		0.4056	8.509	1180.8	0.4058	13.611	1198.8	0.3970
10	0.000		0.3717	8.412	1170.7	0.3717	13.463	1189.6	0.3639
11	0.000		0.3435	8.221	1151.2	0.3435	13.205	1177.8	0.3360
12	0.000		0.3197	7.973	1126.4	0.3197	12.891	1166.2	0.3125
13	0.000		0.2996	7.686	1098.3	0.2996	12.545	1155.9	0.2925
14	0.000		0.2824	7.365	1067.8	0.2824	12.164	1145.6	0.2752
15	0.000		0.2677	7.002	1034.4	0.2677	11.725	1132.6	0.2602
16	0.000		0.2550	6.581	997.0	0.2550	11.175	1111.0	0.2472
17	0.000		0.2443	6.055	952.4	0.2443	10.421	1073.7	0.2358
18	0.000		0.2353	5.270	889.7	0.2353	9.231	1010.9	0.2263
19	0.000		0.2280	4.772	852.2	0.2280	8.402	962.5	0.2185
20	0.000		0.2218	4.366	822.9	0.2218	7.681	918.7	0.2119
21	0.000		0.2165	4.016	798.5	0.2165	7.016	877.0	0.2064
22	0.000		0.2119	3.390	756.7	0.2119	5.902	816.4	0.2015
23	0.000		0.2081	2.684	712.1	0.2081	4.656	754.4	0.1978
24	0.000		0.2055	1.043	617.9	0.2055	1.848	635.7	0.1949
25	0.000		0.2045	0.671	598.1	0.2045	1.181	608.5	0.1940

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.441	644.7	0.7396	3.467	645.8	0.7396
2	12.658	917.7	0.7396	12.754	931.0	0.7396
3	17.237	977.9	0.7235	17.361	992.4	0.7236
4	19.493	1016.2	0.6737	19.627	1039.1	0.6737
5	20.161	1019.6	0.6114	20.299	1058.4	0.6116
6	20.196	1019.1	0.5500	20.335	1063.3	0.5501
7	20.116	1022.5	0.4967	20.254	1058.4	0.4968
8	20.125	1029.6	0.4522	20.264	1063.3	0.4523
9	20.587	1047.9	0.4142	20.727	1068.2	0.4144
10	20.571	1060.4	0.3816	20.711	1068.3	0.3817
11	20.457	1074.2	0.3538	20.595	1058.4	0.3540
12	20.293	1088.6	0.3300	20.429	1048.7	0.3301
13	20.102	1104.1	0.3092	20.235	1034.3	0.3093
14	19.874	1119.4	0.2911	20.003	1016.4	0.2912
15	19.572	1133.4	0.2751	19.697	996.9	0.2751
16	19.131	1144.6	0.2609	19.251	974.3	0.2611
17	18.424	1149.4	0.2486	18.539	952.3	0.2487
18	17.145	1140.2	0.2380	17.253	922.3	0.2382
19	16.088	1117.0	0.2285	16.190	897.4	0.2287
20	14.870	1077.8	0.2200	15.064	865.3	0.2202
21	13.657	1016.9	0.2125	13.741	826.9	0.2126
22	11.538	929.6	0.2062	11.609	779.6	0.2063
23	9.050	832.6	0.2012	9.105	725.2	0.2013
24	3.662	663.3	0.1979	3.684	624.2	0.1981
25	2.302	623.7	0.1965	2.316	598.6	0.1966

Table 4-89. LS1 Burnup and TH Feedback Parameters Assembly F3

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.264	639.0	0.7396	2.007	639.0	0.7396
2	0.000		0.7396	4.716	900.9	0.7396	7.495	901.9	0.7396
3	0.000		0.7288	6.522	991.8	0.7288	10.541	1019.6	0.7276
4	0.000	Data	0.6841	7.579	1088.0	0.6841	12.321	1135.8	0.6809
5	0.000	Not	0.6242	7.990	1126.0	0.6242	12.944	1172.5	0.6189
6	0.000	Required	0.5613	8.069	1135.9	0.5613	12.983	1165.5	0.5548
7	0.000		0.5044	8.043	1133.3	0.5044	12.854	1147.6	0.4980
8	0.000		0.4566	8.039	1132.9	0.4566	12.777	1135.2	0.4508
9	0.000		0.4165	8.236	1152.7	0.4165	13.035	1145.6	0.4114
10	0.000		0.3824	8.166	1145.6	0.3824	12.899	1134.3	0.3779
11	0.000		0.3535	8.009	1129.9	0.3535	12.660	1120.5	0.3498
12	0.000		0.3292	7.800	1109.3	0.3292	12.370	1107.0	0.3256
13	0.000		0.3085	7.554	1085.6	0.3085	12.052	1095.1	0.3052
14	0.000		0.2908	7.273	1059.2	0.2908	11.708	1084.9	0.2874
15	0.000		0.2755	6.953	1029.9	0.2755	11.316	1073.3	0.2720
16	0.000		0.2623	6.577	996.7	0.2623	10.832	1056.1	0.2586
17	0.000		0.2510	6.096	955.8	0.2510	10.163	1026.9	0.2469
18	0.000		0.2415	5.343	895.3	0.2415	9.065	975.7	0.2370
19	0.000		0.2337	4.862	858.9	0.2337	8.312	937.2	0.2288
20	0.000		0.2271	4.456	829.3	0.2271	7.644	901.6	0.2217
21	0.000		0.2212	4.095	803.9	0.2212	7.007	865.8	0.2156
22	0.000		0.2162	3.441	760.0	0.2162	5.895	809.5	0.2104
23	0.000		0.2124	2.706	713.5	0.2124	4.632	749.3	0.2063
24	0.000		0.2098	1.044	618.0	0.2098	1.826	633.6	0.2035
25	0.000		0.2088	0.667	596.6	0.2088	1.158	606.8	0.2026

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.196	636.0	0.7396	3.219	635.5	0.7396
2	11.866	880.4	0.7396	11.951	879.9	0.7396
3	16.311	940.6	0.7281	16.423	939.3	0.7281
4	18.551	980.2	0.6834	18.678	1006.1	0.6834
5	19.239	985.9	0.6256	19.377	1058.4	0.6256
6	19.282	986.3	0.5665	19.430	1108.5	0.5666
7	19.188	989.3	0.5138	19.346	1161.0	0.5138
8	19.184	995.6	0.4891	19.348	1193.8	0.4890
9	19.620	1011.8	0.4307	19.790	1227.5	0.4306
10	19.595	1021.9	0.3978	19.765	1227.5	0.3976
11	19.477	1033.1	0.3695	19.645	1216.1	0.3693
12	19.319	1045.4	0.3452	19.484	1199.3	0.3450
13	19.139	1058.4	0.3241	19.302	1188.3	0.3238
14	18.929	1071.2	0.3055	19.091	1182.6	0.3052
15	18.661	1083.2	0.2891	18.821	1171.6	0.2889
16	18.277	1093.0	0.2747	18.434	1155.7	0.2744
17	17.651	1097.3	0.2619	17.804	1134.5	0.2616
18	16.466	1088.7	0.2511	16.613	1103.4	0.2508
19	15.512	1069.2	0.2413	15.651	1063.3	0.2409
20	14.489	1035.7	0.2323	14.620	1024.6	0.2320
21	13.268	982.9	0.2243	13.386	985.4	0.2240
22	11.215	903.9	0.2178	11.316	893.3	0.2174
23	8.773	814.4	0.2125	8.852	808.4	0.2121
24	3.519	656.2	0.2093	3.553	658.3	0.2090
25	2.192	618.6	0.2077	2.213	621.3	0.2074

Table 4-90. LS1 Burnup and TH Feedback Parameters Assembly F4

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.297	641.1	0.7396	2.099	645.6	0.7396
2	0.000		0.7396	4.819	910.0	0.7396	7.809	934.0	0.7396
3	0.000		0.7266	6.861	1004.0	0.7266	10.964	1063.7	0.7237
4	0.000	Data	0.6789	7.775	1106.9	0.6789	12.836	1191.4	0.6721
5	0.000	Not	0.6158	8.257	1154.9	0.6158	13.550	1233.6	0.6054
6	0.000	Required	0.5505	8.401	1169.6	0.5505	13.676	1230.2	0.5385
7	0.000		0.4926	8.431	1172.7	0.4926	13.626	1215.6	0.4808
8	0.000		0.4444	8.465	1176.2	0.4444	13.601	1204.9	0.4335
9	0.000		0.4040	8.586	1189.3	0.4040	13.699	1216.9	0.3941
10	0.000		0.3697	8.608	1191.1	0.3697	13.774	1210.3	0.3606
11	0.000		0.3410	8.427	1172.3	0.3410	13.532	1199.3	0.3325
12	0.000		0.3169	8.182	1147.3	0.3169	13.227	1188.6	0.3088
13	0.000		0.2965	7.894	1116.6	0.2965	12.887	1179.4	0.2886
14	0.000		0.2792	7.563	1066.5	0.2792	12.509	1171.1	0.2711
15	0.000		0.2642	7.183	1050.9	0.2642	12.065	1159.9	0.2560
16	0.000		0.2515	6.737	1010.7	0.2515	11.500	1139.4	0.2429
17	0.000		0.2408	6.185	963.2	0.2408	10.717	1100.7	0.2315
18	0.000		0.2318	5.371	897.5	0.2318	9.479	1033.2	0.2219
19	0.000		0.2245	4.851	858.1	0.2245	8.603	980.0	0.2141
20	0.000		0.2183	4.428	827.3	0.2183	7.838	931.7	0.2076
21	0.000		0.2130	4.071	802.3	0.2130	7.141	886.1	0.2021
22	0.000		0.2084	3.438	759.8	0.2084	6.002	822.7	0.1974
23	0.000		0.2048	2.726	714.8	0.2048	4.738	758.6	0.1937
24	0.000		0.2022	1.062	618.9	0.2022	1.884	637.3	0.1909
25	0.000		0.2012	0.684	598.8	0.2012	1.206	609.6	0.1900

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.634	652.6	0.7396	3.558	638.9	0.7396
2	12.973	952.9	0.7396	13.060	889.0	0.7396
3	17.583	1014.9	0.7215	17.697	947.9	0.7215
4	19.853	1051.8	0.6697	19.983	1020.1	0.6699
5	20.570	1052.1	0.6060	20.710	1068.2	0.6062
6	20.668	1049.4	0.5437	20.814	1098.3	0.5439
7	20.642	1051.7	0.4897	20.793	1124.0	0.4899
8	20.693	1058.9	0.4447	20.849	1150.3	0.4449
9	21.190	1078.0	0.4065	21.350	1171.8	0.4066
10	21.201	1091.3	0.3738	21.362	1177.3	0.3739
11	21.107	1105.9	0.3459	21.266	1166.4	0.3459
12	20.956	1121.4	0.3220	21.113	1155.7	0.3220
13	20.773	1137.4	0.3013	20.928	1145.0	0.3013
14	20.551	1153.5	0.2831	20.703	1129.2	0.2831
15	20.253	1168.8	0.2671	20.403	1118.6	0.2671
16	19.809	1181.6	0.2530	19.956	1103.4	0.2530
17	19.088	1188.2	0.2406	19.231	1083.2	0.2406
18	17.783	1181.1	0.2299	17.921	1058.4	0.2299
19	16.684	1157.5	0.2204	16.818	1039.1	0.2204
20	15.510	1116.6	0.2120	15.638	1010.8	0.2119
21	14.134	1049.5	0.2046	14.249	952.3	0.2046
22	11.953	956.1	0.1984	12.053	889.3	0.1984
23	9.398	852.6	0.1936	9.477	808.4	0.1935
24	3.823	670.7	0.1903	3.856	656.3	0.1903
25	2.411	628.4	0.1889	2.432	621.3	0.1889

Table 4-81. LS1 Burnup and TH Feedback Parameters Assembly F5

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.308	641.9	0.7396	2.120	646.7	0.7396
2	0.000		0.7396	4.893	816.5	0.7396	7.902	937.0	0.7396
3	0.000		0.7262	6.735	1010.5	0.7262	11.001	1057.8	0.7239
4	0.000	Data	0.6782	7.602	1109.5	0.6782	12.759	1173.0	0.6728
5	0.000	Not	0.6148	8.237	1152.8	0.6148	13.399	1209.6	0.6066
6	0.000	Required	0.5495	8.358	1165.2	0.5495	13.500	1206.0	0.5401
7	0.000		0.4915	8.389	1168.4	0.4915	13.454	1192.1	0.4824
8	0.000		0.4433	8.444	1174.0	0.4433	13.448	1181.3	0.4352
9	0.000		0.4029	8.704	1201.2	0.4029	13.768	1192.0	0.3958
10	0.000		0.3685	8.685	1199.2	0.3685	13.688	1181.1	0.3623
11	0.000		0.3395	8.567	1186.6	0.3395	13.499	1168.6	0.3342
12	0.000		0.3151	8.376	1167.2	0.3151	13.245	1157.3	0.3104
13	0.000		0.2943	8.139	1142.8	0.2943	12.960	1149.3	0.2899
14	0.000		0.2765	7.858	1115.0	0.2765	12.656	1145.4	0.2723
15	0.000		0.2612	7.527	1083.1	0.2612	12.307	1142.3	0.2569
16	0.000		0.2480	7.126	1045.6	0.2480	11.850	1132.8	0.2434
17	0.000		0.2368	6.608	999.4	0.2368	11.175	1106.5	0.2317
18	0.000		0.2273	5.801	931.6	0.2273	10.023	1050.9	0.2217
19	0.000		0.2197	5.274	890.0	0.2197	9.199	1005.5	0.2134
20	0.000		0.2131	4.823	856.0	0.2131	8.448	961.7	0.2063
21	0.000		0.2074	4.422	826.9	0.2074	7.732	918.0	0.2003
22	0.000		0.2025	3.727	778.9	0.2025	6.532	852.3	0.1951
23	0.000		0.1987	2.949	728.5	0.1987	5.171	782.5	0.1911
24	0.000		0.1962	1.142	623.3	0.1962	2.057	646.2	0.1882
25	0.000		0.1953	0.733	601.3	0.1953	1.312	614.8	0.1873

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.618	656.9	0.7396	3.632	605.2	0.7396
2	13.225	968.1	0.7396	13.276	737.5	0.7396
3	17.729	1024.9	0.7210	17.795	762.2	0.7211
4	19.845	1058.3	0.6692	19.920	793.9	0.6695
5	20.474	1057.3	0.6058	20.555	816.7	0.6062
6	20.543	1054.2	0.5436	20.628	830.7	0.5443
7	20.521	1056.5	0.4897	20.610	845.9	0.4905
8	20.585	1063.2	0.4448	20.678	861.4	0.4456
9	21.098	1081.8	0.4066	21.194	873.2	0.4075
10	21.145	1094.2	0.3739	21.241	873.2	0.3748
11	21.095	1108.0	0.3460	21.191	873.2	0.3469
12	20.989	1122.9	0.3220	21.083	865.3	0.3228
13	20.856	1138.4	0.3012	20.948	857.5	0.3019
14	20.698	1153.5	0.2829	20.787	845.9	0.2836
15	20.484	1167.6	0.2667	20.571	838.2	0.2673
16	20.144	1180.0	0.2524	20.227	823.2	0.2530
17	19.547	1188.3	0.2397	19.628	808.4	0.2403
18	18.378	1186.5	0.2287	18.452	790.3	0.2293
19	17.390	1169.1	0.2189	17.460	776.1	0.2195
20	16.288	1132.6	0.2102	16.353	758.7	0.2107
21	14.928	1068.6	0.2025	14.986	735.1	0.2030
22	12.729	977.3	0.1961	12.778	705.7	0.1966
23	10.073	871.0	0.1910	10.111	671.4	0.1915
24	4.113	677.6	0.1877	4.128	604.4	0.1882
25	2.591	632.5	0.1863	2.599	584.9	0.1868

Table 4-92. LS1 Burnup and TH Feedback Parameters Assembly F6

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.271	639.4	0.7396	2.014	639.0	0.7396
2	0.000		0.7396	4.783	906.8	0.7396	7.542	899.0	0.7396
3	0.000		0.7265	6.589	997.7	0.7265	10.522	1006.7	0.7265
4	0.000	Data	0.6791	7.613	1091.3	0.6791	12.217	1112.6	0.6789
5	0.000	Not	0.6181	8.013	1130.3	0.6181	12.837	1149.9	0.6169
6	0.000	Required	0.5551	8.111	1140.1	0.5551	12.929	1148.8	0.5532
7	0.000		0.4984	8.127	1141.7	0.4984	12.870	1138.0	0.4964
8	0.000		0.4507	8.197	1148.8	0.4507	12.875	1125.0	0.4490
9	0.000		0.4103	8.528	1182.7	0.4103	13.255	1133.3	0.4093
10	0.000		0.3755	8.625	1192.9	0.3755	13.279	1121.0	0.3753
11	0.000		0.3457	8.612	1191.5	0.3457	13.187	1107.8	0.3452
12	0.000		0.3202	8.489	1178.7	0.3202	12.997	1096.8	0.3215
13	0.000		0.2985	8.292	1158.4	0.2985	12.752	1088.9	0.3003
14	0.000		0.2799	8.034	1132.4	0.2799	12.468	1084.7	0.2820
15	0.000		0.2640	7.711	1100.7	0.2640	12.122	1081.0	0.2662
16	0.000		0.2504	7.317	1063.3	0.2504	11.672	1072.0	0.2524
17	0.000		0.2387	6.808	1017.0	0.2387	11.025	1050.1	0.2404
18	0.000		0.2290	6.004	948.1	0.2290	9.919	1004.0	0.2303
19	0.000		0.2209	5.478	905.9	0.2209	9.149	968.3	0.2217
20	0.000		0.2140	5.020	870.7	0.2140	8.461	935.9	0.2143
21	0.000		0.2080	4.602	839.8	0.2080	7.798	902.7	0.2078
22	0.000		0.2029	3.870	788.5	0.2029	6.613	844.5	0.2022
23	0.000		0.1989	3.046	734.6	0.1989	5.222	777.2	0.1979
24	0.000		0.1963	1.173	625.0	0.1963	2.063	643.8	0.1951
25	0.000		0.1953	0.747	602.1	0.1953	1.301	612.5	0.1941

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.405	649.6	0.7396	3.432	649.3	0.7396
2	12.633	936.6	0.7396	12.631	940.5	0.7396
3	16.924	995.4	0.7247	17.049	996.9	0.7247
4	19.025	1032.2	0.6770	19.163	1058.4	0.677
5	19.672	1034.7	0.6173	19.814	1078.2	0.6174
6	19.752	1033.6	0.5574	19.894	1078.2	0.5574
7	19.720	1036.1	0.5040	19.861	1073.2	0.5041
8	19.784	1041.6	0.4589	19.926	1078.2	0.4589
9	20.324	1056.7	0.4203	20.467	1083.2	0.4203
10	20.435	1065.0	0.3869	20.577	1078.2	0.3870
11	20.451	1075.4	0.3582	20.592	1073.2	0.3583
12	20.386	1087.5	0.3336	20.525	1063.3	0.3336
13	20.277	1100.9	0.3121	20.413	1048.7	0.3121
14	20.132	1114.6	0.2934	20.264	1029.6	0.2934
15	19.920	1128.4	0.2768	20.048	1010.8	0.2768
16	19.588	1140.4	0.2621	19.712	992.4	0.2622
17	19.019	1148.5	0.2493	19.136	961.0	0.2493
18	17.895	1146.6	0.2381	18.005	930.7	0.2382
19	16.973	1131.0	0.2280	17.076	901.5	0.2281
20	15.952	1097.6	0.2190	16.047	869.3	0.2191
21	14.674	1038.5	0.2110	14.758	826.9	0.2111
22	12.629	953.1	0.2044	12.600	779.6	0.2045
23	9.889	853.1	0.1991	9.944	725.2	0.1992
24	4.004	670.6	0.1959	4.027	627.0	0.1960
25	2.497	627.9	0.1944	2.511	601.6	0.1945

Table 4-93. LS1 Burnup and TH Feedback Parameters Assembly F7

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.244	637.7	0.7396	1.953	635.2	0.7396
2	0.000		0.7396	4.669	896.7	0.7396	7.321	883.1	0.7396
3	0.000		0.7288	6.449	985.6	0.7288	10.268	989.8	0.7288
4	0.000	Data	0.6842	7.476	1078.2	0.6842	11.987	1097.3	0.6839
5	0.000	Not	0.6252	7.879	1117.1	0.6252	12.620	1135.7	0.6242
6	0.000	Required	0.5633	7.971	1126.2	0.5633	12.698	1133.3	0.5616
7	0.000		0.5068	7.971	1126.2	0.5068	12.610	1118.5	0.5050
8	0.000		0.4589	8.008	1129.8	0.4589	12.576	1106.6	0.4575
9	0.000		0.4184	8.268	1156.0	0.4184	12.689	1115.5	0.4177
10	0.000		0.3838	8.260	1157.2	0.3838	12.631	1103.6	0.3836
11	0.000		0.3542	8.203	1149.4	0.3542	12.668	1089.7	0.3547
12	0.000		0.3291	8.052	1134.2	0.3291	12.439	1077.1	0.3301
13	0.000		0.3076	7.846	1113.8	0.3076	12.170	1067.0	0.3090
14	0.000		0.2892	7.594	1089.5	0.2892	11.866	1058.8	0.2908
15	0.000		0.2734	7.291	1060.9	0.2734	11.510	1050.5	0.2749
16	0.000		0.2597	6.926	1027.5	0.2597	11.062	1037.6	0.2612
17	0.000		0.2480	6.453	985.9	0.2480	10.434	1013.9	0.2492
18	0.000		0.2382	5.689	922.6	0.2382	8.365	969.0	0.2390
19	0.000		0.2300	5.196	884.0	0.2300	8.637	935.9	0.2304
20	0.000		0.2230	4.763	851.6	0.2230	7.977	905.1	0.2230
21	0.000		0.2169	4.367	823.0	0.2169	7.338	873.3	0.2164
22	0.000		0.2116	3.661	774.5	0.2118	6.191	818.6	0.2110
23	0.000		0.2077	2.871	723.7	0.2077	4.865	756.8	0.2067
24	0.000		0.2052	1.103	621.2	0.2052	1.913	638.2	0.2039
25	0.000		0.2042	0.702	599.7	0.2042	1.205	607.9	0.2029

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.162	637.4	0.7396	3.184	632.1	0.7396
2	11.736	884.3	0.7396	11.818	866.4	0.7396
3	16.075	943.9	0.7289	16.185	930.7	0.729
4	18.252	983.3	0.6855	18.376	992.4	0.6856
5	18.950	989.0	0.6292	19.083	1034.3	0.6294
6	19.034	989.5	0.5711	19.175	1073.2	0.5713
7	18.980	992.5	0.5185	19.126	1098.3	0.5186
8	19.012	998.4	0.4734	19.162	1118.8	0.4735
9	19.490	1013.3	0.4347	19.645	1145.0	0.4347
10	19.523	1021.6	0.4012	19.679	1150.3	0.4011
11	19.466	1031.3	0.3725	19.620	1139.7	0.3724
12	19.356	1042.4	0.3476	19.510	1139.7	0.3476
13	19.217	1054.6	0.3260	19.367	1118.8	0.3260
14	19.044	1067.1	0.3072	19.192	1108.5	0.3071
15	18.814	1079.3	0.2905	18.959	1093.2	0.2904
16	18.474	1089.8	0.2758	18.615	1073.2	0.2757
17	17.905	1095.6	0.2628	18.041	1048.7	0.2627
18	16.781	1090.2	0.2517	16.911	1020.1	0.2516
19	15.682	1073.5	0.2416	16.006	992.4	0.2415
20	14.693	1042.3	0.2325	15.009	956.6	0.2323
21	13.682	990.2	0.2242	13.786	905.6	0.2242
22	11.611	912.0	0.2175	11.700	845.9	0.2174
23	9.103	821.4	0.2121	9.174	779.6	0.2120
24	3.649	658.7	0.2089	3.680	650.4	0.2088
25	2.263	620.2	0.2074	2.282	615.6	0.2072

Table 4-84. LS1 Burnup and TH Feedback Parameters Assembly F8

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.302	641.5	0.7396	2.112	646.5	0.7396
2	0.000		0.7396	4.674	914.8	0.7396	7.873	935.4	0.7396
3	0.000		0.7265	6.711	1008.4	0.7265	10.964	1055.8	0.7241
4	0.000	Data	0.6786	7.778	1107.2	0.6786	12.722	1170.7	0.6732
5	0.000	Not	0.6155	8.214	1150.5	0.6155	13.365	1207.6	0.6073
6	0.000	Required	0.5503	8.337	1163.0	0.5503	13.468	1204.0	0.5408
7	0.000		0.4923	8.369	1166.3	0.4923	13.425	1190.5	0.4831
8	0.000		0.4440	8.425	1172.1	0.4440	13.419	1179.5	0.4359
9	0.000		0.4037	8.685	1199.2	0.4037	13.740	1190.4	0.3965
10	0.000		0.3692	8.666	1197.2	0.3692	13.661	1179.7	0.3630
11	0.000		0.3402	8.549	1184.9	0.3402	13.472	1167.0	0.3348
12	0.000		0.3157	8.360	1165.4	0.3157	13.219	1155.9	0.3109
13	0.000		0.2949	8.122	1141.2	0.2949	12.935	1148.0	0.2905
14	0.000		0.2770	7.841	1113.4	0.2770	12.631	1144.0	0.2728
15	0.000		0.2617	7.511	1081.6	0.2617	12.283	1140.9	0.2574
16	0.000		0.2486	7.111	1044.3	0.2486	11.826	1131.3	0.2439
17	0.000		0.2372	6.593	998.0	0.2372	11.152	1105.2	0.2321
18	0.000		0.2278	5.787	930.4	0.2278	10.002	1049.8	0.2221
19	0.000		0.2201	5.261	889.0	0.2201	9.179	1004.4	0.2138
20	0.000		0.2136	4.811	855.1	0.2136	8.429	960.7	0.2067
21	0.000		0.2079	4.412	826.2	0.2079	7.715	917.1	0.2007
22	0.000		0.2030	3.718	778.3	0.2030	6.618	851.6	0.1955
23	0.000		0.1991	2.941	728.0	0.1991	5.158	781.9	0.1914
24	0.000		0.1967	1.139	623.1	0.1967	2.053	646.1	0.1886
25	0.000		0.1957	0.731	601.2	0.1957	1.308	614.6	0.1876

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.606	656.7	0.7396	3.620	605.2	0.7396
2	13.179	966.4	0.7396	13.230	737.6	0.7396
3	17.673	1023.1	0.7212	17.738	758.7	0.7213
4	19.790	1056.6	0.6696	19.864	790.3	0.6699
5	20.423	1055.7	0.6064	20.504	815.7	0.6069
6	20.495	1052.7	0.5444	20.581	834.4	0.545
7	20.476	1055.0	0.4904	20.585	845.9	0.4912
8	20.543	1061.9	0.4454	20.635	857.5	0.4463
9	21.056	1080.4	0.4073	21.151	869.2	0.4082
10	21.104	1092.6	0.3746	21.199	869.2	0.3754
11	21.055	1106.7	0.3486	21.150	869.2	0.3474
12	20.949	1121.5	0.3226	21.043	865.3	0.3234
13	20.816	1136.8	0.3017	20.908	857.5	0.3024
14	20.659	1152.0	0.2834	20.748	845.9	0.2841
15	20.445	1166.0	0.2672	20.532	838.2	0.2678
16	20.106	1178.5	0.2528	20.189	823.1	0.2535
17	19.510	1186.6	0.2401	19.589	808.4	0.2408
18	18.343	1185.0	0.2292	18.417	790.3	0.2297
19	17.357	1167.7	0.2193	17.426	772.6	0.2200
20	16.256	1131.3	0.2106	16.320	755.3	0.2112
21	14.899	1067.7	0.2029	14.956	731.8	0.2034
22	12.703	976.3	0.1965	12.752	705.7	0.1970
23	10.052	870.4	0.1914	10.090	671.4	0.1919
24	4.106	677.5	0.1881	4.121	604.4	0.1886
25	2.585	632.4	0.1867	2.593	584.9	0.1871

Table 4-95. LS1 Burnup and TH Feedback Parameters Assembly F9

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.210	635.4	0.7396	1.963	640.1	0.7396
2	0.000		0.7396	4.585	887.7	0.7396	7.392	909.2	0.7396
3	0.000		0.7300	6.364	978.3	0.7300	10.450	1029.9	0.7277
4	0.000	Data	0.6862	7.454	1076.1	0.6862	12.276	1149.5	0.6808
5	0.000	Not	0.6272	7.916	1120.9	0.6272	12.962	1188.4	0.6185
6	0.000	Required	0.5647	8.048	1133.6	0.5647	13.056	1182.0	0.5542
7	0.000		0.5074	8.067	1135.7	0.5074	12.971	1163.7	0.4970
8	0.000		0.4589	8.111	1140.1	0.4589	12.931	1149.2	0.4495
9	0.000		0.4179	8.366	1166.0	0.4179	13.232	1157.1	0.4098
10	0.000		0.3831	8.355	1164.9	0.3831	13.144	1143.9	0.3760
11	0.000		0.3535	8.246	1153.7	0.3535	12.948	1129.1	0.3473
12	0.000		0.3284	8.064	1135.4	0.3284	12.689	1116.1	0.3230
13	0.000		0.3070	7.828	1112.1	0.3070	12.404	1108.0	0.3021
14	0.000		0.2887	7.546	1084.9	0.2887	12.121	1107.6	0.2841
15	0.000		0.2730	7.216	1053.9	0.2730	11.829	1114.1	0.2683
16	0.000		0.2595	6.821	1018.1	0.2595	11.442	1115.5	0.2543
17	0.000		0.2480	6.316	974.2	0.2480	10.821	1096.3	0.2422
18	0.000		0.2384	5.633	910.2	0.2384	9.698	1042.0	0.2318
19	0.000		0.2305	5.039	872.1	0.2305	8.909	997.3	0.2232
20	0.000		0.2237	4.632	842.0	0.2237	8.205	954.4	0.2159
21	0.000		0.2179	4.275	816.5	0.2179	7.536	911.4	0.2095
22	0.000		0.2129	3.610	771.1	0.2129	6.362	845.7	0.2043
23	0.000		0.2089	2.653	722.5	0.2089	5.016	776.8	0.2001
24	0.000		0.2062	1.107	621.4	0.2062	1.989	643.0	0.1972
25	0.000		0.2053	0.708	600.0	0.2053	1.261	612.4	0.1962

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.436	655.2	0.7396	3.453	615.2	0.7396
2	12.710	967.6	0.7396	12.772	781.2	0.7396
3	17.284	1034.6	0.7229	17.364	812.0	0.7231
4	19.502	1071.7	0.6735	19.593	853.6	0.6738
5	20.160	1089.0	0.6125	20.257	877.2	0.6129
6	20.197	1063.6	0.5519	20.299	897.4	0.5524
7	20.109	1063.3	0.4984	20.215	913.9	0.4991
8	20.113	1067.5	0.4534	20.223	930.7	0.4541
9	20.578	1083.3	0.4151	20.692	947.9	0.4158
10	20.586	1092.7	0.3823	20.700	947.9	0.3829
11	20.601	1103.7	0.3541	20.615	947.9	0.3547
12	20.366	1116.1	0.3298	20.476	939.3	0.3304
13	20.210	1129.2	0.3087	20.320	930.7	0.3092
14	20.048	1141.6	0.2901	20.155	918.1	0.2907
15	19.860	1152.3	0.2737	19.964	905.6	0.2742
16	19.658	1161.2	0.2590	19.658	889.3	0.2595
17	18.982	1165.9	0.2461	19.077	889.2	0.2465
18	17.802	1159.9	0.2349	17.693	853.6	0.2353
19	16.819	1139.8	0.2249	16.904	830.7	0.2254
20	15.743	1102.2	0.2161	15.822	808.4	0.2166
21	14.427	1039.9	0.2084	14.498	779.6	0.2088
22	12.254	951.1	0.2020	12.315	745.1	0.2024
23	9.642	850.0	0.1970	9.689	699.4	0.1975
24	3.911	669.7	0.1937	3.930	615.6	0.1941
25	2.450	627.5	0.1923	2.461	593.2	0.1927

Table 4-86. LS1 Burnup and TH Feedback Parameters Assembly F10

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.264	639.0	0.7396	2.007	639.0	0.7396
2	0.000		0.7396	4.716	900.9	0.7396	7.497	902.2	0.7396
3	0.000		0.7289	6.622	991.9	0.7289	10.545	1020.2	0.7276
4	0.000	Data	0.6841	7.579	1088.0	0.6841	12.324	1136.3	0.6810
5	0.000	Not	0.6243	7.990	1128.0	0.6243	12.948	1172.8	0.6190
6	0.000	Required	0.5616	8.069	1135.9	0.5616	12.983	1165.5	0.5550
7	0.000		0.5046	8.042	1133.2	0.5046	12.853	1147.6	0.4981
8	0.000		0.4568	8.039	1132.9	0.4568	12.775	1134.8	0.4509
9	0.000		0.4167	8.235	1152.6	0.4167	13.033	1145.4	0.4115
10	0.000		0.3826	8.164	1145.4	0.3826	12.897	1134.3	0.3781
11	0.000		0.3537	8.007	1129.7	0.3537	12.657	1120.3	0.3497
12	0.000		0.3294	7.798	1109.2	0.3294	12.367	1106.6	0.3258
13	0.000		0.3087	7.552	1085.4	0.3087	12.049	1095.0	0.3053
14	0.000		0.2910	7.271	1059.0	0.2910	11.705	1084.7	0.2876
15	0.000		0.2756	6.951	1029.8	0.2756	11.313	1073.1	0.2722
16	0.000		0.2625	6.575	996.5	0.2625	10.829	1056.0	0.2588
17	0.000		0.2512	6.094	955.6	0.2512	10.161	1026.9	0.2472
18	0.000		0.2417	5.341	895.2	0.2417	9.062	976.5	0.2372
19	0.000		0.2339	4.650	858.7	0.2339	8.310	937.2	0.2290
20	0.000		0.2272	4.454	829.2	0.2272	7.841	901.5	0.2218
21	0.000		0.2214	4.093	803.8	0.2214	7.004	865.6	0.2157
22	0.000		0.2164	3.439	759.9	0.2164	5.892	809.4	0.2105
23	0.000		0.2125	2.705	713.4	0.2125	4.630	749.2	0.2065
24	0.000		0.2100	1.043	617.9	0.2100	1.825	633.6	0.2037
25	0.000		0.2090	0.666	597.8	0.2090	1.157	606.8	0.2027

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.196	636.0	0.7396	3.218	632.1	0.7396
2	11.863	880.0	0.7396	11.947	876.4	0.7396
3	16.306	940.0	0.7282	16.417	935.0	0.7282
4	18.544	979.3	0.6835	18.671	1006.1	0.6836
5	19.232	985.1	0.6257	19.370	1058.4	0.6258
6	19.276	985.7	0.5667	19.425	1113.6	0.5668
7	19.184	989.1	0.5141	19.341	1155.7	0.5141
8	19.180	995.6	0.4693	19.344	1193.8	0.4693
9	19.617	1011.7	0.4310	19.786	1221.8	0.4309
10	19.591	1021.7	0.3980	19.761	1227.5	0.3978
11	19.473	1033.0	0.3698	19.641	1216.1	0.3696
12	19.316	1045.4	0.3455	19.481	1199.3	0.3452
13	19.135	1058.3	0.3243	19.298	1188.3	0.3241
14	18.926	1071.2	0.3057	19.087	1177.3	0.3055
15	18.658	1083.2	0.2893	18.818	1171.8	0.2891
16	18.274	1093.0	0.2749	18.431	1165.7	0.2747
17	17.649	1097.3	0.2622	17.801	1129.2	0.2619
18	16.463	1088.7	0.2513	16.610	1103.4	0.2510
19	15.510	1069.2	0.2415	15.649	1083.3	0.2411
20	14.487	1035.8	0.2325	14.618	1024.8	0.2323
21	13.266	983.0	0.2245	13.384	985.4	0.2242
22	11.213	904.0	0.2179	11.314	893.3	0.2176
23	8.770	814.3	0.2126	8.850	812.0	0.2124
24	3.519	656.3	0.2095	3.552	656.3	0.2091
25	2.191	618.6	0.2079	2.212	621.3	0.2076

Table 4-97. LS1 Burnup and TH Feedback Parameters Assembly F11

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.304	641.6	0.7396	2.089	643.7	0.7396
2	0.000		0.7396	4.848	912.5	0.7396	7.781	925.3	0.7396
3	0.000		0.7270	6.691	1006.6	0.7270	10.912	1050.8	0.7250
4	0.000	Data	0.6800	7.762	1105.6	0.6800	12.705	1170.5	0.6751
5	0.000	Not	0.6179	8.171	1146.1	0.6179	13.310	1205.4	0.6102
6	0.000	Required	0.5537	8.244	1153.5	0.5537	13.332	1196.3	0.5446
7	0.000		0.4967	8.214	1150.5	0.4967	13.199	1177.9	0.4876
8	0.000		0.4492	8.204	1149.5	0.4492	13.116	1165.1	0.4409
9	0.000		0.4094	8.390	1168.5	0.4094	13.369	1176.9	0.4019
10	0.000		0.3757	8.297	1158.9	0.3757	13.217	1166.5	0.3688
11	0.000		0.3472	8.117	1140.7	0.3472	12.960	1153.1	0.3409
12	0.000		0.3233	7.884	1117.6	0.3233	12.651	1140.1	0.3173
13	0.000		0.3031	7.614	1091.4	0.3031	12.315	1128.9	0.2972
14	0.000		0.2857	7.310	1062.6	0.2857	11.953	1119.1	0.2799
15	0.000		0.2708	6.968	1031.1	0.2708	11.543	1108.1	0.2647
16	0.000		0.2580	6.568	995.7	0.2580	11.033	1090.1	0.2515
17	0.000		0.2470	6.061	952.9	0.2470	10.327	1057.6	0.2401
18	0.000		0.2379	5.297	891.8	0.2379	9.190	1000.7	0.2304
19	0.000		0.2304	4.811	855.1	0.2304	8.401	956.8	0.2224
20	0.000		0.2240	4.411	826.1	0.2240	7.708	916.2	0.2156
21	0.000		0.2184	4.058	801.4	0.2184	7.053	876.4	0.2098
22	0.000		0.2136	3.423	758.6	0.2136	5.938	816.6	0.2048
23	0.000		0.2098	2.703	713.3	0.2098	4.678	754.5	0.2008
24	0.000		0.2072	1.045	618.0	0.2072	1.848	635.6	0.1980
25	0.000		0.2062	0.668	597.9	0.2062	1.174	606.6	0.1971

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.365	641.8	0.7396	3.388	635.5	0.7396
2	12.428	905.0	0.7396	12.513	879.9	0.7396
3	16.960	964.4	0.7250	17.069	926.5	0.7251
4	19.187	1002.5	0.6769	19.308	978.8	0.677
5	19.841	1006.9	0.6161	19.966	996.9	0.6163
6	19.863	1006.9	0.5555	19.990	1006.1	0.5558
7	19.768	1010.4	0.5025	19.896	1010.8	0.5028
8	19.763	1017.4	0.4580	19.892	1015.4	0.4584
9	20.204	1034.7	0.4200	20.336	1029.6	0.4203
10	20.175	1046.2	0.3874	20.306	1024.8	0.3876
11	20.055	1059.2	0.3595	20.185	1020.1	0.3597
12	19.892	1073.2	0.3355	20.019	1006.1	0.3357
13	19.704	1087.5	0.3147	19.829	996.9	0.3149
14	19.487	1101.8	0.2964	19.609	983.3	0.2967
15	19.205	1114.6	0.2803	19.323	965.4	0.2805
16	18.797	1124.9	0.2660	18.910	943.6	0.2662
17	18.133	1129.2	0.2535	18.241	922.3	0.2537
18	16.909	1120.4	0.2428	17.011	897.4	0.2430
19	15.904	1098.8	0.2332	15.999	869.2	0.2334
20	14.832	1061.9	0.2245	14.920	842.0	0.2247
21	13.554	1004.2	0.2168	13.632	804.7	0.2169
22	11.462	920.4	0.2104	11.628	762.2	0.2105
23	8.982	826.3	0.2053	9.033	712.2	0.2055
24	3.618	660.7	0.2020	3.638	618.5	0.2022
25	2.259	621.7	0.2005	2.271	596.0	0.2006

Table 4-68. LS1 Burnup and TH Feedback Parameters Assembly F12

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.328	643.2	0.7396	2.130	645.6	0.7396
2	0.000		0.7396	4.910	918.0	0.7396	7.898	933.4	0.7396
3	0.000		0.7259	6.766	1013.2	0.7259	11.063	1062.7	0.7236
4	0.000	Data	0.6776	7.852	1114.4	0.6776	12.889	1187.2	0.6720
5	0.000	Not	0.6142	8.274	1156.6	0.6142	13.513	1223.6	0.6055
6	0.000	Required	0.5493	8.355	1164.9	0.5493	13.548	1215.2	0.5392
7	0.000		0.4921	8.332	1162.5	0.4921	13.426	1197.3	0.4821
8	0.000		0.4447	8.325	1161.6	0.4447	13.353	1185.6	0.4354
9	0.000		0.4051	8.514	1181.3	0.4051	13.617	1199.0	0.3965
10	0.000		0.3713	8.416	1171.1	0.3713	13.468	1189.8	0.3635
11	0.000		0.3431	8.224	1151.5	0.3431	13.209	1177.9	0.3357
12	0.000		0.3194	7.975	1126.5	0.3194	12.894	1166.3	0.3123
13	0.000		0.2993	7.689	1098.6	0.2993	12.548	1155.9	0.2922
14	0.000		0.2821	7.367	1068.0	0.2821	12.167	1145.7	0.2749
15	0.000		0.2674	7.004	1034.5	0.2674	11.728	1132.8	0.2600
16	0.000		0.2548	6.582	997.1	0.2548	11.177	1111.1	0.2469
17	0.000		0.2440	6.056	952.4	0.2440	10.423	1073.9	0.2356
18	0.000		0.2351	5.271	889.8	0.2351	9.233	1011.0	0.2261
19	0.000		0.2278	4.773	852.3	0.2278	8.404	962.6	0.2183
20	0.000		0.2216	4.367	823.0	0.2216	7.683	918.8	0.2117
21	0.000		0.2163	4.017	798.6	0.2163	7.017	877.0	0.2062
22	0.000		0.2117	3.390	756.7	0.2117	5.903	816.5	0.2014
23	0.000		0.2079	2.685	712.2	0.2079	4.656	754.3	0.1976
24	0.000		0.2053	1.043	617.9	0.2053	1.848	635.7	0.1948
25	0.000		0.2043	0.671	598.1	0.2043	1.182	608.6	0.1939

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.450	644.6	0.7396	3.476	645.8	0.7396
2	12.686	918.0	0.7396	12.782	931.0	0.7396
3	17.269	978.1	0.7234	17.392	987.6	0.7234
4	19.521	1016.1	0.6734	19.655	1039.1	0.6734
5	20.184	1019.6	0.6109	20.322	1058.4	0.6111
6	20.214	1019.2	0.5495	20.353	1063.3	0.5497
7	20.131	1022.7	0.4963	20.270	1063.3	0.4964
8	20.138	1030.1	0.4518	20.277	1063.3	0.4520
9	20.598	1048.4	0.4139	20.739	1073.2	0.4140
10	20.581	1060.9	0.3813	20.721	1068.3	0.3814
11	20.485	1074.6	0.3535	20.604	1063.3	0.3537
12	20.301	1089.3	0.3297	20.437	1048.7	0.3298
13	20.109	1104.5	0.3090	20.242	1034.3	0.3091
14	19.880	1119.7	0.2909	20.010	1020.1	0.2910
15	19.578	1133.7	0.2749	19.703	996.9	0.2750
16	19.137	1145.0	0.2608	19.257	974.3	0.2609
17	18.429	1149.7	0.2484	18.544	952.3	0.2485
18	17.150	1140.5	0.2379	17.258	922.3	0.2380
19	16.092	1117.2	0.2284	16.194	897.4	0.2285
20	14.873	1077.9	0.2199	15.068	869.2	0.2200
21	13.660	1017.1	0.2124	13.744	826.9	0.2124
22	11.540	929.7	0.2060	11.611	779.6	0.2062
23	9.051	832.6	0.2010	9.106	725.2	0.2012
24	3.663	683.3	0.1978	3.685	624.2	0.1979
25	2.302	623.6	0.1964	2.316	601.6	0.1965

Table 4-99. LS1 Burnup and TH Feedback Parameters Assembly F13

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.304	641.6	0.7396	2.111	646.1	0.7396
2	0.000		0.7396	4.845	812.3	0.7396	7.851	936.5	0.7396
3	0.000		0.7262	6.694	1006.9	0.7262	11.017	1066.9	0.7234
4	0.000	Data	0.6782	7.809	1110.2	0.6782	12.888	1194.6	0.6713
5	0.000	Not	0.6147	8.286	1157.8	0.6147	13.593	1236.2	0.6043
6	0.000	Required	0.5492	8.426	1172.2	0.5492	13.710	1231.9	0.5373
7	0.000		0.4913	8.451	1174.8	0.4913	13.654	1217.0	0.4795
8	0.000		0.4432	8.482	1178.0	0.4432	13.625	1206.2	0.4324
9	0.000		0.4029	8.701	1200.9	0.4029	13.920	1220.0	0.3931
10	0.000		0.3687	8.622	1192.6	0.3687	13.793	1211.2	0.3597
11	0.000		0.3400	8.439	1173.5	0.3400	13.550	1200.4	0.3317
12	0.000		0.3160	8.194	1148.5	0.3160	13.244	1189.5	0.3080
13	0.000		0.2957	7.905	1119.6	0.2957	12.903	1180.2	0.2879
14	0.000		0.2784	7.574	1087.5	0.2784	12.524	1171.8	0.2704
15	0.000		0.2635	7.193	1051.8	0.2635	12.080	1160.8	0.2553
16	0.000		0.2508	6.747	1011.6	0.2508	11.515	1140.3	0.2422
17	0.000		0.2401	6.195	964.0	0.2401	10.731	1101.4	0.2309
18	0.000		0.2311	5.380	898.2	0.2311	9.492	1033.8	0.2213
19	0.000		0.2238	4.859	858.6	0.2238	8.615	980.6	0.2136
20	0.000		0.2177	4.435	827.8	0.2177	7.849	932.2	0.2070
21	0.000		0.2124	4.077	802.7	0.2124	7.150	886.5	0.2015
22	0.000		0.2079	3.443	760.1	0.2079	6.010	823.0	0.1969
23	0.000		0.2042	2.732	715.1	0.2042	4.744	758.8	0.1932
24	0.000		0.2016	1.083	619.0	0.2016	1.887	637.5	0.1904
25	0.000		0.2006	0.686	598.9	0.2006	1.209	609.7	0.1895

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.651	653.0	0.7396	3.571	625.3	0.7396
2	13.032	954.5	0.7396	13.104	822.8	0.7398
3	17.651	1016.3	0.7211	17.743	857.5	0.7212
4	19.917	1052.9	0.6690	20.019	897.4	0.6693
5	20.625	1053.2	0.6050	20.732	918.1	0.6055
6	20.715	1050.6	0.5426	20.824	926.5	0.5431
7	20.684	1053.0	0.4886	20.796	939.3	0.4892
8	20.730	1060.1	0.4437	20.843	943.6	0.4444
9	21.224	1079.3	0.4056	21.339	952.3	0.4062
10	21.234	1092.6	0.3729	21.349	952.3	0.3735
11	21.137	1107.1	0.3451	21.251	947.9	0.3457
12	20.985	1122.6	0.3213	21.097	939.3	0.3218
13	20.801	1138.6	0.3006	20.911	930.7	0.3011
14	20.578	1154.7	0.2825	20.685	918.1	0.2829
15	20.279	1169.9	0.2665	20.383	905.6	0.2669
16	19.834	1182.7	0.2524	19.934	889.3	0.2529
17	19.113	1189.4	0.2401	19.208	869.2	0.2405
18	17.805	1182.0	0.2294	17.896	853.6	0.2298
19	16.705	1158.5	0.2200	16.791	834.4	0.2204
20	15.529	1116.4	0.2115	15.609	812.0	0.2119
21	14.150	1050.2	0.2041	14.222	783.1	0.2045
22	11.967	956.6	0.1979	12.028	745.1	0.1984
23	9.410	853.0	0.1931	9.456	696.2	0.1935
24	3.827	670.7	0.1899	3.846	615.6	0.1902
25	2.415	628.4	0.1885	2.425	590.5	0.1889

Table 4-100. LS1 Burnup and TH Feedback Parameters Assembly F14

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.446	651.0	0.7396	2.194	639.5	0.7396
2	0.000		0.7396	5.353	958.4	0.7396	8.128	901.3	0.7396
3	0.000		0.7203	7.309	1062.5	0.7203	11.262	1009.7	0.7220
4	0.000	Data	0.6659	8.352	1164.6	0.6659	12.964	1114.0	0.6693
5	0.000	Not	0.5977	8.674	1198.1	0.5977	13.503	1150.7	0.6026
6	0.000	Required	0.5312	8.668	1197.4	0.5312	13.511	1153.1	0.5368
7	0.000		0.4750	8.580	1188.2	0.4750	13.379	1145.6	0.4803
8	0.000		0.4293	8.507	1180.6	0.4293	13.280	1141.1	0.4343
9	0.000		0.3912	8.637	1194.2	0.3912	13.509	1158.2	0.3958
10	0.000		0.3589	8.493	1179.1	0.3589	13.350	1155.6	0.3632
11	0.000		0.3320	8.277	1156.9	0.3320	13.111	1151.6	0.3358
12	0.000		0.3093	8.014	1130.4	0.3093	12.834	1149.2	0.3126
13	0.000		0.2901	7.719	1101.5	0.2901	12.524	1146.6	0.2928
14	0.000		0.2737	7.394	1070.5	0.2737	12.155	1139.1	0.2756
15	0.000		0.2597	7.030	1038.9	0.2597	11.698	1123.3	0.2607
16	0.000		0.2475	6.613	999.6	0.2475	11.121	1096.8	0.2478
17	0.000		0.2372	6.098	955.9	0.2372	10.359	1057.1	0.2387
18	0.000		0.2286	5.325	893.9	0.2286	9.184	995.7	0.2273
19	0.000		0.2216	4.822	855.9	0.2216	8.358	949.2	0.2195
20	0.000		0.2155	4.393	824.6	0.2155	7.622	907.1	0.2129
21	0.000		0.2103	4.013	798.3	0.2103	6.934	866.9	0.2072
22	0.000		0.2058	3.365	755.0	0.2058	5.810	808.5	0.2023
23	0.000		0.2022	2.645	709.7	0.2022	4.557	747.8	0.1985
24	0.000		0.1997	1.015	616.4	0.1997	1.788	632.6	0.1959
25	0.000		0.1988	0.649	596.9	0.1988	1.131	606.0	0.1949

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.326	632.2	0.7396	3.348	632.1	0.7396
2	12.239	857.7	0.7396	12.321	866.4	0.7396
3	16.617	908.7	0.7252	16.725	922.3	0.7253
4	18.767	943.6	0.6774	18.890	987.8	0.6775
5	19.450	955.8	0.6172	19.581	1024.8	0.6174
6	19.551	963.7	0.5576	19.686	1043.9	0.5578
7	19.531	973.4	0.5054	19.667	1048.7	0.5057
8	19.564	984.9	0.4616	19.703	1063.3	0.4618
9	20.019	1005.0	0.4238	20.162	1083.2	0.4240
10	20.010	1018.6	0.3914	20.155	1093.2	0.3914
11	19.922	1032.5	0.3635	20.068	1098.3	0.3637
12	19.799	1046.9	0.3395	19.945	1098.3	0.3396
13	19.644	1061.6	0.3187	19.791	1103.4	0.3188
14	19.434	1076.8	0.3005	19.581	1103.4	0.3005
15	19.130	1091.8	0.2845	19.275	1093.2	0.2845
16	18.682	1104.5	0.2704	18.823	1073.2	0.2704
17	17.987	1111.2	0.2581	18.123	1048.7	0.2581
18	16.741	1104.1	0.2477	16.871	1020.1	0.2477
19	15.712	1084.1	0.2382	15.835	987.8	0.2382
20	14.608	1048.9	0.2294	14.723	952.3	0.2294
21	13.315	993.5	0.2215	13.418	901.5	0.2214
22	11.232	912.1	0.2150	11.320	842.0	0.2150
23	8.780	820.3	0.2097	8.849	772.6	0.2097
24	3.512	658.1	0.2066	3.541	644.5	0.2066
25	2.179	619.6	0.2050	2.195	615.6	0.2049

Table 4-101. LS1 Burnup and TH Feedback Parameters Assembly F15

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.418	649.1	0.7396	2.193	642.5	0.7396
2	0.000		0.7396	5.225	946.6	0.7396	8.097	916.0	0.7396
3	0.000		0.7214	7.157	1048.5	0.7214	11.286	1033.4	0.7213
4	0.000	Data	0.6677	8.248	1153.9	0.6677	13.059	1147.6	0.6677
5	0.000	Not	0.5996	8.645	1195.0	0.5996	13.684	1187.5	0.5998
6	0.000	Required	0.5325	8.708	1201.6	0.5325	13.753	1188.6	0.5328
7	0.000		0.4755	8.678	1198.5	0.4755	13.672	1179.5	0.4757
8	0.000		0.4290	8.662	1196.8	0.4290	13.624	1173.9	0.4291
9	0.000		0.3901	8.845	1216.2	0.3901	13.905	1191.3	0.3904
10	0.000		0.3571	8.736	1204.6	0.3571	13.780	1188.4	0.3574
11	0.000		0.3296	8.535	1183.5	0.3296	13.662	1185.4	0.3298
12	0.000		0.3064	8.277	1156.9	0.3064	13.300	1184.7	0.3064
13	0.000		0.2870	7.979	1126.9	0.2870	12.997	1183.8	0.2865
14	0.000		0.2703	7.640	1093.9	0.2703	12.619	1176.9	0.2692
15	0.000		0.2560	7.251	1057.2	0.2560	12.127	1158.9	0.2542
16	0.000		0.2438	6.795	1015.8	0.2438	11.487	1127.4	0.2413
17	0.000		0.2335	6.232	967.1	0.2335	10.639	1080.3	0.2302
18	0.000		0.2248	5.411	900.6	0.2248	9.373	1011.0	0.2209
19	0.000		0.2178	4.677	860.0	0.2178	8.479	958.5	0.2133
20	0.000		0.2116	4.439	828.1	0.2116	7.709	912.6	0.2069
21	0.000		0.2067	4.067	802.0	0.2067	7.012	870.0	0.2014
22	0.000		0.2023	3.430	759.3	0.2023	5.893	810.6	0.1967
23	0.000		0.1988	2.719	714.3	0.1988	4.650	749.9	0.1931
24	0.000		0.1962	1.054	618.5	0.1962	1.841	634.1	0.1905
25	0.000		0.1953	0.679	598.5	0.1953	1.175	607.2	0.1895

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.485	642.9	0.7396	3.506	628.7	0.7396
2	12.750	905.6	0.7396	12.826	840.0	0.7396
3	17.265	950.2	0.7226	17.363	881.2	0.7227
4	19.496	998.5	0.6719	19.605	926.5	0.6721
5	20.210	1006.5	0.6089	20.326	956.6	0.6093
6	20.320	1010.2	0.5472	20.438	965.4	0.5477
7	20.309	1016.5	0.4938	20.430	978.8	0.4943
8	20.365	1026.1	0.4493	20.487	983.3	0.4498
9	20.658	1045.7	0.4112	20.983	996.9	0.4117
10	20.676	1059.3	0.3786	21.002	1001.6	0.3791
11	20.605	1073.4	0.3508	20.929	992.4	0.3512
12	20.689	1087.5	0.3289	20.811	983.3	0.3273
13	20.537	1102.4	0.3081	20.657	974.3	0.3066
14	20.319	1118.4	0.2881	20.436	961.0	0.2884
15	19.989	1134.9	0.2722	20.102	943.6	0.2725
16	19.492	1149.6	0.2583	19.601	926.5	0.2586
17	18.723	1157.9	0.2462	18.828	909.7	0.2465
18	17.396	1151.5	0.2358	17.495	885.2	0.2361
19	16.286	1129.3	0.2264	16.380	865.3	0.2268
20	15.119	1089.6	0.2179	15.206	838.2	0.2183
21	13.766	1027.2	0.2103	13.845	808.4	0.2106
22	11.635	938.5	0.2040	11.702	765.6	0.2043
23	9.136	839.6	0.1990	9.188	715.4	0.1993
24	3.694	665.6	0.1958	3.715	621.3	0.1961
25	2.317	624.8	0.1944	2.329	596.0	0.1946

Table 4-102. LS1 Burnup and TH Feedback Parameters Assembly F16

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.477	653.0	0.7396	2.202	637.0	0.7396
2	0.000		0.7396	5.475	969.8	0.7396	8.197	893.5	0.7396
3	0.000		0.7180	7.540	1084.3	0.7180	11.481	1007.9	0.7198
4	0.000	Data	0.6603	8.648	1195.3	0.6603	13.275	1116.5	0.6646
5	0.000	Not	0.5889	8.958	1228.4	0.5889	13.601	1153.1	0.5960
6	0.000	Required	0.5212	8.911	1223.3	0.5212	13.755	1153.3	0.5298
7	0.000		0.4652	8.789	1210.2	0.4652	13.576	1143.5	0.4739
8	0.000		0.4202	8.699	1200.7	0.4202	13.453	1137.9	0.4284
9	0.000		0.3826	8.629	1214.5	0.3826	13.683	1155.0	0.3904
10	0.000		0.3509	8.673	1197.9	0.3509	13.619	1153.7	0.3582
11	0.000		0.3244	8.438	1173.4	0.3244	13.286	1154.0	0.3312
12	0.000		0.3022	8.156	1144.6	0.3022	13.050	1162.0	0.3085
13	0.000		0.2834	7.843	1113.5	0.2834	12.795	1172.1	0.2889
14	0.000		0.2674	7.498	1080.3	0.2674	12.453	1172.7	0.2718
15	0.000		0.2537	7.113	1044.5	0.2537	11.970	1155.6	0.2568
16	0.000		0.2419	6.669	1004.7	0.2419	11.332	1122.5	0.2439
17	0.000		0.2318	6.118	957.6	0.2318	10.485	1074.1	0.2327
18	0.000		0.2234	5.311	892.6	0.2234	9.227	1004.2	0.2235
19	0.000		0.2166	4.778	852.7	0.2166	8.336	952.3	0.2158
20	0.000		0.2108	4.341	821.1	0.2108	7.671	907.2	0.2093
21	0.000		0.2058	3.952	794.8	0.2058	6.872	865.5	0.2039
22	0.000		0.2016	3.323	752.3	0.2016	5.752	806.6	0.1991
23	0.000		0.1982	2.620	708.2	0.1982	4.516	746.1	0.1955
24	0.000		0.1957	1.017	616.5	0.1957	1.786	632.4	0.1930
25	0.000		0.1947	0.656	597.3	0.1947	1.140	606.2	0.1920

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.406	637.0	0.7396	3.432	645.8	0.7398
2	12.619	884.9	0.7396	12.716	935.7	0.7398
3	17.262	941.7	0.7225	17.388	1001.5	0.7226
4	19.526	982.0	0.6715	19.665	1063.3	0.6716
5	20.165	992.0	0.6088	20.308	1083.2	0.6089
6	20.171	998.8	0.5480	20.314	1083.2	0.5482
7	20.064	1003.1	0.4958	20.206	1078.2	0.4959
8	20.037	1011.7	0.4521	20.180	1083.2	0.4522
9	20.468	1030.1	0.4146	20.614	1098.3	0.4147
10	20.429	1041.7	0.3825	20.576	1103.4	0.3826
11	20.320	1053.4	0.3552	20.466	1098.3	0.3552
12	20.204	1064.8	0.3315	20.348	1088.2	0.3316
13	20.071	1076.5	0.3109	20.213	1078.2	0.3110
14	19.867	1090.0	0.2929	20.006	1083.3	0.2930
15	19.531	1104.5	0.2772	19.667	1048.7	0.2772
16	19.025	1117.7	0.2633	19.155	1020.1	0.2633
17	18.248	1124.5	0.2513	18.369	987.8	0.2513
18	16.912	1116.9	0.2412	17.027	952.3	0.2412
19	15.798	1094.7	0.2318	15.906	922.3	0.2318
20	14.842	1056.9	0.2234	14.741	885.2	0.2234
21	13.311	998.7	0.2157	13.399	842.0	0.2157
22	11.202	914.4	0.2094	11.276	790.3	0.2094
23	8.750	821.1	0.2043	8.808	735.1	0.2043
24	3.523	658.8	0.2013	3.548	632.8	0.2013
25	2.205	620.6	0.1997	2.220	604.4	0.1997

Table 4-103. LS1 Burnup and TH Feedback Parameters Assembly F17

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.333	643.6	0.7396	2.030	633.9	0.7396
2	0.000		0.7396	4.895	916.7	0.7396	7.470	871.9	0.7396
3	0.000		0.7250	6.692	1006.7	0.7250	10.399	973.6	0.7262
4	0.000	Data	0.6762	7.756	1105.1	0.6762	12.174	1082.1	0.6786
5	0.000	Not	0.6128	8.225	1151.6	0.6128	12.938	1130.9	0.6163
6	0.000	Required	0.5478	8.396	1169.1	0.5478	13.177	1142.5	0.5519
7	0.000		0.4904	8.462	1175.9	0.4904	13.233	1140.8	0.4943
8	0.000		0.4425	8.519	1181.8	0.4425	13.285	1139.9	0.4463
9	0.000		0.4023	8.752	1206.3	0.4023	13.630	1159.2	0.4059
10	0.000		0.3679	8.687	1199.4	0.3679	13.656	1157.6	0.3715
11	0.000		0.3391	8.530	1183.0	0.3391	13.379	1154.2	0.3426
12	0.000		0.3149	8.328	1162.1	0.3149	13.161	1151.4	0.3180
13	0.000		0.2943	8.085	1137.5	0.2943	12.897	1147.8	0.2971
14	0.000		0.2766	7.787	1106.1	0.2766	12.550	1139.4	0.2790
15	0.000		0.2615	7.411	1072.1	0.2615	12.073	1122.3	0.2634
16	0.000		0.2486	6.957	1030.3	0.2486	11.445	1093.5	0.2499
17	0.000		0.2377	6.394	980.9	0.2377	10.613	1050.5	0.2384
18	0.000		0.2287	5.668	912.9	0.2287	9.365	988.6	0.2287
19	0.000		0.2213	5.034	871.7	0.2213	8.488	937.7	0.2208
20	0.000		0.2151	4.593	839.2	0.2151	7.729	894.8	0.2141
21	0.000		0.2097	4.214	812.2	0.2097	7.041	855.0	0.2084
22	0.000		0.2050	3.561	767.9	0.2050	5.930	799.5	0.2034
23	0.000		0.2012	2.828	721.0	0.2012	4.690	742.4	0.1998
24	0.000		0.1986	1.100	621.0	0.1986	1.863	631.6	0.1989
25	0.000		0.1975	0.708	600.0	0.1975	1.189	605.9	0.1958

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.287	640.6	0.7396	3.308	628.7	0.7396
2	11.981	892.8	0.7396	12.060	853.1	0.7396
3	16.280	950.1	0.7269	16.385	909.7	0.727
4	18.516	990.1	0.6814	18.635	969.9	0.6815
5	19.367	997.8	0.6229	19.494	1006.1	0.6231
6	19.637	1000.6	0.5629	19.770	1034.3	0.5632
7	19.757	1006.3	0.5089	19.894	1053.6	0.5092
8	19.915	1015.9	0.4630	20.055	1068.2	0.4632
9	20.479	1036.0	0.4236	20.624	1093.2	0.4238
10	20.557	1050.3	0.3898	20.702	1093.2	0.3900
11	20.540	1065.5	0.3609	20.684	1088.2	0.3611
12	20.479	1080.6	0.3360	20.623	1088.2	0.3362
13	20.379	1096.7	0.3144	20.620	1073.2	0.3146
14	20.204	1113.8	0.2956	20.343	1063.3	0.2957
15	19.906	1131.9	0.2791	20.042	1048.7	0.2792
16	19.440	1148.6	0.2645	19.572	1029.6	0.2647
17	18.711	1159.3	0.2518	18.838	1006.1	0.2519
18	17.431	1156.0	0.2409	17.553	983.3	0.2410
19	16.376	1137.5	0.2310	16.490	952.3	0.2311
20	15.253	1100.8	0.2221	15.360	918.1	0.2221
21	13.937	1040.4	0.2141	14.033	873.2	0.2142
22	11.833	952.0	0.2076	11.916	819.4	0.2076
23	9.338	851.7	0.2023	9.402	755.3	0.2024
24	3.798	670.4	0.1990	3.825	638.6	0.1991
25	2.387	628.0	0.1975	2.404	610.0	0.1976

Table 4-104. LS1 Burnup and TH Feedback Parameters Assembly F18

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.479	653.2	0.7396	2.019	616.7	0.7396
2	0.000		0.7396	5.491	971.3	0.7396	7.617	795.6	0.7396
3	0.000		0.7167	7.543	1084.6	0.7167	10.488	870.0	0.7197
4	0.000	Data	0.6575	8.628	1193.2	0.6575	12.117	942.6	0.6657
5	0.000	Not	0.5851	8.925	1224.8	0.5851	12.630	973.2	0.6006
6	0.000	Required	0.5171	8.877	1219.7	0.5171	12.645	982.3	0.5396
7	0.000		0.4619	8.759	1207.1	0.4619	12.542	984.5	0.4888
8	0.000		0.4179	8.671	1197.7	0.4179	12.473	987.3	0.4468
9	0.000		0.3812	8.800	1211.4	0.3812	12.725	1005.5	0.4106
10	0.000		0.3500	8.649	1195.4	0.3500	12.587	1007.4	0.3790
11	0.000		0.3239	8.418	1171.3	0.3239	12.388	1012.2	0.3525
12	0.000		0.3018	8.141	1143.1	0.3018	12.364	1051.1	0.3319
13	0.000		0.2830	7.831	1112.4	0.2830	13.002	1211.2	0.3185
14	0.000		0.2671	7.488	1079.4	0.2671	12.675	1251.1	0.2990
15	0.000		0.2533	7.102	1043.5	0.2533	12.362	1227.5	0.2803
16	0.000		0.2416	6.657	1003.6	0.2416	11.683	1181.6	0.2641
17	0.000		0.2316	6.108	956.8	0.2316	10.758	1120.3	0.2505
18	0.000		0.2233	5.306	892.5	0.2233	9.444	1037.9	0.2398
19	0.000		0.2166	4.774	852.4	0.2166	8.512	978.0	0.2306
20	0.000		0.2109	4.333	820.6	0.2109	7.713	927.5	0.2230
21	0.000		0.2058	3.948	793.8	0.2058	6.987	882.1	0.2165
22	0.000		0.2016	3.310	751.5	0.2016	5.840	818.6	0.2111
23	0.000		0.1981	2.606	707.4	0.1981	4.572	753.7	0.2067
24	0.000		0.1955	1.008	616.0	0.1955	1.798	634.3	0.2041
25	0.000		0.1956	0.653	597.1	0.1956	1.143	606.7	0.2032

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.221	636.9	0.7396	3.243	632.1	0.7396
2	11.930	884.1	0.7396	12.010	857.5	0.7396
3	16.324	946.3	0.7227	16.429	909.8	0.7227
4	18.466	990.7	0.6725	18.586	974.3	0.6727
5	19.101	1001.6	0.6122	19.228	1006.2	0.6125
6	19.162	1005.7	0.5550	19.293	1024.8	0.5553
7	19.119	1011.1	0.5060	19.252	1034.3	0.5063
8	19.138	1019.1	0.4545	19.273	1043.9	0.4547
9	19.587	1037.2	0.4280	19.726	1063.3	0.4282
10	19.589	1048.5	0.3961	19.710	1073.2	0.3963
11	19.487	1059.5	0.3688	19.628	1073.2	0.3689
12	19.551	1068.0	0.3462	19.691	1068.2	0.3463
13	20.200	1069.0	0.3288	20.339	1063.3	0.3289
14	20.186	1079.9	0.3090	20.323	1053.6	0.3091
15	19.830	1095.3	0.2907	19.965	1043.9	0.2908
16	19.281	1110.2	0.2747	19.412	1024.8	0.2747
17	18.466	1119.2	0.2609	18.592	1001.6	0.2610
18	17.102	1114.2	0.2494	17.222	974.3	0.2495
19	15.958	1094.1	0.2392	16.081	943.6	0.2392
20	14.789	1057.4	0.2301	14.894	909.7	0.2301
21	13.437	999.7	0.2219	13.531	885.3	0.2220
22	11.309	915.9	0.2162	11.388	808.4	0.2153
23	8.826	822.5	0.2099	8.888	748.5	0.2099
24	3.541	659.1	0.2067	3.567	635.7	0.2067
25	2.208	620.6	0.2053	2.224	607.2	0.2053

Table 4-105. LS1 Burnup and TH Feedback Parameters Assembly G1

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.136	630.5	0.7396	1.866	637.4	0.7396
2	0.000		0.7396	3.969	836.9	0.7396	6.589	877.8	0.7396
3	0.000		0.7355	5.562	911.6	0.7355	9.447	998.6	0.7317
4	0.000	Data	0.6995	6.654	1002.4	0.6995	11.393	1134.0	0.6898
5	0.000	Not	0.6487	7.270	1057.6	0.6487	12.381	1195.3	0.6322
6	0.000	Required	0.5908	7.589	1087.6	0.5908	12.744	1206.6	0.5701
7	0.000		0.5339	7.759	1104.1	0.5339	12.878	1200.3	0.5124
8	0.000		0.4836	7.904	1118.3	0.4836	12.985	1193.7	0.4631
9	0.000		0.4400	8.322	1160.1	0.4400	13.523	1215.2	0.4213
10	0.000		0.4025	8.304	1158.3	0.4025	13.450	1205.2	0.3852
11	0.000		0.3708	8.161	1143.8	0.3708	13.236	1192.6	0.3548
12	0.000		0.3439	7.948	1122.4	0.3439	12.950	1179.9	0.3289
13	0.000		0.3213	7.684	1096.9	0.3213	12.633	1170.2	0.3069
14	0.000		0.3020	7.378	1067.9	0.3020	12.303	1168.0	0.2879
15	0.000		0.2855	7.022	1035.1	0.2855	11.946	1165.8	0.2712
16	0.000		0.2714	6.605	998.2	0.2714	11.482	1157.7	0.2567
17	0.000		0.2595	6.102	955.4	0.2595	10.804	1127.8	0.2441
18	0.000		0.2495	5.392	898.6	0.2495	9.693	1062.3	0.2336
19	0.000		0.2413	4.898	861.0	0.2413	8.838	1006.8	0.2250
20	0.000		0.2344	4.459	829.0	0.2344	8.027	952.9	0.2178
21	0.000		0.2286	3.983	795.8	0.2286	7.135	896.2	0.2119
22	0.000		0.2237	3.336	752.8	0.2237	5.944	827.5	0.2069
23	0.000		0.2198	2.635	708.9	0.2198	4.667	760.7	0.2031
24	0.000		0.2170	1.083	620.0	0.2170	1.945	641.0	0.2002
25	0.000		0.2159	0.710	600.1	0.2159	1.267	612.7	0.1993

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.392	658.7	0.7396	3.405	601.9	0.7396
2	12.043	979.9	0.7396	12.091	725.7	0.7396
3	16.629	1056.8	0.7240	16.592	751.5	0.7241
4	18.665	1094.5	0.6765	18.938	786.3	0.6767
5	19.756	1087.0	0.6180	19.836	811.6	0.6184
6	20.040	1077.3	0.5586	20.126	833.9	0.5592
7	20.152	1076.2	0.5048	20.243	853.0	0.5055
8	20.308	1079.9	0.4586	20.403	868.6	0.4595
9	21.078	1102.7	0.4191	21.178	888.6	0.4200
10	21.133	1115.5	0.3848	21.236	900.8	0.3855
11	21.067	1130.4	0.3553	21.171	904.9	0.3561
12	20.939	1146.6	0.3300	21.043	904.9	0.3308
13	20.785	1163.6	0.3080	20.889	904.9	0.3087
14	20.611	1180.1	0.2887	20.715	904.9	0.2894
15	20.395	1195.2	0.2716	20.498	900.8	0.2723
16	20.052	1208.3	0.2565	20.152	888.6	0.2571
17	19.449	1216.5	0.2432	19.548	884.6	0.2437
18	18.293	1211.5	0.2314	18.398	909.0	0.2320
19	17.248	1191.0	0.2212	17.387	1062.2	0.2221
20	16.048	1149.9	0.2123	16.191	1082.0	0.2132
21	14.430	1077.2	0.2047	14.560	1019.1	0.2055
22	12.167	978.7	0.1984	12.279	938.5	0.1991
23	9.538	868.0	0.1935	9.624	833.9	0.1942
24	4.016	678.3	0.1901	4.052	665.2	0.1908
25	2.585	634.6	0.1889	2.606	621.2	0.1895

Table 4-106. LS1 Burnup and TH Feedback Parameters Assembly G2

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.230	636.6	0.7396	2.006	642.5	0.7396
2	0.000		0.7396	4.283	863.0	0.7396	7.108	908.2	0.7396
3	0.000		0.7329	6.028	949.3	0.7329	10.263	1051.9	0.7287
4	0.000	Data	0.6926	7.166	1047.3	0.6926	12.244	1194.8	0.6822
5	0.000	Not	0.6371	7.657	1094.3	0.6371	12.967	1235.1	0.6203
6	0.000	Required	0.5768	7.800	1108.1	0.5768	13.027	1219.9	0.5566
7	0.000		0.5203	7.817	1109.8	0.5203	12.898	1193.6	0.5000
8	0.000		0.4717	7.863	1114.3	0.4717	12.837	1174.6	0.4529
9	0.000		0.4299	8.236	1151.4	0.4299	13.287	1188.2	0.4131
10	0.000		0.3941	8.200	1147.7	0.3941	13.159	1172.0	0.3789
11	0.000		0.3639	8.056	1133.3	0.3639	12.909	1153.5	0.3502
12	0.000		0.3384	7.847	1112.7	0.3384	12.600	1136.4	0.3257
13	0.000		0.3166	7.592	1088.1	0.3166	12.266	1123.1	0.3048
14	0.000		0.2981	7.297	1060.3	0.2981	11.914	1113.5	0.2867
15	0.000		0.2822	6.957	1029.3	0.2822	11.523	1105.1	0.2709
16	0.000		0.2685	6.557	994.0	0.2685	11.032	1090.2	0.2572
17	0.000		0.2569	6.061	952.0	0.2569	10.350	1060.4	0.2453
18	0.000		0.2472	5.358	895.6	0.2472	9.288	1005.3	0.2351
19	0.000		0.2391	4.670	858.9	0.2391	8.498	961.3	0.2268
20	0.000		0.2323	4.445	828.0	0.2323	7.775	920.0	0.2197
21	0.000		0.2264	3.978	795.3	0.2264	6.955	873.7	0.2137
22	0.000		0.2216	3.332	752.6	0.2216	5.817	812.7	0.2087
23	0.000		0.2177	2.628	708.4	0.2177	4.589	750.6	0.2048
24	0.000		0.2151	1.083	620.0	0.2151	1.909	637.6	0.2021
25	0.000		0.2141	0.712	600.2	0.2141	1.246	610.6	0.2012

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.410	650.4	0.7396	3.433	635.4	0.7396
2	12.248	949.8	0.7396	12.336	892.9	0.7396
3	17.013	1025.9	0.7248	17.128	951.5	0.7246
4	19.415	1065.3	0.6760	19.543	1009.8	0.6761
5	20.099	1081.6	0.6165	20.233	1038.1	0.6166
6	20.082	1054.3	0.5553	20.216	1047.7	0.5555
7	19.932	1052.3	0.5024	20.069	1052.5	0.5026
8	19.896	1054.7	0.4577	20.035	1062.2	0.4579
9	20.540	1073.2	0.4193	20.683	1082.0	0.4195
10	20.496	1081.3	0.3862	20.641	1092.0	0.3863
11	20.350	1091.5	0.3578	20.494	1087.0	0.3580
12	20.158	1103.0	0.3334	20.301	1082.0	0.3336
13	19.947	1115.3	0.3123	20.088	1072.1	0.3124
14	19.717	1127.6	0.2937	19.856	1062.2	0.2938
15	19.437	1138.9	0.2773	19.571	1038.1	0.2774
16	19.033	1147.9	0.2628	19.161	1009.8	0.2628
17	18.383	1151.2	0.2500	18.503	973.5	0.2500
18	17.219	1140.7	0.2389	17.331	938.5	0.2389
19	16.203	1117.7	0.2290	16.307	904.9	0.2291
20	15.084	1078.6	0.2204	15.179	868.5	0.2204
21	13.569	1013.5	0.2129	13.653	826.4	0.2129
22	11.398	924.4	0.2067	11.470	782.7	0.2067
23	8.879	826.1	0.2019	8.935	728.2	0.2020
24	3.719	662.9	0.1986	3.742	626.9	0.1987
25	2.386	624.6	0.1974	2.400	601.5	0.1975

Table 4-107. LS1 Burnup and TH Feedback Parameters Assembly G3

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.219	635.9	0.7396	1.954	638.0	0.7396
2	0.000		0.7396	4.242	859.5	0.7396	6.676	879.9	0.7396
3	0.000		0.7325	5.902	939.0	0.7325	9.792	999.4	0.7302
4	0.000	Data	0.6929	6.992	1032.4	0.6929	11.700	1128.8	0.6867
5	0.000	Not	0.6384	7.561	1085.1	0.6384	12.589	1184.1	0.6274
6	0.000	Required	0.5780	7.824	1110.5	0.5780	12.899	1192.5	0.5642
7	0.000		0.5204	7.953	1123.1	0.5204	12.987	1185.2	0.5062
8	0.000		0.4706	8.074	1135.1	0.4706	13.071	1178.6	0.4571
9	0.000		0.4277	8.482	1176.5	0.4277	13.594	1199.1	0.4156
10	0.000		0.3909	8.459	1174.2	0.3909	13.517	1189.4	0.3800
11	0.000		0.3599	8.315	1159.4	0.3599	13.302	1176.9	0.3500
12	0.000		0.3339	8.106	1138.3	0.3339	13.021	1164.3	0.3247
13	0.000		0.3119	7.869	1114.9	0.3119	12.721	1153.3	0.3031
14	0.000		0.2931	7.627	1091.4	0.2931	12.424	1143.9	0.2846
15	0.000		0.2768	7.357	1065.9	0.2768	12.090	1133.0	0.2684
16	0.000		0.2627	7.010	1034.1	0.2627	11.637	1115.2	0.2543
17	0.000		0.2505	6.535	992.1	0.2505	10.966	1083.1	0.2420
18	0.000		0.2404	5.808	931.4	0.2404	9.876	1026.1	0.2316
19	0.000		0.2320	5.280	889.6	0.2320	9.041	980.4	0.2229
20	0.000		0.2249	4.785	852.6	0.2249	8.241	937.2	0.2155
21	0.000		0.2189	4.240	813.6	0.2189	7.381	892.1	0.2092
22	0.000		0.2139	3.628	765.3	0.2139	6.180	832.6	0.2039
23	0.000		0.2100	2.776	717.5	0.2100	4.891	770.0	0.1998
24	0.000		0.2074	1.138	623.0	0.2074	2.052	645.9	0.1968
25	0.000		0.2063	0.748	602.1	0.2063	1.340	615.9	0.1958

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.387	652.3	0.7396	3.400	601.9	0.7396
2	11.998	948.1	0.7396	12.046	725.7	0.7396
3	16.449	1017.4	0.7262	16.512	751.5	0.7262
4	18.761	1054.9	0.6801	18.834	786.3	0.6803
5	19.626	1052.6	0.6217	19.705	807.9	0.6221
6	19.878	1047.1	0.5616	19.962	826.4	0.5622
7	19.970	1047.6	0.5072	20.058	841.6	0.5079
8	20.117	1053.4	0.4608	20.208	853.0	0.4616
9	20.875	1076.9	0.4210	20.972	876.6	0.4218
10	20.931	1088.6	0.3867	21.029	880.6	0.3874
11	20.867	1103.7	0.3573	20.969	896.7	0.3581
12	20.744	1119.5	0.3322	20.858	947.1	0.3330
13	20.603	1135.6	0.3104	20.761	1159.7	0.3114
14	20.457	1151.2	0.2913	20.626	1220.2	0.2922
15	20.261	1165.6	0.2744	20.427	1203.4	0.2752
16	19.934	1178.9	0.2595	20.092	1159.7	0.2601
17	19.353	1188.5	0.2462	19.502	1112.4	0.2467
18	18.249	1187.0	0.2346	18.388	1062.2	0.2351
19	17.273	1172.0	0.2243	17.403	1019.1	0.2247
20	16.155	1138.9	0.2152	16.274	969.0	0.2156
21	14.621	1073.9	0.2072	14.726	909.0	0.2076
22	12.433	981.3	0.2005	12.622	845.3	0.2009
23	9.821	872.6	0.1953	9.890	772.2	0.1957
24	4.154	680.2	0.1919	4.182	641.4	0.1922
25	2.676	635.6	0.1906	2.694	612.7	0.1908

Table 4-108. LS1 Burnup and TH Feedback Parameters Assembly G4

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.049	624.9	0.7396	1.748	634.0	0.7396
2	0.000		0.7396	3.621	808.8	0.7396	6.077	854.2	0.7396
3	0.000		0.7385	5.017	889.8	0.7385	8.597	954.5	0.7344
4	0.000	Data	0.7082	5.970	944.6	0.7082	10.339	1073.1	0.6977
5	0.000	Not	0.6650	6.538	992.4	0.6650	11.289	1136.1	0.6474
6	0.000	Required	0.6144	6.885	1022.8	0.6144	11.765	1168.2	0.5915
7	0.000		0.5621	7.125	1044.5	0.5621	12.036	1163.6	0.5370
8	0.000		0.5129	7.342	1084.5	0.5129	12.284	1169.0	0.4880
9	0.000		0.4684	7.610	1109.1	0.4684	12.945	1203.2	0.4449
10	0.000		0.4292	7.850	1113.0	0.4292	12.986	1203.4	0.4071
11	0.000		0.3958	7.757	1103.9	0.3958	12.869	1199.1	0.3748
12	0.000		0.3674	7.587	1087.6	0.3674	12.686	1193.2	0.3474
13	0.000		0.3432	7.384	1068.4	0.3432	12.412	1184.1	0.3238
14	0.000		0.3225	7.173	1048.9	0.3225	12.114	1168.8	0.3036
15	0.000		0.3046	6.932	1027.0	0.3046	11.729	1143.9	0.2863
16	0.000		0.2891	6.612	998.8	0.2891	11.199	1108.5	0.2713
17	0.000		0.2758	6.161	960.3	0.2758	10.459	1061.8	0.2583
18	0.000		0.2647	5.461	903.8	0.2647	9.331	996.4	0.2473
19	0.000		0.2555	4.956	865.3	0.2555	8.490	948.1	0.2383
20	0.000		0.2477	4.489	831.2	0.2477	7.716	906.1	0.2306
21	0.000		0.2410	3.987	796.1	0.2410	6.696	864.6	0.2240
22	0.000		0.2354	3.328	752.3	0.2354	5.603	811.5	0.2183
23	0.000		0.2309	2.627	708.4	0.2309	4.610	755.3	0.2138
24	0.000		0.2279	1.075	619.6	0.2279	1.934	640.7	0.2105
25	0.000		0.2266	0.701	599.6	0.2266	1.260	612.9	0.2093

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.177	652.1	0.7396	3.199	632.0	0.7396
2	11.147	943.3	0.7396	11.229	865.8	0.7396
3	15.310	1022.6	0.7288	15.416	921.5	0.7288
4	17.511	1065.4	0.6868	17.632	977.9	0.6869
5	18.373	1057.0	0.6339	18.500	1005.2	0.634
6	18.687	1041.8	0.6789	18.817	1019.1	0.679
7	18.866	1033.2	0.5273	18.997	1023.8	0.5274
8	19.108	1032.5	0.4814	19.239	1033.3	0.4815
9	19.958	1050.3	0.4411	20.095	1052.5	0.4412
10	20.107	1060.5	0.4055	20.246	1062.2	0.4056
11	20.135	1074.4	0.3748	20.277	1077.0	0.3749
12	20.101	1090.9	0.3483	20.247	1097.1	0.3483
13	20.033	1109.3	0.3251	20.183	1117.5	0.3252
14	19.929	1128.8	0.3050	20.080	1122.7	0.3050
15	19.739	1148.8	0.2872	19.889	1117.5	0.2872
16	19.392	1167.9	0.2714	19.536	1087.0	0.2714
17	18.783	1181.8	0.2574	18.921	1057.3	0.2574
18	17.653	1181.6	0.2450	17.783	1019.1	0.2450
19	16.682	1167.8	0.2341	16.803	977.9	0.2341
20	15.697	1135.5	0.2245	15.710	942.8	0.2245
21	14.141	1072.4	0.2160	14.241	888.6	0.2160
22	12.045	980.4	0.2090	12.131	833.9	0.2090
23	9.542	872.7	0.2036	9.608	761.8	0.2036
24	4.043	680.6	0.1998	4.071	641.4	0.1998
25	2.606	636.2	0.1983	2.623	609.9	0.1984

Table 4-109. LS1 Burnup and TH Feedback Parameters Assembly G5

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.128	630.0	0.7396	1.860	637.6	0.7396
2	0.000		0.7396	3.944	834.8	0.7396	6.566	878.1	0.7396
3	0.000		0.7358	5.630	909.2	0.7358	9.411	998.0	0.7319
4	0.000	Data	0.7004	6.623	999.7	0.7004	11.357	1133.2	0.6903
5	0.000	Not	0.6502	7.245	1055.5	0.6502	12.332	1194.6	0.6331
6	0.000	Required	0.5924	7.568	1085.8	0.5924	12.720	1206.3	0.5710
7	0.000		0.5354	7.740	1102.3	0.5354	12.856	1199.6	0.5132
8	0.000		0.4848	7.887	1116.6	0.4848	12.966	1193.2	0.4638
9	0.000		0.4409	8.309	1158.8	0.4409	13.507	1214.6	0.4218
10	0.000		0.4032	8.295	1157.4	0.4032	13.436	1204.3	0.3857
11	0.000		0.3714	8.156	1143.3	0.3714	13.222	1190.9	0.3552
12	0.000		0.3445	7.942	1122.0	0.3445	12.936	1178.1	0.3293
13	0.000		0.3218	7.687	1097.2	0.3218	12.627	1168.6	0.3072
14	0.000		0.3024	7.404	1070.3	0.3024	12.322	1164.6	0.2882
15	0.000		0.2858	7.081	1040.5	0.2858	12.005	1165.6	0.2714
16	0.000		0.2715	6.696	1006.1	0.2715	11.583	1159.4	0.2568
17	0.000		0.2593	6.212	964.6	0.2593	10.939	1132.0	0.2441
18	0.000		0.2491	5.506	907.4	0.2491	9.848	1068.8	0.2334
19	0.000		0.2407	5.008	869.2	0.2407	9.004	1015.2	0.2246
20	0.000		0.2337	4.556	836.0	0.2337	8.197	963.2	0.2173
21	0.000		0.2276	4.063	801.3	0.2276	7.302	907.7	0.2110
22	0.000		0.2226	3.396	756.7	0.2226	6.098	838.9	0.2059
23	0.000		0.2187	2.678	711.5	0.2187	4.798	770.5	0.2020
24	0.000		0.2159	1.100	620.9	0.2159	2.005	645.1	0.1989
25	0.000		0.2149	0.722	600.7	0.2149	1.308	615.4	0.1979

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.399	659.6	0.7396	3.422	635.4	0.7396
2	12.062	984.0	0.7396	12.149	888.3	0.7396
3	16.546	1081.9	0.7239	16.660	947.1	0.7239
4	18.883	1099.8	0.6763	19.009	1000.6	0.6765
5	19.774	1091.6	0.6178	19.905	1023.8	0.618
6	20.056	1081.2	0.5585	20.189	1033.3	0.5587
7	20.165	1078.6	0.5048	20.298	1033.3	0.5048
8	20.316	1082.8	0.4584	20.452	1038.1	0.4586
9	21.087	1105.2	0.4186	21.226	1062.2	0.4190
10	21.140	1117.6	0.3844	21.280	1067.1	0.3845
11	21.072	1132.4	0.3549	21.213	1072.1	0.3551
12	20.941	1148.3	0.3296	21.085	1087.0	0.3298
13	20.790	1164.8	0.3076	20.937	1102.2	0.3078
14	20.634	1180.5	0.2884	20.782	1107.3	0.2885
15	20.447	1194.4	0.2713	20.592	1092.0	0.2714
16	20.138	1206.6	0.2561	20.278	1067.1	0.2562
17	19.589	1214.8	0.2427	19.701	1028.6	0.2428
18	18.444	1211.1	0.2308	18.568	991.5	0.2310
19	17.426	1192.3	0.2206	17.541	951.5	0.2207
20	16.251	1153.4	0.2116	16.357	913.2	0.2117
21	14.646	1082.0	0.2039	14.740	864.7	0.2039
22	12.386	984.4	0.1975	12.468	811.6	0.1975
23	9.733	873.0	0.1925	9.796	751.5	0.1926
24	4.106	680.1	0.1891	4.132	635.6	0.1892
25	2.647	635.6	0.1878	2.663	607.1	0.1880

Table 4-110. LS1 Burnup and TH Feedback Parameters Assembly G6

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.181	633.4	0.7396	1.947	641.4	0.7396
2	0.000		0.7396	4.089	846.8	0.7396	6.845	897.9	0.7396
3	0.000		0.7349	5.732	925.3	0.7349	9.841	1032.4	0.7302
4	0.000	Data	0.6978	6.830	1017.9	0.6978	11.794	1172.8	0.6860
5	0.000	Not	0.6459	7.378	1067.9	0.6459	12.608	1220.4	0.6266
6	0.000	Required	0.5876	7.593	1088.2	0.5876	12.792	1214.8	0.5643
7	0.000		0.5315	7.668	1095.4	0.5315	12.765	1196.4	0.5076
8	0.000		0.4823	7.743	1102.6	0.4823	12.767	1183.4	0.4598
9	0.000		0.4397	8.107	1138.4	0.4397	13.239	1202.7	0.4191
10	0.000		0.4032	8.049	1132.6	0.4032	13.114	1190.7	0.3841
11	0.000		0.3724	7.877	1116.6	0.3724	12.858	1175.8	0.3547
12	0.000		0.3464	7.641	1092.8	0.3464	12.542	1161.8	0.3296
13	0.000		0.3245	7.364	1066.6	0.3245	12.202	1150.9	0.3083
14	0.000		0.3059	7.052	1037.9	0.3059	11.859	1145.6	0.2898
15	0.000		0.2899	6.697	1006.2	0.2899	11.495	1144.1	0.2738
16	0.000		0.2762	6.283	970.6	0.2762	11.027	1134.9	0.2593
17	0.000		0.2646	5.784	929.4	0.2646	10.346	1104.4	0.2471
18	0.000		0.2549	5.095	875.7	0.2549	9.256	1040.4	0.2368
19	0.000		0.2469	4.626	841.0	0.2469	8.437	987.7	0.2284
20	0.000		0.2403	4.232	813.0	0.2403	7.692	937.8	0.2214
21	0.000		0.2346	3.807	783.9	0.2346	6.872	884.8	0.2157
22	0.000		0.2297	3.214	745.0	0.2297	5.756	819.5	0.2109
23	0.000		0.2259	2.554	703.9	0.2259	4.536	755.2	0.2072
24	0.000		0.2230	1.055	618.5	0.2230	1.897	639.1	0.2042
25	0.000		0.2219	0.693	599.2	0.2219	1.239	611.7	0.2033

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.418	654.9	0.7396	3.440	632.0	0.7396
2	12.161	985.6	0.7396	12.230	852.6	0.7396
3	16.757	1041.2	0.7239	16.861	904.9	0.724
4	19.107	1079.0	0.6757	19.224	960.2	0.6759
5	19.866	1073.7	0.6164	19.989	986.9	0.6166
6	19.972	1066.2	0.5571	20.099	1005.2	0.5574
7	19.934	1065.1	0.5041	20.064	1019.1	0.5044
8	19.986	1069.9	0.4590	20.117	1023.8	0.4593
9	20.683	1091.8	0.4202	20.820	1052.5	0.4205
10	20.676	1103.4	0.3865	20.815	1062.2	0.3867
11	20.657	1117.1	0.3576	20.699	1077.0	0.3579
12	20.385	1131.7	0.3328	20.531	1097.1	0.3330
13	20.192	1146.7	0.3113	20.343	1122.7	0.3114
14	19.987	1161.1	0.2923	20.139	1127.9	0.2924
15	19.741	1173.5	0.2755	19.892	1122.7	0.2756
16	19.384	1183.2	0.2606	19.511	1102.2	0.2607
17	18.718	1186.9	0.2474	18.860	1077.0	0.2476
18	17.626	1176.0	0.2361	17.682	1047.7	0.2361
19	16.471	1151.3	0.2261	16.600	1014.5	0.2262
20	15.307	1108.7	0.2175	15.428	977.9	0.2176
21	13.760	1038.6	0.2100	13.868	921.5	0.2101
22	11.579	944.5	0.2039	11.572	860.8	0.2040
23	9.055	841.5	0.1992	9.127	782.7	0.1993
24	3.806	668.7	0.1959	3.836	647.3	0.1960
25	2.450	628.6	0.1946	2.468	612.7	0.1947

Table 4-111. LS1 Burnup and TH Feedback Parameters Assembly G7

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.040	624.3	0.7396	1.813	642.2	0.7396
2	0.000		0.7396	3.615	808.3	0.7396	6.339	893.1	0.7396
3	0.000		0.7392	5.038	871.4	0.7392	8.991	1008.7	0.7313
4	0.000	Data	0.7094	6.014	948.2	0.7094	10.777	1138.1	0.6909
5	0.000	Not	0.6663	6.580	996.0	0.6663	11.685	1197.8	0.6375
6	0.000	Required	0.6154	6.909	1025.0	0.6154	12.095	1212.4	0.5803
7	0.000		0.5625	7.130	1045.0	0.5625	12.317	1212.6	0.5258
8	0.000		0.5129	7.340	1064.3	0.5129	12.541	1215.2	0.4774
9	0.000		0.4680	7.608	1108.9	0.4680	13.202	1250.7	0.4350
10	0.000		0.4287	7.848	1112.6	0.4287	13.245	1251.3	0.3977
11	0.000		0.3954	7.750	1103.3	0.3954	13.128	1247.7	0.3660
12	0.000		0.3670	7.569	1085.9	0.3670	12.923	1243.3	0.3389
13	0.000		0.3430	7.336	1064.0	0.3430	12.645	1234.9	0.3167
14	0.000		0.3225	7.063	1038.9	0.3225	12.279	1217.9	0.2959
15	0.000		0.3050	6.743	1010.2	0.3050	11.796	1188.5	0.2789
16	0.000		0.2900	6.359	977.0	0.2900	11.170	1146.3	0.2642
17	0.000		0.2771	5.876	937.1	0.2771	10.362	1091.7	0.2518
18	0.000		0.2664	5.180	882.2	0.2664	9.193	1017.8	0.2413
19	0.000		0.2575	4.681	845.0	0.2575	8.318	962.6	0.2327
20	0.000		0.2499	4.232	813.0	0.2499	7.615	913.6	0.2254
21	0.000		0.2435	3.758	780.6	0.2435	6.664	864.4	0.2193
22	0.000		0.2381	3.139	740.2	0.2381	5.558	804.9	0.2143
23	0.000		0.2338	2.479	699.4	0.2338	4.382	746.5	0.2102
24	0.000		0.2306	1.016	616.4	0.2306	1.831	636.6	0.2069
25	0.000		0.2294	0.665	597.7	0.2294	1.197	610.4	0.2058

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.404	663.1	0.7396	3.426	632.0	0.7396
2	11.988	999.0	0.7396	12.069	861.4	0.7396
3	16.327	1081.2	0.7229	16.436	925.8	0.7229
4	18.486	1118.1	0.6762	18.610	991.5	0.6753
5	19.213	1100.0	0.6186	19.348	1042.8	0.6188
6	19.391	1077.3	0.5625	19.536	1092.0	0.5627
7	19.488	1063.4	0.5114	19.621	1133.1	0.5114
8	19.647	1059.1	0.4666	19.806	1165.0	0.4668
9	20.474	1076.0	0.4274	20.640	1203.4	0.4274
10	20.608	1083.8	0.3928	20.774	1203.4	0.3927
11	20.628	1097.3	0.3629	20.792	1192.3	0.3628
12	20.589	1113.8	0.3370	20.750	1176.9	0.3369
13	20.504	1133.3	0.3144	20.662	1159.7	0.3144
14	20.350	1155.1	0.2948	20.505	1143.7	0.2947
15	20.088	1178.4	0.2775	20.240	1127.9	0.2773
16	19.684	1200.0	0.2621	19.813	1112.4	0.2621
17	18.992	1214.8	0.2486	19.138	1087.0	0.2485
18	17.798	1212.1	0.2365	17.937	1062.2	0.2365
19	16.748	1192.9	0.2261	16.880	1038.1	0.2259
20	15.564	1152.8	0.2169	15.691	1005.2	0.2167
21	14.004	1081.6	0.2089	14.118	947.1	0.2088
22	11.823	982.4	0.2024	11.922	884.6	0.2022
23	9.303	871.9	0.1973	9.381	804.3	0.1972
24	3.936	680.4	0.1936	3.969	656.2	0.1935
25	2.545	636.3	0.1922	2.567	624.1	0.1921

Table 4-112. LS1 Burnup and TH Feedback Parameters Assembly G8

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.048	624.9	0.7396	1.746	633.9	0.7396
2	0.000		0.7396	3.619	808.6	0.7396	6.073	853.9	0.7396
3	0.000		0.7385	5.014	889.6	0.7385	8.591	954.1	0.7345
4	0.000	Data	0.7083	5.967	944.3	0.7083	10.333	1072.6	0.6978
5	0.000	Not	0.6651	6.635	992.1	0.6651	11.283	1135.6	0.6475
6	0.000	Required	0.6145	6.882	1022.6	0.6145	11.761	1158.0	0.5917
7	0.000		0.5623	7.122	1044.2	0.5623	12.032	1163.4	0.5373
8	0.000		0.5131	7.340	1064.3	0.5131	12.280	1168.6	0.4882
9	0.000		0.4686	7.808	1108.9	0.4686	12.942	1203.0	0.4451
10	0.000		0.4294	7.848	1112.6	0.4294	12.984	1203.4	0.4073
11	0.000		0.3960	7.755	1103.6	0.3960	12.866	1198.9	0.3751
12	0.000		0.3675	7.586	1087.5	0.3675	12.664	1193.0	0.3475
13	0.000		0.3433	7.382	1068.3	0.3433	12.410	1184.1	0.3239
14	0.000		0.3226	7.172	1048.6	0.3226	12.112	1168.6	0.3038
15	0.000		0.3047	6.931	1026.9	0.3047	11.727	1143.7	0.2864
16	0.000		0.2893	6.612	998.8	0.2893	11.198	1108.4	0.2713
17	0.000		0.2760	6.160	960.3	0.2760	10.457	1061.6	0.2584
18	0.000		0.2648	5.460	903.7	0.2648	9.329	996.2	0.2474
19	0.000		0.2557	4.955	865.2	0.2557	8.488	947.9	0.2384
20	0.000		0.2478	4.488	831.1	0.2478	7.714	906.0	0.2307
21	0.000		0.2411	3.986	796.0	0.2411	6.894	864.7	0.2240
22	0.000		0.2355	3.328	752.3	0.2355	5.802	811.4	0.2184
23	0.000		0.2311	2.626	708.3	0.2311	4.610	755.4	0.2140
24	0.000		0.2280	1.075	619.6	0.2280	1.933	640.6	0.2106
25	0.000		0.2268	0.701	599.6	0.2268	1.260	612.9	0.2093

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.176	652.1	0.7396	3.198	632.0	0.7396
2	11.143	943.3	0.7396	11.225	865.6	0.7396
3	15.305	1022.6	0.7288	15.413	921.5	0.7288
4	17.508	1065.5	0.6868	17.628	982.4	0.6869
5	18.368	1057.1	0.6340	18.496	1009.8	0.6341
6	18.684	1041.9	0.5790	18.814	1019.1	0.5792
7	18.862	1033.2	0.5274	18.993	1023.8	0.5276
8	19.103	1032.6	0.4816	19.236	1033.3	0.4816
9	19.954	1050.2	0.4412	20.092	1057.3	0.4414
10	20.103	1060.4	0.4056	20.243	1067.1	0.4058
11	20.132	1074.4	0.3749	20.274	1077.0	0.3751
12	20.099	1090.6	0.3483	20.245	1097.1	0.3484
13	20.030	1109.2	0.3253	20.180	1117.5	0.3253
14	19.928	1128.7	0.3050	20.078	1127.9	0.3051
15	19.736	1148.7	0.2872	19.886	1117.5	0.2873
16	19.389	1167.7	0.2715	19.534	1092.0	0.2715
17	18.780	1181.7	0.2575	18.918	1057.3	0.2575
18	17.650	1181.5	0.2451	17.780	1019.1	0.2451
19	16.679	1167.7	0.2342	16.801	982.4	0.2342
20	15.694	1135.4	0.2245	15.707	942.8	0.2245
21	14.139	1072.4	0.2161	14.239	888.6	0.2161
22	12.043	980.3	0.2091	12.128	830.1	0.2091
23	9.540	872.6	0.2036	9.607	765.3	0.2036
24	4.042	680.6	0.1998	4.070	641.4	0.1998
25	2.605	636.1	0.1984	2.623	612.7	0.1984

Table 4-113. LS1 Burnup and TH Feedback Parameters Assembly G9

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.129	630.1	0.7396	1.888	640.6	0.7396
2	0.000		0.7396	3.906	831.7	0.7396	6.597	888.2	0.7396
3	0.000		0.7352	5.423	900.9	0.7352	9.376	1008.7	0.7305
4	0.000	Data	0.6997	6.463	985.9	0.6997	11.271	1145.6	0.6878
5	0.000	Not	0.6496	7.070	1039.5	0.6496	12.244	1210.3	0.6299
6	0.000	Required	0.5923	7.410	1070.9	0.5923	12.669	1225.7	0.5680
7	0.000		0.5360	7.618	1090.6	0.5360	12.864	1223.4	0.5106
8	0.000		0.4862	7.807	1108.8	0.4862	13.038	1220.6	0.4617
9	0.000		0.4435	8.283	1156.1	0.4435	13.660	1247.6	0.4205
10	0.000		0.4086	8.374	1165.4	0.4086	13.713	1240.5	0.3861
11	0.000		0.3765	8.273	1155.1	0.3765	13.557	1230.3	0.3554
12	0.000		0.3485	8.066	1134.3	0.3485	13.289	1219.2	0.3287
13	0.000		0.3246	7.814	1109.5	0.3246	12.972	1207.4	0.3059
14	0.000		0.3044	7.534	1082.6	0.3044	12.612	1193.0	0.2865
15	0.000		0.2872	7.214	1052.7	0.2872	12.176	1172.5	0.2697
16	0.000		0.2724	6.824	1017.4	0.2724	11.611	1142.2	0.2553
17	0.000		0.2599	6.326	974.2	0.2599	10.846	1097.5	0.2429
18	0.000		0.2495	5.593	914.2	0.2495	9.689	1030.4	0.2325
19	0.000		0.2410	5.066	873.5	0.2410	8.811	978.1	0.2240
20	0.000		0.2337	4.584	838.0	0.2337	7.991	930.5	0.2168
21	0.000		0.2275	4.085	801.4	0.2275	7.106	881.7	0.2107
22	0.000		0.2225	3.389	756.2	0.2225	5.940	820.6	0.2055
23	0.000		0.2184	2.673	711.2	0.2184	4.691	759.1	0.2015
24	0.000		0.2165	1.096	620.7	0.2165	1.965	641.6	0.1984
25	0.000		0.2144	0.720	600.5	0.2144	1.287	613.6	0.1974

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.384	656.6	0.7396	3.408	638.8	0.7396
2	11.925	867.7	0.7396	12.014	897.5	0.7396
3	16.315	1043.4	0.7248	16.430	951.5	0.7248
4	18.615	1082.0	0.6777	18.741	1000.6	0.6778
5	19.510	1074.4	0.6193	19.641	1023.6	0.6195
6	19.816	1063.0	0.5600	19.949	1033.3	0.5602
7	19.966	1058.7	0.5062	20.099	1033.3	0.5065
8	20.170	1061.6	0.4603	20.304	1038.1	0.4605
9	21.008	1082.4	0.4211	21.146	1057.3	0.4213
10	21.177	1093.7	0.3878	21.315	1057.3	0.3879
11	21.169	1108.4	0.3582	21.306	1052.5	0.3584
12	21.068	1125.2	0.3323	21.203	1042.8	0.3324
13	20.928	1143.2	0.3099	21.081	1033.3	0.3100
14	20.749	1162.0	0.2903	20.879	1019.1	0.2905
15	20.491	1180.6	0.2732	20.617	1000.6	0.2733
16	20.087	1198.1	0.2581	20.208	977.9	0.2582
17	19.432	1210.0	0.2447	19.547	951.5	0.2448
18	18.254	1207.7	0.2330	18.363	925.8	0.2332
19	17.216	1190.4	0.2228	17.317	892.6	0.2229
20	16.044	1153.3	0.2136	16.138	864.7	0.2138
21	14.468	1083.7	0.2057	14.551	822.7	0.2059
22	12.252	986.5	0.1992	12.323	779.2	0.1994
23	9.654	875.1	0.1941	9.709	724.9	0.1943
24	4.083	681.1	0.1906	4.106	626.9	0.1908
25	2.639	636.5	0.1893	2.653	601.5	0.1894

Table 4-114. LS1 Burnup and TH Feedback Parameters Assembly G10

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.140	630.8	0.7396	1.872	637.6	0.7396
2	0.000		0.7396	3.981	837.9	0.7396	6.607	878.7	0.7396
3	0.000		0.7353	5.575	912.8	0.7353	9.457	999.6	0.7315
4	0.000	Data	0.6992	6.657	1003.6	0.6992	11.414	1135.4	0.6895
5	0.000	Not	0.6482	7.284	1059.1	0.6482	12.381	1196.4	0.6317
6	0.000	Required	0.5901	7.601	1088.9	0.5901	12.761	1207.7	0.5895
7	0.000		0.5332	7.769	1105.1	0.5332	12.692	1201.1	0.5118
8	0.000		0.4830	7.912	1119.1	0.4830	12.697	1194.3	0.4626
9	0.000		0.4395	8.330	1160.9	0.4395	13.533	1218.5	0.4208
10	0.000		0.4020	8.311	1159.0	0.4020	13.480	1205.7	0.3848
11	0.000		0.3703	8.168	1144.5	0.3703	13.246	1193.0	0.3543
12	0.000		0.3435	7.953	1123.1	0.3435	12.959	1180.2	0.3285
13	0.000		0.3208	7.690	1097.5	0.3208	12.642	1170.7	0.3065
14	0.000		0.3016	7.385	1068.5	0.3016	12.313	1166.6	0.2875
15	0.000		0.2851	7.029	1035.8	0.2851	11.955	1166.2	0.2709
16	0.000		0.2711	6.612	998.8	0.2711	11.492	1158.2	0.2564
17	0.000		0.2590	6.109	956.0	0.2590	10.813	1128.1	0.2439
18	0.000		0.2491	5.398	898.9	0.2491	9.702	1062.6	0.2333
19	0.000		0.2410	4.904	861.4	0.2410	8.846	1007.1	0.2247
20	0.000		0.2341	4.464	829.4	0.2341	8.035	953.3	0.2176
21	0.000		0.2282	3.988	796.1	0.2282	7.142	896.5	0.2116
22	0.000		0.2233	3.340	753.1	0.2233	5.951	827.8	0.2067
23	0.000		0.2195	2.638	709.0	0.2195	4.672	760.9	0.2029
24	0.000		0.2167	1.084	620.0	0.2167	1.947	641.1	0.1999
25	0.000		0.2157	0.711	600.1	0.2157	1.269	612.6	0.1990

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.401	658.9	0.7396	3.424	635.4	0.7396
2	12.073	981.1	0.7396	12.158	879.3	0.7396
3	16.560	1057.9	0.7239	16.673	942.8	0.7239
4	18.895	1095.4	0.6762	19.021	1000.6	0.6763
5	19.784	1087.7	0.6175	19.916	1028.6	0.6177
6	20.064	1078.0	0.5581	20.198	1038.1	0.5583
7	20.174	1076.0	0.5042	20.310	1047.7	0.5044
8	20.328	1080.7	0.4582	20.466	1057.3	0.4583
9	21.097	1103.6	0.4186	21.239	1077.0	0.4188
10	21.152	1116.4	0.3843	21.296	1087.0	0.3845
11	21.085	1131.3	0.3549	21.231	1097.1	0.3550
12	20.957	1147.6	0.3296	21.104	1102.2	0.3297
13	20.801	1164.3	0.3076	20.950	1112.4	0.3077
14	20.628	1180.6	0.2884	20.776	1107.3	0.2884
15	20.412	1196.0	0.2713	20.558	1097.1	0.2714
16	20.068	1208.9	0.2562	20.210	1077.0	0.2563
17	19.465	1217.2	0.2428	19.602	1052.6	0.2429
18	18.307	1212.1	0.2311	18.439	1028.6	0.2312
19	17.261	1191.5	0.2209	17.387	1000.6	0.2210
20	16.061	1150.5	0.2121	16.180	969.0	0.2121
21	14.442	1077.7	0.2044	14.549	917.4	0.2045
22	12.177	979.0	0.1982	12.269	856.9	0.1982
23	9.546	868.3	0.1933	9.618	782.7	0.1934
24	4.019	678.4	0.1899	4.050	650.2	0.1899
25	2.587	634.6	0.1887	2.607	618.4	0.1887

Table 4-115. LS1 Burnup and TH Feedback Parameters Assembly G11

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.037	624.1	0.7396	1.808	642.0	0.7396
2	0.000		0.7396	3.604	807.4	0.7396	6.320	891.9	0.7396
3	0.000		0.7392	5.024	870.4	0.7392	8.968	1007.4	0.7314
4	0.000	Data	0.7095	5.998	946.9	0.7095	10.752	1136.6	0.6911
5	0.000	Not	0.6666	6.564	994.6	0.6666	11.660	1196.2	0.6378
6	0.000	Required	0.6158	6.894	1023.6	0.6158	12.073	1211.2	0.5808
7	0.000		0.5630	7.116	1043.7	0.5630	12.296	1211.3	0.5263
8	0.000		0.5134	7.326	1063.0	0.5134	12.521	1214.1	0.4778
9	0.000		0.4685	7.795	1107.6	0.4685	13.183	1249.6	0.4354
10	0.000		0.4291	7.836	1111.6	0.4291	13.226	1250.0	0.3981
11	0.000		0.3958	7.738	1102.1	0.3958	13.111	1246.8	0.3664
12	0.000		0.3675	7.558	1084.9	0.3675	12.905	1242.0	0.3393
13	0.000		0.3434	7.325	1062.9	0.3434	12.627	1233.6	0.3161
14	0.000		0.3229	7.053	1037.9	0.3229	12.263	1216.8	0.2962
15	0.000		0.3054	6.733	1009.4	0.3054	11.780	1187.5	0.2792
16	0.000		0.2903	6.349	976.2	0.2903	11.165	1145.4	0.2645
17	0.000		0.2775	5.869	936.3	0.2775	10.348	1090.8	0.2521
18	0.000		0.2666	5.172	881.5	0.2666	9.179	1016.8	0.2415
19	0.000		0.2578	4.674	844.5	0.2578	8.305	961.8	0.2329
20	0.000		0.2503	4.225	812.5	0.2503	7.503	913.0	0.2256
21	0.000		0.2438	3.752	780.2	0.2438	6.654	863.9	0.2195
22	0.000		0.2384	3.135	739.9	0.2384	5.550	804.5	0.2145
23	0.000		0.2341	2.475	699.2	0.2341	4.375	746.2	0.2105
24	0.000		0.2309	1.015	616.3	0.2309	1.828	636.4	0.2072
25	0.000		0.2297	0.663	597.6	0.2297	1.185	610.4	0.2060

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.397	663.0	0.7396	3.419	632.0	0.7396
2	11.961	998.2	0.7396	12.043	865.8	0.7396
3	16.295	1080.4	0.7229	16.404	921.5	0.7230
4	18.454	1117.4	0.6753	18.578	991.5	0.6755
5	19.183	1099.5	0.6189	19.317	1038.1	0.6190
6	19.363	1076.6	0.5628	19.507	1087.0	0.5630
7	19.440	1062.7	0.5117	19.593	1133.1	0.5116
8	19.619	1058.4	0.4689	19.779	1170.4	0.4689
9	20.447	1074.2	0.4277	20.612	1197.6	0.4277
10	20.581	1083.1	0.3931	20.747	1203.4	0.3931
11	20.602	1096.4	0.3632	20.765	1186.8	0.3631
12	20.563	1113.0	0.3372	20.724	1175.9	0.3372
13	20.478	1132.5	0.3147	20.635	1154.3	0.3146
14	20.325	1154.2	0.2950	20.480	1143.7	0.2949
15	20.063	1177.4	0.2777	20.214	1122.7	0.2775
16	19.639	1198.8	0.2623	19.788	1112.4	0.2622
17	18.967	1213.5	0.2488	19.112	1092.0	0.2486
18	17.774	1211.0	0.2367	17.914	1067.1	0.2366
19	16.723	1191.8	0.2262	16.857	1038.1	0.2261
20	15.542	1151.8	0.2170	15.669	1005.2	0.2169
21	13.984	1080.6	0.2091	14.098	947.1	0.2090
22	11.806	981.6	0.2025	11.905	884.6	0.2024
23	9.289	871.3	0.1975	9.367	804.3	0.1974
24	3.931	680.2	0.1937	3.964	656.2	0.1937
25	2.542	636.2	0.1924	2.563	621.2	0.1922

Table 4-116. LS1 Burnup and TH Feedback Parameters Assembly G12

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.011	622.5	0.7396	1.756	639.1	0.7396
2	0.000		0.7396	3.513	800.2	0.7396	6.138	878.6	0.7396
3	0.000		0.7396	4.898	916.3	0.7396	8.711	1088.4	0.7326
4	0.000	Data	0.7109	5.863	935.6	0.7109	10.480	1113.6	0.6940
5	0.000	Not	0.6690	6.452	985.0	0.6690	11.431	1175.5	0.6423
6	0.000	Required	0.6192	6.815	1016.6	0.6192	11.897	1193.7	0.5861
7	0.000		0.5671	7.062	1038.8	0.5671	12.151	1195.0	0.5320
8	0.000		0.5178	7.281	1058.9	0.5178	12.384	1197.5	0.4835
9	0.000		0.4731	7.753	1103.6	0.4731	13.044	1231.6	0.4410
10	0.000		0.4338	7.798	1107.9	0.4338	13.091	1232.0	0.4037
11	0.000		0.4002	7.706	1099.0	0.4002	12.989	1230.2	0.3716
12	0.000		0.3715	7.628	1082.0	0.3715	12.815	1230.9	0.3440
13	0.000		0.3471	7.302	1060.8	0.3471	12.686	1230.3	0.3204
14	0.000		0.3262	7.041	1036.9	0.3262	12.275	1221.2	0.3000
15	0.000		0.3083	6.737	1009.7	0.3083	11.832	1196.0	0.2825
16	0.000		0.2929	6.367	977.7	0.2929	11.238	1156.6	0.2674
17	0.000		0.2799	5.896	938.5	0.2799	10.456	1104.1	0.2546
18	0.000		0.2690	5.203	883.9	0.2690	9.303	1031.0	0.2437
19	0.000		0.2599	4.713	847.3	0.2599	8.445	976.2	0.2349
20	0.000		0.2522	4.273	815.9	0.2522	7.659	927.6	0.2274
21	0.000		0.2456	3.809	784.0	0.2456	6.823	878.2	0.2211
22	0.000		0.2401	3.196	743.8	0.2401	5.718	817.1	0.2158
23	0.000		0.2356	2.532	702.6	0.2356	4.524	756.3	0.2117
24	0.000		0.2325	1.041	617.7	0.2325	1.894	640.1	0.2083
25	0.000		0.2312	0.679	598.4	0.2312	1.236	612.7	0.2071

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.300	659.9	0.7396	3.322	632.0	0.7396
2	11.615	982.1	0.7396	11.696	861.4	0.7396
3	15.870	1064.2	0.7246	15.977	917.4	0.7246
4	18.041	1103.3	0.6786	18.163	982.4	0.6788
5	18.853	1089.6	0.6238	18.984	1023.6	0.6237
6	19.131	1071.4	0.5682	19.268	1052.5	0.5684
7	19.281	1061.4	0.5171	19.422	1072.1	0.5173
8	19.498	1059.8	0.4721	19.644	1097.1	0.4721
9	20.345	1077.8	0.4326	20.495	1117.5	0.4327
10	20.492	1087.5	0.3976	20.643	1122.7	0.3977
11	20.525	1100.8	0.3674	20.675	1117.5	0.3674
12	20.507	1116.4	0.3410	20.655	1107.3	0.3410
13	20.451	1133.9	0.3180	20.597	1097.1	0.3180
14	20.330	1153.5	0.2979	20.474	1087.0	0.2979
15	20.087	1174.4	0.2802	20.228	1072.1	0.2802
16	19.680	1194.4	0.2646	19.818	1057.3	0.2646
17	19.025	1208.2	0.2508	19.160	1042.6	0.2508
18	17.856	1206.4	0.2385	17.989	1033.3	0.2386
19	16.838	1189.1	0.2279	16.969	1023.6	0.2279
20	15.698	1151.6	0.2185	15.824	1000.6	0.2185
21	14.176	1082.9	0.2105	14.290	947.1	0.2105
22	12.021	985.7	0.2038	12.120	884.6	0.2038
23	9.486	875.0	0.1986	9.563	800.6	0.1986
24	4.016	681.4	0.1949	4.049	656.2	0.1949
25	2.592	636.7	0.1935	2.612	616.4	0.1935

Table 4-117. LS1 Burnup and TH Feedback Parameters Assembly G13

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.185	633.7	0.7396	1.965	643.0	0.7396
2	0.000		0.7396	4.119	849.3	0.7396	6.906	902.5	0.7396
3	0.000		0.7327	5.734	925.4	0.7327	9.839	1031.8	0.7282
4	0.000	Data	0.6934	6.809	1016.1	0.6934	11.766	1171.6	0.6822
5	0.000	Not	0.6391	7.396	1069.6	0.6391	12.688	1231.4	0.6209
6	0.000	Required	0.5789	7.697	1098.2	0.5789	13.042	1241.6	0.5569
7	0.000		0.5217	7.868	1114.8	0.5217	13.179	1235.3	0.4991
8	0.000		0.4724	8.030	1130.7	0.4724	13.311	1229.8	0.4507
9	0.000		0.4307	8.489	1177.3	0.4307	13.900	1253.9	0.4103
10	0.000		0.3967	8.566	1185.3	0.3967	13.932	1245.5	0.3768
11	0.000		0.3655	8.456	1173.9	0.3655	13.764	1234.8	0.3469
12	0.000		0.3381	8.245	1152.3	0.3381	13.492	1223.5	0.3208
13	0.000		0.3149	7.981	1125.9	0.3149	13.163	1211.7	0.2988
14	0.000		0.2952	7.669	1095.5	0.2952	12.771	1197.3	0.2796
15	0.000		0.2785	7.298	1060.4	0.2785	12.285	1176.9	0.2632
16	0.000		0.2644	6.860	1020.6	0.2644	11.670	1146.1	0.2492
17	0.000		0.2524	6.329	974.5	0.2524	10.870	1101.0	0.2372
18	0.000		0.2425	5.681	913.3	0.2425	9.688	1032.1	0.2271
19	0.000		0.2343	5.047	872.1	0.2343	8.789	977.7	0.2189
20	0.000		0.2274	4.562	836.4	0.2274	7.945	927.2	0.2121
21	0.000		0.2216	4.044	800.0	0.2216	7.032	874.9	0.2062
22	0.000		0.2167	3.368	754.9	0.2167	5.845	811.8	0.2015
23	0.000		0.2129	2.655	710.1	0.2129	4.591	750.1	0.1978
24	0.000		0.2101	1.090	620.4	0.2101	1.918	637.8	0.1949
25	0.000		0.2090	0.718	600.5	0.2090	1.257	611.1	0.1939

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.479	857.9	0.7396	3.498	621.8	0.7396
2	12.310	975.1	0.7396	12.381	818.1	0.7396
3	16.814	1046.8	0.7230	16.906	856.9	0.7231
4	19.118	1082.8	0.6737	19.221	900.8	0.6739
5	19.963	1075.5	0.6130	20.071	921.5	0.6133
6	20.217	1065.7	0.5522	20.328	934.2	0.5527
7	20.325	1062.9	0.4981	20.437	938.5	0.4987
8	20.496	1066.7	0.4525	20.610	947.1	0.4530
9	21.306	1088.0	0.4137	21.424	964.6	0.4143
10	21.457	1099.7	0.3810	21.574	980.2	0.3815
11	21.435	1114.3	0.3519	21.551	955.8	0.3524
12	21.327	1130.8	0.3265	21.441	947.1	0.3270
13	21.176	1149.1	0.3045	21.287	934.2	0.3050
14	20.969	1168.4	0.2853	21.077	921.5	0.2858
15	20.670	1188.3	0.2685	20.774	904.9	0.2689
16	20.223	1206.4	0.2537	20.323	888.6	0.2541
17	19.534	1218.5	0.2407	19.629	868.6	0.2411
18	18.328	1215.9	0.2293	18.418	849.2	0.2297
19	17.253	1196.8	0.2193	17.337	826.4	0.2197
20	16.032	1156.8	0.2105	16.110	804.3	0.2108
21	14.402	1084.5	0.2028	14.471	772.2	0.2031
22	12.141	985.1	0.1965	12.199	734.8	0.1968
23	9.527	873.0	0.1916	9.572	692.8	0.1919
24	4.023	680.4	0.1882	4.041	612.7	0.1885
25	2.598	635.9	0.1868	2.609	593.2	0.1872

Table 4-118. LS1 Burnup and TH Feedback Parameters Assembly G14

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.247	637.7	0.7396	1.963	635.9	0.7396
2	0.000		0.7396	4.310	865.3	0.7396	6.874	869.7	0.7396
3	0.000		0.7316	5.967	944.3	0.7316	9.761	985.2	0.7302
4	0.000	Data	0.6909	7.051	1037.6	0.6909	11.659	1112.0	0.6868
5	0.000	Not	0.6353	7.618	1090.6	0.6353	12.659	1168.6	0.6279
6	0.000	Required	0.5745	7.886	1116.5	0.5745	12.891	1180.0	0.5648
7	0.000		0.5172	8.020	1129.7	0.5172	12.996	1174.9	0.5069
8	0.000		0.4578	8.136	1141.3	0.4578	13.086	1170.4	0.4579
9	0.000		0.4253	8.531	1161.6	0.4253	13.605	1192.3	0.4164
10	0.000		0.3888	8.492	1177.6	0.3888	13.526	1185.2	0.3807
11	0.000		0.3580	8.343	1162.3	0.3580	13.321	1175.3	0.3507
12	0.000		0.3322	8.144	1142.1	0.3322	13.061	1164.6	0.3252
13	0.000		0.3102	7.903	1118.2	0.3102	12.761	1154.4	0.3035
14	0.000		0.2915	7.606	1089.4	0.2915	12.403	1143.9	0.2849
15	0.000		0.2754	7.235	1054.6	0.2754	11.950	1130.0	0.2688
16	0.000		0.2618	6.793	1014.7	0.2618	11.369	1106.7	0.2549
17	0.000		0.2503	6.266	969.1	0.2503	10.607	1068.6	0.2429
18	0.000		0.2406	5.635	909.6	0.2406	9.474	1006.6	0.2329
19	0.000		0.2327	5.021	870.1	0.2327	8.616	956.7	0.2247
20	0.000		0.2261	4.558	836.1	0.2261	7.808	909.2	0.2178
21	0.000		0.2204	4.057	800.9	0.2204	6.927	859.9	0.2119
22	0.000		0.2156	3.393	756.5	0.2156	5.769	799.9	0.2070
23	0.000		0.2118	2.682	711.7	0.2118	4.534	741.0	0.2032
24	0.000		0.2091	1.100	620.9	0.2091	1.890	634.2	0.2005
25	0.000		0.2081	0.723	600.5	0.2081	1.232	608.3	0.1995

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.332	648.0	0.7396	3.354	632.0	0.7396
2	11.769	927.0	0.7396	11.853	874.8	0.7396
3	16.157	993.9	0.7274	16.267	930.0	0.7274
4	18.481	1032.5	0.6824	18.604	986.9	0.6826
5	19.393	1033.6	0.6249	19.522	1014.5	0.6251
6	19.700	1031.3	0.5652	19.830	1019.1	0.5654
7	19.834	1034.0	0.5110	19.965	1023.6	0.5111
8	20.006	1041.6	0.4645	20.138	1028.6	0.4647
9	20.775	1065.2	0.4245	20.911	1047.7	0.4247
10	20.839	1079.0	0.3900	20.977	1057.3	0.3902
11	20.793	1094.5	0.3605	20.933	1067.1	0.3606
12	20.695	1110.6	0.3351	20.838	1082.0	0.3353
13	20.562	1127.4	0.3132	20.709	1102.2	0.3133
14	20.375	1144.9	0.2940	20.523	1107.3	0.2941
15	20.091	1162.4	0.2770	20.237	1097.1	0.2772
16	19.660	1178.3	0.2621	19.800	1067.1	0.2623
17	18.992	1188.3	0.2490	19.126	1038.1	0.2491
18	17.817	1183.8	0.2376	17.943	1000.6	0.2377
19	16.776	1164.4	0.2274	16.894	964.6	0.2275
20	15.593	1125.8	0.2185	15.702	925.8	0.2185
21	14.014	1057.3	0.2106	14.111	876.6	0.2107
22	11.812	963.1	0.2042	11.895	822.7	0.2043
23	9.260	857.0	0.1991	9.324	765.0	0.1992
24	3.896	674.5	0.1958	3.922	635.8	0.1958
25	2.503	632.0	0.1944	2.519	607.1	0.1946

Table 4-119. LS1 Burnup and TH Feedback Parameters Assembly G15

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.031	623.8	0.7396	1.734	634.4	0.7396
2	0.000		0.7396	3.559	803.8	0.7396	6.039	857.6	0.7396
3	0.000		0.7396	4.948	920.7	0.7396	8.600	1040.6	0.7342
4	0.000	Data	0.7107	5.915	940.1	0.7107	10.402	1092.1	0.6971
5	0.000	Not	0.6684	6.495	988.6	0.6684	11.380	1159.1	0.6463
6	0.000	Required	0.6178	6.845	1019.3	0.6178	11.853	1180.6	0.5902
7	0.000		0.5650	7.088	1041.1	0.5650	12.117	1184.3	0.5356
8	0.000		0.5153	7.320	1062.5	0.5153	12.379	1189.6	0.4864
9	0.000		0.4702	7.610	1109.1	0.4702	13.069	1225.7	0.4432
10	0.000		0.4305	7.862	1114.2	0.4305	13.122	1225.9	0.4052
11	0.000		0.3968	7.765	1104.7	0.3968	12.996	1220.6	0.3729
12	0.000		0.3684	7.576	1086.6	0.3684	12.762	1212.4	0.3454
13	0.000		0.3443	7.327	1063.1	0.3443	12.446	1200.3	0.3220
14	0.000		0.3237	7.031	1036.0	0.3237	12.037	1180.2	0.3016
15	0.000		0.3062	6.685	1005.1	0.3062	11.513	1149.2	0.2848
16	0.000		0.2913	6.279	970.2	0.2913	10.855	1106.7	0.2702
17	0.000		0.2787	5.784	929.4	0.2787	10.026	1053.0	0.2578
18	0.000		0.2680	5.083	874.8	0.2680	8.850	981.3	0.2473
19	0.000		0.2593	4.691	838.5	0.2593	7.984	928.6	0.2389
20	0.000		0.2519	4.152	807.4	0.2519	7.198	882.4	0.2318
21	0.000		0.2456	3.691	776.1	0.2456	6.374	836.6	0.2258
22	0.000		0.2402	3.086	736.8	0.2402	5.305	781.7	0.2208
23	0.000		0.2359	2.440	697.1	0.2359	4.177	726.6	0.2169
24	0.000		0.2327	1.003	615.7	0.2327	1.748	630.0	0.2136
25	0.000		0.2313	0.658	597.3	0.2313	1.145	606.4	0.2124

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.320	682.8	0.7396	3.341	628.6	0.7396
2	11.682	998.4	0.7396	11.761	852.6	0.7396
3	16.013	1088.7	0.7244	16.117	904.9	0.7245
4	18.224	1129.5	0.6784	18.341	960.2	0.6786
5	18.996	1108.8	0.6232	19.121	996.0	0.6234
6	19.195	1081.6	0.5677	19.325	1019.1	0.5679
7	19.282	1064.7	0.5166	19.414	1028.6	0.5168
8	19.474	1058.1	0.4715	19.608	1038.1	0.4717
9	20.314	1072.4	0.4321	20.454	1067.1	0.4323
10	20.450	1080.4	0.3971	20.591	1072.1	0.3972
11	20.457	1093.4	0.3668	20.599	1077.0	0.3670
12	20.393	1110.3	0.3406	20.536	1082.0	0.3407
13	20.275	1130.2	0.3179	20.418	1082.0	0.3180
14	20.087	1153.0	0.2980	20.229	1077.0	0.2981
15	19.789	1176.7	0.2805	19.930	1072.1	0.2806
16	19.332	1198.2	0.2651	19.470	1057.3	0.2652
17	18.626	1211.5	0.2514	18.760	1038.1	0.2514
18	17.394	1205.4	0.2392	17.526	1028.6	0.2393
19	16.321	1183.2	0.2287	16.451	1019.1	0.2287
20	15.133	1141.1	0.2195	15.258	996.0	0.2195
21	13.591	1069.7	0.2116	13.704	942.8	0.2117
22	11.437	970.8	0.2051	11.533	872.6	0.2052
23	8.979	862.8	0.2001	9.054	793.4	0.2002
24	3.806	677.6	0.1984	3.838	653.2	0.1965
25	2.469	634.9	0.1950	2.489	618.4	0.1951

Table 4-120. LS1 Burnup and TH Feedback Parameters Assembly G16

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.054	625.2	0.7396	1.816	641.0	0.7396
2	0.000		0.7396	3.656	811.5	0.7396	6.359	890.0	0.7396
3	0.000		0.7381	5.120	877.5	0.7381	9.096	1012.2	0.7308
4	0.000	Data	0.7065	6.144	958.9	0.7065	10.982	1150.9	0.6892
5	0.000	Not	0.6611	6.752	1011.0	0.6611	11.950	1214.6	0.6339
6	0.000	Required	0.6079	7.106	1042.8	0.6079	12.377	1227.9	0.5748
7	0.000		0.5538	7.331	1063.5	0.5538	12.579	1223.7	0.5193
8	0.000		0.5041	7.638	1083.0	0.5041	12.773	1221.4	0.4709
9	0.000		0.4599	8.013	1129.0	0.4599	13.413	1251.9	0.4290
10	0.000		0.4214	8.046	1132.3	0.4214	13.431	1249.0	0.3924
11	0.000		0.3885	7.940	1121.8	0.3885	13.301	1244.6	0.3611
12	0.000		0.3602	7.749	1103.2	0.3602	13.102	1243.1	0.3342
13	0.000		0.3363	7.504	1079.7	0.3363	12.845	1240.9	0.3111
14	0.000		0.3159	7.211	1052.4	0.3159	12.497	1230.7	0.2912
15	0.000		0.2986	6.864	1021.0	0.2986	12.009	1205.0	0.2741
16	0.000		0.2838	6.450	984.8	0.2838	11.368	1164.8	0.2595
17	0.000		0.2712	5.942	942.3	0.2712	10.540	1110.4	0.2471
18	0.000		0.2607	5.221	885.3	0.2607	9.345	1034.7	0.2366
19	0.000		0.2522	4.715	847.5	0.2522	8.455	977.4	0.2282
20	0.000		0.2448	4.269	815.6	0.2448	7.648	926.4	0.2211
21	0.000		0.2386	3.804	783.7	0.2386	6.788	874.4	0.2152
22	0.000		0.2333	3.187	743.2	0.2333	5.663	811.7	0.2102
23	0.000		0.2291	2.527	702.3	0.2291	4.468	750.6	0.2064
24	0.000		0.2261	1.046	618.0	0.2261	1.878	638.2	0.2033
25	0.000		0.2249	0.688	598.9	0.2249	1.233	611.6	0.2022

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.394	662.2	0.7396	3.409	608.4	0.7396
2	11.996	897.8	0.7396	12.052	756.7	0.7396
3	16.444	1082.4	0.7224	16.518	789.8	0.7225
4	18.713	1120.3	0.6738	18.796	822.7	0.6741
5	19.524	1104.6	0.6160	19.614	849.2	0.6164
6	19.760	1085.8	0.5586	19.855	868.6	0.5591
7	19.861	1076.0	0.5065	19.960	884.6	0.5072
8	20.043	1074.8	0.4613	20.145	896.7	0.4621
9	20.871	1093.1	0.4223	20.977	913.2	0.4230
10	20.988	1102.9	0.3879	21.095	917.4	0.3886
11	20.987	1115.8	0.3582	21.093	913.2	0.3589
12	20.936	1130.7	0.3324	21.041	909.0	0.3330
13	20.846	1147.9	0.3099	20.948	896.7	0.3105
14	20.684	1167.3	0.2902	20.784	888.6	0.2908
15	20.394	1188.3	0.2730	20.491	876.6	0.2735
16	19.938	1208.3	0.2578	20.031	860.8	0.2583
17	19.233	1221.7	0.2443	19.320	837.7	0.2448
18	18.007	1218.3	0.2325	18.090	822.7	0.2330
19	16.936	1198.6	0.2222	17.014	804.3	0.2227
20	15.747	1158.3	0.2131	15.819	782.7	0.2136
21	14.175	1086.2	0.2054	14.240	758.4	0.2059
22	11.969	986.0	0.1990	12.024	724.9	0.1995
23	9.416	874.0	0.1941	9.458	683.5	0.1946
24	3.994	681.0	0.1905	4.010	607.1	0.1910
25	2.591	636.9	0.1892	2.600	587.6	0.1896

Table 4-121. LS1 Burnup and TH Feedback Parameters Assembly H1

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.2	0.7396
2	0.000		0.7396	0.075	835.4	0.7396
3	0.000		0.7396	0.103	964.4	0.7396
4	0.000	Data	0.7082	0.119	969.3	0.7082
5	0.000	Not	0.6824	0.127	1005.5	0.6824
6	0.000	Required	0.6094	0.130	1019.5	0.6094
7	0.000		0.5558	0.132	1028.9	0.5558
8	0.000		0.5067	0.134	1038.4	0.5067
9	0.000		0.4629	0.142	1077.4	0.4629
10	0.000		0.4248	0.143	1082.4	0.4248
11	0.000		0.3921	0.143	1082.4	0.3921
12	0.000		0.3637	0.143	1082.4	0.3637
13	0.000		0.3391	0.142	1077.4	0.3391
14	0.000		0.3178	0.140	1067.6	0.3178
15	0.000		0.2993	0.136	1048.0	0.2993
16	0.000		0.2834	0.130	1019.5	0.2834
17	0.000		0.2697	0.121	978.2	0.2697
18	0.000		0.2583	0.106	913.4	0.2583
19	0.000		0.2490	0.097	876.8	0.2490
20	0.000		0.2409	0.089	845.5	0.2409
21	0.000		0.2339	0.081	815.4	0.2339
22	0.000		0.2282	0.068	768.9	0.2282
23	0.000		0.2236	0.054	721.7	0.2236
24	0.000		0.2209	0.021	621.2	0.2209
25	0.000		0.2197	0.013	598.7	0.2197

Table 4-122. LS1 Burnup and TH Feedback Parameters Assembly H2

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm^3) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	0.000		0.7396	0.020	625.2	0.7396
2	0.000		0.7396	0.074	831.1	0.7396
3	0.000		0.7396	0.102	959.5	0.7396
4	0.000	Data	0.7085	0.119	959.3	0.7085
5	0.000	Not	0.6625	0.128	1010.2	0.6625
6	0.000	Required	0.6090	0.131	1024.2	0.609
7	0.000		0.5552	0.132	1028.9	0.5552
8	0.000		0.5058	0.135	1043.2	0.5058
9	0.000		0.4617	0.143	1082.4	0.4617
10	0.000		0.4234	0.145	1092.5	0.4234
11	0.000		0.3904	0.145	1092.5	0.3904
12	0.000		0.3617	0.146	1097.5	0.3617
13	0.000		0.3367	0.146	1097.5	0.3367
14	0.000		0.3150	0.145	1092.5	0.3150
15	0.000		0.2962	0.141	1072.5	0.2962
16	0.000		0.2799	0.135	1043.2	0.2799
17	0.000		0.2661	0.125	996.4	0.2661
18	0.000		0.2546	0.110	930.3	0.2546
19	0.000		0.2452	0.100	888.6	0.2452
20	0.000		0.2371	0.091	853.2	0.2371
21	0.000		0.2302	0.083	822.8	0.2302
22	0.000		0.2245	0.069	772.3	0.2245
23	0.000		0.2199	0.055	725.0	0.2199
24	0.000		0.2171	0.021	621.2	0.2171
25	0.000		0.2160	0.014	601.5	0.2160

Table 4-123. LS1 Burnup and TH Feedback Parameters Assembly H3

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.017	615.1	0.7396
2	0.000		0.7396	0.064	789.1	0.7396
3	0.000		0.7396	0.089	897.7	0.7396
4	0.000	Data	0.7223	0.104	905.2	0.7223
5	0.000	Not	0.6865	0.113	943.1	0.6865
6	0.000	Required	0.6430	0.117	960.5	0.643
7	0.000		0.5963	0.119	969.3	0.5963
8	0.000		0.5495	0.122	982.7	0.5495
9	0.000		0.5055	0.129	1014.8	0.5055
10	0.000		0.4658	0.130	1019.5	0.4658
11	0.000		0.4316	0.128	1010.2	0.4316
12	0.000		0.4025	0.126	1000.9	0.4025
13	0.000		0.3774	0.123	987.3	0.3774
14	0.000		0.3556	0.119	969.3	0.3556
15	0.000		0.3368	0.114	947.4	0.3368
16	0.000		0.3206	0.109	926.0	0.3206
17	0.000		0.3067	0.101	892.9	0.3067
18	0.000		0.2951	0.088	841.7	0.2951
19	0.000		0.2855	0.080	811.7	0.2855
20	0.000		0.2773	0.073	786.4	0.2773
21	0.000		0.2701	0.067	765.4	0.2701
22	0.000		0.2641	0.056	728.3	0.2641
23	0.000		0.2593	0.044	689.8	0.2593
24	0.000		0.2566	0.017	609.9	0.2566
25	0.000		0.2554	0.010	590.4	0.2554

Table 4-124. LS1 Burnup and TH Feedback Parameters Assembly H4

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.015	608.5	0.7396
2	0.000		0.7396	0.057	760.8	0.7396
3	0.000		0.7396	0.079	852.8	0.7396
4	0.000	Data	0.7355	0.093	881.0	0.7355
5	0.000	Not	0.7070	0.101	892.9	0.707
6	0.000	Required	0.6701	0.106	913.4	0.6701
7	0.000		0.6282	0.108	921.8	0.6282
8	0.000		0.5841	0.111	934.5	0.5841
9	0.000		0.5405	0.116	964.9	0.5405
10	0.000		0.5001	0.119	969.3	0.5001
11	0.000		0.4646	0.117	960.5	0.4646
12	0.000		0.4345	0.115	951.6	0.4345
13	0.000		0.4086	0.112	938.8	0.4086
14	0.000		0.3861	0.108	921.8	0.3861
15	0.000		0.3664	0.104	905.2	0.3664
16	0.000		0.3494	0.099	884.8	0.3494
17	0.000		0.3348	0.091	853.2	0.3348
18	0.000		0.3227	0.080	811.7	0.3227
19	0.000		0.3125	0.073	786.4	0.3125
20	0.000		0.3038	0.067	765.4	0.3038
21	0.000		0.2962	0.061	744.9	0.2962
22	0.000		0.2898	0.051	712.0	0.2898
23	0.000		0.2848	0.040	677.4	0.2848
24	0.000		0.2819	0.015	604.3	0.2819
25	0.000		0.2807	0.009	587.7	0.2807

Table 4-125. LS1 Burnup and TH Feedback Parameters Assembly H5

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.021	628.6	0.7396
2	0.000		0.7396	0.079	852.8	0.7396
3	0.000		0.7376	0.109	926.0	0.7376
4	0.000	Data	0.7008	0.126	1000.9	0.7008
5	0.000	Not	0.6499	0.133	1033.7	0.6499
6	0.000	Required	0.5928	0.136	1048.0	0.5928
7	0.000		0.5371	0.137	1052.9	0.5371
8	0.000		0.4876	0.139	1062.6	0.4876
9	0.000		0.4442	0.148	1107.7	0.4442
10	0.000		0.4066	0.150	1118.0	0.4066
11	0.000		0.3741	0.152	1128.4	0.3741
12	0.000		0.3458	0.154	1138.9	0.3458
13	0.000		0.3211	0.156	1149.5	0.3211
14	0.000		0.2995	0.156	1149.5	0.2995
15	0.000		0.2806	0.153	1133.6	0.2806
16	0.000		0.2643	0.148	1107.7	0.2643
17	0.000		0.2502	0.141	1072.6	0.2502
18	0.000		0.2384	0.126	1000.9	0.2384
19	0.000		0.2285	0.118	964.9	0.2285
20	0.000		0.2199	0.109	926.0	0.2199
21	0.000		0.2124	0.100	888.8	0.2124
22	0.000		0.2063	0.084	826.6	0.2063
23	0.000		0.2015	0.067	765.4	0.2015
24	0.000		0.1986	0.025	632.7	0.1986
25	0.000		0.1975	0.017	609.9	0.1975

Table 4-126. LS1 Burnup and TH Feedback Parameters Assembly H5

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.022	632.0	0.7396
2	0.000		0.7396	0.083	870.5	0.7396
3	0.000		0.7364	0.114	947.4	0.7364
4	0.000	Data	0.6980	0.131	1024.2	0.698
5	0.000	Not	0.6457	0.137	1052.9	0.6457
6	0.000	Required	0.5883	0.138	1057.7	0.5883
7	0.000		0.5332	0.138	1057.7	0.5332
8	0.000		0.4849	0.139	1062.6	0.4849
9	0.000		0.4430	0.146	1097.6	0.4430
10	0.000		0.4068	0.146	1097.6	0.4068
11	0.000		0.3760	0.144	1087.4	0.3760
12	0.000		0.3497	0.141	1072.6	0.3497
13	0.000		0.3271	0.138	1057.7	0.3271
14	0.000		0.3078	0.134	1038.4	0.3078
15	0.000		0.2910	0.129	1014.6	0.2910
16	0.000		0.2764	0.123	987.3	0.2764
17	0.000		0.2639	0.116	951.6	0.2639
18	0.000		0.2534	0.102	897.0	0.2534
19	0.000		0.2446	0.093	861.0	0.2446
20	0.000		0.2370	0.086	834.1	0.2370
21	0.000		0.2305	0.078	804.4	0.2305
22	0.000		0.2250	0.066	761.9	0.2250
23	0.000		0.2207	0.052	716.2	0.2207
24	0.000		0.2181	0.020	616.4	0.2181
25	0.000		0.2170	0.013	598.7	0.2170

Table 4-127. LS1 Burnup and TH Feedback Parameters Assembly H7

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.8	0.7396
2	0.000		0.7396	0.070	814.0	0.7396
3	0.000		0.7396	0.094	921.0	0.7396
4	0.000	Data	0.7173	0.109	926.0	0.7173
5	0.000	Not	0.6788	0.116	956.1	0.6788
6	0.000	Required	0.6329	0.119	969.3	0.6329
7	0.000		0.5846	0.121	978.2	0.5846
8	0.000		0.5376	0.123	987.3	0.5376
9	0.000		0.4943	0.130	1019.5	0.4943
10	0.000		0.4555	0.130	1019.5	0.4555
11	0.000		0.4225	0.129	1014.8	0.4225
12	0.000		0.3942	0.127	1005.5	0.3942
13	0.000		0.3696	0.124	991.8	0.3696
14	0.000		0.3484	0.120	973.8	0.3484
15	0.000		0.3300	0.116	956.1	0.3300
16	0.000		0.3140	0.111	934.5	0.3140
17	0.000		0.3001	0.105	909.3	0.3001
18	0.000		0.2884	0.093	861.0	0.2884
19	0.000		0.2785	0.086	834.1	0.2785
20	0.000		0.2699	0.080	811.7	0.2699
21	0.000		0.2623	0.073	786.4	0.2623
22	0.000		0.2561	0.062	748.3	0.2561
23	0.000		0.2511	0.049	705.6	0.2511
24	0.000		0.2481	0.018	612.7	0.2481
25	0.000		0.2469	0.012	598.0	0.2469

Table 4-128. LS1 Burnup and TH Feedback Parameters Assembly H8

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.021	628.6	0.7396
2	0.000		0.7396	0.081	851.6	0.7396
3	0.000		0.7378	0.110	930.3	0.7378
4	0.000	Data	0.7016	0.127	1005.5	0.7016
5	0.000	Not	0.6517	0.134	1038.4	0.6517
6	0.000	Required	0.5958	0.136	1048.0	0.5958
7	0.000		0.5411	0.136	1048.0	0.5411
8	0.000		0.4925	0.137	1052.8	0.4925
9	0.000		0.4499	0.145	1092.5	0.4499
10	0.000		0.4131	0.145	1092.5	0.4131
11	0.000		0.3817	0.144	1087.4	0.3817
12	0.000		0.3547	0.141	1072.5	0.3547
13	0.000		0.3316	0.139	1062.6	0.3316
14	0.000		0.3116	0.135	1043.2	0.3116
15	0.000		0.2944	0.130	1019.5	0.2944
16	0.000		0.2795	0.124	991.8	0.2795
17	0.000		0.2667	0.116	958.1	0.2667
18	0.000		0.2560	0.102	897.0	0.2560
19	0.000		0.2471	0.093	861.0	0.2471
20	0.000		0.2394	0.086	834.1	0.2394
21	0.000		0.2328	0.077	800.8	0.2328
22	0.000		0.2273	0.065	758.5	0.2273
23	0.000		0.2230	0.051	712.0	0.2230
24	0.000		0.2204	0.019	615.6	0.2204
25	0.000		0.2194	0.012	596.0	0.2194

Table 4-129. LS1 Burnup and TH Feedback Parameters Assembly H9

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.2	0.7396
2	0.000		0.7396	0.077	844.0	0.7396
3	0.000		0.7382	0.106	913.4	0.7382
4	0.000	Data	0.7015	0.125	996.4	0.7015
5	0.000	Not	0.6495	0.136	1048.0	0.6495
6	0.000	Required	0.5898	0.143	1082.4	0.5898
7	0.000		0.5305	0.148	1107.7	0.5305
8	0.000		0.4777	0.152	1128.4	0.4777
9	0.000		0.4320	0.162	1161.8	0.4320
10	0.000		0.3929	0.162	1161.8	0.3929
11	0.000		0.3599	0.161	1176.4	0.3599
12	0.000		0.3322	0.158	1160.2	0.3322
13	0.000		0.3088	0.156	1149.5	0.3088
14	0.000		0.2886	0.153	1133.6	0.2886
15	0.000		0.2711	0.149	1112.8	0.2711
16	0.000		0.2559	0.146	1097.5	0.2559
17	0.000		0.2425	0.141	1072.5	0.2425
18	0.000		0.2310	0.131	1024.2	0.2310
19	0.000		0.2210	0.127	1005.5	0.2210
20	0.000		0.2121	0.122	982.7	0.2121
21	0.000		0.2042	0.113	943.1	0.2042
22	0.000		0.1976	0.096	872.8	0.1976
23	0.000		0.1924	0.077	800.8	0.1924
24	0.000		0.1894	0.029	644.4	0.1894
25	0.000		0.1880	0.019	615.6	0.1880

Table 4-130. LS1 Burnup and TH Feedback Parameters Assembly H10

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.2	0.7396
2	0.000		0.7396	0.076	839.7	0.7396
3	0.000		0.7396	0.104	969.3	0.7396
4	0.000	Data	0.7073	0.120	973.6	0.7073
5	0.000	Not	0.6609	0.128	1010.2	0.6609
6	0.000	Required	0.6074	0.131	1024.2	0.6074
7	0.000		0.5537	0.132	1028.9	0.5537
8	0.000		0.5047	0.134	1038.4	0.5047
9	0.000		0.4612	0.142	1077.4	0.4612
10	0.000		0.4233	0.143	1082.4	0.4233
11	0.000		0.3908	0.143	1082.4	0.3908
12	0.000		0.3625	0.143	1082.4	0.3625
13	0.000		0.3380	0.143	1082.4	0.3380
14	0.000		0.3166	0.141	1072.5	0.3166
15	0.000		0.2981	0.138	1057.7	0.2981
16	0.000		0.2819	0.133	1033.7	0.2819
17	0.000		0.2680	0.125	996.4	0.2680
18	0.000		0.2563	0.112	938.8	0.2563
19	0.000		0.2465	0.103	901.0	0.2465
20	0.000		0.2381	0.095	868.9	0.2381
21	0.000		0.2308	0.086	834.1	0.2308
22	0.000		0.2248	0.072	782.9	0.2248
23	0.000		0.2201	0.057	731.6	0.2201
24	0.000		0.2173	0.022	624.1	0.2173
25	0.000		0.2162	0.014	601.5	0.2162

Table 4-131. LS1 Burnup and TH Feedback Parameters Assembly H11

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.016	616.5	0.7396
2	0.000		0.7396	0.068	805.6	0.7396
3	0.000		0.7396	0.093	916.3	0.7396
4	0.000	Data	0.7183	0.108	921.8	0.7183
5	0.000	Not	0.6799	0.116	956.1	0.6799
6	0.000	Required	0.6339	0.120	973.8	0.6339
7	0.000		0.5850	0.123	987.3	0.5850
8	0.000		0.5373	0.125	996.4	0.5373
9	0.000		0.4930	0.133	1033.7	0.4930
10	0.000		0.4535	0.134	1038.4	0.4535
11	0.000		0.4200	0.133	1033.7	0.4200
12	0.000		0.3912	0.131	1024.2	0.3912
13	0.000		0.3661	0.128	1010.2	0.3661
14	0.000		0.3444	0.125	996.4	0.3444
15	0.000		0.3257	0.120	973.8	0.3257
16	0.000		0.3095	0.115	951.8	0.3095
17	0.000		0.2955	0.107	917.6	0.2955
18	0.000		0.2839	0.094	864.9	0.2839
19	0.000		0.2742	0.086	834.1	0.2742
20	0.000		0.2659	0.080	811.7	0.2659
21	0.000		0.2586	0.072	782.9	0.2586
22	0.000		0.2525	0.061	744.9	0.2525
23	0.000		0.2477	0.049	705.6	0.2477
24	0.000		0.2448	0.018	612.7	0.2448
25	0.000		0.2437	0.011	593.2	0.2437

Table 4-132. LS1 Burnup and TH Feedback Parameters Assembly H12

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.022	632.0	0.7396
2	0.000		0.7396	0.085	879.5	0.7396
3	0.000		0.7355	0.116	956.1	0.7355
4	0.000	Data	0.6959	0.133	1033.7	0.6959
5	0.000	Not	0.6426	0.139	1062.6	0.6426
6	0.000	Required	0.5846	0.140	1067.5	0.5846
7	0.000		0.5294	0.139	1062.6	0.5294
8	0.000		0.4813	0.140	1067.5	0.4813
9	0.000		0.4396	0.147	1102.6	0.4396
10	0.000		0.4037	0.147	1102.6	0.4037
11	0.000		0.3731	0.145	1092.5	0.3731
12	0.000		0.3469	0.143	1082.4	0.3469
13	0.000		0.3244	0.140	1067.5	0.3244
14	0.000		0.3050	0.136	1048.0	0.3050
15	0.000		0.2883	0.131	1024.2	0.2883
16	0.000		0.2738	0.125	996.4	0.2738
17	0.000		0.2613	0.117	960.5	0.2613
18	0.000		0.2507	0.104	905.2	0.2507
19	0.000		0.2420	0.096	872.8	0.2420
20	0.000		0.2344	0.088	841.7	0.2344
21	0.000		0.2278	0.080	811.7	0.2278
22	0.000		0.2223	0.067	765.4	0.2223
23	0.000		0.2179	0.053	718.5	0.2179
24	0.000		0.2154	0.020	618.4	0.2154
25	0.000		0.2143	0.013	598.7	0.2143

Table 4-133. LS1 Burnup and TH Feedback Parameters Assembly H13

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.021	628.6	0.7396
2	0.000		0.7396	0.078	848.4	0.7396
3	0.000		0.7387	0.107	917.6	0.7387
4	0.000	Data	0.7035	0.124	991.8	0.7035
5	0.000	Not	0.6543	0.132	1028.9	0.6543
6	0.000	Required	0.5984	0.135	1043.2	0.5984
7	0.000		0.5432	0.136	1048.0	0.5432
8	0.000		0.4937	0.138	1057.7	0.4937
9	0.000		0.4502	0.147	1102.6	0.4502
10	0.000		0.4125	0.148	1107.7	0.4125
11	0.000		0.3800	0.149	1112.8	0.3800
12	0.000		0.3519	0.149	1112.8	0.3519
13	0.000		0.3277	0.148	1107.7	0.3277
14	0.000		0.3066	0.147	1102.6	0.3066
15	0.000		0.2883	0.143	1082.4	0.2883
16	0.000		0.2725	0.137	1052.9	0.2725
17	0.000		0.2590	0.128	1010.2	0.2590
18	0.000		0.2477	0.112	938.6	0.2477
19	0.000		0.2384	0.103	901.0	0.2384
20	0.000		0.2305	0.094	864.9	0.2305
21	0.000		0.2237	0.085	830.3	0.2237
22	0.000		0.2180	0.072	782.9	0.2180
23	0.000		0.2135	0.057	731.6	0.2135
24	0.000		0.2108	0.022	624.1	0.2108
25	0.000		0.2097	0.014	601.5	0.2097

Table 4-134. LS1 Burnup and TH Feedback Parameters Assembly H14

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm^3) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	0.000		0.7396	0.019	621.6	0.7396
2	0.000		0.7396	0.071	818.3	0.7396
3	0.000		0.7396	0.098	940.1	0.7396
4	0.000	Data	0.7144	0.114	947.4	0.7144
5	0.000	Not	0.6728	0.122	982.7	0.6728
6	0.000	Required	0.6237	0.125	996.4	0.6237
7	0.000		0.5730	0.126	1000.9	0.5730
8	0.000		0.5250	0.128	1010.2	0.5250
9	0.000		0.4815	0.135	1043.2	0.4815
10	0.000		0.4429	0.136	1048.0	0.4429
11	0.000		0.4103	0.134	1038.4	0.4103
12	0.000		0.3824	0.131	1024.2	0.3824
13	0.000		0.3582	0.128	1010.2	0.3582
14	0.000		0.3374	0.124	991.6	0.3374
15	0.000		0.3194	0.119	969.3	0.3194
16	0.000		0.3039	0.113	943.1	0.3039
17	0.000		0.2907	0.105	909.3	0.2907
18	0.000		0.2796	0.092	857.1	0.2796
19	0.000		0.2704	0.083	822.6	0.2704
20	0.000		0.2626	0.076	797.2	0.2626
21	0.000		0.2557	0.069	772.3	0.2557
22	0.000		0.2500	0.058	734.9	0.2500
23	0.000		0.2455	0.046	696.1	0.2455
24	0.000		0.2428	0.017	609.9	0.2428
25	0.000		0.2417	0.011	593.2	0.2417

Table 4-135. LS1 Burnup and TH Feedback Parameters Assembly H15

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.022	632.0	0.7396
2	0.000		0.7396	0.085	879.5	0.7396
3	0.000		0.7348	0.117	960.5	0.7348
4	0.000	Data	0.6941	0.134	1038.4	0.6941
5	0.000	Not	0.6395	0.140	1067.5	0.6395
6	0.000	Required	0.5804	0.141	1072.5	0.5804
7	0.000		0.5246	0.141	1072.5	0.5246
8	0.000		0.4762	0.142	1077.4	0.4762
9	0.000		0.4345	0.149	1112.6	0.4345
10	0.000		0.3985	0.150	1118.0	0.3985
11	0.000		0.3676	0.149	1112.6	0.3676
12	0.000		0.3410	0.148	1107.7	0.3410
13	0.000		0.3181	0.147	1102.6	0.3181
14	0.000		0.2982	0.145	1092.5	0.2982
15	0.000		0.2809	0.141	1072.5	0.2809
16	0.000		0.2659	0.134	1038.4	0.2659
17	0.000		0.2531	0.126	1000.9	0.2531
18	0.000		0.2425	0.111	934.5	0.2425
19	0.000		0.2335	0.102	897.0	0.2335
20	0.000		0.2259	0.093	861.0	0.2259
21	0.000		0.2193	0.084	826.6	0.2193
22	0.000		0.2138	0.071	779.4	0.2138
23	0.000		0.2095	0.056	726.3	0.2095
24	0.000		0.2069	0.021	621.2	0.2069
25	0.000		0.2059	0.014	601.5	0.2059

Table 4-136. LS1 Burnup and TH Feedback Parameters Assembly H16

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm^3) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	0.000		0.7396	0.023	635.4	0.7396
2	0.000		0.7396	0.086	884.0	0.7396
3	0.000		0.7342	0.118	964.9	0.7342
4	0.000	Data	0.6926	0.135	1043.2	0.6926
5	0.000	Not	0.6369	0.141	1072.5	0.6369
6	0.000	Required	0.5772	0.142	1077.4	0.5772
7	0.000		0.5212	0.141	1072.5	0.5212
8	0.000		0.4729	0.142	1077.4	0.4729
9	0.000		0.4314	0.150	1118.0	0.4314
10	0.000		0.3955	0.150	1118.0	0.3955
11	0.000		0.3646	0.150	1118.0	0.3646
12	0.000		0.3380	0.151	1123.2	0.3380
13	0.000		0.3149	0.151	1123.2	0.3149
14	0.000		0.2948	0.149	1112.8	0.2948
15	0.000		0.2773	0.146	1097.5	0.2773
16	0.000		0.2621	0.140	1067.5	0.2621
17	0.000		0.2491	0.131	1024.2	0.2491
18	0.000		0.2382	0.116	956.1	0.2382
19	0.000		0.2291	0.107	917.6	0.2291
20	0.000		0.2213	0.098	880.8	0.2213
21	0.000		0.2146	0.088	841.7	0.2146
22	0.000		0.2091	0.074	790.0	0.2091
23	0.000		0.2048	0.059	738.2	0.2048
24	0.000		0.2022	0.022	624.1	0.2022
25	0.000		0.2011	0.014	601.5	0.2011

Table 4-137. LS1 Burnup and TH Feedback Parameters Assembly H17

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.8	0.7396
2	0.000		0.7396	0.074	831.1	0.7396
3	0.000		0.7396	0.102	959.5	0.7396
4	0.000	Data	0.7101	0.119	969.3	0.7101
5	0.000	Not	0.6652	0.127	1005.5	0.6652
6	0.000	Required	0.6130	0.130	1019.5	0.613
7	0.000		0.5600	0.131	1024.2	0.5600
8	0.000		0.5111	0.133	1033.7	0.5111
9	0.000		0.4673	0.141	1072.5	0.4673
10	0.000		0.4290	0.142	1077.4	0.4290
11	0.000		0.3966	0.140	1067.5	0.3966
12	0.000		0.3686	0.138	1057.7	0.3686
13	0.000		0.3445	0.135	1043.2	0.3445
14	0.000		0.3239	0.132	1028.9	0.3239
15	0.000		0.3060	0.127	1005.5	0.3060
16	0.000		0.2907	0.120	973.8	0.2907
17	0.000		0.2775	0.111	934.5	0.2775
18	0.000		0.2668	0.097	876.8	0.2668
19	0.000		0.2576	0.088	841.7	0.2576
20	0.000		0.2498	0.081	815.4	0.2498
21	0.000		0.2432	0.073	786.4	0.2432
22	0.000		0.2376	0.062	748.3	0.2376
23	0.000		0.2332	0.049	705.6	0.2332
24	0.000		0.2306	0.018	612.7	0.2306
25	0.000		0.2294	0.012	596.0	0.2294

Table 4-138. LS1 Burnup and TH Feedback Parameters Assembly H18

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	821.8	0.7396
2	0.000		0.7396	0.074	831.1	0.7396
3	0.000		0.7390	0.103	901.0	0.7390
4	0.000	Data	0.7033	0.123	987.3	0.7033
5	0.000	Not	0.6519	0.135	1043.2	0.6519
6	0.000	Required	0.5917	0.143	1082.4	0.5917
7	0.000		0.5314	0.149	1112.8	0.5314
8	0.000		0.4774	0.155	1144.2	0.4774
9	0.000		0.4305	0.165	1198.4	0.4305
10	0.000		0.3906	0.168	1203.9	0.3906
11	0.000		0.3570	0.165	1198.4	0.3570
12	0.000		0.3287	0.163	1187.3	0.3287
13	0.000		0.3047	0.162	1181.8	0.3047
14	0.000		0.2839	0.163	1187.3	0.2839
15	0.000		0.2654	0.165	1198.4	0.2654
16	0.000		0.2489	0.164	1192.8	0.2489
17	0.000		0.2346	0.159	1165.5	0.2346
18	0.000		0.2224	0.144	1087.4	0.2224
19	0.000		0.2122	0.134	1038.4	0.2122
20	0.000		0.2034	0.125	996.4	0.2034
21	0.000		0.1959	0.114	947.4	0.1959
22	0.000		0.1896	0.097	876.8	0.1896
23	0.000		0.1847	0.079	808.1	0.1847
24	0.000		0.1817	0.030	647.3	0.1817
25	0.000		0.1805	0.020	618.4	0.1805

Table 4-139. LS1 Burnup and TH Feedback Parameters Assembly J1

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.018	618.3	0.7396
2	0.000		0.7396	0.065	792.4	0.7396
3	0.000		0.7396	0.089	896.5	0.7396
4	0.000	Data	0.7198	0.105	908.0	0.7198
5	0.000	Not	0.6819	0.114	945.9	0.6819
6	0.000	Required	0.6382	0.118	963.3	0.6382
7	0.000		0.5875	0.120	972.2	0.5875
8	0.000		0.5395	0.123	985.6	0.5395
9	0.000		0.4949	0.132	1027.1	0.4949
10	0.000		0.4547	0.134	1036.6	0.4547
11	0.000		0.4200	0.137	1050.9	0.4200
12	0.000		0.3895	0.140	1065.5	0.3895
13	0.000		0.3622	0.143	1080.3	0.3622
14	0.000		0.3379	0.145	1090.3	0.3379
15	0.000		0.3167	0.142	1075.3	0.3167
16	0.000		0.2985	0.136	1046.1	0.2985
17	0.000		0.2829	0.128	1008.4	0.2829
18	0.000		0.2700	0.113	941.6	0.2700
19	0.000		0.2593	0.104	903.9	0.2593
20	0.000		0.2502	0.095	867.7	0.2502
21	0.000		0.2425	0.085	829.4	0.2425
22	0.000		0.2361	0.071	778.6	0.2361
23	0.000		0.2311	0.057	731.0	0.2311
24	0.000		0.2280	0.023	626.6	0.2280
25	0.000		0.2267	0.015	604.2	0.2267

Table 4-140. LS1 Burnup and TH Feedback Parameters Assembly J2

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.016	616.3	0.7396
2	0.000		0.7396	0.064	788.3	0.7396
3	0.000		0.7396	0.088	891.9	0.7396
4	0.000	Data	0.7202	0.104	903.9	0.7202
5	0.000	Not	0.6829	0.112	937.4	0.6829
6	0.000	Required	0.6374	0.117	959.0	0.6374
7	0.000		0.5886	0.120	972.2	0.5886
8	0.000		0.5404	0.124	990.1	0.5404
9	0.000		0.4955	0.132	1027.1	0.4955
10	0.000		0.4551	0.134	1036.6	0.4551
11	0.000		0.4202	0.137	1050.9	0.4202
12	0.000		0.3895	0.140	1065.6	0.3895
13	0.000		0.3620	0.144	1085.3	0.3620
14	0.000		0.3376	0.145	1090.3	0.3376
15	0.000		0.3161	0.144	1085.3	0.3161
16	0.000		0.2975	0.140	1085.5	0.2975
17	0.000		0.2815	0.134	1036.5	0.2815
18	0.000		0.2678	0.122	981.1	0.2678
19	0.000		0.2563	0.115	950.3	0.2563
20	0.000		0.2463	0.108	920.5	0.2463
21	0.000		0.2377	0.097	875.6	0.2377
22	0.000		0.2307	0.082	816.2	0.2307
23	0.000		0.2252	0.065	757.8	0.2252
24	0.000		0.2218	0.026	635.4	0.2218
25	0.000		0.2204	0.018	612.6	0.2204

Table 4-141. LS1 Burnup and TH Feedback Parameters Assembly J3

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.0	0.7396
2	0.000		0.7396	0.070	813.2	0.7396
3	0.000		0.7396	0.095	924.4	0.7396
4	0.000	Data	0.7143	0.111	933.1	0.7143
5	0.000	Not	0.6728	0.119	967.8	0.6728
6	0.000	Required	0.6235	0.124	990.1	0.6235
7	0.000		0.5721	0.126	999.2	0.5721
8	0.000		0.5233	0.129	1013.0	0.5233
9	0.000		0.4788	0.137	1050.9	0.4788
10	0.000		0.4394	0.139	1060.6	0.4394
11	0.000		0.4056	0.141	1070.4	0.4056
12	0.000		0.3760	0.142	1075.3	0.3760
13	0.000		0.3501	0.142	1075.3	0.3501
14	0.000		0.3275	0.142	1075.3	0.3275
15	0.000		0.3078	0.139	1060.6	0.3078
16	0.000		0.2908	0.133	1031.8	0.2908
17	0.000		0.2761	0.126	999.2	0.2761
18	0.000		0.2638	0.112	937.4	0.2638
19	0.000		0.2536	0.103	899.6	0.2536
20	0.000		0.2448	0.095	867.7	0.2448
21	0.000		0.2372	0.085	829.4	0.2372
22	0.000		0.2311	0.071	778.6	0.2311
23	0.000		0.2262	0.057	731.0	0.2262
24	0.000		0.2232	0.023	626.8	0.2232
25	0.000		0.2219	0.016	607.0	0.2219

Table 4-142. LS1 Burnup and TH Feedback Parameters Assembly J4

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm³) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm³) 3.67 Cy 8
1	0.000		0.7396	0.020	625.0	0.7396
2	0.000		0.7396	0.070	813.2	0.7396
3	0.000		0.7396	0.097	933.9	0.7396
4	0.000	Data	0.7125	0.114	945.9	0.7125
5	0.000	Not	0.6692	0.123	985.6	0.6692
6	0.000	Required	0.6175	0.129	1013.0	0.6175
7	0.000		0.5637	0.132	1027.1	0.5637
8	0.000		0.5132	0.135	1041.3	0.5132
9	0.000		0.4679	0.144	1085.3	0.4679
10	0.000		0.4284	0.145	1090.3	0.4284
11	0.000		0.3948	0.145	1090.3	0.3948
12	0.000		0.3658	0.144	1085.3	0.3658
13	0.000		0.3408	0.143	1080.3	0.3408
14	0.000		0.3192	0.141	1070.4	0.3192
15	0.000		0.3003	0.138	1055.7	0.3003
16	0.000		0.2839	0.133	1031.8	0.2839
17	0.000		0.2697	0.127	1003.8	0.2697
18	0.000		0.2576	0.116	954.6	0.2576
19	0.000		0.2474	0.108	920.6	0.2474
20	0.000		0.2385	0.100	887.6	0.2385
21	0.000		0.2309	0.090	848.3	0.2309
22	0.000		0.2247	0.075	792.8	0.2247
23	0.000		0.2197	0.060	741.0	0.2197
24	0.000		0.2168	0.024	629.6	0.2168
25	0.000		0.2155	0.016	607.0	0.2155

Table 4-143. LS1 Burnup and TH Feedback Parameters Assembly J5

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm^3) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	0.000		0.7396	0.016	616.3	0.7396
2	0.000		0.7396	0.062	760.2	0.7396
3	0.000		0.7396	0.086	882.9	0.7396
4	0.000	Data	0.7205	0.103	899.8	0.7205
5	0.000	Not	0.6823	0.115	950.3	0.6823
6	0.000	Required	0.6340	0.125	994.6	0.634
7	0.000		0.5802	0.134	1036.5	0.5802
8	0.000		0.5264	0.142	1075.3	0.5264
9	0.000		0.4767	0.152	1126.0	0.4767
10	0.000		0.4335	0.153	1131.2	0.4335
11	0.000		0.3975	0.152	1126.0	0.3975
12	0.000		0.3668	0.150	1115.7	0.3668
13	0.000		0.3407	0.148	1105.4	0.3407
14	0.000		0.3185	0.145	1090.3	0.3185
15	0.000		0.2993	0.141	1070.4	0.2993
16	0.000		0.2826	0.137	1050.9	0.2826
17	0.000		0.2682	0.130	1017.7	0.2682
18	0.000		0.2559	0.119	967.8	0.2559
19	0.000		0.2455	0.111	933.1	0.2455
20	0.000		0.2365	0.103	899.8	0.2365
21	0.000		0.2287	0.093	859.9	0.2287
22	0.000		0.2223	0.079	807.2	0.2223
23	0.000		0.2173	0.063	751.0	0.2173
24	0.000		0.2142	0.026	635.4	0.2142
25	0.000		0.2129	0.017	609.8	0.2129

Table 4-144. LS1 Burnup and TH Feedback Parameters Assembly J6

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.021	628.4	0.7396
2	0.000		0.7396	0.072	821.6	0.7396
3	0.000		0.7396	0.100	948.3	0.7396
4	0.000	Data	0.7070	0.119	967.6	0.7070
5	0.000	Not	0.6587	0.131	1022.4	0.6587
6	0.000	Required	0.6012	0.139	1060.6	0.6012
7	0.000		0.5421	0.146	1095.3	0.5421
8	0.000		0.4880	0.152	1126.0	0.4880
9	0.000		0.4409	0.162	1179.2	0.4409
10	0.000		0.4006	0.162	1179.2	0.4006
11	0.000		0.3667	0.161	1173.8	0.3667
12	0.000		0.3381	0.159	1163.0	0.3381
13	0.000		0.3140	0.156	1147.0	0.3140
14	0.000		0.2932	0.154	1136.4	0.2932
15	0.000		0.2752	0.152	1126.0	0.2752
16	0.000		0.2594	0.148	1105.4	0.2594
17	0.000		0.2456	0.143	1080.3	0.2456
18	0.000		0.2339	0.131	1022.4	0.2339
19	0.000		0.2238	0.124	990.1	0.2238
20	0.000		0.2150	0.116	954.6	0.2150
21	0.000		0.2075	0.104	903.9	0.2075
22	0.000		0.2013	0.089	844.5	0.2013
23	0.000		0.1964	0.071	778.6	0.1964
24	0.000		0.1934	0.029	644.1	0.1934
25	0.000		0.1920	0.020	618.2	0.1920

Table 4-145. LS1 Burnup and TH Feedback Parameters Assembly J7

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm^3) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	0.000		0.7396	0.019	621.6	0.7396
2	0.000		0.7396	0.065	792.4	0.7396
3	0.000		0.7396	0.090	901.1	0.7396
4	0.000	Data	0.7196	0.106	912.1	0.7196
5	0.000	Not	0.6818	0.114	945.9	0.6818
6	0.000	Required	0.6362	0.118	963.3	0.6362
7	0.000		0.5877	0.120	972.2	0.5877
8	0.000		0.5401	0.123	985.6	0.5401
9	0.000		0.4958	0.131	1022.4	0.4958
10	0.000		0.4558	0.133	1031.8	0.4558
11	0.000		0.4215	0.135	1041.3	0.4215
12	0.000		0.3912	0.138	1055.7	0.3912
13	0.000		0.3641	0.141	1070.4	0.3641
14	0.000		0.3400	0.142	1075.3	0.3400
15	0.000		0.3190	0.139	1060.6	0.3190
16	0.000		0.3009	0.134	1036.5	0.3009
17	0.000		0.2855	0.125	994.6	0.2855
18	0.000		0.2728	0.111	933.1	0.2728
19	0.000		0.2621	0.101	891.7	0.2621
20	0.000		0.2531	0.093	859.9	0.2531
21	0.000		0.2455	0.082	818.2	0.2455
22	0.000		0.2391	0.069	771.6	0.2391
23	0.000		0.2342	0.055	724.4	0.2342
24	0.000		0.2312	0.022	623.9	0.2312
25	0.000		0.2299	0.015	604.2	0.2299

Table 4-145. LS1 Burnup and TH Feedback Parameters Assembly J8

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.0	0.7396
2	0.000		0.7396	0.070	813.2	0.7396
3	0.000		0.7396	0.097	933.9	0.7396
4	0.000	Data	0.7125	0.114	945.9	0.7125
5	0.000	Not	0.6689	0.123	985.6	0.6689
6	0.000	Required	0.6169	0.129	1013.0	0.6169
7	0.000		0.5628	0.133	1031.6	0.5628
8	0.000		0.5119	0.136	1046.1	0.5119
9	0.000		0.4663	0.145	1090.3	0.4663
10	0.000		0.4266	0.147	1100.4	0.4266
11	0.000		0.3928	0.147	1100.4	0.3928
12	0.000		0.3637	0.146	1095.3	0.3637
13	0.000		0.3386	0.145	1090.3	0.3386
14	0.000		0.3169	0.143	1080.3	0.3169
15	0.000		0.2980	0.140	1065.6	0.2980
16	0.000		0.2815	0.136	1046.1	0.2815
17	0.000		0.2671	0.131	1022.4	0.2671
18	0.000		0.2548	0.121	976.6	0.2548
19	0.000		0.2442	0.115	950.3	0.2442
20	0.000		0.2349	0.108	920.5	0.2349
21	0.000		0.2269	0.098	879.6	0.2269
22	0.000		0.2202	0.083	821.9	0.2202
23	0.000		0.2150	0.066	761.3	0.2150
24	0.000		0.2119	0.027	638.3	0.2119
25	0.000		0.2105	0.018	612.6	0.2105

Table 4-147. LS1 Burnup and TH Feedback Parameters Assembly J9

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.6	0.7396
2	0.000		0.7396	0.066	796.5	0.7396
3	0.000		0.7396	0.090	901.1	0.7396
4	0.000	Data	0.7189	0.106	912.1	0.7189
5	0.000	Not	0.6808	0.114	945.9	0.6808
6	0.000	Required	0.6347	0.118	963.3	0.6347
7	0.000		0.5856	0.121	976.6	0.5856
8	0.000		0.5376	0.124	990.1	0.5376
9	0.000		0.4931	0.132	1027.1	0.4931
10	0.000		0.4531	0.134	1036.5	0.4531
11	0.000		0.4188	0.136	1046.1	0.4188
12	0.000		0.3886	0.139	1060.6	0.3886
13	0.000		0.3615	0.142	1075.3	0.3615
14	0.000		0.3374	0.143	1080.3	0.3374
15	0.000		0.3164	0.141	1070.4	0.3164
16	0.000		0.2981	0.137	1050.9	0.2981
17	0.000		0.2825	0.130	1017.7	0.2825
18	0.000		0.2692	0.118	963.3	0.2692
19	0.000		0.2581	0.109	924.7	0.2581
20	0.000		0.2486	0.101	891.7	0.2486
21	0.000		0.2404	0.090	848.3	0.2404
22	0.000		0.2337	0.076	796.4	0.2337
23	0.000		0.2285	0.060	741.0	0.2285
24	0.000		0.2253	0.024	629.6	0.2253
25	0.000		0.2240	0.016	607.0	0.2240

Table 4-148. LS1 Burnup and TH Feedback Parameters Assembly J10

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.023	635.2	0.7396
2	0.000		0.7396	0.079	851.7	0.7396
3	0.000		0.7388	0.107	916.3	0.7388
4	0.000	Data	0.7042	0.124	990.1	0.7042
5	0.000	Not	0.6561	0.131	1022.4	0.6561
6	0.000	Required	0.6017	0.133	1031.8	0.6017
7	0.000		0.5480	0.133	1031.8	0.5480
8	0.000		0.4997	0.134	1036.5	0.4997
9	0.000		0.4572	0.141	1070.4	0.4572
10	0.000		0.4205	0.141	1070.4	0.4205
11	0.000		0.3891	0.140	1065.5	0.3891
12	0.000		0.3620	0.138	1055.7	0.3620
13	0.000		0.3386	0.136	1046.1	0.3386
14	0.000		0.3185	0.132	1027.1	0.3185
15	0.000		0.3009	0.128	1008.4	0.3009
16	0.000		0.2858	0.122	981.1	0.2858
17	0.000		0.2728	0.116	950.3	0.2728
18	0.000		0.2617	0.102	895.7	0.2617
19	0.000		0.2525	0.094	863.8	0.2525
20	0.000		0.2446	0.086	833.1	0.2446
21	0.000		0.2377	0.078	798.4	0.2377
22	0.000		0.2321	0.064	754.4	0.2321
23	0.000		0.2277	0.051	711.5	0.2277
24	0.000		0.2250	0.021	621.1	0.2250
25	0.000		0.2238	0.014	601.4	0.2238

Table 4-149. LS1 Burnup and TH Feedback Parameters Assembly J11

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.0	0.7396
2	0.000		0.7396	0.068	804.8	0.7396
3	0.000		0.7396	0.093	915.0	0.7396
4	0.000	Data	0.7177	0.108	920.5	0.7177
5	0.000	Not	0.6791	0.116	954.6	0.6791
6	0.000	Required	0.6330	0.120	972.2	0.633
7	0.000		0.5843	0.121	976.6	0.5843
8	0.000		0.5370	0.123	985.6	0.5370
9	0.000		0.4934	0.131	1022.4	0.4934
10	0.000		0.4544	0.132	1027.1	0.4544
11	0.000		0.4211	0.131	1022.4	0.4211
12	0.000		0.3923	0.130	1017.7	0.3923
13	0.000		0.3672	0.128	1008.4	0.3672
14	0.000		0.3454	0.125	994.6	0.3454
15	0.000		0.3264	0.122	981.1	0.3264
16	0.000		0.3099	0.117	959.0	0.3099
17	0.000		0.2957	0.110	928.9	0.2957
18	0.000		0.2837	0.098	879.6	0.2837
19	0.000		0.2736	0.090	848.3	0.2736
20	0.000		0.2649	0.083	821.9	0.2649
21	0.000		0.2575	0.074	789.2	0.2575
22	0.000		0.2513	0.062	747.7	0.2513
23	0.000		0.2465	0.049	705.1	0.2465
24	0.000		0.2436	0.020	618.2	0.2436
25	0.000		0.2422	0.013	598.6	0.2422

Table 4-150. LS1 Burnup and TH Feedback Parameters Assembly J12

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.018	618.3	0.7396
2	0.000		0.7396	0.065	792.4	0.7396
3	0.000		0.7396	0.090	901.1	0.7396
4	0.000	Data	0.7167	0.108	920.5	0.7167
5	0.000	Not	0.6755	0.119	967.8	0.6755
6	0.000	Required	0.6241	0.130	1017.7	0.6241
7	0.000		0.5680	0.139	1060.6	0.5680
8	0.000		0.5134	0.146	1095.3	0.5134
9	0.000		0.4641	0.157	1152.3	0.4641
10	0.000		0.4218	0.157	1152.3	0.4218
11	0.000		0.3863	0.156	1147.0	0.3863
12	0.000		0.3562	0.154	1136.4	0.3562
13	0.000		0.3308	0.151	1120.6	0.3308
14	0.000		0.3090	0.148	1105.4	0.3090
15	0.000		0.2903	0.145	1090.3	0.2903
16	0.000		0.2739	0.140	1065.6	0.2739
17	0.000		0.2598	0.135	1041.3	0.2598
18	0.000		0.2477	0.124	990.1	0.2477
19	0.000		0.2372	0.118	963.3	0.2372
20	0.000		0.2281	0.111	933.1	0.2281
21	0.000		0.2202	0.100	887.6	0.2202
22	0.000		0.2137	0.085	829.4	0.2137
23	0.000		0.2086	0.068	768.1	0.2086
24	0.000		0.2055	0.028	641.2	0.2055
25	0.000		0.2041	0.019	615.4	0.2041

Table 4-151. LS1 Burnup and TH Feedback Parameters Assembly J13

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU) 0.00 Cy 8	Fuel Temp. (K) 0.00 Cy 8	Mod. Dens. (g/cm^3) 0.00 Cy 8	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU) 3.67 Cy 8	Fuel Temp. (K) 3.67 Cy 8	Mod. Dens. (g/cm^3) 3.67 Cy 8
1	0.000		0.7396	0.019	621.6	0.7396
2	0.000		0.7396	0.066	795.5	0.7396
3	0.000		0.7396	0.090	901.1	0.7396
4	0.000	Data	0.7186	0.106	912.1	0.7186
5	0.000	Not	0.6800	0.114	945.9	0.6800
6	0.000	Required	0.6334	0.119	967.8	0.6334
7	0.000		0.5838	0.122	981.1	0.5838
8	0.000		0.5354	0.125	994.6	0.5354
9	0.000		0.4905	0.134	1036.5	0.4905
10	0.000		0.4503	0.136	1046.1	0.4503
11	0.000		0.4159	0.137	1050.9	0.4159
12	0.000		0.3858	0.139	1060.6	0.3858
13	0.000		0.3592	0.140	1065.6	0.3592
14	0.000		0.3359	0.139	1060.6	0.3359
15	0.000		0.3155	0.137	1050.9	0.3155
16	0.000		0.2977	0.134	1036.5	0.2977
17	0.000		0.2822	0.129	1013.0	0.2822
18	0.000		0.2689	0.121	976.6	0.2689
19	0.000		0.2573	0.117	959.0	0.2573
20	0.000		0.2469	0.112	937.4	0.2469
21	0.000		0.2380	0.101	891.7	0.2380
22	0.000		0.2306	0.086	833.1	0.2306
23	0.000		0.2248	0.068	768.1	0.2248
24	0.000		0.2214	0.028	641.2	0.2214
25	0.000		0.2198	0.018	612.6	0.2198

Table 4-152. LS1 Burnup and TH Feedback Parameters Assembly A1

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.138	625.7	0.7396	2.348	648.5	0.7396
2	0.000		0.7114	6.303	880.5	0.7285	11.025	1030.2	0.7191
3	0.000		0.5096	8.046	1080.4	0.5776	15.483	1196.5	0.5460
4	0.000	Data	0.3693	8.975	1165.0	0.4124	16.395	1194.6	0.3890
5	0.000	Not	0.3046	8.508	1121.4	0.3271	15.843	1184.1	0.3089
6	0.000	Required	0.2659	7.694	1049.4	0.2740	14.752	1151.2	0.2575
7	0.000		0.2424	6.420	948.2	0.2399	12.433	1034.8	0.2238
8	0.000		0.2272	5.025	846.2	0.2172	9.571	893.0	0.2021
9	0.000		0.2211	2.032	665.1	0.2074	3.882	680.4	0.1930
10	0.000		0.2199	1.275	625.7	0.2057	2.411	633.2	0.1915

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.826	634.7	0.7398	4.920	617.6	0.7396	6.576	663.9	0.7396
2	17.892	931.7	0.7206	22.622	805.6	0.7238	28.912	998.1	0.7223
3	23.710	1004.9	0.5562	29.448	861.4	0.5743	36.381	1022.1	0.5714
4	24.840	1020.5	0.4042	31.340	911.1	0.4298	38.154	1011.7	0.4286
5	24.107	1007.5	0.3247	31.059	942.1	0.3505	37.608	980.2	0.3505
6	22.618	979.5	0.2733	29.693	984.9	0.2976	35.818	937.1	0.2983
7	19.371	917.9	0.2389	26.586	960.6	0.2615	31.798	881.5	0.2625
8	14.390	792.2	0.2162	20.012	855.1	0.2352	23.936	790.4	0.2388
9	5.618	637.8	0.2051	7.729	659.9	0.2235	9.205	640.8	0.2254
10	3.403	605.1	0.2029	4.588	616.2	0.2201	5.417	606.0	0.2222

Table 4-152. LS1 Burnup and TH Feedback Parameters Assembly A1 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.586	861.5	0.7395	6.240	601.5	0.7396	6.517	588.9	0.7396
2	32.470	948.5	0.7223	34.751	694.4	0.7240	35.648	648.0	0.7246
3	40.215	965.1	0.5726	43.233	734.0	0.5840	44.443	675.4	0.5887
4	41.957	961.0	0.4307	45.604	774.8	0.4495	47.202	715.1	0.4589
5	41.247	952.3	0.3529	45.040	784.6	0.3725	46.897	742.8	0.3842
6	39.458	940.4	0.3006	43.140	776.5	0.3167	45.162	761.1	0.3310
7	35.231	912.3	0.2647	38.578	755.0	0.2815	40.620	763.3	0.2938
8	26.585	818.5	0.2389	29.049	699.6	0.2543	30.680	719.0	0.2659
9	10.220	651.0	0.2275	11.078	608.2	0.2414	11.687	616.0	0.2520
10	5.986	611.4	0.2243	6.426	586.0	0.2367	6.725	589.7	0.2461

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.841	580.3	0.7396
2	36.627	618.0	0.7253
3	45.695	631.4	0.5933
4	48.973	661.3	0.4694
5	49.228	695.1	0.4005
6	48.090	732.6	0.3524
7	44.014	763.7	0.3184
8	33.678	737.6	0.2909
9	12.789	624.0	0.2763
10	7.289	593.3	0.2666

Table 4-153. LS1 Burnup and TH Feedback Parameters Assembly A2

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.234	631.5	0.7396	2.242	633.1	0.7396
2	0.000		0.7147	5.642	905.9	0.7267	10.483	938.3	0.7250
3	0.000		0.5212	7.961	1072.4	0.5741	14.656	1097.7	0.5658
4	0.000	Data	0.3835	8.446	1115.6	0.4155	15.199	1115.6	0.4091
5	0.000	Not	0.3196	7.791	1057.7	0.3346	14.346	1093.2	0.3293
6	0.000	Required	0.2807	6.622	977.5	0.2846	12.992	1051.1	0.2785
7	0.000		0.2565	5.596	885.3	0.2523	10.980	970.5	0.2447
8	0.000		0.2416	4.371	802.8	0.2305	8.544	859.8	0.2221
9	0.000		0.2354	1.748	650.1	0.2213	3.443	669.9	0.2126
10	0.000		0.2342	1.090	616.4	0.2197	2.117	626.2	0.2110

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.537	625.1	0.7396	4.573	614.5	0.7396	5.818	636.9	0.7396
2	16.627	883.7	0.7266	21.098	795.6	0.7288	25.936	869.2	0.7293
3	22.163	961.8	0.5784	27.685	847.8	0.5938	32.954	885.6	0.5996
4	23.094	981.5	0.4272	29.316	892.6	0.4509	34.619	888.2	0.4598
5	22.121	973.3	0.3472	28.786	922.2	0.3715	33.953	878.0	0.3804
6	20.350	945.1	0.2949	27.327	943.8	0.3178	32.253	860.1	0.3264
7	17.346	881.7	0.2595	24.214	936.3	0.2805	28.757	832.4	0.2888
8	12.944	769.2	0.2350	18.258	835.9	0.2532	21.797	764.7	0.2614
9	5.032	631.3	0.2247	7.001	653.0	0.2412	8.311	631.8	0.2492
10	3.023	601.4	0.2224	4.127	612.5	0.2380	4.848	600.3	0.2457

Table 4-153. LS1 Burnup and TH Feedback Parameters Assembly A2 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.658	634.7	0.7396	7.376	610.6	0.7396	7.719	595.9	0.7396
2	28.611	834.2	0.7298	31.568	748.1	0.7310	32.752	684.0	0.7315
3	35.853	846.6	0.6035	39.668	786.3	0.6131	41.218	710.1	0.6181
4	37.618	858.5	0.4659	42.195	839.7	0.4807	44.092	747.3	0.4898
5	36.985	862.4	0.3867	41.802	857.3	0.4009	43.895	769.1	0.4111
6	35.269	860.5	0.3324	39.957	847.9	0.3449	42.201	786.3	0.3551
7	31.635	844.1	0.2945	35.698	817.3	0.3055	38.204	793.5	0.3155
8	24.084	777.8	0.2668	27.202	740.8	0.2765	29.126	750.6	0.2863
9	9.182	638.0	0.2544	10.269	620.6	0.2633	10.975	626.8	0.2723
10	5.328	603.7	0.2508	5.899	592.9	0.2590	6.263	595.5	0.2673

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.214	591.1	0.7396
2	34.321	657.7	0.7320
3	43.139	670.2	0.6240
4	46.607	706.5	0.5025
5	46.983	743.3	0.4283
6	45.878	783.1	0.3746
7	42.311	813.4	0.3355
8	32.682	775.1	0.3052
9	12.325	636.9	0.2902
10	6.961	600.6	0.2837

Table 4-154. LS1 Burnup and TH Feedback Parameters Assembly A3

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.059	621.0	0.7396	2.091	634.9	0.7396
2	0.000		0.7249	4.939	871.5	0.7314	10.006	986.2	0.7259
3	0.000		0.5512	7.683	1040.3	0.5969	14.640	1150.9	0.5696
4	0.000	Data	0.4057	8.410	1112.3	0.4343	15.505	1155.4	0.4112
5	0.000	Not	0.3360	7.758	1054.8	0.3481	14.562	1121.4	0.3293
6	0.000	Required	0.2939	6.736	970.8	0.2954	13.080	1070.1	0.2776
7	0.000		0.2683	5.486	876.0	0.2620	10.919	977.5	0.2437
8	0.000		0.2526	4.300	798.2	0.2395	8.476	860.2	0.2218
9	0.000		0.2464	1.725	648.9	0.2297	3.399	668.4	0.2124
10	0.000		0.2452	1.074	615.6	0.2260	2.093	625.7	0.2110

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.005	658.0	0.7396	5.454	637.1	0.7396	6.535	626.4	0.7396
2	18.620	1075.0	0.7170	24.915	901.3	0.7187	29.059	817.1	0.7206
3	24.656	1141.2	0.5453	31.969	987.7	0.5552	35.758	850.1	0.5667
4	25.428	1133.6	0.3944	33.380	1014.7	0.4082	38.389	866.2	0.4247
5	24.138	1106.0	0.3168	32.495	1045.9	0.3305	37.398	858.4	0.3467
6	22.031	1057.9	0.2670	30.715	1071.7	0.2791	35.422	844.1	0.2946
7	18.634	969.7	0.2339	27.153	1058.7	0.2438	32.652	903.8	0.2621
8	13.693	814.8	0.2135	20.122	908.3	0.2203	25.151	869.0	0.2389
9	5.285	644.6	0.2054	7.664	673.1	0.2110	9.518	681.9	0.2273
10	3.200	610.1	0.2042	4.566	624.5	0.2092	5.583	616.0	0.2242

Table 4-154. LS1 Burnup and TH Feedback Parameters Assembly A3 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.761	687.6	0.7396	8.538	608.0	0.7396	8.875	595.2	0.7396
2	33.177	1029.7	0.7194	35.814	717.1	0.7214	36.903	667.8	0.7222
3	41.017	1024.8	0.5845	44.608	764.7	0.5767	45.975	701.5	0.5822
4	42.638	1023.4	0.4234	46.808	810.6	0.4419	48.674	743.8	0.4518
5	41.643	1022.8	0.3461	45.969	821.6	0.3645	48.078	771.0	0.3769
6	39.604	1013.9	0.2940	43.776	810.9	0.3107	46.038	788.1	0.3223
7	36.479	964.5	0.2611	40.181	778.6	0.2755	42.401	783.5	0.2862
8	28.052	847.9	0.2376	30.744	713.9	0.2504	32.502	732.5	0.2602
9	10.657	662.4	0.2261	11.620	613.9	0.2381	12.273	621.9	0.2474
10	6.234	618.5	0.2233	6.734	589.2	0.2339	7.071	593.1	0.2424

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.290	586.0	0.7396
2	38.151	633.9	0.7231
3	47.658	650.4	0.588
4	50.851	685.7	0.4642
5	50.873	724.2	0.3938
6	49.453	765.1	0.344
7	46.188	790.7	0.3087
8	35.768	755.4	0.2819
9	13.529	631.6	0.2680
10	7.711	597.5	0.2609

Table 4-155. LS1 Burnup and TH Feedback Parameters Assembly A4

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.093	623.0	0.7396	2.270	646.0	0.7396
2	0.000		0.7124	5.140	868.6	0.7270	10.631	1027.3	0.7205
3	0.000		0.5107	7.944	1071.5	0.5822	15.511	1212.6	0.5474
4	0.000	Data	0.3693	8.884	1156.3	0.4173	16.432	1210.3	0.3899
5	0.000	Not	0.3043	8.277	1100.5	0.3319	15.578	1180.0	0.3101
6	0.000	Required	0.2658	7.364	1021.5	0.2800	14.184	1123.4	0.2602
7	0.000		0.2421	6.276	935.2	0.2482	12.090	1013.9	0.2275
8	0.000		0.2270	4.970	842.5	0.2227	9.438	885.8	0.2055
9	0.000		0.2209	2.018	684.4	0.2124	3.860	679.8	0.1980
10	0.000		0.2197	1.265	625.2	0.2107	2.400	633.1	0.1945

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.700	632.2	0.7396	4.716	613.4	0.7396	6.411	666.5	0.7396
2	17.852	921.7	0.7221	21.904	768.6	0.7252	28.337	1002.0	0.7233
3	23.569	992.9	0.5593	28.975	840.6	0.5782	35.666	1001.0	0.5761
4	24.683	1008.6	0.4070	30.857	889.4	0.4345	37.353	984.3	0.4336
5	23.684	996.3	0.3278	30.339	921.6	0.3561	38.565	961.6	0.3563
6	21.879	967.8	0.2769	28.889	946.1	0.3039	34.738	930.9	0.3046
7	18.842	906.0	0.2428	25.806	942.9	0.2678	31.164	892.5	0.2687
8	14.128	785.0	0.2189	19.583	843.4	0.2410	23.720	806.4	0.2423
9	5.537	635.2	0.2084	7.651	655.2	0.2285	9.101	644.9	0.2302
10	3.353	603.5	0.2061	4.476	613.3	0.2249	5.344	608.1	0.2268

Table 4-155. LS1 Burnup and TH Feedback Parameters Assembly A4 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.550	677.8	0.7396	8.734	634.1	0.7396	9.332	623.3	0.7396
2	32.264	1001.2	0.7223	36.451	824.7	0.7239	38.828	777.5	0.7248
3	39.710	994.2	0.5736	45.082	899.9	0.5817	47.784	841.3	0.5867
4	41.336	985.6	0.4333	47.285	946.1	0.4424	50.268	876.8	0.4489
5	40.497	978.6	0.3565	46.377	940.4	0.3642	49.434	886.4	0.3702
6	38.572	965.1	0.3048	43.997	904.0	0.3112	47.061	887.3	0.3166
7	34.711	927.0	0.2688	39.348	844.3	0.2743	42.211	861.4	0.2792
8	26.427	825.2	0.2424	29.756	754.4	0.2476	31.957	782.2	0.2520
9	10.138	653.0	0.2305	11.363	628.1	0.2357	12.208	639.9	0.2401
10	5.930	612.9	0.2272	6.699	598.1	0.2323	7.061	604.4	0.2364

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	10.221	616.5	0.7396
2	41.282	729.5	0.7261
3	51.134	760.8	0.5944
4	54.332	810.4	0.4517
5	54.085	853.8	0.3843
6	52.231	894.1	0.3303
7	47.695	911.3	0.2920
8	36.314	832.7	0.2633
9	13.921	657.9	0.2508
10	7.992	613.4	0.2467

Table 4-156. LS1 Burnup and TH Feedback Parameters Assembly A5

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.108	623.9	0.7396	2.280	645.6	0.7396
2	0.000		0.7129	5.195	872.6	0.7295	10.770	1014.4	0.7209
3	0.000		0.5113	7.979	1074.5	0.5818	15.408	1195.6	0.5502
4	0.000	Data	0.3691	8.865	1154.6	0.4171	16.351	1202.6	0.3921
5	0.000	Not	0.3041	8.215	1095.0	0.3323	15.493	1177.2	0.3120
6	0.000	Required	0.2653	7.173	1005.8	0.2810	14.081	1133.6	0.2615
7	0.000		0.2419	5.944	910.4	0.2483	12.022	1041.5	0.2282
8	0.000		0.2268	4.804	831.2	0.2255	9.450	902.2	0.2065
9	0.000		0.2209	1.944	660.5	0.2154	3.808	681.3	0.1972
10	0.000		0.2197	1.213	622.6	0.2137	2.351	633.3	0.1957

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.006	647.9	0.7396	5.842	659.0	0.7396	7.551	667.5	0.7396
2	18.781	1013.4	0.7162	26.165	994.6	0.7162	32.254	972.7	0.7161
3	24.942	1102.6	0.5439	33.334	1048.6	0.5432	40.081	1005.6	0.5463
4	25.967	1109.1	0.3903	34.575	1089.8	0.3941	41.763	1018.1	0.3996
5	24.753	1081.3	0.3125	34.041	1121.4	0.3170	40.698	998.0	0.3227
6	22.734	1035.7	0.2627	32.301	1145.1	0.2662	38.549	963.5	0.2719
7	19.596	980.0	0.2294	28.892	1122.3	0.2309	34.794	935.2	0.2376
8	14.748	818.3	0.2077	21.786	950.3	0.2074	26.260	828.7	0.2135
9	5.776	648.3	0.1987	8.487	689.7	0.1979	10.177	652.7	0.2037
10	3.502	612.0	0.1972	5.088	634.8	0.1962	6.033	612.2	0.2016

Table 4-156. LS1 Burnup and TH Feedback Parameters Assembly A5 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.338	639.6	0.7396	8.977	599.3	0.7396	9.199	583.1	0.7396
2	34.872	827.3	0.7173	37.000	684.7	0.7185	37.716	630.1	0.7191
3	43.123	863.6	0.5527	45.921	720.1	0.5589	46.930	655.7	0.5625
4	45.028	891.0	0.4081	48.291	749.6	0.4157	49.656	691.0	0.4216
5	44.036	900.1	0.3310	47.398	755.9	0.3380	49.059	721.6	0.3447
6	41.980	912.0	0.2801	45.205	747.1	0.2862	47.039	740.3	0.2923
7	38.760	983.3	0.2472	41.557	720.0	0.2521	43.317	732.4	0.2573
8	29.424	879.9	0.2219	31.429	672.5	0.2263	32.792	691.0	0.2308
9	11.405	670.7	0.2114	12.141	601.7	0.2155	12.656	609.2	0.2197
10	6.714	621.1	0.2087	7.109	583.7	0.2125	7.383	587.4	0.2163

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.496	578.6	0.7396
2	38.605	612.6	0.7197
3	48.104	627.0	0.5671
4	51.309	654.4	0.4307
5	51.160	681.0	0.3559
6	49.597	709.2	0.3046
7	46.161	727.3	0.2693
8	35.265	704.0	0.2422
9	13.633	616.0	0.2303
10	7.899	590.7	0.2259

Table 4-157. LS1 Burnup and TH Feedback Parameters Assembly A5

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.5 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.5 Cy 4	208.5 Cy 4	208.5 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.121	624.7	0.7396	2.171	636.3	0.7396
2	0.000		0.7196	5.296	880.0	0.7280	10.596	985.7	0.7237
3	0.000		0.5323	7.636	1061.6	0.5846	15.007	1164.4	0.5594
4	0.000	Data	0.3917	8.407	1112.0	0.4240	15.476	1152.3	0.4031
5	0.000	Not	0.3259	7.691	1049.0	0.3414	14.430	1114.1	0.3242
6	0.000	Required	0.2860	6.670	965.6	0.2909	12.948	1062.9	0.2743
7	0.000		0.2616	5.424	873.1	0.2585	10.844	974.1	0.2413
8	0.000		0.2466	4.288	797.4	0.2365	8.453	859.2	0.2197
9	0.000		0.2408	1.722	648.6	0.2270	3.389	668.0	0.2106
10	0.000		0.2395	1.073	615.5	0.2253	2.086	625.3	0.2092

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.647	629.3	0.7396	4.616	616.3	0.7396	5.658	636.7	0.7396
2	17.117	808.4	0.7247	21.575	795.2	0.7272	26.266	858.0	0.7281
3	22.846	977.8	0.5702	28.239	839.8	0.5867	33.277	868.4	0.5944
4	23.503	990.8	0.4195	29.664	888.6	0.4450	34.789	874.8	0.4560
5	22.323	981.4	0.3408	28.977	921.6	0.3671	34.026	869.1	0.3781
6	20.414	952.3	0.2896	27.421	945.9	0.3146	32.291	856.0	0.3250
7	17.290	886.7	0.2552	24.245	942.3	0.2763	28.817	834.5	0.2882
8	12.691	771.3	0.2316	18.308	842.2	0.2516	21.894	767.9	0.2612
9	4.961	630.5	0.2216	6.947	653.9	0.2396	8.268	632.4	0.2489
10	2.981	601.0	0.2195	4.089	612.7	0.2383	4.812	600.4	0.2453

Table 4-157. LS1 Burnup and TH Feedback Parameters Assembly A8 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.671	631.6	0.7396	8.000	650.3	0.7396	8.778	643.3	0.7396
2	28.743	810.8	0.7288	34.006	908.9	0.7285	36.835	872.7	0.7285
3	35.986	822.1	0.6995	42.440	990.7	0.6985	45.990	953.7	0.6991
4	37.645	841.5	0.4637	44.422	1017.3	0.4614	48.195	985.9	0.4617
5	36.960	850.8	0.3859	43.383	986.3	0.3831	47.221	995.4	0.3829
6	35.247	853.3	0.3324	40.912	923.2	0.3299	44.644	979.9	0.3292
7	31.679	842.2	0.2952	36.268	840.9	0.2933	39.498	909.8	0.2923
8	24.189	778.8	0.2677	27.448	749.8	0.2667	29.784	795.7	0.2657
9	9.143	638.4	0.2552	10.367	628.1	0.2547	11.254	643.9	0.2539
10	5.292	603.7	0.2514	6.982	599.3	0.2511	6.486	608.2	0.2505

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	10.001	638.7	0.7396
2	40.685	807.4	0.7291
3	50.495	842.8	0.6038
4	53.419	898.5	0.4691
5	53.025	946.3	0.3901
6	50.959	990.5	0.3352
7	45.900	998.3	0.2965
8	34.755	881.5	0.2684
9	13.216	672.6	0.2561
10	7.588	622.9	0.2527

Table 4-158. LS1 Burnup and TH Feedback Parameters Assembly A7

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.160	627.0	0.7396	2.419	652.3	0.7396
2	0.000		0.7128	5.477	893.6	0.7270	11.512	1065.3	0.7163
3	0.000		0.5106	8.353	1107.9	0.5680	16.144	1240.7	0.5333
4	0.000	Data	0.3683	9.251	1191.6	0.4017	16.977	1232.5	0.3763
5	0.000	Not	0.3032	8.639	1133.6	0.3182	16.197	1211.5	0.2982
6	0.000	Required	0.2844	7.636	1044.5	0.2674	14.824	1166.6	0.2488
7	0.000		0.2409	6.252	933.5	0.2352	12.393	1048.5	0.2167
8	0.000		0.2258	4.864	835.3	0.2137	9.466	898.2	0.1962
9	0.000		0.2200	1.953	650.9	0.2043	3.801	680.2	0.1875
10	0.000		0.2188	1.228	623.4	0.2028	2.362	633.0	0.1881

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.231	852.5	0.7396	6.035	657.1	0.7396	6.820	614.0	0.7396
2	19.748	1030.2	0.7144	26.907	978.2	0.7139	30.259	781.4	0.7171
3	25.776	1110.4	0.5306	34.037	1038.4	0.5346	38.627	836.1	0.5521
4	26.660	1114.4	0.3780	35.539	1087.5	0.3861	40.879	891.1	0.4092
5	25.545	1088.1	0.3019	34.835	1121.5	0.3101	40.191	892.3	0.3312
6	23.655	1048.9	0.2531	33.226	1145.4	0.2600	38.298	870.9	0.2788
7	20.498	996.4	0.2206	29.823	1124.7	0.2254	34.431	837.1	0.2427
8	15.514	863.6	0.1990	22.690	960.0	0.2018	28.250	766.1	0.2182
9	6.108	663.9	0.1902	8.933	695.5	0.1922	10.299	634.8	0.2078
10	3.719	621.0	0.1887	5.379	638.3	0.1905	6.125	601.7	0.2048

Table 4-158. LS1 Burnup and TH Feedback Parameters Assembly A7 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.571	625.4	0.7396	8.028	688.0	0.7396	8.218	579.8	0.7396
2	32.476	780.5	0.7186	33.959	645.7	0.7199	34.855	618.4	0.7204
3	41.110	798.8	0.5598	43.061	669.2	0.5686	43.840	633.7	0.5720
4	43.548	819.7	0.4198	46.080	703.7	0.4370	47.134	660.0	0.4440
5	42.976	833.1	0.3422	45.820	722.9	0.3634	47.121	684.5	0.3737
6	41.147	840.7	0.2895	44.062	727.3	0.3114	45.573	706.0	0.3240
7	37.220	833.7	0.2533	39.973	717.2	0.2744	41.579	715.9	0.2881
8	28.517	775.6	0.2283	30.606	677.4	0.2478	31.943	688.3	0.2615
9	11.203	641.0	0.2177	11.941	601.6	0.2349	12.430	606.8	0.2472
10	6.619	604.9	0.2138	6.988	582.3	0.2286	7.232	584.7	0.2392

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.443	574.2	0.7396
2	35.222	599.9	0.7210
3	44.685	607.6	0.5754
4	48.300	626.5	0.4516
5	48.703	650.3	0.3859
6	47.667	680.6	0.3421
7	44.147	709.8	0.3118
8	34.323	698.2	0.2879
9	13.333	611.9	0.2720
10	7.677	586.9	0.2606

Table 4-159. LS1 Burnup and TH Feedback Parameters Assembly A8

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	0.875	616.0	0.7396	2.087	641.0	0.7396
2	0.000		0.7206	4.685	852.3	0.7325	10.198	1036.0	0.7226
3	0.000		0.5325	7.497	1033.3	0.6029	15.007	1205.6	0.5603
4	0.000	Data	0.3875	8.464	1117.2	0.4389	15.891	1195.4	0.4037
5	0.000	Not	0.3199	7.799	1058.3	0.3510	14.908	1157.0	0.3221
6	0.000	Required	0.2795	6.761	972.7	0.2978	13.450	1108.4	0.2707
7	0.000		0.2552	5.581	884.1	0.2642	11.444	1018.9	0.2369
8	0.000		0.2404	4.556	814.7	0.2404	9.044	887.9	0.2153
9	0.000		0.2342	1.835	654.7	0.2298	3.614	675.5	0.2060
10	0.000		0.2330	1.139	618.9	0.2280	2.221	629.7	0.2045

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.923	653.8	0.7396	5.319	634.2	0.7396	7.015	666.6	0.7396
2	18.686	1049.6	0.7169	24.624	890.5	0.7190	30.724	972.9	0.7184
3	24.815	1124.4	0.5442	32.003	958.7	0.5557	38.596	992.5	0.5572
4	25.655	1120.8	0.3933	33.471	1004.5	0.4087	40.218	1005.6	0.4125
5	24.332	1094.1	0.3154	32.634	1033.9	0.3307	39.079	988.4	0.3350
6	22.239	1045.8	0.2855	30.739	1057.1	0.2793	36.910	957.0	0.2837
7	18.992	958.3	0.2324	27.303	1042.4	0.2440	33.188	933.8	0.2492
8	14.147	808.3	0.2117	20.402	896.6	0.2203	24.810	831.0	0.2250
9	5.462	642.9	0.2031	7.791	670.6	0.2106	9.468	652.0	0.2150
10	3.302	609.0	0.2018	4.638	623.1	0.2087	5.575	611.7	0.2129

Table 4-159. LS1 Burnup and TH Feedback Parameters Assembly A8 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.603	639.8	0.7396	8.401	596.7	0.7396	8.626	583.4	0.7396
2	33.380	831.9	0.7194	35.428	679.8	0.7206	36.167	632.4	0.7211
3	41.620	861.5	0.5628	44.285	711.8	0.5687	45.308	657.1	0.5724
4	43.462	888.4	0.4202	46.560	738.9	0.4278	47.911	689.6	0.4336
5	42.399	897.9	0.3426	45.603	745.7	0.3498	47.178	712.7	0.3557
6	40.320	909.3	0.2912	43.421	739.1	0.2973	45.138	727.7	0.3031
7	37.131	980.1	0.2581	39.868	716.2	0.2631	41.544	723.6	0.2681
8	28.058	877.9	0.2326	30.034	670.7	0.2371	31.350	686.3	0.2415
9	10.672	668.5	0.2216	11.380	600.2	0.2260	11.868	606.7	0.2301
10	6.243	620.0	0.2192	6.620	582.7	0.2230	6.878	586.0	0.2268

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.891	576.6	0.7396
2	36.978	608.1	0.7217
3	46.377	621.1	0.5765
4	49.440	647.2	0.4422
5	49.160	673.9	0.3671
6	47.571	701.4	0.3156
7	44.264	719.4	0.2803
8	33.729	698.1	0.2532
9	12.784	612.6	0.2410
10	7.357	588.7	0.2366

Table 4-160. LS1 Burnup and TH Feedback Parameters Assembly A9

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.061	621.1	0.7396	2.231	645.4	0.7396
2	0.000		0.7176	5.010	876.9	0.7306	10.620	1046.9	0.7202
3	0.000		0.5253	7.806	1059.6	0.5895	15.277	1200.7	0.5524
4	0.000	Data	0.3812	8.609	1149.3	0.4236	16.268	1199.3	0.3950
5	0.000	Not	0.3139	8.303	1102.7	0.3362	15.668	1187.5	0.3134
6	0.000	Required	0.2737	7.381	1023.0	0.2825	14.524	1161.2	0.2609
7	0.000		0.2495	6.027	916.6	0.2485	12.185	1050.3	0.2267
8	0.000		0.2344	4.740	827.0	0.2259	9.361	900.0	0.2053
9	0.000		0.2282	1.907	658.5	0.2160	3.750	679.9	0.1963
10	0.000		0.2270	1.192	621.5	0.2143	2.319	632.6	0.1949

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.112	656.2	0.7396	5.725	646.3	0.7396	7.421	666.6	0.7396
2	19.149	1052.6	0.7163	25.734	936.0	0.7164	31.969	984.4	0.7167
3	25.156	1130.1	0.5385	32.938	1002.0	0.5459	39.703	1007.3	0.5492
4	26.191	1133.6	0.3865	34.616	1051.2	0.3974	41.318	1001.9	0.4025
5	25.240	1105.6	0.3086	34.085	1084.7	0.3194	40.473	975.1	0.3251
6	23.502	1059.9	0.2581	32.702	1113.9	0.2676	38.623	936.8	0.2735
7	20.207	990.7	0.2245	29.345	1108.9	0.2320	34.606	885.2	0.2380
8	15.103	845.3	0.2031	22.139	950.0	0.2081	26.150	796.4	0.2141
9	6.921	657.6	0.1945	8.662	691.2	0.1986	10.205	644.5	0.2045
10	3.600	617.7	0.1931	5.201	635.6	0.1968	6.065	607.9	0.2024

Table 4-160. LS1 Burnup and TH Feedback Parameters Assembly A9 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.517	673.1	0.7396	9.034	691.7	0.7396	9.254	682.9	0.7396
2	35.693	971.8	0.7169	37.316	654.1	0.7183	37.983	625.3	0.7189
3	43.677	984.4	0.5512	45.909	685.7	0.5811	46.807	645.0	0.5649
4	45.273	981.8	0.4057	48.225	729.7	0.4247	49.439	675.8	0.4327
5	44.366	973.3	0.3286	47.651	750.9	0.3509	49.117	701.4	0.3619
6	42.408	958.5	0.2770	45.733	753.5	0.2990	47.405	722.9	0.3119
7	38.116	922.2	0.2413	41.239	740.6	0.2623	43.007	733.2	0.2760
8	28.833	822.4	0.2173	31.201	694.0	0.2367	32.682	703.1	0.2504
9	11.251	653.9	0.2076	12.093	607.4	0.2248	12.642	612.3	0.2374
10	6.655	613.2	0.2053	7.080	585.2	0.2202	7.355	587.6	0.2310

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.529	677.3	0.7396
2	38.769	606.7	0.7195
3	47.602	617.0	0.5689
4	50.640	639.9	0.4415
5	50.990	667.4	0.3760
6	49.833	701.1	0.3317
7	45.919	731.7	0.3007
8	35.341	715.7	0.2769
9	13.663	618.4	0.2623
10	7.863	590.3	0.2526

Table 4-161. LS1 Burnup and TH Feedback Parameters Assembly A10

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.254	632.7	0.7396	2.414	644.7	0.7396
2	0.000		0.7123	5.818	919.6	0.7247	11.420	1017.2	0.7192
3	0.000		0.5117	8.374	1109.4	0.5614	15.708	1184.1	0.5410
4	0.000	Data	0.3727	8.942	1161.9	0.4003	16.300	1186.9	0.3846
5	0.000	Not	0.3090	8.231	1096.4	0.3204	15.360	1159.4	0.3076
6	0.000	Required	0.2705	7.165	1005.2	0.2718	13.871	1110.4	0.2590
7	0.000		0.2489	5.833	902.4	0.2406	11.640	1013.3	0.2268
8	0.000		0.2319	4.555	814.8	0.2196	8.971	881.3	0.2058
9	0.000		0.2259	1.819	653.6	0.2105	3.590	678.0	0.1989
10	0.000		0.2247	1.138	618.6	0.2089	2.218	629.6	0.1955

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.152	648.5	0.7396	5.547	634.1	0.7396	7.287	669.6	0.7396
2	19.380	1009.5	0.7172	25.210	883.2	0.7194	31.476	987.2	0.7190
3	25.083	1090.2	0.5394	32.197	953.5	0.5525	39.004	1011.0	0.5543
4	25.804	1100.2	0.3871	33.574	1001.1	0.4046	40.457	1017.7	0.4080
5	24.559	1076.7	0.3111	32.709	1029.8	0.3280	39.356	997.2	0.3318
6	22.483	1032.8	0.2824	30.916	1051.8	0.2777	37.180	964.8	0.2813
7	19.068	951.5	0.2298	27.821	1036.4	0.2429	33.087	924.3	0.2465
8	14.026	805.6	0.2084	20.246	894.1	0.2189	24.733	829.5	0.2224
9	5.409	641.6	0.1997	7.721	669.8	0.2089	9.425	653.5	0.2124
10	3.272	607.8	0.1982	4.592	622.4	0.2068	5.550	612.8	0.2102

Table 4-161. LS1 Burnup and TH Feedback Parameters Assembly A10 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.366	671.2	0.7396	8.914	593.6	0.7396	9.136	583.1	0.7396
2	35.085	953.0	0.7191	36.849	653.7	0.7205	37.545	628.1	0.7211
3	42.904	974.2	0.5584	45.373	700.0	0.5670	46.310	648.7	0.5709
4	44.455	987.7	0.4111	47.734	750.6	0.4310	48.974	678.4	0.4390
5	43.386	989.3	0.3349	47.046	777.0	0.3577	48.519	702.1	0.3685
6	41.173	987.1	0.2842	44.912	781.0	0.3062	46.598	724.4	0.3189
7	36.945	968.5	0.2491	40.448	765.3	0.2696	42.275	739.6	0.2834
8	27.735	880.1	0.2248	30.356	709.4	0.2433	31.932	713.1	0.2575
9	10.592	665.0	0.2145	11.518	611.9	0.2314	12.102	615.5	0.2446
10	6.209	619.2	0.2122	6.682	587.8	0.2271	6.974	589.0	0.2386

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.452	579.8	0.7396
2	38.489	614.7	0.7218
3	47.474	626.5	0.5765
4	50.575	651.4	0.4489
5	50.605	680.1	0.3838
6	49.252	715.3	0.3395
7	45.412	746.4	0.3079
8	34.767	727.0	0.2831
9	13.188	622.0	0.2690
10	7.521	592.4	0.2601

Table 4-162. LS1 Burnup and TH Feedback Parameters Assembly A11

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.378	640.2	0.7396	2.637	652.3	0.7396
2	0.000		0.7136	6.350	981.9	0.7193	12.424	1069.6	0.7134
3	0.000		0.5143	8.979	1165.7	0.5376	16.682	1229.6	0.5184
4	0.000	Data	0.3742	9.460	1212.3	0.3778	17.125	1224.8	0.3644
5	0.000	Not	0.3099	8.667	1136.3	0.3013	16.093	1195.3	0.2907
6	0.000	Required	0.2712	7.483	1031.7	0.2551	14.404	1135.2	0.2445
7	0.000		0.2476	5.942	910.5	0.2280	11.778	1018.4	0.2144
8	0.000		0.2327	4.497	811.0	0.2069	8.852	876.0	0.1949
9	0.000		0.2267	1.797	652.7	0.1986	3.549	673.7	0.1868
10	0.000		0.2255	1.135	618.7	0.1972	2.211	629.3	0.1854

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.026	630.0	0.7396	4.959	608.9	0.7396	6.680	668.3	0.7396
2	18.734	894.5	0.7180	22.670	763.9	0.7219	29.035	996.0	0.7200
3	24.351	966.0	0.5432	29.407	819.3	0.5661	36.259	1014.9	0.5636
4	25.107	987.6	0.3938	31.020	872.5	0.4265	37.914	1018.6	0.4255
5	23.962	979.7	0.3185	30.387	906.1	0.3517	37.036	997.3	0.3509
6	21.886	953.4	0.2702	28.690	931.8	0.3020	34.950	964.4	0.3011
7	18.344	894.2	0.2383	25.127	930.3	0.2683	31.097	940.7	0.2678
8	13.391	776.8	0.2156	18.683	834.5	0.2426	23.265	838.3	0.2420
9	5.178	633.0	0.2056	7.130	652.3	0.2303	8.833	653.4	0.2300
10	3.135	602.2	0.2030	4.218	611.5	0.2261	5.178	613.0	0.2262

Table 4-162. LS1 Burnup and TH Feedback Parameters Assembly A11 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.495	642.6	0.7396	8.115	598.1	0.7396	8.319	581.2	0.7396
2	31.879	854.9	0.7208	33.995	684.0	0.7219	34.669	626.0	0.7224
3	39.483	885.9	0.5682	42.255	718.5	0.5739	43.199	649.6	0.5774
4	41.303	906.7	0.4314	44.550	748.6	0.4380	45.648	684.3	0.4441
5	40.471	912.4	0.3564	43.815	754.8	0.3821	45.456	719.7	0.3688
6	38.484	922.7	0.3084	41.675	746.2	0.3109	43.617	741.2	0.3170
7	35.151	995.5	0.2737	37.949	720.1	0.2772	39.720	733.5	0.2821
8	26.491	887.6	0.2467	28.515	673.5	0.2499	29.693	692.5	0.2540
9	10.083	670.9	0.2342	10.790	601.2	0.2373	11.300	608.7	0.2411
10	5.866	621.6	0.2304	6.258	583.5	0.2333	6.529	587.1	0.2368

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.614	578.5	0.7396
2	35.577	613.8	0.7231
3	44.383	627.5	0.5819
4	47.497	654.2	0.4528
5	47.535	679.7	0.3797
6	46.052	707.7	0.3287
7	42.652	726.6	0.2934
8	32.373	704.4	0.2647
9	12.263	615.2	0.2512
10	7.041	590.5	0.2461

Table 4-163. LS1 Burnup and TH Feedback Parameters Assembly A12

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.126	625.0	0.7396	2.435	656.2	0.7396
2	0.000		0.7175	5.218	874.2	0.7287	11.410	1083.2	0.7161
3	0.000		0.6275	7.928	1070.0	0.5797	15.607	1252.1	0.5357
4	0.000	Data	0.3852	8.889	1156.6	0.4159	16.632	1234.8	0.3819
5	0.000	Not	0.3180	8.396	1111.2	0.3307	15.840	1197.4	0.3041
6	0.000	Required	0.2775	7.531	1035.5	0.2782	14.399	1129.0	0.2551
7	0.000		0.2530	6.303	937.3	0.2443	12.033	1005.5	0.2233
8	0.000		0.2378	4.968	842.2	0.2214	9.285	872.6	0.2024
9	0.000		0.2313	2.023	664.7	0.2113	3.787	674.5	0.1934
10	0.000		0.2300	1.273	625.6	0.2096	2.364	630.3	0.1919

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.258	653.1	0.7396	5.555	628.7	0.7396	7.255	666.9	0.7396
2	19.615	1027.7	0.7140	24.906	847.5	0.7175	31.181	987.9	0.7175
3	25.156	1088.2	0.5334	31.672	912.3	0.5512	38.471	1010.3	0.5533
4	26.006	1090.1	0.3844	33.315	967.4	0.4071	40.049	1004.6	0.4105
5	24.943	1069.3	0.3084	32.724	1001.9	0.3306	39.175	980.4	0.3344
6	22.968	1029.6	0.2598	31.113	1029.5	0.2801	37.159	946.8	0.2840
7	19.560	956.6	0.2280	27.598	1021.3	0.2459	33.133	906.2	0.2496
8	14.448	811.7	0.2066	20.603	889.8	0.2215	24.938	818.7	0.2253
9	5.623	642.3	0.1975	7.907	668.4	0.2108	9.565	650.9	0.2147
10	3.425	608.1	0.1958	4.718	621.2	0.2082	5.650	611.5	0.2120

Table 4-163. LS1 Burnup and TH Feedback Parameters Assembly A12 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.445	683.5	0.7396	9.084	699.3	0.7396	9.316	584.2	0.7396
2	35.203	1015.2	0.7170	37.346	685.7	0.7182	38.098	633.7	0.7188
3	42.688	1018.9	0.5531	45.631	722.9	0.5593	46.601	681.7	0.5632
4	44.220	1012.3	0.4112	47.609	751.2	0.4186	48.931	698.9	0.4247
5	43.291	1004.4	0.3355	46.655	756.1	0.3421	48.323	722.5	0.3483
6	41.178	990.7	0.2850	44.404	747.1	0.2907	46.219	738.3	0.2964
7	38.862	951.1	0.2505	39.724	724.1	0.2554	41.507	734.8	0.2605
8	27.783	841.4	0.2261	29.830	674.9	0.2303	31.210	692.6	0.2348
9	10.673	659.6	0.2155	11.403	601.4	0.2195	11.912	608.7	0.2235
10	6.280	616.7	0.2129	6.671	583.4	0.2166	6.941	587.1	0.2202

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.603	578.0	0.7396
2	38.987	611.4	0.7194
3	47.770	626.7	0.5677
4	50.590	654.7	0.4336
5	50.432	681.5	0.3596
6	48.783	709.6	0.3087
7	44.403	730.7	0.2729
8	33.716	706.2	0.2464
9	12.876	615.2	0.2342
10	7.449	590.3	0.2299

Table 4-164. LS1 Burnup and TH Feedback Parameters Assembly B1

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.016	618.6	0.7396	2.254	650.9	0.7396
2	0.000		0.7246	5.013	878.2	0.7301	11.289	1128.8	0.7153
3	0.000		0.5482	8.063	1084.0	0.5819	15.942	1254.7	0.5351
4	0.000	Data	0.4006	9.153	1184.4	0.4138	16.804	1225.6	0.3803
5	0.000	Not	0.3301	8.389	1112.6	0.3280	15.839	1200.5	0.3016
6	0.000	Required	0.2880	7.219	1011.2	0.2772	14.347	1161.5	0.2522
7	0.000		0.2629	5.804	901.3	0.2456	12.073	1063.8	0.2198
8	0.000		0.2478	4.592	818.0	0.2240	9.291	908.4	0.1995
9	0.000		0.2419	1.816	653.9	0.2145	3.603	676.4	0.1912
10	0.000		0.2406	1.124	618.3	0.2129	2.203	629.7	0.1900

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.084	653.7	0.7396	5.717	647.7	0.7396	7.424	667.6	0.7396
2	19.285	1013.6	0.7145	25.688	924.1	0.7162	31.490	948.5	0.7164
3	25.334	1093.4	0.5348	32.979	993.2	0.5442	39.401	979.3	0.5483
4	26.357	1106.0	0.3832	34.607	1039.1	0.3959	41.214	995.1	0.4028
5	25.079	1081.6	0.3061	33.729	1070.6	0.3188	40.348	998.2	0.3264
6	22.989	1036.6	0.2579	31.957	1098.6	0.2683	38.266	969.9	0.2752
7	19.685	963.8	0.2244	28.514	1085.4	0.2334	34.183	917.8	0.2398
8	14.644	823.1	0.2032	21.358	928.8	0.2098	25.779	825.4	0.2164
9	6.586	649.2	0.1949	8.224	686.3	0.2005	9.986	657.0	0.2074
10	3.354	612.1	0.1934	4.885	632.4	0.1986	5.879	614.9	0.2052

Table 4-164. LS1 Burnup and TH Feedback Parameters Assembly B1 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.112	629.4	0.7396	8.463	581.5	0.7396	8.605	574.9	0.7396
2	33.722	782.8	0.7178	34.804	622.4	0.7187	35.229	602.1	0.7191
3	42.130	827.6	0.5558	43.620	643.1	0.5622	44.188	614.3	0.5647
4	44.236	862.1	0.4129	46.245	672.8	0.4241	47.011	632.6	0.4291
5	43.455	872.5	0.3364	45.771	691.0	0.3485	46.701	648.3	0.3549
6	41.384	873.8	0.2848	43.823	698.4	0.2963	44.913	663.6	0.3035
7	37.546	904.7	0.2503	39.898	693.1	0.2608	41.096	674.5	0.2683
8	28.907	876.0	0.2275	30.704	660.6	0.2368	31.746	659.2	0.2441
9	11.283	677.5	0.2180	11.954	598.3	0.2265	12.360	599.4	0.2333
10	6.602	625.0	0.2152	6.948	581.0	0.2227	7.152	581.4	0.2287

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.797	572.1	0.7396
2	35.771	592.7	0.7195
3	44.870	599.8	0.5676
4	47.964	614.8	0.4355
5	47.971	632.5	0.3646
6	46.562	654.4	0.3160
7	43.081	674.3	0.2824
8	33.574	685.0	0.2582
9	13.095	602.7	0.2468
10	7.625	583.0	0.2406

Table 4-165. LS1 Burnup and TH Feedback Parameters Assembly B2

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.363	639.5	0.7396	2.694	658.1	0.7396
2	0.000		0.7098	6.539	979.0	0.7167	12.857	1098.2	0.7097
3	0.000		0.5032	9.281	1197.2	0.5262	16.899	1221.3	0.5090
4	0.000	Data	0.3643	9.849	1254.1	0.3858	17.461	1220.6	0.3561
5	0.000	Not	0.3015	8.980	1168.0	0.2903	16.472	1205.6	0.2833
6	0.000	Required	0.2638	7.728	1054.2	0.2452	14.888	1165.4	0.2377
7	0.000		0.2409	6.200	930.8	0.2169	12.822	1069.7	0.2075
8	0.000		0.2261	4.761	829.3	0.1979	9.521	913.9	0.1876
9	0.000		0.2203	1.866	658.6	0.1896	3.710	680.3	0.1793
10	0.000		0.2192	1.163	620.2	0.1884	2.276	631.9	0.1780

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.989	625.3	0.7396	4.840	604.6	0.7396	5.885	624.3	0.7396
2	18.509	853.6	0.7163	21.888	732.5	0.7207	26.112	823.4	0.7225
3	23.844	919.1	0.5416	28.209	779.4	0.5662	34.481	867.4	0.5757
4	24.833	947.2	0.3948	30.067	830.8	0.4312	37.095	1032.2	0.4392
5	23.824	945.9	0.3200	29.633	866.7	0.3582	36.622	1019.7	0.3631
6	21.941	926.1	0.2716	28.171	894.1	0.3088	34.498	971.2	0.3114
7	18.831	879.1	0.2391	25.107	897.2	0.2746	30.666	909.2	0.2761
8	14.047	776.5	0.2155	19.062	818.2	0.2481	23.218	807.0	0.2497
9	5.343	633.4	0.2052	7.274	651.4	0.2363	8.851	648.6	0.2381
10	3.183	601.6	0.2020	4.239	610.4	0.2312	5.124	609.1	0.2335

Table 4-165. LS1 Burnup and TH Feedback Parameters Assembly B2 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.971	672.3	0.7396	8.053	627.7	0.7396	8.780	637.6	0.7396
2	29.636	973.0	0.7220	33.628	796.4	0.7239	36.162	834.6	0.7245
3	38.303	964.9	0.5757	43.471	885.3	0.5850	46.819	926.7	0.5878
4	40.808	950.1	0.4399	46.774	948.7	0.4502	50.461	974.7	0.4528
5	40.211	946.9	0.3641	46.103	942.6	0.3721	49.898	990.5	0.3739
6	38.168	944.6	0.3124	43.559	902.4	0.3187	47.166	963.2	0.3199
7	34.163	921.7	0.2767	38.587	829.7	0.2819	41.644	887.7	0.2826
8	25.925	826.0	0.2502	29.058	742.2	0.2550	31.303	787.9	0.2557
9	9.924	656.6	0.2386	11.160	628.9	0.2437	12.095	648.7	0.2445
10	5.727	614.5	0.2343	6.423	599.7	0.2395	6.963	611.6	0.2405

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	10.193	651.9	0.7396
2	40.371	835.5	0.7253
3	51.410	850.0	0.5924
4	55.499	884.6	0.4595
5	55.640	933.9	0.3808
6	53.454	989.6	0.3261
7	48.184	1012.3	0.2874
8	36.579	905.3	0.2589
9	14.348	690.6	0.2473
10	8.255	633.8	0.2434

Table 4-166. LS1 Burnup and TH Feedback Parameters Assembly B3

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.356	639.1	0.7396	2.489	642.8	0.7396
2	0.000		0.7165	6.329	961.4	0.7197	11.765	1000.1	0.7175
3	0.000		0.5257	8.741	1145.1	0.5415	15.558	1124.8	0.5362
4	0.000	Data	0.3867	8.197	1188.7	0.3830	16.151	1140.8	0.3819
5	0.000	Not	0.3219	8.419	1115.3	0.3064	15.296	1131.8	0.3065
6	0.000	Required	0.2825	7.298	1017.7	0.2599	13.863	1096.3	0.2586
7	0.000		0.2583	5.846	904.5	0.2304	11.596	1008.9	0.2269
8	0.000		0.2434	4.442	808.2	0.2109	8.810	878.0	0.2057
9	0.000		0.2373	1.742	650.0	0.2025	3.449	671.0	0.1969
10	0.000		0.2361	1.083	616.2	0.2012	2.109	626.3	0.1954

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.208	647.7	0.7396	5.697	639.6	0.7396	7.484	673.0	0.7396
2	18.381	984.3	0.7172	25.363	895.9	0.7191	31.595	985.5	0.7187
3	24.667	1071.5	0.5402	32.037	973.1	0.5514	38.955	1022.3	0.5529
4	25.470	1087.6	0.3885	33.422	1016.3	0.4034	40.341	1022.4	0.4064
5	24.304	1063.8	0.3129	32.587	1041.7	0.3272	39.262	1001.0	0.3305
6	22.284	1020.4	0.2644	30.800	1060.0	0.2770	37.070	966.6	0.2803
7	18.940	945.8	0.2318	27.172	1037.9	0.2424	32.660	919.3	0.2456
8	13.864	806.1	0.2100	20.019	890.9	0.2183	24.419	824.1	0.2216
9	5.269	641.8	0.2012	7.605	671.2	0.2086	9.341	655.5	0.2120
10	3.154	607.5	0.1996	4.492	623.4	0.2066	5.474	614.3	0.2098

Table 4-166. LS1 Burnup and TH Feedback Parameters Assembly B3 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.603	676.9	0.7396	8.955	581.6	0.7396	9.095	574.6	0.7396
2	35.205	957.0	0.7188	36.270	621.5	0.7196	36.680	600.6	0.7200
3	42.967	991.1	0.5547	44.444	642.4	0.5609	45.015	614.4	0.5634
4	44.442	1003.7	0.4090	46.368	668.0	0.4199	47.172	636.2	0.4252
5	43.382	1003.5	0.3331	45.501	680.4	0.3449	46.496	654.5	0.3518
6	41.136	998.6	0.2826	43.328	683.6	0.2939	44.476	669.5	0.3013
7	36.736	972.4	0.2476	38.825	677.5	0.2582	40.040	676.2	0.2658
8	27.423	861.2	0.2232	29.016	648.9	0.2331	30.026	656.2	0.2405
9	10.552	689.4	0.2136	11.134	593.6	0.2226	11.517	597.3	0.2295
10	6.164	622.1	0.2114	6.463	578.6	0.2194	6.658	580.4	0.2254

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.255	570.1	0.7396
2	37.125	587.2	0.7203
3	45.602	594.7	0.5659
4	48.039	610.0	0.4311
5	47.690	628.3	0.3613
6	46.053	650.2	0.3141
7	41.956	670.1	0.2809
8	31.796	661.6	0.2563
9	12.211	600.5	0.2444
10	7.010	581.9	0.2385

Table 4-168. LS1 Burnup and TH Feedback Parameters Assembly B5

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.5 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.5 Cy 4	208.5 Cy 4	208.5 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.115	624.5	0.7396	2.108	632.0	0.7396
2	0.000		0.7257	5.299	900.7	0.7295	10.361	961.9	0.7251
3	0.000		0.5572	7.828	1062.7	0.5836	14.558	1114.9	0.5663
4	0.000	Data	0.4151	8.469	1119.7	0.4222	15.199	1114.8	0.4095
5	0.000	Not	0.3462	7.743	1055.2	0.3393	14.272	1092.1	0.3295
6	0.000	Required	0.3041	6.708	969.9	0.2887	12.677	1052.7	0.2788
7	0.000		0.2782	5.399	872.3	0.2564	10.776	971.2	0.2451
8	0.000		0.2623	4.197	792.3	0.2349	8.329	857.3	0.2228
9	0.000		0.2559	1.662	645.8	0.2258	3.274	664.6	0.2138
10	0.000		0.2547	1.027	613.4	0.2242	1.994	622.6	0.2123

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.769	644.7	0.7396	5.348	644.6	0.7396	6.353	621.7	0.7396
2	17.867	977.7	0.7222	24.199	919.0	0.7221	28.023	794.7	0.7243
3	23.620	1060.3	0.5607	31.063	985.8	0.5647	35.871	859.9	0.5775
4	24.392	1077.9	0.4078	32.510	1029.0	0.4160	37.706	881.1	0.4327
5	23.184	1056.6	0.3291	31.663	1057.1	0.3376	36.725	871.1	0.3535
6	21.212	1014.2	0.2784	29.921	1075.5	0.2855	34.689	849.4	0.3003
7	18.048	941.0	0.2443	26.430	1049.7	0.2494	30.668	825.7	0.2638
8	13.346	804.0	0.2221	19.611	898.2	0.2250	23.399	781.8	0.2399
9	6.051	639.9	0.2133	7.425	673.1	0.2155	8.686	640.2	0.2297
10	3.011	606.3	0.2119	4.373	624.5	0.2137	5.276	610.0	0.2287

Table 4-168. LS1 Burnup and TH Feedback Parameters Assembly B5 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.168	642.8	0.7396	7.519	581.5	0.7396	7.664	575.2	0.7396
2	30.779	844.9	0.7246	31.903	624.8	0.7255	32.354	604.6	0.7258
3	39.476	923.0	0.5811	40.968	643.1	0.5869	41.651	615.8	0.5893
4	41.487	959.3	0.4371	43.474	671.5	0.4477	44.262	634.8	0.4527
5	40.553	965.6	0.3577	42.826	688.4	0.3692	43.788	651.3	0.3758
6	38.512	965.0	0.3039	40.893	694.6	0.3150	42.010	666.5	0.3222
7	34.513	941.1	0.2668	36.822	690.6	0.2771	38.043	676.8	0.2846
8	28.206	837.7	0.2420	27.982	659.4	0.2514	29.031	659.9	0.2586
9	10.006	660.9	0.2316	10.655	597.2	0.2402	11.055	598.8	0.2469
10	6.938	619.6	0.2310	6.267	580.2	0.2383	6.468	580.9	0.2441

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.850	571.8	0.7396
2	32.901	593.0	0.7262
3	42.218	599.0	0.5920
4	45.200	613.9	0.4589
5	45.049	632.1	0.3854
6	43.554	654.1	0.3347
7	40.030	674.4	0.2990
8	30.867	665.5	0.2734
9	11.776	602.0	0.2609
10	6.829	582.4	0.2580

Table 4-169. LS1 Burnup and TH Feedback Parameters Assembly B6

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.116	624.6	0.7396	2.178	637.4	0.7396
2	0.000		0.7161	6.381	887.4	0.7286	10.738	992.4	0.7224
3	0.000		0.6204	7.952	1073.5	0.5784	14.903	1140.5	0.5566
4	0.000	Data	0.3816	8.591	1131.0	0.4167	15.528	1138.7	0.4005
5	0.000	Not	0.3174	7.842	1063.8	0.3345	14.584	1116.3	0.3215
6	0.000	Required	0.2787	6.801	977.2	0.2846	13.249	1083.1	0.2715
7	0.000		0.2550	5.636	889.1	0.2526	11.449	1015.2	0.2378
8	0.000		0.2405	4.570	816.5	0.2301	9.088	891.6	0.2151
9	0.000		0.2344	1.609	653.6	0.2203	3.561	674.0	0.2057
10	0.000		0.2332	1.113	617.7	0.2186	2.164	627.9	0.2042

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.413	675.9	0.7396	6.112	651.4	0.7396	7.386	639.0	0.7396
2	20.175	1127.0	0.7111	26.601	925.8	0.7131	31.086	843.1	0.7152
3	25.235	1169.4	0.5290	33.001	1002.4	0.5388	38.560	909.2	0.5499
4	25.737	1159.1	0.3809	34.261	1060.7	0.3935	40.685	979.7	0.4085
5	24.488	1134.1	0.3082	33.487	1097.6	0.3179	40.362	1020.4	0.3320
6	22.662	1095.1	0.2579	31.936	1122.1	0.2675	38.585	998.9	0.2791
7	19.974	1028.2	0.2248	29.070	1107.3	0.2319	34.672	928.5	0.2416
8	15.298	874.4	0.2035	22.474	961.1	0.2079	26.613	819.8	0.2164
9	5.911	666.2	0.1949	8.834	700.9	0.1983	10.667	655.4	0.2066
10	3.545	622.2	0.1936	5.252	640.7	0.1966	6.239	614.5	0.2046

Table 4-169. LS1 Burnup and TH Feedback Parameters Assembly B6 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.295	652.9	0.7396	8.625	580.2	0.7396	8.768	573.9	0.7398
2	34.068	673.1	0.7180	35.110	620.1	0.7170	35.512	599.9	0.7174
3	42.004	914.9	0.5544	43.468	641.6	0.5608	44.013	612.2	0.5632
4	44.246	930.0	0.4144	46.235	671.6	0.4255	46.960	628.8	0.4303
5	43.920	929.5	0.3379	46.244	691.5	0.3500	47.120	643.1	0.3562
6	42.109	925.1	0.2848	44.600	701.6	0.2965	45.638	658.8	0.3035
7	38.223	903.0	0.2469	40.670	698.9	0.2579	41.845	672.2	0.2656
8	29.437	816.3	0.2212	31.324	665.8	0.2311	32.373	659.9	0.2388
9	11.658	658.2	0.2113	12.351	599.5	0.2200	12.759	599.6	0.2272
10	6.692	618.8	0.2098	7.245	581.6	0.2173	7.451	581.4	0.2235

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.942	571.6	0.7396
2	36.042	592.0	0.7178
3	44.688	599.4	0.5661
4	47.891	613.6	0.4365
5	48.340	629.7	0.3654
6	47.223	650.7	0.3186
7	43.787	671.7	0.2798
8	34.197	664.8	0.2533
9	13.493	602.7	0.2409
10	7.823	583.0	0.2353

Table 4-170. LS1 Burnup and TH Feedback Parameters Assembly B7

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.075	622.1	0.7396	2.292	649.3	0.7396
2	0.000		0.7132	5.275	879.6	0.7286	11.254	1060.0	0.7172
3	0.000		0.5122	8.202	1096.1	0.5743	15.682	1204.3	0.5399
4	0.000	Data	0.3703	9.164	1185.4	0.4073	16.575	1195.7	0.3834
5	0.000	Not	0.3056	8.465	1119.5	0.3229	15.775	1183.3	0.3043
6	0.000	Required	0.2671	7.390	1025.4	0.2723	14.493	1158.4	0.2544
7	0.000		0.2439	6.108	923.7	0.2404	12.505	1077.7	0.2211
8	0.000		0.2291	4.923	840.1	0.2160	9.800	924.9	0.1995
9	0.000		0.2232	1.949	661.0	0.2082	3.831	682.9	0.1905
10	0.000		0.2220	1.203	622.2	0.2067	2.338	633.3	0.1891

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.717	632.1	0.7396	4.643	608.7	0.7396	6.338	666.8	0.7396
2	17.457	888.7	0.7208	21.178	752.0	0.7245	27.399	984.5	0.7230
3	23.066	948.0	0.5598	27.814	801.7	0.5811	34.656	1006.8	0.5777
4	24.293	970.7	0.4094	29.904	854.2	0.4414	36.577	1000.8	0.4390
5	23.437	966.8	0.3301	29.615	890.7	0.3637	36.061	981.4	0.3620
6	21.818	944.1	0.2786	28.408	918.3	0.3109	34.501	951.9	0.3097
7	19.049	893.8	0.2438	25.639	918.3	0.2740	31.370	922.6	0.2729
8	14.470	784.4	0.2193	19.668	829.4	0.2463	24.225	835.2	0.2454
9	5.525	636.2	0.2091	7.533	655.2	0.2348	9.317	658.2	0.2340
10	3.285	603.3	0.2065	4.395	612.9	0.2307	5.400	615.5	0.2304

Table 4-170. LS1 Burnup and TH Feedback Parameters Assembly B7 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	7.494	680.0	0.7396	7.981	689.9	0.7396	8.170	679.7	0.7396
2	31.226	988.1	0.7221	32.821	652.5	0.7233	33.412	618.1	0.7238
3	38.645	1002.0	0.5769	40.771	679.7	0.5824	41.589	637.6	0.5857
4	40.692	1005.6	0.4377	43.251	705.7	0.4468	44.349	664.6	0.4526
5	40.171	1004.9	0.3610	42.866	714.0	0.3696	44.164	684.5	0.3760
6	38.559	997.6	0.3086	41.219	711.9	0.3163	42.655	698.7	0.3225
7	35.196	965.4	0.2716	37.641	698.8	0.2784	39.101	701.2	0.2843
8	27.198	857.4	0.2442	29.000	661.0	0.2503	30.173	672.1	0.2556
9	10.525	669.1	0.2328	11.189	598.0	0.2385	11.637	603.2	0.2434
10	6.089	622.0	0.2294	6.437	581.2	0.2346	6.671	583.9	0.2391

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.386	573.6	0.7396
2	34.052	598.3	0.7242
3	42.426	608.4	0.5890
4	45.553	628.9	0.4601
5	45.761	651.4	0.3868
6	44.669	676.1	0.3352
7	41.438	695.8	0.2976
8	32.257	680.4	0.2685
9	12.464	607.8	0.2557
10	7.097	585.9	0.2502

Table 4-171. LS1 Burnup and TH Feedback Parameters Assembly B8

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.263	633.4	0.7396	2.605	659.0	0.7396
2	0.000		0.7123	6.087	942.2	0.7208	12.486	1108.0	0.7110
3	0.000		0.5097	9.015	1171.6	0.6402	16.761	1237.6	0.5143
4	0.000	Data	0.3680	9.657	1254.9	0.3754	17.666	1232.9	0.3595
5	0.000	Not	0.3033	9.077	1177.3	0.2964	16.682	1219.7	0.2847
6	0.000	Required	0.2649	7.899	1069.0	0.2492	15.181	1180.0	0.2380
7	0.000		0.2416	6.416	947.2	0.2195	12.826	1079.4	0.2071
8	0.000		0.2287	4.951	842.1	0.1996	9.775	919.9	0.1870
9	0.000		0.2207	1.949	661.0	0.1911	3.823	682.3	0.1788
10	0.000		0.2195	1.215	622.8	0.1896	2.352	633.4	0.1773

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.710	668.7	0.7396	6.411	651.5	0.7396	8.014	660.7	0.7396
2	21.287	1075.5	0.7084	27.676	923.2	0.7111	33.267	930.4	0.7132
3	26.692	1136.3	0.5120	34.417	999.3	0.5257	41.007	993.6	0.5350
4	27.467	1133.9	0.3620	35.919	1055.0	0.3788	42.658	1006.5	0.3889
5	26.285	1110.0	0.2890	35.181	1090.8	0.3048	41.633	981.9	0.3141
6	24.311	1073.1	0.2424	33.515	1116.2	0.2562	39.473	941.0	0.2647
7	21.155	1013.9	0.2110	30.210	1103.9	0.2225	35.433	883.4	0.2305
8	15.916	870.0	0.1901	23.059	958.8	0.1990	26.972	790.4	0.2067
9	6.184	666.7	0.1816	9.102	700.6	0.1896	10.656	645.4	0.1974
10	3.734	622.3	0.1802	5.439	640.6	0.1878	6.308	608.2	0.1951

Table 4-171. LS1 Burnup and TH Feedback Parameters Assembly B8 (Continued)

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	8.991	660.3	0.7396	9.160	571.7	0.7396	9.257	568.2	0.7396
2	36.441	897.9	0.7144	37.004	593.1	0.7149	37.229	583.0	0.7151
3	44.609	935.4	0.5407	45.408	605.2	0.5445	45.714	590.3	0.5460
4	46.327	944.2	0.3956	47.496	625.3	0.4042	47.928	601.7	0.4073
5	45.290	942.5	0.3205	46.751	641.5	0.3325	47.314	613.7	0.3374
6	43.085	936.6	0.2708	44.725	651.5	0.2840	45.431	627.0	0.2906
7	38.856	912.2	0.2362	40.525	653.2	0.2495	41.349	638.1	0.2575
8	29.617	818.7	0.2120	30.942	633.9	0.2246	31.684	630.3	0.2331
9	11.724	656.1	0.2027	12.210	588.5	0.2138	12.496	588.6	0.2216
10	6.906	614.0	0.2001	7.160	575.7	0.2096	7.292	575.6	0.2163

	Statepoint 10 (495.2, EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.357	566.4	0.7396
2	37.506	577.7	0.7154
3	46.071	582.2	0.5476
4	48.447	591.0	0.4111
5	48.035	602.0	0.3436
6	46.429	617.3	0.3004
7	42.643	633.9	0.2709
8	32.941	631.6	0.2485
9	12.994	589.6	0.2363
10	7.540	576.2	0.2288

Table 4-172. LS1 Burnup and TH Feedback Parameters Assembly B9

	Datapoint 1 (BOC Cy 4)			Datapoint 2 (208.6 EFPD Cy 4)			Datapoint 3 (BOC Cy 5)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.186	628.8	0.7396	2.541	660.0	0.7396
2	0.000		0.7096	5.734	914.3	0.7241	12.196	1115.4	0.7120
3	0.000		0.5060	8.495	1122.6	0.5563	16.174	1229.2	0.5225
4	0.000	Data	0.3683	9.345	1203.2	0.3924	16.856	1208.1	0.3699
5	0.000	Not	0.3049	8.724	1143.5	0.3111	16.082	1189.2	0.2943
6	0.000	Required	0.2668	7.796	1059.8	0.2616	14.775	1143.9	0.2466
7	0.000		0.2436	6.653	957.7	0.2295	12.618	1041.9	0.2151
8	0.000		0.2286	5.135	854.7	0.2078	9.748	900.1	0.1941
9	0.000		0.2226	2.034	665.5	0.1984	3.858	678.8	0.1852
10	0.000		0.2214	1.265	625.4	0.1968	2.370	631.4	0.1839

	Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	4.409	655.8	0.7396	6.272	660.8	0.7396	8.044	672.0	0.7396
2	20.297	1021.5	0.7122	27.234	963.0	0.7127	33.299	970.9	0.7137
3	25.653	1100.2	0.5256	33.756	1027.9	0.5321	40.639	1019.2	0.5376
4	26.388	1104.3	0.3756	35.107	1076.3	0.3856	42.027	1022.5	0.3921
5	25.260	1076.8	0.3009	34.381	1109.3	0.3107	41.075	1002.7	0.3170
6	23.387	1034.3	0.2531	32.786	1132.7	0.2613	39.067	967.5	0.2673
7	20.291	968.0	0.2211	29.444	1112.2	0.2270	35.085	915.6	0.2327
8	15.253	831.9	0.1994	22.278	950.6	0.2032	26.629	820.6	0.2090
9	5.913	652.5	0.1904	8.716	694.7	0.1937	10.479	657.1	0.1995
10	3.559	613.8	0.1888	5.191	637.2	0.1918	6.189	615.1	0.1974

Table 4-172. LS1 Burnup and TH Feedback Parameters Assembly B9 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	9.138	573.2	0.7398	9.368	574.0	0.7396	9.459	589.8	0.7396
2	36.785	939.8	0.7144	37.461	599.4	0.7161	37.726	586.9	0.7153
3	44.611	985.5	0.5412	45.560	613.3	0.5457	45.931	596.2	0.5475
4	46.115	1001.6	0.3983	47.432	633.4	0.4057	47.983	610.8	0.4095
5	45.158	1001.1	0.3211	46.720	647.1	0.3330	47.406	625.1	0.3388
6	43.092	992.9	0.2710	44.781	654.3	0.2836	45.616	639.1	0.2908
7	38.892	962.9	0.2362	40.568	653.6	0.2486	41.498	648.3	0.2566
8	29.601	857.4	0.2121	30.912	633.1	0.2237	31.713	636.0	0.2316
9	11.706	671.1	0.2026	12.185	588.0	0.2129	12.489	590.2	0.2203
10	6.890	623.1	0.2003	7.128	575.4	0.2091	7.279	576.4	0.2165

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.565	586.6	0.7396
2	38.019	578.5	0.7156
3	46.317	583.8	0.5492
4	48.638	594.0	0.4137
5	48.212	606.6	0.3457
6	46.719	623.1	0.3013
7	42.904	640.3	0.2706
8	33.086	637.3	0.2476
9	13.023	591.8	0.2351
10	7.543	577.1	0.2281

Table 4-173. LS1 Burnup and TH Feedback Parameters Assembly B10

Node No.	Datapoint 1 (BOC Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 2 (208.6 EFPD Cy 4) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 4	0.00 Cy 4	0.00 Cy 4	208.6 Cy 4	208.6 Cy 4	208.6 Cy 4	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5
1	0.000		0.7396	1.354	639.0	0.7396	2.676	657.4	0.7396
2	0.000		0.7101	6.498	975.6	0.7171	12.767	1094.9	0.7101
3	0.000		0.5040	9.250	1194.1	0.5274	16.853	1219.4	0.5101
4	0.000	Data	0.3648	9.645	1253.7	0.3666	17.448	1219.5	0.3568
5	0.000	Not	0.3016	8.996	1169.5	0.2908	16.488	1205.6	0.2837
6	0.000	Required	0.2640	7.767	1056.7	0.2454	14.928	1166.6	0.2380
7	0.000		0.2409	6.233	933.3	0.2169	12.572	1071.5	0.2076
8	0.000		0.2261	4.784	830.8	0.1978	9.656	915.0	0.1876
9	0.000		0.2203	1.674	657.0	0.1896	3.722	680.6	0.1793
10	0.000		0.2191	1.167	620.4	0.1883	2.283	632.1	0.1780

Node No.	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6
1	3.970	625.2	0.7396	4.621	604.6	0.7396	5.812	620.6	0.7396
2	18.441	853.7	0.7165	21.824	732.7	0.7209	25.700	798.3	0.7235
3	23.794	918.9	0.5424	28.160	779.4	0.5668	33.149	865.8	0.5801
4	24.808	946.4	0.3953	30.036	830.4	0.4316	35.249	882.4	0.4465
5	23.625	944.9	0.3202	29.624	866.1	0.3583	34.681	870.8	0.3717
6	21.964	925.0	0.2717	28.161	893.3	0.3088	32.927	847.8	0.3207
7	18.867	876.2	0.2391	25.128	896.2	0.2745	29.503	821.3	0.2855
8	14.076	776.1	0.2155	19.079	817.6	0.2480	22.618	778.4	0.2592
9	5.353	633.3	0.2051	7.280	651.3	0.2363	8.741	640.2	0.2472
10	3.188	601.5	0.2020	4.242	610.3	0.2311	5.150	610.3	0.2435

Table 4-173. LS1 Burnup and TH Feedback Parameters Assembly B10 (Continued)

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	6.617	641.6	0.7396	7.711	628.5	0.7396	8.455	639.7	0.7396
2	28.540	855.2	0.7239	32.457	805.4	0.7254	35.102	849.1	0.7259
3	36.755	936.3	0.5831	42.064	896.1	0.5912	45.540	944.5	0.5930
4	39.068	964.4	0.4492	45.191	961.9	0.4576	49.007	993.7	0.4588
5	38.513	966.1	0.3738	44.519	952.1	0.3798	48.426	1007.3	0.3802
6	36.728	962.0	0.3219	42.108	901.5	0.3263	45.783	973.1	0.3262
7	33.105	935.4	0.2858	37.445	823.7	0.2893	40.496	887.0	0.2889
8	25.588	833.3	0.2590	28.619	735.7	0.2623	30.773	777.4	0.2621
9	9.854	660.3	0.2469	11.051	626.8	0.2505	11.930	643.4	0.2505
10	5.613	619.7	0.2439	6.482	598.2	0.2474	6.985	608.2	0.2474

Node No.	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	9.661	658.3	0.7396
2	39.640	861.4	0.7262
3	60.383	869.4	0.5960
4	64.237	899.9	0.4636
5	64.262	950.2	0.3851
6	62.278	1008.3	0.3302
7	47.183	1025.6	0.2913
8	36.054	905.8	0.2630
9	14.168	689.5	0.2508
10	8.263	633.0	0.2478

Table 4-174. LS1 Burnup and TH Feedback Parameters Assembly C1

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.543	638.0	0.7396	2.776	625.1	0.7396
2	0.000		0.7237	6.921	935.2	0.7237	12.707	879.7	0.7261
3	0.000		0.5668	8.859	1050.2	0.5668	16.503	991.1	0.5793
4	0.000	Data	0.4168	9.145	1071.8	0.4168	17.324	1031.4	0.4328
5	0.000	Not	0.3380	8.722	1040.1	0.3380	17.100	1046.8	0.3526
6	0.000	Required	0.2868	8.005	988.7	0.2868	16.468	1053.4	0.2983
7	0.000		0.2524	6.768	906.6	0.2524	14.728	1014.9	0.2601
8	0.000		0.2308	4.489	773.8	0.2308	10.134	856.9	0.2350
9	0.000		0.2228	1.599	631.6	0.2228	3.659	657.3	0.2255
10	0.000		0.2214	0.963	603.8	0.2214	2.150	616.2	0.2237

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	3.734	618.5	0.7396	4.763	665.6	0.7396	6.044	640.4	0.7396
2	17.204	842.3	0.7268	21.228	1014.4	0.7245	26.388	899.8	0.7252
3	23.423	1021.2	0.5855	27.852	1005.6	0.5811	34.077	994.5	0.5839
4	25.024	1091.7	0.4376	28.985	981.9	0.4360	35.649	1024.4	0.4384
5	24.548	1068.1	0.3548	28.440	972.5	0.3548	34.959	994.0	0.3570
6	23.211	1005.0	0.2992	27.044	964.4	0.3000	32.829	932.4	0.3023
7	20.576	930.5	0.2612	24.186	934.8	0.2621	28.906	850.0	0.2648
8	14.395	813.7	0.2364	17.182	834.2	0.2372	20.590	759.4	0.2403
9	5.132	640.6	0.2268	6.139	650.2	0.2274	7.376	628.7	0.2308
10	2.973	605.7	0.2250	3.534	610.6	0.2256	4.223	599.2	0.2290

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.810	641.9	0.7396	8.192	649.4	0.7396	8.196	572.9	0.7396
2	29.412	898.7	0.7254	33.993	863.4	0.7257	34.007	602.6	0.7257
3	37.812	979.8	0.5847	42.949	891.0	0.5887	42.969	620.1	0.5888
4	39.667	992.0	0.4394	45.386	938.5	0.4466	45.414	641.9	0.4488
5	38.764	990.0	0.3582	44.994	982.4	0.3656	45.026	653.7	0.3658
6	36.728	1003.9	0.3033	43.375	1019.9	0.3099	43.408	657.7	0.3101
7	32.431	949.9	0.2654	39.092	1021.2	0.2707	39.124	654.7	0.2709
8	23.153	825.1	0.2407	28.384	900.3	0.2445	28.410	635.1	0.2447
9	8.325	649.6	0.2311	10.338	675.6	0.2343	10.347	587.8	0.2345
10	4.757	610.9	0.2292	5.884	624.2	0.2323	5.889	576.7	0.2324

Table 4-175. LS1 Burnup and TH Feedback Parameters Assembly C2

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.704	646.6	0.7396	3.158	637.3	0.7396
2	0.000		0.7188	7.471	973.7	0.7188	14.154	942.7	0.7197
3	0.000		0.5447	9.512	1100.0	0.5447	18.059	1060.1	0.5513
4	0.000	Data	0.3928	9.823	1124.7	0.3928	18.836	1097.6	0.4025
5	0.000	Not	0.3163	9.321	1085.3	0.3163	18.536	1114.4	0.3250
6	0.000	Required	0.2674	8.500	1024.0	0.2674	17.821	1123.2	0.2732
7	0.000		0.2348	7.184	933.6	0.2348	16.058	1086.6	0.2368
8	0.000		0.2143	4.795	790.6	0.2143	11.138	902.6	0.2131
9	0.000		0.2066	1.743	638.1	0.2066	4.105	672.1	0.2040
10	0.000		0.2053	1.060	608.0	0.2053	2.444	625.3	0.2024

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.384	634.3	0.7396	5.065	630.5	0.7396	5.870	609.7	0.7396
2	19.250	888.6	0.7222	21.946	836.1	0.7236	25.148	754.2	0.7256
3	23.902	929.9	0.5663	26.968	866.1	0.5751	31.189	814.1	0.5883
4	24.607	924.2	0.4214	27.762	876.9	0.4333	33.539	932.6	0.4554
5	24.092	907.2	0.3440	27.239	875.9	0.3557	33.808	998.3	0.3760
6	23.019	880.0	0.2912	26.115	869.8	0.3024	32.482	979.1	0.3174
7	20.722	840.8	0.2541	23.651	849.7	0.2649	29.224	915.3	0.2769
8	14.653	783.0	0.2308	16.977	781.7	0.2415	20.948	797.7	0.2514
9	6.368	629.1	0.2210	6.226	636.9	0.2313	7.682	635.2	0.2402
10	3.139	598.9	0.2183	3.608	602.7	0.2282	4.333	601.1	0.2367

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.173	591.6	0.7396	6.943	608.7	0.7396	6.952	589.0	0.7396
2	26.332	677.3	0.7287	28.940	719.4	0.7283	28.969	646.1	0.7283
3	32.847	721.4	0.5962	36.097	763.6	0.6065	36.136	673.5	0.6067
4	35.460	749.6	0.4677	39.333	796.4	0.4837	39.379	698.9	0.4838
5	35.619	759.6	0.3882	40.180	831.7	0.4051	40.228	703.2	0.4052
6	34.545	767.7	0.3307	39.436	871.8	0.3474	39.485	704.2	0.3476
7	31.332	770.5	0.2904	36.588	900.5	0.3063	36.634	695.7	0.3064
8	23.234	791.4	0.2683	27.646	836.3	0.2819	27.682	664.9	0.2820
9	8.427	639.8	0.2559	10.123	656.8	0.2688	10.137	601.7	0.2689
10	4.802	605.0	0.2521	5.729	613.1	0.2649	5.736	582.2	0.2649

Table 4-176. LS1 Burnup and TH Feedback Parameters Assembly C3

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.827	653.2	0.7396	3.266	636.5	0.7396
2	0.000		0.7140	8.029	1014.5	0.7140	14.568	932.1	0.7174
3	0.000		0.5279	9.848	1126.6	0.5279	18.136	1039.9	0.5451
4	0.000	Data	0.3794	9.990	1138.2	0.3794	18.813	1082.1	0.3988
5	0.000	Not	0.3058	9.489	1098.4	0.3058	18.576	1103.7	0.3227
6	0.000	Required	0.2585	8.683	1037.4	0.2585	17.949	1118.6	0.2715
7	0.000		0.2268	7.369	945.8	0.2268	16.272	1088.9	0.2355
8	0.000		0.2068	4.938	798.5	0.2068	11.370	908.5	0.2117
9	0.000		0.1992	1.794	640.4	0.1992	4.193	673.9	0.2026
10	0.000		0.1980	1.094	609.5	0.1980	2.496	626.1	0.2008

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.255	620.5	0.7396	4.798	613.8	0.7396	6.086	641.0	0.7396
2	18.716	816.8	0.7216	20.813	766.5	0.7237	26.020	903.7	0.7244
3	23.176	868.1	0.5682	25.669	799.7	0.5798	32.337	1007.1	0.5820
4	24.020	880.6	0.4278	26.697	820.4	0.4439	33.619	1047.9	0.4433
5	23.628	869.0	0.3499	26.364	827.1	0.3661	33.246	1026.1	0.3644
6	22.693	846.5	0.2966	25.433	827.5	0.3121	31.598	983.9	0.3105
7	20.563	814.4	0.2592	23.207	816.7	0.2742	28.276	876.2	0.2732
8	14.639	747.1	0.2358	16.767	762.6	0.2510	20.433	775.3	0.2500
9	5.376	624.8	0.2257	6.178	631.8	0.2404	7.496	633.2	0.2398
10	3.139	596.2	0.2223	3.571	599.5	0.2361	4.305	601.6	0.2360

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.831	639.5	0.7396	8.230	650.5	0.7396	8.238	585.6	0.7398
2	28.918	881.3	0.7249	33.486	862.5	0.7252	33.514	643.9	0.7252
3	35.991	987.9	0.5838	41.203	897.1	0.5881	41.242	675.8	0.5882
4	37.583	983.9	0.4447	43.399	946.7	0.4512	43.447	702.1	0.4514
5	37.008	983.7	0.3655	43.323	990.0	0.3717	43.372	708.5	0.3719
6	35.499	1004.1	0.3112	42.230	1027.6	0.3162	42.277	700.0	0.3163
7	31.879	960.9	0.2733	38.676	1033.6	0.2767	38.718	684.2	0.2769
8	23.124	840.8	0.2496	28.546	916.7	0.2510	28.577	651.6	0.2511
9	8.508	655.6	0.2392	10.633	682.4	0.2401	10.644	693.3	0.2401
10	4.872	613.9	0.2356	6.071	628.3	0.2365	6.077	579.5	0.2368

Table 4-177. LS1 Burnup and TH Feedback Parameters Assembly C4

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.788	651.1	0.7396	3.261	638.4	0.7396
2	0.000		0.7159	7.765	995.0	0.7159	14.392	938.4	0.7180
3	0.000		0.5344	9.686	1113.6	0.5344	18.110	1050.4	0.5461
4	0.000	Data	0.3843	9.956	1135.4	0.3843	18.953	1096.4	0.3987
5	0.000	Not	0.3091	9.491	1098.5	0.3091	18.777	1120.3	0.3219
6	0.000	Required	0.2609	8.711	1039.4	0.2609	18.165	1134.4	0.2702
7	0.000		0.2286	7.428	949.7	0.2286	16.419	1096.2	0.2339
8	0.000		0.2082	4.993	801.6	0.2082	11.455	910.6	0.2102
9	0.000		0.2005	1.817	641.4	0.2005	4.227	674.5	0.2010
10	0.000		0.1992	1.107	610.1	0.1992	2.517	626.5	0.1993

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.628	644.8	0.7396	5.419	640.0	0.7396	6.261	612.0	0.7396
2	20.217	948.2	0.7194	23.311	885.8	0.7207	26.479	752.0	0.7235
3	24.629	1002.8	0.5549	28.341	921.6	0.5622	32.555	813.6	0.5790
4	25.634	990.9	0.4093	29.082	923.9	0.4185	33.952	862.4	0.4416
5	24.976	958.8	0.3326	28.444	916.3	0.3417	33.419	868.8	0.3633
6	23.844	917.0	0.2809	27.225	905.1	0.2895	31.957	850.7	0.3088
7	21.398	853.7	0.2447	24.561	878.0	0.2530	28.778	813.7	0.2704
8	15.142	774.4	0.2215	17.611	797.7	0.2297	20.695	738.4	0.2460
9	5.641	631.9	0.2120	6.442	640.6	0.2199	7.490	618.4	0.2349
10	3.243	600.6	0.2098	3.738	604.9	0.2172	4.281	591.4	0.2309

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.629	598.4	0.7396	7.118	590.7	0.7396	7.126	585.8	0.7396
2	27.802	692.1	0.7247	29.416	655.8	0.7261	29.443	641.8	0.7261
3	34.343	735.3	0.5872	36.400	678.3	0.5964	36.437	668.9	0.5965
4	36.116	776.9	0.4550	38.820	718.3	0.4732	38.866	696.8	0.4733
5	35.762	797.6	0.3773	39.064	757.3	0.4010	39.113	705.3	0.4012
6	34.405	809.9	0.3223	38.274	796.2	0.3485	38.322	704.2	0.3486
7	31.200	807.0	0.2835	35.430	822.0	0.3099	35.476	697.9	0.3100
8	22.652	764.1	0.2589	26.287	780.3	0.2848	26.324	668.9	0.2849
9	8.187	625.9	0.2469	9.528	636.3	0.2716	9.542	601.7	0.2716
10	4.640	595.0	0.2419	5.326	599.9	0.2646	5.333	582.2	0.2647

Table 4-178. LS1 Burnup and TH Feedback Parameters Assembly C5

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.619	636.8	0.7396	2.661	620.2	0.7398
2	0.000		0.7251	6.719	921.4	0.7251	12.026	847.9	0.7284
3	0.000		0.5758	8.620	1025.2	0.5758	15.648	953.9	0.5925
4	0.000	Data	0.4277	8.826	1047.7	0.4277	16.601	1000.8	0.4485
5	0.000	Not	0.3480	8.457	1020.7	0.3480	16.483	1019.7	0.3668
6	0.000	Required	0.2957	7.805	974.8	0.2957	15.957	1029.3	0.3108
7	0.000		0.2604	6.653	899.3	0.2604	14.353	995.4	0.2713
8	0.000		0.2381	4.442	771.2	0.2381	9.937	847.4	0.2453
9	0.000		0.2298	1.575	630.6	0.2298	3.576	654.6	0.2353
10	0.000		0.2284	0.944	603.0	0.2284	2.090	614.3	0.2334

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	3.913	637.3	0.7396	4.669	636.3	0.7396	5.339	601.2	0.7398
2	17.450	914.6	0.7281	20.454	874.3	0.7284	23.330	741.7	0.7305
3	21.798	954.8	0.5946	25.133	899.2	0.5983	29.371	815.4	0.6125
4	22.586	941.3	0.4535	25.930	900.5	0.4594	30.943	871.7	0.4801
5	22.186	918.8	0.3731	25.489	895.3	0.3794	30.381	862.6	0.3977
6	21.270	888.6	0.3179	24.492	885.3	0.3240	28.843	823.2	0.3394
7	19.113	847.7	0.2789	22.130	860.3	0.2849	25.647	766.0	0.2982
8	13.495	765.9	0.2534	15.858	785.9	0.2593	18.553	713.7	0.2726
9	4.837	629.0	0.2434	5.694	636.7	0.2490	6.706	616.5	0.2622
10	2.789	599.1	0.2412	3.260	602.9	0.2466	3.897	596.4	0.2613

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.944	624.0	0.7396	7.483	660.2	0.7396	7.491	585.8	0.7396
2	25.770	837.1	0.7302	30.929	910.9	0.7288	30.957	642.6	0.7288
3	32.653	902.6	0.6129	38.122	926.0	0.6099	38.160	672.0	0.6100
4	34.538	959.4	0.4814	40.502	959.4	0.4796	40.549	701.1	0.4798
5	34.796	1086.2	0.3989	41.208	998.6	0.3973	41.258	709.6	0.3974
6	33.324	1095.6	0.3382	40.312	1051.7	0.3362	40.361	708.5	0.3363
7	29.380	980.1	0.2957	36.584	1072.3	0.2923	36.630	698.9	0.2925
8	21.197	835.0	0.2697	26.971	945.2	0.2640	27.008	687.9	0.2642
9	7.673	651.5	0.2591	9.934	690.6	0.2524	9.948	601.7	0.2526
10	4.441	611.8	0.2581	5.725	633.1	0.2512	5.733	585.0	0.2513

Table 4-179. LS1 Burnup and TH Feedback Parameters Assembly C6

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.775	650.4	0.7396	3.644	660.7	0.7396
2	0.000		0.7151	7.869	1002.7	0.7151	16.029	1056.3	0.7094
3	0.000		0.5301	9.873	1128.7	0.5301	19.568	1155.2	0.5183
4	0.000	Data	0.3799	10.073	1144.9	0.3799	20.146	1188.4	0.3733
5	0.000	Not	0.3059	9.515	1100.4	0.3059	19.803	1207.7	0.3000
6	0.000	Required	0.2587	8.715	1039.7	0.2587	19.074	1214.2	0.2510
7	0.000		0.2268	7.609	955.1	0.2268	17.275	1161.8	0.2164
8	0.000		0.2064	5.138	809.8	0.2064	12.189	951.6	0.1938
9	0.000		0.1985	1.870	643.8	0.1985	4.508	685.9	0.1849
10	0.000		0.1973	1.138	611.4	0.1973	2.698	633.5	0.1835

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.498	677.1	0.7396	6.526	665.5	0.7396	7.714	634.3	0.7396
2	23.391	1088.0	0.7078	27.188	981.5	0.7090	31.624	842.9	0.7123
3	27.738	1137.2	0.5162	32.132	1043.6	0.5215	38.414	874.1	0.5365
4	28.118	1117.8	0.3731	32.557	1050.6	0.3785	39.671	1047.1	0.3941
5	27.438	1085.6	0.3011	31.814	1041.3	0.3062	38.679	1024.6	0.3185
6	26.134	1032.9	0.2529	30.408	1026.4	0.2576	36.519	959.3	0.2676
7	23.435	955.6	0.2191	27.485	994.4	0.2235	32.418	866.0	0.2321
8	16.799	838.1	0.1970	19.998	883.9	0.2011	23.468	783.6	0.2093
9	6.210	653.3	0.1884	7.430	669.8	0.1922	8.728	632.1	0.2004
10	3.685	613.3	0.1868	4.356	622.0	0.1904	5.087	601.4	0.1984

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.463	640.0	0.7396	9.892	652.6	0.7396
2	34.402	865.3	0.7137	38.835	851.7	0.7164
3	42.216	989.7	0.5423	47.373	892.6	0.5510
4	43.750	1031.4	0.3993	49.582	948.1	0.4108
5	42.766	1032.5	0.3229	49.184	999.1	0.3341
6	40.530	1021.0	0.2713	47.476	1047.7	0.2816
7	35.915	946.2	0.2353	42.977	1058.7	0.2444
8	25.992	820.2	0.2122	31.618	932.8	0.2197
9	9.703	652.3	0.2034	11.965	690.6	0.2102
10	5.645	613.1	0.2012	6.934	633.4	0.2079

Table 4-180. LS1 Burnup and TH Feedback Parameters Assembly C7

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.791	651.3	0.7396	3.407	646.4	0.7396
2	0.000		0.7153	7.845	1000.9	0.7153	15.084	983.9	0.7150
3	0.000		0.5314	9.814	1124.0	0.5314	18.783	1094.0	0.5344
4	0.000	Data	0.3807	10.091	1146.4	0.3807	19.553	1135.2	0.3871
5	0.000	Not	0.3059	9.600	1107.1	0.3059	19.339	1159.0	0.3116
6	0.000	Required	0.2581	8.825	1047.9	0.2581	18.733	1173.7	0.2608
7	0.000		0.2258	7.628	963.1	0.2258	17.073	1134.1	0.2250
8	0.000		0.2051	5.241	815.6	0.2051	12.078	936.3	0.2016
9	0.000		0.1971	1.934	646.7	0.1971	4.800	682.2	0.1925
10	0.000		0.1958	1.182	613.3	0.1958	2.694	631.3	0.1909

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.150	669.6	0.7396	5.960	642.0	0.7396	7.123	632.7	0.7396
2	22.049	1049.9	0.7121	25.087	878.8	0.7136	29.547	844.7	0.7164
3	26.517	1094.8	0.5311	30.029	922.0	0.5395	36.284	971.6	0.5521
4	27.204	1087.1	0.3873	30.799	932.6	0.3976	37.573	1043.5	0.4103
5	26.576	1048.7	0.3130	30.154	930.5	0.3229	36.999	1022.7	0.3329
6	25.386	997.2	0.2635	28.990	934.0	0.2732	35.065	956.4	0.2810
7	23.197	952.6	0.2301	27.287	1000.0	0.2414	32.063	854.3	0.2474
8	16.633	834.5	0.2068	19.857	887.0	0.2171	23.219	756.4	0.2231
9	6.137	649.7	0.1976	7.324	666.8	0.2069	8.584	630.0	0.2131
10	3.611	610.6	0.1956	4.268	619.0	0.2043	4.979	600.3	0.2105

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.898	642.9	0.7396	9.367	655.3	0.7396
2	32.482	886.4	0.7174	37.144	869.9	0.7186
3	40.216	1009.0	0.5558	45.485	901.7	0.5625
4	42.085	1051.9	0.4131	47.917	948.1	0.4224
5	41.260	1059.7	0.3350	47.684	998.0	0.3443
6	39.125	1028.5	0.2826	46.105	1051.0	0.2909
7	35.442	929.7	0.2484	42.482	1056.6	0.2548
8	25.657	809.6	0.2241	31.289	933.3	0.2290
9	9.532	649.7	0.2143	11.803	691.2	0.2187
10	5.525	612.0	0.2117	6.825	634.0	0.2160

Table 4-181. LS1 Burnup and TH Feedback Parameters Assembly C8

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.788	651.1	0.7396	3.262	638.4	0.7396
2	0.000		0.7160	7.773	995.6	0.7160	14.406	938.9	0.7181
3	0.000		0.5348	9.701	1115.0	0.5348	18.135	1051.2	0.5485
4	0.000	Data	0.3846	9.972	1136.7	0.3846	18.881	1097.3	0.3991
5	0.000	Not	0.3094	9.505	1099.6	0.3094	18.804	1121.4	0.3222
6	0.000	Required	0.2612	8.725	1040.4	0.2612	18.191	1135.5	0.2705
7	0.000		0.2289	7.439	950.5	0.2289	16.443	1097.2	0.2342
8	0.000		0.2085	5.001	802.0	0.2085	11.473	911.3	0.2105
9	0.000		0.2007	1.819	641.5	0.2007	4.232	674.6	0.2012
10	0.000		0.1995	1.108	610.1	0.1995	2.520	626.6	0.1996

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.625	644.5	0.7396	5.414	639.8	0.7396	6.257	612.1	0.7396
2	20.215	946.8	0.7198	23.305	885.3	0.7208	26.478	752.3	0.7237
3	24.848	1002.0	0.5555	28.354	921.3	0.5628	32.570	813.8	0.5796
4	25.561	990.8	0.4099	29.087	923.6	0.4192	33.979	862.6	0.4424
5	25.005	959.0	0.3331	28.474	916.3	0.3422	33.452	869.0	0.3639
6	23.873	917.2	0.2814	27.255	905.3	0.2900	31.991	851.0	0.3093
7	21.426	864.0	0.2452	24.591	878.2	0.2535	28.812	814.0	0.2709
8	15.164	774.7	0.2219	17.636	798.0	0.2301	20.724	738.7	0.2485
9	5.547	632.0	0.2124	6.449	640.7	0.2203	7.498	618.5	0.2353
10	3.247	600.6	0.2101	3.741	604.9	0.2176	4.286	591.5	0.2313

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.626	598.6	0.7396	7.116	590.8	0.7396	7.124	585.8	0.7396
2	27.802	692.3	0.7248	29.416	655.8	0.7262	29.443	640.8	0.7262
3	34.359	735.4	0.5877	36.415	678.2	0.5969	36.452	667.4	0.5970
4	36.143	776.9	0.4556	38.847	718.3	0.4738	38.893	696.8	0.4739
5	35.796	797.7	0.3779	39.099	757.3	0.4016	39.147	705.3	0.4017
6	34.441	810.2	0.3229	38.312	796.4	0.3490	38.361	705.8	0.3491
7	31.236	807.2	0.2839	35.470	822.3	0.3104	35.516	697.9	0.3105
8	22.683	754.3	0.2593	26.323	780.7	0.2853	26.360	668.9	0.2854
9	8.187	626.1	0.2474	9.539	636.4	0.2720	9.653	601.7	0.2721
10	4.644	594.9	0.2423	5.331	600.0	0.2650	5.338	582.2	0.2652

Table 4-182. LS1 Burnup and TH Feedback Parameters Assembly C9

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.646	643.5	0.7396	2.955	629.3	0.7396
2	0.000		0.7200	7.361	965.9	0.7200	13.496	903.6	0.7227
3	0.000		0.5510	9.261	1080.6	0.5510	17.230	1016.4	0.5644
4	0.000	Data	0.4014	9.458	1095.9	0.4014	17.926	1053.8	0.4178
5	0.000	Not	0.3249	8.988	1059.9	0.3249	17.657	1069.8	0.3396
6	0.000	Required	0.2754	8.229	1004.5	0.2754	16.988	1077.0	0.2869
7	0.000		0.2423	6.944	916.0	0.2423	15.182	1036.2	0.2499
8	0.000		0.2215	4.584	779.0	0.2215	10.404	868.2	0.2257
9	0.000		0.2138	1.629	633.0	0.2138	3.744	660.0	0.2165
10	0.000		0.2126	0.984	604.7	0.2126	2.206	617.6	0.2147

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.725	671.4	0.7396	5.849	676.0	0.7396	7.193	644.6	0.7396
2	20.881	1090.3	0.7168	25.106	1044.8	0.7155	30.099	886.5	0.7175
3	25.378	1135.1	0.5479	30.055	1086.6	0.5449	36.377	977.1	0.5545
4	25.729	1101.6	0.4047	30.370	1081.3	0.4024	37.022	1005.5	0.4121
5	25.014	1059.7	0.3300	29.570	1068.1	0.3282	35.902	977.8	0.3363
6	23.752	1006.7	0.2798	28.202	1052.3	0.2782	33.890	924.5	0.2852
7	21.165	940.5	0.2445	25.318	1010.6	0.2428	30.117	855.8	0.2497
8	14.881	828.7	0.2209	18.060	881.5	0.2188	21.477	760.1	0.2259
9	6.360	648.5	0.2119	6.536	665.7	0.2097	7.733	626.5	0.2166
10	3.126	610.6	0.2104	3.797	620.2	0.2081	4.445	597.0	0.2145

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.856	630.4	0.7396	8.740	616.1	0.7396	8.748	585.6	0.7396
2	32.472	813.2	0.7168	35.296	733.9	0.7207	35.322	640.8	0.7207
3	39.510	896.3	0.5614	43.098	776.6	0.5727	43.134	666.6	0.5729
4	40.491	941.8	0.4201	44.942	838.4	0.4383	44.986	691.5	0.4385
5	39.441	951.6	0.3434	44.601	893.0	0.3630	44.649	703.2	0.3632
6	37.388	945.5	0.2915	43.099	938.0	0.3100	43.147	702.1	0.3102
7	33.287	901.1	0.2552	39.145	950.2	0.2722	39.190	692.6	0.2723
8	23.836	800.4	0.2310	28.554	859.7	0.2463	28.589	660.9	0.2465
9	8.594	641.3	0.2214	10.378	661.9	0.2360	10.391	598.9	0.2361
10	4.914	605.0	0.2192	5.677	615.1	0.2329	5.683	579.5	0.2330

Table 4-183. LS1 Burnup and TH Feedback Parameters Assembly C10

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.732	648.1	0.7396	3.632	656.8	0.7396
2	0.000		0.7170	7.625	984.8	0.7170	15.623	1035.2	0.7119
3	0.000		0.5373	9.686	1113.8	0.5373	19.223	1141.7	0.5257
4	0.000	Data	0.3859	8.975	1136.9	0.3859	19.953	1180.0	0.3793
5	0.000	Not	0.3106	9.459	1096.0	0.3106	19.676	1201.3	0.3047
6	0.000	Required	0.2624	8.708	1039.1	0.2624	19.009	1209.0	0.2547
7	0.000		0.2296	7.651	964.6	0.2296	17.374	1158.0	0.2195
8	0.000		0.2082	5.401	824.7	0.2082	12.467	952.6	0.1963
9	0.000		0.1997	2.012	650.2	0.1997	4.687	687.7	0.1872
10	0.000		0.1984	1.228	615.3	0.1984	2.615	634.8	0.1856

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.266	669.0	0.7396	6.485	686.6	0.7396	7.593	629.1	0.7396
2	22.521	1053.1	0.7112	26.916	1071.1	0.7102	31.070	821.7	0.7129
3	26.941	1093.4	0.5265	31.649	1091.3	0.5257	37.358	926.4	0.5398
4	27.487	1076.0	0.3822	32.129	1081.4	0.3826	38.498	980.9	0.3994
5	26.825	1040.7	0.3087	31.394	1070.3	0.3096	37.613	968.1	0.3245
6	25.665	997.4	0.2594	30.125	1053.7	0.2605	36.601	990.2	0.2760
7	23.532	955.4	0.2248	27.666	1006.5	0.2259	33.102	904.7	0.2385
8	17.280	852.9	0.2019	20.427	877.5	0.2029	24.222	785.5	0.2139
9	6.452	656.8	0.1927	7.643	667.1	0.1938	9.031	637.1	0.2041
10	3.805	614.5	0.1908	4.482	620.7	0.1918	5.249	603.3	0.2017

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.019	604.6	0.7396	8.985	621.5	0.7396
2	32.727	728.3	0.7147	35.877	756.3	0.7171
3	39.826	812.6	0.5498	43.747	800.0	0.5620
4	41.334	857.6	0.4124	46.003	854.8	0.4294
5	40.509	865.2	0.3367	45.767	900.7	0.3537
6	39.373	849.6	0.2865	45.047	934.7	0.3017
7	35.596	815.5	0.2481	41.620	964.4	0.2626
8	26.613	803.2	0.2252	31.980	910.7	0.2389
9	10.112	662.5	0.2165	12.344	688.8	0.2294
10	5.857	617.7	0.2136	7.146	633.4	0.2266

Table 4-184. LS1 Burnup and TH Feedback Parameters Assembly C11

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.681	640.1	0.7396	3.263	650.1	0.7396
2	0.000		0.7224	6.998	940.5	0.7224	14.427	998.4	0.7173
3	0.000		0.5596	9.088	1067.4	0.5596	18.264	1111.1	0.5445
4	0.000	Data	0.4069	9.515	1100.3	0.4069	19.195	1153.9	0.3963
5	0.000	Not	0.3280	9.081	1067.0	0.3280	19.040	1178.3	0.3186
6	0.000	Required	0.2772	8.393	1016.2	0.2772	18.492	1190.7	0.2662
7	0.000		0.2426	7.499	954.1	0.2426	17.076	1145.5	0.2294
8	0.000		0.2193	5.459	828.0	0.2193	12.432	945.9	0.2051
9	0.000		0.2101	2.060	652.4	0.2101	4.709	688.4	0.1956
10	0.000		0.2086	1.253	616.4	0.2086	2.823	634.0	0.1939

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.296	623.3	0.7396	5.161	647.9	0.7396	6.548	647.4	0.7396
2	19.015	849.2	0.7212	22.386	922.3	0.7206	27.827	923.0	0.7214
3	24.207	938.0	0.5637	28.425	1018.6	0.5648	35.355	1030.5	0.5676
4	25.178	941.2	0.4174	29.519	1036.0	0.4189	36.928	1074.7	0.4208
5	24.692	914.8	0.3384	28.969	1026.8	0.3402	36.094	1048.3	0.3413
6	23.688	879.8	0.2848	27.878	1014.3	0.2864	34.304	986.1	0.2876
7	21.772	843.0	0.2471	25.669	973.3	0.2485	30.883	887.4	0.2502
8	16.352	789.9	0.2239	19.289	852.1	0.2247	22.920	774.3	0.2268
9	6.143	638.4	0.2131	7.247	659.1	0.2138	8.603	635.3	0.2162
10	3.712	609.1	0.2124	4.367	618.8	0.2138	5.125	602.8	0.2155

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.351	646.0	0.7396	8.779	652.6	0.7396
2	30.904	906.1	0.7219	35.503	864.9	0.7226
3	39.225	999.6	0.5693	44.430	896.6	0.5749
4	40.948	1022.3	0.4224	46.611	950.7	0.4311
5	40.101	1020.1	0.3429	46.517	999.0	0.3515
6	38.260	1012.6	0.2890	45.147	1042.2	0.2967
7	34.404	949.4	0.2514	41.382	1050.7	0.2577
8	25.526	830.2	0.2276	31.071	925.9	0.2321
9	9.626	656.9	0.2172	11.858	688.8	0.2214
10	5.706	615.2	0.2164	6.969	631.9	0.2201

Table 4-185. LS1 Burnup and TH Feedback Parameters Assembly C12

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.816	652.6	0.7396	3.248	636.2	0.7396
2	0.000		0.7144	7.985	1011.2	0.7144	14.496	930.1	0.7178
3	0.000		0.5295	9.817	1124.3	0.5295	18.085	1038.2	0.5465
4	0.000	Data	0.3809	9.967	1136.3	0.3809	18.772	1080.7	0.4002
5	0.000	Not	0.3070	9.468	1096.5	0.3070	18.538	1102.4	0.3238
6	0.000	Required	0.2595	8.661	1035.7	0.2595	17.909	1117.2	0.2728
7	0.000		0.2278	7.348	944.4	0.2278	16.235	1087.6	0.2364
8	0.000		0.2077	4.925	797.8	0.2077	11.344	907.7	0.2125
9	0.000		0.2001	1.790	640.2	0.2001	4.185	673.7	0.2034
10	0.000		0.1989	1.090	609.3	0.1989	2.488	626.0	0.2017

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.228	619.9	0.7396	4.767	613.7	0.7396	6.054	640.6	0.7396
2	18.613	814.5	0.7220	20.698	765.2	0.7240	25.894	902.8	0.7247
3	23.097	886.0	0.5697	25.576	798.2	0.5811	32.232	1006.0	0.5832
4	23.960	879.1	0.4292	26.626	819.1	0.4454	33.734	1046.6	0.4446
5	23.574	867.9	0.3512	26.301	826.1	0.3675	33.172	1025.1	0.3657
6	22.643	845.7	0.2977	25.375	826.7	0.3133	31.631	963.1	0.3116
7	20.517	813.6	0.2602	23.156	816.0	0.2753	28.217	875.6	0.2742
8	14.607	748.7	0.2368	16.761	762.2	0.2520	20.392	774.9	0.2510
9	5.366	624.7	0.2267	6.168	631.8	0.2414	7.485	633.1	0.2408
10	3.130	598.2	0.2233	3.561	599.4	0.2371	4.294	601.5	0.2370

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.798	639.4	0.7396	8.196	650.5	0.7396	8.204	585.8	0.7396
2	28.786	880.5	0.7252	33.341	861.5	0.7255	33.369	643.8	0.7255
3	35.878	966.6	0.5851	41.078	896.1	0.5892	41.117	673.5	0.5894
4	37.491	982.9	0.4480	43.296	945.8	0.4525	43.344	702.1	0.4527
5	36.928	982.7	0.3667	43.233	989.1	0.3729	43.282	707.4	0.3730
6	35.426	1003.2	0.3123	42.147	1026.7	0.3173	42.194	701.0	0.3174
7	31.815	960.2	0.2743	38.603	1032.9	0.2777	38.645	684.2	0.2778
8	23.080	840.4	0.2505	28.493	915.0	0.2519	28.525	652.8	0.2520
9	8.494	655.6	0.2401	10.620	682.3	0.2409	10.632	698.1	0.2410
10	4.861	613.8	0.2365	6.059	628.2	0.2375	6.065	679.5	0.2376

Table 4-186. LS1 Burnup and TH Feedback Parameters Assembly C13

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.574	639.7	0.7396	3.251	649.5	0.7396
2	0.000		0.7225	6.965	938.2	0.7225	14.371	996.7	0.7174
3	0.000		0.5602	9.057	1065.1	0.5602	18.212	1109.4	0.5449
4	0.000	Data	0.4073	9.488	1098.2	0.4073	19.148	1162.2	0.3966
5	0.000	Not	0.3284	9.056	1065.1	0.3284	18.993	1176.4	0.3189
6	0.000	Required	0.2775	8.370	1014.6	0.2775	18.447	1188.8	0.2664
7	0.000		0.2428	7.479	952.8	0.2428	17.035	1143.6	0.2295
8	0.000		0.2196	5.445	827.2	0.2196	12.402	944.7	0.2053
9	0.000		0.2104	2.056	652.2	0.2104	4.699	686.1	0.1957
10	0.000		0.2089	1.250	616.3	0.2089	2.816	633.6	0.1941

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.036	607.7	0.7396	4.907	648.5	0.7396	6.318	649.0	0.7396
2	17.979	778.3	0.7213	21.322	918.6	0.7218	26.933	937.3	0.7221
3	24.125	936.5	0.5589	27.642	922.6	0.5731	34.518	1025.5	0.5734
4	26.056	1019.3	0.4238	29.517	915.3	0.4300	36.778	1060.8	0.4293
5	25.788	1009.3	0.3412	29.246	914.9	0.3484	36.294	1041.2	0.3479
6	24.662	960.2	0.2846	28.111	913.7	0.2921	34.456	979.2	0.2924
7	22.495	900.0	0.2457	25.782	893.3	0.2532	30.978	886.0	0.2542
8	16.467	799.9	0.2210	19.053	810.9	0.2283	22.741	778.1	0.2297
9	6.137	638.7	0.2102	7.099	646.1	0.2173	8.465	635.8	0.2192
10	3.606	603.9	0.2076	4.136	608.0	0.2144	4.901	603.2	0.2164

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.121	646.0	0.7396	8.524	650.8	0.7396
2	30.012	906.3	0.7226	34.674	861.9	0.7232
3	38.274	982.8	0.5760	43.412	891.1	0.5802
4	40.589	990.8	0.4309	46.280	936.2	0.4390
5	40.075	986.3	0.3497	46.260	978.5	0.3580
6	38.232	985.6	0.2942	44.675	1018.6	0.3019
7	34.409	936.7	0.2559	41.142	1027.8	0.2624
8	25.332	828.3	0.2312	30.689	910.5	0.2363
9	9.469	655.1	0.2207	11.606	683.0	0.2254
10	5.469	614.0	0.2181	6.676	628.7	0.2226

Table 4-187. LS1 Burnup and TH Feedback Parameters Assembly C14

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.583	640.2	0.7396	2.878	628.5	0.7396
2	0.000		0.7224	7.047	943.9	0.7224	13.078	896.5	0.7244
3	0.000		0.5611	9.015	1061.9	0.5611	16.910	1009.8	0.5717
4	0.000	Data	0.4104	9.322	1085.3	0.4104	17.736	1049.5	0.4242
5	0.000	Not	0.3321	8.882	1052.0	0.3321	17.493	1065.2	0.3446
6	0.000	Required	0.2815	8.143	998.4	0.2815	16.838	1071.8	0.2910
7	0.000		0.2475	6.880	913.8	0.2475	15.066	1032.1	0.2533
8	0.000		0.2262	4.666	778.0	0.2262	10.380	867.7	0.2287
9	0.000		0.2182	1.635	633.2	0.2182	3.771	661.0	0.2193
10	0.000		0.2169	0.987	604.9	0.2169	2.225	618.6	0.2176

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.487	660.7	0.7396	5.491	662.8	0.7396	6.074	695.8	0.7396
2	19.729	1020.8	0.7214	23.492	976.7	0.7208	25.622	884.6	0.7232
3	23.998	1035.3	0.5654	28.013	989.6	0.5660	30.969	729.9	0.5826
4	24.503	1006.8	0.4218	28.456	980.8	0.4239	32.197	780.9	0.4524
5	23.905	976.5	0.3448	27.780	970.2	0.3474	31.790	799.2	0.3773
6	22.800	939.5	0.2927	26.653	953.6	0.2954	30.604	795.2	0.3230
7	20.432	892.8	0.2561	23.897	915.9	0.2587	27.630	773.6	0.2841
8	14.408	797.3	0.2320	17.064	819.2	0.2345	19.774	714.8	0.2588
9	5.167	637.5	0.2226	6.147	645.9	0.2249	7.052	610.7	0.2469
10	3.012	603.8	0.2208	3.546	608.3	0.2230	4.004	587.0	0.2426

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.318	685.4	0.7396	6.644	580.4	0.7396	6.665	629.0	0.7398
2	26.477	643.8	0.7240	27.545	623.0	0.7250	27.624	823.4	0.7250
3	32.133	670.8	0.5889	33.497	637.6	0.5958	33.600	903.3	0.5959
4	33.705	705.8	0.4849	35.560	666.2	0.4797	35.673	944.1	0.4798
5	33.527	729.6	0.3929	35.903	697.7	0.4149	36.015	939.8	0.4149
6	32.413	748.3	0.3399	35.353	733.4	0.3676	35.454	897.9	0.3676
7	29.510	756.2	0.3013	32.878	761.7	0.3323	32.962	825.9	0.3322
8	21.433	721.7	0.2764	24.430	737.3	0.3085	24.490	745.3	0.3085
9	7.632	615.1	0.2634	8.716	621.8	0.2939	8.738	627.3	0.2938
10	4.294	588.8	0.2572	4.834	592.0	0.2849	4.847	598.9	0.2848

Table 4-188. LS1 Burnup and TH Feedback Parameters Assembly C15

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.716	647.2	0.7396	3.493	655.5	0.7396
2	0.000		0.7176	7.526	977.6	0.7176	15.284	1024.0	0.7127
3	0.000		0.5414	9.468	1096.6	0.5414	18.878	1130.8	0.5297
4	0.000	Data	0.3915	9.708	1115.5	0.3915	19.601	1172.5	0.3840
5	0.000	Not	0.3161	9.247	1079.6	0.3161	19.396	1195.3	0.3089
6	0.000	Required	0.2675	8.589	1030.4	0.2675	18.822	1202.7	0.2584
7	0.000		0.2339	7.736	970.2	0.2339	17.410	1153.7	0.2226
8	0.000		0.2112	5.659	839.8	0.2112	12.789	956.9	0.1987
9	0.000		0.2021	2.141	656.1	0.2021	4.873	690.6	0.1892
10	0.000		0.2006	1.304	618.6	0.2006	2.926	638.4	0.1876

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.086	659.5	0.7396	6.171	671.7	0.7396	6.912	605.7	0.7396
2	22.024	1029.1	0.7126	26.090	1020.6	0.7126	29.082	739.8	0.7162
3	26.915	1124.1	0.5298	31.288	1040.9	0.5321	35.708	828.3	0.5523
4	27.581	1118.6	0.3841	31.815	1020.5	0.3877	36.903	877.3	0.4140
5	26.901	1073.4	0.3099	31.036	1006.4	0.3139	35.954	864.6	0.3372
6	25.617	1009.5	0.2604	29.653	992.4	0.2644	34.066	827.6	0.2844
7	23.243	929.3	0.2257	27.004	954.9	0.2296	30.706	778.2	0.2471
8	17.047	813.3	0.2025	19.908	843.1	0.2064	22.893	731.9	0.2243
9	6.417	644.5	0.1932	7.486	655.9	0.1970	8.607	622.4	0.2143
10	3.793	608.0	0.1914	4.393	614.0	0.1950	5.077	598.9	0.2131

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.365	607.5	0.7396	8.806	653.4	0.7396
2	30.896	746.1	0.7179	35.493	864.8	0.7190
3	38.284	825.5	0.5613	43.597	905.2	0.5676
4	39.760	860.2	0.4251	45.753	961.8	0.4333
5	38.912	873.2	0.3477	45.478	1012.6	0.3554
6	38.212	1043.8	0.2965	45.041	1036.7	0.3025
7	34.738	1024.8	0.2567	41.550	1035.2	0.2618
8	25.722	858.5	0.2313	31.089	911.2	0.2351
9	9.651	658.9	0.2208	11.797	683.6	0.2242
10	6.649	614.4	0.2190	6.850	628.4	0.2221

Table 4-189. LS1 Burnup and TH Feedback Parameters Assembly C16

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.693	646.0	0.7396	3.305	646.2	0.7396
2	0.000		0.7193	7.358	965.7	0.7193	14.492	975.9	0.7175
3	0.000		0.5466	9.445	1094.9	0.5466	18.369	1090.4	0.5437
4	0.000	Data	0.3938	9.843	1126.3	0.3938	19.308	1135.5	0.3946
5	0.000	Not	0.3166	9.375	1089.5	0.3166	19.123	1159.8	0.3172
6	0.000	Required	0.2672	8.627	1033.2	0.2672	18.542	1174.4	0.2652
7	0.000		0.2338	7.532	956.5	0.2338	17.046	1140.0	0.2285
8	0.000		0.2121	5.285	818.1	0.2121	12.246	945.0	0.2042
9	0.000		0.2036	1.985	649.0	0.2036	4.642	686.8	0.1949
10	0.000		0.2022	1.212	614.6	0.2022	2.785	634.1	0.1933

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.053	670.0	0.7396	6.139	671.8	0.7396	7.544	648.6	0.7396
2	21.689	1073.0	0.7142	25.767	1021.1	0.7138	30.934	900.5	0.7159
3	26.381	1121.7	0.5362	30.964	1072.3	0.5365	37.477	993.4	0.5460
4	27.017	1092.5	0.3905	31.591	1071.0	0.3915	38.383	1018.0	0.4013
5	26.433	1055.4	0.3166	30.928	1058.9	0.3170	37.345	985.2	0.3255
6	25.277	1004.2	0.2654	29.656	1041.7	0.2669	35.362	926.0	0.2744
7	22.957	935.5	0.2300	27.037	998.7	0.2314	31.774	851.3	0.2388
8	16.720	828.4	0.2065	19.657	876.3	0.2077	23.212	755.9	0.2152
9	6.299	650.6	0.1973	7.494	667.5	0.1984	8.705	627.3	0.2056
10	3.723	611.7	0.1956	4.403	621.0	0.1967	5.065	597.7	0.2034

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.240	634.1	0.7396	9.192	620.6	0.7396
2	33.419	827.3	0.7172	36.441	747.5	0.7192
3	40.760	816.4	0.5529	44.587	793.3	0.5645
4	41.999	862.5	0.4091	46.680	855.7	0.4269
5	41.038	873.6	0.3324	46.418	910.6	0.3512
6	38.979	862.6	0.2805	44.905	956.1	0.2983
7	34.975	805.4	0.2440	40.995	964.0	0.2603
8	25.554	798.5	0.2200	30.338	864.9	0.2345
9	9.580	642.7	0.2102	11.425	665.6	0.2240
10	5.547	606.1	0.2079	6.553	617.5	0.2208

Table 4-190. LS1 Burnup and TH Feedback Parameters Assembly C17

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.693	646.0	0.7396	3.141	637.0	0.7396
2	0.000		0.7191	7.437	971.3	0.7191	14.098	941.1	0.7199
3	0.000		0.5457	9.487	1098.1	0.5457	18.021	1059.0	0.5522
4	0.000	Data	0.3937	9.605	1123.3	0.3937	18.806	1096.7	0.4033
5	0.000	Not	0.3171	9.303	1083.9	0.3171	18.506	1113.4	0.3256
6	0.000	Required	0.2681	8.482	1022.7	0.2681	17.790	1122.2	0.2737
7	0.000		0.2354	7.170	932.7	0.2354	16.030	1085.4	0.2373
8	0.000		0.2149	4.788	790.1	0.2149	11.120	901.9	0.2135
9	0.000		0.2071	1.740	637.9	0.2071	4.099	672.0	0.2044
10	0.000		0.2059	1.058	607.9	0.2059	2.440	625.2	0.2028

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.341	633.9	0.7396	5.040	630.3	0.7396	6.142	628.7	0.7396
2	19.175	887.1	0.7225	21.866	835.5	0.7239	26.185	834.1	0.7254
3	23.648	928.6	0.5672	26.909	865.4	0.5759	32.794	940.5	0.5846
4	24.568	923.4	0.4222	27.716	876.1	0.4341	34.404	1008.7	0.4428
5	24.054	906.7	0.3446	27.197	875.4	0.3563	33.663	989.4	0.3627
6	22.983	879.5	0.2917	26.076	869.3	0.3030	31.790	926.7	0.3080
7	20.690	840.5	0.2547	23.616	849.3	0.2654	28.254	844.1	0.2704
8	14.632	762.8	0.2312	16.954	781.5	0.2420	20.241	751.5	0.2469
9	5.361	629.1	0.2214	6.220	636.8	0.2318	7.398	625.5	0.2366
10	3.134	598.9	0.2188	3.603	602.7	0.2286	4.259	597.4	0.2335

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (495.2, EOC Cy 7)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.553	603.0	0.7396	7.849	643.5	0.7396	7.857	585.8	0.7396
2	27.882	732.8	0.7267	32.189	841.9	0.7271	32.213	632.7	0.7271
3	35.291	816.1	0.5925	39.992	857.1	0.5969	40.025	657.5	0.5970
4	37.320	867.9	0.454	42.450	890.5	0.4613	42.494	688.4	0.4615
5	36.651	877.0	0.3732	42.387	940.0	0.3809	42.435	702.1	0.3811
6	34.676	851.3	0.317	40.966	996.7	0.3239	41.014	702.1	0.3241
7	30.540	791.1	0.2780	37.105	1012.5	0.2831	37.151	695.7	0.2833
8	21.639	716.4	0.2539	27.094	902.1	0.2567	27.130	666.9	0.2569
9	7.883	615.6	0.2436	10.043	678.4	0.2454	10.056	598.9	0.2455
10	4.684	601.0	0.2422	5.910	629.8	0.2447	5.917	582.2	0.2448

Table 4-191. LS1 Burnup and TH Feedback Parameters Assembly C18

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.723	647.6	0.7396	3.519	658.6	0.7396
2	0.000		0.7172	7.594	982.6	0.7172	16.473	1033.6	0.7122
3	0.000		0.5383	9.663	1112.0	0.5383	19.188	1140.6	0.5265
4	0.000	Data	0.3867	9.958	1135.6	0.3867	19.923	1178.9	0.3800
5	0.000	Not	0.3113	9.443	1094.8	0.3113	19.648	1200.3	0.3053
6	0.000	Required	0.2630	8.693	1038.0	0.2630	18.982	1207.8	0.2552
7	0.000		0.2302	7.640	963.8	0.2302	17.351	1157.0	0.2199
8	0.000		0.2087	5.394	824.4	0.2087	12.452	952.0	0.1967
9	0.000		0.2002	2.010	650.1	0.2002	4.682	687.6	0.1876
10	0.000		0.1989	1.226	615.2	0.1989	2.811	634.7	0.1861

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.248	668.7	0.7396	6.464	686.3	0.7396	7.497	624.3	0.7396
2	22.458	1051.6	0.7115	26.844	1069.6	0.7104	30.708	800.6	0.7133
3	26.695	1092.3	0.5273	31.595	1090.2	0.5264	36.977	900.5	0.5416
4	27.449	1075.3	0.3829	32.086	1080.5	0.3833	38.206	959.6	0.4022
5	26.789	1040.1	0.3092	31.354	1069.5	0.3102	37.375	951.5	0.3273
6	25.632	996.8	0.2599	30.087	1053.0	0.2610	36.389	975.3	0.2786
7	23.603	954.9	0.2252	27.633	1005.9	0.2263	32.925	893.5	0.2406
8	17.261	852.6	0.2023	20.405	877.2	0.2033	24.104	779.0	0.2158
9	6.445	656.8	0.1930	7.636	667.0	0.1940	8.988	635.1	0.2058
10	3.800	614.4	0.1912	4.477	620.7	0.1922	5.219	602.0	0.2032

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.910	603.2	0.7396	8.878	621.6	0.7396
2	32.305	721.7	0.7150	35.474	757.6	0.7174
3	39.393	806.4	0.6516	43.270	796.8	0.6636
4	41.052	858.9	0.4156	45.602	845.8	0.4322
5	40.311	870.4	0.3398	45.458	891.9	0.3567
6	39.143	847.3	0.2891	44.760	930.0	0.3044
7	35.339	805.9	0.2500	41.344	962.8	0.2647
8	26.415	793.9	0.2289	31.781	910.6	0.2409
9	10.037	659.4	0.2182	12.273	689.0	0.2313
10	5.808	615.8	0.2152	7.102	633.7	0.2284

Table 4-192. LS1 Burnup and TH Feedback Parameters Assembly C19

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.713	647.1	0.7396	3.387	649.7	0.7396
2	0.000		0.7182	7.509	976.5	0.7182	14.934	998.0	0.7156
3	0.000		0.5422	9.569	1104.5	0.5422	18.695	1107.0	0.5370
4	0.000	Data	0.3900	9.906	1131.4	0.3900	19.490	1145.6	0.3890
5	0.000	Not	0.3137	9.403	1091.7	0.3137	19.231	1166.8	0.3129
6	0.000	Required	0.2650	8.611	1032.1	0.2650	18.575	1178.7	0.2618
7	0.000		0.2323	7.398	947.7	0.2323	16.922	1140.8	0.2257
8	0.000		0.2114	5.061	805.4	0.2114	11.965	941.2	0.2022
9	0.000		0.2034	1.861	643.4	0.2034	4.464	684.1	0.1931
10	0.000		0.2021	1.133	611.2	0.2021	2.671	632.5	0.1915

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.289	615.0	0.7396	4.805	611.4	0.7396	5.496	602.5	0.7396
2	18.806	796.9	0.7204	20.810	786.2	0.7226	23.799	739.6	0.7255
3	23.596	857.9	0.5630	25.973	788.8	0.5751	30.243	817.6	0.5919
4	24.687	879.6	0.4214	27.254	807.9	0.4384	32.195	866.2	0.4609
5	24.288	869.4	0.3430	26.932	816.5	0.3805	31.765	857.5	0.3805
6	23.309	845.7	0.2893	25.977	819.3	0.3062	30.288	820.4	0.3233
7	21.188	812.6	0.2517	23.777	810.4	0.2680	27.286	765.5	0.2827
8	15.193	744.5	0.2282	17.297	768.0	0.2448	19.981	713.0	0.2590
9	5.620	623.4	0.2177	6.400	629.8	0.2337	7.408	616.2	0.2477
10	3.294	595.2	0.2141	3.710	598.2	0.2289	4.335	595.8	0.2444

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.116	625.7	0.7396	7.652	660.0	0.7396	7.659	582.5	0.7396
2	26.232	820.7	0.7255	31.268	900.6	0.7251	31.293	635.6	0.7251
3	33.333	890.4	0.5942	38.745	913.1	0.5949	38.780	661.3	0.5950
4	35.697	948.6	0.4646	41.496	945.2	0.4665	41.540	690.5	0.4666
5	36.102	1076.2	0.3845	42.375	986.2	0.3863	42.422	700.0	0.3865
6	34.720	1087.4	0.3249	41.601	1041.7	0.3265	41.647	697.9	0.3266
7	31.002	977.4	0.2829	38.125	1064.6	0.2832	38.170	691.5	0.2833
8	22.616	834.2	0.2584	28.359	942.3	0.2564	28.394	663.8	0.2566
9	8.380	652.0	0.2469	10.662	691.8	0.2443	10.675	598.9	0.2445
10	4.875	611.4	0.2439	6.160	633.1	0.2414	6.167	582.2	0.2415

Table 4-193. LS1 Burnup and TH Feedback Parameters Assembly C20

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.632	642.8	0.7396	3.216	644.6	0.7396
2	0.000		0.7207	7.246	957.9	0.7207	14.622	986.9	0.7179
3	0.000		0.6509	9.404	1091.6	0.6509	18.525	1106.6	0.6436
4	0.000	Data	0.3976	9.788	1121.9	0.3976	19.270	1136.8	0.3946
5	0.000	Not	0.3200	9.273	1081.6	0.3200	18.913	1150.5	0.3179
6	0.000	Required	0.2705	8.446	1020.1	0.2705	18.130	1154.3	0.2667
7	0.000		0.2375	7.137	930.5	0.2375	16.217	1103.6	0.2309
8	0.000		0.2169	4.746	787.9	0.2169	11.148	906.7	0.2077
9	0.000		0.2091	1.708	636.5	0.2091	4.065	671.9	0.1989
10	0.000		0.2079	1.035	606.9	0.2079	2.420	625.3	0.1975

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.099	679.1	0.7396	6.121	664.8	0.7396	7.327	635.5	0.7396
2	22.079	1107.2	0.7124	25.882	982.2	0.7129	30.316	842.9	0.7153
3	26.771	1144.8	0.5314	31.107	1035.3	0.5348	37.068	947.1	0.5470
4	27.382	1131.5	0.3863	31.760	1041.5	0.3904	38.386	1003.2	0.4043
5	26.759	1105.6	0.3121	31.082	1033.4	0.3162	37.876	1018.2	0.3294
6	25.410	1052.8	0.2626	29.642	1020.2	0.2664	35.879	970.0	0.2773
7	22.551	970.3	0.2282	26.583	992.0	0.2318	31.699	879.6	0.2411
8	15.830	843.5	0.2056	19.038	884.9	0.2088	22.685	775.4	0.2177
9	5.766	653.2	0.1970	6.976	668.9	0.1999	8.309	634.0	0.2086
10	3.389	613.4	0.1956	4.072	621.3	0.1984	4.813	601.9	0.2065

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.735	602.7	0.7396	8.704	621.7	0.7396
2	31.892	719.3	0.7169	35.021	754.9	0.7192
3	39.388	795.0	0.6565	43.280	798.0	0.6683
4	41.097	842.0	0.4176	45.799	857.2	0.4344
5	40.661	851.1	0.3419	45.957	903.8	0.3584
6	38.591	842.0	0.2887	44.489	951.8	0.3042
7	34.050	798.6	0.2513	40.265	981.0	0.2657
8	24.386	726.3	0.2274	29.548	894.2	0.2402
9	8.959	621.6	0.2183	11.025	678.7	0.2303
10	5.265	603.4	0.2180	6.460	628.1	0.2298

Table 4-194. LS1 Burnup and TH Feedback Parameters Assembly C21

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.372	629.0	0.7396	2.586	624.1	0.7396
2	0.000		0.7299	6.068	878.6	0.7299	11.698	888.2	0.7301
3	0.000		0.5974	8.066	992.8	0.5974	15.660	987.5	0.5979
4	0.000	Data	0.4476	8.629	1033.2	0.4476	16.791	1030.0	0.4509
5	0.000	Not	0.3636	8.309	1010.1	0.3636	16.659	1044.6	0.3671
6	0.000	Required	0.3086	7.668	965.5	0.3086	16.066	1048.3	0.3102
7	0.000		0.2715	6.626	891.3	0.2715	14.360	1005.5	0.2703
8	0.000		0.2480	4.381	767.9	0.2480	9.933	851.0	0.2442
9	0.000		0.2393	1.578	630.7	0.2393	3.632	657.0	0.2342
10	0.000		0.2378	0.944	603.0	0.2378	2.132	616.3	0.2325

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.150	657.7	0.7396	5.122	659.4	0.7396	6.023	615.8	0.7396
2	16.512	1086.4	0.7241	22.381	991.8	0.7230	25.624	770.9	0.7254
3	23.107	1068.1	0.5793	27.260	1009.0	0.5768	31.728	831.6	0.5911
4	23.840	1031.8	0.4371	27.848	988.6	0.4360	32.774	865.1	0.4555
5	23.284	994.6	0.3583	27.164	970.8	0.3582	31.989	857.8	0.3763
6	22.127	947.6	0.3046	25.858	950.6	0.3050	30.338	832.4	0.3212
7	19.631	885.6	0.2667	23.059	911.2	0.2674	26.982	793.3	0.2824
8	13.767	785.6	0.2416	16.401	814.3	0.2423	19.192	719.9	0.2567
9	4.996	634.6	0.2321	5.937	644.2	0.2327	6.860	611.7	0.2458
10	2.897	602.6	0.2305	3.422	607.5	0.2311	3.901	588.1	0.2429

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (495.2, EOC Cy 7)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.384	597.7	0.7396	6.805	586.4	0.7396	6.819	605.4	0.7396
2	27.135	690.6	0.7266	28.547	643.5	0.7277	28.596	713.2	0.7277
3	33.542	738.2	0.5989	35.413	667.2	0.6071	35.477	755.4	0.6073
4	35.035	788.1	0.4687	37.616	710.5	0.4863	37.689	785.4	0.4866
5	34.468	813.7	0.3902	37.710	753.3	0.4145	37.782	784.2	0.4148
6	32.903	823.9	0.3344	36.738	793.6	0.3618	36.806	770.1	0.3620
7	29.445	811.8	0.2947	33.631	818.6	0.3227	33.691	742.6	0.3230
8	21.085	747.1	0.2684	24.635	774.6	0.2959	24.680	692.8	0.2961
9	7.511	621.7	0.2567	8.782	632.4	0.2823	8.798	607.3	0.2825
10	4.235	592.6	0.2529	4.879	597.6	0.2763	4.887	585.0	0.2765

Table 4-195. LS1 Burnup and TH Feedback Parameters Assembly C22

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.934	659.0	0.7396	3.737	657.0	0.7396
2	0.000		0.7090	8.342	1038.1	0.7090	16.268	1037.4	0.7071
3	0.000		0.5122	10.184	1154.0	0.5122	19.795	1147.9	0.5116
4	0.000	Data	0.3659	10.280	1162.0	0.3659	20.345	1187.7	0.3682
5	0.000	Not	0.2948	9.775	1120.9	0.2948	20.069	1208.3	0.2961
6	0.000	Required	0.2491	9.076	1066.6	0.2491	19.426	1213.4	0.2478
7	0.000		0.2182	8.054	992.4	0.2182	17.815	1161.3	0.2137
8	0.000		0.1976	5.688	841.6	0.1976	12.681	961.5	0.1908
9	0.000		0.1892	2.149	656.5	0.1892	4.917	692.4	0.1817
10	0.000		0.1878	1.321	619.4	0.1878	2.970	637.7	0.1801

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.145	647.4	0.7396	6.001	646.9	0.7396	6.883	614.6	0.7396
2	22.175	955.2	0.7110	25.437	907.7	0.7129	28.658	769.2	0.7158
3	26.830	1030.4	0.5270	30.631	946.7	0.5360	35.114	840.0	0.5524
4	27.353	1028.1	0.3834	31.054	946.7	0.3935	37.191	962.4	0.4179
5	26.661	991.8	0.3099	30.301	938.6	0.3196	37.154	1023.5	0.3408
6	25.431	943.0	0.2605	28.980	926.8	0.2698	35.604	994.4	0.2866
7	23.026	881.0	0.2260	26.335	896.2	0.2347	31.951	918.6	0.2485
8	16.722	784.7	0.2033	19.282	808.0	0.2118	23.264	798.5	0.2237
9	8.294	635.3	0.1936	7.238	644.5	0.2017	8.638	637.7	0.2126
10	3.731	602.4	0.1912	4.250	607.0	0.1989	5.007	602.6	0.2092

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (495.2, EOC Cy 7)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.253	598.7	0.7396	8.191	619.7	0.7396	8.196	576.1	0.7396
2	30.283	702.9	0.7174	33.352	750.8	0.7196	33.389	610.5	0.7198
3	37.123	759.6	0.5618	40.932	792.1	0.5737	40.956	628.8	0.5738
4	39.436	786.2	0.4306	43.874	837.3	0.4467	43.904	648.8	0.4469
5	39.445	791.4	0.3535	44.359	873.6	0.3697	44.393	658.7	0.3699
6	37.834	796.0	0.2990	43.250	913.5	0.3146	43.284	659.7	0.3148
7	34.221	789.1	0.2806	39.922	936.9	0.2754	39.954	652.7	0.2756
8	25.620	799.7	0.2385	30.289	855.8	0.2511	30.313	630.2	0.2513
9	9.531	644.4	0.2286	11.368	665.1	0.2389	11.377	587.8	0.2390
10	5.514	608.4	0.2230	6.534	618.3	0.2352	6.539	578.7	0.2353

Table 4-196. LS1 Burnup and TH Feedback Parameters Assembly C23

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	2.003	662.8	0.7396	3.794	656.3	0.7396
2	0.000		0.7070	8.642	1061.3	0.7070	16.466	1029.1	0.7068
3	0.000		0.5050	10.372	1169.6	0.5050	19.844	1136.1	0.5100
4	0.000	Data	0.3595	10.403	1172.2	0.3595	20.356	1177.8	0.3669
5	0.000	Not	0.2895	9.882	1129.5	0.2895	20.085	1200.1	0.2952
6	0.000	Required	0.2444	9.173	1074.0	0.2444	19.458	1207.5	0.2469
7	0.000		0.2135	8.091	995.0	0.2135	17.840	1160.3	0.2128
8	0.000		0.1932	5.687	841.6	0.1932	12.911	963.7	0.1899
9	0.000		0.1851	2.125	655.4	0.1851	4.890	692.3	0.1808
10	0.000		0.1838	1.302	618.5	0.1838	2.942	637.3	0.1792

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.607	674.3	0.7396	6.684	670.6	0.7396	8.053	646.2	0.7396
2	23.720	1077.5	0.7066	27.638	999.0	0.7077	32.648	887.6	0.7108
3	28.086	1144.3	0.5110	32.459	1040.9	0.5164	39.178	1011.9	0.5297
4	28.425	1127.2	0.3683	32.752	1034.1	0.3741	39.993	1058.9	0.3863
5	27.683	1082.1	0.2972	31.938	1023.6	0.3028	38.626	1026.6	0.3125
6	26.393	1021.7	0.2498	30.582	1014.1	0.2550	36.639	954.9	0.2631
7	23.879	945.9	0.2165	27.876	987.1	0.2214	32.714	858.9	0.2285
8	17.366	827.1	0.1942	20.431	867.6	0.1988	23.854	760.4	0.2059
9	6.521	649.3	0.1853	7.674	663.6	0.1897	8.964	631.6	0.1969
10	3.863	610.8	0.1835	4.512	618.3	0.1878	5.235	601.0	0.1947

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.793	639.0	0.7396	10.048	640.8	0.7396
2	35.340	854.1	0.7124	39.242	810.9	0.7145
3	42.816	965.8	0.5365	47.574	861.6	0.5474
4	43.932	1009.9	0.3932	49.477	924.1	0.4078
5	42.816	1017.6	0.3183	48.953	974.3	0.3326
6	40.492	997.1	0.2680	47.149	1020.8	0.2813
7	36.000	916.9	0.2328	42.728	1027.4	0.2446
8	26.195	798.4	0.2098	31.487	905.3	0.2199
9	9.859	644.6	0.2008	11.954	680.5	0.2102
10	5.741	608.3	0.1885	6.919	627.1	0.2076

Table 4-197. LS1 Burnup and TH Feedback Parameters Assembly C24

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.906	657.5	0.7396	3.657	654.0	0.7396
2	0.000		0.7104	6.332	1037.3	0.7104	16.042	1020.2	0.7099
3	0.000		0.5150	10.153	1151.4	0.5150	19.485	1124.2	0.5182
4	0.000	Data	0.3677	10.236	1158.3	0.3677	20.026	1163.4	0.3735
5	0.000	Not	0.2963	9.712	1115.9	0.2963	19.748	1185.2	0.3006
6	0.000	Required	0.2503	8.984	1059.7	0.2503	19.115	1193.6	0.2516
7	0.000		0.2188	7.902	981.6	0.2188	17.655	1151.9	0.2167
8	0.000		0.1981	5.552	833.6	0.1981	12.749	961.8	0.1934
9	0.000		0.1900	2.059	652.4	0.1900	4.800	691.1	0.1842
10	0.000		0.1887	1.257	616.6	0.1887	2.878	636.4	0.1827

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	6.480	675.0	0.7396	6.543	669.3	0.7396	7.284	605.7	0.7396
2	23.273	1075.3	0.7089	27.163	995.0	0.7098	30.103	736.4	0.7135
3	27.420	1114.3	0.5186	31.740	1033.0	0.5234	36.109	824.7	0.5446
4	27.753	1094.2	0.3755	32.030	1026.8	0.3809	37.114	877.0	0.4084
5	27.022	1052.1	0.3036	31.216	1014.8	0.3088	36.191	868.8	0.3331
6	25.784	998.5	0.2554	29.885	1001.5	0.2603	34.406	835.4	0.2811
7	23.416	931.5	0.2215	27.300	971.5	0.2261	31.144	787.9	0.2443
8	17.118	821.0	0.1987	20.091	856.4	0.2031	23.188	739.0	0.2216
9	6.390	647.0	0.1896	7.498	659.4	0.1939	8.652	624.2	0.2117
10	3.771	609.3	0.1878	4.391	615.8	0.1919	5.092	599.8	0.2104

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	7.726	606.3	0.7396	9.134	651.2	0.7396
2	31.809	733.8	0.7153	36.189	847.7	0.7169
3	38.555	809.9	0.5541	43.717	893.1	0.5621
4	39.868	847.3	0.4204	45.758	953.0	0.4303
5	39.067	862.8	0.3446	45.641	1004.2	0.3537
6	38.612	1037.8	0.2946	45.256	1028.7	0.3018
7	35.222	1031.6	0.2551	41.997	1031.8	0.2612
8	26.109	870.2	0.2297	31.519	914.7	0.2346
9	9.739	653.1	0.2192	11.925	686.0	0.2237
10	5.684	616.2	0.2172	6.906	629.6	0.2214

Table 4-198. LS1 Burnup and TH Feedback Parameters Assembly C25

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.512	636.4	0.7396	3.252	653.4	0.7396
2	0.000		0.7245	6.759	924.2	0.7245	14.488	1021.9	0.7166
3	0.000		0.5681	8.928	1055.4	0.5681	18.371	1133.6	0.5432
4	0.000	Data	0.4148	9.381	1089.9	0.4148	19.189	1165.0	0.3957
5	0.000	Not	0.3348	8.916	1054.5	0.3348	18.909	1181.3	0.3184
6	0.000	Required	0.2835	8.160	998.9	0.2835	18.195	1185.9	0.2665
7	0.000		0.2491	6.947	918.0	0.2491	16.361	1131.6	0.2301
8	0.000		0.2275	4.718	786.2	0.2275	11.424	927.4	0.2068
9	0.000		0.2191	1.721	637.1	0.2191	4.227	679.2	0.1976
10	0.000		0.2178	1.041	607.2	0.2178	2.523	629.9	0.1960

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.378	629.2	0.7396	5.085	631.1	0.7396	6.334	638.3	0.7396
2	19.372	871.9	0.7202	22.136	844.4	0.7218	26.977	874.3	0.7223
3	24.473	950.8	0.5609	27.628	876.9	0.5696	33.833	987.3	0.5739
4	25.494	967.6	0.4153	28.718	885.4	0.4268	35.494	1016.6	0.4324
5	24.936	944.7	0.3365	28.161	885.6	0.3480	35.114	1032.5	0.3541
6	23.742	906.6	0.2832	26.934	881.6	0.2944	33.329	983.6	0.2991
7	21.256	857.5	0.2462	24.287	861.9	0.2571	29.645	890.7	0.2612
8	15.067	771.6	0.2230	17.452	789.6	0.2338	21.170	779.5	0.2376
9	6.523	630.9	0.2132	6.402	638.6	0.2235	7.720	633.2	0.2272
10	3.234	599.8	0.2107	3.712	603.6	0.2204	4.442	601.3	0.2242

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (495.2, EOC Cy 7)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.786	605.3	0.7396	7.798	625.9	0.7396	7.803	576.1	0.7396
2	28.698	735.7	0.7238	32.090	773.6	0.7255	32.109	617.6	0.7255
3	36.274	809.4	0.5823	40.334	809.8	0.5917	40.360	637.5	0.5916
4	38.293	852.9	0.4439	43.106	865.7	0.4575	43.141	662.8	0.4577
5	37.970	860.1	0.3647	43.381	913.1	0.3780	43.420	676.0	0.3782
6	36.108	850.4	0.3089	42.116	963.1	0.3211	42.156	678.0	0.3213
7	31.977	808.3	0.2699	38.357	995.7	0.2807	38.396	673.9	0.2809
8	22.930	732.6	0.2457	28.258	907.5	0.2545	28.287	649.8	0.2546
9	8.382	622.7	0.2354	10.607	682.3	0.2432	10.518	593.3	0.2434
10	4.899	603.9	0.2339	6.125	629.8	0.2418	6.131	579.5	0.2420

Table 4-199. LS1 Burnup and TH Feedback Parameters Assembly C26

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.514	636.5	0.7396	3.034	641.0	0.7396
2	0.000		0.7246	6.768	924.8	0.7246	13.802	968.7	0.7210
3	0.000		0.5684	8.931	1055.6	0.5684	17.869	1091.6	0.5561
4	0.000	Data	0.4149	9.394	1090.9	0.4149	18.689	1121.1	0.4070
5	0.000	Not	0.3348	8.928	1055.4	0.3348	18.354	1132.1	0.3286
6	0.000	Required	0.2834	8.146	998.7	0.2834	17.653	1131.3	0.2762
7	0.000		0.2491	6.870	913.2	0.2491	15.591	1074.4	0.2398
8	0.000		0.2277	4.543	776.8	0.2277	10.622	885.2	0.2162
9	0.000		0.2197	1.614	632.3	0.2197	3.830	664.8	0.2072
10	0.000		0.2185	0.970	604.1	0.2185	2.266	621.2	0.2057

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.168	629.7	0.7396	5.408	689.0	0.7396	6.874	652.7	0.7396
2	18.656	869.6	0.7222	23.179	1091.4	0.7183	28.760	934.0	0.7192
3	23.515	914.2	0.5694	28.244	1094.9	0.5602	35.028	1017.2	0.5639
4	24.374	917.3	0.4260	29.041	1085.1	0.4188	35.921	1025.9	0.4219
5	23.809	899.5	0.3474	28.426	1077.6	0.3416	34.673	987.7	0.3445
6	22.718	876.7	0.2943	27.234	1062.2	0.2893	32.949	926.7	0.2923
7	21.550	939.7	0.2609	25.663	1003.6	0.2559	30.262	841.3	0.2586
8	15.933	890.4	0.2377	19.051	873.9	0.2325	22.203	742.8	0.2354
9	5.684	681.8	0.2260	6.850	664.8	0.2211	7.987	622.2	0.2245
10	3.285	616.0	0.2232	3.949	619.6	0.2185	4.559	595.0	0.2218

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.446	620.4	0.7396	8.307	614.6	0.7396	8.313	579.3	0.7396
2	30.872	782.5	0.7208	33.724	735.8	0.7224	33.746	625.6	0.7225
3	37.902	862.7	0.5711	41.554	781.2	0.5821	41.585	651.5	0.5823
4	39.227	919.3	0.4312	43.723	841.8	0.4487	43.764	680.1	0.4489
5	38.506	965.0	0.3532	43.573	885.5	0.3714	43.617	690.5	0.3716
6	36.596	967.1	0.2996	42.167	926.2	0.3170	42.211	689.4	0.3172
7	33.411	898.4	0.2640	39.065	933.0	0.2795	39.104	677.0	0.2797
8	24.463	788.6	0.2400	28.958	842.8	0.2536	28.989	648.9	0.2538
9	8.787	637.5	0.2290	10.492	657.3	0.2422	10.503	593.3	0.2424
10	5.003	602.7	0.2263	5.920	612.6	0.2388	5.925	576.7	0.2389

Table 4-200. LS1 Burnup and TH Feedback Parameters Assembly C27

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.381	629.5	0.7396	2.667	628.0	0.7396
2	0.000		0.7293	6.160	884.6	0.7293	12.185	896.1	0.7282
3	0.000		0.5927	8.231	1004.6	0.5927	16.225	1017.2	0.5877
4	0.000	Data	0.4419	8.750	1042.1	0.4419	17.212	1053.3	0.4397
5	0.000	Not	0.3586	8.380	1015.2	0.3586	16.982	1064.4	0.3575
6	0.000	Required	0.3043	7.690	967.0	0.3043	16.298	1064.8	0.3018
7	0.000		0.2679	6.499	889.6	0.2679	14.477	1016.4	0.2630
8	0.000		0.2451	4.322	784.8	0.2451	9.916	853.7	0.2377
9	0.000		0.2366	1.553	629.6	0.2366	3.608	657.1	0.2282
10	0.000		0.2353	0.932	602.5	0.2353	2.126	616.5	0.2265

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	3.839	632.2	0.7396	4.509	627.3	0.7396	5.699	634.5	0.7396
2	17.354	894.2	0.7285	20.025	833.1	0.7293	24.849	873.0	0.7291
3	22.369	954.2	0.5926	25.416	863.8	0.5990	31.804	982.9	0.5996
4	23.339	952.8	0.4478	26.479	875.1	0.4573	33.625	1040.9	0.4569
5	22.612	928.8	0.3664	25.958	875.8	0.3762	32.772	1019.9	0.3747
6	21.680	894.0	0.3111	24.795	872.1	0.3206	31.024	969.2	0.3190
7	19.267	849.9	0.2726	22.242	855.2	0.2818	27.343	878.7	0.2806
8	13.434	763.4	0.2479	15.786	784.8	0.2570	19.354	770.1	0.2560
9	4.829	626.9	0.2379	5.671	635.3	0.2465	6.940	630.5	0.2458
10	2.797	597.7	0.2358	3.253	601.6	0.2439	3.963	600.3	0.2434

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.420	636.9	0.7396	7.804	649.5	0.7396	7.813	589.0	0.7396
2	27.716	877.2	0.7291	32.350	867.7	0.7290	32.379	650.1	0.7290
3	35.566	983.8	0.5994	40.680	889.2	0.6016	40.720	676.5	0.6020
4	37.570	1026.1	0.4562	43.207	931.7	0.4614	43.255	701.0	0.4616
5	36.864	1033.3	0.3736	43.074	980.8	0.3789	43.124	708.5	0.3791
6	34.916	1003.1	0.3176	41.699	1032.5	0.3220	41.747	701.0	0.3221
7	30.683	924.2	0.2792	37.693	1053.7	0.2817	37.736	688.4	0.2818
8	21.871	819.1	0.2544	27.590	940.4	0.2546	27.623	655.8	0.2547
9	7.910	651.8	0.2441	10.167	690.3	0.2433	10.179	596.1	0.2434
10	4.518	612.8	0.2417	5.803	633.1	0.2408	5.809	579.5	0.2409

Table 4-201. LS1 Burnup and TH Feedback Parameters Assembly C28

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.934	659.0	0.7396	3.737	657.0	0.7396
2	0.000		0.7090	8.345	1038.3	0.7090	16.274	1037.7	0.7071
3	0.000		0.5122	10.168	1154.4	0.5122	19.804	1148.3	0.5115
4	0.000	Data	0.3658	10.285	1162.4	0.3658	20.353	1188.0	0.3681
5	0.000	Not	0.2947	9.779	1121.3	0.2947	20.077	1208.6	0.2961
6	0.000	Required	0.2490	9.081	1067.0	0.2490	19.434	1213.7	0.2477
7	0.000		0.2182	8.058	992.7	0.2182	17.822	1161.6	
8	0.000		0.1976	5.692	841.9	0.1976	12.888	961.7	0.1908
9	0.000		0.1891	2.150	656.6	0.1891	4.919	692.5	0.1816
10	0.000		0.1878	1.322	619.4	0.1878	2.972	637.7	0.1800

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.142	647.2	0.7396	5.997	646.8	0.7396	6.881	614.7	0.7396
2	22.173	954.5	0.7110	25.434	907.6	0.7129	28.881	769.6	0.7158
3	26.833	1030.0	0.5271	30.533	946.6	0.5360	35.120	840.3	0.5524
4	27.380	1028.0	0.3834	31.059	946.5	0.3935	37.200	982.8	0.4179
5	26.689	991.6	0.3099	30.307	938.4	0.3196	37.165	1023.9	0.3408
6	25.438	942.9	0.2805	28.988	926.8	0.2698	35.516	994.7	0.2866
7	23.033	881.0	0.2260	25.343	896.2	0.2347	31.961	919.1	0.2484
8	16.729	784.7	0.2033	19.289	808.0	0.2116	23.274	798.6	0.2236
9	6.296	635.3	0.1936	7.239	644.4	0.2017	8.639	637.7	0.2128
10	3.733	602.4	0.1912	4.252	607.0	0.1989	5.009	602.6	0.2092

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (495.2, EOC Cy 7)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.251	698.7	0.7396	8.190	619.7	0.7396	8.195	576.1	0.7396
2	30.288	703.1	0.7174	33.360	761.0	0.7196	33.377	610.5	0.7197
3	37.132	759.8	0.5618	40.943	792.3	0.5737	40.967	628.8	0.5738
4	39.447	786.4	0.4306	43.887	837.5	0.4467	43.917	648.8	0.4469
5	39.457	791.5	0.3535	44.374	873.8	0.3697	44.407	658.7	0.3699
6	37.846	796.1	0.2989	43.265	913.7	0.3145	43.300	660.7	0.3147
7	34.232	789.2	0.2606	39.937	937.2	0.2754	39.968	651.7	0.2755
8	25.631	799.7	0.2384	30.302	856.0	0.2511	30.327	631.2	0.2512
9	8.533	644.5	0.2266	11.370	665.1	0.2388	11.379	587.8	0.2389
10	5.518	608.4	0.2230	6.537	618.3	0.2351	6.541	573.9	0.2353

Table 4-202. LS1 Burnup and TH Feedback Parameters Assembly C29

Node No.	Datapoint 3 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 4 (239.5 EFPD Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.882	656.2	0.7396	3.675	656.4	0.7396
2	0.000		0.7113	8.241	1030.5	0.7113	16.177	1038.2	0.7093
3	0.000		0.5171	10.163	1152.3	0.5171	19.701	1141.6	0.5168
4	0.000	Data	0.3690	10.265	1160.7	0.3690	20.188	1175.2	0.3709
5	0.000	Not	0.2971	9.707	1115.5	0.2971	19.842	1194.0	0.2983
6	0.000	Required	0.2511	8.929	1055.6	0.2511	19.134	1200.3	0.2497
7	0.000		0.2198	7.738	970.6	0.2198	17.432	1155.4	0.2153
8	0.000		0.1997	5.328	820.6	0.1997	12.492	959.6	0.1923
9	0.000		0.1918	1.963	648.0	0.1918	4.677	689.7	0.1834
10	0.000		0.1906	1.198	614.0	0.1906	2.806	635.6	0.1819

Node No.	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	5.454	672.1	0.7396	6.217	637.0	0.7396	7.299	627.4	0.7396
2	23.197	1055.2	0.7077	26.076	858.6	0.7098	30.006	805.5	0.7133
3	27.449	1096.1	0.5164	30.923	917.1	0.5271	36.073	882.3	0.5449
4	27.822	1085.3	0.3748	31.440	935.8	0.3874	37.016	915.3	0.4080
5	27.262	1065.4	0.3036	30.852	932.1	0.3152	36.211	898.2	0.3332
6	26.051	1020.1	0.2550	29.563	921.9	0.2658	34.425	860.4	0.2816
7	23.514	949.4	0.2207	27.166	943.1	0.2325	31.246	802.9	0.2461
8	17.170	842.7	0.1989	20.510	901.2	0.2115	23.305	720.1	0.2235
9	8.423	655.7	0.1903	7.711	676.2	0.2020	8.690	614.7	0.2133
10	3.795	614.4	0.1885	4.616	624.6	0.1996	5.037	590.3	0.2099

Node No.	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (495.2, EOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	7.658	597.3	0.7396	8.212	594.9	0.7396	8.218	579.3	0.7396
2	31.253	684.0	0.7147	33.039	666.4	0.7166	33.060	624.5	0.7166
3	37.870	736.4	0.5536	40.268	699.1	0.5649	40.298	648.6	0.5651
4	39.354	797.2	0.4227	42.638	749.4	0.4429	42.677	676.0	0.4431
5	39.085	860.1	0.3501	42.636	789.4	0.3740	42.679	687.4	0.3742
6	37.456	882.6	0.2972	41.775	828.6	0.3224	41.818	688.4	0.3226
7	33.986	845.7	0.2592	38.571	848.3	0.2840	38.613	683.2	0.2841
8	25.311	759.7	0.2348	29.080	789.8	0.2580	29.114	657.8	0.2582
9	9.407	627.8	0.2237	10.830	641.0	0.2458	10.842	698.1	0.2460
10	5.413	598.6	0.2195	6.157	603.1	0.2399	6.164	682.2	0.2401

Table 4-203. LS1 Burnup and TH Feedback Parameters Assembly C30

	Datapoint 3 (BOC Cy 5)			Datapoint 4 (239.5 EFPD Cy 5)			Datapoint 5 (BOC Cy 6)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	239.5 Cy 5	239.5 Cy 5	239.5 Cy 5	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6
1	0.000		0.7396	1.397	630.3	0.7396	3.077	650.0	0.7396
2	0.000		0.7283	6.245	890.0	0.7283	13.832	1011.0	0.7191
3	0.000		0.5857	8.495	1023.5	0.5857	17.929	1132.8	0.5528
4	0.000	Data	0.4320	9.088	1067.4	0.4320	18.852	1161.1	0.4049
5	0.000	Not	0.3490	8.663	1035.7	0.3490	18.568	1173.5	0.3260
6	0.000	Required	0.2956	7.912	982.2	0.2956	17.806	1172.6	0.2730
7	0.000		0.2600	6.709	902.8	0.2600	15.674	1110.8	0.2362
8	0.000		0.2377	4.521	775.4	0.2377	10.956	808.9	0.2127
9	0.000		0.2292	1.646	633.7	0.2292	4.038	673.6	0.2035
10	0.000		0.2278	0.992	605.1	0.2278	2.407	626.7	0.2020

	Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7
1	4.962	679.2	0.7396	6.070	674.3	0.7396	7.541	653.0	0.7396
2	21.542	1122.4	0.7128	25.672	1030.4	0.7125	31.116	923.4	0.7145
3	26.269	1156.2	0.5363	30.828	1065.7	0.5364	37.784	1032.8	0.5439
4	26.676	1122.9	0.3927	31.365	1058.0	0.3936	38.663	1064.2	0.4000
5	26.129	1078.7	0.3178	30.547	1047.4	0.3190	37.445	1027.6	0.3243
6	24.753	1022.8	0.2676	29.105	1037.8	0.2690	35.165	955.1	0.2737
7	21.898	952.8	0.2327	26.156	1009.8	0.2339	31.015	860.5	0.2385
8	15.495	833.2	0.2098	18.688	883.3	0.2107	22.123	761.2	0.2157
9	5.880	649.9	0.2011	6.864	666.5	0.2017	8.126	630.1	0.2068
10	3.339	611.4	0.1997	4.009	620.1	0.2003	4.711	599.9	0.2051

	Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (EOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	495.2 Cy 7	495.2 Cy 7	495.2 Cy 7
1	8.229	633.2	0.7396	9.395	634.8	0.7396
2	33.634	831.4	0.7158	37.336	796.0	0.7178
3	41.171	930.6	0.5505	45.724	846.1	0.5609
4	42.421	983.2	0.4073	47.769	908.0	0.4219
5	41.450	1019.9	0.3308	47.364	955.1	0.3451
6	39.061	1006.6	0.279	45.526	1001.6	0.2924
7	34.328	920.6	0.2428	40.892	1012.3	0.2551
8	24.488	801.2	0.2196	29.673	896.5	0.2301
9	9.008	643.3	0.2106	11.017	675.3	0.2204
10	5.204	607.1	0.2088	6.321	623.7	0.2181

Table 4-204. LS1 Burnup and TH Feedback Parameters Assembly D1

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.481	652.5	0.7396	2.432	657.4	0.7396
2	0.000		0.7110	7.017	1057.5	0.7110	11.451	1079.5	0.7099
3	0.000		0.5221	8.202	1143.0	0.5221	13.118	1126.8	0.5205
4	0.000	Data	0.3788	8.028	1125.7	0.3788	12.714	1090.3	0.3794
5	0.000	Not	0.3088	7.405	1068.2	0.3088	11.886	1059.0	0.3101
6	0.000	Required	0.2640	6.605	994.8	0.2640	10.858	1025.3	0.2648
7	0.000		0.2345	5.365	894.1	0.2345	9.097	952.5	0.2342
8	0.000		0.2153	3.908	790.1	0.2153	6.645	829.8	0.2140
9	0.000		0.2078	1.236	627.9	0.2078	2.130	640.2	0.2062
10	0.000		0.2067	0.725	600.6	0.2067	1.232	606.1	0.2050

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.586	632.3	0.7396	4.397	647.2	0.7396	6.011	665.7	0.7396
2	17.007	934.2	0.7143	20.629	987.2	0.7140	26.580	981.7	0.7137
3	20.554	1079.6	0.5374	25.143	1115.6	0.5370	31.503	995.6	0.5408
4	20.639	1127.1	0.3916	25.462	1155.6	0.3904	32.123	1023.1	0.3980
5	19.391	1086.1	0.3177	24.326	1175.2	0.3155	31.526	1074.3	0.3233
6	17.438	1001.4	0.2700	22.094	1127.2	0.2687	29.957	1140.8	0.2732
7	14.273	885.9	0.2385	18.139	1001.5	0.2345	26.167	1158.0	0.2382
8	10.099	763.4	0.2181	12.755	837.7	0.2140	19.002	988.6	0.2143
9	3.239	621.9	0.2104	4.120	643.5	0.2062	6.351	689.1	0.2050
10	1.853	595.7	0.2091	2.353	607.9	0.2049	3.618	632.2	0.2034

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.035	639.5	0.7396
2	26.671	873.0	0.7137
3	31.617	954.9	0.5411
4	32.246	993.3	0.3983
5	31.648	984.2	0.3236
6	30.069	941.4	0.2733
7	26.262	874.8	0.2383
8	19.071	773.9	0.2144
9	6.375	630.4	0.2051
10	3.630	596.2	0.2035

Table 4-205. LS1 Burnup and TH Feedback Parameters Assembly D2

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.714	668.0	0.7396	2.887	681.9	0.7396
2	0.000		0.7006	7.817	1136.2	0.7006	13.024	1209.4	0.6966
3	0.000		0.4939	8.654	1189.1	0.4939	14.158	1225.8	0.4850
4	0.000	Data	0.3560	8.405	1163.3	0.3560	13.643	1179.6	0.3495
5	0.000	Not	0.2896	7.805	1104.0	0.2896	12.641	1146.2	0.2841
6	0.000	Required	0.2468	7.051	1034.0	0.2468	11.649	1107.9	0.2412
7	0.000		0.2181	5.882	934.7	0.2181	10.125	1024.2	0.2118
8	0.000		0.1991	4.387	823.3	0.1991	7.473	871.8	0.1926
9	0.000		0.1915	1.409	637.3	0.1915	2.428	651.6	0.1849
10	0.000		0.1904	0.831	606.2	0.1904	1.416	612.9	0.1839

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.161	640.2	0.7396	4.716	618.7	0.7396	5.385	602.3	0.7396
2	18.727	946.6	0.7040	21.067	809.9	0.7076	23.625	716.3	0.7116
3	21.240	1046.2	0.5124	24.412	902.8	0.5292	27.832	766.0	0.5512
4	20.782	1051.5	0.3745	24.312	951.8	0.3933	28.636	830.0	0.4273
5	19.565	1013.8	0.3052	23.181	964.0	0.3220	28.236	885.9	0.3589
6	17.895	955.3	0.2596	21.478	959.4	0.2744	27.110	932.7	0.3097
7	15.231	880.2	0.2295	18.521	918.6	0.2426	24.345	948.8	0.2751
8	10.925	763.4	0.2087	13.316	805.4	0.2202	17.960	855.1	0.2493
9	3.478	618.7	0.2001	4.239	632.1	0.2112	5.794	648.9	0.2389
10	1.979	592.6	0.1980	2.382	599.1	0.2085	3.192	606.8	0.2347

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.397	598.9	0.7396
2	23.680	736.1	0.7117
3	27.914	823.6	0.5517
4	28.732	875.9	0.4279
5	28.333	878.6	0.3593
6	27.203	866.6	0.3101
7	24.467	990.2	0.2755
8	18.066	922.3	0.2496
9	5.830	666.1	0.2392
10	3.211	616.0	0.2350

Table 4-206. LS1 Burnup and TH Feedback Parameters Assembly D3

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.142	630.4	0.7396	2.019	649.4	0.7396
2	0.000		0.7237	5.659	936.0	0.7237	9.800	1034.1	0.7196
3	0.000		0.5671	7.501	1075.1	0.5671	12.133	1082.1	0.5559
4	0.000	Data	0.4148	7.817	1105.0	0.4148	12.225	1048.1	0.4097
5	0.000	Not	0.3356	7.297	1056.3	0.3356	11.534	1022.8	0.3337
6	0.000	Required	0.2852	6.513	986.9	0.2852	10.562	996.0	0.2841
7	0.000		0.2524	5.297	888.6	0.2524	8.664	930.8	0.2509
8	0.000		0.2313	3.876	787.9	0.2313	6.523	819.1	0.2290
9	0.000		0.2230	1.233	627.7	0.2230	2.107	638.4	0.2205
10	0.000		0.2218	0.721	600.4	0.2218	1.215	605.0	0.2192

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.149	630.8	0.7396	3.952	646.3	0.7396	5.533	663.4	0.7396
2	15.346	933.3	0.7209	19.038	998.0	0.7192	25.044	986.7	0.7175
3	19.549	1077.7	0.5601	24.170	1121.0	0.5547	30.633	995.9	0.5548
4	20.122	1124.3	0.4107	24.930	1152.9	0.4052	31.675	1021.6	0.4098
5	19.037	1086.0	0.3325	23.947	1170.8	0.3269	31.112	1070.8	0.3322
6	17.213	1007.7	0.2822	21.859	1125.4	0.2760	29.651	1133.4	0.2801
7	14.115	891.6	0.2491	17.995	1003.6	0.2426	25.960	1151.4	0.2439
8	10.039	787.6	0.2279	12.750	844.6	0.2215	18.983	987.2	0.2194
9	3.244	623.4	0.2197	4.158	646.7	0.2131	6.389	689.1	0.2096
10	1.856	596.7	0.2185	2.380	610.1	0.2119	3.650	632.6	0.2081

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.645	598.9	0.7396
2	25.095	719.0	0.7176
3	30.606	787.9	0.5551
4	31.652	841.9	0.4103
5	31.245	1047.4	0.3329
6	29.798	1108.9	0.2806
7	26.086	1004.6	0.2443
8	19.072	852.5	0.2197
9	6.420	651.0	0.2099
10	3.667	610.3	0.2084

Table 4-207. LS1 Burnup and TH Feedback Parameters Assembly D4

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.592	659.9	0.7396	2.627	688.8	0.7396
2	0.000		0.7059	7.302	1084.7	0.7059	12.705	1244.5	0.6971
3	0.000		0.5114	8.234	1146.2	0.5114	13.681	1251.1	0.4901
4	0.000	Data	0.3717	8.080	1130.8	0.3717	13.478	1206.9	0.3546
5	0.000	Not	0.3029	7.555	1080.2	0.3029	12.768	1175.5	0.2881
6	0.000	Required	0.2582	6.912	1021.6	0.2582	11.892	1137.0	0.2441
7	0.000		0.2277	6.045	947.8	0.2277	10.445	1047.2	0.2140
8	0.000		0.2066	4.689	845.0	0.2066	7.891	886.2	0.1941
9	0.000		0.1979	1.512	643.0	0.1979	2.578	655.9	0.1858
10	0.000		0.1967	0.887	609.2	0.1967	1.501	615.4	0.1847

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.928	628.9	0.7396	4.431	613.1	0.7396	5.158	606.1	0.7396
2	17.699	887.6	0.7062	19.860	787.9	0.7099	22.687	733.1	0.7141
3	20.333	989.9	0.5246	23.228	866.4	0.5416	26.812	777.2	0.5629
4	20.378	1029.5	0.3872	23.534	900.3	0.4069	27.840	828.6	0.4381
5	19.559	1019.8	0.3154	22.762	906.6	0.3335	27.617	870.1	0.3661
6	18.171	975.0	0.2672	21.388	908.4	0.2840	26.751	910.5	0.3155
7	15.606	900.0	0.2342	18.673	888.6	0.2499	24.463	929.2	0.2794
8	11.577	779.1	0.2117	13.943	802.1	0.2262	18.459	845.3	0.2526
9	3.716	623.5	0.2026	4.491	633.4	0.2166	6.035	648.2	0.2421
10	2.109	595.0	0.2004	2.517	599.6	0.2136	3.326	606.8	0.2379

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.170	598.9	0.7396
2	22.722	736.2	0.7142
3	26.899	842.0	0.5633
4	27.943	904.5	0.4386
5	27.725	925.8	0.3665
6	26.913	1189.2	0.3158
7	24.608	1099.2	0.2795
8	18.563	912.1	0.2526
9	6.073	672.2	0.2421
10	3.347	621.7	0.2379

Table 4-208. LS1 Burnup and TH Feedback Parameters Assembly D5

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.139	630.3	0.7396	2.015	649.3	0.7396
2	0.000		0.7238	5.647	934.9	0.7238	9.782	1033.2	0.7197
3	0.000		0.5676	7.490	1074.1	0.5676	12.117	1081.4	0.5564
4	0.000	Data	0.4153	7.809	1104.3	0.4153	12.213	1047.5	0.4101
5	0.000	Not	0.3360	7.291	1055.7	0.3360	11.624	1022.2	0.3340
6	0.000	Required	0.2855	6.507	986.5	0.2855	10.553	995.5	0.2844
7	0.000		0.2528	5.292	888.5	0.2528	8.856	930.3	0.2511
8	0.000		0.2316	3.872	787.7	0.2316	6.517	818.9	0.2293
9	0.000		0.2233	1.232	627.7	0.2233	2.105	638.3	0.2207
10	0.000		0.2221	0.720	600.4	0.2221	1.214	605.0	0.2195

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.142	630.6	0.7396	3.944	646.2	0.7396	5.524	653.3	0.7396
2	15.317	932.4	0.7210	19.003	997.0	0.7193	25.008	986.6	0.7176
3	19.523	1076.7	0.5606	24.140	1120.2	0.5551	30.500	995.7	0.5551
4	20.102	1123.5	0.4111	24.905	1152.2	0.4056	31.545	1021.1	0.4101
5	19.019	1085.2	0.3328	23.926	1170.2	0.3272	31.084	1070.2	0.3325
6	17.198	1007.1	0.2825	21.840	1124.8	0.2763	29.625	1132.8	0.2804
7	14.102	891.3	0.2494	17.978	1003.0	0.2429	25.936	1150.7	0.2442
8	10.030	767.4	0.2282	12.738	844.2	0.2217	18.985	986.7	0.2198
9	3.240	623.3	0.2200	4.164	646.7	0.2133	6.383	689.0	0.2098
10	1.854	596.7	0.2187	2.377	610.0	0.2121	3.646	632.5	0.2083

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.536	598.9	0.7396
2	25.059	719.0	0.7177
3	30.573	785.1	0.5555
4	31.833	845.8	0.4107
5	31.218	1045.7	0.3331
6	29.772	1107.2	0.2809
7	26.062	1003.0	0.2445
8	19.054	850.0	0.2199
9	6.414	651.0	0.2101
10	3.663	610.3	0.2085

Table 4-209. LS1 Burnup and TH Feedback Parameters Assembly D6

	Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.424	648.8	0.7396	2.424	662.8	0.7396
2	0.000		0.7116	6.901	1046.7	0.7116	11.594	1121.6	0.7081
3	0.000		0.5203	8.434	1166.3	0.5203	13.556	1160.7	0.5134
4	0.000	Data	0.3731	8.407	1163.6	0.3731	13.226	1111.1	0.3708
5	0.000	Not	0.3017	7.758	1099.6	0.3017	12.367	1078.4	0.3013
6	0.000	Required	0.2567	6.886	1019.4	0.2567	11.270	1044.5	0.2564
7	0.000		0.2274	5.549	908.4	0.2274	9.394	968.0	0.2262
8	0.000		0.2086	4.020	797.8	0.2086	6.828	838.1	0.2065
9	0.000		0.2012	1.276	630.0	0.2012	2.197	642.7	0.1989
10	0.000		0.2001	0.751	602.0	0.2001	1.276	607.7	0.1978

	Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.656	637.4	0.7396	4.234	621.3	0.7396	5.177	620.2	0.7396
2	17.346	950.8	0.7124	19.924	840.0	0.7152	23.598	794.6	0.7186
3	20.755	1057.1	0.5307	24.115	928.2	0.5440	28.621	843.5	0.5623
4	20.899	1102.2	0.3862	24.400	947.7	0.4008	29.545	892.9	0.4258
5	19.970	1095.4	0.3129	23.443	943.9	0.3263	29.065	931.8	0.3511
6	18.262	1038.1	0.2652	21.713	940.8	0.2776	27.814	972.7	0.3007
7	15.277	942.1	0.2333	18.546	915.6	0.2450	24.831	989.0	0.2660
8	10.810	799.6	0.2124	13.365	824.9	0.2232	18.358	882.4	0.2410
9	3.428	628.6	0.2045	4.271	639.9	0.2148	5.986	658.2	0.2316
10	1.947	598.3	0.2031	2.399	603.5	0.2129	3.321	613.0	0.2289

	Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.195	619.0	0.7396
2	23.670	795.2	0.7186
3	28.715	869.2	0.5627
4	29.650	914.2	0.4262
5	29.169	908.6	0.3514
6	27.911	878.6	0.3010
7	24.916	830.5	0.2662
8	18.419	749.5	0.2412
9	6.006	616.9	0.2318
10	3.332	593.4	0.2291

Table 4-210. LS1 Burnup and TH Feedback Parameters Assembly D7

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.763	671.3	0.7396	2.924	680.5	0.7396
2	0.000		0.6955	8.166	1172.8	0.6955	13.344	1204.2	0.6936
3	0.000		0.4756	9.275	1255.3	0.4756	14.848	1237.8	0.4733
4	0.000	Data	0.3369	9.012	1226.7	0.3369	14.339	1194.8	0.3365
5	0.000	Not	0.2720	8.343	1157.2	0.2720	13.491	1164.5	0.2720
6	0.000	Required	0.2306	7.486	1072.1	0.2306	12.423	1133.3	0.2301
7	0.000		0.2035	6.095	952.2	0.2035	10.540	1053.9	0.2015
8	0.000		0.1859	4.441	827.2	0.1859	7.677	890.7	0.1829
9	0.000		0.1790	1.428	638.4	0.1790	2.503	656.7	0.1756
10	0.000		0.1780	0.850	607.2	0.1780	1.470	615.9	0.1745

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.410	654.3	0.7396	4.849	606.2	0.7396	5.756	617.6	0.7396
2	19.920	1024.9	0.6995	21.827	757.6	0.7025	25.331	782.0	0.7074
3	22.783	1128.2	0.4926	25.416	833.4	0.5091	29.940	845.0	0.5322
4	22.182	1119.0	0.3536	25.215	884.1	0.3768	30.527	906.4	0.4061
5	20.757	1063.5	0.2864	24.857	1039.5	0.3159	30.567	939.1	0.3417
6	18.792	982.9	0.2427	23.184	1083.2	0.2675	29.353	978.7	0.2918
7	15.655	881.0	0.2134	19.381	980.6	0.2323	25.701	992.1	0.2559
8	11.069	759.3	0.1941	13.650	828.5	0.2096	18.581	877.7	0.2307
9	3.568	619.4	0.1866	4.388	637.9	0.2010	6.070	656.3	0.2212
10	2.057	593.9	0.1854	2.496	602.4	0.1986	3.399	612.0	0.2180

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.771	608.9	0.7396
2	25.386	735.4	0.7075
3	30.017	802.4	0.5327
4	30.617	849.6	0.4067
5	30.655	845.7	0.3422
6	29.434	820.4	0.2922
7	25.776	793.4	0.2563
8	18.636	728.0	0.2310
9	6.088	613.1	0.2216
10	3.409	590.6	0.2183

Table 4-211. LS1 Burnup and TH Feedback Parameters Assembly D8

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (195.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	195.1 Cy 6	195.1 Cy 6	195.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.476	652.2	0.7396	2.424	657.1	0.7396
2	0.000		0.7113	6.996	1055.5	0.7113	11.421	1078.1	0.7101
3	0.000		0.5229	8.186	1141.3	0.5229	13.094	1125.7	0.5212
4	0.000	Data	0.3794	8.017	1124.6	0.3794	12.697	1089.3	0.3800
5	0.000	Not	0.3093	7.396	1065.4	0.3093	11.873	1058.3	0.3106
6	0.000	Required	0.2645	6.597	994.2	0.2645	10.846	1024.7	0.2652
7	0.000		0.2349	5.359	893.6	0.2349	9.087	952.0	0.2346
8	0.000		0.2157	3.904	789.8	0.2157	6.639	829.5	0.2143
9	0.000		0.2081	1.234	627.8	0.2081	2.128	640.2	0.2065
10	0.000		0.2071	0.724	600.6	0.2071	1.231	606.1	0.2053

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.574	632.1	0.7396	4.383	647.0	0.7396	5.997	665.7	0.7396
2	16.964	933.1	0.7145	20.579	986.1	0.7142	26.531	981.8	0.7138
3	20.518	1078.5	0.5381	25.103	1114.9	0.5376	31.480	995.4	0.5413
4	20.612	1126.2	0.3922	25.432	1154.9	0.3909	32.088	1022.6	0.3985
5	19.369	1085.3	0.3182	24.301	1174.6	0.3159	31.495	1073.7	0.3237
6	17.420	1000.8	0.2704	22.072	1126.5	0.2670	29.928	1140.1	0.2735
7	14.258	885.4	0.2389	18.120	1000.9	0.2349	26.140	1157.2	0.2384
8	10.089	763.1	0.2184	12.741	837.4	0.2143	18.983	988.1	0.2145
9	3.235	621.8	0.2107	4.116	643.5	0.2065	6.344	689.0	0.2052
10	1.850	595.6	0.2094	2.350	607.9	0.2052	3.613	632.1	0.2036

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.020	636.0	0.7396
2	26.619	859.2	0.7138
3	31.576	961.6	0.5416
4	32.218	1024.4	0.3987
5	31.631	1050.1	0.3239
6	30.058	1024.6	0.2736
7	26.251	940.1	0.2386
8	19.064	816.5	0.2146
9	6.374	648.0	0.2053
10	3.629	607.5	0.2037

Table 4-212. LS1 Burnup and TH Feedback Parameters Assembly D9

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (195.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	195.1 Cy 6	195.1 Cy 6	195.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7395	1.686	666.2	0.7396	2.728	667.4	0.7396
2	0.000		0.7009	7.794	1134.0	0.7009	12.550	1131.8	0.7008
3	0.000		0.4925	8.798	1204.1	0.4925	13.990	1172.2	0.4940
4	0.000	Data	0.3530	8.574	1180.6	0.3530	13.530	1133.2	0.3557
5	0.000	Not	0.2863	7.925	1115.7	0.2863	12.691	1102.9	0.2891
6	0.000	Required	0.2438	7.096	1038.1	0.2438	11.671	1073.2	0.2459
7	0.000		0.2158	5.827	930.4	0.2158	9.969	1009.4	0.2165
8	0.000		0.1975	4.257	814.2	0.1975	7.299	866.3	0.1969
9	0.000		0.1903	1.357	634.5	0.1903	2.356	649.7	0.1894
10	0.000		0.1892	0.601	604.6	0.1892	1.371	611.6	0.1882

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.041	642.8	0.7396	4.816	643.2	0.7396	6.290	656.0	0.7396
2	18.688	985.1	0.7064	22.183	968.1	0.7064	27.632	936.8	0.7101
3	22.044	1140.2	0.5113	26.556	1102.7	0.5171	32.787	984.2	0.5276
4	21.874	1169.7	0.3672	26.466	1116.1	0.3718	33.285	1037.7	0.3855
5	20.520	1117.7	0.2968	25.071	1109.2	0.3003	32.421	1088.8	0.3130
6	18.504	1024.0	0.2515	23.077	1112.9	0.2540	30.882	1134.7	0.2646
7	15.377	903.9	0.2216	19.394	1024.3	0.2228	27.192	1134.2	0.2309
8	10.985	779.0	0.2021	13.758	852.6	0.2025	19.751	966.1	0.2078
9	3.560	627.1	0.1948	4.483	647.5	0.1950	6.613	683.0	0.1991
10	2.049	598.7	0.1935	2.570	609.8	0.1937	3.771	628.6	0.1975

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.302	598.9	0.7396
2	27.676	699.0	0.7102
3	32.850	755.4	0.5280
4	33.364	810.5	0.3861
5	32.503	820.3	0.3136
6	30.960	806.7	0.2651
7	27.263	779.1	0.2314
8	19.804	721.3	0.2083
9	6.631	613.1	0.1996
10	3.780	587.9	0.1979

Table 4-213. LS1 Burnup and TH Feedback Parameters Assembly D10

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.372	645.4	0.7396	2.245	649.0	0.7396
2	0.000		0.7165	6.521	1011.1	0.7165	10.627	1028.8	0.7157
3	0.000		0.5447	7.566	1081.3	0.5447	12.178	1079.1	0.5430
4	0.000	Data	0.4038	7.359	1061.9	0.4038	11.781	1050.2	0.4032
5	0.000	Not	0.3335	6.649	1018.0	0.3335	11.089	1020.4	0.3328
6	0.000	Required	0.2866	6.166	957.8	0.2866	10.154	987.5	0.2855
7	0.000		0.2548	5.043	869.7	0.2548	8.522	919.2	0.2530
8	0.000		0.2340	3.712	776.8	0.2340	6.286	810.9	0.2315
9	0.000		0.2258	1.186	625.2	0.2258	2.036	636.3	0.2230
10	0.000		0.2246	0.694	599.0	0.2246	1.175	603.9	0.2218

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.610	646.2	0.7396	4.400	644.8	0.7396	5.868	655.6	0.7396
2	17.093	1015.0	0.7143	20.684	982.5	0.7146	26.180	941.0	0.7163
3	20.464	1163.9	0.5360	25.075	1119.2	0.5365	31.233	977.8	0.5439
4	20.451	1204.0	0.3910	25.199	1142.7	0.3901	31.866	1023.6	0.4006
5	19.315	1159.8	0.3181	24.034	1137.5	0.3164	31.242	1075.0	0.3262
6	17.406	1062.5	0.2709	21.883	1097.0	0.2683	29.686	1134.6	0.2760
7	14.226	927.7	0.2399	18.016	990.1	0.2366	25.975	1150.8	0.2411
8	10.069	785.7	0.2205	12.678	832.0	0.2168	18.898	986.0	0.2175
9	3.246	627.4	0.2127	4.113	642.2	0.2090	6.327	688.1	0.2081
10	1.859	599.0	0.2117	2.351	607.2	0.2079	3.602	631.4	0.2067

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.889	629.2	0.7396
2	26.259	821.9	0.7154
3	31.335	898.5	0.5442
4	31.978	941.2	0.4010
5	31.351	928.4	0.3265
6	29.787	893.6	0.2763
7	25.063	843.3	0.2414
8	18.962	757.5	0.2177
9	6.349	624.6	0.2084
10	3.614	596.2	0.2069

Table 4-214. LS1 Burnup and TH Feedback Parameters Assembly D11

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.662	664.5	0.7396	2.755	673.0	0.7396
2	0.000		0.7022	7.750	1129.6	0.7022	12.729	1169.5	0.6999
3	0.000		0.4972	8.609	1184.6	0.4972	13.922	1192.8	0.4928
4	0.000	Data	0.3593	8.274	1150.1	0.3593	13.290	1143.0	0.3567
5	0.000	Not	0.2932	7.631	1087.4	0.2932	12.419	1106.3	0.2912
6	0.000	Required	0.2506	6.829	1014.4	0.2506	11.360	1066.5	0.2482
7	0.000		0.2223	5.582	910.9	0.2223	9.550	984.9	0.2190
8	0.000		0.2039	4.088	802.4	0.2039	6.973	847.4	0.1999
9	0.000		0.1965	1.301	631.4	0.1965	2.246	644.8	0.1924
10	0.000		0.1955	0.767	602.8	0.1955	1.307	609.0	0.1913

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.942	634.5	0.7396	4.395	607.7	0.7396	4.971	596.3	0.7396
2	18.143	922.1	0.7074	20.106	764.2	0.7108	22.379	697.6	0.7145
3	20.701	1018.6	0.5227	23.483	849.7	0.5406	26.578	745.6	0.5619
4	20.079	1019.5	0.3849	23.286	907.2	0.4073	27.291	806.6	0.4420
5	18.768	980.9	0.3152	22.170	933.9	0.3361	26.790	852.1	0.3738
6	17.030	924.4	0.2692	20.433	934.0	0.2877	25.667	892.0	0.3248
7	14.220	847.5	0.2383	17.308	891.5	0.2548	22.649	908.7	0.2903
8	10.036	737.9	0.2171	12.232	782.4	0.2318	16.471	824.7	0.2642
9	3.167	611.7	0.2088	3.847	624.5	0.2225	5.231	639.0	0.2534
10	1.801	588.9	0.2068	2.159	595.0	0.2196	2.872	601.5	0.2486

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.984	602.2	0.7396
2	22.435	736.3	0.7146
3	26.656	809.7	0.5624
4	27.383	860.1	0.4425
5	26.928	1069.2	0.3743
6	25.718	1129.9	0.3250
7	22.777	1017.1	0.2904
8	16.562	857.7	0.2642
9	5.261	648.0	0.2534
10	2.888	607.5	0.2487

Table 4-215. LS1 Burnup and TH Feedback Parameters Assembly D12

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.773	672.0	0.7396	2.867	673.1	0.7396
2	0.000		0.6950	6.134	1169.3	0.6950	13.083	1164.6	0.6949
3	0.000		0.4764	9.169	1243.6	0.4764	14.677	1226.1	0.4773
4	0.000	Data	0.3384	9.006	1226.0	0.3384	14.353	1198.1	0.3399
5	0.000	Not	0.2729	8.517	1174.6	0.2729	13.691	1168.9	0.2744
6	0.000	Required	0.2304	7.712	1095.4	0.2304	12.657	1132.9	0.2314
7	0.000		0.2025	6.271	966.8	0.2025	10.707	1052.5	0.2024
8	0.000		0.1845	4.581	837.2	0.1845	7.881	898.5	0.1831
9	0.000		0.1773	1.489	641.7	0.1773	2.604	650.4	0.1755
10	0.000		0.1764	0.889	609.3	0.1764	1.534	618.1	0.1744

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.735	613.9	0.7396	4.091	597.3	0.7396	4.625	593.6	0.7396
2	17.050	808.7	0.7049	18.587	715.7	0.7085	20.695	686.9	0.7126
3	20.000	896.9	0.5225	22.134	774.3	0.5412	24.896	722.5	0.5627
4	20.356	951.6	0.3904	22.615	812.2	0.4155	26.256	767.3	0.4492
5	19.796	960.1	0.3192	22.365	825.4	0.3438	26.341	804.6	0.3815
6	18.464	934.6	0.2707	21.130	837.3	0.2945	25.636	843.5	0.3327
7	15.801	879.2	0.2380	18.486	839.8	0.2619	23.337	869.7	0.2993
8	11.389	767.1	0.2143	13.560	779.1	0.2377	17.582	808.7	0.2725
9	3.670	619.6	0.2043	4.370	626.4	0.2265	5.720	637.1	0.2602
10	2.094	592.4	0.2007	2.450	594.8	0.2211	3.140	600.2	0.2529

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.638	602.2	0.7396
2	20.754	748.0	0.7127
3	24.983	843.6	0.5632
4	26.357	894.8	0.4496
5	26.440	889.4	0.3818
6	25.731	871.9	0.3330
7	23.459	993.1	0.2995
8	17.689	925.2	0.2727
9	5.757	669.2	0.2602
10	3.160	618.9	0.2530

Table 4-216. LS1 Burnup and TH Feedback Parameters Assembly D13

	Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.723	868.6	0.7396	2.867	678.6	0.7396
2	0.000		0.6998	7.816	1136.3	0.6998	12.883	1184.3	0.6970
3	0.000		0.4916	8.707	1194.5	0.4916	14.154	1215.8	0.4856
4	0.000	Data	0.3532	8.522	1175.3	0.3532	13.790	1184.7	0.3488
5	0.000	Not	0.2864	7.967	1119.7	0.2864	13.082	1159.1	0.2825
6	0.000	Required	0.2433	7.262	1053.1	0.2433	12.205	1131.1	0.2389
7	0.000		0.2141	6.183	959.3	0.2141	10.685	1062.4	0.2089
8	0.000		0.1946	4.660	842.9	0.1946	7.974	900.4	0.1889
9	0.000		0.1868	1.506	642.7	0.1868	2.611	659.5	0.1810
10	0.000		0.1857	0.890	609.3	0.1857	1.526	617.3	0.1799

	Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.980	629.7	0.7396	4.496	614.5	0.7396	5.183	603.5	0.7396
2	17.893	888.9	0.7061	20.098	793.2	0.7096	22.748	722.5	0.7138
3	20.609	990.1	0.5213	23.563	874.1	0.5382	26.992	766.6	0.5597
4	20.550	1016.9	0.3831	23.795	912.3	0.4026	27.997	820.9	0.4351
5	19.608	996.3	0.3118	22.914	920.7	0.3297	27.706	865.2	0.3644
6	18.174	948.9	0.2642	21.473	919.6	0.2806	26.779	905.9	0.3143
7	15.746	876.8	0.2315	18.833	891.2	0.2466	24.348	922.9	0.2784
8	11.452	765.1	0.2091	13.765	795.9	0.2230	18.205	839.6	0.2519
9	3.684	619.9	0.2003	4.435	631.2	0.2136	5.939	645.9	0.2414
10	2.098	593.1	0.1979	2.493	598.4	0.2105	3.278	605.5	0.2368

	Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.196	602.2	0.7396
2	22.806	744.4	0.7139
3	27.113	992.8	0.5601
4	28.160	1198.4	0.4354
5	27.861	1147.3	0.3643
6	26.924	1095.1	0.3141
7	24.478	1021.6	0.2783
8	18.300	873.6	0.2517
9	5.973	660.0	0.2412
10	3.297	616.0	0.2366

Table 4-217. LS1 Burnup and TH Feedback Parameters Assembly D14

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.709	667.7	0.7396	2.881	681.8	0.7396
2	0.000		0.7008	7.799	1134.3	0.7008	13.000	1208.3	0.6967
3	0.000		0.4943	8.640	1187.6	0.4943	14.139	1224.9	0.4853
4	0.000	Data	0.3563	8.395	1162.3	0.3563	13.628	1178.8	0.3498
5	0.000	Not	0.2899	7.797	1103.2	0.2899	12.628	1145.4	0.2843
6	0.000	Required	0.2470	7.043	1033.4	0.2470	11.838	1107.4	0.2413
7	0.000		0.2183	5.875	934.2	0.2183	10.114	1023.5	0.2120
8	0.000		0.1993	4.383	823.0	0.1993	7.465	871.4	0.1927
9	0.000		0.1917	1.407	637.2	0.1917	2.425	651.5	0.1851
10	0.000		0.1906	0.830	606.2	0.1906	1.415	612.9	0.1841

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.157	640.3	0.7396	4.713	618.9	0.7396	5.381	602.2	0.7396
2	18.708	947.1	0.7041	21.051	810.3	0.7077	23.607	716.2	0.7117
3	21.220	1046.2	0.5125	24.393	902.8	0.5293	27.811	766.0	0.5513
4	20.764	1051.2	0.3747	24.292	951.5	0.3934	28.615	829.9	0.4274
5	19.549	1013.5	0.3053	23.183	963.7	0.3221	28.217	885.8	0.3590
6	17.880	955.0	0.2596	21.481	959.1	0.2745	27.092	932.5	0.3098
7	15.217	880.0	0.2296	18.506	918.4	0.2426	24.328	948.6	0.2752
8	10.915	763.3	0.2087	13.305	805.2	0.2202	17.947	855.0	0.2493
9	3.475	618.7	0.2002	4.236	632.1	0.2112	5.791	648.9	0.2389
10	1.977	592.5	0.1981	2.380	599.1	0.2086	3.189	606.8	0.2347

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.393	598.9	0.7396
2	23.663	737.4	0.7118
3	27.894	822.9	0.5518
4	28.711	874.6	0.4279
5	28.314	878.6	0.3594
6	27.185	866.6	0.3101
7	24.450	891.5	0.2755
8	18.053	822.3	0.2496
9	5.827	666.1	0.2392
10	3.209	618.9	0.2350

Table 4-218. LS1 Burnup and TH Feedback Parameters Assembly D15

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.499	653.7	0.7396	2.525	665.6	0.7396
2	0.000		0.7103	7.123	1067.5	0.7103	11.912	1137.6	0.7066
3	0.000		0.5230	8.002	1123.4	0.5230	13.111	1158.6	0.5138
4	0.000	Data	0.3843	7.656	1089.8	0.3843	12.446	1106.5	0.3773
5	0.000	Not	0.3159	7.068	1035.5	0.3159	11.611	1068.3	0.3100
6	0.000	Required	0.2714	6.354	973.5	0.2714	10.614	1026.3	0.2656
7	0.000		0.2415	5.208	882.1	0.2415	8.875	944.0	0.2353
8	0.000		0.2218	3.848	785.8	0.2218	6.516	822.0	0.2154
9	0.000		0.2140	1.229	627.5	0.2140	2.106	638.7	0.2076
10	0.000		0.2129	0.722	600.5	0.2129	1.222	605.5	0.2065

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.849	643.5	0.7396	4.493	628.5	0.7396	5.364	615.4	0.7396
2	17.994	979.8	0.7108	20.809	871.3	0.7134	24.197	773.7	0.7169
3	20.654	1089.7	0.5279	24.317	971.0	0.5395	28.614	828.0	0.5592
4	20.060	1096.6	0.3871	23.918	999.5	0.3987	28.998	887.8	0.4266
5	18.792	1055.5	0.3166	22.638	997.7	0.3266	26.284	933.9	0.3543
6	17.044	988.2	0.2705	20.808	985.5	0.2789	26.937	975.2	0.3046
7	14.175	895.3	0.2396	17.595	936.5	0.2467	23.843	985.7	0.2699
8	10.081	771.0	0.2194	12.557	815.5	0.2252	17.451	874.7	0.2448
9	3.204	621.3	0.2116	3.998	635.2	0.2170	5.640	653.9	0.2353
10	1.822	594.5	0.2103	2.252	601.5	0.2155	3.126	610.4	0.2327

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.377	602.2	0.7396
2	24.250	725.9	0.7170
3	28.689	796.9	0.5596
4	29.085	847.0	0.4272
5	28.374	853.5	0.3548
6	27.023	834.2	0.3050
7	23.916	788.7	0.2702
8	17.503	717.0	0.2451
9	5.657	610.3	0.2356
10	3.139	599.0	0.2332

Table 4-219. LS1 Burnup and TH Feedback Parameters Assembly D16

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.775	672.1	0.7396	2.869	673.1	0.7396
2	0.000		0.6949	8.136	1169.5	0.6949	13.087	1164.9	0.6947
3	0.000		0.4760	9.167	1243.5	0.4760	14.674	1226.0	0.4768
4	0.000	Data	0.3381	9.003	1225.7	0.3381	14.349	1198.0	0.3395
5	0.000	Not	0.2726	8.515	1174.6	0.2726	13.687	1168.7	0.2741
6	0.000	Required	0.2301	7.710	1095.2	0.2301	12.663	1132.7	0.2311
7	0.000		0.2022	6.270	966.7	0.2022	10.705	1052.3	0.2021
8	0.000		0.1843	4.580	837.2	0.1843	7.879	898.3	0.1829
9	0.000		0.1771	1.489	641.7	0.1771	2.604	660.4	0.1752
10	0.000		0.1761	0.890	609.3	0.1761	1.534	618.0	0.1741

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.822	619.3	0.7396	4.252	605.2	0.7396	5.386	632.9	0.7396
2	17.588	848.7	0.7026	19.624	772.7	0.7071	24.023	849.7	0.7113
3	20.635	948.2	0.5135	23.466	858.2	0.5328	28.744	903.6	0.5494
4	21.885	1090.7	0.3822	24.810	870.1	0.4020	30.535	940.4	0.4195
5	21.858	1151.9	0.3076	24.713	861.1	0.3256	30.813	972.7	0.3421
6	20.262	1095.3	0.2569	23.094	858.1	0.2745	29.653	1013.7	0.2897
7	17.055	981.5	0.2233	19.720	837.3	0.2409	26.485	1032.7	0.2542
8	12.201	823.7	0.2006	14.828	833.5	0.2209	20.161	909.8	0.2307
9	3.971	636.1	0.1818	4.872	645.4	0.2114	6.780	659.6	0.2204
10	2.286	602.6	0.1899	2.808	609.9	0.2097	3.884	621.6	0.2167

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.408	632.6	0.7396
2	24.118	888.2	0.7113
3	28.879	1048.1	0.5495
4	30.683	1113.8	0.4195
5	30.958	1096.7	0.3421
6	29.795	1084.9	0.2897
7	26.612	1012.2	0.2542
8	20.254	865.5	0.2306
9	6.815	663.1	0.2203
10	3.904	618.9	0.2186

Table 4-220. LS1 Burnup and TH Feedback Parameters Assembly D17

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.710	667.8	0.7396	2.917	685.7	0.7396
2	0.000		0.6995	7.822	1136.8	0.6995	13.136	1228.6	0.6943
3	0.000		0.4902	8.767	1200.9	0.4902	14.443	1256.0	0.4786
4	0.000	Data	0.3519	8.550	1178.1	0.3519	14.023	1220.0	0.3428
5	0.000	Not	0.2855	8.000	1123.0	0.2855	13.306	1191.1	0.2775
6	0.000	Required	0.2425	7.291	1055.8	0.2425	12.378	1154.6	0.2345
7	0.000		0.2135	6.202	960.8	0.2135	10.730	1066.5	0.2050
8	0.000		0.1940	4.704	846.1	0.1940	8.025	901.2	0.1855
9	0.000		0.1861	1.528	643.9	0.1861	2.643	660.4	0.1776
10	0.000		0.1849	0.905	610.1	0.1849	1.550	618.1	0.1766

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.336	649.8	0.7396	4.945	624.7	0.7396	5.696	607.6	0.7396
2	19.468	1002.4	0.7007	22.035	836.7	0.7045	24.888	736.3	0.7089
3	22.109	1101.6	0.5001	25.564	941.5	0.5166	29.368	792.7	0.5395
4	21.600	1092.9	0.3616	25.393	989.9	0.3788	30.123	860.5	0.4122
5	20.359	1043.7	0.2933	24.238	1002.7	0.3085	29.675	916.6	0.3432
6	18.645	974.0	0.2485	22.455	992.5	0.2617	28.451	953.6	0.2945
7	15.945	888.6	0.2189	19.373	937.8	0.2303	25.507	975.6	0.2603
8	11.521	765.3	0.1985	13.973	812.7	0.2085	18.803	869.6	0.2350
9	3.717	620.0	0.1901	4.506	634.8	0.1996	6.142	653.6	0.2250
10	2.131	593.5	0.1882	2.553	600.8	0.1972	3.413	609.6	0.2212

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.720	639.5	0.7396
2	24.982	881.2	0.7090
3	29.487	976.0	0.5397
4	30.251	1015.0	0.4124
5	29.802	1010.3	0.3433
6	28.568	967.9	0.2945
7	25.605	885.7	0.2604
8	18.873	781.0	0.2350
9	6.166	630.4	0.2251
10	3.427	601.8	0.2213

Table 4-221. LS1 Burnup and TH Feedback Parameters Assembly D18

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.592	659.9	0.7396	2.828	688.9	0.7396
2	0.000		0.7059	7.302	1084.7	0.7059	12.709	1245.2	0.6971
3	0.000		0.5114	8.234	1148.2	0.5114	13.884	1251.5	0.4901
4	0.000	Data	0.3718	8.081	1130.8	0.3718	13.481	1207.3	0.3546
5	0.000	Not	0.3029	7.558	1060.3	0.3029	12.770	1175.7	0.2881
6	0.000	Required	0.2582	6.913	1021.7	0.2582	11.894	1137.2	0.2441
7	0.000		0.2277	6.046	947.8	0.2277	10.446	1047.3	0.2140
8	0.000		0.2066	4.889	845.0	0.2066	7.892	886.3	0.1941
9	0.000		0.1979	1.512	643.0	0.1979	2.578	655.9	0.1857
10	0.000		0.1967	0.887	609.2	0.1967	1.501	615.4	0.1847

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.930	628.9	0.7396	4.433	613.1	0.7396	5.160	606.1	0.7396
2	17.704	887.7	0.7062	19.866	788.0	0.7098	22.671	733.0	0.7141
3	20.337	990.0	0.6246	23.232	866.4	0.6415	26.815	777.1	0.5628
4	20.380	1029.5	0.3872	23.536	900.3	0.4068	27.842	828.6	0.4381
5	19.562	1019.8	0.3154	22.785	906.6	0.3334	27.621	870.1	0.3661
6	18.174	975.0	0.2672	21.391	908.6	0.2840	26.755	910.5	0.3155
7	15.808	900.0	0.2342	18.675	888.6	0.2499	24.467	929.3	0.2794
8	11.578	779.1	0.2117	13.944	802.1	0.2262	18.461	845.4	0.2526
9	3.716	623.5	0.2026	4.492	633.5	0.2166	6.036	648.2	0.2421
10	2.110	595.0	0.2004	2.517	599.5	0.2136	3.327	606.8	0.2379

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.183	636.1	0.7396
2	22.766	888.3	0.7141
3	26.936	985.1	0.5630
4	27.972	1024.4	0.4382
5	27.751	1027.6	0.3661
6	26.677	988.9	0.3154
7	24.569	902.1	0.2793
8	18.534	786.9	0.2525
9	6.062	636.2	0.2421
10	3.341	601.8	0.2379

Table 4-222. LS1 Burnup and TH Feedback Parameters Assembly D19

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.639	663.0	0.7396	2.629	683.8	0.7396
2	0.000		0.7041	7.566	1110.9	0.7041	12.903	1232.6	0.6976
3	0.000		0.5051	8.347	1157.7	0.5051	13.881	1231.2	0.4897
4	0.000	Data	0.3677	8.023	1125.1	0.3677	13.212	1171.5	0.3557
5	0.000	Not	0.3009	7.435	1069.0	0.3009	12.363	1131.9	0.2906
6	0.000	Required	0.2575	6.714	1004.2	0.2575	11.370	1085.6	0.2477
7	0.000		0.2284	5.576	910.4	0.2284	9.588	991.2	0.2185
8	0.000		0.2091	4.175	808.4	0.2091	7.067	848.3	0.1995
9	0.000		0.2012	1.342	633.6	0.2012	2.295	645.6	0.1918
10	0.000		0.2002	0.790	604.0	0.2002	1.337	609.6	0.1908

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.335	655.7	0.7396	4.966	627.1	0.7396	5.818	614.2	0.7396
2	19.647	1040.8	0.7021	22.355	857.0	0.7056	25.614	764.5	0.7069
3	21.994	1146.1	0.5029	25.633	967.6	0.5180	29.918	827.3	0.5402
4	21.162	1129.7	0.3647	25.124	1015.2	0.3799	30.296	895.1	0.4106
5	19.735	1071.6	0.2973	23.824	1034.7	0.3103	29.574	942.7	0.3404
6	17.840	991.7	0.2534	21.841	1021.3	0.2642	28.093	986.0	0.2922
7	14.825	890.5	0.2241	18.351	951.6	0.2330	24.716	996.1	0.2588
8	10.525	763.8	0.2049	13.005	816.2	0.2124	17.955	879.2	0.2348
9	3.361	619.6	0.1974	4.152	635.0	0.2043	5.815	655.1	0.2254
10	1.922	593.7	0.1961	2.349	601.3	0.2027	3.235	611.0	0.2226

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.838	625.7	0.7396
2	25.690	811.4	0.7100
3	30.017	891.3	0.5406
4	30.406	932.6	0.4110
5	29.683	926.9	0.3407
6	28.194	894.9	0.2925
7	24.804	842.0	0.2590
8	18.020	758.7	0.2348
9	5.837	624.6	0.2255
10	3.247	596.2	0.2228

Table 4-223. LS1 Burnup and TH Feedback Parameters Assembly D20

Node No.	Datapoint 5 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.506	654.2	0.7396	2.557	668.3	0.7396
2	0.000		0.7106	7.061	1063.4	0.7106	11.956	1151.9	0.7060
3	0.000		0.5256	7.886	1112.1	0.5256	13.025	1163.5	0.5135
4	0.000	Data	0.3874	7.554	1080.1	0.3874	12.366	1110.2	0.3779
5	0.000	Not	0.3188	6.993	1028.7	0.3188	11.563	1072.5	0.3107
6	0.000	Required	0.2740	6.319	970.5	0.2740	10.605	1030.2	0.2661
7	0.000		0.2438	5.223	883.1	0.2438	8.905	946.1	0.2357
8	0.000		0.2237	3.895	789.1	0.2237	6.574	823.0	0.2158
9	0.000		0.2157	1.253	628.8	0.2157	2.136	639.2	0.2078
10	0.000		0.2145	0.735	601.1	0.2145	1.239	605.8	0.2067

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.916	645.8	0.7396	4.652	638.6	0.7396	5.960	644.6	0.7396
2	18.330	1006.5	0.7090	21.650	942.0	0.7111	26.609	895.1	0.7134
3	21.050	1137.2	0.5209	25.258	1053.4	0.5262	31.086	949.2	0.5409
4	20.786	1177.7	0.3789	24.973	1050.0	0.3851	31.315	994.0	0.4011
5	19.739	1152.6	0.3076	23.817	1033.1	0.3131	30.572	1031.8	0.3278
6	17.932	1069.5	0.2614	21.968	1026.6	0.2661	29.136	1071.0	0.2788
7	14.852	947.5	0.2308	18.534	973.9	0.2345	25.743	1075.0	0.2447
8	10.591	802.0	0.2113	13.343	849.6	0.2138	18.915	930.0	0.2210
9	3.410	631.0	0.2036	4.334	647.6	0.2059	6.278	671.8	0.2119
10	1.951	600.5	0.2027	2.464	609.1	0.2048	3.643	621.7	0.2104

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.981	629.2	0.7396
2	26.690	833.6	0.7135
3	31.194	926.8	0.5412
4	31.434	976.6	0.4014
5	30.691	972.1	0.3281
6	29.245	928.5	0.2790
7	25.835	860.2	0.2448
8	18.981	764.5	0.2212
9	6.301	627.5	0.2121
10	3.555	596.2	0.2105

Table 4-224. LS1 Burnup and TH Feedback Parameters Assembly D21

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.747	670.3	0.7396	2.681	677.6	0.7396
2	0.000		0.6967	6.021	1157.4	0.6967	13.125	1191.3	0.6945
3	0.000		0.4819	8.952	1220.5	0.4819	14.495	1232.3	0.4780
4	0.000	Data	0.3449	8.718	1195.6	0.3449	14.069	1198.8	0.3421
5	0.000	Not	0.2797	8.163	1141.0	0.2797	13.361	1169.7	0.2771
6	0.000	Required	0.2372	7.440	1069.7	0.2372	12.398	1133.4	0.2343
7	0.000		0.2086	6.226	962.9	0.2086	10.690	1056.6	0.2049
8	0.000		0.1897	4.685	844.7	0.1897	8.043	905.9	0.1853
9	0.000		0.1820	1.535	644.3	0.1820	2.672	662.4	0.1774
10	0.000		0.1809	0.913	610.6	0.1809	1.570	619.2	0.1763

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (305.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	305.8 Cy 7	305.8 Cy 7	305.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.623	605.9	0.7396	4.086	608.6	0.7396	5.634	661.1	0.7396
2	16.822	789.1	0.7050	19.078	799.1	0.7091	24.923	972.0	0.7097
3	20.002	911.6	0.5270	23.215	908.1	0.5430	29.772	1013.5	0.5456
4	20.146	957.8	0.3943	23.549	934.0	0.4100	30.621	1061.7	0.4127
5	19.118	931.3	0.3211	22.546	937.5	0.3352	30.135	1112.7	0.3370
6	17.501	879.9	0.2717	22.247	1145.2	0.2868	30.066	1136.1	0.2863
7	14.893	813.6	0.2383	19.474	1115.3	0.2488	27.234	1130.1	0.2470
8	11.284	749.1	0.2172	14.417	899.9	0.2238	20.402	965.3	0.2206
9	3.749	620.2	0.2085	4.784	658.4	0.2142	6.951	685.2	0.2102
10	2.237	598.1	0.2086	2.807	614.3	0.2135	4.030	629.9	0.2092

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.647	602.2	0.7396
2	24.975	725.0	0.7098
3	29.845	788.8	0.5460
4	30.707	839.3	0.4133
5	30.223	843.1	0.3375
6	30.147	819.1	0.2857
7	27.307	788.6	0.2474
8	20.456	724.7	0.2209
9	6.970	616.0	0.2106
10	4.039	587.9	0.2095

Table 4-225. LS1 Burnup and TH Feedback Parameters Assembly E1

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.558	657.5	0.7396	2.826	692.7	0.7396
2	0.000		0.7076	7.180	1072.4	0.7076	12.760	1276.5	0.6964
3	0.000		0.5187	8.033	1125.8	0.5187	13.747	1282.7	0.4915
4	0.000	Data	0.3818	7.600	1083.9	0.3818	12.901	1189.8	0.3590
5	0.000	Not	0.3140	7.114	1039.2	0.3140	12.180	1150.6	0.2941
6	0.000	Required	0.2693	6.520	987.1	0.2693	11.294	1103.6	0.2508
7	0.000		0.2387	5.646	915.5	0.2387	9.757	1004.8	0.2214
8	0.000		0.2175	4.451	827.6	0.2175	7.423	857.5	0.2021
9	0.000		0.2085	1.462	640.2	0.2085	2.473	650.8	0.1936
10	0.000		0.2072	0.857	607.6	0.2072	1.443	612.9	0.1924

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.600	607.7	0.7396	4.069	609.4	0.7396	5.558	657.0	0.7396
2	16.607	799.7	0.7068	18.860	798.8	0.7106	24.474	951.0	0.7116
3	19.268	913.9	0.5375	22.404	894.8	0.5524	28.795	998.0	0.5548
4	18.926	953.0	0.4075	22.212	917.6	0.4226	29.164	1050.0	0.4247
5	17.690	927.2	0.3347	21.204	921.4	0.3484	28.846	1097.5	0.3489
6	16.353	876.2	0.2852	21.009	1129.5	0.2995	28.650	1117.4	0.2975
7	13.926	811.0	0.2518	18.484	1110.9	0.2610	26.035	1108.4	0.2576
8	10.813	745.7	0.2304	13.736	898.4	0.2353	19.533	948.6	0.2306
9	3.536	619.4	0.2213	4.557	656.9	0.2254	6.624	679.1	0.2200
10	2.098	597.4	0.2212	2.656	613.2	0.2246	3.810	625.9	0.2190

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.573	608.8	0.7395
2	24.531	739.9	0.7116
3	28.873	808.7	0.5553
4	29.257	862.4	0.4252
5	28.738	858.5	0.3493
6	28.734	827.7	0.2979
7	26.109	792.0	0.2579
8	19.588	726.8	0.2309
9	6.643	616.0	0.2202
10	3.820	590.6	0.2192

Table 4-226. LS1 Burnup and TH Feedback Parameters Assembly E2

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.572	658.5	0.7396	2.715	678.4	0.7396
2	0.000		0.7038	7.483	1102.6	0.7038	12.620	1196.6	0.6993
3	0.000		0.4957	9.039	1228.9	0.4957	14.486	1215.1	0.4881
4	0.000	Data	0.3514	8.792	1202.7	0.3514	13.886	1155.2	0.3487
5	0.000	Not	0.2835	8.181	1140.3	0.2835	13.071	1122.0	0.2825
6	0.000	Required	0.2403	7.300	1056.4	0.2403	11.975	1088.2	0.2394
7	0.000		0.2122	5.880	934.3	0.2122	10.013	1007.9	0.2104
8	0.000		0.1942	4.301	817.1	0.1942	7.316	862.8	0.1916
9	0.000		0.1870	1.391	636.3	0.1870	2.411	651.6	0.1842
10	0.000		0.1860	0.825	605.9	0.1860	1.414	613.2	0.1831

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.812	628.6	0.7396	4.292	610.6	0.7396	4.883	597.3	0.7396
2	17.597	885.9	0.7077	19.856	776.5	0.7113	21.965	699.9	0.7151
3	20.795	977.1	0.5231	23.575	851.7	0.5405	26.623	741.0	0.5614
4	20.421	996.6	0.3844	23.562	898.1	0.4057	27.447	798.0	0.4399
5	19.318	971.8	0.3136	22.559	911.5	0.3334	27.089	845.1	0.3713
6	17.669	926.0	0.2668	20.918	912.7	0.2850	25.997	887.3	0.3225
7	14.834	858.4	0.2357	17.879	885.6	0.2526	23.213	907.8	0.2886
8	10.540	748.2	0.2140	12.773	786.5	0.2292	17.073	828.9	0.2624
9	3.405	615.6	0.2053	4.114	627.2	0.2197	5.537	641.2	0.2511
10	1.944	590.8	0.2027	2.316	596.3	0.2163	3.048	602.5	0.2457

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.897	605.5	0.7396
2	22.024	745.6	0.7151
3	26.703	813.1	0.5618
4	27.538	857.2	0.4403
5	27.225	1058.5	0.3717
6	26.144	1110.3	0.3227
7	23.336	992.0	0.2887
8	17.159	839.5	0.2624
9	5.566	645.0	0.2511
10	3.064	607.4	0.2458

Table 4-227. LS1 Burnup and TH Feedback Parameters Assembly E3

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.773	671.9	0.7396	2.901	676.8	0.7396
2	0.000		0.6962	8.141	1169.4	0.6962	13.190	1181.1	0.6952
3	0.000		0.4803	9.037	1229.0	0.4803	14.526	1222.2	0.4788
4	0.000	Data	0.3444	8.528	1175.4	0.3444	13.777	1180.8	0.3433
5	0.000	Not	0.2803	7.955	1118.0	0.2803	13.022	1150.7	0.2789
6	0.000	Required	0.2387	7.214	1048.4	0.2387	12.092	1120.1	0.2365
7	0.000		0.2108	5.988	943.0	0.2108	10.404	1049.1	0.2073
8	0.000		0.1923	4.490	830.5	0.1923	7.739	891.8	0.1880
9	0.000		0.1849	1.472	640.7	0.1849	2.580	659.7	0.1803
10	0.000		0.1838	0.876	608.6	0.1838	1.516	617.6	0.1792

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.221	643.2	0.7396	4.979	641.2	0.7396	6.418	653.5	0.7396
2	19.294	931.7	0.7019	22.704	955.2	0.7048	28.032	926.0	0.7075
3	22.595	1141.3	0.5001	27.097	1100.7	0.5084	33.201	972.6	0.5215
4	22.271	1184.9	0.3587	26.909	1123.2	0.3651	33.578	1023.5	0.3809
5	21.063	1138.4	0.2894	25.630	1111.4	0.2944	32.827	1073.4	0.3092
6	19.338	1061.3	0.2444	23.745	1085.0	0.2483	31.425	1121.5	0.2611
7	16.220	936.5	0.2141	20.062	997.3	0.2171	27.860	1133.5	0.2275
8	11.572	789.1	0.1942	14.383	854.2	0.1967	20.511	979.2	0.2042
9	3.841	630.2	0.1867	4.823	653.2	0.1891	7.059	689.4	0.1954
10	2.230	600.6	0.1854	2.791	613.5	0.1877	4.057	632.2	0.1937

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.427	589.1	0.7396
2	28.066	662.9	0.7075
3	33.250	708.6	0.5218
4	33.643	756.7	0.3815
5	32.894	769.4	0.3098
6	31.490	759.0	0.2616
7	27.918	735.2	0.2280
8	20.553	685.9	0.2047
9	7.072	599.0	0.1958
10	4.064	582.3	0.1941

Table 4-228. LS1 Burnup and TH Feedback Parameters Assembly E4

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.570	658.3	0.7396	2.712	678.3	0.7396
2	0.000		0.7040	7.478	1102.1	0.7040	12.612	1196.0	0.6994
3	0.000		0.4960	9.036	1228.6	0.4960	14.481	1214.9	0.4885
4	0.000	Data	0.3517	8.789	1202.4	0.3517	13.883	1155.1	0.3490
5	0.000	Not	0.2837	8.178	1140.1	0.2837	13.068	1121.9	0.2827
6	0.000	Required	0.2405	7.298	1056.2	0.2405	11.972	1088.1	0.2396
7	0.000		0.2125	5.877	934.1	0.2125	10.010	1007.6	0.2106
8	0.000		0.1945	4.299	817.0	0.1945	7.313	862.7	0.1916
9	0.000		0.1873	1.390	636.2	0.1873	2.410	651.6	0.1844
10	0.000		0.1862	0.825	605.9	0.1862	1.413	613.1	0.1833

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.610	628.6	0.7396	4.291	610.7	0.7396	4.882	597.3	0.7396
2	17.591	888.1	0.7078	19.651	775.6	0.7114	21.957	699.6	0.7151
3	20.789	977.1	0.5234	23.570	851.6	0.5407	26.615	740.8	0.5616
4	20.416	996.5	0.3847	23.555	897.9	0.4060	27.439	797.9	0.4402
5	19.313	971.6	0.3138	22.553	911.4	0.3336	27.082	845.0	0.3715
6	17.665	925.9	0.2671	20.914	912.5	0.2852	25.991	887.3	0.3227
7	14.830	858.4	0.2359	17.875	885.5	0.2528	23.209	907.7	0.2889
8	10.537	748.2	0.2142	12.770	786.5	0.2294	17.069	828.9	0.2626
9	3.404	615.6	0.2055	4.113	627.2	0.2199	5.537	641.2	0.2513
10	1.942	590.8	0.2029	2.314	596.3	0.2165	3.047	602.6	0.2459

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.895	602.2	0.7396
2	22.015	745.6	0.7152
3	26.694	813.1	0.5620
4	27.530	858.5	0.4406
5	27.218	1058.5	0.3720
6	26.138	1110.3	0.3230
7	23.332	993.5	0.2889
8	17.156	840.6	0.2627
9	5.565	642.1	0.2513
10	3.063	607.4	0.2460

Table 4-229. LS1 Burnup and TH Feedback Parameters Assembly E5

Node No.	Datapoint 5 (BOC Cy 5) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 5	0.00 Cy 5	0.00 Cy 5	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.737	669.5	0.7396	2.906	681.3	0.7396
2	0.000		0.6975	6.045	1159.5	0.6975	13.270	1212.1	0.6942
3	0.000		0.4826	9.028	1228.0	0.4826	14.708	1256.1	0.4758
4	0.000	Data	0.3461	8.505	1173.0	0.3461	13.936	1212.0	0.3403
5	0.000	Not	0.2818	7.945	1117.1	0.2818	13.177	1178.0	0.2764
6	0.000	Required	0.2400	7.199	1047.1	0.2400	12.188	1137.9	0.2341
7	0.000		0.2120	5.931	938.4	0.2120	10.335	1047.4	0.2052
8	0.000		0.1936	4.469	828.9	0.1936	7.696	889.1	0.1863
9	0.000		0.1861	1.473	640.8	0.1861	2.581	659.7	0.1786
10	0.000		0.1850	0.878	608.7	0.1850	1.522	618.0	0.1776

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.208	642.0	0.7396	4.980	642.8	0.7396	6.488	656.9	0.7396
2	19.303	975.3	0.7020	22.731	957.7	0.7047	28.154	934.3	0.7071
3	22.655	1128.9	0.5000	27.081	1088.2	0.5084	33.282	981.2	0.5205
4	22.262	1167.3	0.3585	26.779	1103.0	0.3653	33.584	1036.1	0.3803
5	21.052	1121.7	0.2894	25.520	1085.0	0.2949	32.837	1085.1	0.3088
6	19.188	1038.6	0.2444	23.732	1107.5	0.2489	31.478	1128.2	0.2607
7	15.867	921.4	0.2142	20.068	1036.7	0.2176	27.867	1133.6	0.2271
8	11.483	785.8	0.1946	14.404	871.2	0.1969	20.478	972.8	0.2038
9	3.836	629.9	0.1870	4.837	655.0	0.1892	7.036	687.1	0.1950
10	2.231	600.3	0.1856	2.798	614.0	0.1877	4.043	631.0	0.1932

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.482	605.5	0.7396
2	28.204	717.9	0.7072
3	33.353	781.5	0.5209
4	33.671	837.8	0.3810
5	32.925	842.9	0.3094
6	31.560	821.4	0.2612
7	27.941	793.3	0.2276
8	20.534	730.1	0.2042
9	7.055	616.0	0.1954
10	4.053	590.6	0.1937

Table 4-230. LS1 Burnup and TH Feedback Parameters Assembly E6

	Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.670	665.0	0.7396	2.739	670.2	0.7396
2	0.000		0.7003	7.627	1137.1	0.7003	12.694	1149.9	0.6996
3	0.000		0.4881	9.048	1230.0	0.4881	14.328	1186.4	0.4889
4	0.000	Data	0.3479	8.655	1188.4	0.3479	13.625	1134.8	0.3507
5	0.000	Not	0.2821	8.021	1124.5	0.2821	12.786	1102.2	0.2851
6	0.000	Required	0.2400	7.176	1045.0	0.2400	11.744	1071.7	0.2425
7	0.000		0.2125	5.828	930.2	0.2125	9.946	1005.7	0.2137
8	0.000		0.1945	4.278	815.5	0.1945	7.306	864.3	0.1945
9	0.000		0.1875	1.382	635.8	0.1875	2.404	651.8	0.1871
10	0.000		0.1864	0.820	605.6	0.1864	1.405	612.8	0.1859

	Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.842	629.0	0.7396	4.275	605.5	0.7396	4.793	592.6	0.7396
2	17.715	889.5	0.7078	19.580	752.7	0.7112	21.624	682.7	0.7147
3	20.667	979.7	0.5235	23.276	830.5	0.5416	26.078	725.0	0.5622
4	20.074	989.2	0.3861	23.128	886.5	0.4096	26.818	784.4	0.4448
5	18.862	957.4	0.3159	22.077	908.0	0.3380	26.428	831.7	0.3781
6	17.213	908.1	0.2695	20.436	909.1	0.2896	25.325	872.5	0.3295
7	14.509	839.4	0.2385	17.480	875.9	0.2567	22.605	890.9	0.2953
8	10.293	733.0	0.2164	12.420	774.3	0.2327	16.520	814.4	0.2685
9	3.315	611.1	0.2076	3.979	623.0	0.2229	5.317	636.3	0.2567
10	1.692	588.5	0.2051	2.239	594.0	0.2194	2.923	599.9	0.2509

	Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.805	598.9	0.7396
2	21.678	730.3	0.7148
3	26.193	988.5	0.5627
4	26.977	1173.8	0.4451
5	26.579	1129.1	0.3781
6	25.465	1076.2	0.3294
7	22.729	999.4	0.2950
8	16.612	861.3	0.2683
9	5.350	656.9	0.2565
10	2.941	613.1	0.2507

Table 4-231. LS1 Burnup and TH Feedback Parameters Assembly E7

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.772	671.9	0.7396	2.859	672.2	0.7396
2	0.000		0.6953	8.167	1172.3	0.6953	13.097	1160.7	0.6954
3	0.000		0.4775	9.122	1238.1	0.4775	14.602	1220.6	0.4787
4	0.000	Data	0.3418	8.624	1185.3	0.3418	13.894	1184.4	0.3428
5	0.000	Not	0.2781	8.108	1133.1	0.2781	13.186	1152.5	0.2785
6	0.000	Required	0.2363	7.360	1061.8	0.2363	12.198	1113.9	0.2359
7	0.000		0.2084	6.032	946.6	0.2084	10.362	1036.4	0.2069
8	0.000		0.1901	4.528	833.1	0.1901	7.793	893.7	0.1875
9	0.000		0.1827	1.497	642.1	0.1827	2.627	661.7	0.1797
10	0.000		0.1816	0.893	609.5	0.1816	1.547	618.9	0.1785

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.911	625.7	0.7396	4.356	606.8	0.7396	5.070	605.2	0.7396
2	17.902	872.2	0.7047	19.827	759.6	0.7085	22.692	730.2	0.7130
3	20.834	970.7	0.5186	23.454	831.6	0.5351	26.992	773.9	0.5574
4	20.810	1030.7	0.3812	23.711	866.8	0.4036	27.964	824.4	0.4355
5	20.181	1037.7	0.3105	23.134	873.5	0.3313	27.901	863.1	0.3642
6	18.754	998.5	0.2628	21.759	880.2	0.2825	27.046	904.0	0.3142
7	16.018	923.2	0.2304	18.982	874.9	0.2498	24.564	928.1	0.2798
8	11.612	788.2	0.2075	14.005	805.1	0.2262	18.550	847.3	0.2531
9	3.813	626.1	0.1983	4.603	634.8	0.2181	6.161	649.0	0.2418
10	2.184	596.5	0.1958	2.595	599.8	0.2123	3.411	607.1	0.2368

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	5.094	639.5	0.7396
2	22.691	903.6	0.7130
3	27.116	996.0	0.5576
4	28.093	1022.4	0.4356
5	28.030	1017.7	0.3641
6	27.164	972.0	0.3142
7	24.653	886.7	0.2798
8	18.620	777.3	0.2531
9	6.186	633.3	0.2417
10	3.425	601.6	0.2368

Table 4-232. LS1 Burnup and TH Feedback Parameters Assembly E8

	Datapoint 5 (BOC Cy 6)			Datapoint 6 (196.1 Cy 6)			Statepoint 7 (BOC Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.668	664.9	0.7396	2.807	678.0	0.7396
2	0.000		0.7007	7.832	1137.5	0.7007	12.965	1195.9	0.6970
3	0.000		0.4899	8.934	1217.9	0.4899	14.561	1248.7	0.4823
4	0.000	Data	0.3515	8.417	1164.0	0.3515	13.787	1201.7	0.3452
5	0.000	Not	0.2864	7.818	1104.8	0.2864	12.985	1167.2	0.2805
6	0.000	Required	0.2442	7.046	1033.2	0.2442	11.986	1130.1	0.2378
7	0.000		0.2161	5.782	926.4	0.2161	10.154	1042.6	0.2085
8	0.000		0.1977	4.346	820.2	0.1977	7.534	884.2	0.1895
9	0.000		0.1901	1.424	638.1	0.1901	2.512	657.8	0.1818
10	0.000		0.1890	0.847	607.0	0.1890	1.478	616.8	0.1807

	Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)			Statepoint 10 (BOC Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	4.170	648.0	0.7396	4.927	641.1	0.7396	6.347	652.2	0.7396
2	19.207	994.0	0.7029	22.602	952.9	0.7055	27.639	918.3	0.7084
3	22.710	1149.3	0.5009	27.173	1094.1	0.5094	33.188	964.9	0.5229
4	22.363	1193.4	0.3587	26.972	1118.4	0.3654	33.603	1020.0	0.3820
5	21.126	1148.8	0.2893	25.679	1108.6	0.2947	32.660	1071.9	0.3102
6	19.144	1053.3	0.2442	23.540	1083.2	0.2485	31.264	1125.9	0.2620
7	15.818	924.2	0.2142	19.596	988.0	0.2176	27.425	1136.7	0.2286
8	11.287	783.5	0.1950	13.886	830.6	0.1977	19.971	973.8	0.2055
9	3.751	629.0	0.1875	4.629	643.2	0.1901	6.613	686.2	0.1968
10	2.181	600.0	0.1863	2.680	607.8	0.1889	3.915	630.5	0.1951

	Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	6.357	592.3	0.7396
2	27.880	686.7	0.7084
3	33.246	738.3	0.5232
4	33.677	792.0	0.3826
5	32.938	804.1	0.3108
6	31.337	788.4	0.2626
7	27.491	764.8	0.2292
8	20.021	708.2	0.2061
9	6.629	607.4	0.1972
10	3.923	585.1	0.1955

Table 4-233. LS1 Burnup and TH Feedback Parameters Assembly E9

Node No.	Datapoint 5 (BOC Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Datapoint 6 (196.1 Cy 6) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 6	0.00 Cy 6	0.00 Cy 6	196.1 Cy 6	196.1 Cy 6	196.1 Cy 6	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7
1	0.000		0.7396	1.625	662.0	0.7396	2.694	670.2	0.7396
2	0.000		0.7032	7.578	1111.7	0.7032	12.456	1152.1	0.7006
3	0.000		0.4976	8.732	1196.5	0.4976	14.229	1223.7	0.4916
4	0.000	Data	0.3580	8.329	1155.0	0.3580	13.633	1190.3	0.3527
5	0.000	Not	0.2915	7.836	1106.5	0.2915	12.952	1158.7	0.2865
6	0.000	Required	0.2480	7.106	1038.6	0.2480	11.982	1119.9	0.2427
7	0.000		0.2191	5.808	928.4	0.2191	10.113	1032.7	0.2127
8	0.000		0.2002	4.384	822.8	0.2002	7.569	883.7	0.1930
9	0.000		0.1924	1.449	639.5	0.1924	2.548	858.9	0.1849
10	0.000		0.1912	0.862	607.8	0.1912	1.501	617.5	0.1837

Node No.	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8
1	3.857	632.9	0.7396	4.278	604.2	0.7396	4.864	596.9	0.7396
2	17.699	907.6	0.7082	19.515	747.0	0.7115	21.613	699.1	0.7153
3	20.815	1001.1	0.5233	23.378	824.8	0.5412	26.468	743.8	0.5623
4	20.320	1010.1	0.3842	23.380	887.4	0.4083	27.335	803.0	0.4425
5	19.221	973.7	0.3134	22.590	929.0	0.3357	27.129	845.8	0.3736
6	17.573	917.7	0.2664	20.995	936.4	0.2872	26.048	885.4	0.3237
7	14.699	841.2	0.2346	17.782	890.6	0.2530	23.061	903.3	0.2887
8	10.559	733.1	0.2123	12.735	780.0	0.2284	16.931	821.3	0.2613
9	3.473	611.9	0.2033	4.158	625.0	0.2183	5.550	639.4	0.2494
10	1.999	589.1	0.2009	2.360	595.3	0.2149	3.082	602.0	0.2441

Node No.	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	4.877	602.2	0.7396
2	21.670	740.8	0.7154
3	26.549	817.0	0.5626
4	27.428	863.7	0.4430
5	27.223	865.0	0.3740
6	26.137	845.5	0.3240
7	23.138	804.2	0.2890
8	16.986	726.9	0.2616
9	5.568	613.1	0.2497
10	3.095	599.0	0.2444

Table 4-237. LS1 Burnup and TH Feedback Parameters Assembly F1

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.476	653.0	0.7396	2.015	616.6	0.7396
2	0.000		0.7047	7.206	1081.6	0.7047	10.020	868.6	0.7084
3	0.000		0.4958	8.794	1210.8	0.4958	12.553	981.0	0.5192
4	0.000	Data	0.3519	8.612	1191.6	0.3519	12.552	1007.7	0.3809
5	0.000	Not	0.2841	7.811	1110.8	0.2841	12.733	1170.2	0.3166
6	0.000	Required	0.2423	6.616	1000.7	0.2423	11.582	1175.4	0.2651
7	0.000		0.2170	4.799	854.8	0.2170	8.547	980.5	0.2312
8	0.000		0.2020	3.285	750.7	0.2020	5.795	817.9	0.2116
9	0.000		0.1956	1.007	616.0	0.1956	1.797	634.3	0.2041
10	0.000		0.1957	0.653	597.1	0.1957	1.142	606.6	0.2034

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.215	636.6	0.7396	3.237	632.1	0.7396
2	15.548	940.0	0.7117	15.651	918.7	0.7118
3	19.105	1008.9	0.5348	19.237	1027.3	0.5349
4	19.525	1047.7	0.3978	19.665	1068.3	0.3979
5	19.958	1071.6	0.3281	20.097	1065.0	0.3282
6	19.173	1107.6	0.2755	19.304	1023.4	0.2756
7	15.937	1087.9	0.2396	16.049	942.6	0.2397
8	11.180	912.3	0.2157	11.259	807.3	0.2158
9	3.536	659.0	0.2067	3.564	635.7	0.2067
10	2.206	620.5	0.2053	2.222	607.2	0.2054

Table 4-238. LS1 Burnup and TH Feedback Parameters Assembly F2

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.324	642.9	0.7396	2.123	645.2	0.7396
2	0.000		0.7145	6.493	1013.7	0.7145	10.588	1059.3	0.7119
3	0.000		0.5257	8.311	1160.4	0.5257	13.445	1204.6	0.5161
4	0.000	Data	0.3736	8.381	1167.6	0.3736	13.426	1188.7	0.3656
5	0.000	Not	0.3006	7.675	1097.5	0.3006	12.533	1155.9	0.2934
6	0.000	Required	0.2557	6.546	994.6	0.2557	11.107	1105.8	0.2477
7	0.000		0.2284	4.803	854.9	0.2284	8.438	964.0	0.2189
8	0.000		0.2121	3.363	755.8	0.2121	5.858	816.0	0.2019
9	0.000		0.2055	1.043	617.9	0.2055	1.848	635.7	0.1949
10	0.000		0.2045	0.671	598.1	0.2045	1.181	608.5	0.1940

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.441	644.7	0.7396	3.467	645.8	0.7396
2	16.463	970.6	0.7122	16.581	987.6	0.7123
3	20.149	1022.7	0.5276	20.288	1060.9	0.5277
4	20.538	1060.8	0.3832	20.678	1065.0	0.3833
5	20.090	1104.1	0.3101	20.222	1032.8	0.3102
6	19.042	1142.4	0.2616	19.162	974.5	0.2616
7	16.068	1111.7	0.2289	16.169	895.0	0.2290
8	11.415	926.4	0.2066	11.485	777.2	0.2067
9	3.662	663.3	0.1979	3.684	624.2	0.1981
10	2.302	623.7	0.1965	2.315	598.8	0.1966

Table 4-239. LS1 Burnup and TH Feedback Parameters Assembly F3

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.264	639.0	0.7396	2.007	639.0	0.7396
2	0.000		0.7175	6.272	993.6	0.7175	10.119	1019.1	0.7160
3	0.000		0.5366	8.035	1132.5	0.5366	12.689	1155.2	0.5306
4	0.000	Data	0.3842	8.137	1142.8	0.3842	12.865	1133.4	0.3796
5	0.000	Not	0.3095	7.542	1064.7	0.3095	12.043	1095.7	0.3061
6	0.000	Required	0.2629	6.542	994.1	0.2629	10.770	1052.1	0.2592
7	0.000		0.2341	4.887	861.2	0.2341	8.340	938.2	0.2292
8	0.000		0.2166	3.414	759.1	0.2166	5.845	808.2	0.2108
9	0.000		0.2098	1.044	618.0	0.2098	1.826	633.6	0.2035
10	0.000		0.2088	0.667	597.9	0.2088	1.158	606.8	0.2026

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.196	636.0	0.7396	3.219	635.5	0.7396
2	15.576	933.8	0.7170	15.684	941.8	0.7171
3	19.223	989.3	0.5437	19.375	1130.4	0.5437
4	19.564	1022.3	0.3993	19.733	1223.7	0.3991
5	19.129	1058.3	0.3249	19.292	1190.1	0.3247
6	18.196	1091.2	0.2752	18.353	1154.0	0.2750
7	15.489	1064.5	0.2416	15.626	1063.8	0.2413
8	11.085	900.4	0.2182	11.185	889.0	0.2179
9	3.519	656.2	0.2093	3.553	659.3	0.2090
10	2.192	618.8	0.2077	2.213	621.3	0.2074

Table 4-241. LS1 Burnup and TH Feedback Parameters Assembly F5

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.308	641.8	0.7396	2.120	646.7	0.7396
2	0.000		0.7147	6.477	1012.2	0.7147	10.554	1055.9	0.7121
3	0.000		0.5248	8.357	1165.1	0.5248	13.450	1197.3	0.5161
4	0.000	Data	0.3703	8.652	1185.7	0.3703	13.652	1180.6	0.3641
5	0.000	Not	0.2953	8.125	1141.7	0.2953	12.954	1150.7	0.2908
6	0.000	Required	0.2487	7.067	1042.7	0.2487	11.777	1127.2	0.2440
7	0.000		0.2200	5.299	892.5	0.2200	9.223	1006.1	0.2138
8	0.000		0.2029	3.699	778.1	0.2029	6.478	850.9	0.1955
9	0.000		0.1962	1.142	623.3	0.1962	2.057	646.2	0.1882
10	0.000		0.1953	0.733	601.3	0.1953	1.312	614.8	0.1873

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.618	658.9	0.7396	3.632	605.2	0.7396
2	16.933	1017.1	0.7099	16.997	764.5	0.7101
3	20.531	1057.8	0.5210	20.618	838.4	0.5217
4	21.113	1094.7	0.3755	21.209	873.2	0.3764
5	20.848	1138.2	0.3020	20.939	856.2	0.3028
6	20.058	1178.7	0.2529	20.141	823.2	0.2536
7	17.352	1162.8	0.2193	17.422	775.0	0.2199
8	12.577	972.4	0.1965	12.625	704.1	0.1971
9	4.113	677.6	0.1877	4.128	604.4	0.1882
10	2.591	632.5	0.1863	2.599	584.9	0.1868

Table 4-242. LS1 Burnup and TH Feedback Parameters Assembly F6

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.271	639.4	0.7396	2.014	639.0	0.7396
2	0.000		0.7151	6.326	998.6	0.7151	10.094	1006.1	0.7150
3	0.000		0.5306	8.112	1140.2	0.5306	12.678	1139.9	0.5289
4	0.000	Data	0.3772	8.588	1189.1	0.3772	13.240	1120.7	0.3769
5	0.000	Not	0.2995	8.272	1156.5	0.2995	12.739	1090.1	0.3013
6	0.000	Required	0.2510	7.279	1060.3	0.2510	11.606	1067.7	0.2530
7	0.000		0.2213	5.501	908.2	0.2213	9.176	959.4	0.2221
8	0.000		0.2033	3.839	787.7	0.2033	6.544	841.5	0.2026
9	0.000		0.1963	1.173	625.0	0.1963	2.063	643.8	0.1951
10	0.000		0.1953	0.747	602.1	0.1953	1.301	612.5	0.1941

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.405	649.6	0.7396	3.432	649.3	0.7396
2	16.161	988.1	0.7138	16.261	998.6	0.7138
3	19.732	1036.5	0.5344	19.874	1076.9	0.5345
4	20.403	1065.7	0.3885	20.545	1078.2	0.3886
5	20.265	1101.1	0.3130	20.401	1047.2	0.3130
6	19.509	1139.1	0.2627	19.632	988.1	0.2628
7	16.940	1125.1	0.2284	17.043	900.5	0.2285
8	12.364	948.3	0.2049	12.434	777.2	0.2049
9	4.004	670.8	0.1959	4.027	627.0	0.1960
10	2.497	627.9	0.1944	2.511	601.6	0.1945

Table 4-243. LS1 Burnup and TH Feedback Parameters Assembly F7

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.244	637.7	0.7396	1.953	635.2	0.7396
2	0.000		0.7175	6.198	986.9	0.7175	9.859	990.1	0.7175
3	0.000		0.5385	7.957	1124.8	0.5385	12.626	1123.5	0.5371
4	0.000	Data	0.3855	8.250	1154.2	0.3855	12.796	1103.0	0.3853
5	0.000	Not	0.3086	7.631	1112.5	0.3086	12.158	1067.6	0.3099
6	0.000	Required	0.2604	6.890	1024.8	0.2604	11.002	1034.0	0.2618
7	0.000		0.2304	5.216	886.0	0.2304	8.660	936.7	0.2308
8	0.000		0.2121	3.633	773.7	0.2121	6.131	816.2	0.2114
9	0.000		0.2052	1.103	621.2	0.2052	1.913	636.2	0.2039
10	0.000		0.2042	0.702	599.7	0.2042	1.205	607.9	0.2029

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.162	637.4	0.7396	3.184	632.1	0.7396
2	15.354	937.2	0.7180	15.460	929.8	0.7181
3	18.994	992.4	0.5481	19.136	1081.1	0.5482
4	19.493	1022.0	0.4026	19.648	1145.0	0.4027
5	19.206	1054.7	0.3270	19.356	1122.3	0.3269
6	18.398	1088.2	0.2764	18.538	1071.7	0.2763
7	15.852	1068.7	0.2419	15.975	989.7	0.2418
8	11.465	907.9	0.2179	11.553	843.7	0.2179
9	3.649	658.7	0.2089	3.680	650.4	0.2088
10	2.263	620.2	0.2074	2.282	615.6	0.2072

Table 4-244. LS1 Burnup and TH Feedback Parameters Assembly F8

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.302	641.5	0.7396	2.112	646.5	0.7396
2	0.000		0.7149	6.454	1010.1	0.7149	10.520	1054.0	0.7123
3	0.000		0.5255	8.336	1163.0	0.5255	13.419	1195.4	0.5168
4	0.000	Data	0.3710	8.633	1193.8	0.3710	13.624	1179.0	0.3648
5	0.000	Not	0.2959	8.108	1140.0	0.2959	12.928	1149.3	0.2914
6	0.000	Required	0.2492	7.072	1041.3	0.2492	11.764	1125.8	0.2444
7	0.000		0.2205	5.288	891.5	0.2205	9.203	1005.0	0.2142
8	0.000		0.2033	3.690	777.5	0.2033	6.464	850.2	0.1959
9	0.000		0.1967	1.139	623.1	0.1967	2.053	646.1	0.1886
10	0.000		0.1957	0.731	601.2	0.1957	1.308	614.6	0.1876

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.606	656.7	0.7396	3.620	605.2	0.7396
2	16.881	1015.4	0.7101	16.944	762.2	0.7103
3	20.484	1056.3	0.5216	20.571	838.4	0.5223
4	21.072	1093.3	0.3762	21.167	869.2	0.3770
5	20.808	1136.8	0.3026	20.900	856.2	0.3033
6	20.020	1177.1	0.2534	20.103	823.2	0.2540
7	17.319	1161.4	0.2197	17.388	772.7	0.2203
8	12.551	971.4	0.1969	12.599	703.0	0.1975
9	4.106	677.5	0.1881	4.121	604.4	0.1886
10	2.585	632.4	0.1867	2.593	584.9	0.1871

Table 4-245. LS1 Burnup and TH Feedback Parameters Assembly F9

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.210	635.4	0.7396	1.963	640.1	0.7396
2	0.000		0.7186	6.128	980.7	0.7186	10.039	1029.5	0.7160
3	0.000		0.5396	8.036	1132.6	0.5396	12.980	1170.6	0.5298
4	0.000	Data	0.3848	8.322	1161.5	0.3848	13.108	1143.3	0.3777
5	0.000	Not	0.3080	7.813	1110.8	0.3080	12.405	1110.6	0.3031
6	0.000	Required	0.2602	6.784	1015.4	0.2602	11.364	1108.6	0.2549
7	0.000		0.2309	5.068	874.6	0.2309	8.937	997.9	0.2236
8	0.000		0.2132	3.579	770.0	0.2132	6.305	844.3	0.2046
9	0.000		0.2062	1.107	621.4	0.2062	1.989	643.0	0.1972
10	0.000		0.2053	0.708	600.0	0.2053	1.261	612.4	0.1962

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.436	655.2	0.7396	3.453	615.2	0.7396
2	16.499	1024.7	0.7120	16.576	815.6	0.7122
3	20.145	1065.8	0.5290	20.248	904.8	0.5298
4	20.555	1093.3	0.3838	20.669	947.9	0.3845
5	20.208	1129.0	0.3085	20.318	929.4	0.3101
6	19.467	1159.8	0.2596	19.566	888.0	0.2601
7	16.788	1134.0	0.2253	16.873	830.9	0.2257
8	12.108	947.0	0.2025	12.167	741.4	0.2029
9	3.911	669.7	0.1937	3.930	615.6	0.1941
10	2.450	627.5	0.1923	2.461	593.2	0.1927

Table 4-246. LS1 Burnup and TH Feedback Parameters Assembly F10

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.264	639.0	0.7396	2.007	639.0	0.7396
2	0.000		0.7175	6.272	993.6	0.7175	10.122	1019.6	0.7161
3	0.000		0.5368	8.035	1132.5	0.5368	12.889	1155.2	0.5307
4	0.000	Data	0.3844	8.135	1142.6	0.3844	12.862	1133.3	0.3798
5	0.000	Not	0.3097	7.540	1084.5	0.3097	12.040	1095.5	0.3062
6	0.000	Required	0.2631	6.540	993.9	0.2631	10.768	1052.0	0.2594
7	0.000		0.2343	4.885	861.0	0.2343	8.338	938.1	0.2293
8	0.000		0.2168	3.412	759.0	0.2168	5.642	808.1	0.2109
9	0.000		0.2100	1.043	617.9	0.2100	1.825	633.6	0.2037
10	0.000		0.2090	0.666	597.6	0.2090	1.157	606.6	0.2027

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.196	636.0	0.7396	3.218	632.1	0.7396
2	15.571	933.1	0.7171	15.678	938.8	0.7171
3	19.218	988.9	0.5439	19.370	1130.4	0.5440
4	19.560	1022.1	0.3996	19.729	1221.8	0.3994
5	19.126	1058.3	0.3252	19.289	1188.3	0.3249
6	18.194	1091.2	0.2765	18.350	1152.2	0.2762
7	15.487	1064.6	0.2418	15.626	1063.8	0.2415
8	11.083	900.4	0.2184	11.183	890.3	0.2181
9	3.519	656.3	0.2095	3.552	656.3	0.2091
10	2.191	618.8	0.2079	2.212	621.3	0.2076

Table 4-247. LS1 Burnup and TH Feedback Parameters Assembly F11

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.304	641.6	0.7396	2.089	643.7	0.7396
2	0.000		0.7155	6.434	1008.3	0.7155	10.466	1048.9	0.7133
3	0.000		0.5294	8.208	1149.9	0.5294	13.239	1186.2	0.5208
4	0.000	Data	0.3774	8.268	1156.0	0.3774	13.182	1165.5	0.3705
5	0.000	Not	0.3040	7.603	1090.5	0.3040	12.306	1129.4	0.2981
6	0.000	Required	0.2586	6.531	993.2	0.2586	10.968	1085.3	0.2521
7	0.000		0.2308	4.840	857.7	0.2308	8.433	957.9	0.2226
8	0.000		0.2140	3.395	757.8	0.2140	5.889	815.9	0.2051
9	0.000		0.2072	1.045	618.0	0.2072	1.848	635.6	0.1980
10	0.000		0.2062	0.668	597.9	0.2062	1.174	608.2	0.1971

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.365	641.6	0.7396	3.388	635.5	0.7396
2	16.192	957.3	0.7138	16.297	928.4	0.7139
3	19.809	1010.4	0.5330	19.936	1007.3	0.5333
4	20.145	1046.7	0.3890	20.276	1024.6	0.3892
5	19.694	1087.5	0.3156	19.819	995.5	0.3158
6	18.712	1122.9	0.2666	18.825	943.8	0.2668
7	15.882	1093.7	0.2335	15.977	869.6	0.2337
8	11.333	917.0	0.2108	11.398	759.7	0.2110
9	3.618	660.7	0.2020	3.638	618.5	0.2022
10	2.259	621.7	0.2005	2.271	596.0	0.2008

Table 4-248. LS1 Burnup and TH Feedback Parameters Assembly F12

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.328	643.2	0.7396	2.130	645.6	0.7396
2	0.000		0.7144	6.509	1015.2	0.7144	10.616	1061.1	0.7118
3	0.000		0.5251	8.321	1161.4	0.5251	13.460	1205.4	0.5155
4	0.000	Data	0.3732	8.385	1168.0	0.3732	13.431	1188.9	0.3652
5	0.000	Not	0.3002	7.677	1097.7	0.3002	12.536	1156.0	0.2931
6	0.000	Required	0.2554	6.547	994.7	0.2554	11.109	1105.9	0.2475
7	0.000		0.2282	4.804	855.0	0.2282	8.440	964.2	0.2167
8	0.000		0.2120	3.364	755.8	0.2120	5.859	816.0	0.2017
9	0.000		0.2053	1.043	617.9	0.2053	1.848	635.7	0.1948
10	0.000		0.2043	0.671	598.1	0.2043	1.182	608.6	0.1939

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.450	644.6	0.7396	3.476	645.8	0.7396
2	16.492	970.7	0.7121	16.610	988.0	0.7122
3	20.167	1022.9	0.5271	20.306	1062.1	0.5273
4	20.548	1061.3	0.3829	20.688	1068.3	0.3830
5	20.097	1104.5	0.3099	20.230	1034.4	0.3099
6	19.048	1142.8	0.2614	19.168	974.5	0.2615
7	16.072	1111.9	0.2287	16.173	896.3	0.2288
8	11.417	926.5	0.2065	11.487	777.2	0.2066
9	3.663	663.3	0.1978	3.685	624.2	0.1979
10	2.302	623.6	0.1964	2.316	601.6	0.1965

Table 4-249. LS1 Burnup and TH Feedback Parameters Assembly F13

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.304	641.6	0.7396	2.111	646.1	0.7396
2	0.000		0.7147	6.449	1009.8	0.7147	10.585	1066.0	0.7114
3	0.000		0.5246	8.411	1170.7	0.5246	13.646	1222.8	0.5134
4	0.000	Data	0.3705	8.687	1189.0	0.3705	13.754	1210.5	0.3615
5	0.000	Not	0.2967	7.691	1118.5	0.2967	12.890	1180.5	0.2888
6	0.000	Required	0.2515	6.712	1009.1	0.2515	11.442	1134.1	0.2428
7	0.000		0.2242	4.891	851.6	0.2242	8.652	982.2	0.2140
8	0.000		0.2082	3.417	759.3	0.2082	5.968	822.8	0.1972
9	0.000		0.2016	1.063	619.0	0.2016	1.887	637.5	0.1904
10	0.000		0.2006	0.686	598.9	0.2006	1.209	609.7	0.1895

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.551	653.0	0.7396	3.571	625.3	0.7396
2	16.867	1007.9	0.7099	16.955	859.2	0.7100
3	20.689	1054.2	0.5200	20.799	931.9	0.5205
4	21.198	1093.0	0.3745	21.313	950.6	0.3751
5	20.768	1138.6	0.3014	20.898	929.4	0.3019
6	19.742	1180.7	0.2530	19.842	888.0	0.2534
7	16.680	1152.3	0.2203	16.765	833.4	0.2207
8	11.842	953.3	0.1984	11.902	741.5	0.1988
9	3.627	670.7	0.1899	3.646	615.6	0.1902
10	2.415	628.4	0.1885	2.425	590.5	0.1889

Table 4-250. LS1 Burnup and TH Feedback Parameters Assembly F14

	Statepoint 7 (BOC Cy 7).			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.448	651.0	0.7396	2.194	639.5	0.7396
2	0.000		0.7086	7.005	1061.8	0.7086	10.785	1008.3	0.7103
3	0.000		0.5083	8.607	1191.1	0.5083	13.418	1147.6	0.5135
4	0.000	Data	0.3607	8.469	1176.7	0.3607	13.323	1155.1	0.3649
5	0.000	Not	0.2911	7.709	1100.8	0.2911	12.504	1144.9	0.2937
6	0.000	Required	0.2481	6.580	997.5	0.2481	11.059	1092.4	0.2484
7	0.000		0.2219	4.847	858.2	0.2219	8.388	950.7	0.2199
8	0.000		0.2061	3.341	754.4	0.2061	5.767	807.7	0.2027
9	0.000		0.1997	1.015	616.4	0.1997	1.786	632.8	0.1959
10	0.000		0.1988	0.649	596.9	0.1988	1.131	606.0	0.1949

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.326	632.2	0.7396	3.348	632.1	0.7396
2	15.874	902.7	0.7141	15.979	925.5	0.7141
3	19.524	969.4	0.5354	19.659	1045.2	0.5357
4	19.984	1018.7	0.3929	20.128	1091.6	0.3930
5	19.626	1061.8	0.3196	19.772	1101.7	0.3196
6	18.600	1102.5	0.2710	18.740	1071.7	0.2710
7	15.687	1079.0	0.2384	15.810	988.7	0.2384
8	11.109	908.6	0.2154	11.196	838.7	0.2154
9	3.512	658.1	0.2066	3.541	644.5	0.2066
10	2.179	619.6	0.2050	2.198	615.6	0.2049

Table 4-251. LS1 Burnup and TH Feedback Parameters Assembly F15

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.418	649.1	0.7396	2.193	642.5	0.7396
2	0.000		0.7096	6.877	1049.7	0.7096	10.807	1032.3	0.7095
3	0.000		0.5092	8.673	1198.0	0.5092	13.683	1182.4	0.5093
4	0.000	Data	0.3589	8.705	1201.4	0.3589	13.749	1188.3	0.3592
5	0.000	Not	0.2879	7.965	1125.9	0.2879	12.972	1181.8	0.2874
6	0.000	Required	0.2444	6.759	1013.4	0.2444	11.418	1122.2	0.2419
7	0.000		0.2181	4.909	862.9	0.2181	8.520	960.7	0.2137
8	0.000		0.2026	3.405	758.5	0.2026	5.852	810.2	0.1971
9	0.000		0.1962	1.054	618.5	0.1962	1.841	634.1	0.1905
10	0.000		0.1953	0.679	598.5	0.1953	1.175	607.2	0.1895

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.485	642.9	0.7396	3.506	628.7	0.7396
2	16.504	954.8	0.7114	16.598	882.6	0.7115
3	20.301	1014.6	0.5248	20.420	971.1	0.5253
4	20.846	1059.5	0.3802	20.971	997.0	0.3807
5	20.515	1102.8	0.3070	20.635	972.9	0.3074
6	19.401	1147.5	0.2589	19.510	926.6	0.2592
7	16.267	1123.5	0.2267	16.360	862.9	0.2271
8	11.512	935.1	0.2044	11.578	763.1	0.2047
9	3.694	665.6	0.1958	3.715	621.3	0.1961
10	2.317	624.8	0.1944	2.329	596.0	0.1946

Table 4-252. LS1 Burnup and TH Feedback Parameters Assembly F16

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.477	653.0	0.7396	2.202	637.0	0.7396
2	0.000		0.7060	7.221	1083.1	0.7060	10.984	1005.9	0.7080
3	0.000		0.4989	8.839	1215.7	0.4989	13.646	1147.0	0.5070
4	0.000	Data	0.3526	8.647	1195.3	0.3526	13.496	1154.2	0.3600
5	0.000	Not	0.2844	7.832	1112.8	0.2844	12.765	1168.9	0.2897
6	0.000	Required	0.2425	6.633	1002.2	0.2425	11.263	1117.4	0.2445
7	0.000		0.2169	4.810	855.6	0.2169	8.378	954.5	0.2162
8	0.000		0.2019	3.302	751.8	0.2019	5.713	806.0	0.1995
9	0.000		0.1957	1.017	616.5	0.1957	1.786	632.4	0.1930
10	0.000		0.1947	0.656	597.3	0.1947	1.140	606.2	0.1920

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.406	637.0	0.7396	3.432	645.8	0.7396
2	16.469	936.2	0.7112	18.590	1000.2	0.7113
3	20.109	1000.9	0.5262	20.252	1061.9	0.5263
4	20.406	1041.7	0.3841	20.552	1100.0	0.3841
5	20.047	1077.1	0.3118	20.189	1076.6	0.3118
6	18.934	1115.6	0.2639	19.064	1018.9	0.2639
7	15.784	1089.5	0.2321	15.891	919.9	0.2321
8	11.088	911.4	0.2098	11.161	789.1	0.2098
9	3.523	658.8	0.2013	3.548	632.8	0.2013
10	2.205	620.6	0.1997	2.220	604.4	0.1997

Table 4-253. LS1 Burnup and TH Feedback Parameters Assembly F17

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.333	643.5	0.7396	2.030	633.9	0.7396
2	0.000		0.7136	6.448	1009.5	0.7136	10.014	975.8	0.7148
3	0.000		0.5234	8.401	1169.6	0.5234	13.158	1138.5	0.5272
4	0.000	Data	0.3697	8.658	1196.2	0.3697	13.622	1167.0	0.3733
5	0.000	Not	0.2953	8.067	1135.9	0.2953	12.869	1146.2	0.2980
6	0.000	Required	0.2493	6.921	1027.8	0.2493	11.377	1088.6	0.2506
7	0.000		0.2217	5.065	874.6	0.2217	8.527	939.7	0.2212
8	0.000		0.2053	3.534	767.0	0.2053	5.887	799.0	0.2038
9	0.000		0.1986	1.100	621.0	0.1986	1.863	631.8	0.1969
10	0.000		0.1975	0.708	600.0	0.1975	1.189	605.9	0.1958

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.287	640.6	0.7396	3.308	628.7	0.7396
2	15.692	944.3	0.7160	15.693	910.9	0.7160
3	19.669	1005.1	0.5394	19.803	1040.6	0.5397
4	20.625	1050.6	0.3916	20.670	1091.5	0.3916
5	20.354	1097.0	0.3154	20.495	1074.9	0.3155
6	19.352	1146.6	0.2851	19.484	1028.1	0.2853
7	16.353	1131.4	0.2313	16.468	951.2	0.2314
8	11.703	948.0	0.2080	11.783	816.0	0.2081
9	3.798	670.4	0.1990	3.825	638.6	0.1991
10	2.387	628.0	0.1975	2.404	610.0	0.1976

Table 4-254. LS1 Burnup and TH Feedback Parameters Assembly F18

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.479	653.2	0.7396	2.019	616.7	0.7396
2	0.000		0.7046	7.221	1083.0	0.7046	10.041	869.3	0.7083
3	0.000		0.4955	8.808	1212.3	0.4955	12.572	981.8	0.5189
4	0.000	Data	0.3517	8.622	1192.7	0.3517	12.567	1008.4	0.3807
5	0.000	Not	0.2840	7.820	1111.6	0.2840	12.747	1171.1	0.3165
6	0.000	Required	0.2422	6.622	1001.3	0.2422	11.594	1176.5	0.2650
7	0.000		0.2169	4.804	855.1	0.2169	8.556	981.1	0.2310
8	0.000		0.2018	3.288	750.9	0.2018	5.800	818.1	0.2114
9	0.000		0.1955	1.008	616.0	0.1955	1.798	634.3	0.2041
10	0.000		0.1956	0.653	597.1	0.1956	1.143	606.7	0.2032

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.221	636.9	0.7396	3.243	632.1	0.7396
2	15.573	840.4	0.7116	15.675	913.9	0.7117
3	19.130	1009.3	0.5344	19.262	1027.3	0.5347
4	19.548	1048.4	0.3976	19.688	1069.9	0.3978
5	19.979	1072.3	0.3280	20.118	1081.7	0.3281
6	19.192	1108.3	0.2754	19.323	1023.4	0.2755
7	15.953	1088.6	0.2396	16.066	942.6	0.2396
8	11.191	912.7	0.2157	11.269	807.4	0.2157
9	3.541	659.1	0.2067	3.567	635.7	0.2067
10	2.208	620.6	0.2053	2.224	607.2	0.2053

Table 4-255. LS1 Burnup and TH Feedback Parameters Assembly G1

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7398	1.136	630.5	0.7396	1.866	637.4	0.7396
2	0.000		0.7248	5.395	917.0	0.7248	9.143	1003.5	0.7203
3	0.000		0.5842	7.630	1092.0	0.5842	12.742	1199.1	0.5444
4	0.000	Data	0.4044	8.252	1154.1	0.4044	13.403	1204.3	0.3871
5	0.000	Not	0.3224	7.669	1095.7	0.3224	12.629	1172.0	0.3079
6	0.000	Required	0.2721	6.576	996.2	0.2721	11.411	1150.4	0.2574
7	0.000		0.2417	4.916	862.8	0.2417	8.853	1007.3	0.2255
8	0.000		0.2240	3.316	752.5	0.2240	5.915	828.1	0.2073
9	0.000		0.2170	1.083	620.0	0.2170	1.945	641.0	0.2002
10	0.000		0.2159	0.710	600.1	0.2159	1.267	612.7	0.1993

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.392	658.7	0.7396	3.405	601.9	0.7396
2	15.812	1043.6	0.7134	15.874	754.5	0.7135
3	20.064	1079.8	0.5350	20.152	841.5	0.5356
4	21.093	1116.2	0.3864	21.195	898.1	0.3872
5	20.778	1163.4	0.3089	20.882	904.9	0.3096
6	19.955	1208.6	0.2571	20.066	891.3	0.2577
7	17.196	1184.2	0.2216	17.325	1017.8	0.2224
8	12.045	974.7	0.1989	12.154	930.5	0.1996
9	4.016	678.3	0.1901	4.052	665.2	0.1908
10	2.685	634.6	0.1889	2.606	621.2	0.1895

Table 4-256. LS1 Burnup and TH Feedback Parameters Assembly G2

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.230	638.6	0.7396	2.006	642.6	0.7396
2	0.000		0.7217	5.822	953.2	0.7217	9.672	1051.6	0.7168
3	0.000		0.5515	7.784	1106.6	0.5515	12.932	1205.8	0.5324
4	0.000	Data	0.3960	8.164	1144.1	0.3960	13.118	1171.2	0.3807
5	0.000	Not	0.3177	7.579	1087.0	0.3177	12.260	1124.3	0.3057
6	0.000	Required	0.2692	6.525	991.6	0.2692	10.968	1085.2	0.2578
7	0.000		0.2395	4.891	860.9	0.2395	8.520	962.2	0.2272
8	0.000		0.2219	3.312	752.1	0.2219	5.760	812.4	0.2091
9	0.000		0.2151	1.083	620.0	0.2151	1.909	637.6	0.2021
10	0.000		0.2141	0.712	600.2	0.2141	1.246	610.6	0.2012

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.410	650.4	0.7396	3.433	635.4	0.7396
2	16.225	1013.7	0.7134	16.336	951.4	0.7134
3	20.002	1055.7	0.5327	20.139	1050.1	0.5329
4	20.462	1082.0	0.3878	20.606	1087.0	0.3879
5	19.941	1115.3	0.3131	20.082	1072.1	0.3133
6	18.951	1146.0	0.2633	19.078	1007.1	0.2634
7	16.169	1112.3	0.2294	16.272	904.0	0.2295
8	11.282	921.3	0.2071	11.353	779.1	0.2072
9	3.719	662.9	0.1986	3.742	626.9	0.1987
10	2.386	624.6	0.1974	2.400	601.5	0.1975

Table 4-257. LS1 Burnup and TH Feedback Parameters Assembly G3

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.219	635.9	0.7396	1.954	638.0	0.7396
2	0.000		0.7217	5.712	943.7	0.7217	9.456	1002.7	0.7188
3	0.000		0.5518	7.853	1113.4	0.5518	12.887	1185.1	0.5387
4	0.000	Data	0.3929	8.419	1170.0	0.3929	13.471	1188.5	0.3818
5	0.000	Not	0.3130	7.857	1114.9	0.3130	12.722	1153.8	0.3041
6	0.000	Required	0.2633	6.967	1030.7	0.2633	11.584	1110.4	0.2549
7	0.000		0.2325	5.291	891.3	0.2325	9.053	981.3	0.2233
8	0.000		0.2143	3.515	765.5	0.2143	6.144	831.6	0.2043
9	0.000		0.2074	1.138	623.0	0.2074	2.052	645.9	0.1968
10	0.000		0.2063	0.748	602.1	0.2063	1.340	615.9	0.1958

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.387	652.3	0.7396	3.400	601.9	0.7396
2	15.736	1006.8	0.7153	15.797	754.5	0.7154
3	19.898	1050.2	0.5379	19.983	832.2	0.5385
4	20.891	1089.5	0.3883	20.990	884.6	0.3891
5	20.601	1135.4	0.3113	20.748	1109.0	0.3122
6	19.849	1177.7	0.2600	20.007	1158.5	0.2607
7	17.226	1166.0	0.2247	17.355	1016.8	0.2251
8	12.292	975.9	0.2010	12.379	842.2	0.2014
9	4.154	680.2	0.1919	4.182	641.4	0.1922
10	2.676	635.6	0.1906	2.694	612.7	0.1908

Table 4-258. LS1 Burnup and TH Feedback Parameters Assembly G4

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.049	624.9	0.7396	1.748	634.0	0.7396
2	0.000		0.7288	4.869	874.4	0.7288	8.338	960.6	0.7239
3	0.000		0.5886	6.973	1031.1	0.5886	11.844	1156.7	0.5660
4	0.000	Data	0.4311	7.806	1108.7	0.4311	12.933	1201.9	0.4090
5	0.000	Not	0.3444	7.381	1068.3	0.3444	12.397	1182.0	0.3249
6	0.000	Required	0.2899	6.568	995.4	0.2899	11.129	1104.8	0.2719
7	0.000		0.2560	4.969	868.8	0.2560	8.512	950.2	0.2387
8	0.000		0.2358	3.314	752.2	0.2358	5.770	810.5	0.2187
9	0.000		0.2279	1.075	618.6	0.2279	1.934	640.7	0.2105
10	0.000		0.2266	0.701	599.6	0.2266	1.260	612.9	0.2093

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.177	652.1	0.7396	3.199	632.0	0.7396
2	14.656	1010.4	0.7184	14.760	921.8	0.7184
3	18.758	1041.1	0.5554	18.888	1020.4	0.5555
4	20.067	1061.8	0.4071	20.206	1063.9	0.4073
5	20.021	1109.7	0.3261	20.170	1112.4	0.3262
6	19.305	1166.2	0.2720	19.449	1087.3	0.2720
7	16.644	1161.5	0.2345	16.765	980.0	0.2345
8	11.909	875.2	0.2095	11.993	828.1	0.2095
9	4.043	680.6	0.1998	4.071	641.4	0.1998
10	2.606	636.2	0.1983	2.623	609.9	0.1984

Table 4-259. LS1 Burnup and TH Feedback Parameters Assembly G5

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.128	630.0	0.7396	1.880	637.6	0.7396
2	0.000		0.7253	5.366	914.6	0.7253	9.111	1003.1	0.7206
3	0.000		0.5657	7.610	1090.1	0.5657	12.718	1198.5	0.5453
4	0.000	Data	0.4052	8.253	1153.2	0.4052	13.388	1203.3	0.3875
5	0.000	Not	0.3229	7.678	1096.5	0.3229	12.628	1170.5	0.3082
6	0.000	Required	0.2722	6.683	1003.7	0.2722	11.609	1152.4	0.2574
7	0.000		0.2411	5.023	870.6	0.2411	9.016	1015.7	0.2251
8	0.000		0.2230	3.379	756.5	0.2230	6.066	839.1	0.2063
9	0.000		0.2159	1.100	620.9	0.2159	2.005	645.1	0.1989
10	0.000		0.2149	0.722	600.7	0.2149	1.308	615.4	0.1979

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.399	659.6	0.7396	3.422	635.4	0.7396
2	16.830	1048.6	0.7133	16.939	945.4	0.7133
3	20.078	1083.5	0.5348	20.211	1032.1	0.5350
4	21.100	1118.4	0.3860	21.240	1067.1	0.3862
5	20.788	1164.5	0.3085	20.935	1098.6	0.3087
6	20.051	1205.3	0.2567	20.190	1062.6	0.2568
7	17.374	1165.6	0.2210	17.489	952.0	0.2211
8	12.255	979.6	0.1979	12.334	809.3	0.1980
9	4.106	680.1	0.1891	4.132	635.6	0.1892
10	2.647	635.6	0.1878	2.663	607.1	0.1880

Table 4-250. LS1 Burnup and TH Feedback Parameters Assembly G5

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.181	633.4	0.7396	1.947	641.4	0.7396
2	0.000		0.7241	5.550	930.0	0.7241	9.493	1034.3	0.7186
3	0.000		0.5818	7.596	1088.5	0.5818	12.733	1203.8	0.5396
4	0.000	Data	0.4051	8.011	1128.9	0.4051	13.070	1189.7	0.3860
5	0.000	Not	0.3256	7.352	1085.7	0.3256	12.201	1152.8	0.3092
6	0.000	Required	0.2769	6.255	988.7	0.2769	10.956	1127.8	0.2600
7	0.000		0.2474	4.651	843.2	0.2474	8.482	988.8	0.2289
8	0.000		0.2301	3.192	744.3	0.2301	5.721	818.8	0.2112
9	0.000		0.2230	1.055	618.5	0.2230	1.897	639.1	0.2042
10	0.000		0.2219	0.693	599.2	0.2219	1.239	611.7	0.2033

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.418	654.9	0.7396	3.440	632.0	0.7396
2	16.005	1028.6	0.7131	16.105	905.9	0.7132
3	19.939	1068.7	0.5341	20.067	1008.8	0.5344
4	20.639	1104.1	0.3881	20.776	1063.9	0.3884
5	20.188	1146.5	0.3121	20.338	1116.9	0.3123
6	19.274	1161.2	0.2612	19.421	1100.6	0.2613
7	18.435	1145.3	0.2266	16.563	1013.4	0.2266
8	11.465	941.5	0.2044	11.556	855.0	0.2045
9	3.806	668.7	0.1959	3.836	647.3	0.1960
10	2.450	628.6	0.1946	2.468	612.7	0.1947

Table 4-261. LS1 Burnup and TH Feedback Parameters Assembly G7

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.040	624.3	0.7396	1.813	642.2	0.7396
2	0.000		0.7294	4.889	876.0	0.7294	8.702	1013.3	0.7206
3	0.000		0.5893	6.990	1032.6	0.5893	12.160	1209.5	0.5552
4	0.000	Data	0.4307	7.802	1108.3	0.4307	13.192	1249.9	0.3995
5	0.000	Not	0.3442	7.323	1062.9	0.3442	12.616	1232.0	0.3168
6	0.000	Required	0.2907	6.327	974.6	0.2907	11.109	1142.2	0.2850
7	0.000		0.2579	4.698	848.7	0.2579	8.342	964.7	0.2331
8	0.000		0.2385	3.125	740.1	0.2385	5.535	805.3	0.2146
9	0.000		0.2306	1.016	616.4	0.2306	1.831	636.6	0.2069
10	0.000		0.2294	0.665	597.7	0.2294	1.197	610.4	0.2058

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.404	663.1	0.7396	3.426	632.0	0.7396
2	15.600	1068.1	0.7126	15.705	926.2	0.7126
3	19.430	1075.0	0.5398	19.578	1108.3	0.5399
4	20.570	1085.4	0.3944	20.735	1199.7	0.3943
5	20.481	1134.1	0.3154	20.639	1159.7	0.3153
6	19.581	1197.7	0.2627	19.730	1109.1	0.2626
7	16.703	1185.9	0.2265	16.836	1035.2	0.2264
8	11.710	978.6	0.2029	11.807	878.6	0.2027
9	3.936	680.4	0.1938	3.969	656.2	0.1935
10	2.545	636.3	0.1922	2.567	624.1	0.1921

Table 4-262. LS1 Burnup and TH Feedback Parameters Assembly G8

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.048	624.9	0.7396	1.748	633.9	0.7396
2	0.000		0.7288	4.867	874.2	0.7288	8.332	960.2	0.7240
3	0.000		0.5888	6.970	1030.6	0.5888	11.839	1156.4	0.5662
4	0.000	Data	0.4313	7.604	1108.5	0.4313	12.931	1201.8	0.4092
5	0.000	Not	0.3445	7.380	1068.2	0.3445	12.395	1181.9	0.3251
6	0.000	Required	0.2900	6.568	995.3	0.2900	11.127	1104.6	0.2720
7	0.000		0.2561	4.968	866.7	0.2561	8.510	950.1	0.2389
8	0.000		0.2359	3.313	752.2	0.2359	5.769	810.5	0.2188
9	0.000		0.2280	1.075	619.6	0.2280	1.933	640.6	0.2106
10	0.000		0.2268	0.701	599.6	0.2268	1.260	612.9	0.2093

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.178	652.1	0.7396	3.198	632.0	0.7396
2	14.651	1010.4	0.7184	14.755	923.3	0.7185
3	18.754	1041.2	0.5555	18.885	1021.5	0.5556
4	20.083	1061.7	0.4073	20.203	1067.2	0.4074
5	20.018	1109.6	0.3262	20.168	1114.2	0.3263
6	19.302	1168.0	0.2721	19.446	1089.0	0.2721
7	16.641	1161.5	0.2346	16.763	981.5	0.2345
8	11.907	975.1	0.2096	11.991	828.0	0.2098
9	4.042	680.6	0.1998	4.070	641.4	0.1998
10	2.605	638.1	0.1984	2.623	612.7	0.1984

Table 4-263. LS1 Burnup and TH Feedback Parameters Assembly G9

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.129	630.1	0.7396	1.888	630.1	0.7396
2	0.000		0.7248	5.264	906.2	0.7248	9.081	906.2	0.7193
3	0.000		0.5660	7.476	1077.4	0.5660	12.704	1077.4	0.5425
4	0.000	Data	0.4095	8.310	1158.9	0.4095	13.643	1158.9	0.3873
5	0.000	Not	0.3258	7.805	1108.8	0.3258	12.858	1108.8	0.3070
6	0.000	Required	0.2732	6.788	1014.8	0.2732	11.544	1014.8	0.2560
7	0.000		0.2414	5.081	875.2	0.2414	8.630	875.2	0.2245
8	0.000		0.2228	3.376	756.3	0.2228	5.912	756.3	0.2059
9	0.000		0.2155	1.096	620.7	0.2155	1.965	620.7	0.1984
10	0.000		0.2144	0.720	600.6	0.2144	1.287	600.6	0.1974

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.384	658.6	0.7396	3.408	638.8	0.7396
2	15.618	1031.0	0.7140	15.728	949.9	0.7141
3	19.865	1064.5	0.6385	19.998	1032.1	0.6367
4	21.116	1094.8	0.3890	21.256	1055.7	0.3892
5	20.815	1143.5	0.3108	21.048	1031.8	0.3110
6	20.003	1196.3	0.2586	20.124	976.7	0.2588
7	17.171	1163.8	0.2231	17.273	894.4	0.2233
8	12.125	981.6	0.1997	12.194	776.6	0.1999
9	4.083	681.1	0.1906	4.106	626.9	0.1908
10	2.639	636.5	0.1893	2.653	601.5	0.1894

Table 4-264. LS1 Burnup and TH Feedback Parameters Assembly G10

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.140	630.8	0.7396	1.872	637.6	0.7396
2	0.000		0.7247	5.408	916.1	0.7247	9.163	1004.6	0.7202
3	0.000		0.5636	7.641	1093.1	0.5636	12.758	1199.9	0.5439
4	0.000	Data	0.4039	8.270	1154.8	0.4039	13.413	1204.8	0.3866
5	0.000	Not	0.3220	7.676	1096.4	0.3220	12.638	1172.5	0.3075
6	0.000	Required	0.2717	6.583	996.9	0.2717	11.420	1150.8	0.2570
7	0.000		0.2414	4.922	863.2	0.2414	8.861	1007.7	0.2252
8	0.000		0.2237	3.322	752.7	0.2237	5.922	828.4	0.2070
9	0.000		0.2167	1.084	620.0	0.2167	1.947	641.1	0.1999
10	0.000		0.2157	0.711	600.1	0.2157	1.269	612.6	0.1990

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.401	658.9	0.7396	3.424	635.4	0.7396
2	15.843	1044.6	0.7132	15.951	940.9	0.7133
3	20.087	1080.6	0.5345	20.222	1042.9	0.5347
4	21.111	1117.1	0.3859	21.255	1087.0	0.3861
5	20.795	1164.2	0.3085	20.943	1107.3	0.3088
6	19.982	1207.4	0.2567	20.123	1075.5	0.2569
7	17.210	1184.7	0.2214	17.335	999.4	0.2215
8	12.055	975.0	0.1986	12.145	852.3	0.1987
9	4.019	678.4	0.1899	4.050	650.2	0.1899
10	2.687	634.6	0.1887	2.607	618.4	0.1887

Table 4-265. LS1 Burnup and TH Feedback Parameters Assembly G11

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.037	624.1	0.7396	1.808	642.0	0.7396
2	0.000		0.7295	4.675	874.9	0.7295	8.680	1012.0	0.7207
3	0.000		0.5897	6.975	1031.2	0.5897	12.137	1208.2	0.5557
4	0.000	Data	0.4311	7.790	1107.1	0.4311	13.173	1248.8	0.4000
5	0.000	Not	0.3446	7.312	1061.9	0.3446	12.598	1230.8	0.3172
6	0.000	Required	0.2911	6.317	973.9	0.2911	11.094	1141.3	0.2653
7	0.000		0.2582	4.690	846.2	0.2582	8.329	963.9	0.2333
8	0.000		0.2387	3.121	739.8	0.2387	5.526	804.6	0.2148
9	0.000		0.2309	1.015	616.3	0.2309	1.828	636.4	0.2072
10	0.000		0.2297	0.663	597.6	0.2297	1.195	610.4	0.2060

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.397	663.0	0.7396	3.419	632.0	0.7396
2	15.670	1065.3	0.7126	15.675	926.3	0.7127
3	19.401	1074.4	0.5401	19.549	1107.2	0.5402
4	20.543	1084.6	0.3946	20.708	1196.0	0.3946
5	20.455	1133.2	0.3156	20.613	1168.0	0.3155
6	19.556	1196.7	0.2629	19.705	1109.0	0.2628
7	16.680	1184.9	0.2266	16.813	1036.6	0.2266
8	11.693	977.9	0.2030	11.790	878.6	0.2029
9	3.931	680.2	0.1937	3.964	656.2	0.1937
10	2.542	636.2	0.1924	2.563	621.2	0.1922

Table 4-256. LS1 Burnup and TH Feedback Parameters Assembly G12

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.011	622.5	0.7396	1.756	639.1	0.7396
2	0.000		0.7300	4.758	884.1	0.7300	8.443	1020.2	0.7221
3	0.000		0.5933	6.903	1024.8	0.5933	11.966	1190.4	0.5810
4	0.000	Data	0.4357	7.752	1103.5	0.4357	13.041	1231.3	0.4054
5	0.000	Not	0.3483	7.290	1059.9	0.3483	12.559	1227.5	0.3215
6	0.000	Required	0.2937	6.333	976.3	0.2937	11.175	1152.3	0.2682
7	0.000		0.2604	4.730	849.0	0.2604	8.489	978.3	0.2353
8	0.000		0.2404	3.179	743.5	0.2404	5.688	817.2	0.2162
9	0.000		0.2325	1.041	617.7	0.2325	1.894	640.1	0.2083
10	0.000		0.2312	0.679	598.4	0.2312	1.236	612.7	0.2071

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.300	659.9	0.7396	3.322	632.0	0.7396
2	15.175	1049.9	0.7143	15.279	920.4	0.7143
3	19.191	1070.6	0.5453	19.330	1061.4	0.5454
4	20.454	1088.7	0.3992	20.604	1119.3	0.3993
5	20.429	1134.6	0.3190	20.575	1097.1	0.3190
6	19.697	1192.3	0.2652	19.735	1057.4	0.2652
7	16.797	1182.5	0.2283	16.927	1019.2	0.2283
8	11.894	981.2	0.2043	11.991	877.4	0.2043
9	4.016	681.4	0.1949	4.049	656.2	0.1949
10	2.592	636.7	0.1935	2.612	618.4	0.1935

Table 4-267. LS1 Burnup and TH Feedback Parameters Assembly G13

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.185	633.7	0.7396	1.865	643.0	0.7396
2	0.000		0.7219	5.554	930.3	0.7219	9.504	1035.3	0.7167
3	0.000		0.5530	7.748	1103.3	0.5530	13.054	1234.5	0.5319
4	0.000	Data	0.3976	8.504	1178.8	0.3976	13.865	1244.7	0.3780
5	0.000	Not	0.3160	7.985	1124.5	0.3160	13.142	1210.6	0.2996
6	0.000	Required	0.2651	6.829	1018.5	0.2651	11.608	1141.3	0.2499
7	0.000		0.2347	5.063	873.9	0.2347	8.607	979.0	0.2194
8	0.000		0.2170	3.358	755.0	0.2170	5.823	812.2	0.2018
9	0.000		0.2101	1.090	620.4	0.2101	1.918	637.8	0.1949
10	0.000		0.2090	0.718	600.5	0.2090	1.257	611.1	0.1939

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.479	657.9	0.7396	3.498	621.8	0.7396
2	16.081	1034.9	0.7121	16.169	858.6	0.7122
3	20.250	1067.7	0.5289	20.361	935.4	0.5294
4	21.399	1100.7	0.3822	21.516	980.2	0.3827
5	21.157	1149.5	0.3054	21.268	934.3	0.3059
6	20.142	1204.4	0.2543	20.242	887.4	0.2547
7	17.204	1189.8	0.2197	17.288	826.6	0.2201
8	12.023	980.9	0.1989	12.081	733.3	0.1973
9	4.023	680.4	0.1882	4.041	612.7	0.1885
10	2.598	635.9	0.1868	2.609	593.2	0.1872

Table 4-268. LS1 Burnup and TH Feedback Parameters Assembly G14

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.247	637.7	0.7396	1.963	635.9	0.7396
2	0.000		0.7207	5.776	949.1	0.7207	9.431	989.0	0.7169
3	0.000		0.5487	7.915	1119.5	0.5487	12.883	1173.5	0.5394
4	0.000	Data	0.3907	8.455	1173.8	0.3907	13.484	1184.2	0.3826
5	0.000	Not	0.3113	7.884	1116.6	0.3113	12.742	1154.3	0.3046
6	0.000	Required	0.2625	6.765	1012.8	0.2625	11.309	1101.8	0.2556
7	0.000		0.2331	5.038	872.0	0.2331	8.633	957.5	0.2251
8	0.000		0.2159	3.377	756.4	0.2159	5.743	800.2	0.2074
9	0.000		0.2091	1.100	620.9	0.2091	1.890	634.2	0.2005
10	0.000		0.2081	0.723	600.8	0.2081	1.232	608.3	0.1995

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.332	648.0	0.7396	3.354	632.0	0.7396
2	15.469	984.5	0.7165	15.575	930.6	0.7165
3	19.733	1035.1	0.5414	19.864	1021.5	0.5416
4	20.802	1079.6	0.3917	20.940	1057.4	0.3918
5	20.544	1127.6	0.3141	20.690	1097.1	0.3142
6	19.581	1176.3	0.2627	19.721	1067.4	0.2629
7	16.729	1158.0	0.2278	16.846	963.7	0.2279
8	11.695	959.1	0.2046	11.777	818.1	0.2047
9	3.896	674.5	0.1958	3.922	635.6	0.1958
10	2.503	632.0	0.1944	2.519	607.1	0.1946

Table 4-269. LS1 Burnup and TH Feedback Parameters Assembly G15

	Statepoint 7 (BOC Cy 7)			Statepoint 8 (193.2 EFPD Cy 7)			Statepoint 9 (306.8 EFPD Cy 7)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.031	623.8	0.7396	1.734	634.4	0.7396
2	0.000		0.7300	4.807	888.2	0.7300	8.347	996.8	0.7236
3	0.000		0.5916	6.937	1027.9	0.5916	11.932	1178.4	0.5646
4	0.000	Data	0.4325	7.812	1109.3	0.4325	13.062	1224.1	0.4071
5	0.000	Not	0.3455	7.311	1061.9	0.3455	12.415	1197.7	0.3231
6	0.000	Required	0.2921	6.249	968.3	0.2921	10.798	1103.0	0.2709
7	0.000		0.2598	4.609	840.2	0.2598	8.011	930.7	0.2393
8	0.000		0.2406	3.072	736.7	0.2406	5.285	782.3	0.2212
9	0.000		0.2327	1.003	615.7	0.2327	1.748	630.0	0.2136
10	0.000		0.2313	0.658	597.3	0.2313	1.145	606.4	0.2124

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.320	652.8	0.7396	3.341	628.6	0.7396
2	15.306	1072.2	0.7141	15.406	905.9	0.7142
3	19.237	1078.3	0.5447	19.367	1020.4	0.5450
4	20.407	1082.1	0.3987	20.548	1072.1	0.3988
5	20.252	1131.2	0.3188	20.394	1080.3	0.3190
6	19.249	1195.5	0.2657	19.387	1055.6	0.2657
7	16.283	1176.6	0.2291	16.412	1014.6	0.2292
8	11.336	967.6	0.2056	11.430	869.6	0.2057
9	3.806	677.6	0.1964	3.838	653.2	0.1965
10	2.459	634.9	0.1950	2.489	618.4	0.1951

Table 4-270. LS1 Burnup and TH Feedback Parameters Assembly G16

Node No.	Statepoint 7 (BOC Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 8 (193.2 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 9 (306.8 EFPD Cy 7) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 7	0.00 Cy 7	0.00 Cy 7	193.2 Cy 7	193.2 Cy 7	193.2 Cy 7	306.8 Cy 7	306.8 Cy 7	306.8 Cy 7
1	0.000		0.7396	1.054	625.2	0.7396	1.816	641.0	0.7396
2	0.000		0.7280	4.973	882.7	0.7280	8.812	1017.7	0.7199
3	0.000		0.5817	7.182	1050.1	0.5817	12.420	1221.9	0.5497
4	0.000	Data	0.4233	8.000	1127.7	0.4233	13.382	1248.5	0.3942
5	0.000	Not	0.3376	7.488	1078.4	0.3376	12.615	1238.2	0.3121
6	0.000	Required	0.2845	6.419	982.7	0.2845	11.306	1160.1	0.2602
7	0.000		0.2526	4.735	849.5	0.2526	8.482	979.5	0.2286
8	0.000		0.2337	3.173	743.1	0.2337	5.640	812.2	0.2106
9	0.000		0.2261	1.046	618.0	0.2261	1.876	638.2	0.2033
10	0.000		0.2249	0.688	598.9	0.2249	1.233	611.6	0.2022

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	3.394	662.2	0.7396	3.409	608.4	0.7396
2	15.718	1066.6	0.7119	15.789	789.7	0.7121
3	19.797	1085.3	0.5356	19.894	874.8	0.5362
4	20.949	1103.9	0.3895	21.055	914.6	0.3902
5	20.622	1148.6	0.3108	20.924	898.1	0.3114
6	19.855	1208.1	0.2584	19.947	858.4	0.2589
7	16.697	1191.7	0.2226	16.974	803.2	0.2231
8	11.853	982.0	0.1995	11.907	722.2	0.2000
9	3.994	681.0	0.1905	4.010	607.1	0.1910
10	2.591	636.9	0.1892	2.600	587.6	0.1896

Table 4-271. LS1 Burnup and TH Feedback Parameters Assembly H1

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.2	0.7396
2	0.000		0.7291	0.099	923.0	0.7291
3	0.000		0.5836	0.131	1023.1	0.5836
4	0.000	Data	0.4266	0.143	1080.7	0.4266
5	0.000	Not	0.3402	0.142	1075.8	0.3402
6	0.000	Required	0.2841	0.129	1015.3	0.2841
7	0.000		0.2494	0.097	878.6	0.2494
8	0.000		0.2286	0.068	768.7	0.2286
9	0.000		0.2209	0.021	621.2	0.2209
10	0.000		0.2197	0.013	598.7	0.2197

Table 4-272. LS1 Burnup and TH Feedback Parameters Assembly H2

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.2	0.7396
2	0.000		0.7292	0.098	919.9	0.7292
3	0.000		0.5831	0.132	1026.6	0.5831
4	0.000	Data	0.4252	0.144	1089.1	0.4252
5	0.000	Not	0.3378	0.145	1095.8	0.3378
6	0.000	Required	0.2807	0.134	1037.3	0.2807
7	0.000		0.2456	0.100	890.8	0.2456
8	0.000		0.2248	0.069	773.4	0.2248
9	0.000		0.2171	0.021	621.2	0.2171
10	0.000		0.2160	0.014	601.5	0.2160

Table 4-273. LS1 Burnup and TH Feedback Parameters Assembly H3

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.017	615.1	0.7396
2	0.000		0.7338	0.086	864.0	0.7338
3	0.000		0.6188	0.118	963.9	0.6188
4	0.000	Data	0.4676	0.129	1014.8	0.4676
5	0.000	Not	0.3785	0.123	985.6	0.3785
6	0.000	Required	0.3214	0.108	922.1	0.3214
7	0.000		0.2860	0.080	813.3	0.2860
8	0.000		0.2645	0.056	727.8	0.2645
9	0.000		0.2566	0.017	609.9	0.2566
10	0.000		0.2554	0.010	590.4	0.2554

Table 4-274. LS1 Burnup and TH Feedback Parameters Assembly H4

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.015	608.5	0.7396
2	0.000		0.7382	0.076	824.9	0.7382
3	0.000		0.6474	0.106	915.7	0.6474
4	0.000	Data	0.5017	0.116	964.9	0.5017
5	0.000	Not	0.4097	0.112	937.5	0.4097
6	0.000	Required	0.3502	0.098	881.1	0.3502
7	0.000		0.3130	0.073	787.8	0.3130
8	0.000		0.2903	0.051	711.4	0.2903
9	0.000		0.2819	0.015	604.3	0.2819
10	0.000		0.2807	0.009	587.7	0.2807

Table 4-275. LS1 Burnup and TH Feedback Parameters Assembly H5

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.021	628.6	0.7396
2	0.000		0.7260	0.105	926.6	0.7260
3	0.000		0.5668	0.136	1049.3	0.5668
4	0.000	Data	0.4083	0.150	1116.0	0.4083
5	0.000	Not	0.3222	0.155	1145.9	0.3222
6	0.000	Required	0.2650	0.147	1104.6	0.2650
7	0.000		0.2289	0.118	964.0	0.2289
8	0.000		0.2067	0.084	826.9	0.2067
9	0.000		0.1986	0.025	632.7	0.1986
10	0.000		0.1975	0.017	609.9	0.1975

Table 4-276. LS1 Burnup and TH Feedback Parameters Assembly H6

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.022	632.0	0.7396
2	0.000		0.7246	0.109	947.4	0.7246
3	0.000		0.5831	0.138	1057.7	0.5831
4	0.000	Data	0.4086	0.145	1094.1	0.4086
5	0.000	Not	0.3282	0.138	1056.2	0.3282
6	0.000	Required	0.2771	0.122	984.6	0.2771
7	0.000		0.2450	0.094	864.0	0.2450
8	0.000		0.2254	0.065	760.5	0.2254
9	0.000		0.2181	0.020	618.4	0.2181
10	0.000		0.2170	0.013	598.7	0.2170

Table 4-277. LS1 Burnup and TH Feedback Parameters Assembly H7

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.8	0.7396
2	0.000		0.7322	0.091	887.0	0.7322
3	0.000		0.6085	0.120	872.7	0.6085
4	0.000	Data	0.4574	0.130	1017.9	0.4574
5	0.000	Not	0.3708	0.124	890.4	0.3708
6	0.000	Required	0.3147	0.111	933.3	0.3147
7	0.000		0.2789	0.086	835.6	0.2789
8	0.000		0.2565	0.061	746.8	0.2565
9	0.000		0.2481	0.016	612.7	0.2481
10	0.000		0.2469	0.012	598.0	0.2469

Table 4-278. LS1 Burnup and TH Feedback Parameters Assembly H8

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.021	628.6	0.7396
2	0.000		0.7264	0.106	932.5	0.7264
3	0.000		0.5703	0.136	1048.8	0.5703
4	0.000	Data	0.4149	0.145	1090.8	0.4149
5	0.000	Not	0.3327	0.138	1059.4	0.3327
6	0.000	Required	0.2802	0.123	989.1	0.2802
7	0.000		0.2475	0.094	864.0	0.2475
8	0.000		0.2277	0.064	757.1	0.2277
9	0.000		0.2204	0.019	615.6	0.2204
10	0.000		0.2194	0.012	596.0	0.2194

Table 4-279. LS1 Burnup and TH Feedback Parameters Assembly H9

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.2	0.7396
2	0.000		0.7264	0.103	917.9	0.7264
3	0.000		0.5619	0.145	1091.6	0.5619
4	0.000	Data	0.3949	0.162	1180.0	0.3949
5	0.000	Not	0.3099	0.156	1147.7	0.3099
6	0.000	Required	0.2565	0.145	1094.3	0.2565
7	0.000		0.2214	0.127	1004.2	0.2214
8	0.000		0.1981	0.095	872.2	0.1981
9	0.000		0.1894	0.029	644.4	0.1894
10	0.000		0.1880	0.019	615.6	0.1880

Table 4-280. LS1 Burnup and TH Feedback Parameters Assembly H10

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.2	0.7396
2	0.000		0.7288	0.100	927.6	0.7288
3	0.000		0.5817	0.131	1025.4	0.5817
4	0.000	Data	0.4251	0.143	1080.7	0.4251
5	0.000	Not	0.3391	0.142	1079.1	0.3391
6	0.000	Required	0.2826	0.132	1029.2	0.2826
7	0.000		0.2470	0.103	902.9	0.2470
8	0.000		0.2252	0.072	782.8	0.2252
9	0.000		0.2173	0.022	624.1	0.2173
10	0.000		0.2162	0.014	601.5	0.2162

Table 4-281. LS1 Burnup and TH Feedback Parameters Assembly H11

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.018	618.5	0.7396
2	0.000		0.7325	0.090	881.3	0.7325
3	0.000		0.6090	0.121	978.4	0.6090
4	0.000	Data	0.4555	0.133	1035.2	0.4555
5	0.000	Not	0.3672	0.128	1010.2	0.3672
6	0.000	Required	0.3102	0.114	947.7	0.3102
7	0.000		0.2747	0.087	836.9	0.2747
8	0.000		0.2529	0.061	744.5	0.2529
9	0.000		0.2448	0.018	612.7	0.2448
10	0.000		0.2437	0.011	593.2	0.2437

Table 4-282. LS1 Burnup and TH Feedback Parameters Assembly H12

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.022	632.0	0.7396
2	0.000		0.7237	0.111	956.4	0.7237
3	0.000		0.5595	0.139	1065.1	0.5595
4	0.000	Data	0.4055	0.146	1099.2	0.4055
5	0.000	Not	0.3254	0.140	1066.0	0.3254
6	0.000	Required	0.2745	0.124	993.7	0.2745
7	0.000		0.2424	0.096	873.2	0.2424
8	0.000		0.2226	0.067	765.2	0.2226
9	0.000		0.2154	0.020	618.4	0.2154
10	0.000		0.2143	0.013	598.7	0.2143

Table 4-283. LS1 Burnup and TH Feedback Parameters Assembly H13

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.021	628.6	0.7396
2	0.000		0.7273	0.103	919.3	0.7273
3	0.000		0.5724	0.135	1044.5	0.5724
4	0.000	Data	0.4142	0.148	1107.7	0.4142
5	0.000	Not	0.3287	0.148	1107.7	0.3287
6	0.000	Required	0.2732	0.136	1048.5	0.2732
7	0.000		0.2389	0.103	901.6	0.2389
8	0.000		0.2184	0.071	781.6	0.2184
9	0.000		0.2108	0.022	624.1	0.2108
10	0.000		0.2097	0.014	601.5	0.2097

Table 4-284. LS1 Burnup and TH Feedback Parameters Assembly H14

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.8	0.7396
2	0.000		0.7312	0.094	901.9	0.7312
3	0.000		0.5986	0.125	997.5	0.5986
4	0.000	Data	0.4449	0.135	1043.2	0.4449
5	0.000	Not	0.3593	0.128	1008.7	0.3593
6	0.000	Required	0.3047	0.112	940.6	0.3047
7	0.000		0.2709	0.084	825.7	0.2709
8	0.000		0.2504	0.058	734.4	0.2504
9	0.000		0.2428	0.017	609.9	0.2428
10	0.000		0.2417	0.011	593.2	0.2417

Table 4-285. LS1 Burnup and TH Feedback Parameters Assembly H15

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.022	632.0	0.7396
2	0.000		0.7228	0.112	959.5	0.7228
3	0.000		0.5552	0.141	1072.5	0.5552
4	0.000	Data	0.4002	0.149	1114.6	0.4002
5	0.000	Not	0.3191	0.147	1100.9	0.3191
6	0.000	Required	0.2667	0.134	1037.3	0.2667
7	0.000		0.2339	0.102	897.5	0.2339
8	0.000		0.2142	0.070	778.1	0.2142
9	0.000		0.2069	0.021	621.2	0.2069
10	0.000		0.2059	0.014	601.5	0.2059

Table 4-286. LS1 Burnup and TH Feedback Parameters Assembly H16

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.023	635.4	0.7396
2	0.000		0.7221	0.113	964.0	0.7221
3	0.000		0.5520	0.142	1074.9	0.5520
4	0.000	Data	0.3972	0.150	1118.0	0.3972
5	0.000	Not	0.3159	0.150	1119.7	0.3159
6	0.000	Required	0.2628	0.139	1063.1	0.2628
7	0.000		0.2295	0.107	918.2	0.2295
8	0.000		0.2095	0.074	790.0	0.2095
9	0.000		0.2022	0.022	624.1	0.2022
10	0.000		0.2011	0.014	601.6	0.2011

Table 4-287. LS1 Burnup and TH Feedback Parameters Assembly H17

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.8	0.7396
2	0.000		0.7298	0.098	919.9	0.7298
3	0.000		0.5873	0.130	1020.7	0.5873
4	0.000	Data	0.4310	0.141	1072.5	0.4310
5	0.000	Not	0.3457	0.135	1043.3	0.3457
6	0.000	Required	0.2914	0.119	971.3	0.2914
7	0.000		0.2580	0.089	844.6	0.2580
8	0.000		0.2380	0.061	746.8	0.2380
9	0.000		0.2306	0.018	612.7	0.2306
10	0.000		0.2294	0.012	596.0	0.2294

Table 4-288. LS1 Burnup and TH Feedback Parameters Assembly H17

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.8	0.7396
2	0.000		0.7273	0.100	906.5	0.7273
3	0.000		0.5631	0.146	1095.7	0.5631
4	0.000	Data	0.3927	0.165	1200.2	0.3927
5	0.000	Not	0.3058	0.163	1185.5	0.3058
6	0.000	Required	0.2496	0.153	1135.6	0.2496
7	0.000		0.2127	0.134	1040.7	0.2127
8	0.000		0.1901	0.097	877.4	0.1901
9	0.000		0.1817	0.030	647.3	0.1817
10	0.000		0.1805	0.020	618.4	0.1805

Table 4-289. LS1 Burnup and TH Feedback Parameters Assembly J1

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.018	618.3	0.7396
2	0.000		0.7330	0.086	865.8	0.7330
3	0.000		0.6113	0.119	966.8	0.6113
4	0.000	Data	0.4566	0.134	1038.2	0.4566
5	0.000	Not	0.3632	0.143	1078.7	0.3632
6	0.000	Required	0.2994	0.135	1043.3	0.2994
7	0.000		0.2598	0.104	904.4	0.2598
8	0.000		0.2366	0.071	779.7	0.2366
9	0.000		0.2280	0.023	626.8	0.2280
10	0.000		0.2267	0.015	604.2	0.2267

Table 4-290. LS1 Burnup and TH Feedback Parameters Assembly J2

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.018	618.3	0.7396
2	0.000		0.7331	0.085	861.4	0.7331
3	0.000		0.6123	0.118	964.7	0.6123
4	0.000	Data	0.4569	0.134	1038.2	0.4569
5	0.000	Not	0.3630	0.143	1080.3	0.3630
6	0.000	Required	0.2984	0.139	1062.4	0.2984
7	0.000		0.2568	0.116	950.6	0.2568
23	0.000		0.2312	0.081	817.2	0.2312
24	0.000		0.2218	0.026	635.4	0.2218
25	0.000		0.2204	0.018	612.6	0.2204

Table 4-291. LS1 Burnup and TH Feedback Parameters Assembly J3

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.0	0.7396
2	0.000		0.7312	0.092	890.2	0.7312
	0.000		0.5979	0.124	992.5	0.5979
4	0.000	Data	0.4413	0.139	1060.6	0.4413
5	0.000	Not	0.3512	0.142	1075.3	0.3512
6	0.000	Required	0.2916	0.133	1030.5	0.2916
7	0.000		0.2541	0.103	901.6	0.2541
8	0.000		0.2316	0.071	779.7	0.2316
9	0.000		0.2232	0.023	626.8	0.2232
10	0.000		0.2219	0.016	607.0	0.2219

Table 4-292. LS1 Burnup and TH Feedback Parameters Assembly J4

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.0	0.7396
2	0.000		0.7306	0.094	897.7	0.7306
3	0.000		0.5909	0.130	1016.7	0.5909
4	0.000	Data	0.4304	0.145	1088.6	0.4304
5	0.000	Not	0.3419	0.143	1078.6	0.3419
6	0.000	Required	0.2847	0.133	1030.4	0.2847
7	0.000		0.2479	0.108	920.9	0.2479
8	0.000		0.2251	0.075	794.0	0.2251
9	0.000		0.2168	0.024	629.6	0.2168
10	0.000		0.2165	0.016	607.0	0.2165

Table 4-293. LS1 Burnup and TH Feedback Parameters Assembly J5

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.016	616.3	0.7396
2	0.000		0.7332	0.084	854.3	0.7332
3	0.000		0.6057	0.129	1014.2	0.6057
4	0.000	Data	0.4359	0.152	1127.7	0.4359
5	0.000	Not	0.3420	0.148	1103.8	0.3420
6	0.000	Required	0.2833	0.136	1046.3	0.2833
7	0.000		0.2459	0.111	933.5	0.2459
8	0.000		0.2228	0.078	806.1	0.2228
9	0.000		0.2142	0.026	635.4	0.2142
10	0.000		0.2129	0.017	609.8	0.2129

Table 4-294. LS1 Burnup and TH Feedback Parameters Assembly J6

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.021	628.4	0.7396
2	0.000		0.7287	0.097	912.5	0.7287
3	0.000		0.5725	0.142	1076.1	0.5725
4	0.000	Data	0.4027	0.162	1177.4	0.4027
5	0.000	Not	0.3151	0.156	1148.8	0.3151
6	0.000	Required	0.2601	0.148	1103.9	0.2601
7	0.000		0.2242	0.124	989.0	0.2242
8	0.000		0.2017	0.088	842.3	0.2017
9	0.000		0.1934	0.029	644.1	0.1934
10	0.000		0.1920	0.020	618.2	0.1920

Table 4-295. LS1 Burnup and TH Feedback Parameters Assembly J7

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.6	0.7396
2	0.000		0.7329	0.087	868.5	0.7329
3	0.000		0.6115	0.119	968.8	0.6115
4	0.000	Data	0.4577	0.133	1031.8	0.4577
5	0.000	Not	0.3651	0.140	1067.1	0.3651
6	0.000	Required	0.3018	0.133	1030.6	0.3018
7	0.000		0.2627	0.102	894.9	0.2627
8	0.000		0.2396	0.069	771.4	0.2396
9	0.000		0.2312	0.022	623.9	0.2312
10	0.000		0.2299	0.015	604.2	0.2299

Table 4-296. LS1 Burnup and TH Feedback Parameters Assembly J8

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.0	0.7396
2	0.000		0.7306	0.094	897.7	0.7306
3	0.000		0.5901	0.130	1019.1	0.5901
4	0.000	Data	0.4286	0.146	1097.0	0.4286
5	0.000	Not	0.3398	0.145	1088.6	0.3398
6	0.000	Required	0.2822	0.136	1044.6	0.2822
7	0.000		0.2447	0.115	949.1	0.2447
8	0.000		0.2207	0.082	820.9	0.2207
9	0.000		0.2119	0.027	638.3	0.2119
10	0.000		0.2105	0.018	612.6	0.2105

Table 4-297. LS1 Burnup and TH Feedback Parameters Assembly J9

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.6	0.7396
2	0.000		0.7327	0.087	869.9	0.7327
3	0.000		0.6097	0.119	969.0	0.6097
4	0.000	Data	0.4550	0.134	1036.5	0.4550
5	0.000	Not	0.3625	0.141	1072.1	0.3625
6	0.000	Required	0.2990	0.136	1046.3	0.2990
7	0.000		0.2586	0.109	926.6	0.2586
8	0.000		0.2342	0.075	795.2	0.2342
9	0.000		0.2253	0.024	629.6	0.2253
10	0.000		0.2240	0.016	607.0	0.2240

Table 4-298. LS1 Burnup and TH Feedback Parameters Assembly J10

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.023	635.2	0.7396
2	0.000		0.7275	0.103	919.4	0.7275
3	0.000		0.5764	0.133	1030.6	0.5764
4	0.000	Data	0.4223	0.141	1068.6	0.4223
5	0.000	Not	0.3397	0.135	1043.0	0.3397
6	0.000	Required	0.2865	0.122	979.9	0.2865
7	0.000		0.2529	0.094	864.2	0.2529
8	0.000		0.2325	0.064	754.1	0.2325
9	0.000		0.2250	0.021	621.1	0.2250
10	0.000		0.2238	0.014	601.4	0.2238

Table 4-299. LS1 Burnup and TH Feedback Parameters Assembly J11

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.020	625.0	0.7396
2	0.000		0.7323	0.090	880.1	0.7323
3	0.000		0.6084	0.120	972.3	0.6084
4	0.000	Data	0.4563	0.131	1023.9	0.4563
5	0.000	Not	0.3683	0.128	1006.9	0.3683
6	0.000	Required	0.3107	0.116	956.3	0.3107
7	0.000		0.2741	0.090	849.9	0.2741
8	0.000		0.2518	0.062	747.3	0.2518
9	0.000		0.2436	0.020	618.2	0.2436
10	0.000		0.2422	0.013	598.6	0.2422

Table 4-300. LS1 Burnup and TH Feedback Parameters Assembly J12

Node No.	Statepoint 10 (BOC Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)	Statepoint 11 (3.67 EFPD Cy 8) Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm³)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.018	618.3	0.7396
2	0.000		0.7320	0.088	871.3	0.7320
3	0.000		0.5952	0.133	1035.3	0.5952
4	0.000	Data	0.4241	0.157	1150.5	0.4241
5	0.000	Not	0.3320	0.151	1120.9	0.3320
6	0.000	Required	0.2747	0.140	1065.7	0.2747
7	0.000		0.2377	0.116	952.2	0.2377
8	0.000		0.2142	0.084	828.4	0.2142
9	0.000		0.2055	0.028	641.2	0.2055
10	0.000		0.2041	0.019	615.4	0.2041

Table 4-301. LS1 Burnup and TH Feedback Parameters Assembly J13

	Statepoint 10 (BOC Cy 8)			Statepoint 11 (3.67 EFPD Cy 8)		
Node No.	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)	Burnup (GWd/MTU)	Fuel Temp. (K)	Mod. Dens. (g/cm^3)
	0.00 Cy 8	0.00 Cy 8	0.00 Cy 8	3.67 Cy 8	3.67 Cy 8	3.67 Cy 8
1	0.000		0.7396	0.019	621.6	0.7396
2	0.000		0.7326	0.087	889.9	0.7326
3	0.000		0.6082	0.120	972.4	0.6082
4	0.000	Data	0.4522	0.136	1044.6	0.4522
5	0.000	Not	0.3603	0.139	1062.2	0.3603
6	0.000	Required	0.2985	0.133	1033.5	0.2985
7	0.000		0.2577	0.117	957.7	0.2577
8	0.000		0.2312	0.085	831.0	0.2312
9	0.000		0.2214	0.028	641.2	0.2214
10	0.000		0.2198	0.018	612.6	0.2198

Table 4-302. LS1 Heavy Metal Uranium Weights

SAS2H Nodes	Node Height (cm)	Type 8 B Fuel (g)	Type 9 A Fuel (g)	Type 10 C Fuel (g)	Type 11 D Fuel (g)	Type 12 E Fuel (g)	Type 1 G Fuel (g)	Type 2 F Fuel (g)	Type 4 J Fuel (g)	Type 5 H Fuel (g)
10 top	15.24	5903.5	5768.5	6122.4	6140.9	6137.0	5849.5	6098.1	5716.3	5972.3
9	15.24	7228.8	7210.7	7202.8	7224.6	7220.0	7162.7	7174.2	7145.4	7166.8
8	45.72	21686.4	21632.0	21608.4	21673.9	21659.9	21488.0	21522.7	21436.2	21500.4
7	45.72	21686.4	21632.0	21608.4	21673.9	21659.9	21488.0	21522.7	21436.2	21500.4
6	45.72	21686.4	21632.0	21608.4	21673.9	21659.9	21488.0	21522.7	21436.2	21500.4
5	45.72	21686.4	21632.0	21608.4	21673.9	21659.9	21488.0	21522.7	21436.2	21500.4
4	45.72	21686.4	21632.0	21608.4	21673.9	21659.9	21488.0	21522.7	21436.2	21500.4
3	60.96	28915.2	28842.6	28811.2	28898.5	28879.9	28650.6	28697.0	28581.6	21500.4
2	45.72	21686.4	21632.0	21608.4	21673.9	21659.9	21488.0	21522.7	21436.2	28667.2
1 bottom	15.24	7228.8	7210.7	7202.8	7224.6	7220.0	7162.7	7174.2	7145.4	7166.8
Total	381.0	179394.9	178824.3	178989.9	179532.0	179416.1	177753.3	178280.0	177205.8	177975.4
Rod Linear Mass (g/cm/rod)		7.90552	7.88567	7.87709	7.90095	7.89585	7.83318	7.84585	7.81430	7.83770

4.2 CONTROL BLADE HISTORY BY CYCLE

This section provides the control rod blade history for those fuel assemblies where control blades are inserted during core operation. Control of reactivity is accomplished by a combination of blade movements and integral burnable absorbers. The core contains 185 control blades. These movable blades are used to control the fission rate and fission density. Figure 2-1 indicates the cross sectional area of four assemblies and a control blade.

Figure 4-1 indicates a full core with a control blade map for a quarter-core. This map shows locations for control blade groups 9A, 9B, 9C, 9D, 9E, 10A, 10B, and 10C. Additionally, asymmetric blade insertions in Cycle 4 (396) and Cycle 7 (464) during normal plant operation are shown. For locations where the control blades group is not specified, the lower right-hand fuel location number in that block is used as a control group number. For convenience, the fuel assembly location number in lower 1/8 quadrant is kept the same as upper 1/8 quadrant to reflect blade symmetric insertion. In general, the control blades are moved in 1/8 core symmetry.

Figures 4-2 through 4-6 provide the location of fuel assemblies and the active control blades (quarter-core symmetric locations) during Cycles 4 through 8 operation. Shaded areas indicate the areas where control blades were inserted. Sixty-eight fuel assemblies are tracked in the vicinity of control blades locations. Sixty fuel assemblies are actually exposed to some portion of a control blade.

Table 4-303 lists those fuel assemblies that are in the vicinity of a control blade location in Cycles 4 through 7. Tables 4-304 through 4-308 summarize the control blade insertion history. These tables provide a listing of the controlled assemblies and the duration and "notches" withdrawn for each active control blade group. The zero (0) "notch" withdrawn implies that the blade is fully inserted. The forty-eight "notches" withdrawn means that the control blade is fully withdrawn. This condition is identified as double hyphen (--). The forty-eight "notch" withdrawn means 144 inches withdrawn. Each notch is 3 inches (7.62 cm) long. For a duration when the particular control blade group is not symmetric, it is identified with an asterisk (*) in the tables.

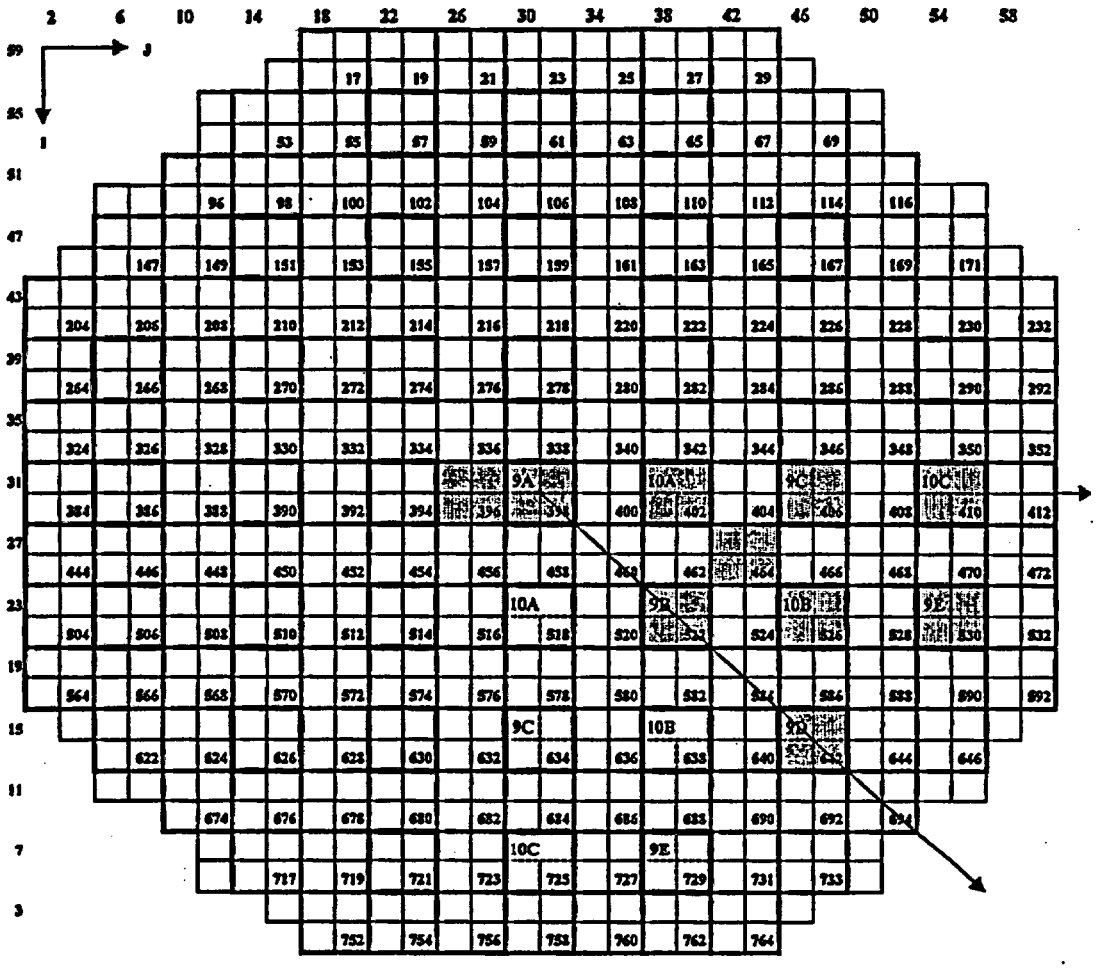

Figure 4-1. LS1 Full Core / Control Blade Map

j=	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i=16	9A	A12		10A	10A			9C	9C	A11		10C	10C		
17			B9				B8		B10						
18				A1		A7		A5		A10					
19	10A			9B	9B		B7	10B	10B			9E	9E		
20	10A			9B	9B	A9		10B	10B	B6		9E	9E		
21	A4						B1	A8		A6					
22							B4		A3	B5					
23	9C			10B	10B			9D	9D						
24	9C	B2		10B	10B			9D	9D						
25															
26		B3		A2											
27	10C			9E	9E										
28	10C			9E	9E										
29															
30															

Figure 4-2. LS1 Cycle 4 Active Control Blade Locations

j=	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i=16	9A	C28	B6	10A	10A	C29	B9	9C	9C	C30	B5	10G	A6 10G		
17	C22		C23	B8	C24			A5	C25		C26	C27			
18					A7	C18		C19	B1	C20		C21			
19	10A		C15	9B	9B		C16	10B	10B	C17	A10	9E	9E		
20	10A			9B	9B	C13	A9	10B	10B		C14	A1 9E	9E		
21			C10		C11	B4			C12	A8					
22		C6				C7		C8	A3	C9		B10			
23	9C			10B	10B		C4	9D	9D A12	C5	A11				
24	9C			10B	10B	C3		9D	9D	B7					
25				C2											
26			B3			C1									
27	10C			9E	9E	A4	B2								
28	10C	A2		9E	9E										
29															
30															

Figure 4-3. LS1 Cycle 5 Active Control Blade Locations

j=	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i=16	B6 9A	E12	C20	B1 10A	C29 10A	D21	B7	C26 9C	A3 9C		A4	C14 10C	A6 10C		
17			D16	C6	E11	B9	D17	C10	D18	A12	D19	D20			
18		D12		E9	C16	E10	B3	D13	A10	D14	A9	D15	C5		
19	10A			9B B10	9B B5	C9		10B A11	10B A8	C24	D11	9E C21	9E C17		
20	10A	E7		9B	C11 9B	E8	C30	A5 10B	10B	D9	A1	D10 9B	9E		
21			E5			B4	D7	C23	E6	B8	D8	C8	C12		
22				E3				E4		D6	C28	C27			
23	9C	C18		10B	10B		E2	9D B2	9D C1	D5	C25	C19			
24	9C	D4		10B	C7 10B		C15	9D	C13 9D	A7					
25	E1		D2					D3							
26						D1	C22								
27	10C			9E	9E	C4									
28	10C	A2		C2 9E	9E	C3									
29															
30															

Figure 4-4. LS1 Cycle 6 Active Control Blade Locations

j=	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i=16	C17 9A	G15	D8	C19 10A	C5 10A	G16	D10	C25 9C	C20 9C	F17	C30	F18 10C	D7 10C	C29	A11
17		B10	G11	D5	G12	C7	G13	E8	G14	C23	F15	F16	C26	E9	A5
18	D1	G7	B2	G8	C27	G9	C6	G10	D9	F13	A6	F14	D19	D11	A12
19	10A	D3	G4	9B C18	9B E12	E3	G5	10B D21	10B C15	G6	F12	9E C16	9E D17	E6	A8
20	10A			9B	C10 9B	G3	E10	C24 10B	E1 10B	C1	F11	C9 9E	D14 9E	C21	B7
21						C11	F8	C12	F9	G2	F10	D15	E4	A1	B3
22					E5	F5	C13	F6	D20	F7	A4	D13	A3	A7	B9
23	9C		G1	10B	10B	C3		9D D16	9D C28	D6	D18	C8	A9	B4	
24	9C			10B	10B			C22 9D	C2 9D	E11	A2	C14	B5		
25			F4						E7	D12	A10	B1	B8		
26				F2		F3		D4			B6				
27	10C F1			9E	9E			C4							
28	10C			9E	D2 9E	E2									
29															
30															

Figure 4-5. LS1 Cycle 7 Active Control Blade Locations

j=	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
i=16	D4 9A	H18	F3	D13 10A	E6 10A	J5	F17	E9 9C	D15 9C	J11	F6	K2 10C	D10 10C	E5	C4
17		D16	J6	G7	J12	F7	J4	F1	H10	E7	J10	H6	H7	E1	C5
18	F10		F4	H9	G12	J8	F14	J9	G14	H16	F16	H12	F15	D7	C2
19	10A	G11		9B D12	9B D2	G15	J2	10B D3	10B F2	G5	H15	9E G2	9E D19	D21	C19
20	10A			D14 9B	G1 9B	J13	G6	D11 10B	G3 10B	J7	H1	D20 9E	D6 9B	D9	C29
21						G10	H5	G4	J1	H2	C14	H11	F9	E8	C25
22							D8	J3	H13	G2	H17	H3	G16	E3	C1
23	9C	F18		10B D5	10B	G8		9D D18	9D D17	H8	H14	H4	E12	C26	
24	9C			E4 10B	10B			9D	D1 9C	F11	G13	F5	C3		
25		E11								F13	C21	C27	C22		
26											C9				
27	10C F12			9E	9E				F8						
28	10C			9E	9B				C12	C28					
29	E10														
30	C8			C17											

Figure 4-6. LS1 Cycle 8 Active Control Blade Locations

Table 4-303. LS1 Bladed Fuel Assemblies and Control Group

SAS2H ID	Initial Insertion	Fuel Type	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8
A1	Cycle 4	9		9E			
A3	Cycle 4	9			9C		
A5	Cycle 4	9			10B		
A6	Cycle 4	9		10C	10C		
A8	Cycle 4	9			10B		
A11	Cycle 4	9			10B		
A12	Cycle 4	9		9D			
B1	Cycle 4	8			10A		
B2	Cycle 4	8			9D		
B5	Cycle 4	8			9B		
B6	Cycle 4	8			9A		
B10	Cycle 4	8			9B		
C1	Cycle 5	10			9D		
C2	Cycle 5	10			9E	9D	
C5	Cycle 5	10				10A	
C6	Cycle 5	10				464	
C7	Cycle 5	10			10B	464	
C9	Cycle 5	10				9E	
C10	Cycle 5	10				9B	
C11	Cycle 5	10			9B		
C13	Cycle 5	10			9D		
C14	Cycle 5	10			10C		
C15	Cycle 5	10				10B	
C16	Cycle 5	10				9E	
C17	Cycle 5	10			9E	9A	
C18	Cycle 5	10				9B	
C19	Cycle 5	10				10A	
C20	Cycle 5	10				9C	
C21	Cycle 5	10			9E		
C22	Cycle 5	10				9D	
C24	Cycle 5	10				10B	
C25	Cycle 5	10				9C	
C26	Cycle 5	10			9C		
C28	Cycle 5	10				9D	
C29	Cycle 5	10			10A		

Table 4-303. LS1 Bladed Fuel Assemblies and Control Group (Continued)

SAS2H ID	Initial Insertion	Fuel Type	Cycle 4	Cycle 5	Cycle 6	Cycle 7	Cycle 8
D1	Cycle 6	11					9D
D2	Cycle 6	11				9E	9B
D3	Cycle 6	11					10B
D4	Cycle 6	11					9A
D5	Cycle 6	11					10B
D6	Cycle 6	11					9E
D7	Cycle 6	11				10C	
D10	Cycle 6	11			9E		10C
D11	Cycle 6	11					10B
D12	Cycle 6	11					9B
D13	Cycle 6	11					10A
D14	Cycle 6	11				9E	9B
D15	Cycle 6	11					9C
D16	Cycle 6	11				9D	
D17	Cycle 6	11				9E	9D
D18	Cycle 6	11					9D
D19	Cycle 6	11					9E
D20	Cycle 6	11					9E
D21	Cycle 6	11				10B	
E1	Cycle 6	12				10B	
E2	Cycle 6	12					10B
E4	Cycle 6	12					10B
E6	Cycle 6	12					10A
E9	Cycle 6	12					9C
E12	Cycle 6	12				9B	
F1	Cycle 7	2				10C	
F2	Cycle 7	2					10C
F12	Cycle 7	2					10C
F18	Cycle 7	2				10C	
G1	Cycle 7	1					9B
G3	Cycle 7	1					10B
G9	Cycle 7	1				464	9E
G13	Cycle 7	1				464	9E

Table 4-304. LS1 Control Blade Position Cycle 4
Control Blade Configuration in Notches Withdrawn

(J, I) =	30,31	38,31	46,31	54,31	38,23	46,23	54,23	46,15	26,31
MWd/MTU	9A	10A	9C	10C	9B	10B	9E	9D	396*
0.0 - 67.3	--	0	30	4	30	8	42	36	--
67.3 - 217.0	--	8	--	14	--	16	--	--	--
217.0 - 332.6	--	12	--	14	--	16	--	--	--
332.6 - 487.8	--	12	--	14	--	18	--	--	--
487.8 - 595.7	--	16	--	--	--	10	--	--	--
595.7 - 1179.1	--	16	--	--	--	12	--	--	--
1179.1 - 1523.7	--	14	--	--	--	12	--	--	--
1523.7 - 1699.8	--	16	--	--	--	10	--	--	--
1699.8 - 1936.0	--	14	--	--	--	10	--	--	--
1936.0 - 2239.5	--	14	--	--	--	10/8(1)	--	--	--
2239.5 - 2759.0	--	14	--	--	--	10	--	--	--
2759.0 - 3491.4	--	14	--	--	--	8	--	--	--
3491.4 - 3703.5	--	12	--	--	--	8	--	--	--
3703.5 - 3956.6	--	12	--	--	22	8	--	--	--
3956.6 - 4323.9	--	8	--	--	22	8	--	--	--
4323.9 - 4468.8	--	0	--	--	22	0	--	--	--
4468.8 - 4963.0	--	6	--	--	22	8	--	--	--
4963.0 - 5589.7	--	6	--	--	22	8	--	--	--
5589.7 - 6102.2	--	4	--	--	22	10	--	--	--
6102.2 - 6880.2	--	4	--	--	22	12	--	--	--
6880.2 - 6948.5	--	4	--	--	22	14	--	--	4(2)
6948.5 - 7148.8	--	0	--	--	22	14	--	--	--
7148.8 - 7379.9	--	0	--	--	--	14	--	--	--
7379.9 - 7800.5	--	8	--	--	--	14	--	--	--
7800.5 - 8032.6	--	6	--	--	--	18	--	--	--
8032.6 - 8352.5	--	12	--	--	--	18	--	--	--
8352.5 - 8515.0	--	6	--	--	--	--	--	--	--
8515.0 - 8679.5	--	12	--	--	--	--	--	--	--
8679.5 - 8931.6	--	16	--	--	--	--	--	--	--

(1) = "10" is symmetric in 1/8 core. "8" is symmetric in another 1/8 of core.
(2) = "4" is a single blade inserted for one time step (6880.2 to 6948.5).

Table 4-305. LS1 Control Blade Position Cycle 5
Control Blade Configuration in Notches Withdrawn

	Control Blade Group Number							
(J,I) =	30,31	38,31	46,31	54,31	38,23	46,23	54,23	46,15
MWd/MTU	9A	10A	9C	10C	9B	10B	9E	9D
0.0 - 151.0	0	24	0	--	6	--	18	12
151.0 - 919.3	12	--	8	--	12	--	--	--
919.3 - 1242.3	12	--	6	--	12	--	--	--
1242.3 - 1451.7	--	--	0	--	12	--	--	--
1451.7 - 1779.1	--	--	0	--	10	--	--	--
1779.1 - 3585.8	--	--	0	--	8	--	--	--
3585.8 - 3787.1	--	--	0	--	4	--	--	--
3787.1 - 4239.3	--	--	0	--	0	--	--	--
4239.3 - 5006.1	10	--	0	--	10	--	--	--
5006.1 - 5559.6	0	--	0	--	10	--	--	--
5559.6 - 5745.7	--	6	--	--	--	12	--	--
5745.7 - 6027.4	--	6	--	--	--	12	--	--
6027.4 - 6652.3	--	8	--	--	--	12	--	--
6652.3 - 6710.5	--	0	--	12	--	0	--	--
6710.5 - 7068.3	--	8	--	--	--	12	--	--
7068.3 - 7494.8	--	8	--	--	--	14	--	--
7494.8 - 8053.6	--	10	--	--	--	16	--	--
8053.6 - 8218.8	--	12	--	--	--	16	--	--
8218.8 - 8424.8	--	4	--	--	--	--	--	--
8424.8 - 8677.7	--	8	--	--	--	--	--	--
8677.7 - 9067.7	--	12	--	--	--	--	--	--
9067.7 - 9239.9	0	12	--	--	--	--	--	--
9239.9 - 11207.9	--	--	--	--	--	--	--	--

Table 4-306. LS1 Control Blade Position Cycle 6
Control Blade Configuration in Notches Withdrawn

	Control Blade Group Number or Region Number							
(J,I) =	30,31	38,31	46,31	54,31	38,23	46,23	54,23	46,15
MWd/MTU	9A	10A	9C	10C	9B	10B	9E	9D
0.0 - 92.9	0	24	0	–	0	36	24	0
92.9 - 211.4	0	30	8	–	8	–	–	24
211.4 - 295.9	0	24	8	–	0	36	–	10
295.9 - 373.0	30	–	12	–	8	–	–	30
373.0 - 435.6	10	24	10	–	8	30	–	10
435.6 - 550.2	36	–	12	–	8	–	–	36
550.2 - 930.5	36	–	12	–	10	–	–	36
930.5 - 1070.9	36	–	14	–	10	–	–	36
1070.9 - 1260.8	–	–	14	–	10	–	–	42
1260.8 - 1454.8	–	–	14	–	8	–	–	–
1454.8 - 1517.5	18	–	14	–	0	–	–	24
1517.5 - 1723.1	–	–	14	–	4	–	–	38
1723.1 - 2416.2	–	–	12	–	0	–	–	38
2416.2 - 2970.8	30	–	12	–	0	–	–	40
2970.8 - 3274.7	30	–	10	–	0	–	–	40
3274.7 - 3694.5	24	–	10	–	0	–	–	30
3694.5 - 4157.7	24	–	8	–	0	–	–	30
4157.7 - 4251.2	–	0	–	–	38	14	–	–
4251.2 - 4752.2	–	6	–	–	38	14	–	–
4752.2 - 4806.8	–	0	40	–	24	6	–	38
4806.8 - 5455.1	–	6	–	–	38	14	–	–
5455.1 - 5745.0	–	10	–	–	38	14	–	–
5745.0 - 6201.9	–	12	–	–	–	14	–	–
6201.9 - 6346.2	–	12	–	–	–	16	–	–
6346.2 - 6423.2	–	0	–	–	–	8	–	–
6423.2 - 7255.9	0	–	–	–	0	–	–	–
7255.9 - 7658.4	–	10	–	–	–	–	–	–

Table 4-307. LS1 Control Blade Position Cycle 7
Control Blade Configuration in Notches Withdrawn

	Control Blade Group Number or Region Number								
(J,I) =	30,31	38,31	46,31	54,31	38,23	46,23	54,23	46,15	42,27
MWd/MTU	9A	10A	9C	10C	9B	10B	9E	9D	464*
0.0 - 156.4	12	0	12	0	12	0	12	12	30
156.4 - 314.3	--	0	36	--	--	8	--	30	--
314.3 - 1056.1	--	0	--	--	--	10	--	30	--
1056.1 - 1315.4	--	0	--	--	--	8	--	30	--
1315.4 - 1830.8	--	0	--	--	--	6	--	30	--
1830.8 - 2099.3	--	0	--	--	--	4	--	30	--
2099.3 - 2488.6	--	0	--	--	--	0	--	30	--
2488.6 - 2902.8	--	8	--	--	--	0	--	18	--
2902.8 - 3071.4	--	8	--	--	20	0	--	--	--
3071.4 - 3603.0	--	0	--	--	20	0	--	--	--
3603.0 - 3769.7	--	0	24	--	18	0	--	--	--
3769.7 - 3865.0	--	0	24	--	18	0	--	24	--
3865.0 - 4619.4	--	4	24	--	20	0	--	24	--
4619.4 - 4728.4	0	--	0	--	6	18	--	0	--
4728.4 - 4925.0	0	--	0	--	6	18	--	0	--
4925.0 - 5119.5	0	--	0	24	6	18	--	0	--
5119.5 - 5725.7	0	24	0	24	6	18	--	8	--
5725.7 - 6308.4	0	24	0	24	4	18	--	8	--
6308.4 - 6771.8	0	24	0	24	6	18	--	8	--
6771.8 - 6911.8	0	30	0	--	0	20	--	0	--
6911.8 - 7082.2	0	30	0	--	6	20	--	0	--
7082.2 - 7190.8	0	--	0	--	0	20	--	0	--
7190.8 - 7312.2	0	--	0	--	8	20	--	0	--
7312.2 - 7507.3	0	--	4	--	10	20	--	0	--
7507.3 - 7778.3	0	--	0	--	6	--	24	0	--
7778.3 - 8014.5	0	--	0	--	6	--	--	0	--
8014.5 - 8281.2	0	--	0	--	10	--	--	0	--
8281.2 - 8351.7	0	--	0	--	12	--	--	6	--
8351.7 - 8522.2	0	--	0	--	12	--	--	10	--
8522.2 - 8644.1	8	--	0	--	12	--	--	12	--
8644.1 - 8907.2	0	--	0	--	8	--	--	--	--
8907.2 - 9358.5	--	--	6	--	0	--	--	--	--
9358.5 - 9676.2	--	--	12	--	4	--	--	--	--
9676.2 - 10062.0	--	--	--	--	0	--	--	--	--
10062.0 - 10498.7	--	--	--	--	8	--	--	--	--
10498.7 - 11885.9	--	--	--	--	--	--	--	--	--
11885.9 - 12119.9	0	--	--	--	--	--	--	--	--

Table 4-308. LS1 Control Blade Position Cycle 8
Control Blade Configuration in Notches Withdrawn

	Control Blade Group Number or Region Number							
(J, I) =	30,31	38,31	46,31	54,31	38,23	46,23	54,23	46,15
MWd/MTU	9A	10A	9C	10C	9B	10B	9E	9D
0.0 - 89.8	20	36	0	–	12	24	–	–
89.8 - 190.6	20	36	0	–	0	18	–	–

Figure 4-7. Not Used.
Figure 4-8. Not Used.

Table 4-309. LS1 Step Lengths for SAS2H Depletion Calculations

Cycle	Range of EFPD	Relative DP or SP	Steps In DP or SP	Step Length (EFPD)
4	000.00 – 208.56	1	3	69.52
4	208.56 – 375.32	2	3	55.59
5	000.00 – 239.48	1	4	59.87
5	239.48 – 467.14	2	4	56.92
6	000.00 – 196.09	1	3	65.36
6	196.09 – 316.01	2	2	59.96
7	000.00 – 193.20	1	3	64.40
7	193.20 – 306.75	2	2	56.78
7	306.75 – 495.23	3	3	62.83
8	000.00 – 3.67	1	1	3.67

Table 4-309 summarizes the 'step length' in EFPD for SAS2H depletion calculations. Table 4-310 through 4-316 summarizes the control blade insertion history statement for each 'step' and specifies the nodes exposed to a blade. It specifies the top and bottom node seeing a blade. If any assembly is exposed to a blade, the blade insertion starts with the bottom node (node 1) and continues "up" the assembly until the required number of exposed nodes are "bladed". The node is identified as seeing a blade if the actual node is exposed to a blade more than one-half of the total step EFPD. If the blade exposure is equal or less than half, the step is considered as non-bladed. The control blade insertion is modeled in the burnup calculations for those assemblies where blades are inserted for more than ½ of the total step EFPD.

Description of the data given in Tables 4-310 through 4-316 is provided in the following paragraph. This example table uses information from assembly C1 to describe the control blade insertion history statement syntax. This description applies to all of the history statements for bladed fuel assemblies.

Example Assembly: C1
Bladed Cycle: 6
Number of Irradiation Steps: 3

Relative Cycle Blade Is Inserted	Relative DP or SP In a Cycle	Relative Step Number	Nodes Exposed to Control Blade Bottom Node	Top Node	SAS2H Material Identifier
collapsed					11
2	1	1	1	3	11
2	1	2	1	2	11
2	1	3	1	2	11
non-collapsed					
2	1	1	1	6	
2	1	2	1	5	11
2	1	3	1	4	11

Table 4-310. LS1 File Control Blade History for "A" Assemblies

```
ASSEMBLY:   A1
BLADED CYCLE:5
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                  : Number of irradiation steps with CRB inserted
*************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                  : Number of irradiation steps with CRB inserted

ASSEMBLY:   A3
BLADED CYCLE:6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 3                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 1 1 6 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 2 1 6 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 7 11       : Insertion history statement
*************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 3                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 1 1 18 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 2 1 18 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 19 11      : Insertion history statement

ASSEMBLY:   A5
BLADED CYCLE: 6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 2 1 1 6 11       : Insertion history statement
*************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 2 1 1 17 11      : Insertion history statement

ASSEMBLY:   A6
BLADED CYCLE:5
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                  : Number of irradiation steps with CRB inserted
*************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                  : Number of irradiation steps with CRB inserted
```

```
ASSEMBLY:    A8
BLADED CYCLE:6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 6 11      : Insertion history statement
*************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 17 11     : Insertion history statement

ASSEMBLY:    A11
BLADED CYCLE:6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 6 11      : Insertion history statement
*************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 17 11     : Insertion history statement

ASSEMBLY:    A12
BLADED CYCLE:5
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                 : Number of irradiation steps with CRB inserted
*************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                 : Number of irradiation steps with CRB inserted
```

Table 4-311. LS1 Control Blade History for "B" Assemblies

```
ASSEMBLY:    B1
BLADED CYCLE:6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 2                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 7 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 6 11      : Insertion history statement
*************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 2                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 19 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 18 11     : Insertion history statement

ASSEMBLY:    B2
BLADED CYCLE:6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 3                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 3 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 2 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 3 11      : Insertion history statement
```

```
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 3                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 1 1 6 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 2 1 5 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 9 11       : Insertion history statement

ASSEMBLY:    B5
BLADED CYCLE:6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 5                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 1 1 7 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 2 1 7 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 9 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 1 1 2 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 2 1 9 11       : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 5                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 1 1 20 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 2 1 19 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 24 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 1 1 5 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 2 1 24 11      : Insertion history statement

ASSEMBLY:    B6
BLADED CYCLE:  6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 3                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 1 1 3 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 4 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 2 1 9 11       : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 3                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 1 1 6 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 12 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 2 1 24 11      : Insertion history statement
```

```
ASSEMBLY:     B10
BLADED CYCLE:  6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 5                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 7 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 7 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 2 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 9 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 5                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 20 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 19 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 24 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 5 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 24 11     : Insertion history statement
```

Table 4-312. LS1 Control Blade History for "C" Assemblies

```
ASSEMBLY:     C1
BLADED CYCLE:  6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 3                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 2 1 1 1 3 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 1 2 1 2 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 1 3 1 2 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 3                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 2 1 1 1 6 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 1 2 1 5 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 1 3 1 4 11      : Insertion history statement

ASSEMBLY:     C2
BLADED CYCLE:  6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                 : Number of irradiation steps with CRB inserted
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                 : Number of irradiation steps with CRB inserted
```

```
ASSEMBLY:      C2
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 6                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 3 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 3 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 4 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 7 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 3 1 1 7 11      : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 6                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 12 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 20 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 24 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 3 1 1 20 11     : Insertion history statement

ASSEMBLY:      C5
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 4                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 8 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 4 11      : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 4                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 24 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 24 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 22 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 12 11     : Insertion history statement

ASSEMBLY:      C6
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                 : Number of irradiation steps with CRB inserted
```

```
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                  : Number of irradiation steps with CRB inserted

ASSEMBLY:     C7
BLADED CYCLE:  6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 2 2 1 1 6 11       : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 2 2 1 1 17 11      : Insertion history statement
ASSEMBLY:     C7
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                  : Number of irradiation steps with CRB inserted
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                  : Number of irradiation steps with CRB inserted

ASSEMBLY:     C9
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                  : Number of irradiation steps with CRB inserted
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                  : Number of irradiation steps with CRB inserted

ASSEMBLY:     C10
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 5                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 5 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 1 1 7 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 2 1 7 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 3 1 1 7 11       : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 3 2 1 8 11       : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 5                  : Number of irradiation steps with CRB inserted
 1                  : Number of axial sections with CRB inserted in step
 3 1 3 1 14 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 1 1 21 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 2 2 1 21 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 3 1 1 19 11      : Insertion history statement
 1                  : Number of axial sections with CRB inserted in step
 3 3 2 1 22 11      : Insertion history statement
```

ASSEMBLY: C11
BLADED CYCLE: 6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

```
5              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
2 1 1 1 7 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 2 1 2 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 3 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 2 1 1 2 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 2 2 1 2 11   : Insertion history statement
```

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

```
5              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
2 1 1 1 20 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 2 1 5 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 3 1 24 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 2 1 1 5 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 2 2 1 5 11   : Insertion history statement
```

ASSEMBLY: C13
BLADED CYCLE: 6

****

SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

```
3              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
2 1 1 1 3 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 2 1 2 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 3 1 2 11   : Insertion history statement
```

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

```
3              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
2 1 1 1 6 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 2 1 5 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 3 1 5 11   : Insertion history statement
```

ASSEMBLY: C15
BLADED CYCLE: 7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

```
5              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
3 1 1 1 7 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 2 1 7 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 3 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
```

```
3 2 1 1 5 11    : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 2 2 1 5 11    : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
5               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 19 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 1 2 1 19 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 1 3 1 24 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 2 1 1 14 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 2 2 1 15 11   : Insertion history statement

ASSEMBLY:     C16
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
0               : Number of irradiation steps with CRB inserted
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
0               : Number of irradiation steps with CRB inserted

ASSEMBLY:     C17
BLADED CYCLE:  6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
0               : Number of irradiation steps with CRB inserted
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
0               : Number of irradiation steps with CRB inserted

ASSEMBLY:     C17
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
3               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 2 1 1 9 11    : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 2 2 1 9 11    : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 3 1 1 9 11    : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
3               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 2 1 1 24 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 2 2 1 24 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
3 3 1 1 24 11   : Insertion history statement

ASSEMBLY:     C18
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
5               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 3 1 5 11    : Insertion history statement
1               : Number of axial sections with CRB inserted in step
```

```
3 2 1 1 7 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 7 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 1 1 7 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 2 1 8 11   : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
5              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
3 1 3 1 14 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 1 1 21 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 21 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 1 1 19 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 2 1 22 11  : Insertion history statement

ASSEMBLY:     C19
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
4              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
3 1 1 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 2 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 3 1 8 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 4 11   : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
4              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
3 1 1 1 24 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 2 1 24 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 3 1 22 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 12 11  : Insertion history statement

ASSEMBLY:     C20
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
5              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
3 1 3 1 4 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 1 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 1 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 2 1 6 11   : Insertion history statement
*****************************************************
```

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

5	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 3 1 12 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 2 1 1 24 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 2 2 1 24 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 3 1 1 24 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 3 2 1 16 11	: Insertion history statement

ASSEMBLY: C21
BLADED CYCLE: 6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

0	: Number of irradiation steps with CRB inserted

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

0	: Number of irradiation steps with CRB inserted

ASSEMBLY: C22
BLADED CYCLE: 7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

6	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 3 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 1 2 1 3 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 1 3 1 4 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 2 1 1 7 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 2 2 1 9 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 3 1 1 7 11	: Insertion history statement

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

6	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 9 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 1 2 1 9 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 1 3 1 12 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 2 1 1 20 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 2 2 1 24 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step
3 3 1 1 19 11	: Insertion history statement

ASSEMBLY: C24
BLADED CYCLE: 7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

5	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 7 11	: Insertion history statement
1	: Number of axial sections with CRB inserted in step

```
3 1 2 1 6 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 3 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 1 1 5 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 5 11   : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
5              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
3 1 1 1 19 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 2 1 18 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 1 3 1 24 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 1 1 14 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 15 11  : Insertion history statement

ASSEMBLY:      C25
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
5              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
3 1 3 1 4 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 1 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 1 1 9 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 2 1 5 11   : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
5              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
3 1 3 1 12 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 1 1 24 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 2 2 1 24 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 1 1 24 11  : Insertion history statement
1              : Number of axial sections with CRB inserted in step
3 3 2 1 14 11  : Insertion history statement

ASSEMBLY:      C26
BLADED CYCLE:  6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
3              : Number of irradiation steps with CRB inserted
1              : Number of axial sections with CRB inserted in step
2 1 1 1 6 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 2 1 6 11   : Insertion history statement
1              : Number of axial sections with CRB inserted in step
2 1 3 1 6 11   : Insertion history statement
**************************************************
```

```
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 3                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 2 1 1 1 18 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 1 2 1 18 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 1 3 1 18 11     : Insertion history statement

ASSEMBLY:    C28
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 6                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 3 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 3 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 4 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 7 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 3 1 1 7 11      : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 6                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 2 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 1 3 1 12 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 1 1 20 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 2 2 1 24 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 3 3 1 1 19 11     : Insertion history statement

ASSEMBLY:    C29
BLADED CYCLE:  6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 2                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 2 2 1 1 6 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 2 2 1 6 11      : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 2                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 2 2 1 1 18 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 2 2 1 18 11     : Insertion history statement
```

Table 4-313. LS1 Control Blade History for "D" Assemblies

```
ASSEMBLY:      D2
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                 : Number of irradiation steps with CRB inserted
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                 : Number of irradiation steps with CRB inserted

ASSEMBLY:      D2
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 6 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 18 11     : Insertion history statement

ASSEMBLY:      D3
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 4 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 12 11     : Insertion history statement

ASSEMBLY:      D4
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 5 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 14 11     : Insertion history statement

ASSEMBLY:      D5
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 4 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 12 11     : Insertion history statement
```

ASSEMBLY: D7
BLADED CYCLE: 7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

1	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
2 2 2 1 4 11	: Insertion history statement

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

1	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
2 2 2 1 12 11	: Insertion history statement

ASSEMBLY: D10
BLADED CYCLE: 6
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

0	: Number of irradiation steps with CRB inserted

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

0	: Number of irradiation steps with CRB inserted

ASSEMBLY: D11
BLADED CYCLE: 8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

1	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 4 11	: Insertion history statement

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

1	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 12 11	: Insertion history statement

ASSEMBLY: D12
BLADED CYCLE: 8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

1	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 6 11	: Insertion history statement

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

1	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 18 11	: Insertion history statement

ASSEMBLY: D13
BLADED CYCLE: 8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):

1	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 3 11	: Insertion history statement

****

SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):

1	: Number of irradiation steps with CRB inserted
1	: Number of axial sections with CRB inserted in step
3 1 1 1 6 11	: Insertion history statement

```
ASSEMBLY:    D14
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                 : Number of irradiation steps with CRB inserted
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                 : Number of irradiation steps with CRB inserted

ASSEMBLY:    D14
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 6 11      : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 18 11     : Insertion history statement

ASSEMBLY:    D15
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 9 11      : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 1                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 3 1 1 1 24 11     : Insertion history statement

ASSEMBLY:    D16
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 5                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 2 1 1 1 3 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 1 2 1 3 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 2 1 1 7 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 2 2 1 7 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 3 1 1 7 11      : Insertion history statement
*****************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 5                 : Number of irradiation steps with CRB inserted
 1                 : Number of axial sections with CRB inserted in step
 2 1 1 1 8 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 1 2 1 9 11      : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 2 1 1 19 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 2 2 1 20 11     : Insertion history statement
 1                 : Number of axial sections with CRB inserted in step
 2 3 1 1 19 11     : Insertion history statement
```

```
ASSEMBLY:      D17
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 0                 : Number of irradiation steps with CRB inserted
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 0                 : Number of irradiation steps with CRB inserted

ASSEMBLY:      D21
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 5                 : Number of irradiation steps with CRB inserted
1                  : Number of axial sections with CRB inserted in step
 2 1 1 1 7 11      : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 1 2 1 6 11      : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 1 3 1 9 11      : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 2 1 1 5 11      : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 2 2 1 5 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 5                 : Number of irradiation steps with CRB inserted
1                  : Number of axial sections with CRB inserted in step
 2 1 1 1 19 11     : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 1 2 1 19 11     : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 1 3 1 24 11     : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 2 1 1 14 11     : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 2 2 1 15 11     : Insertion history statement
```

Table 4-314. LS1 Control Blade History for "E" Assemblies

```
ASSEMBLY:      E1
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
 5                 : Number of irradiation steps with CRB inserted
1                  : Number of axial sections with CRB inserted in step
 2 1 1 1 7 11      : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 1 2 1 6 11      : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 1 3 1 9 11      : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 2 1 1 5 11      : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
 2 2 2 1 5 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
 5                 : Number of irradiation steps with CRB inserted
1                  : Number of axial sections with CRB inserted in step
 2 1 1 1 19 11     : Insertion history statement
1                  : Number of axial sections with CRB inserted in step
```

```
2 1 2 1 16 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
2 1 3 1 24 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
2 2 1 1 14 11   : Insertion history statement
1               : Number of axial sections with CRB inserted in step
2 2 2 1 15 11   : Insertion history statement

ASSEMBLY:     E2
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
1               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 4 11    : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
1               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 12 11   : Insertion history statement

ASSEMBLY:     E4
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
1               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 4 11    : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
1               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 12 11   : Insertion history statement

ASSEMBLY:     E6
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
1               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 3 11    : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
1               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 6 11    : Insertion history statement

ASSEMBLY:     E9
BLADED CYCLE:  8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
1               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 9 11    : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
1               : Number of irradiation steps with CRB inserted
1               : Number of axial sections with CRB inserted in step
3 1 1 1 24 11     : Insertion history statement

ASSEMBLY:     E12
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
5               : Number of irradiation steps with CRB inserted
```

```
1                 : Number of axial sections with CRB inserted in step
2 1 3 1 5 11      : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
2 2 1 1 7 11      : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
2 2 2 1 7 11      : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
2 3 1 1 6 11      : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
2 3 2 1 8 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
5                 : Number of irradiation steps with CRB inserted
1                 : Number of axial sections with CRB inserted in step
2 1 3 1 14 11     : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
2 2 1 1 21 11     : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
2 2 2 1 21 11     : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
2 3 1 1 18 11     : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
2 3 2 1 22 11     : Insertion history statement
```

Table 4-315. LS1 Control Blade History for "F" Assemblies

```
ASSEMBLY:     F1
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
2                 : Number of irradiation steps with CRB inserted
1                 : Number of axial sections with CRB inserted in step
1 2 1 1 4 11      : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
1 2 2 1 4 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
2                 : Number of irradiation steps with CRB inserted
1                 : Number of axial sections with CRB inserted in step
1 2 1 1 12 11     : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
1 2 2 1 12 11     : Insertion history statement

ASSEMBLY:     F18
BLADED CYCLE:  7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
2                 : Number of irradiation steps with CRB inserted
1                 : Number of axial sections with CRB inserted in step
1 2 1 1 4 11      : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
1 2 2 1 4 11      : Insertion history statement
**************************************************
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
2                 : Number of irradiation steps with CRB inserted
1                 : Number of axial sections with CRB inserted in step
1 2 1 1 12 11     : Insertion history statement
1                 : Number of axial sections with CRB inserted in step
1 2 2 1 12 11     : Insertion history statement
```

Table 4-316. LS1 Control Blade History for "G" Assemblies

ASSEMBLY: G1
BLADED CYCLE: 8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
1 : Number of irradiation steps with CRB inserted
1 : Number of axial sections with CRB inserted in step
2 1 1 1 6 11 : Insertion history statement
****
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
1 : Number of irradiation steps with CRB inserted
1 : Number of axial sections with CRB inserted in step
2 1 1 1 18 11 : Insertion history statement

ASSEMBLY: G3
BLADED CYCLE: 8
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
1 : Number of irradiation steps with CRB inserted
1 : Number of axial sections with CRB inserted in step
2 1 1 1 4 11 : Insertion history statement
****
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
1 : Number of irradiation steps with CRB inserted
1 : Number of axial sections with CRB inserted in step
2 1 1 1 12 11 : Insertion history statement

ASSEMBLY: G9
BLADED CYCLE: 7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
0 : Number of irradiation steps with CRB inserted
****
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
0 : Number of irradiation steps with CRB inserted

ASSEMBLY: G13
BLADED CYCLE: 7
SPACE INPUT-CRB INSERTION SECTION (COLLAPSED):
0 : Number of irradiation steps with CRB inserted
****
SPACE INPUT-CRB INSERTION SECTION (UNCOLLAPSED):
0 : Number of irradiation steps with CRB inserted

4.3 STATEPOINT CRITICAL CONDITION MEASUREMENTS

Measured critical conditions for 5 reactor startups (statepoints) are provided in Table 4-317. The data includes the BOC of Cycle 7 and two restarts during Cycle 7, and the BOC for Cycle 8 and one restart during Cycle 8. The cycle and statepoint number, the EFPDs during the cycle for which the startup occurred, and the elapsed time since reactor was shutdown, are provided for each statepoint. Figures 4-9 through 4-13 provide the blade positions for each statepoint when criticality was achieved.

Table 4-317. LS1 Statepoint Criticality Data

Point	Criticality Date (m-d-y)	Exposure (MWd/MTU)	EFPD	Down Time (h)	k_{eff}	Moderator Temperature (°F)	Period (s)
Cycle 7							
SP7	06-24-94	0.00	0.00	3024	1.00584	134.6	147
SP8	02-14-95	4728.4	193.20	120	1.00519	205.0	166
SP9	06-17-95	7507.28	306.75	140	1.00875	221.4	420
Cycle 8							
SP10	04-21-96	0.00	0.00	2064	1.00605	156.8	130
SP11	05-16-96	89.8	3.67	120	1.00574	172.4	327

	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	
59					0	0	0	0	0	0	0					59
55				0	--	0	--	0	18	0	--	0				55
51			0	0	0	0	0	0	0	0	0	0	0			51
47		0	--	0	0	0	--	0	--	0	0	0	--	0		47
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
39	--	0	0	0	--	0	0	0	0	0	--	0	0	0	--	39
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
31	--	0	--	0	0	0	--	0	--	0	0	0	--	0	--	31
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
23	--	0	0	0	--	0	0	0	0	0	--	0	0	0	--	23
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
15		0	--	0	0	0	--	0	--	0	0	0	--	0		15
11			0	0	0	0	0	0	0	0	0	0	0			11
7				0	--	0	--	0	0	0	--	0				7
3					0	0	0	0	0	0	0					3
	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	

Figure 4-9. LS1 SP7 Criticality Control Blade Configuration in Notches Withdrawn (Cycle 7, 0.00 MWd/MTU)

	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	
59					0	0	0	0	0	0	0					59
55				0	--	0	--	0	--	0	--	0				55
51			0	0	0	0	0	0	0	0	0	0	0			51
47		0	--	0	22	0	--	0	--	0	0	0	--	0		47
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
39	--	0	0	0	--	0	0	0	0	0	--	0	0	0	--	39
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
31	--	0	--	0	0	0	--	0	--	0	0	0	--	0	--	31
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
23	--	0	0	0	--	0	0	0	0	0	--	0	0	0	--	23
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
15		0	--	0	0	0	--	0	--	0	0	0	--	0		15
11			0	0	0	0	0	0	0	0	0	0	0			11
7				0	--	0	--	0	--	0	--	0				7
3					0	0	0	0	0	0	0					3
	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	

Figure 4-10. LS1 SP8 Criticality Control Blade Configuration in Notches Withdrawn (Cycle 7, 4728.36 MWd/MTU)

	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	
59					0	0	0	0	0	0	0					59
55				0	--	0	--	0	--	0	--	0				55
51			0	0	0	0	0	0	0	0	0	0	0			51
47		0	--	0	0	0	--	0	--	0	0	0	--	0		47
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
39	--	0	0	0	--	0	0	0	0	0	--	0	0	0	--	39
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
31	--	0	--	0	0	0	--	0	--	0	0	0	--	0	--	31
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
23	--	0	0	0	--	0	0	0	0	0	--	0	0	0	--	23
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
15		0	--	0	0	0	--	0	--	0	0	0	--	0		15
11			0	0	0	0	0	0	0	0	0	0	0			11
7				0	--	0	--	0	22	0	--	0				7
3					0	0	0	0	0	0	0					3
	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	

Figure 4-11. LS1 SP9 Criticality Control Blade Configuration in Notches Withdrawn (Cycle 7, 7507.3 MWd/MTU)

	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	
59					0	0	0	0	0	0	0					59
55				0	--	0	--	0	--	0	--	0				55
51			0	0	0	0	0	0	0	0	0	0	0			51
47		0	--	0	--	0	--	0	--	0	--	0	--	0		47
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
39	--	0	--	0	--	0	--	0	0	0	--	0	--	0	--	39
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
31	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	31
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
23	--	0	--	0	--	0	10	0	0	0	--	0	--	0	--	23
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
15		0	--	0	--	0	--	0	--	0	--	0	--	0		15
11			0	0	0	0	0	0	0	0	0	0	0			11
7				0	--	0	--	0	--	0	--	0				7
3					0	0	0	0	0	0	0					3
	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	

Figure 4-12. LS1 SP10 Criticality Control Blade Configuration in Notches Withdrawn (Cycle 8, 0.00 MWd/MTU)

	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	
59					0	0	0	0	0	0	0					59
55				0	--	0	--	0	--	0	--	0				55
51			0	0	0	0	0	0	0	0	0	0	0			51
47		0	--	0	--	0	--	0	--	0	--	0	--	0		47
43	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43
39	--	0	--	0	--	0	--	0	0	0	--	0	--	0	--	39
35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
31	--	0	--	0	--	0	--	0	--	0	--	0	--	0	--	31
27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
23	--	0	--	0	--	0	20	0	0	0	--	0	--	0	--	23
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
15		0	--	0	--	0	--	0	--	0	--	0	--	0		15
11			0	0	0	0	0	0	0	0	0	0	0			11
7				0	--	0	--	0	--	0	--	0				7
3					0	0	0	0	0	0	0					3
	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	

Figure 4-13. LS1 SP11 Criticality Control Blade Configuration in Notches Withdrawn (Cycle 8, 89.8 MWd/MTU)

5. CONCLUSIONS

This summary report contains the detailed information necessary to perform CRC analyses for the LaSalle Unit 1 reactor. CRC analyses based on the data contained in this report may be used to develop parts of the disposal criticality analysis methodology. The data reported herein has been identified with TBV-1349. Release of the TBV governing this data is required prior to its use in quality affecting activities and for use in analyses affecting procurement, construction, or fabrication.

6. REFERENCES

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