

Core Design and Operating Data for Cycle 1 of Hatch 1

EPRI

Keywords:

BWR Core Design
BWR Operating Data
Reactor Operating
History
BWR Benchmark Data
Hatch 1

EPRI NP-562
Project 130-3
Final Report
January 1979

Prepared by
General Electric Company
San Jose, California

ELECTRIC POWER RESEARCH INSTITUTE

Engin.
TK9202
.C67
1979

ENGINEERING LIBRARY

Core Design and Operating Data for Cycle 1 of Hatch 1

**NP-562
Research Project 130-3**

Final Report, January 1979

Prepared by

GENERAL ELECTRIC COMPANY
Nuclear Energy Engineering Division
175 Curtner Avenue
San Jose, California 95125

Principal Investigators
N. H. Larsen
J. G. Goudey

Prepared for

Electric Power Research Institute
3412 Hillview Avenue
Palo Alto, California 94304

EPRI Project Manager
R. N. Whitesel
Nuclear Power Division

ORDERING INFORMATION

Requests for copies of this report should be directed to Research Reports Center (RRC), Box 10090, Palo Alto, CA 94303, (415) 961-9043. There is no charge for reports requested by EPRI member utilities and affiliates, contributing nonmembers, U.S. utility associations, U.S. government agencies (federal, state, and local), media, and foreign organizations with which EPRI has an information exchange agreement. On request, RRC will send a catalog of EPRI reports.

Copyright © 1979 Electric Power Research Institute, Inc.

EPRI authorizes the reproduction and distribution of all or any portion of this report and the preparation of any derivative work based on this report, in each case on the condition that any such reproduction, distribution, and preparation shall acknowledge this report and EPRI as the source.

NOTICE

This report was prepared by the organization(s) named below as an account of work sponsored by the Electric Power Research Institute, Inc. (EPRI). Neither EPRI, members of EPRI, the organization(s) named below, nor any person acting on their behalf: (a) makes any warranty or representation, express or implied, with respect to the accuracy, completeness, or usefulness of the information contained in this report, or that the use of any information, apparatus, method, or process disclosed in this report may not infringe privately owned rights; or (b) assumes any liabilities with respect to the use of, or for damages resulting from the use of, any information, apparatus, method, or process disclosed in this report.

Prepared by
General Electric Company
San Jose, California

FOREWORD

This report is a compilation of reactor design and operating data for Cycle 1 of the Hatch 1 Nuclear Power Plant. It has been prepared to provide reference quality data for use in the interpretation of power distribution measurements performed at the Hatch site in the Spring of 1977.

[With the encouragement and cooperation of Georgia Power Company (GPCo) and Southern Company Services, a cooperative research effort was developed by General Electric Company (GE) and Electric Power Research Institute, Inc. (EPRI) as an extension of RP 130, "Nuclear Reactor Core Benchmark Data," to carry out a series of measurements at the Hatch 1 Nuclear Power Plant. The measurements included two classes of data taken prior to the end of Cycle 1 and during the refueling outage: (1) Signals from three different types of traversing in-core probes (TIP), and (2) Gamma Scans to benchmark both fuel rod and bundle power distributions at the end of Cycle 1.]

The current TIP system design consists of ionization chambers sensitive to thermal neutron fissions. The gamma scan measurements were performed to establish the accuracy of the process computer calculations made using the TIP data and provide excellent benchmark data on nodal and bundle power distribution symmetry. The gamma scan results also provide benchmark data for the qualification of BWR nuclear analysis methods.

The measurements with the special gamma, thermal neutron, and fast neutron sensitive TIPs are reported in EPRI NP-540. A second report, NP-511, contains results from the fuel rod and bundle gamma scans. A third report, NP-561, contains comparisons of bundle powers inferred from both the gamma sensitive TIP and thermal neutron sensitive TIP and those deduced from the gamma scan data. Finally, this report documents core design and operating data for Hatch 1 during Cycle 1. This report is intended to provide reference quality data for use by those who wish to model the Hatch 1 operating history to qualify BWR nuclear analysis methods.

Bruce W. Crawford
Program Manager
Nuclear Energy Engineering Division
General Electric Company

Robert N. Whitesel
Project Manager
Electric Power Research Institute

ABSTRACT

This report contains the design and operating data needed to define the fuel characteristics and reactor operation characteristics for Cycle 1 of the Hatch Nuclear Power Plant Unit 1. The purpose is to provide reference quality data for use in the qualification of reactor core analysis methods and to provide the basis for the assessment of the irradiation environment up to and including the end of Cycle 1 gamma scan.

The design data includes fuel assembly description, core component arrangements, control rod descriptions and core loading patterns. Hydraulic characteristics of the assemblies and the inlet orifices are also provided. Operating data is compiled for selected steady-state operating points during Cycle 1. Data listed for each state point include core average exposure, thermal power, pressure, flux, inlet subcooling, control configuration and axial in-core detector readings.

LIST OF TABLES

Table	Title	Page
1	Initial Fuel Description.....	5
2	Fuel Assembly Data.....	6
3	Assembly Type 1 Density, Length, etc., Data.....	6
4	Assembly Type 2 Density, Length, etc., Data.....	7
5	Assembly Type 3 Density, Length, etc., Data.....	7
6	Fuel Assembly Hardware Weights.....	8
7	Control Rod Data	9
8	Core Description	10
9	Cycle 1 Assembly Types and Identification.....	11
10	Burn Step Information.....	14

LIST OF ILLUSTRATIONS (Continued)

Figure	Title	Page
25	Hatch Unit 1 Control Rod A Sequence Groups 7—16.....	39
26	Hatch Unit 1 Control Rod B Sequence Groups 1—4.....	40
27	Hatch Unit 1 Control Rod B Sequence Groups 5—18.....	41
28	Core Flow Measurement System Schematic Showing One of Four Groups of Jet Pumps.....	42
29	Data Summaries, October 1974	43
30	Data Summaries, November 1974	44
31	Data Summaries, December 1974	45
32	Data Summaries, January 1975	46
33	Data Summaries, February 1975.....	47
34	Data Summaries, March 1975	48
35	Data Summaries, April 1975.....	49
36	Data Summaries, May 1975	50
37	Data Summaries, June 1975	51
38	Data Summaries, July 1975.....	52
39	Data Summaries, August 1975.....	53
40	Data Summaries, September 1975	54
41	Data Summaries, October 1975	55
42	Data Summaries, November 1975	56
43	Data Summaries, December 1975	57
44	Data Summaries, January 1976	58
45	Data Summaries, February 1976.....	59
46	Data Summaries, March 1976	60
47	Data Summaries, April 1976.....	61
48	Data Summaries, May 1976	62
49	Data Summaries, June 1976	63

LIST OF ILLUSTRATIONS (Continued)

Figure	Title	Page
50	Data Summaries, July 1976.....	64
51	Data Summaries, August 1976.....	65
52	Data Summaries, September 1976	66
53	Data Summaries, October 1976	67
54	Data Summaries, November 1976	68
55	Data Summaries, December 1976	69
56	Data Summaries, January 1977	70
57	Data Summaries, February 1977.....	71
58	Data Summaries, March 1977	72

LIST OF DATA SETS (Continued)

	Page
Data Set 11	90
Reactor Conditions, February 18, 1976.....	90
Control Configuration, February 18, 1976	90
Axial TIP Distribution, February 18, 1976.....	90
Data Set 12	92
Reactor Conditions, March 11, 1976.....	92
Control Configuration, March 11, 1976.....	92
Axial TIP Distribution, March 11, 1976.....	92
Data Set 13	94
Reactor Conditions, May 25, 1976	94
Control Configuration, May 25, 1976.....	94
Axial TIP Distribution, May 25, 1976	94
Data Set 14	96
Reactor Conditions, July 22, 1976.....	96
Control Configuration, July 22, 1976	96
Axial TIP Distribution, July 22, 1976.....	96
Data Set 15	98
Reactor Conditions, August 13, 1976.....	98
Control Configuration, August 13, 1976	98
Axial TIP Distribution, August 13, 1976.....	98
Data Set 16	100
Reactor Conditions, September 16, 1976	100
Control Configuration, September 16, 1976	100
Axial TIP Distribution, September 16, 1976	100
Data Set 17	102
Reactor Conditions, October 12, 1976	102
Control Configuration, October 12, 1976	102
Axial TIP Distribution, October 12, 1976	102
Data Set 18	104
Reactor Conditions, November 29, 1976	104
Control Rod Configuration, November 29, 1976	104
Axial TIP Distribution, November 29, 1976	104
Data Set 19	106
Reactor Conditions, December 29, 1976	106
Control Configuration, December 29, 1976	106
Axial TIP Distribution, December 29, 1976	106

LIST OF DATA SETS (Continued)

	Page
Data Set 20	108
Reactor Conditions, January 21, 1977	108
Control Configuration, January 21, 1977	108
Axial TIP Distribution, January 21, 1977	108
Data Set 21	110
Reactor Conditions, January 25, 1977	110
Control Configuration, January 25, 1977	110
Axial TIP Distribution, January 25, 1977	110
Data Set 22	112
Reactor Conditions, February 23, 1977	112
Control Configuration, February 23, 1977	112
Axial TIP Distribution, February 23, 1977	112
Data Set 23	114
Reactor Conditions, March 7, 1977	114
Control Configuration, March 7, 1977	114
Axial TIP Distribution, March 7, 1977	114

SUMMARY

This report contains the design and operating data needed to define the fuel characteristics and reactor operation characteristics for Cycle 1 of the Hatch Nuclear Power Plant Unit 1. The purpose is to provide reference quality data for use in the qualification of reactor core analysis methods and to provide the basis for the assessment of the irradiation environment up to and including the end of Cycle 1 gamma scan.

The design data includes fuel assembly description, core component arrangements, control rod descriptions and core loading patterns. Hydraulic characteristics of the assemblies and the inlet orifices are also provided. Operating data is compiled for selected steady-state operating points during Cycle 1. Data listed for each state point include core average exposure, thermal power, pressure, flux, inlet subcooling, control configuration and axial in-core detector readings.

1. INTRODUCTION

The design and operating data needed to define the fuel characteristics and reactor operating characteristics for Cycle 1 of the Hatch Nuclear Power Plant Unit 1 are contained in this report. The program was a joint effort of the General Electric Company, the Georgia Power Company, and the Electric Power Research Institute.

The fuel and core design data were extracted from appropriate reports and drawings. Almost all of the operating data provided were obtained directly from process computer output edits of the reactor operation through Cycle 1.

2. DATA

2.1 REACTOR DESIGN DATA FOR CYCLE 1 OF HATCH NUCLEAR POWER PLANT UNIT 1

2.1.1 Fuel Assembly Descriptions

1. Assembly design data for Type 1 initial fuel, Type 2 initial fuel, Type 3 initial fuel, and spatial Gd₂O₃ variation in the initial fuel assemblies are shown in Figures 1 to 4, respectively.
2. A fuel assembly lattice drawing, including detailed dimensions, for the initial fuel is contained in Figure 5.
3. Table 1 summarizes the fuel rod array, fuel rod pitch, rod-to-channel spacing, gap thicknesses, control augmentation characteristics, uranium weights, channel characteristics, and water/UO₂ volume ratios for the initial 7x7 assemblies.
4. Table 2 provides core loading, assembly pitch, fuel pin pitch, spacer data, average fuel comparisons, and fuel weights for all fuel assemblies during Cycle 1.
5. Tables 3 to 5 include pellet and stack densities, Gd₂O₃ and UO₂ weights, pellet lengths, pellet outer diameter (o.d.), cladding o.d., cladding thickness, and gas plenum lengths for all fuel used during Cycle 1. All fuel rods were backfilled with helium at 0 to 10 psig at 70°F.
6. Table 6 includes spacer weights, end plug weights, upper and lower tie plate weights, fission gas plenum material weights, the alloy compositions recommended for nuclear analyses, and spacer placement identification.
7. Figure 6 is an assembly outline drawing for initial 7x7 fuel.
8. A typical fuel rod is shown in Figure 7. A fueled spacer positioning rod for the initial fuel is shown in Figure 8. The purpose of the spacer positioning rod is to provide a locking tab which fixes the fuel rod spacers in their designed axial position. This is accomplished by an end plug connector that contains a fork design which catches a tab on the spacer. The fuel rod is thus segmented into eight segments for the seven spacers. Fission gas may travel from segment to segment by means of a hole in the center of the connector plugs.
9. Figure 9 is a channel outline drawing for the initial fuel.

2.1.2 Control Rod Descriptions

1. Table 7 contains physical data for the control rods including shape, pitch, stroke, control material, etc.
2. Figure 10 is a schematic drawing of a cross section of a control blade.

2.1.3 Core Descriptions

1. Table 8 identifies the total number of fuel assemblies, number of fuel assembly types, heat transfer surface area, total weight of uranium in the core, reference rated conditions, etc., for Cycle 1.
2. Table 9 presents the bundle type and identification core loading array for Cycle 1.
3. Figure 11 is a core plan view showing the core orificing and traversing in-core probe (TIP) system arrangement.

2.1.4 Vessel Internal Components, Elevation Drawings, etc.

1. Figure 12 shows the elevation of the core instrumentation and control blade poison with respect to the active fuel.
2. Figure 13 is a drawing of the reactor assembly showing the arrangement of the reactor internal structure.
3. Figure 14 is a drawing of the top guide.
4. Figure 15 is a drawing of the orificed fuel support.

2.1.5 Nuclear Instrumentation Data

Hatch Nuclear Power Plant Unit 1 is equipped with a system of TIP detectors and fixed local power range monitor (LPRM) detectors designed to provide an accurate representation of the spatial distribution of the neutron flux. The TIP detectors travel through a set of 31 vertical tubes which are distributed uniformly throughout the core with the planar density of one detector per 4 square feet. Figure 11 shows the core location and coordinate identification of the TIP strings. A cross section of a TIP/LPRM assembly is given in Figure 16.

The TIP measures the axial neutron flux distribution in the water gap by use of a 1-in. long U-235 fission chamber attached to a cable and motor which allows the chamber to be positioned at any point along the axial length of up to 10 core positions for each TIP machine. There are four TIP machines in the Hatch 1 reactor. The TIP values reported in the data sets for 6-in. intervals represent the weighted average value of seven measurements made at 1-in. intervals (five interior measurements which are given twice the weighting as the two end points). A total of 145 measurements is made for each core position resulting in 24 values of 6 inches each.

The TIP data are normalized to the common position. The common position normalization is determined experimentally by traveling the common position with each TIP machine. The normalization is determined so that all the TIP machines produce the same readings when operated in the common position. The axially averaged TIP reading for the common position is usually defined to be 100. The TIP data given in the data sets were obtained directly from the process computer. For editing purposes all values of some data sets have been multiplied by a constant such that all values are less than 100.0. No other adjustments have been made.

2.1.6 Thermal Hydraulics

1. The hydraulic characteristics of the 7x7 fuel assemblies are presented in Figures 17 and 18 as functions of active coolant flow, active coolant power and subcooling. These data may be applied over a pressure range of 1035 ± 100 psia. Bundle pressure drop is somewhat insensitive to axial power distribution. The data are based on a distribution peaked at the middle with a peak-to-average value of 1.5. With a bundle flow of 130×10^3 lb/hr, bottom-peaked axial (3/8 point of active fuel length) will yield a pressure drop about 0.66 psi larger. A top-peaked axial yields essentially the same pressure drop as the middle peaked axial.
2. The pressure drop characteristics of the central and peripheral region orifices are presented as functions of active coolant flow on Figures 19 through 22. The location of the orifice zones is given in Figure 11.
3. The total core bypass flow rates for Cycle 1 are presented in Figure 23. It should be noted that the original core design had holes drilled in the core support for bypass flow augmentation. After accumulating a core average exposure of 3600 MWd/t, (December 1975) these holes were plugged, reducing the bypass flow.

2.2 OPERATING DATA FOR CYCLE 1 OF HATCH NUCLEAR POWER PLANT UNIT 1

2.2.1 Rod Withdrawal Group Designations

Figures 24 to 27 present the control rod group designations for Cycle 1.

2.2.2 Benchmark Operating Data for Cycle 1

Data Sets 01 to 23 contain the reactor data for 23 selected operating states during Cycle 1. Most data sets contain the following data: date, core average exposure, core thermal power, dome pressure, core flow, inlet subcooling, control configuration, and complete axial TIP distribution data for all 31 LPRM string locations. The TIP data are the commonly normalized TIP readings at 6-in. intervals up the length of the assembly. The TIP data read from the bottom to the top of core; i.e., the first entry is for the bottom 6-in. node. Exposure can be accumulated by using the calculated core power distribution for each of the data sets provided to advance to the next operating state. When a control rod sequence change is encountered between data sets, the exposure may be advanced to the sequence exchange date, and the data set after the exchange used to advance the exposure to the date of the data set immediately following the exchange date. Experience has shown that taking exposure steps finer than 700 MWd/t does not significantly add to the tracking accuracy. The correspondence between data set number, control rod sequence, and exposure interval is shown in Table 10.

All of these data were taken during steady-state operation. The reactor had been operating for at least 48 hours with essentially constant power, flow, and rod pattern before the data were taken.

Core thermal power, inlet subcooling, and recirculation flow rate are important to the reactor data evaluation. The values for these items were taken directly from process computer P1 output. The P1 output does not contain the detailed data used to calculate the output values and the detailed data are normally not available from the plant data (i.e., special edits must be requested or special readings taken). Therefore, the detailed data cannot be provided. However, the method used by the process computer to compute the values is given here.

2.2.2.1 Core Thermal Power

The core thermal power is obtained from the process computer which performs an energy balance on a system composed of the reactor vessel, recirculation loop piping, and cleanup demineralizer piping. Flows entering the system are the reactor feedwater flow and the control rod drive system flow. The only flow assumed to be leaving the system is the primary steam flow. Nonflow power inputs are the fission power (core thermal power) and recirculation pumping power; nonflow power losses are the radiative power loss and the net power transferred across the boundary of the clean-up demineralizer loop. Analytically, the energy balance is:

$$\text{Core Power, MWt} = \frac{W_{fw}(h_s - h_{fw}) + W_{cr}(h_s - h_{cr})}{C_i} + Q_{cu} + Q_r - Q_p$$

where:

- W_{fw} = feedwater flow rate entering reactor at top of downcomer, Mlb/hr
- h_s = enthalpy of steam leaving the reactor vessel, Btu/lb
- h_{fw} = feedwater enthalpy, Btu/lb
- W_{cr} = control rod drive system flow, Mlb/hr
- h_{cr} = enthalpy of control rod drive system flow, Btu/lb
- Q_p = power added to downcomer fluid by recirculation pumps, MW
- Q_r = radiative power loss, MW
- Q_{cu} = power removed from downcomer fluid by clean-up demineralizer system, MW
- C_i = conversion constant = 3.413 MBtu/MWh

2.2.2.2 Core Inlet Subcooling

The core inlet subcooling is obtained from the process computer by performing an energy balance on the core downcomer (the volume between the core shroud and the vessel wall) and including the external recirculation and clean-up loops yielding:

$$W_T h_o = W_{r\ell} h_f + W_{rs} h_g + W_{fw} h_{fw} + W_{cr} h_{cr} + (Q_p - Q_{cu}) C_i$$

where:

W_T = flow rate entering core inlet plenum, Mlb/hr

h_o = core inlet enthalpy (enthalpy of W_T), Btu/lb

$W_{r\ell}$ = flow rate of saturated liquid entering downcomer, Mlb/hr

h_f = saturated liquid enthalpy, Btu/lb

W_{rs} = flow rate of saturated steam entering downcomer (i.e., "carryunder"), Mlb/hr

h_g = saturated steam enthalpy, Btu/lb

and other terms are defined as above.

The total flow entering the inlet plenum is:

$$W_T = W_{r\ell} + W_{rs} + W_{fw} + W_{cr}$$

2.2.2.3 Recirculation Flow

The reactor core flow rate is monitored by the process computer by direct measurement of differential pressure across the jet pump diffusers. For illustrative purposes, the 20 jet pumps can be divided into 4 groups of 5 each. A typical group is shown in Figure 28. In each group, one jet pump contains a diffuser with two static pressure taps. The remaining four units contain only one pressure tap. The "double tapped units" are calibrated by test prior to installation to determine the relationship between flow and differential pressure over the range of expected operating flow rates. This information is used to perform in-reactor calibration of the "top tap-to-lower plenum" pressure difference of all 20 jet pumps. After this calibration procedure has been completed, the total core flow is measured by electrically analyzing the signals from the single tap-to-lower plenum pressure transducers on all 20 jet pumps. The resulting total core flow rate output signal is displayed on the reactor control board. In addition, the 20 single tap and 4 double tap ΔP signals described above are available in the control room.

2.3 OPERATING DATA SUMMARY

Figures 29 to 58 present operating data summaries for each month during Cycle 1. The data presented include daily values of power level, flow, subcooling, and rod notch inventory (rod notches inserted).

Table 1
INITIAL FUEL DESCRIPTION

Fuel Assembly	Type 1	Type 2	Type 3
Number of Fuel Assemblies per Batch.....	222	222	116
Fuel Rod Array.....	7x7	7x7	7x7
Fuel Rod Pitch, in.	0.738	0.738	0.738
Peripheral-Rod-to-Channel Spacing, in.	0.1435	0.1435	0.1435
1/2 Width of Wide Water Gap, in.	0.375	0.375	0.375
1/2 Width of Narrow Water Gap, in.	0.188	0.188	0.188
Cladding Length, in.	160	160	160
Bundle Average Enrichment (wt % U-235 in Total U).....	2.34	2.34	2.34
Control Augmentation			
Type	Fuel Rods Containing Gd ₂ O ₃	Fuel Rods Containing Gd ₂ O ₃	Fuel Rods Containing Gd ₂ O ₃
Number.....	4	4	2
Control Length, in.....	144(3), 96(1)	144(2), 102(1), 54(1)	144
Control Material.....	4 wt % Gd ₂ O ₃	4.0 wt % Gd ₂ O ₃	2.5 wt % Gd ₂ O ₃
Locations	In Fuel Lattice	In Fuel Lattice	In Fuel Lattice
Weight of U per Fuel Assembly			
lb.....	411.9	412.2	413.0
kg.....	186.8	187.0	187.3
Channel			
Outside Dimensions, in.	5.438 x 5.438	5.438 x 5.438	5.438 x 5.438
Thickness, in.	0.080	0.080	0.080
Inside Corner Radius, in.	0.38	0.38	0.38
Material.....	Zr-4	Zr-4	Zr-4
Water-UO ₂ Volume Ratio (cold).....	2.53	2.53	2.53

Table 2
FUEL ASSEMBLY DATA

Initial 7x7

Assembly Type.....	1	2	3
Number of Assemblies, Initial Core	222	222	116
Geometry.....	7x7	7x7	7x7
Assembly Pitch, in.....	6.0	6.0	6.0
Fuel Rod Pitch	0.738	0.738	0.738
Fuel Rods per Assembly.....	49	49	49
Instrument Rods per Assembly.....	0	0	0
Water Rods per Assembly.....	0	0	0
Burnable Poison Positions	4	4	2
Number of Spacer Grids.....	7	7	7
Inconel per Grid, lb	0.102	0.102	0.102
Zr-4 per Grid, lb	0.537	0.537	0.537
Spacer Width, in.....	1.625	1.625	1.625
Assembly Average Fuel Composition			
Gd ₂ O ₃ , gm	627	527	216
UO ₂ , kg.....	211.96	212.10	212.53
Total Fuel, kg	212.59	212.63	212.75

Table 3
ASSEMBLY TYPE 1 DENSITY, LENGTH, etc., DATA

ASSEMBLY TYPE 1

Rod Type	No. of Rods	Pellet Density		Stack Density (gm/cc)	Gd ₂ O ₃ (gm)	UO ₂ (gm)	Stack Length (in.)
		UO ₂ (gm/cc)	UO ₂ + Gd ₂ O ₃ (gm/cc)				
1	23	10.42	—	10.32	0	4352	144
1s	1	10.42	—	10.32	0	3935	130
2	10	10.42	—	10.32	0	4352	144
3	8	10.42	—	10.32	0	4352	144
4	3	10.42	—	10.32	0	4352	144
5A	3	—	10.26	10.16	171	4114	144
6B*	1	10.42	10.26	10.21	114	4193	144

Pellet o.d. = 0.477 inch all rods

Cladding = Zircaloy-2, 0.563-inch o.d. x 0.037-inch wall, all rods

Gas Plenum Length = 15.8 inches

* Contains two pellet types, see Figures 1 and 4.

Table 4
ASSEMBLY TYPE 2 DENSITY, LENGTH, etc., DATA

ASSEMBLY TYPE 2

Rod Type	No. of Rods	Pellet Density		Stack Density	Gd ₂ O ₃ (gm)	UO ₂ (gm)	Stack Length (in.)
		UO ₂ (gm/cc)	UO ₂ + Gd ₂ O ₃ (gm/cc)	(gm/cc)			
1	23	10.42	—	10.32	0	4352	144
1s	1	10.42	—	10.32	0	3935	130
2	10	10.42	—	10.32	0	4352	144
3	8	10.42	—	10.32	0	4352	144
4	3	10.42	—	10.32	0	4352	144
5A	2	—	10.26	10.16	171	4114	144
6C*	1	10.42	10.26	10.21	121	4186	144
7D*	1	10.42	10.26	10.26	64	4263	144

Pellet o.d. = 0.477 inch all rods

Cladding = Zircaloy-2, 0.563-inch o.d. x 0.037-inch wall, all rods

Gas Plenum Length = 15.8 inches

* Contains two pellet types, see Figures 2 and 4.

Table 5
ASSEMBLY TYPE 3 DENSITY, LENGTH, etc., DATA

ASSEMBLY TYPE 3

Rod Type	No. of Rods	Pellet Density		Stack Density	Gd ₂ O ₃ (gm)	UO ₂ (gm)	Stack Length (in.)
		UO ₂ (gm/cc)	UO ₂ + Gd ₂ O ₃ (gm/cc)	(gm/cc)			
1	25	10.42	—	10.32	0	4352	144
1s	1	10.42	—	10.32	0	3935	130
2	10	10.42	—	10.32	0	4352	144
3	8	10.42	—	10.32	0	4352	144
4	3	10.42	—	10.32	0	4352	144
5	2	—	10.32	10.22	108	4201	144

Pellet o.d. = 0.477 inch all rods

Cladding = Zircaloy-2, 0.563-inch o.d. x 0.037-inch wall, all rods

Gas Plenum Length = 15.8 inches

Table 6
FUEL ASSEMBLY HARDWARE WEIGHTS

		7x7 Initial Assemblies
	Quantity	Pounds
Spacers		
Zircaloy-4	7	3.757
Inconel	112	0.717
End Plugs		
Zircaloy-2	98	3.565
Lower Tie Plate		
Type-304 Stainless Steel	1	9.612
Inconel Finger Springs	4	0.106
Upper Tie Plate Assembly with Hardware		
Type-304 Stainless Steel	1	4.222
Fission Gas Plenum		
Spring, Type-304 Stainless Steel.....	49	4.073
Getter, Zirconium Alloy.....	49	0.972

Wt % Alloy Compositions for Nuclear Analyses

Metal	Zircaloy-2	Zircaloy-4	Type-304 Stainless Steel	Inconel-X
Zr.....	98.30	98.24		
Fe.....	0.14	0.21	67.34	9.0
Sn.....	1.40	1.45		
Ni.....	0.06		9.50	70.0
Cr	0.10	0.10	19.50	16.77
Ti.....				2.50
Mn.....			1.50	0.50
C			0.08	0.03
Si.....			2.00	0.30
S.....			0.04	
P.....			0.04	
Al.....				0.90

Spacer Placement

There are seven spacers in the initial and reload fuel assemblies. Their center positions above the bottom of the active fuel in inches are 18.8, 38.9, 59.1, 79.2, 99.4, 119.5, and 139.6. Each spacer is 1.625 inches long.

Table 7
CONTROL ROD DATA*

Movable Control Rods

Shape.....	Cruciform
Pitch, in.....	12.0
Stroke, in.	144
Control Length, in.....	143.0
Control Material.....	B ₄ C granules in Type-304 stainless steel tubes and sheath
Material Density	70% of Theoretical
Number of Control Material	
Tubes per Rod.....	84
Tube Dimensions	0.188 in. o.d. by 0.025 in. wall
Control Blade Span, in.....	4.875
Control Blade Full Thickness, in.....	0.3120
Control Blade Tip Radius, in.....	0.156
Sheath Thickness, in.....	0.056
Central Structure Wing Length, in.....	0.7815
Blank Tubes per Wing	None
(Adjacent to Central Structure)	

* Some partial dimensions do not add to overall dimensions due to designed clearances between tube and sheath.

Control Blade Position

Control blade insertion is calibrated in notches, where one notch equals 3 inches. Position of the control blade is described by the number of notches withdrawn. Thus, 0 notch implies full insertion and 48 notches implies full withdrawal. Total travel of the control blade is 144 inches, the same as the length of the active fuel. At full blade insertion (0 notch), the top of the control material is 1 inch below the top of the active fuel. At full blade withdrawal, the top of the control material is 1 inch below the bottom of the active fuel. Since the physical notches in the control rod drive are 6 inches apart, the control blade notch position is always even. For the control patterns shown, the numbers shown indicate notches withdrawn. A blank notch number implies a fully withdrawn blade or a notch position of 48 for power operating patterns and a fully inserted blade or a notch position of 00 for cold critical patterns.

Table 8
COBE DESCRIPTION

	Cycle 1
Total Number of Fuel Assemblies	560
Number of Fuel Assembly Types	3
Number of Fuel Assemblies of Each Type	See Table 2
Total Number of Control Elements	137
Number of Control Element Types	1
Number of Control Elements of Each Type	137
Total Number of In-core Flux Monitors.....	31
Heat Transfer Surface Area, ft ²	48,534
Total Weight of U in Core, short tons.....	115.4
Core	
Core Lattice Pitch, in.....	12.0
Water/UO ₂ Volume Ratio (cold)	2.53
Rated Core Thermal Power, MW	2436
Rated Total Core Flow Rate, Mlb/hr	78.5
Approximate Bypass Coolant Total	
Power Fraction	0.02
Approximate Active Coolant Total	
Power Fraction	0.02
Rated Reactor Dome Pressure, psia.....	1020
Rated Core Pressure, psia	1035
Rated Core Inlet Enthalpy, Btu/lb	523.7

Table 9
CYCLE 1 ASSEMBLY TYPES AND IDENTIFICATION

HX0001 to HX0222	7x7	UO ₂	2.34 wt %	Type 1 fuel with Gd ₂ O ₃ in four rods																				
HX0223 to HX0444	7x7	UO ₂	2.34 wt %	Type 2 fuel with Gd ₂ O ₃ in four rods																				
HX0445 to HX0560	7x7	UO ₂	2.34 wt %	Type 3 fuel with Gd ₂ O ₃ in two rods																				
52																								
50																								
48																								
46																								
44																								
42																								
40																								
38																								
36																								
34																								
32																								
30																								
28																								
26																								
24																								
22																								
20																								
18																								
16																								
14																								
12																								
10																								
8																								
6																								
4																								
2																								
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49

Table 9
CYCLE 1 ASSEMBLY TYPES AND IDENTIFICATION (Continued)

HX0554	HX0503	HX0504	HX0463	HX0509	HX0495	HX0550	HX0496
HX0539	HX0478	HX0470	HX0262	HX0202	HX0421	HX0192	HX0290
HX0516	HX0040	HX0377	HX0014	HX0424	HX0027	HX0022	HX0254
HX0481	HX0518	HX0313	HX0079	HX0415	HX0175	HX0111	HX0140
HX0547	HX0296	HX0219	HX0358	HX0016	HX0382	HX0273	HX0326
HX0533	HX0221	HX0362	HX0144	HX0092	HX0328	HX0110	HX0060
HX0232	HX0024	HX0355	HX0001	HX0092	HX0266	HX0003	HX0322
HX0297	HX0182	HX0353	HX0033	HX0097	HX0119	HX0346	HX0054
HX0013	HX0288	HX0011	HX0225	HX00329	HX0433	HX0188	HX0326
HX0240	HX0464	HX013	HX0011	HX0001	HX0239	HX0002	HX0209
HX0466	HX0187	HX0228	HX0057	HX0097	HX0429	HX0429	HX0431
HX0526	HX0457	HX0233	HX0232	HX0001	HX0214	HX0434	HX0118
HX0497	HX0471	HX0297	HX0182	HX0035	HX0214	HX0113	HX0389
HX0490	HX0026	HX0249	HX0051	HX0033	HX0250	HX0436	HX0136
HX0531	HX0302	HX0204	HX0410	HX0185	HX0370	HX0098	HX0389
HX0479	HX0186	HX0008	HX0017	HX0231	HX0344	HX0013	HX0083
HX0537	HX0522	HX0208	HX0286	HX0115	HX0268	HX0395	HX0096
HX0553	HX0549	HX0293	HX0082	HX0275	HX0210	HX0267	HX0444
HX0506	HX0456	HX0270	HX0041	HX0255	HX0263	HX0058	HX0006
HX0552	HX0206	HX0347	HX0062	HX0325	HX0198	HX0020	HX0385
HX0485	HX0485	HX0061	HX0320	HX0032	HX0356	HX0171	HX0059
HX0558	HX0473	HX0282	HX0047	HX0112	HX0354	HX0443	HX0443
HX0528	HX0454	HX0521	HX0270	HX0049	HX0112	HX0443	HX0009
HX0449		HX0452	HX0206	HX0041	HX0348	HX0150	HX0368
			HX0347	HX0032	HX0343	HX0157	HX0356
			HX0017	HX0011	HX0118	HX0357	HX0117
			HX0012	HX0412	HX0354	HX0075	HX0435
			HX0012	HX0409	HX0354	HX0435	HX0127
			HX0041	HX0261	HX0195	HX0348	HX0374
			HX0062	HX0366	HX0015	HX0272	HX0148
			HX0345	HX0101	HX0386	HX0155	HX0241
			HX0345	HX0392	HX0100	HX0308	HX0254
			HX0166	HX0166	HX0132	HX0199	HX0152
			HX0523	HX0520	HX0523	HX0406	HX0295
			HX0452	HX0449	HX0513	HX0519	HX0044
					HX0445	HX0447	HX0538
						HX0447	HX0517

Table 9
CYCLE 1 ASSEMBLY TYPES AND IDENTIFICATION (Continued)

HX0486	HX0467	HX0512	HX0476	HX0459	HX0453	HX0457	HX0477	HX0460	HX0446	HX0512	HX0476	HX0459	HX0477	HX0460	HX0446	HX0514	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450			
HX0178	HX0306	HX0176	HX0453	HX0459	HX0453	HX0457	HX0545	HX0545	HX0491	HX0491	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0251	HX0222	HX0292	HX0074	HX0375	HX0375	HX0375	HX0314	HX0314	HX0180	HX0180	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0049	HX0278	HX0181	HX0376	HX0172	HX0172	HX0172	HX0274	HX0274	HX0298	HX0298	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0321	HX0109	HX0277	HX0149	HX0274	HX0274	HX0274	HX0179	HX0179	HX0194	HX0194	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0023	HX0257	HX0138	HX0279	HX0179	HX0361	HX0361	HX0066	HX0066	HX0332	HX0332	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0233	HX0213	HX0359	HX0218	HX0330	HX0330	HX0330	HX0211	HX0211	HX0333	HX0333	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0169	HX0373	HX0220	HX0220	HX0165	HX0388	HX0165	HX0438	HX0438	HX0250	HX0250	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0393	HX0141	HX0141	HX0141	HX0391	HX0156	HX0422	HX0161	HX0161	HX0260	HX0260	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0086	HX0391	HX0156	HX0422	HX0402	HX0145	HX0337	HX0077	HX0077	HX0112	HX0112	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0405	HX0137	HX0402	HX0271	HX0076	HX0143	HX0323	HX0072	HX0072	HX0363	HX0363	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0170	HX0404	HX0404	HX0398	HX0160	HX0387	HX0387	HX0029	HX0029	HX0334	HX0334	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0397	HX0104	HX0400	HX0102	HX0390	HX0108	HX0108	HX0365	HX0365	HX0212	HX0212	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0094	HX0174	HX0384	HX0114	HX0063	HX0432	HX0432	HX0116	HX0116	HX0428	HX0428	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0403	HX0128	HX0369	HX0063	HX0432	HX0163	HX0244	HX0031	HX0031	HX0227	HX0227	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0236	HX0215	HX0380	HX0124	HX0248	HX0248	HX0193	HX0193	HX0437	HX0437	HX0352	HX0352	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450	
HX0107	HX0379	HX0164	HX0423	HX0120	HX0364	HX0364	HX0247	HX0247	HX0142	HX0142	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0230	HX0103	HX0340	HX0196	HX0207	HX0245	HX0245	HX0046	HX0046	HX0318	HX0318	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0052	HX0342	HX0207	HX0183	HX0287	HX0068	HX0068	HX0300	HX0300	HX0010	HX0010	HX0335	HX0335	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450
HX0294	HX0183	HX0184	HX0299	HX0299	HX0038	HX0038	HX0148	HX0148	HX0254	HX0254	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0154	HX0105	HX0283	HX0125	HX0316	HX0316	HX0316	HX0205	HX0205	HX0258	HX0258	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0269	HX0159	HX0264	HX0080	HX0301	HX0130	HX0130	HX0546	HX0546	HX0494	HX0494	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0280	HX0034	HX0285	HX0530	HX0472	HX0484	HX0484	HX0461	HX0461	HX0480	HX0480	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450		
HX0488	HX0476	HX0459	HX0477	HX0460	HX0446	HX0476	HX0459	HX0477	HX0460	HX0446	HX0524	HX0507	HX0508	HX0468	HX0505	HX0450												

Table 10
BURN STEP INFORMATION

Exposure Interval (MWd/t)	Control Rod Sequence	Reactor Data From Data Set No.
0 to 280	A	1
280 to 448	B	2
448 to 637	A	3
637 to 944	A	3
944 to 1163	A	4
1163 to 1480	A	4
1480 to 1827	A	5
1827 to 2344	B	6
2344 to 2827	B	7
2827 to 3308	B	8
3308 to 3582	B	8
3582 to 3772	B	9
3772 to 3814	B	9
3814 to 3919	A	10
3919 to 4251	A	10
4251 to 4558	A	11
4558 to 4809	A	12
4809 to 5256	B	13
5256 to 5694	B	13
5694 to 5981	A	14
5981 to 6332	A	15
6332 to 6497	A	15
6497 to 6912	B	16
6912 to 7312	B	16
7312 to 7650	B	17
7650 to 8109	B	18
8109 to 8188	B	18
8188 to 8530	A	19
8530 to 8917	A	20
8917 to 8966	A	21
8966 to 9180	A	21
9180 to 9354	A	22
9354 to 9434	A	23

2.34 wt% U-235 BUNDLE AVERAGE

WIDE-WIDE CORNER

4	4	3	T	3	T	2	3
4	2	2	1	1	1	1	2
T	3	2	6B	1	1	5A	T
3	1	1	1	S	1	1	1
T	3	1	1	1	5A	1	T
2	1	5A	1	1	1	1	2
3	2	1	T	1	T	2	2

ROD TYPE	U-235 (wt%)	Gd ₂ O ₃ (wt%)	NO. OF RODS
1	2.79	0	24
2	1.94	0	10
3	1.69	0	8
4	1.27	0	3
5A	2.79	4.0	3
6B	2.79	4.0	1

S - SPACER POSITIONING ROD

T - TIE ROD

Figure 1. Bundle Design for Type 1 Initial Fuel

2.34 wt% U-235 BUNDLE AVERAGE

WIDE-WIDE CORNER

4	4	3	3	3	2	3
4	2	2	1	1	1	2
T						T
3	2	7D	1	1	5A	1
3	1	1	1	1	1	1
T						T
3	1	1	1	6C	1	1
2	1	5A	1	1	1	2
3	2	1	1	1	2	2

ROD TYPE	U-235 (wt%)	Gd ₂ O ₃ (wt%)	NO. OF RODS
1	2.79	0	24
2	1.94	0	10
3	1.69	0	8
4	1.27	0	3
5A	2.79	4.0	2
6C	2.79	4.0	1
7D	2.79	4.0	1

S - SPACER POSITIONING ROD

T - TIE ROD

Figure 2. Bundle Design for Type 2 Initial Fuel

2.34 wt% U-235 BUNDLE AVERAGE

WIDE-WIDE CORNER

4	4	T	3	T	2	3
4	2	2	1	1	1	2
T	2	1	1	1	5E	T
3	1	1	S	1	1	1
T	1	1	1	1	1	T
2	1	5E	1	1	1	2
3	2	T	1	T	2	2

ROD TYPE	U-235 (wt%)	Gd ₂ O ₃ (wt%)	NO. OF RODS
1	2.79	0	26
2	1.94	0	10
3	1.69	0	8
4	1.27	0	3
5E	2.79	2.5	2

S - SPACER POSITIONING ROD

T - TIE ROD

Figure 3. Bundle Design for Type 3 Initial Fuel

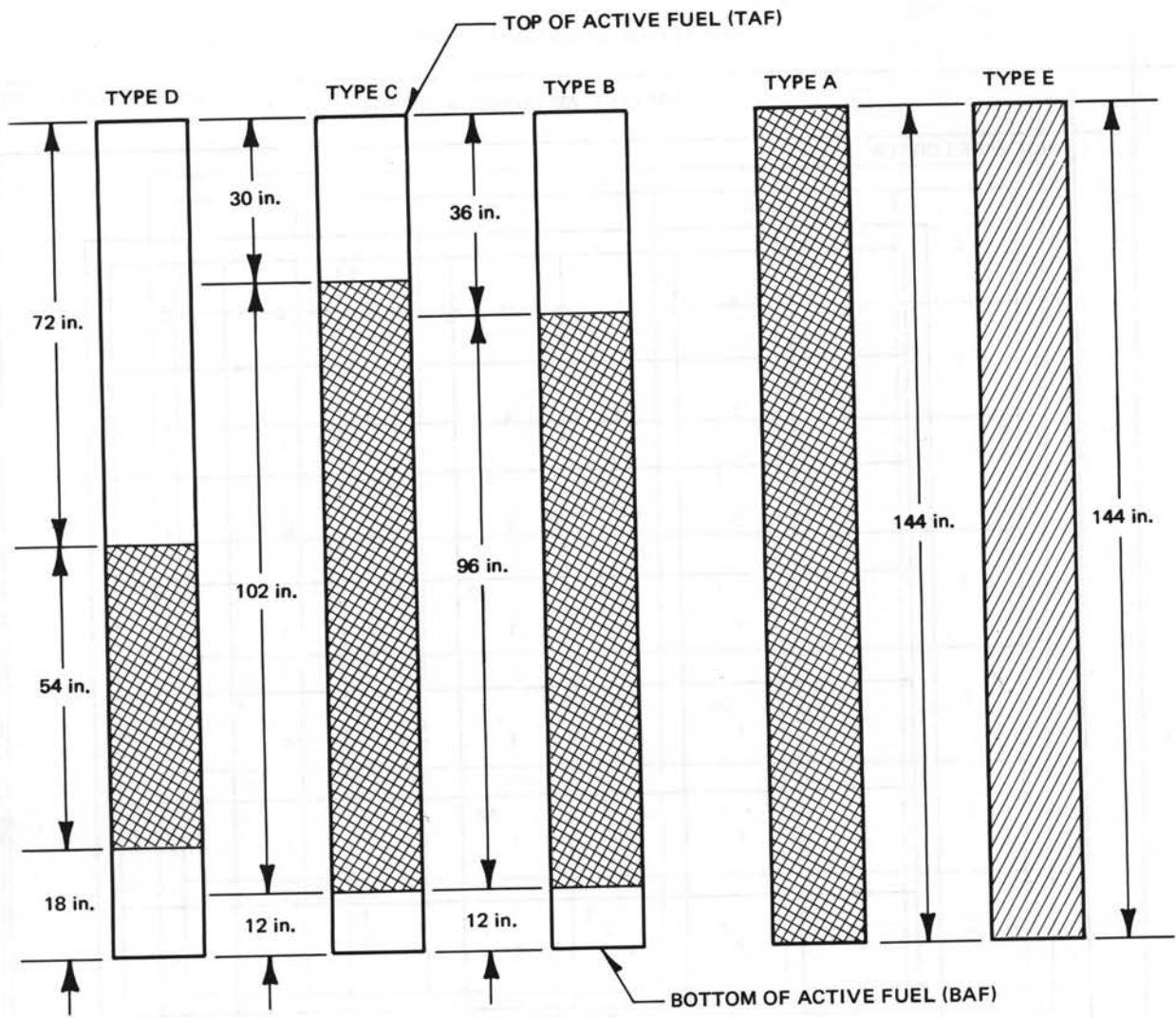
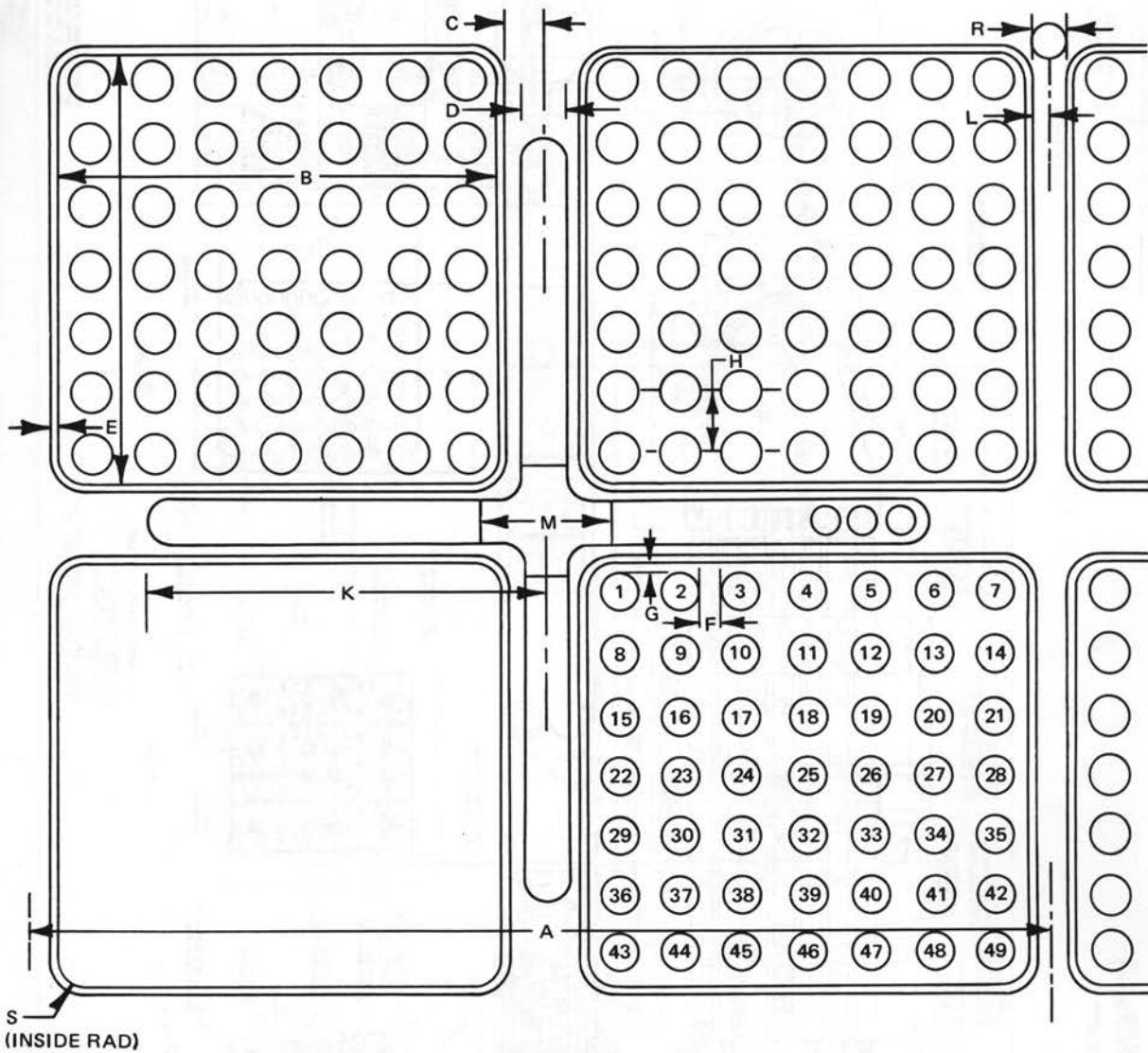


Figure 4. Spatial Gd₂O₃ Variation Initial Fuel Rods



DIM. IDENTIFICATION	A	B	C	D	E	F	G	H	I	J
DIM. INCHES	12.0	5.278	0.375		0.080	0.175	0.1435	0.738		
DIM. IDENTIFICATION	K	L	M	N	O	P	Q	R	S	
DIM. INCHES		0.188							0.380	

Figure 5. Initial Fuel Assembly Lattice

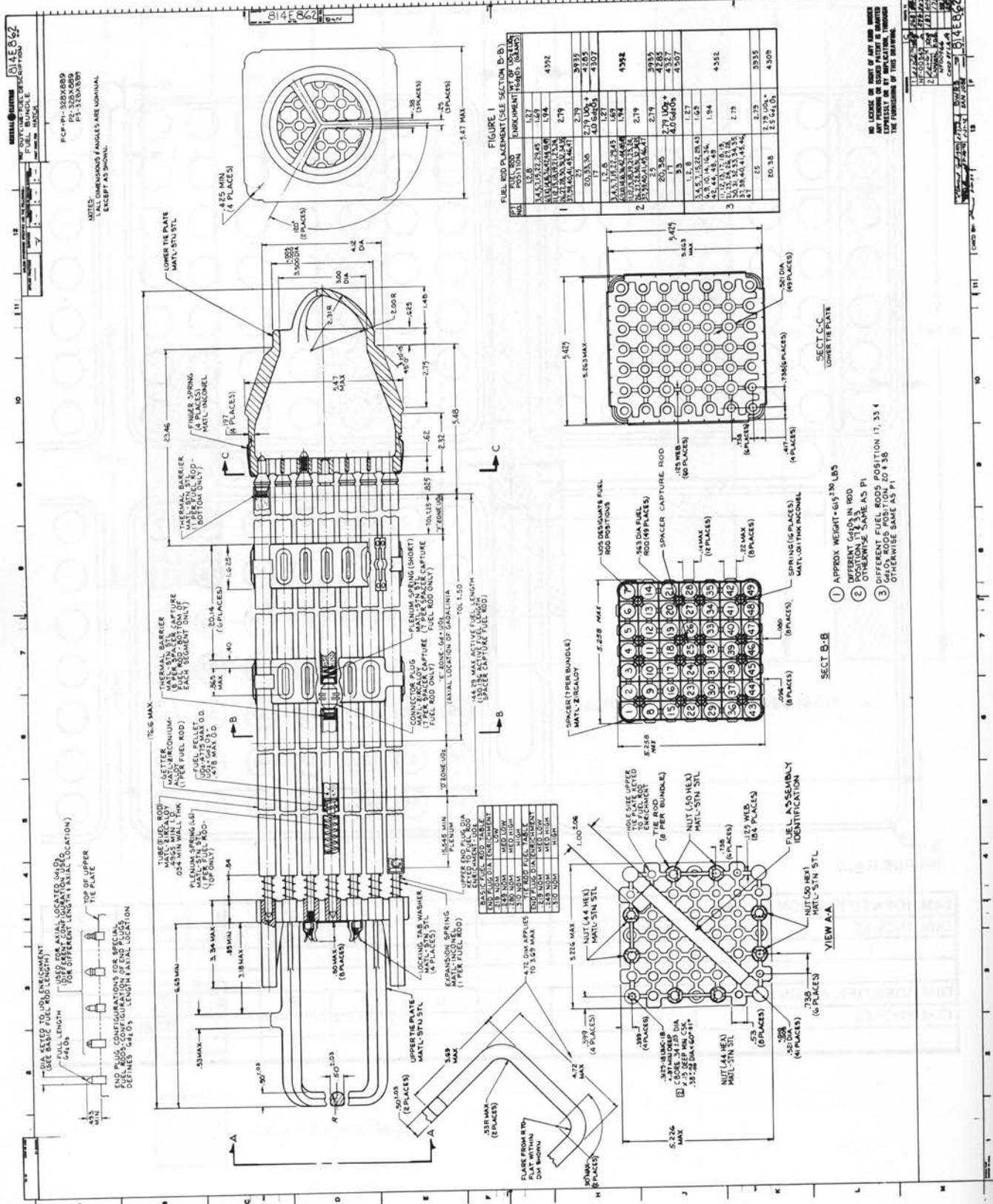


Figure 6. Fuel Assembly Drawing for Initial Core Fuel

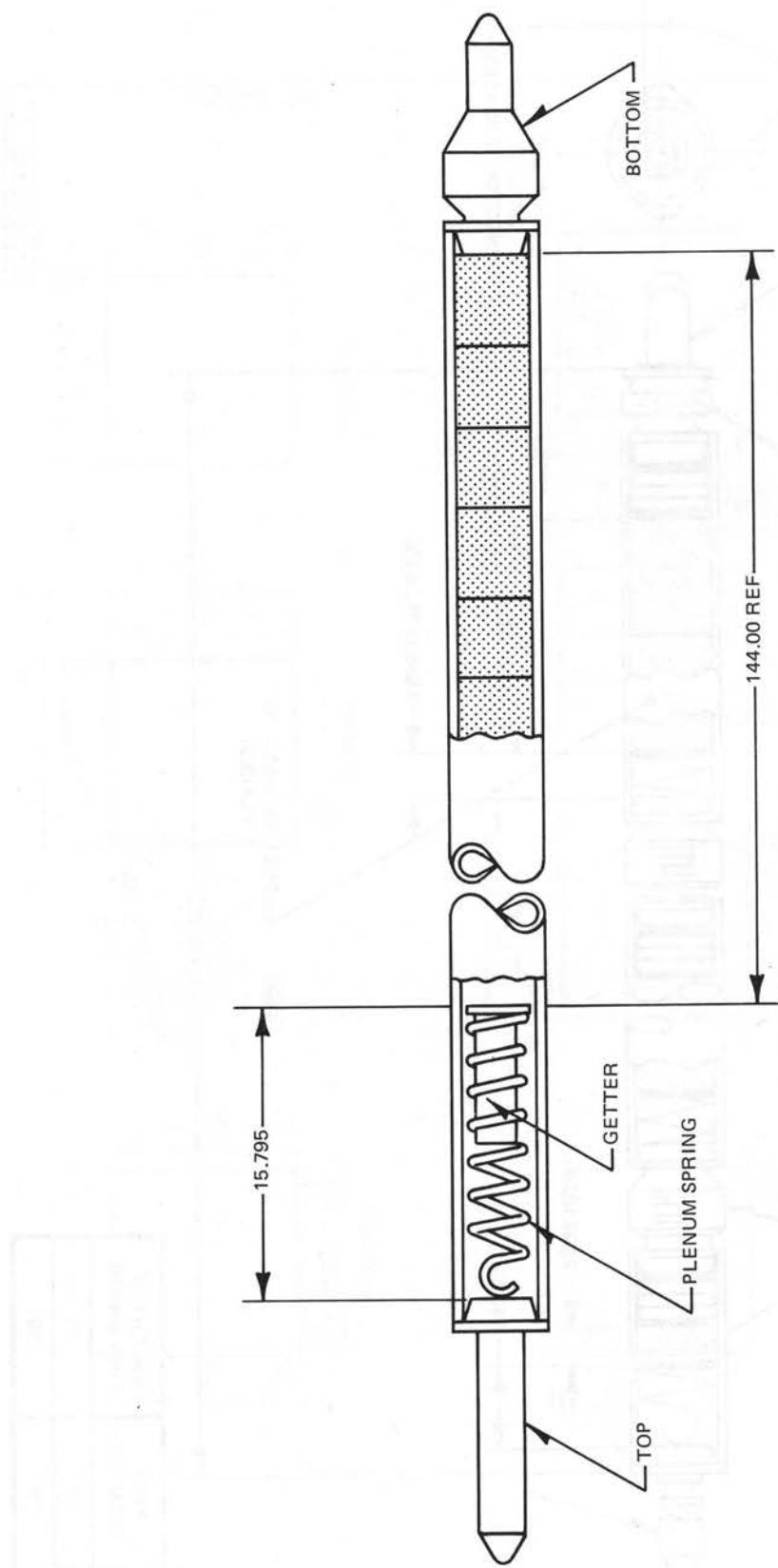


Figure 7. Typical Fuel Rod

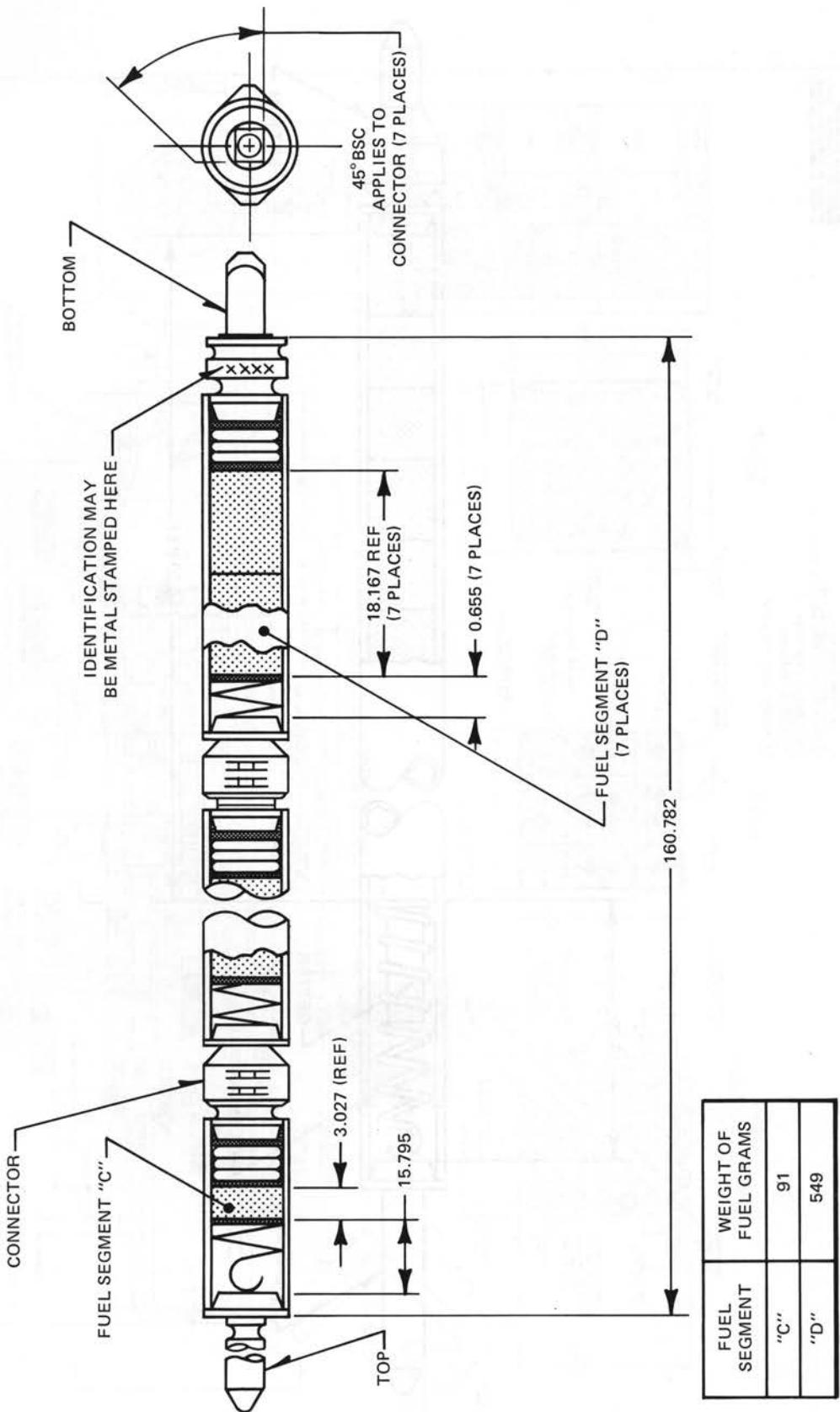
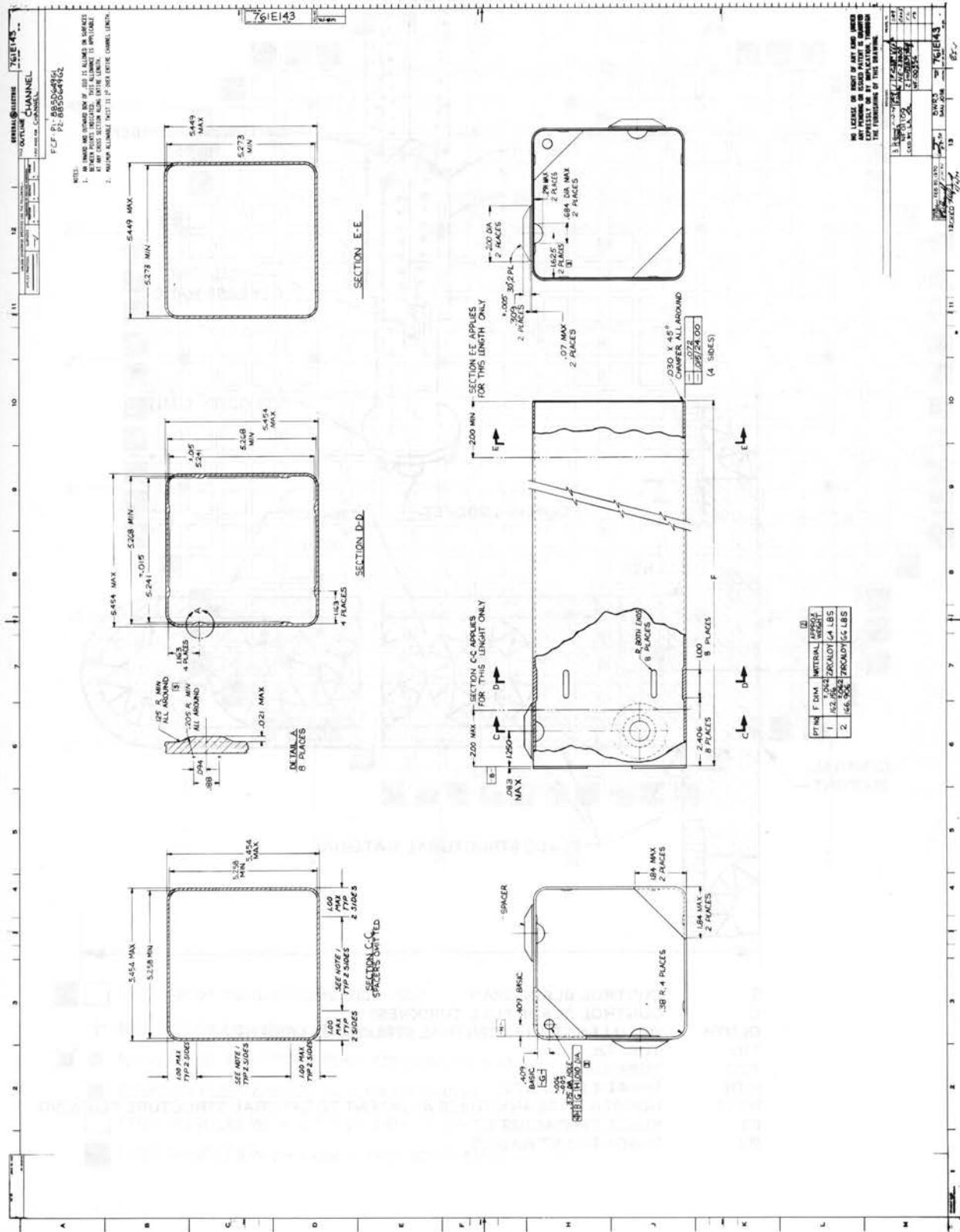
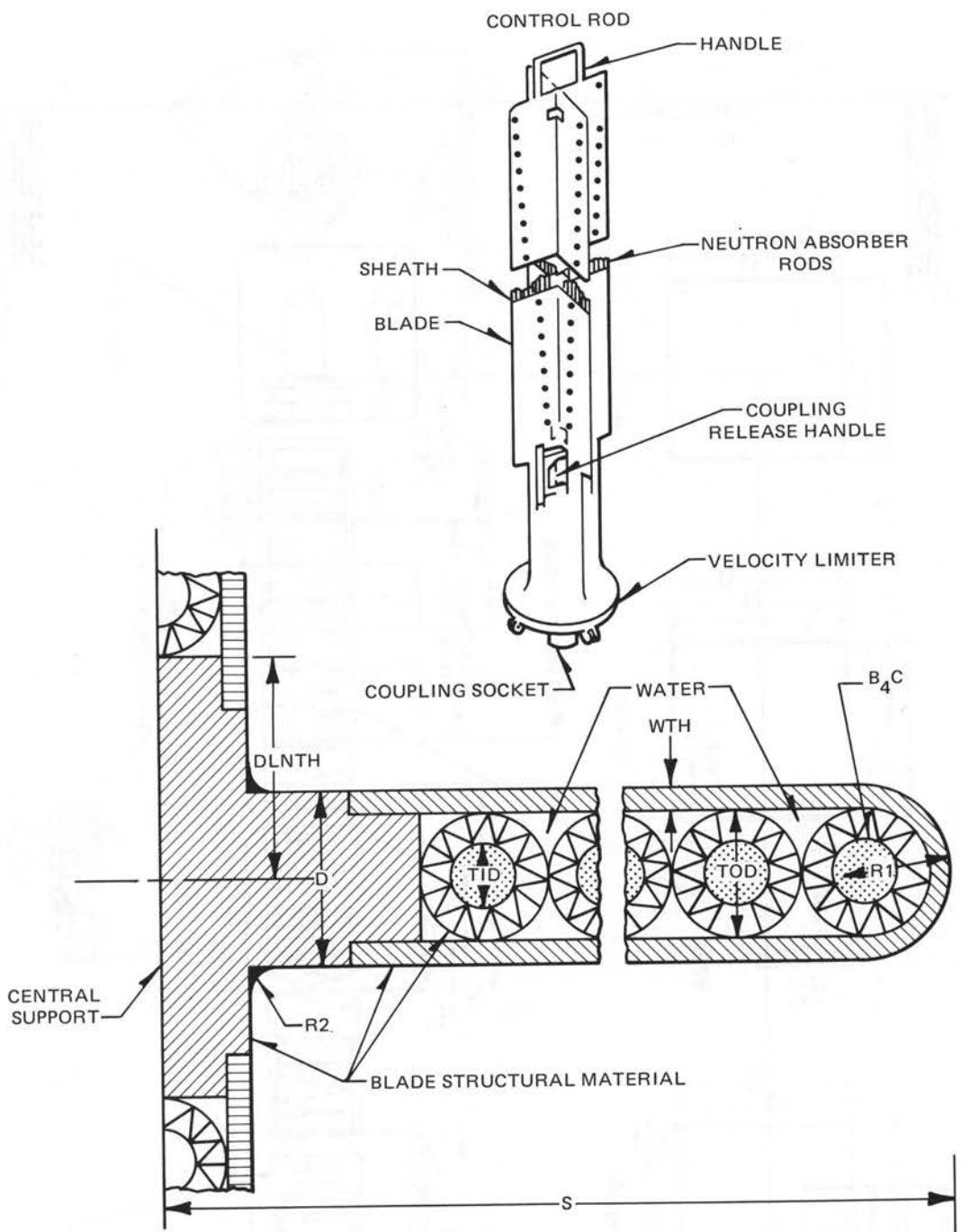


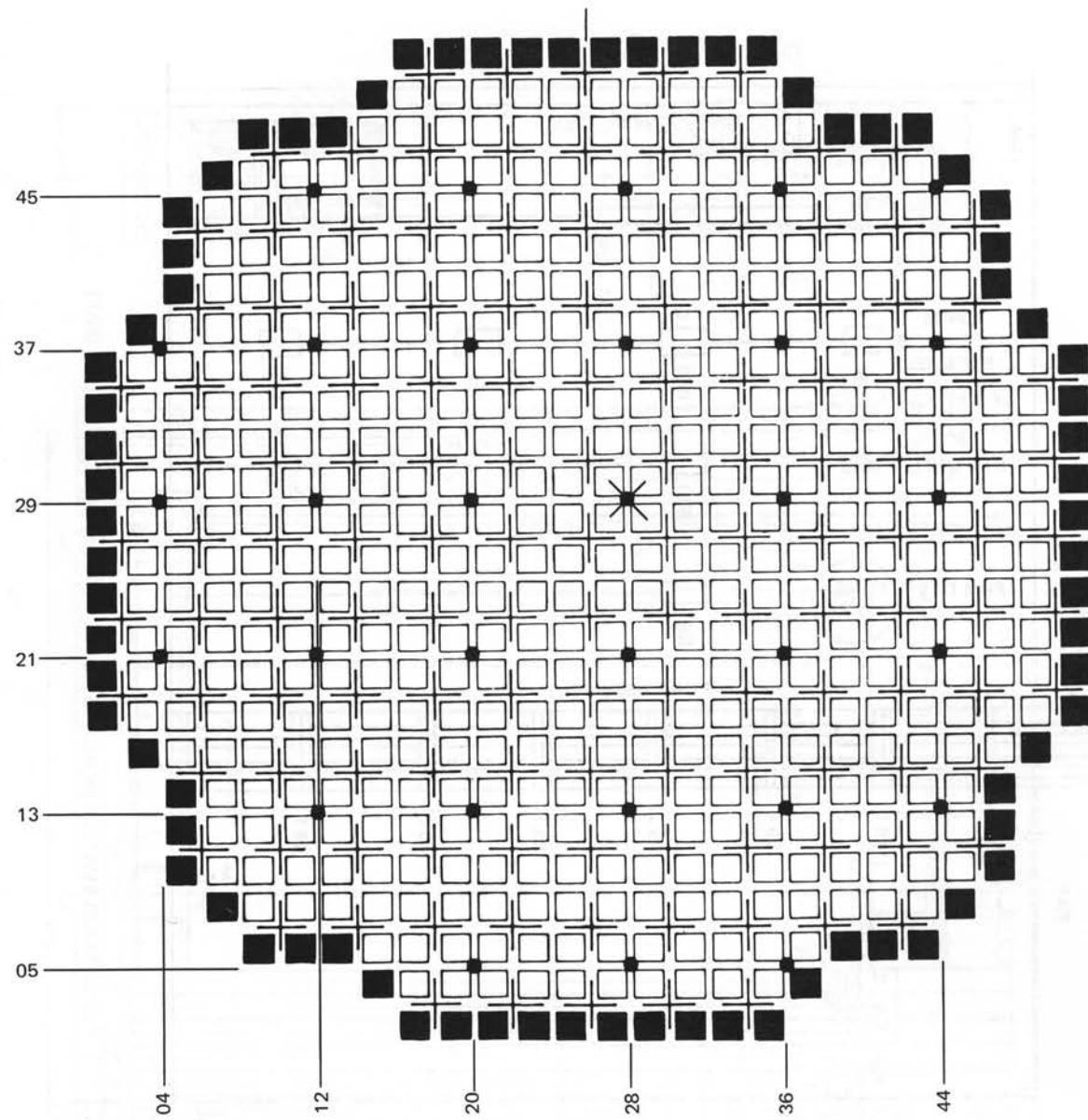
Figure 8. Spacer Positioning Rod for Initial Fuel





S	CONTROL BLADE SPAN
D	CONTROL BLADE FULL THICKNESS
DLNTH	DEAD LENGTH, i.e., CENTRAL STRUCTURE LENGTH
TID	TUBE i.d.
TOD	TUBE o.d.
WTH	SHEATH THICKNESS
NBKT	NUMBER OF BLANK TUBES ADJACENT TO CENTRAL STRUCTURE PER WING
R1	BLADE TIP RADIUS
R2	BLADE FILLET RADIUS

Figure 10. *B₄C Control Blade Model (Schematic)*



- □ NUMBER OF FUEL ASSEMBLIES – 560
- + NUMBER OF CONTROL RODS – 137
- ○ NUMBER OF TIP INSTRUMENT ASSEMBLIES – 31
- ★ COMMON POSITION FOR ALL TIP MACHINES
- FUEL BUNDLES WITH 2.222-in. ORIFICE DIAMETER – 484
- ■ FUEL BUNDLES WITH 1.488-in. ORIFICE DIAMETER – 76

Figure 11. Core Orificing and TIP System Arrangement

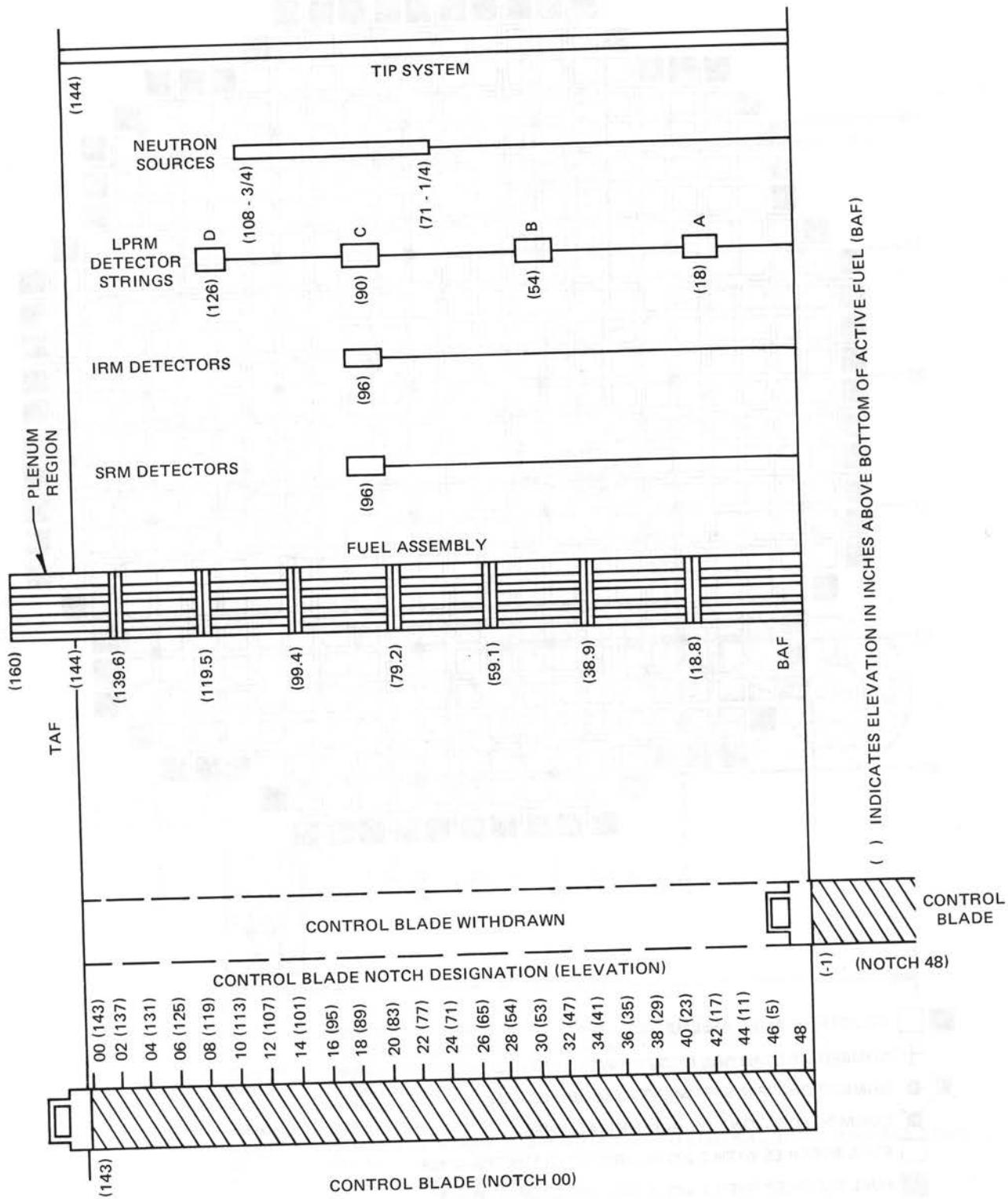


Figure 12. Elevation of Core Components

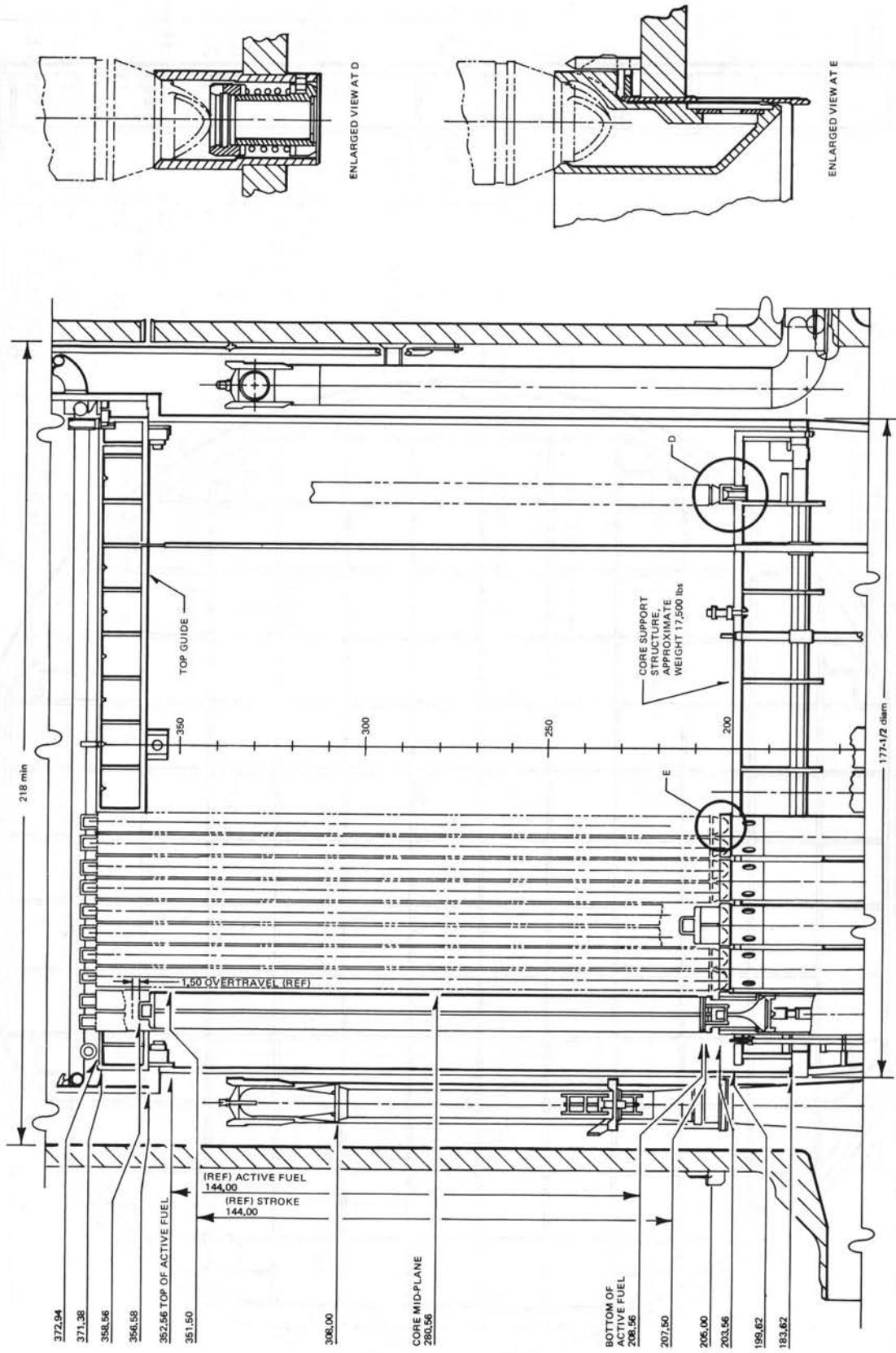


Figure 13. Core Elevation, Arrangements, and Components

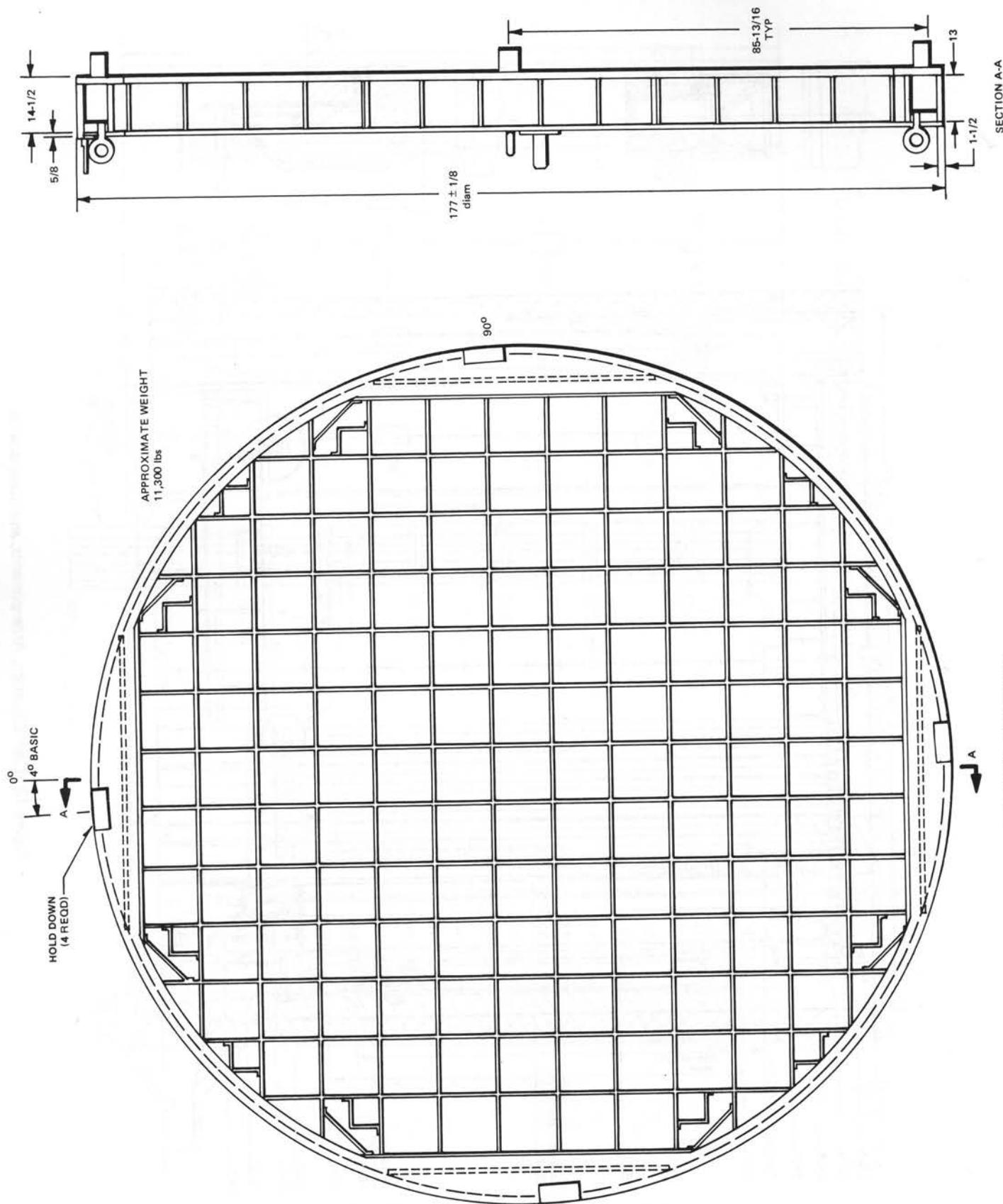


Figure 14. Top Guide

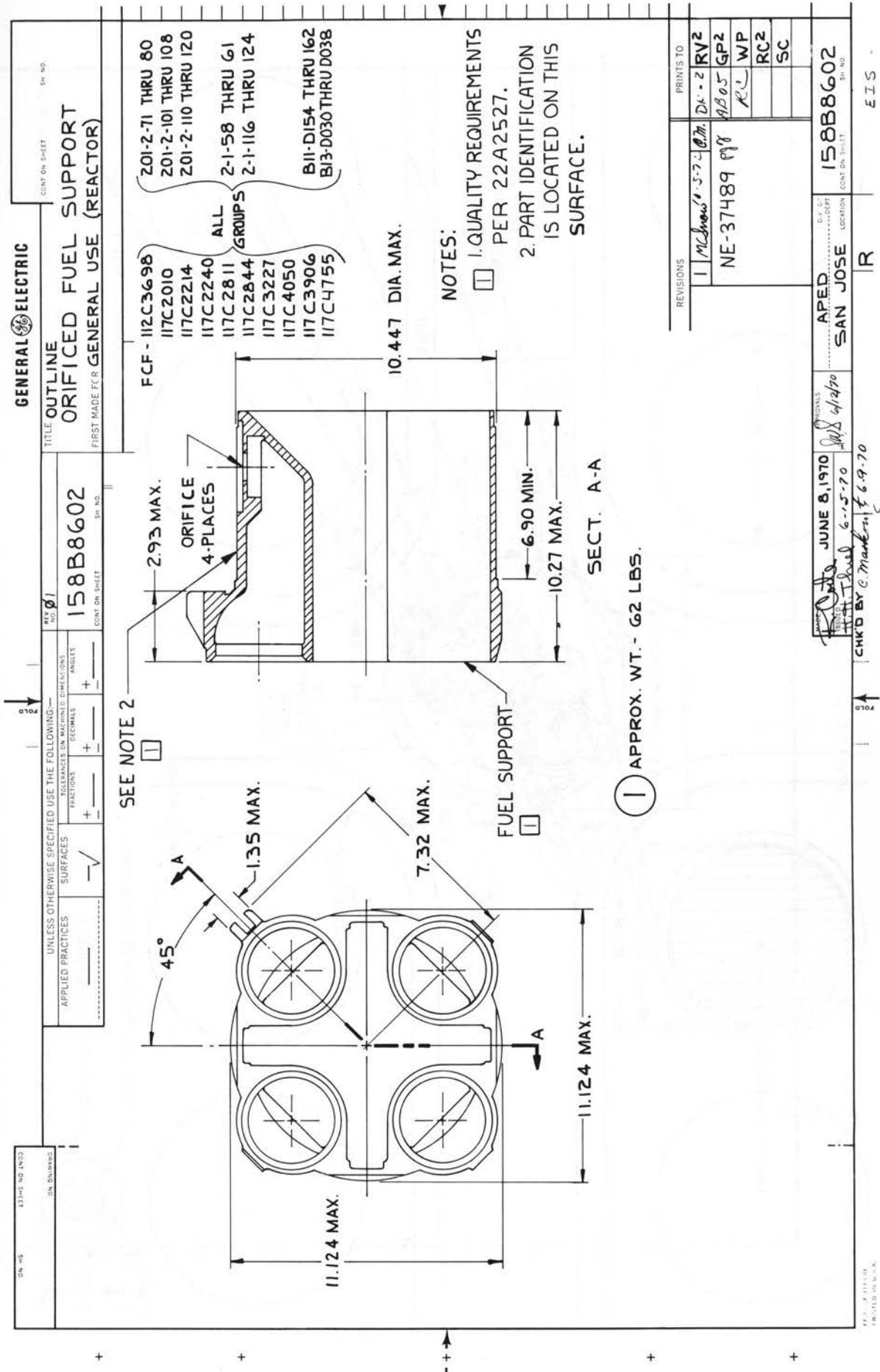


Figure 15. Orificed Fuel Support

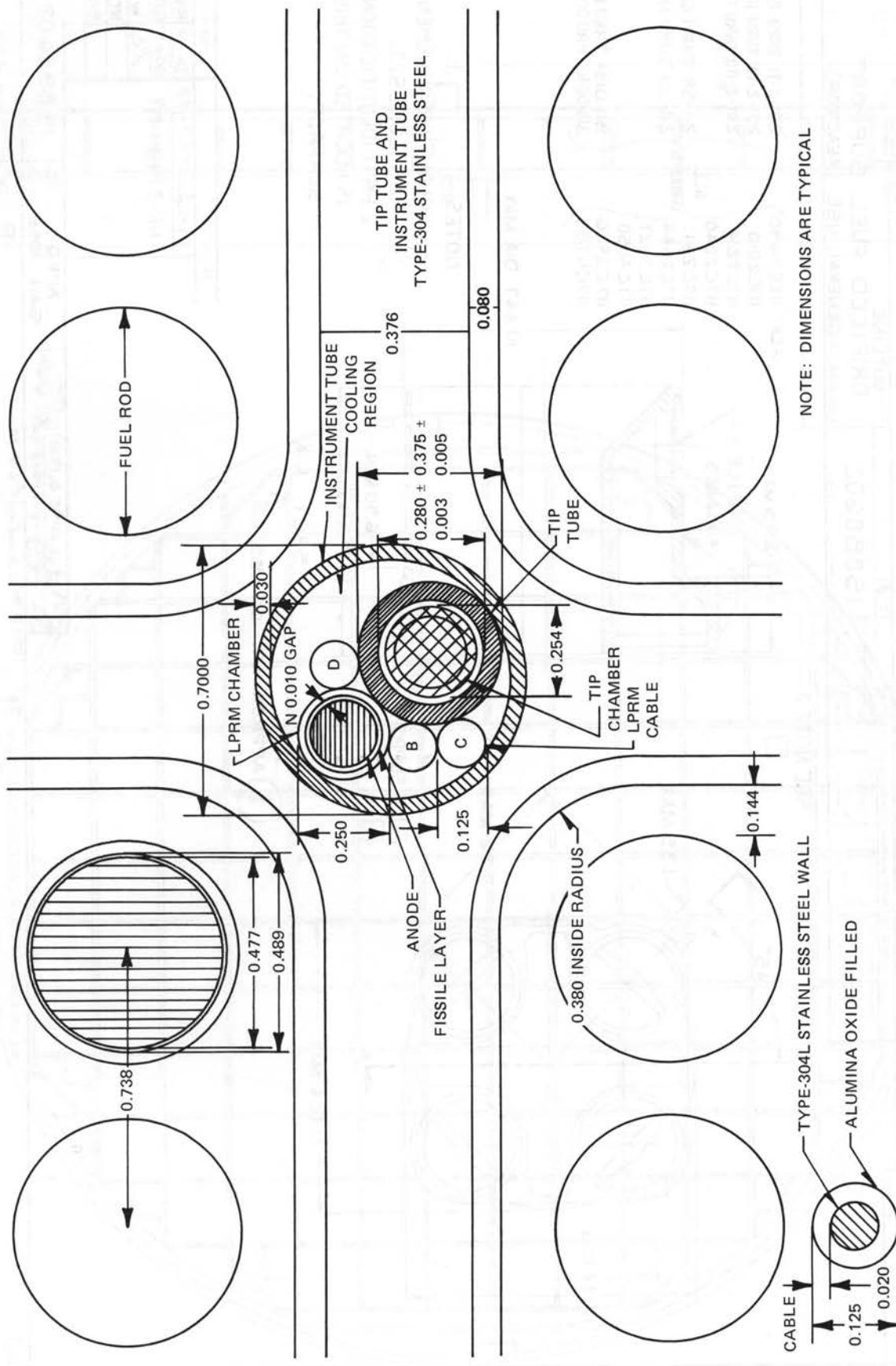


Figure 16. TIP/LPRM In-Core Assembly Cross Section

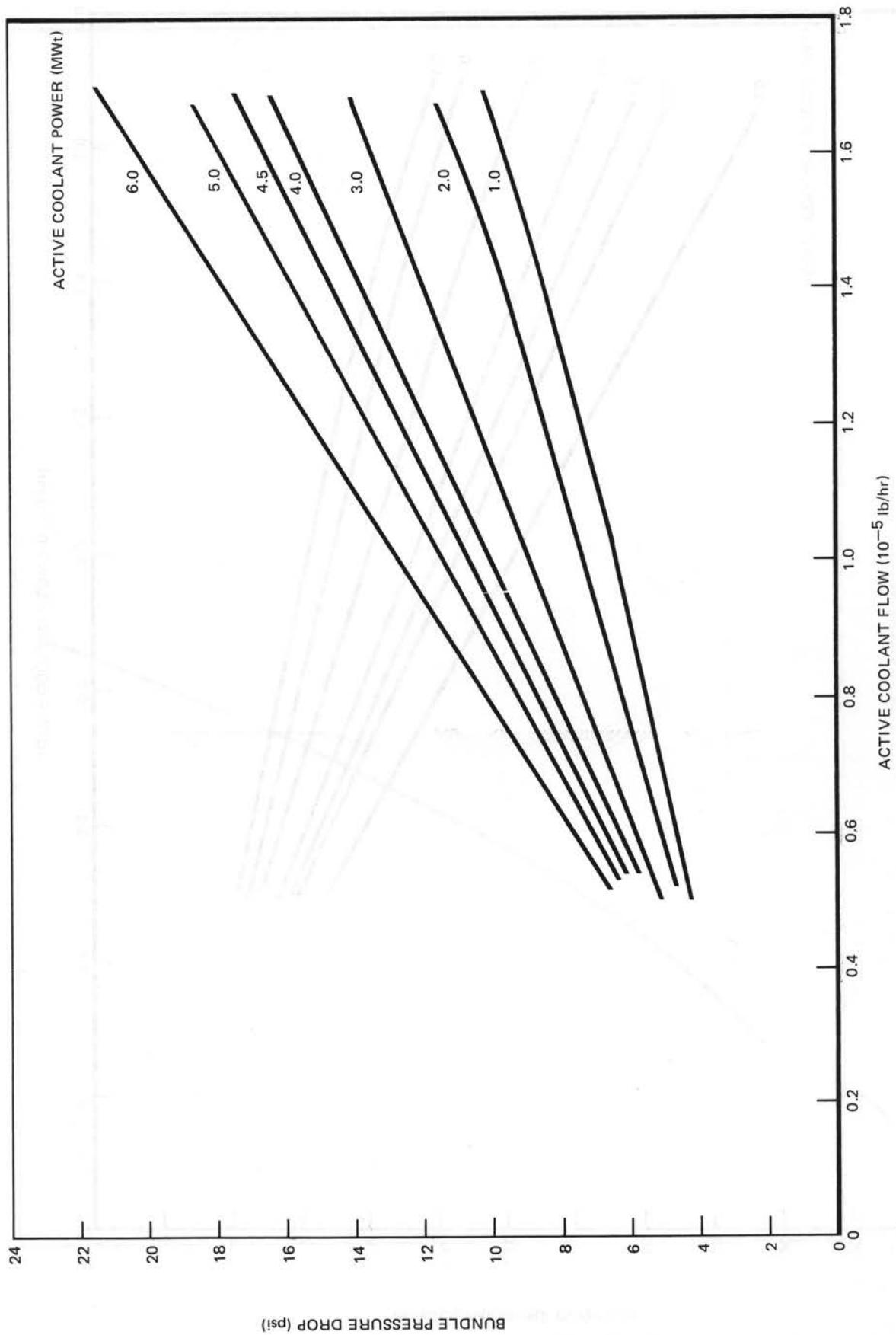


Figure 17. Flow Characteristics 7x7 Fuel Assemblies, 20 Btu/lb Subcooling

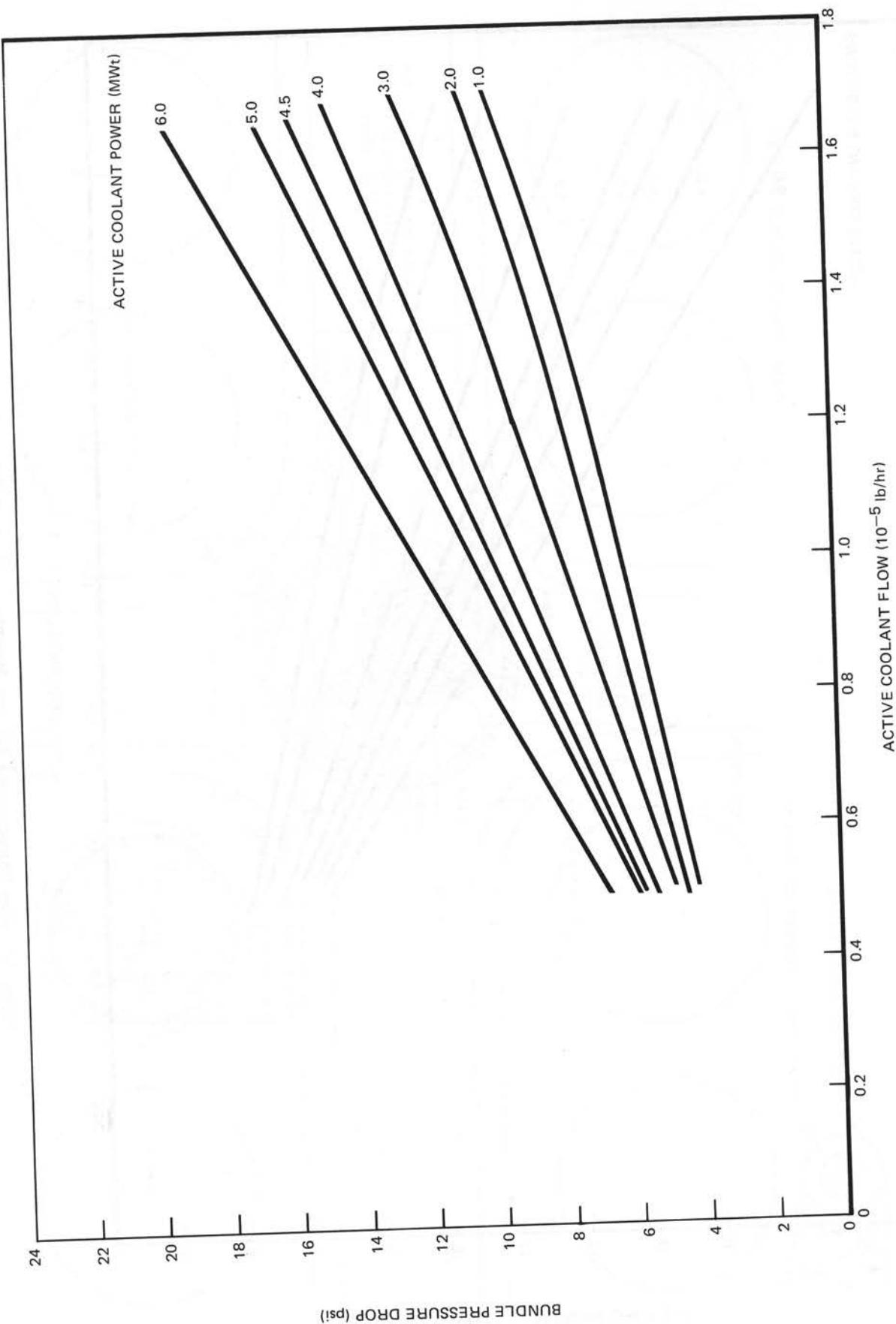


Figure 18. Flow Characteristics 7x7 Fuel Assemblies, 30 Btu/lb Subcooling

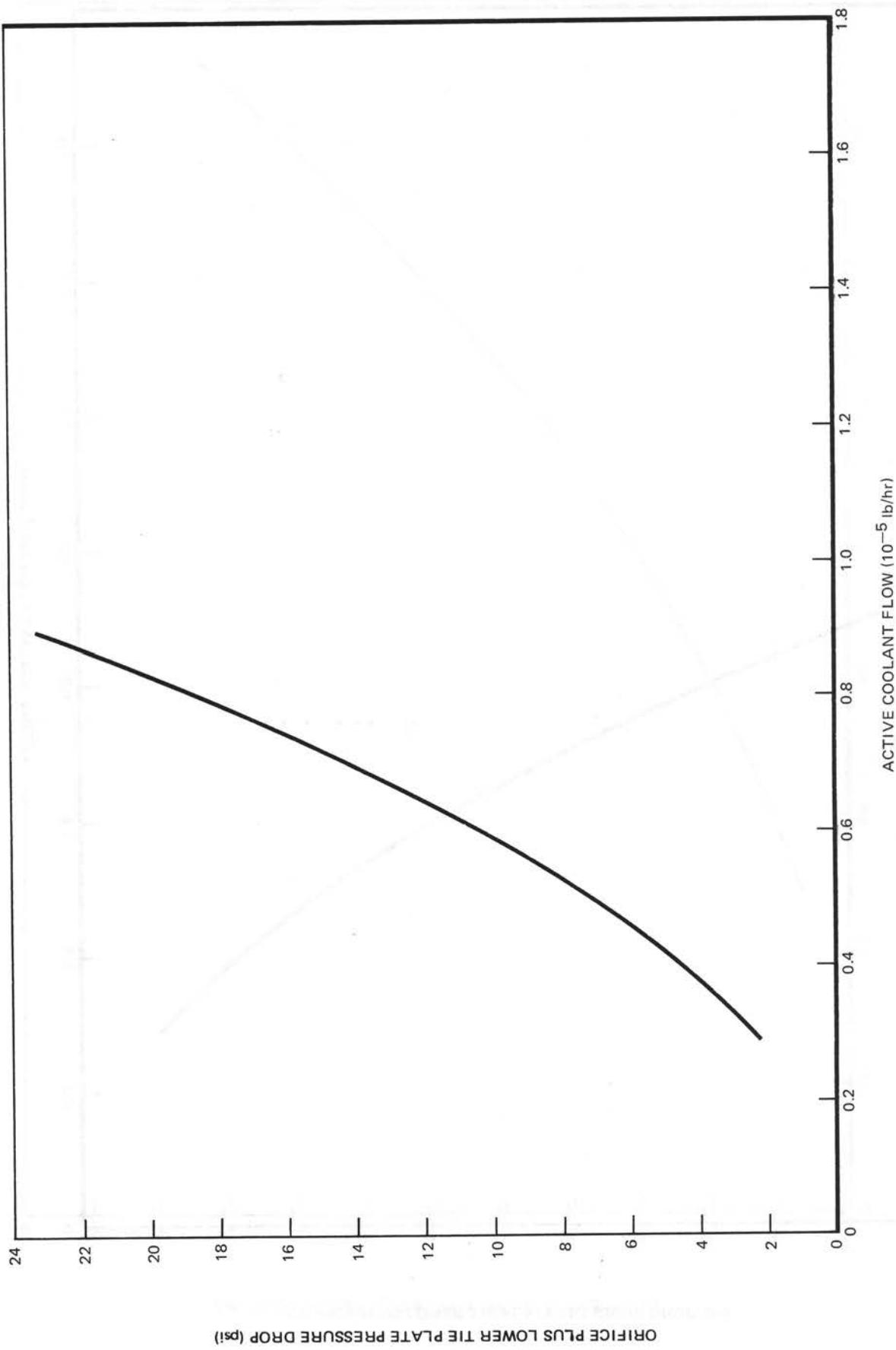


Figure 19. 1.488-in. Orifice Diameter, 20 Btu/lb Subcooling

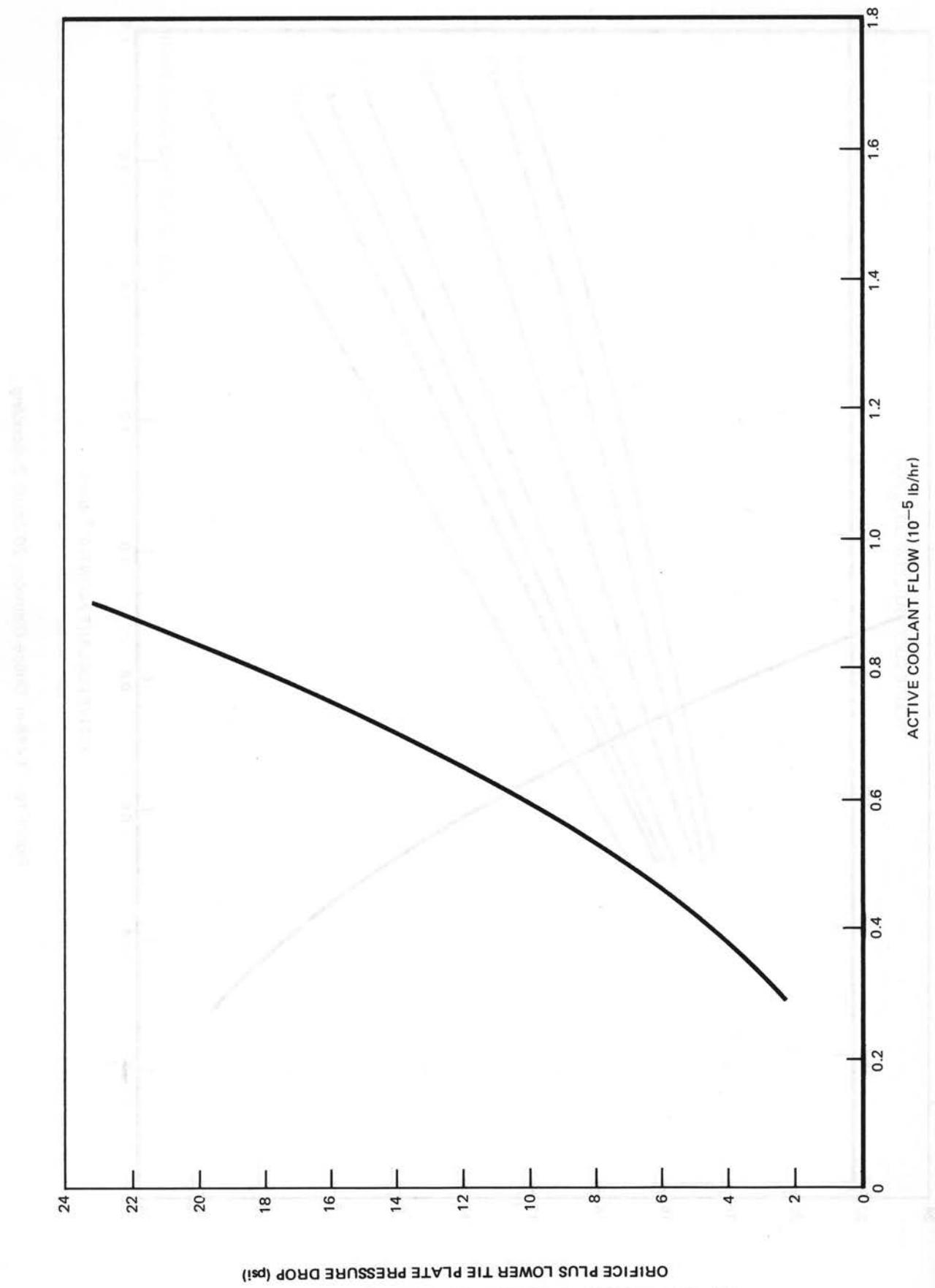


Figure 20. 1.488-in. Orifice Diameter, 30 Btu/lb Subcooling

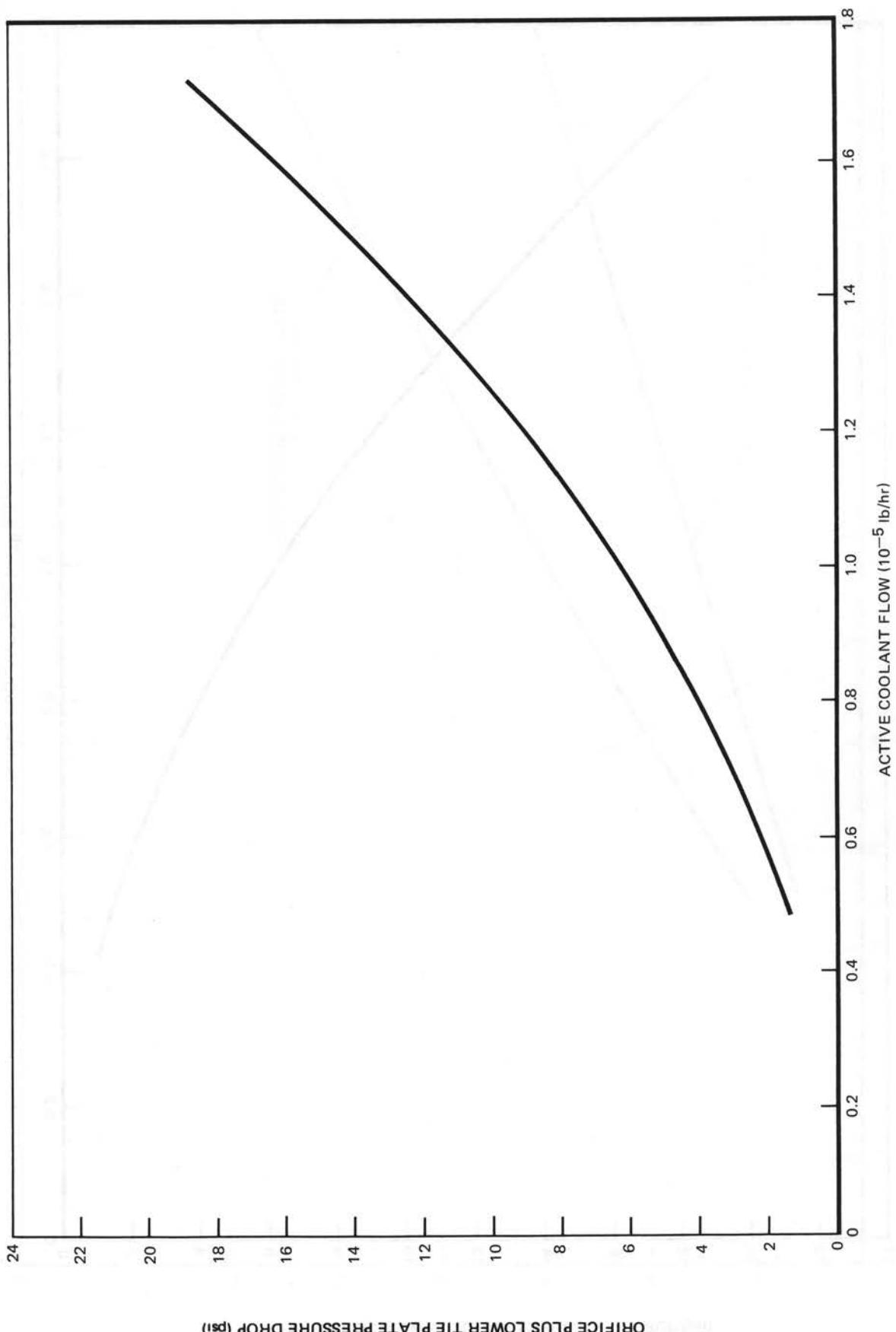


Figure 21. 2.222-in. Orifice Diameter, 20 Btu/lb Subcooling

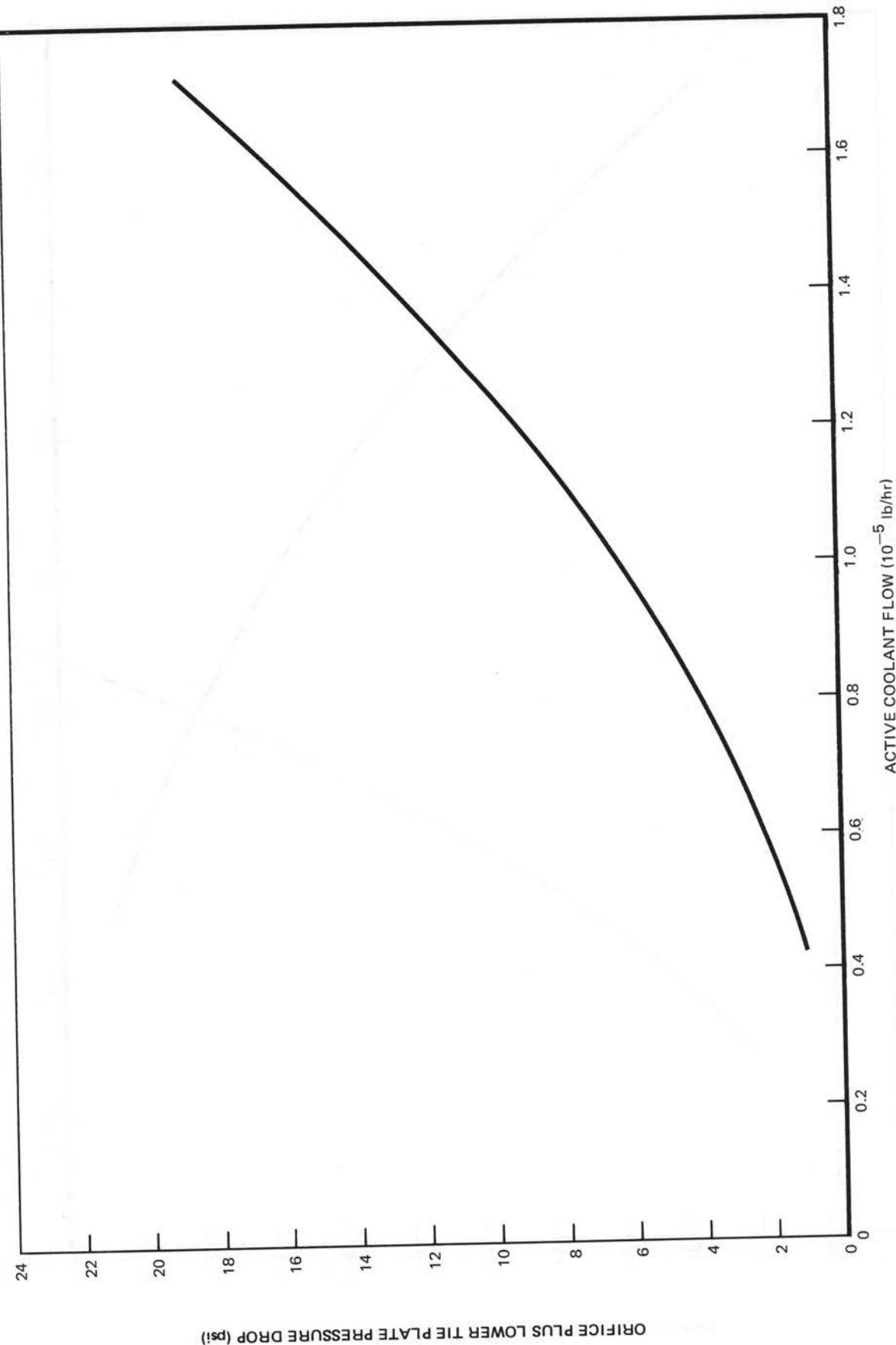


Figure 22. 2.222-in. Orifice Diameter, 30 Btu/lb Subcooling

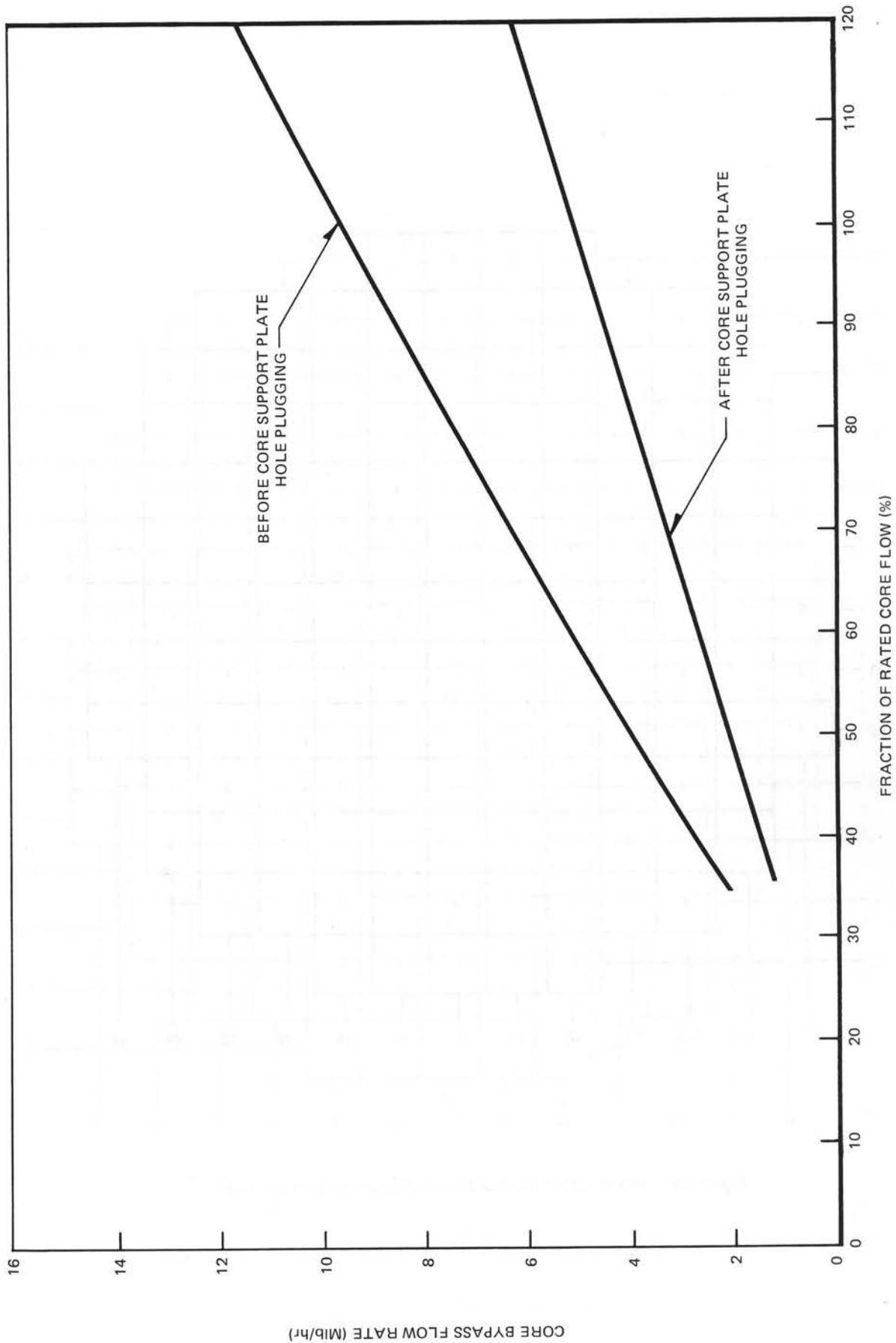


Figure 23. Core Bypass Flow for Cycle 1

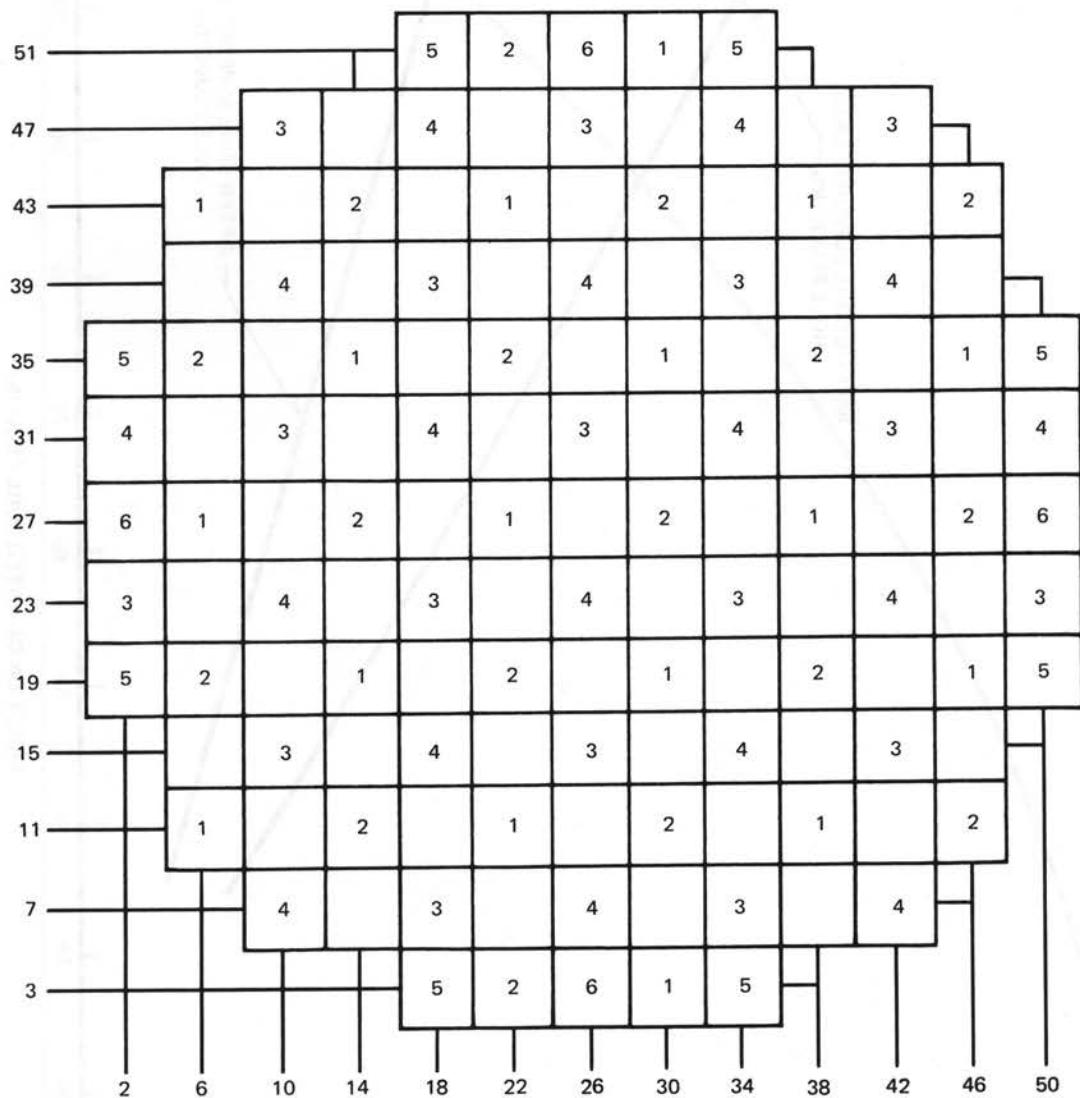


Figure 24. Hatch Unit 1 Control Rod A Sequence Groups 1—6

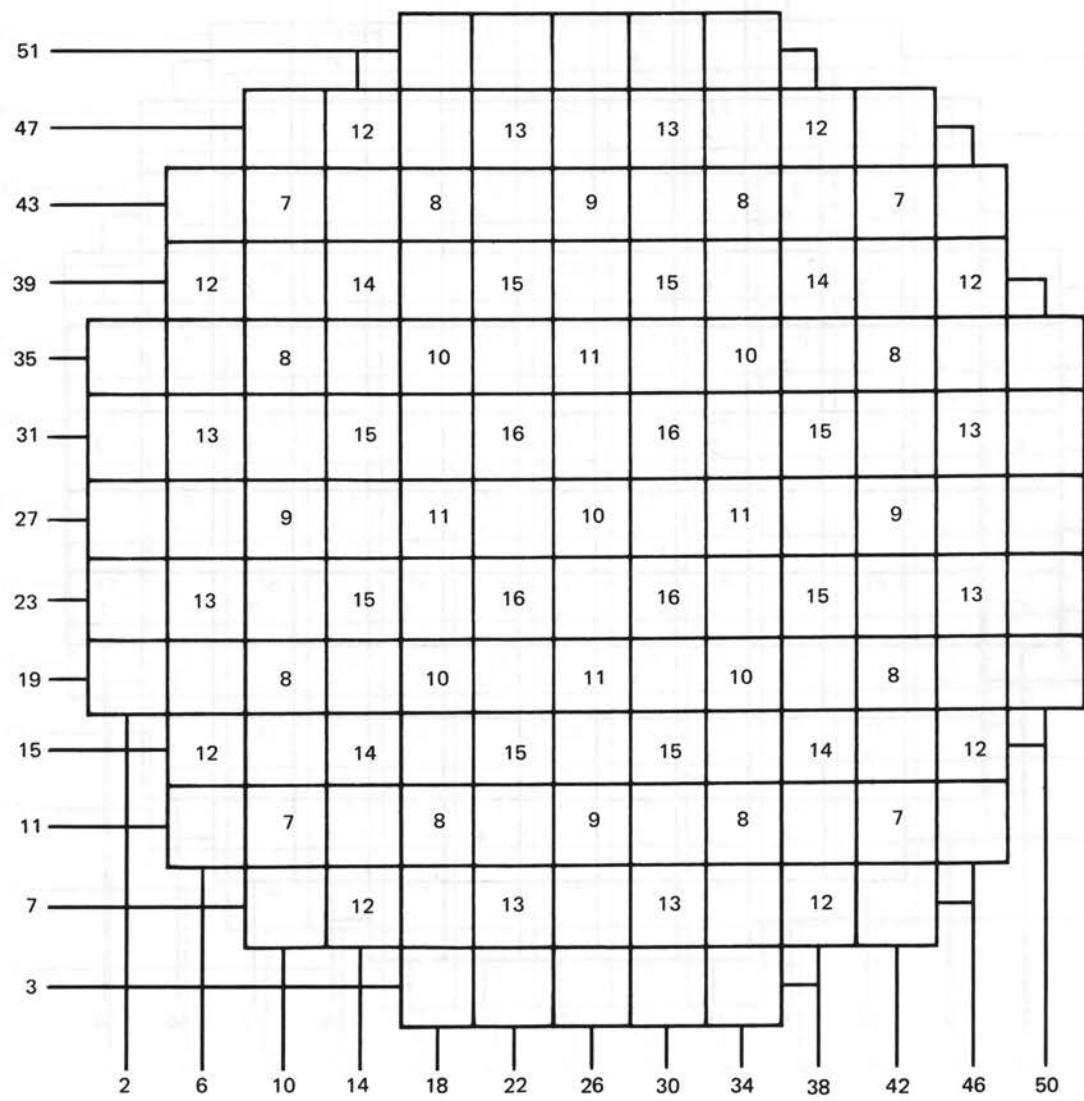


Figure 25. Hatch Unit 1 Control Rod A Sequence Groups 7-16

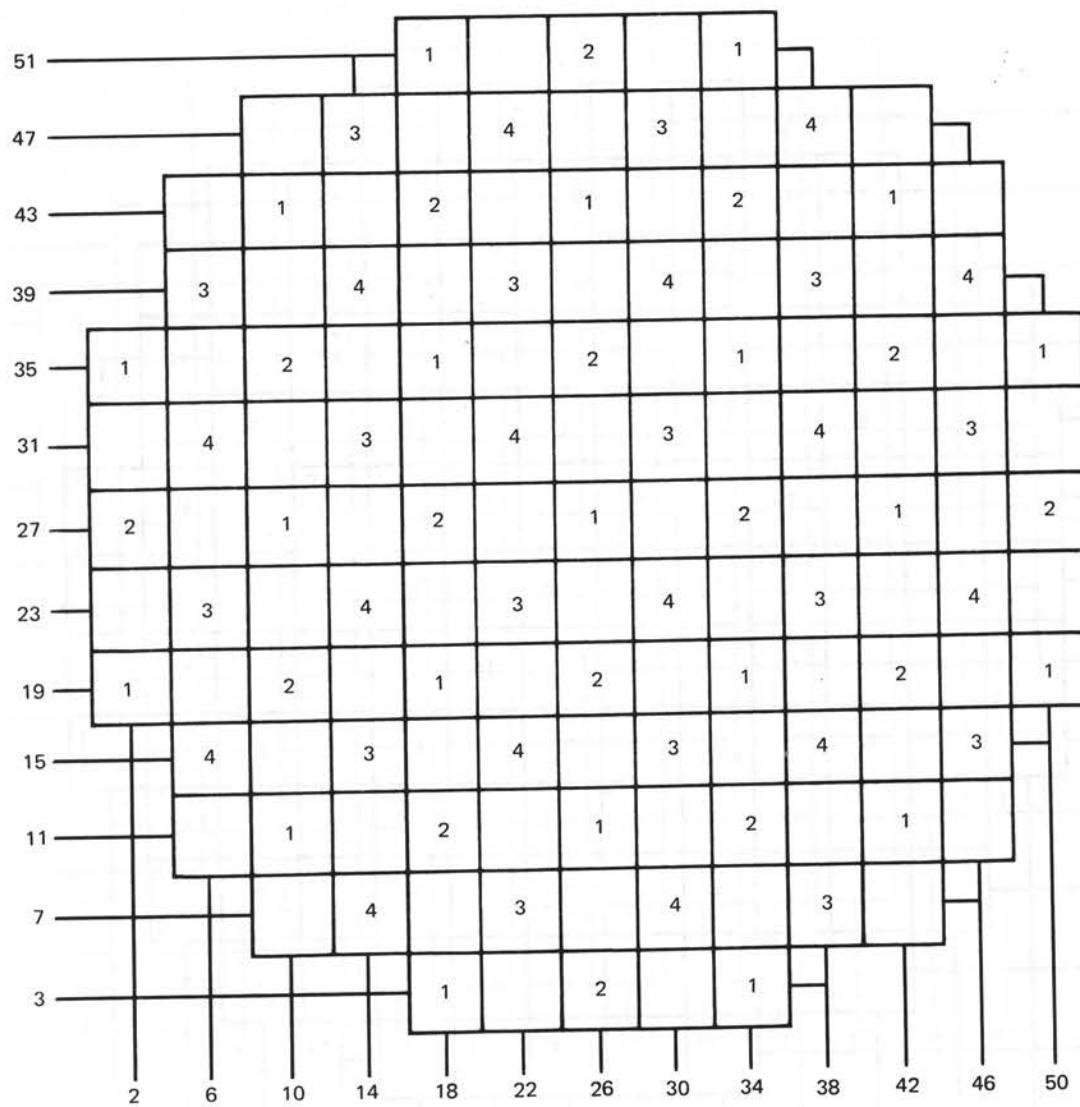


Figure 26. Hatch Unit 1 Control Rod B Sequence Groups 1—4

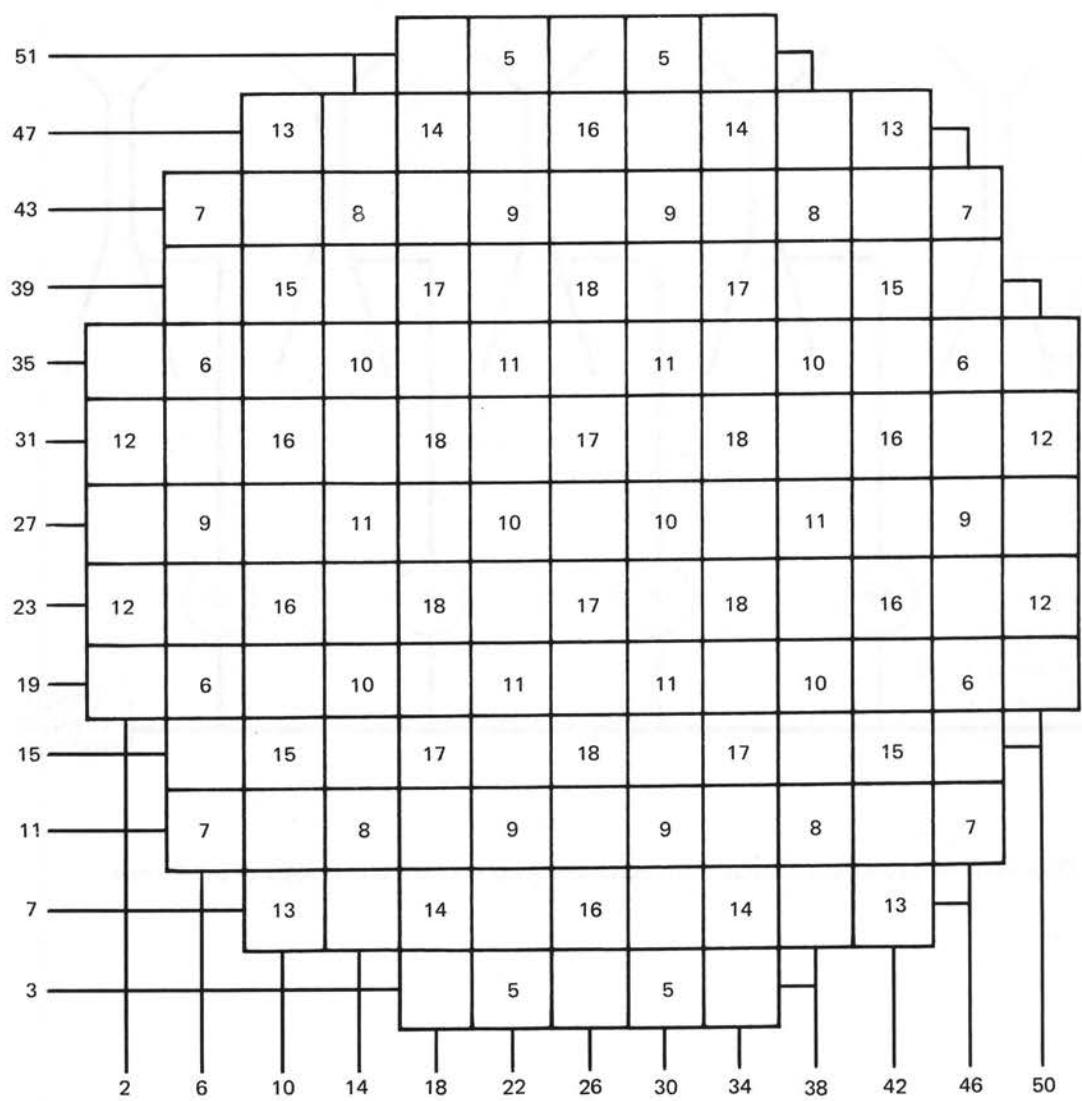


Figure 27. Hatch Unit 1 Control Rod B Sequence Groups 5–18

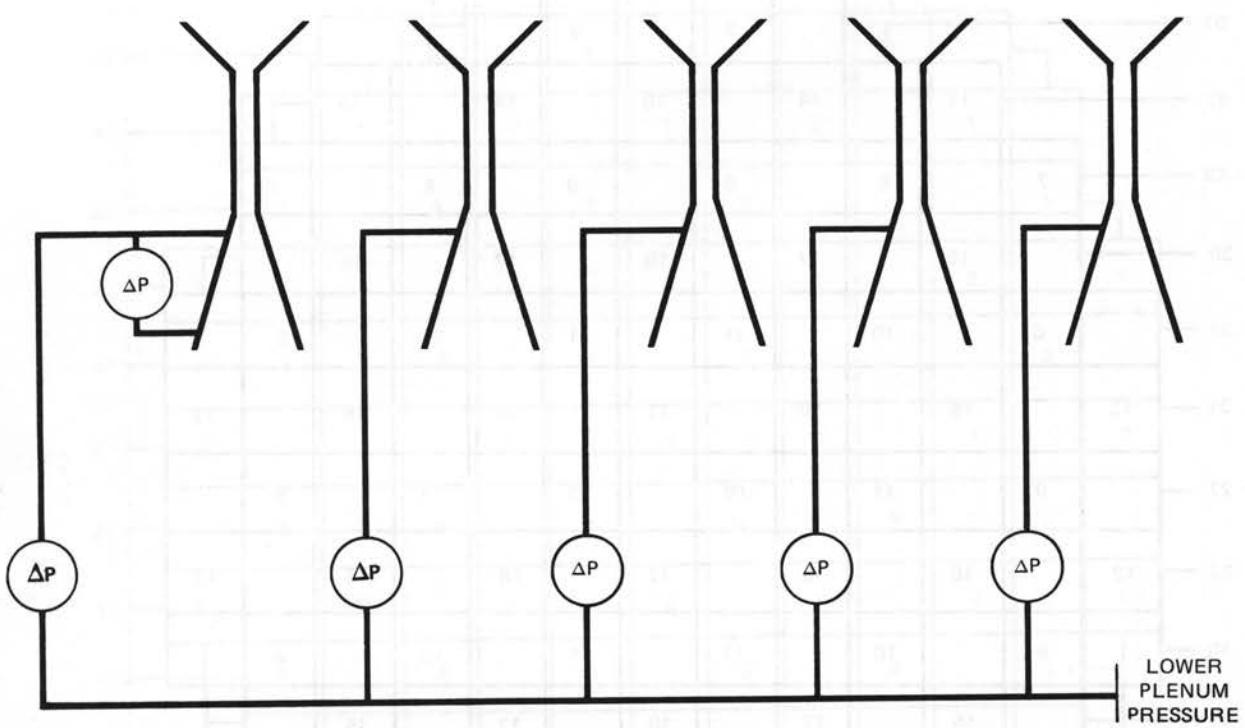


Figure 28. Core Flow Measurement System Schematic Showing One of Four Groups of Jet Pumps

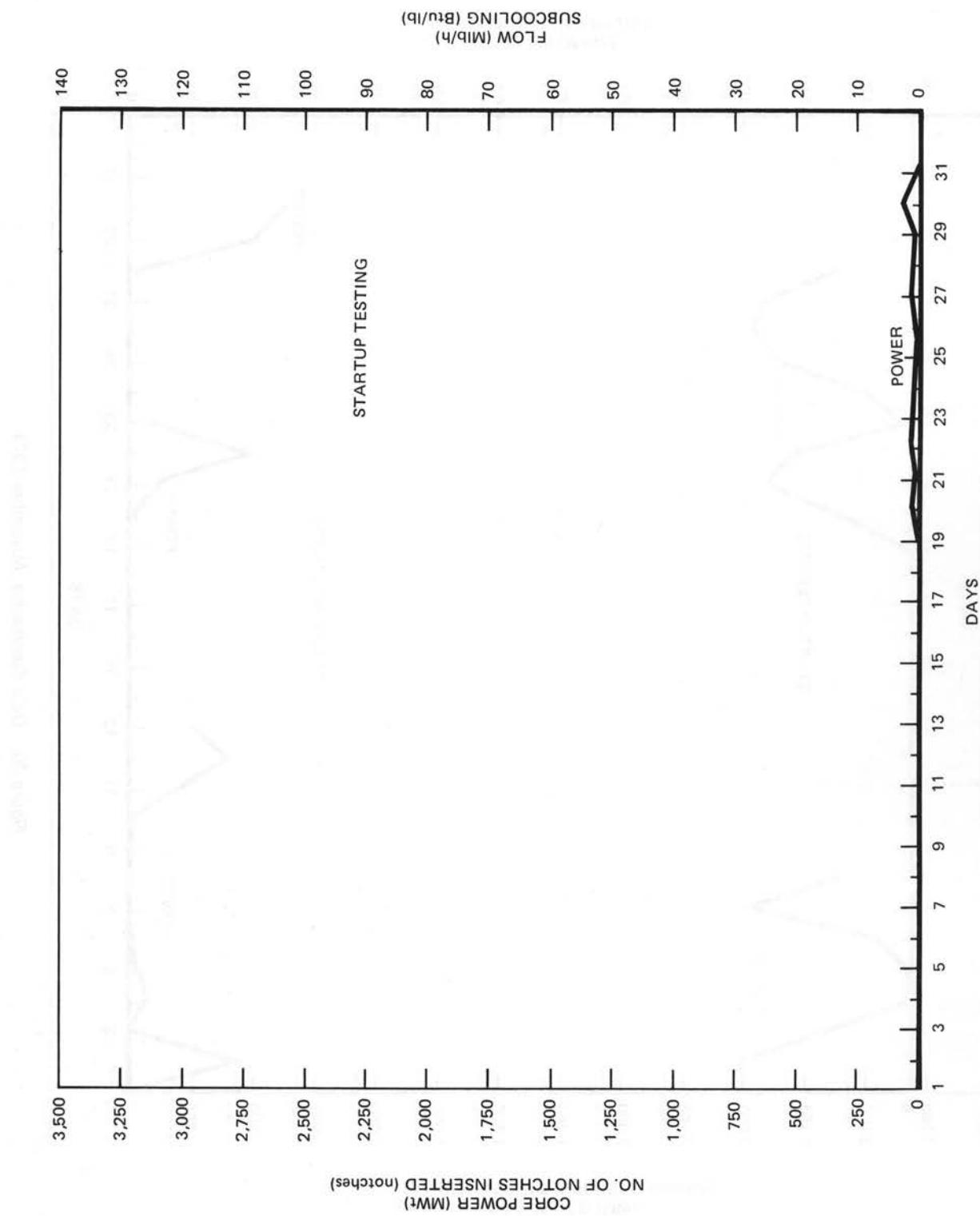


Figure 29. Data Summaries, October 1974

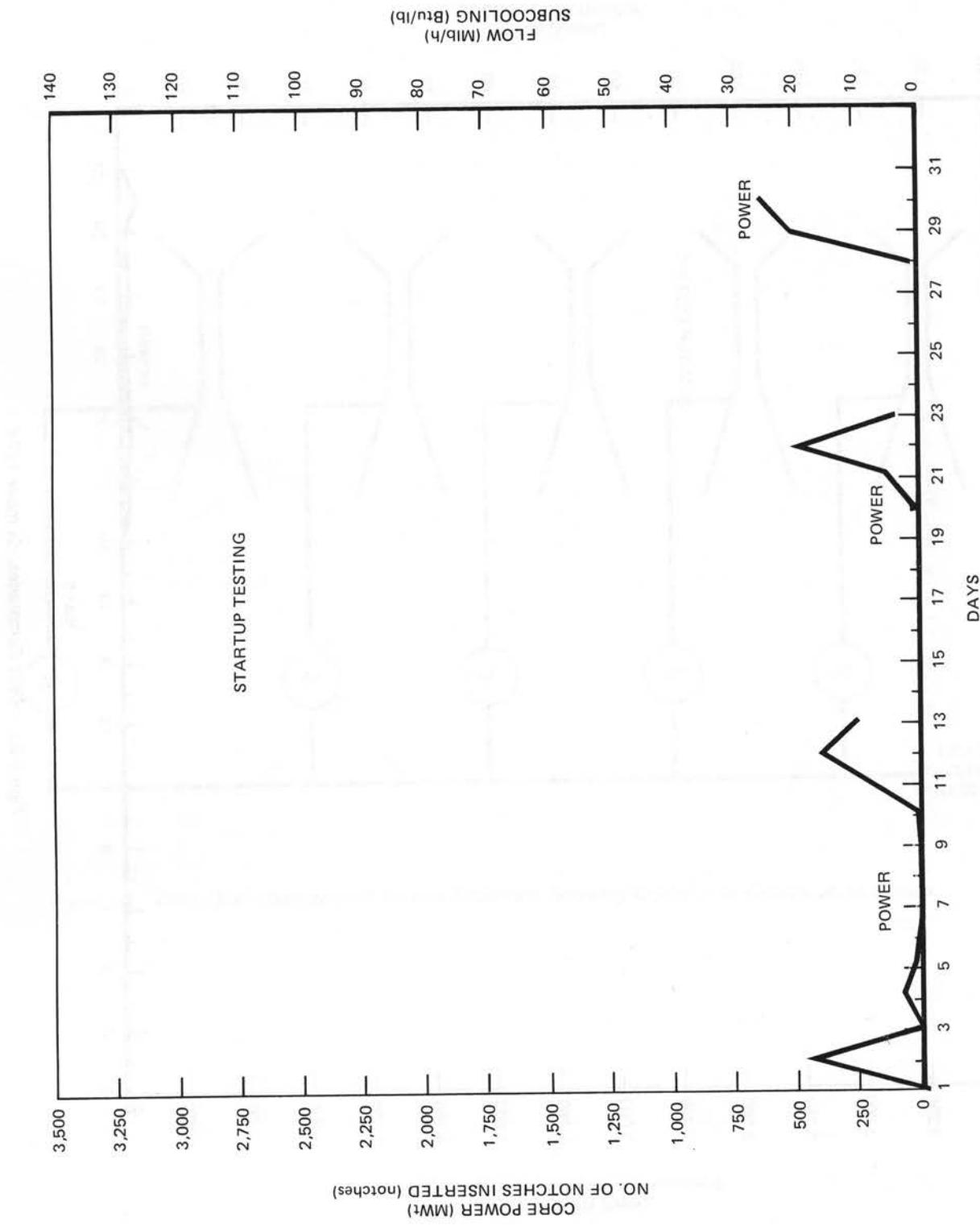


Figure 30. Data Summaries, November 1974

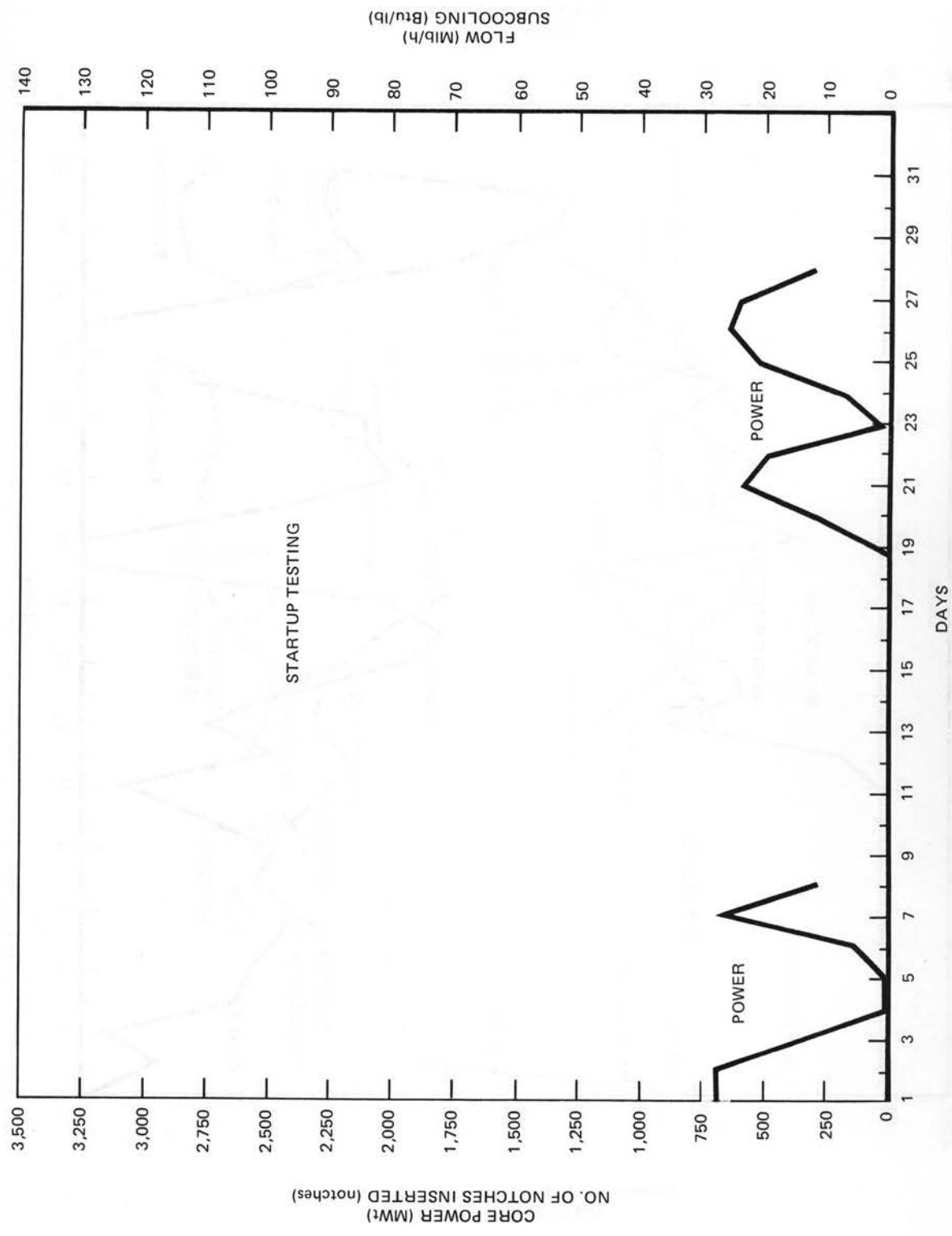


Figure 31. Data Summaries, December 1974

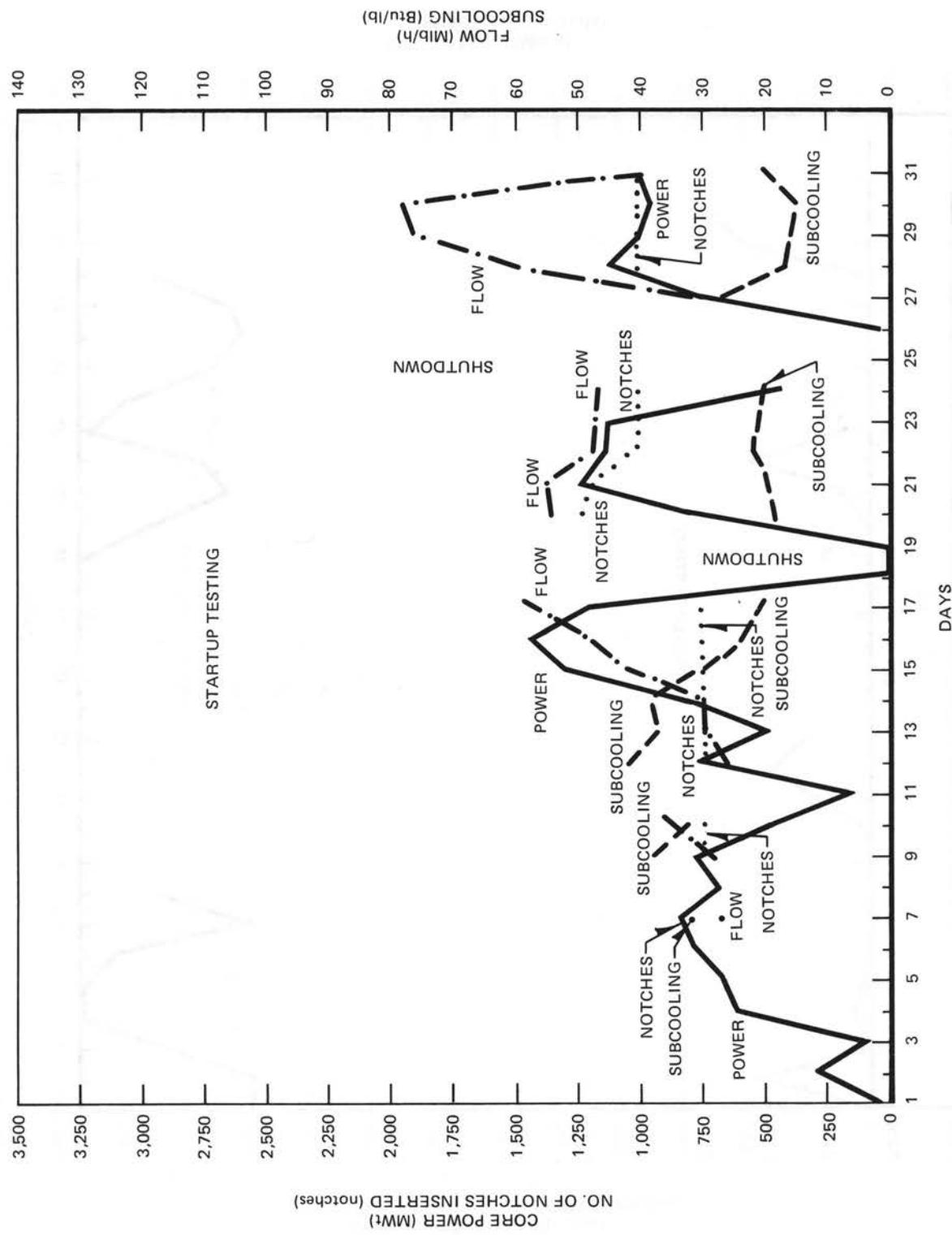


Figure 32. Data Summaries, January 1975

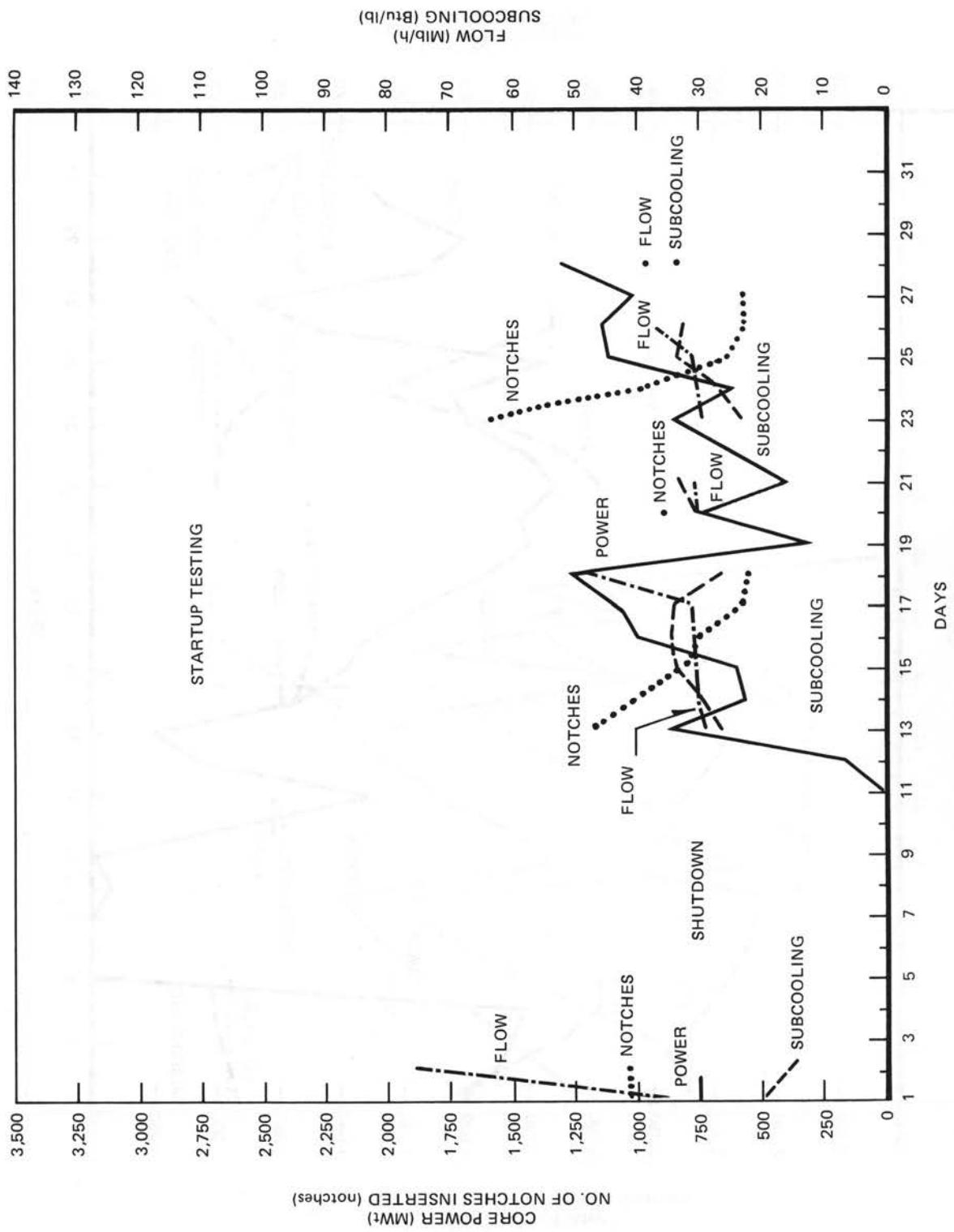


Figure 33. Data Summaries, February 1975

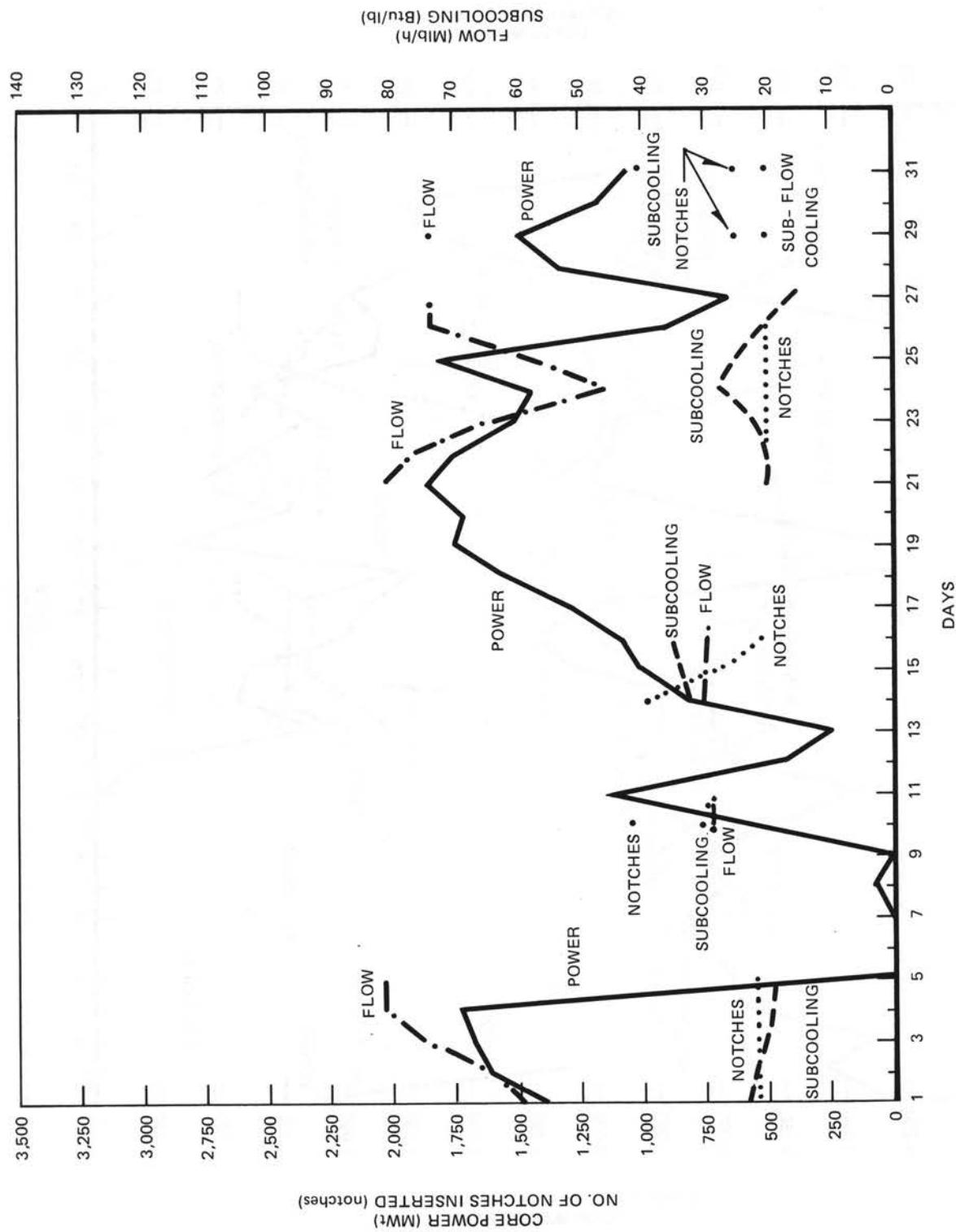


Figure 34. Data Summaries, March 1975

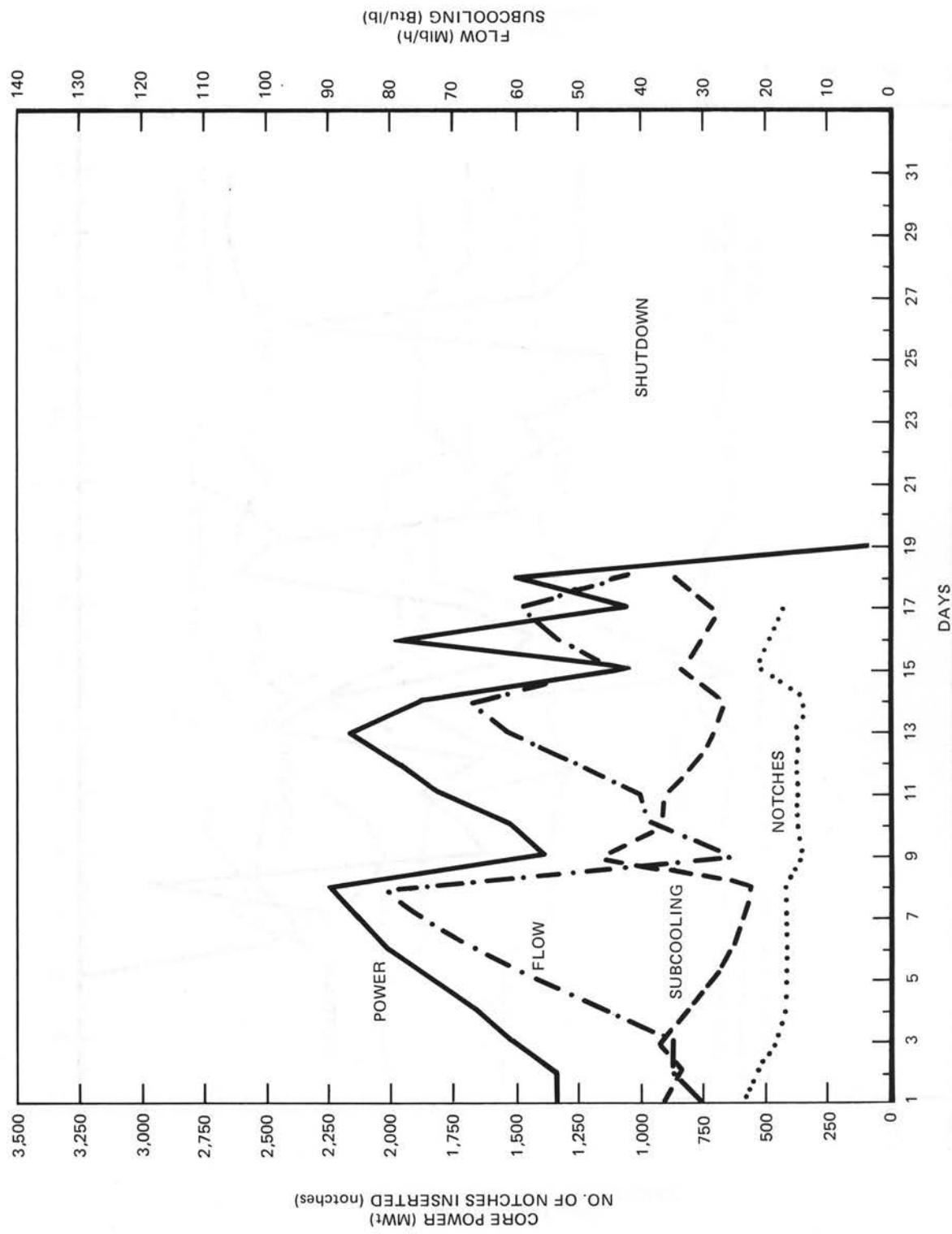


Figure 35. Data Summaries, April 1975

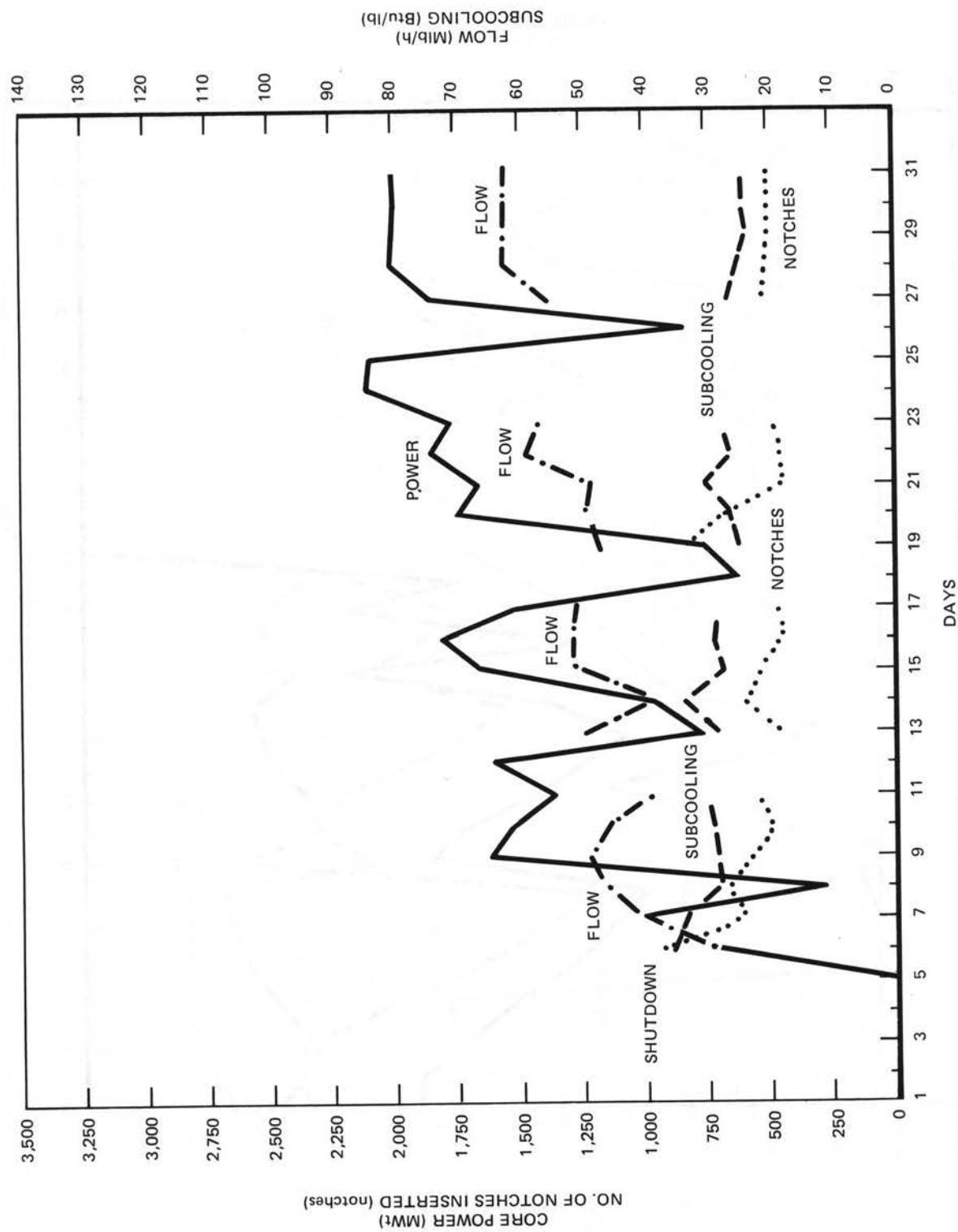


Figure 36. Data Summaries, May 1975

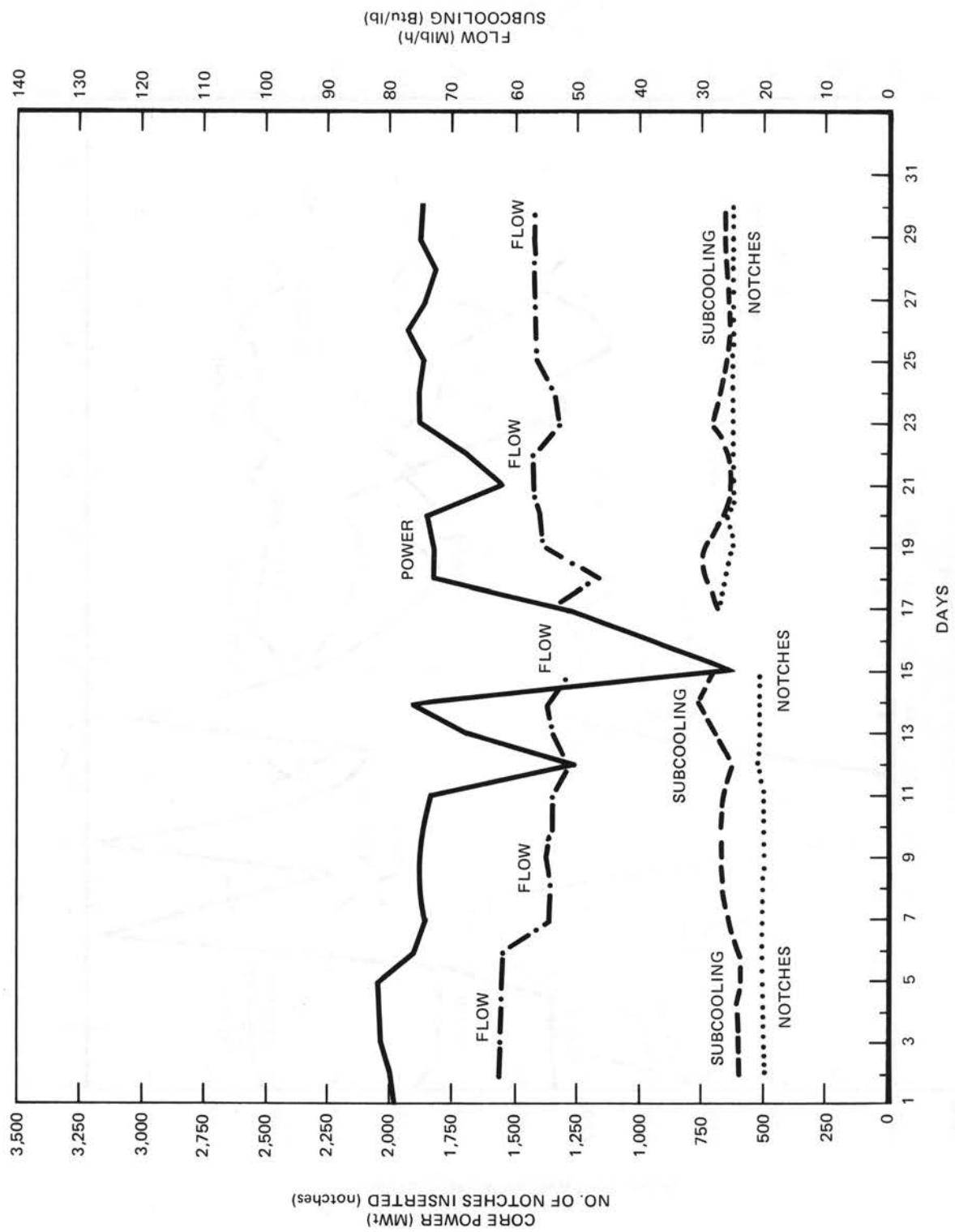


Figure 37. Data Summaries, June 1975

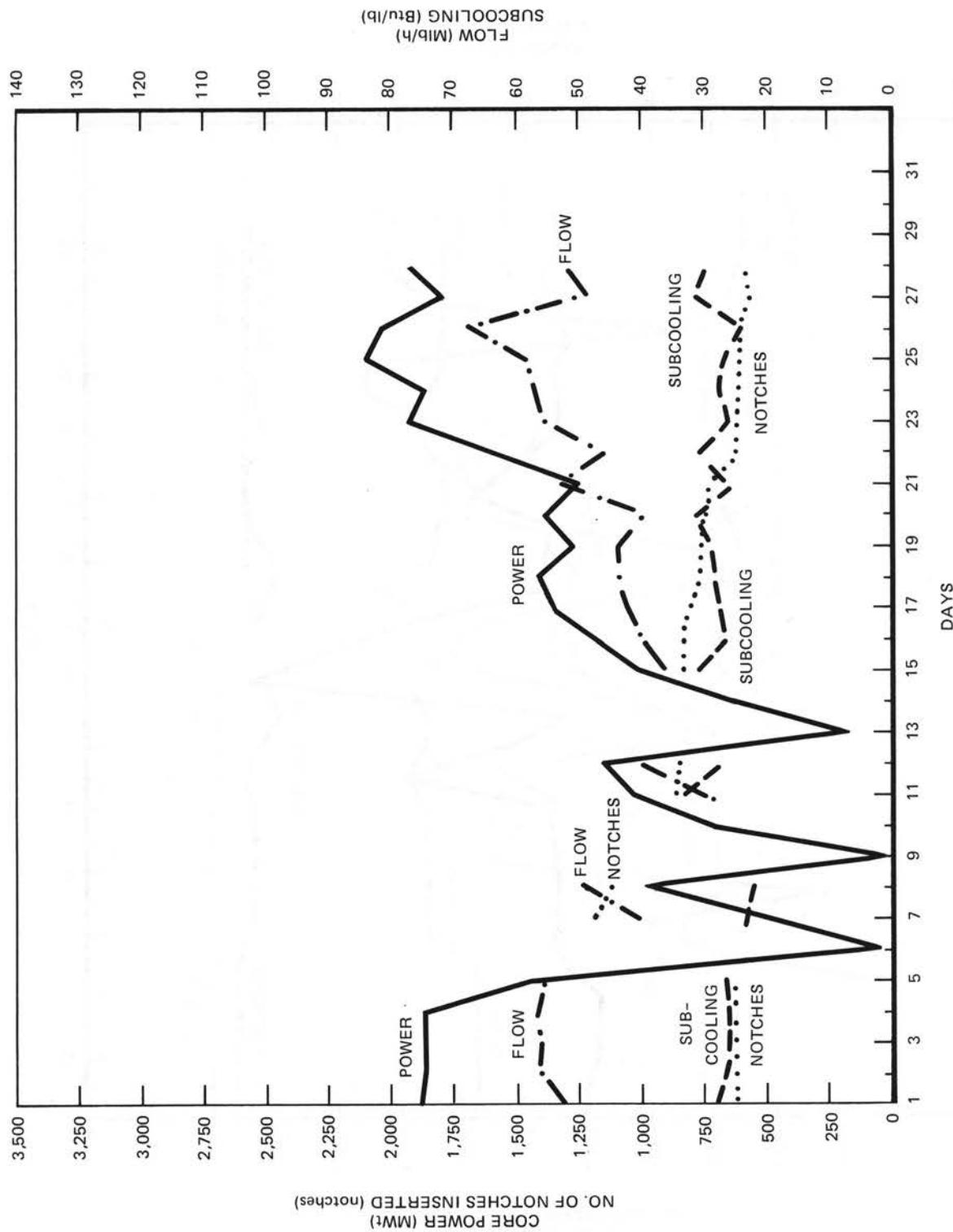


Figure 38. Data Summaries, July 1975

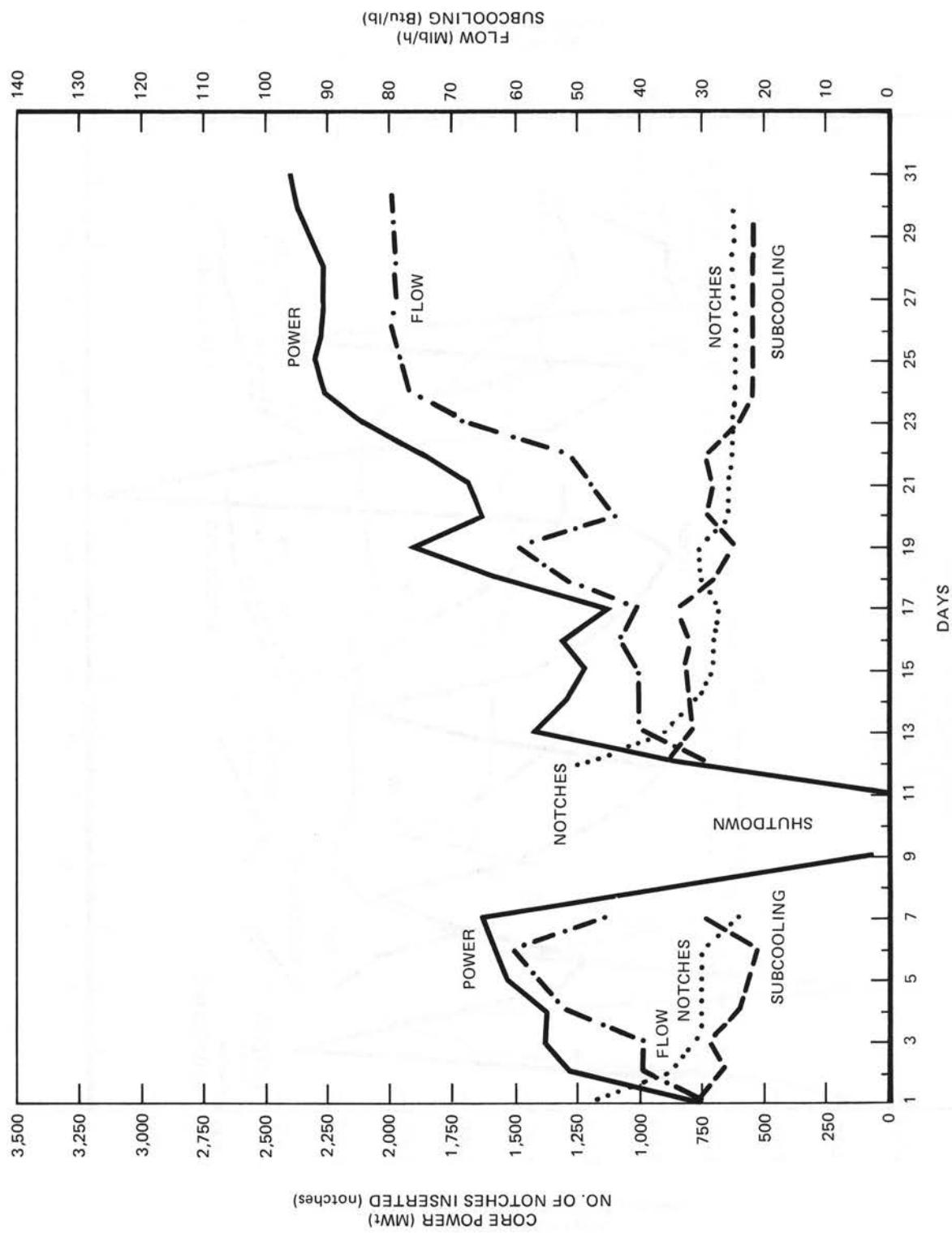


Figure 39. Data Summaries, August 1975

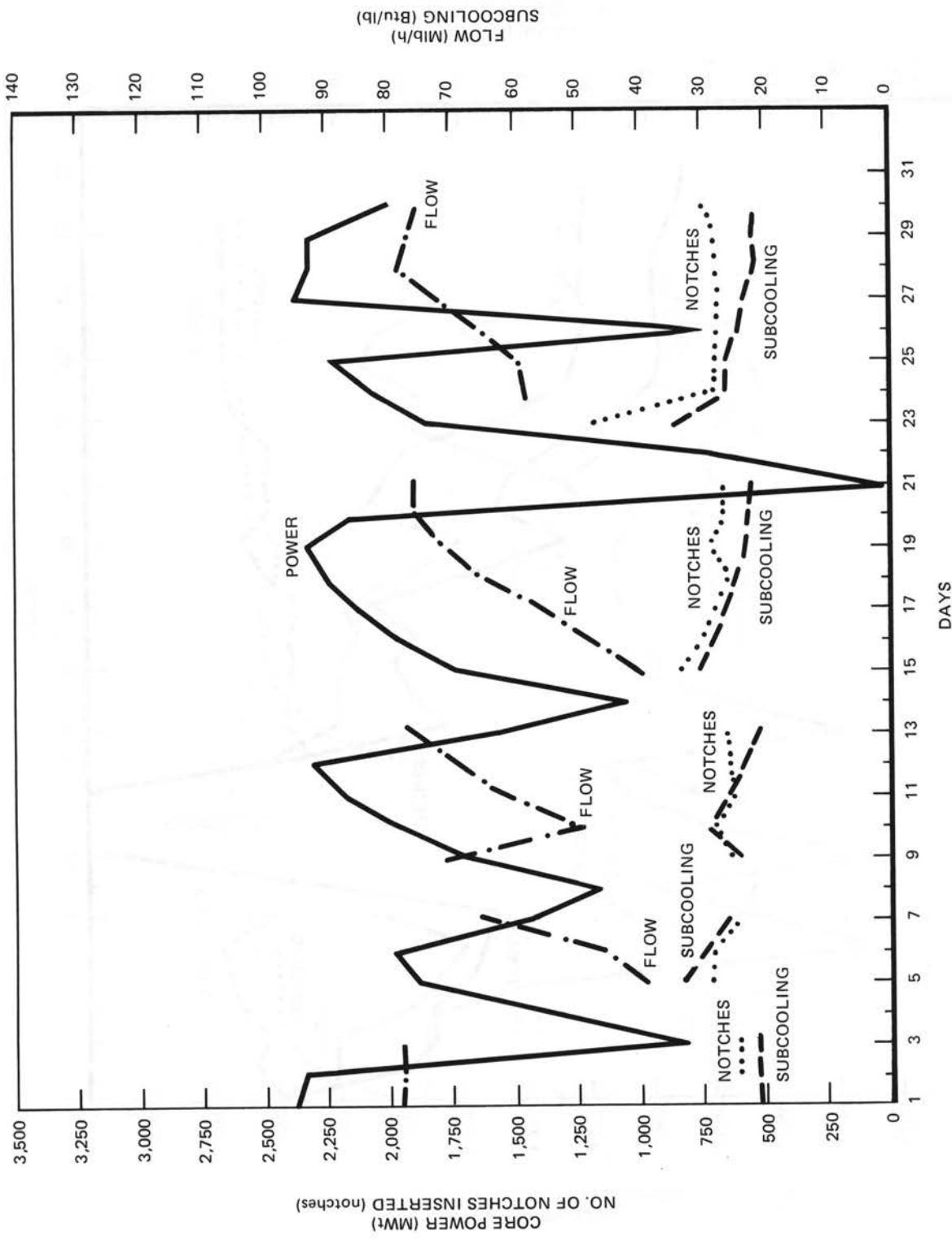


Figure 40. Data Summaries, September 1975

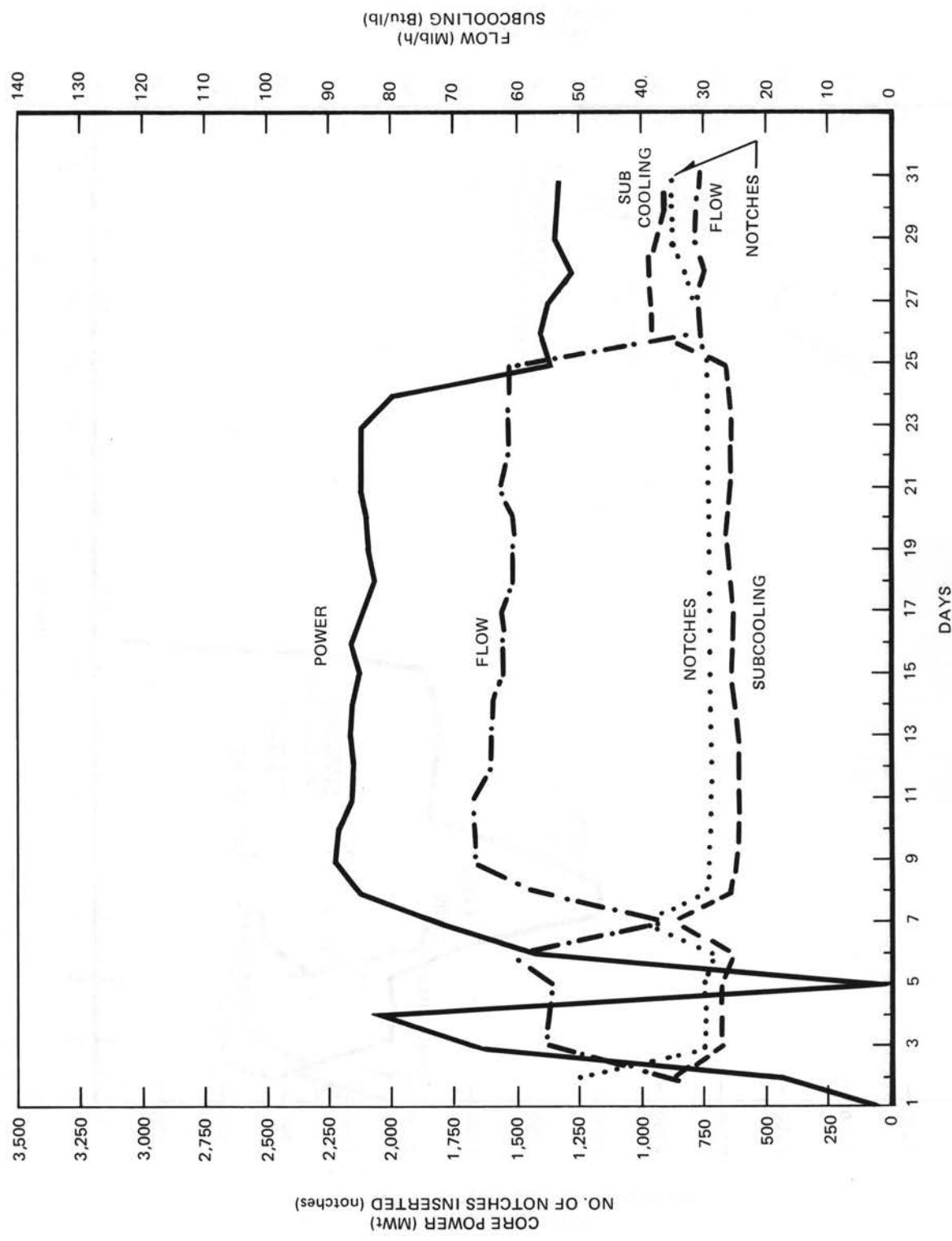


Figure 41. Data Summaries, October 1975

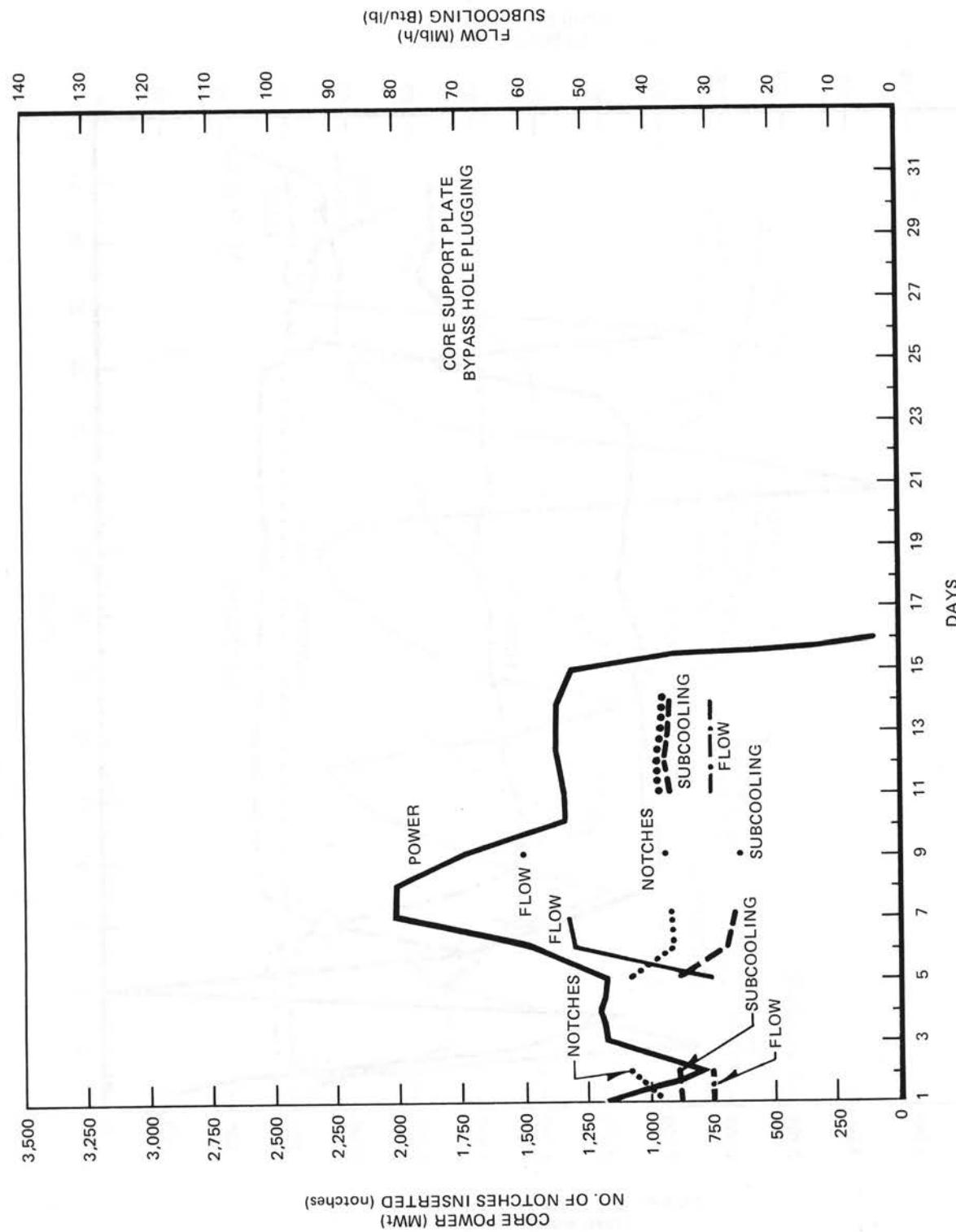


Figure 42. Data Summaries, November 1975

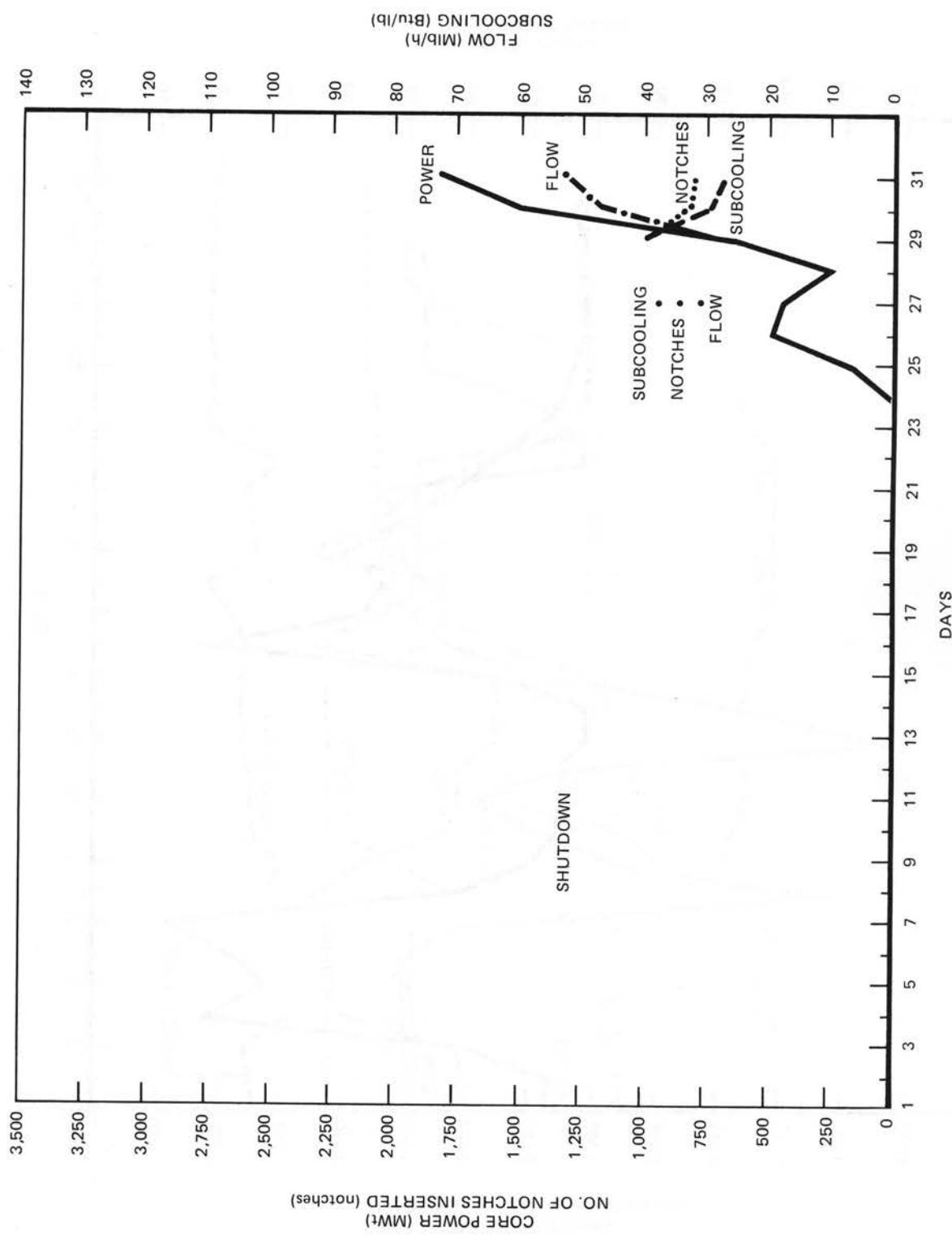


Figure 43. Data Summaries, December 1975

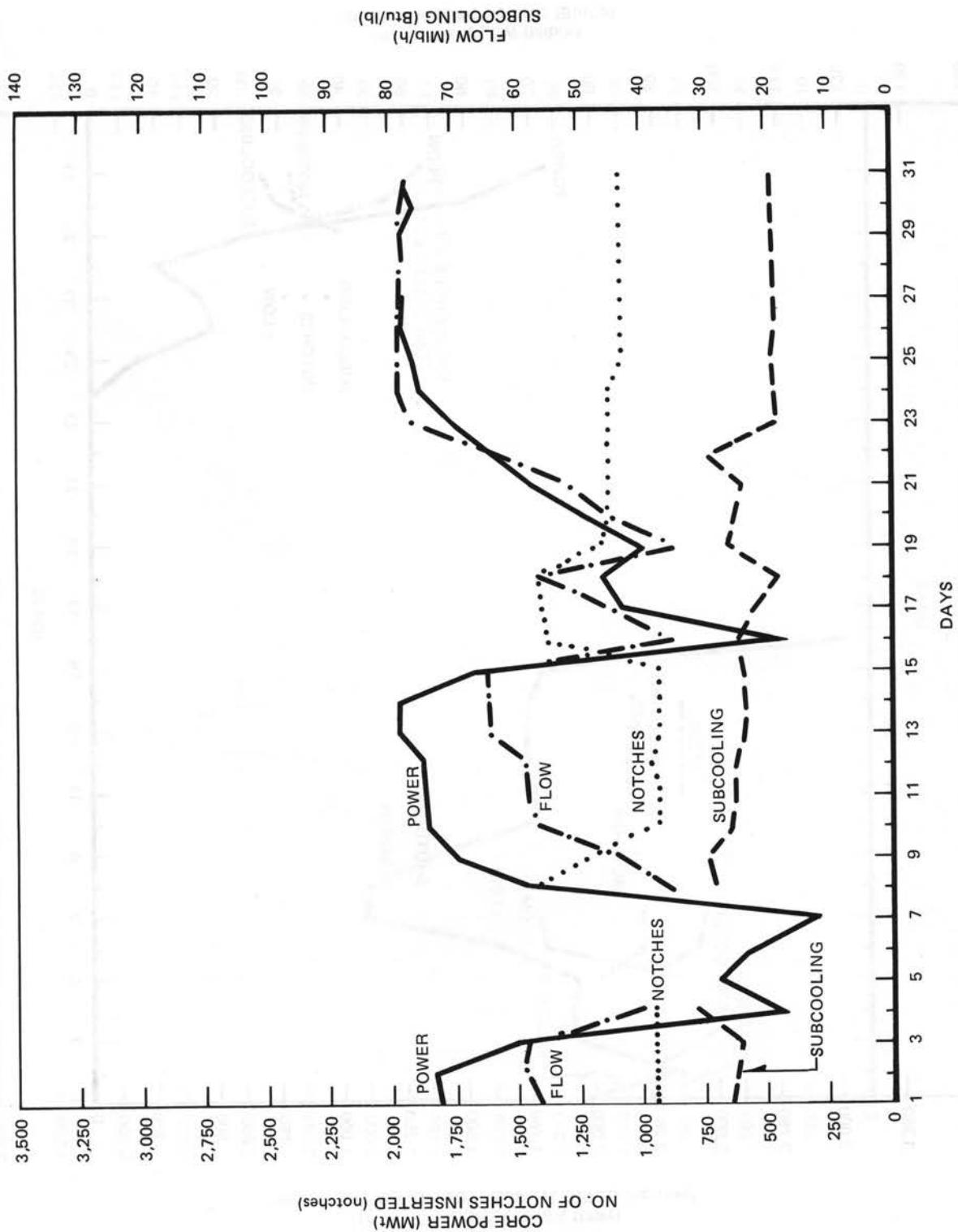


Figure 44. Data Summaries, January 1976

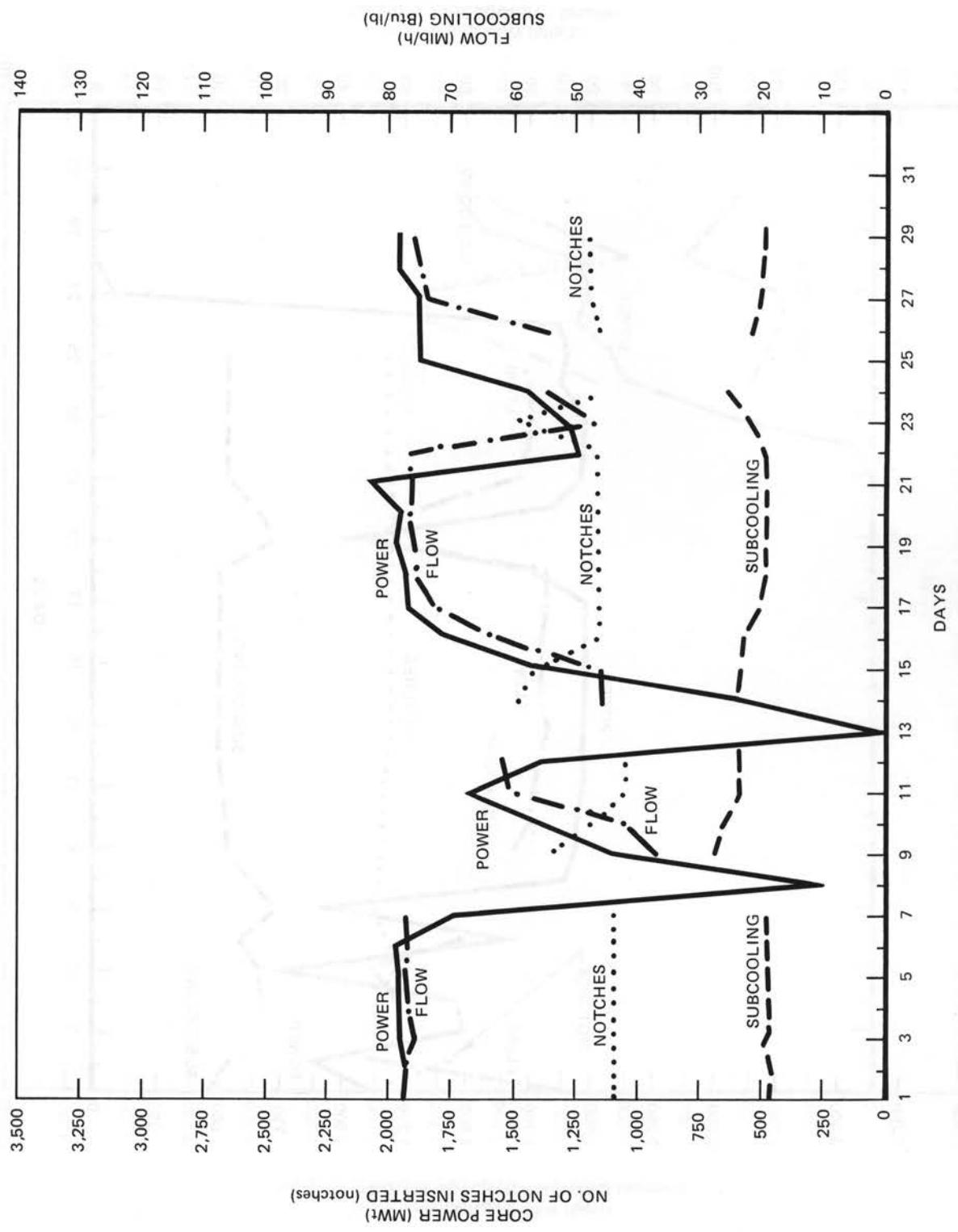


Figure 45. Data Summaries, February 1976

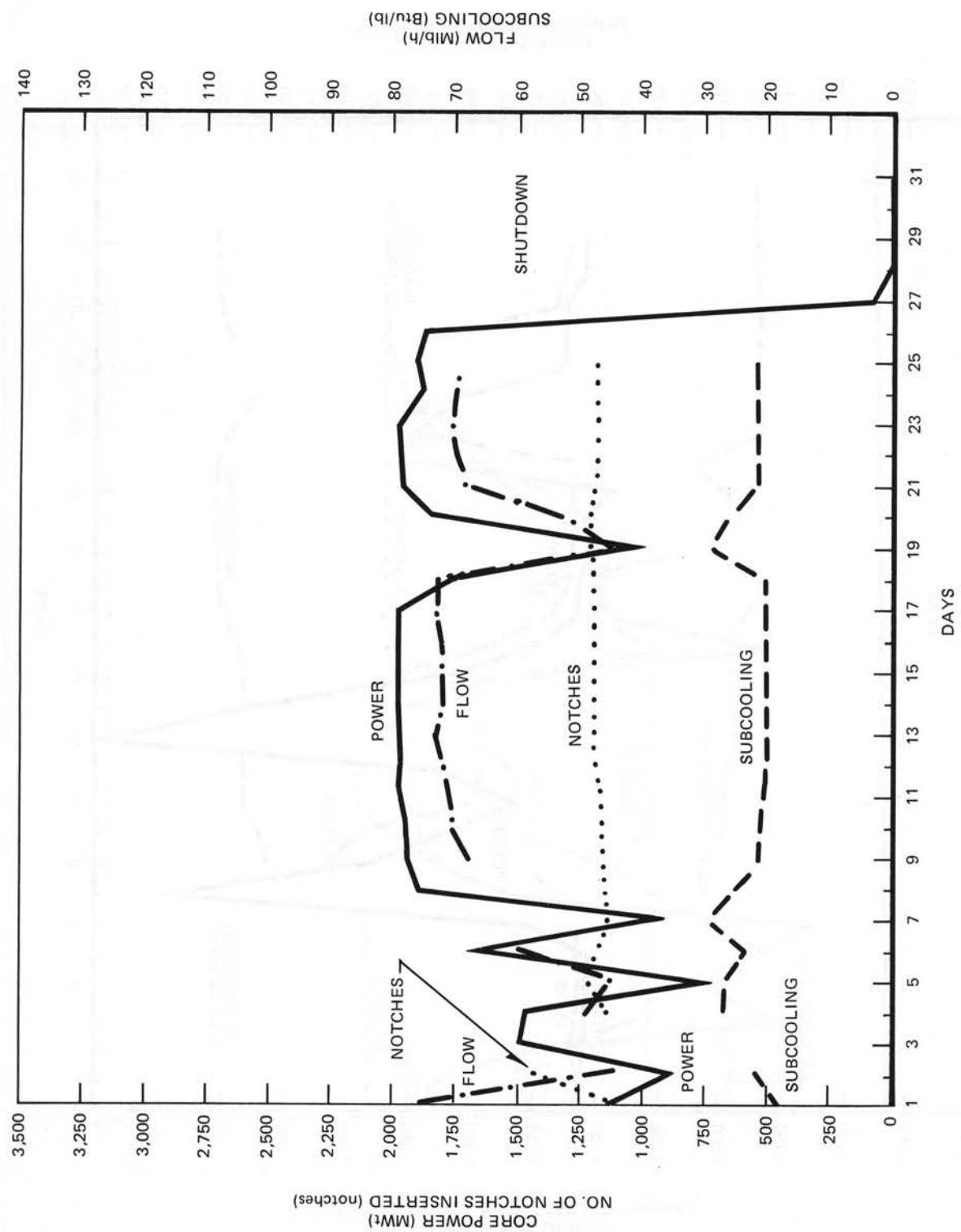


Figure 46. Data Summaries, March 1976

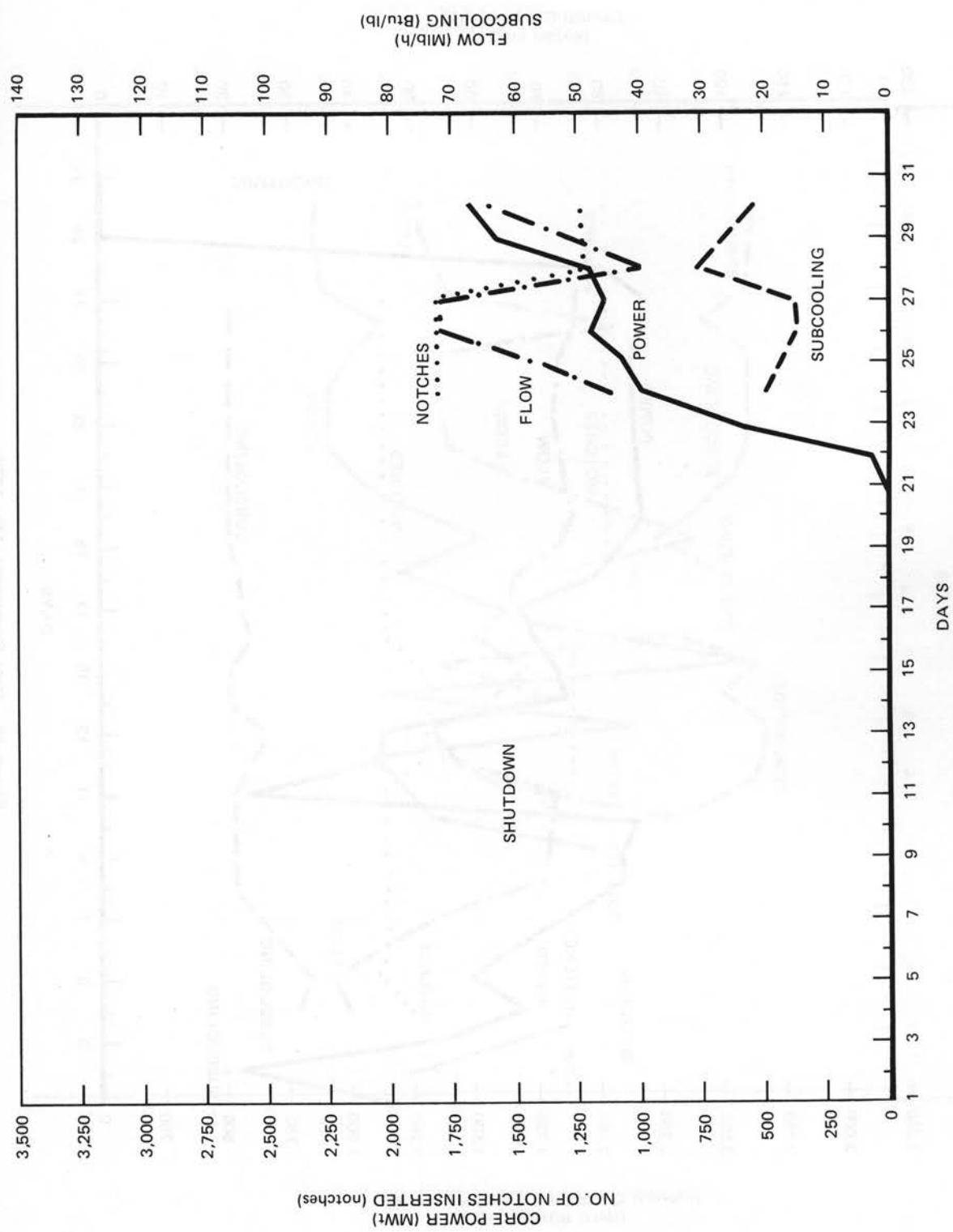


Figure 47. Data Summaries, April 1976

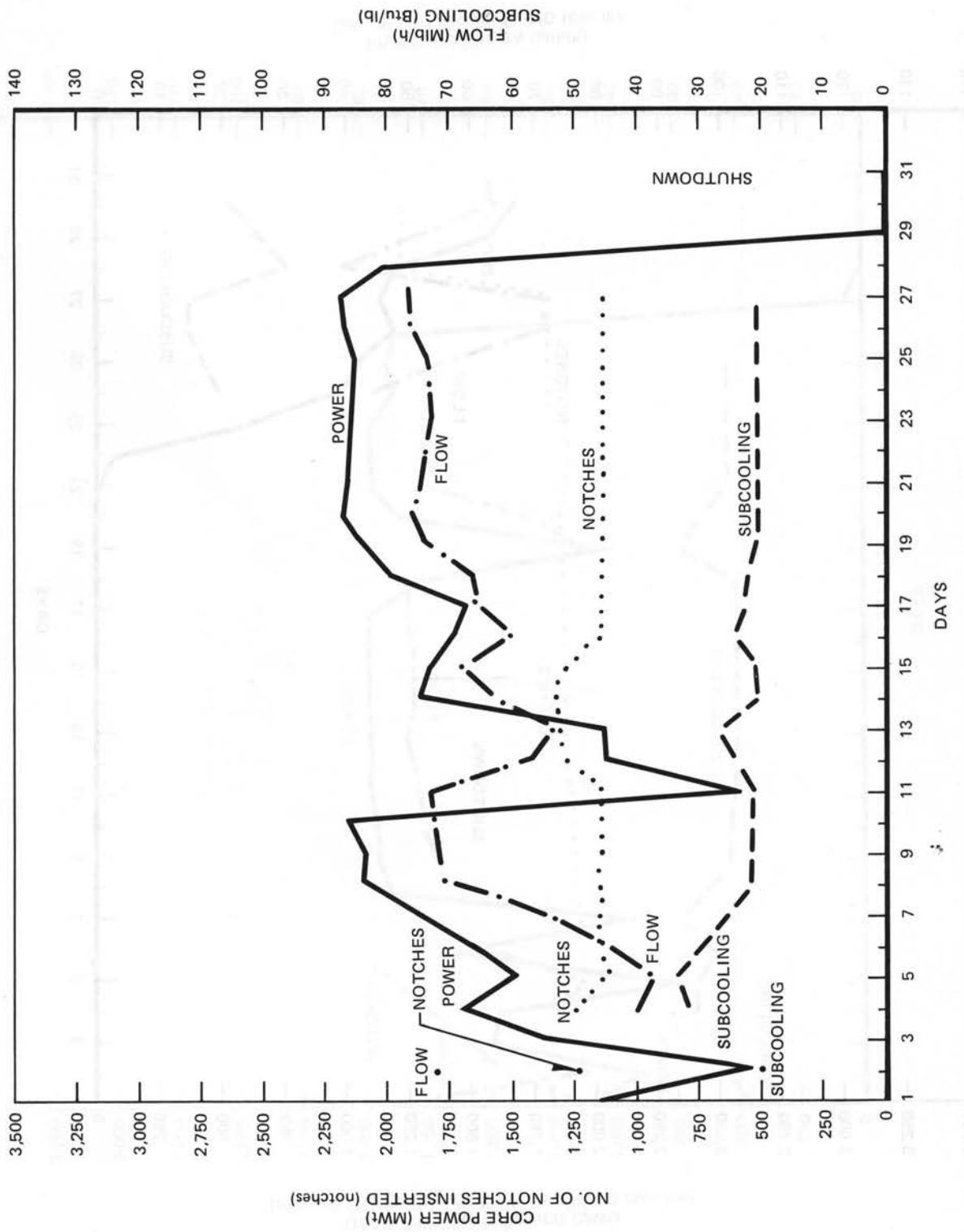


Figure 48. Data Summaries, May 1976

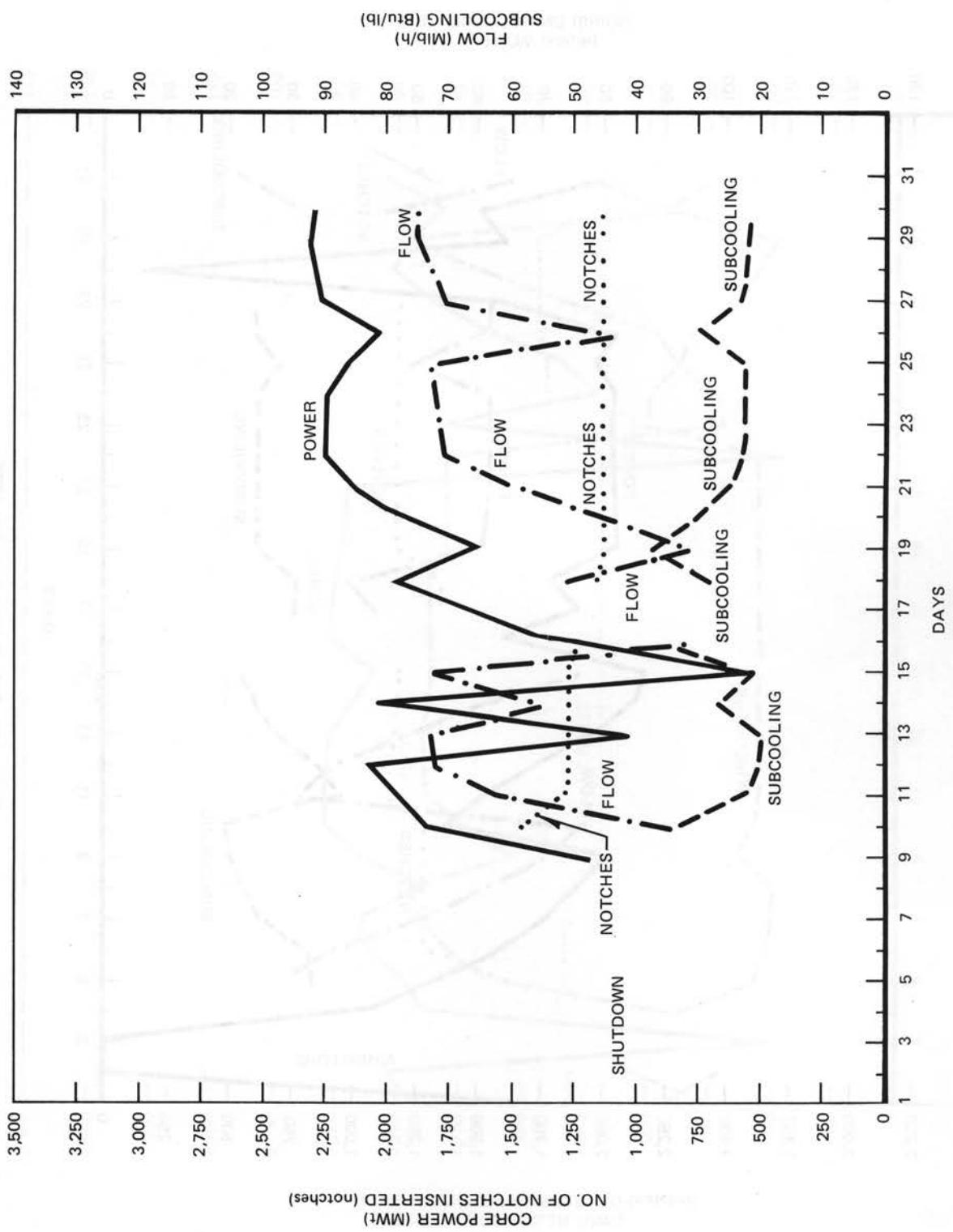


Figure 49. Data Summaries, June 1976

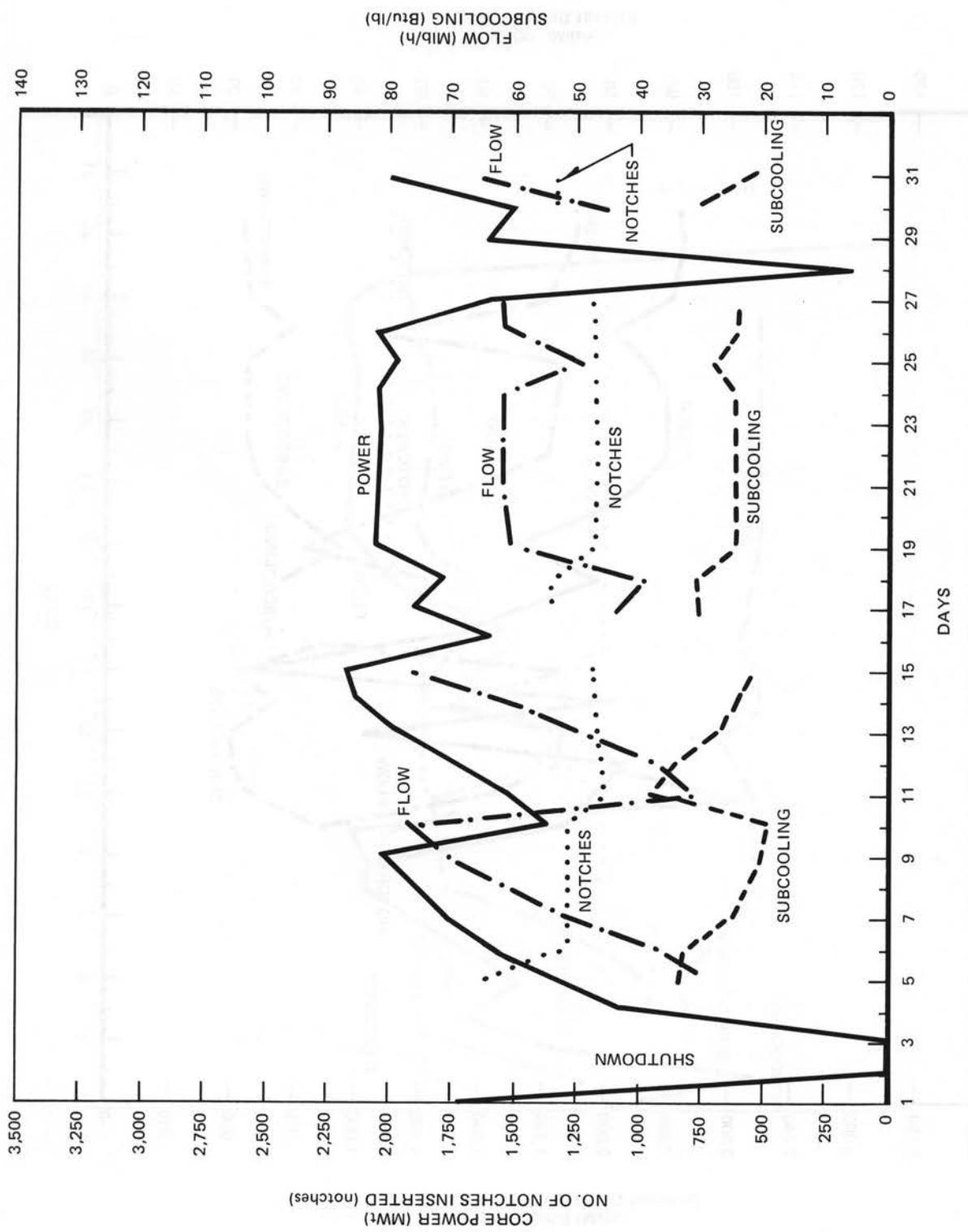


Figure 50. Data Summaries, July 1976

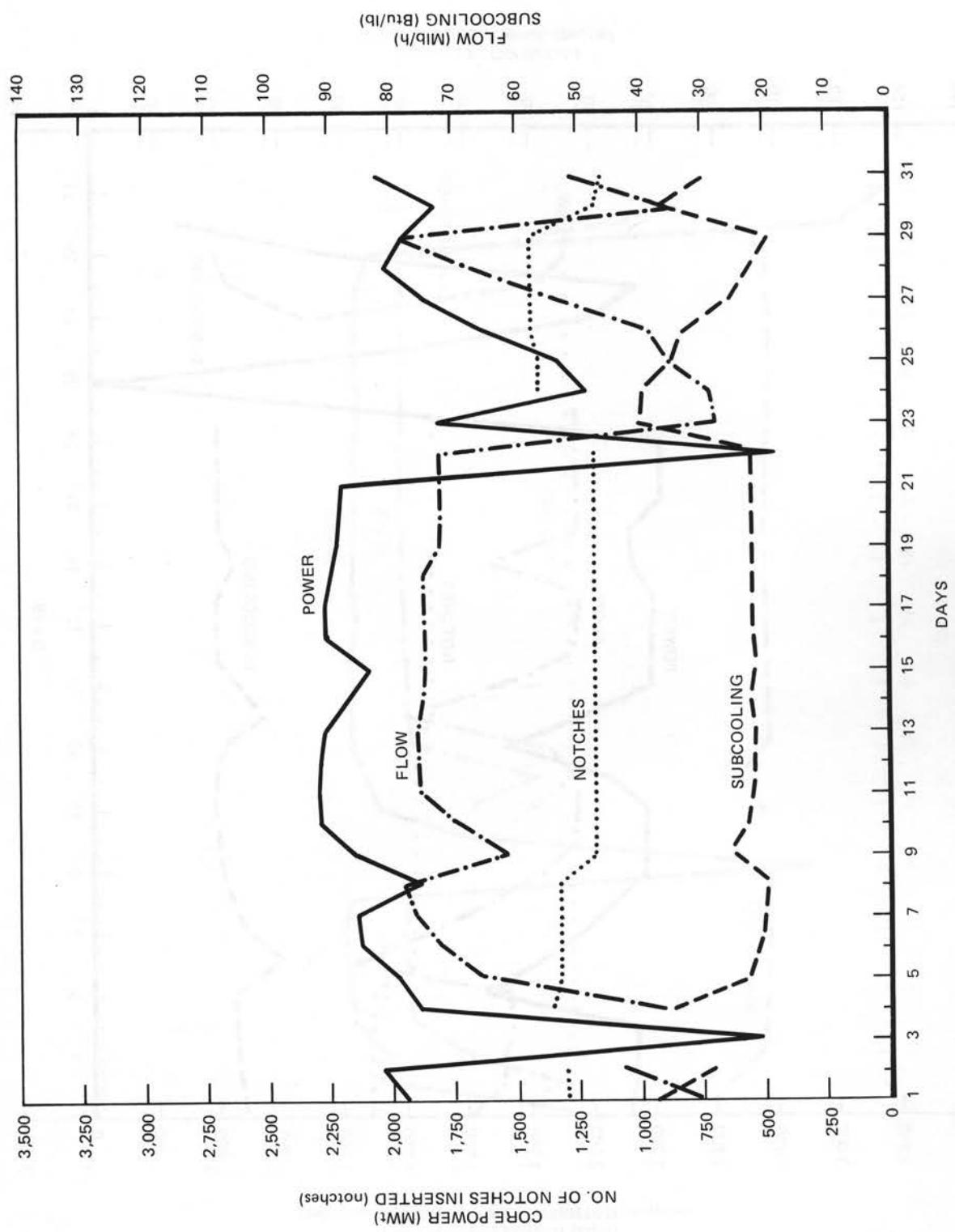


Figure 51. Data Summaries, August 1976

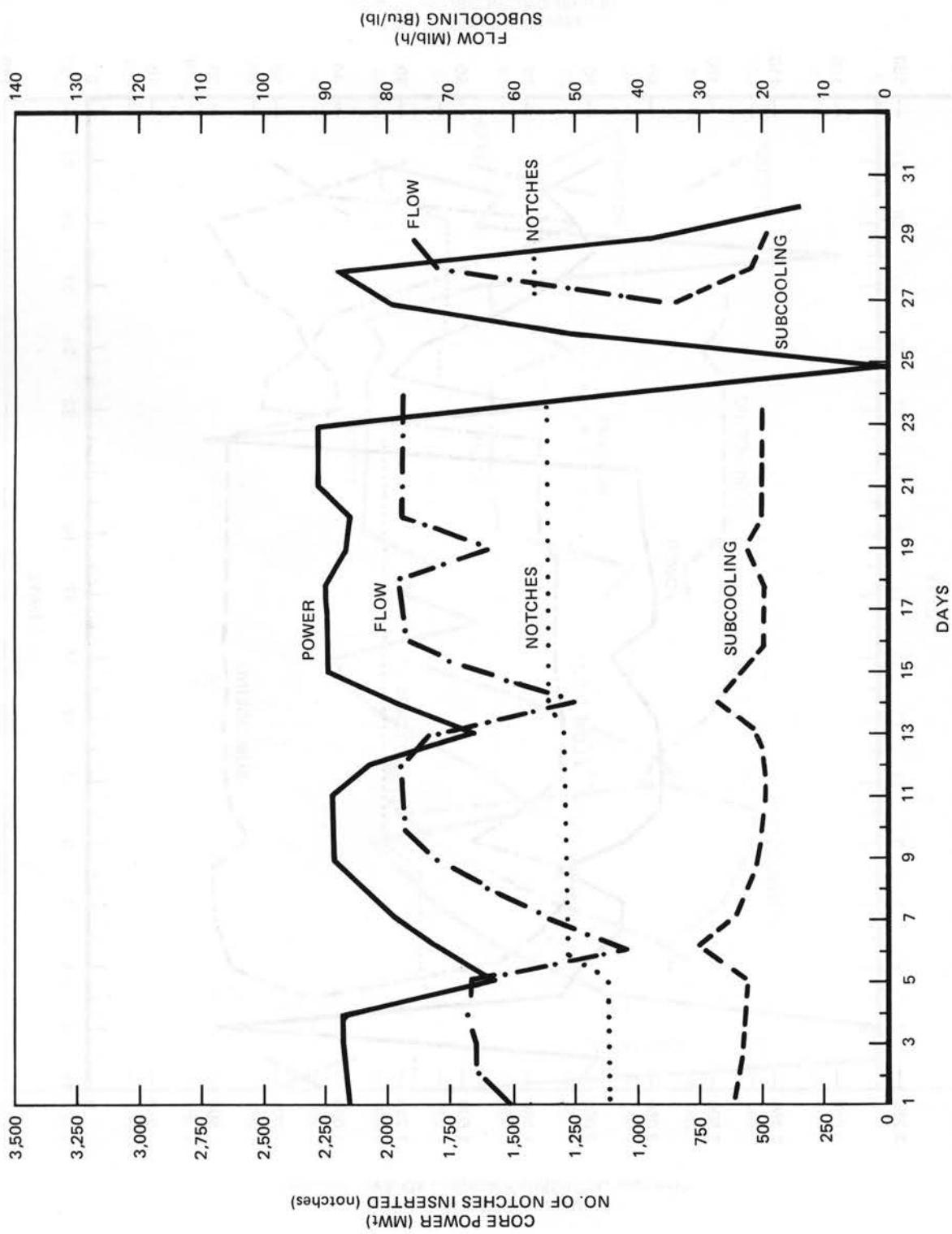


Figure 52. Data Summaries, September 1976

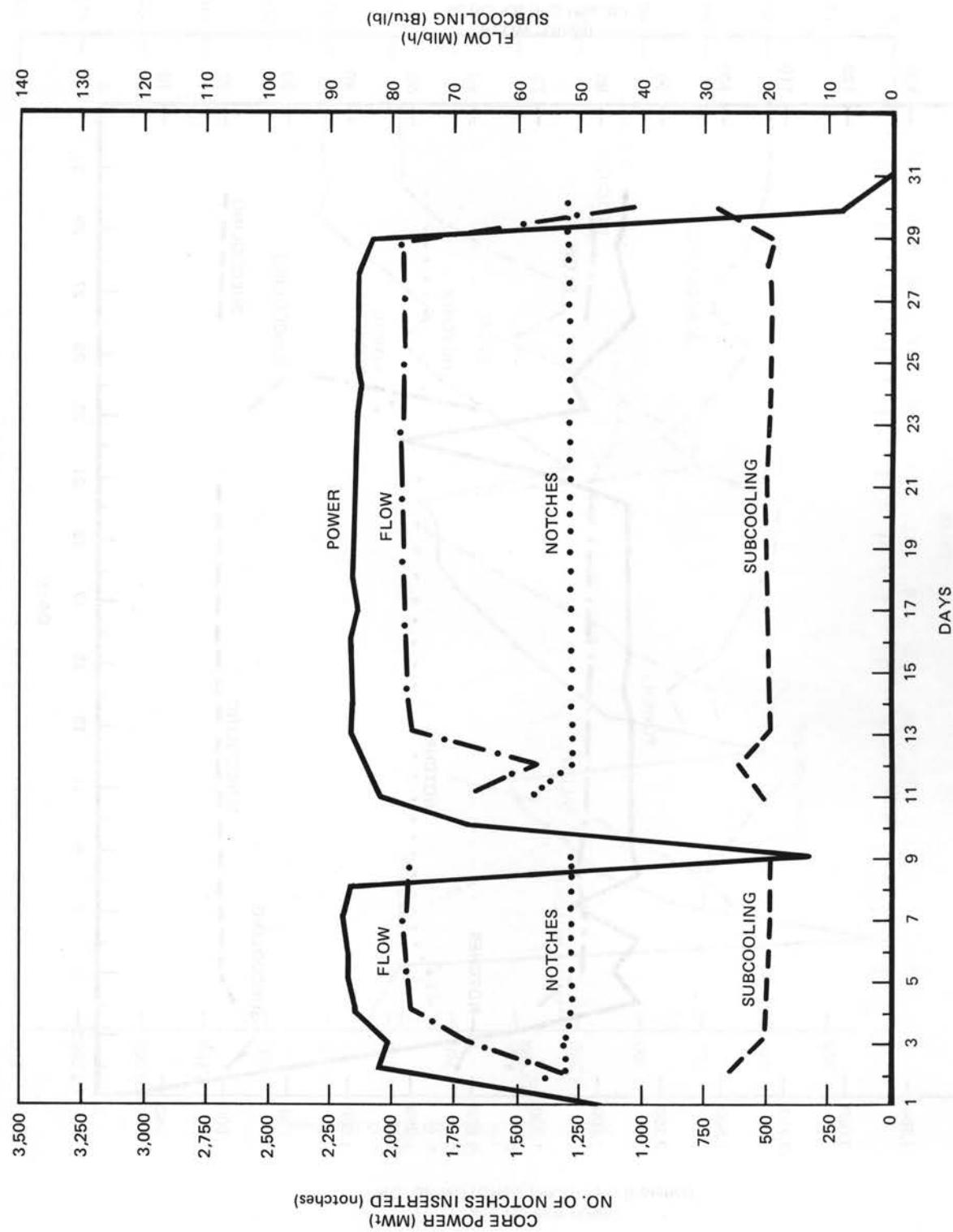


Figure 53. Data Summaries, October 1976

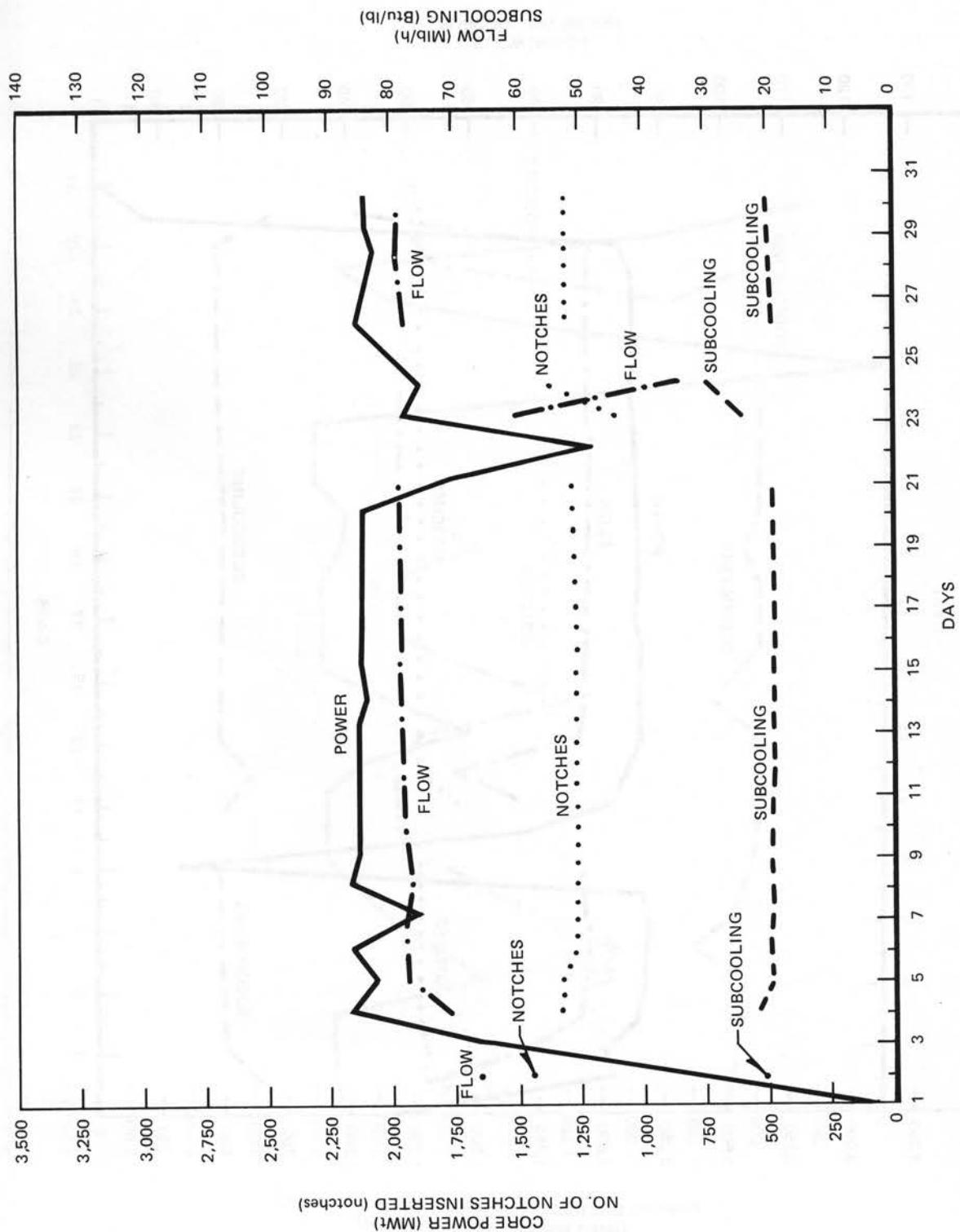


Figure 54. Data Summaries, November 1976

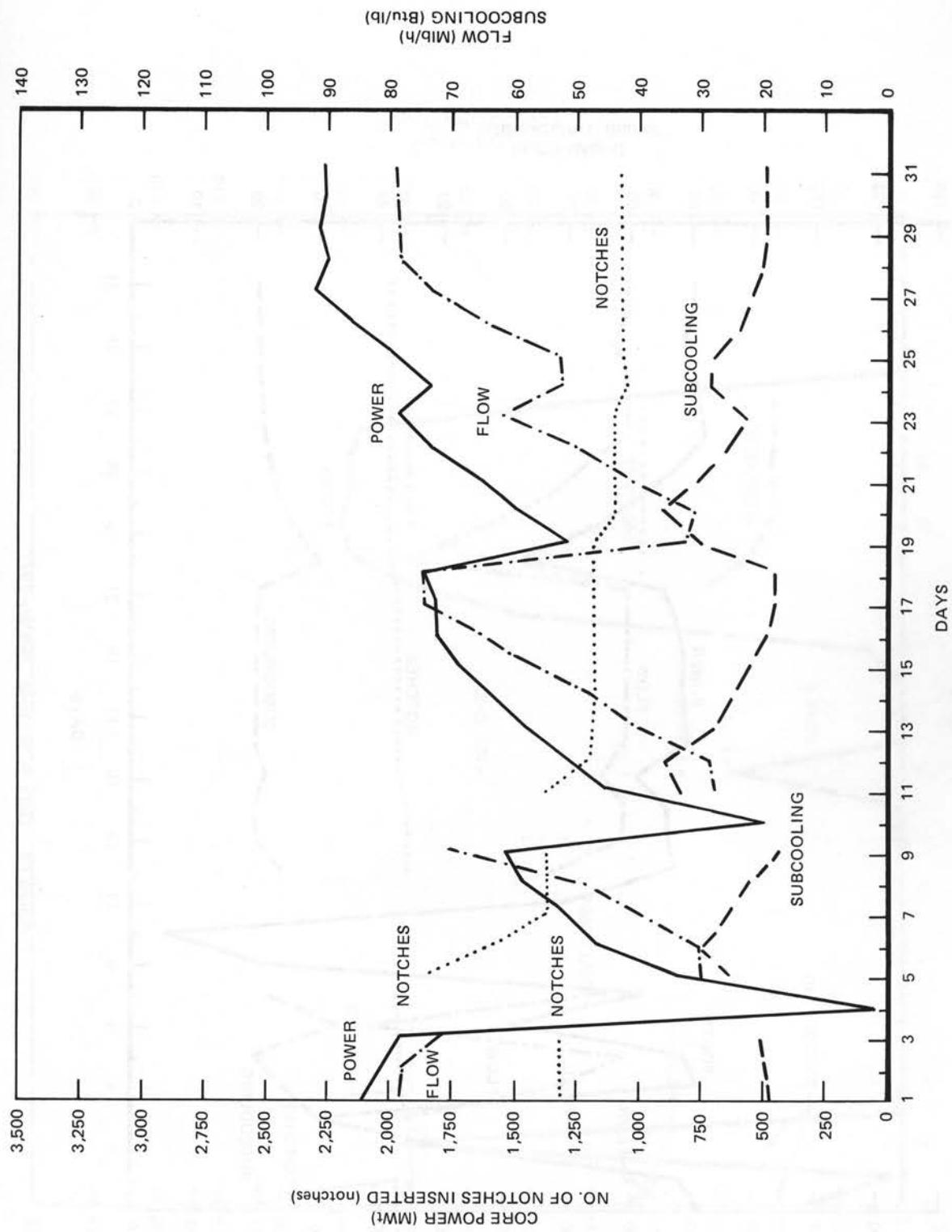


Figure 55. Data Summaries, December 1976

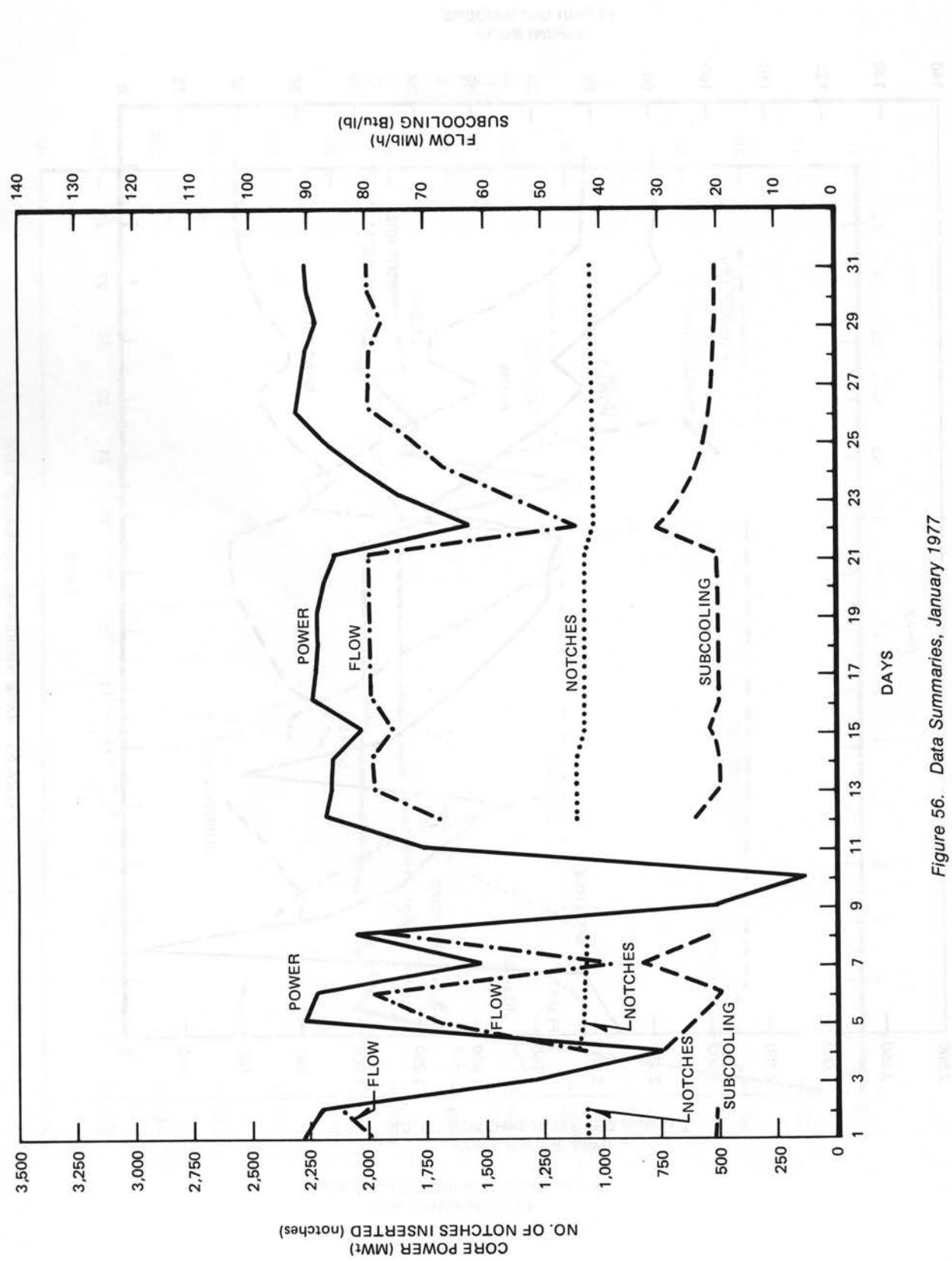


Figure 56. Data Summaries, January 1977

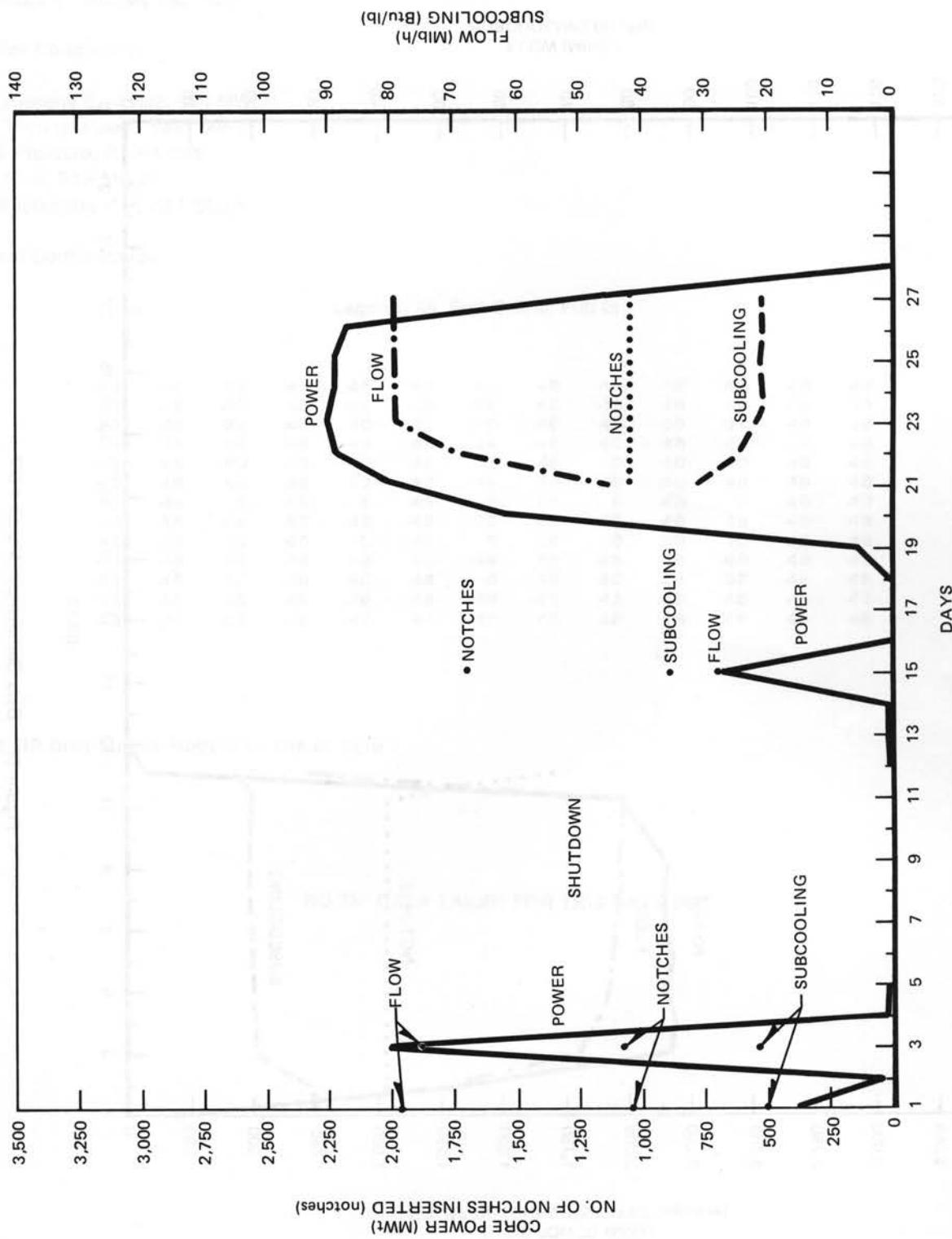


Figure 57. Data Summaries, February 1977

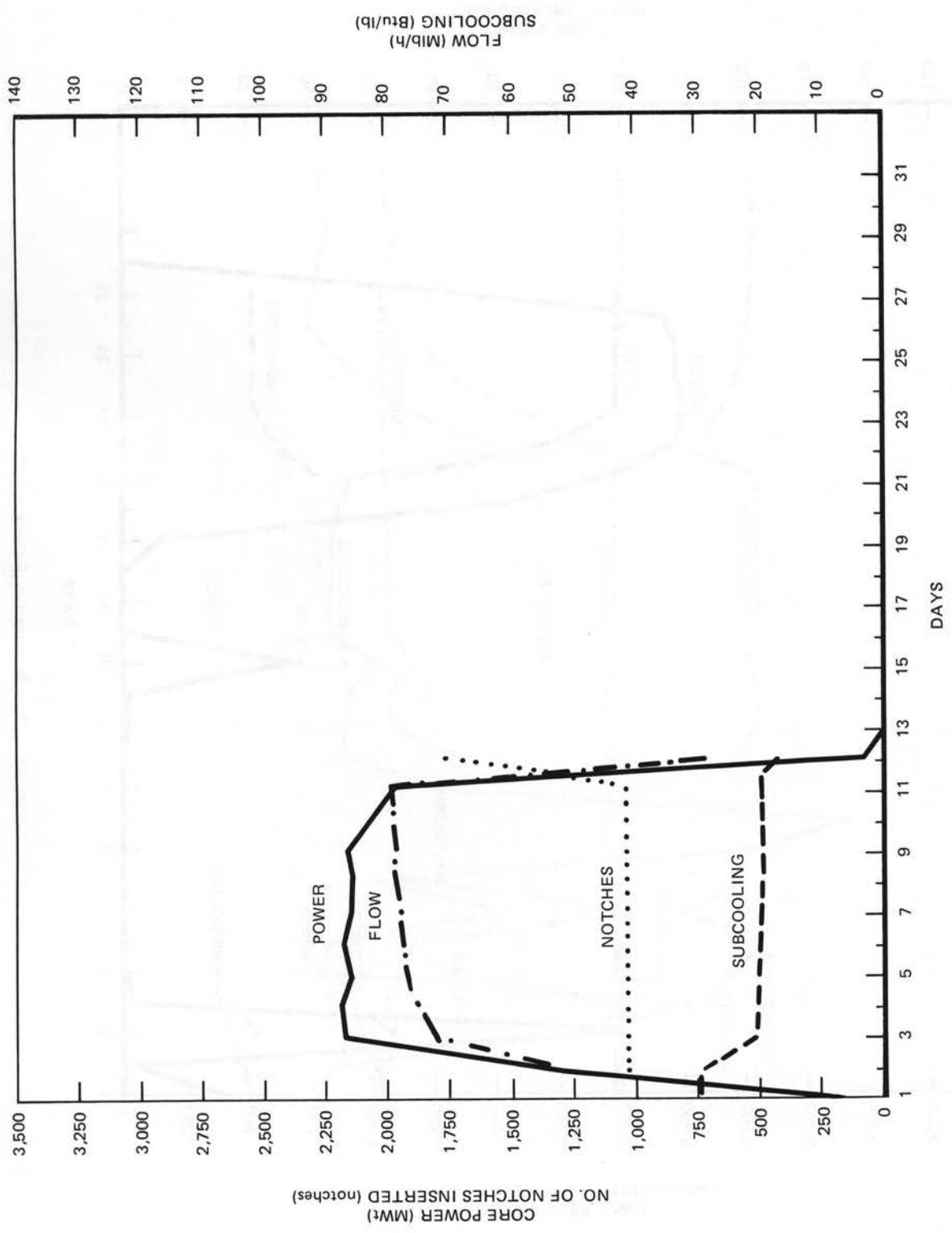


Figure 58. Data Summaries, March 1977

CYCLE 1 DATA

DATASET 1, January 16, 1975

Reactor Conditions

Core Average Exposure, 180 MWd/t
Core Thermal Power, 1451 MWT
Dome Pressure, P, 964 psia
Core Flow, 50.8 Mlb/hr
Inlet Subcooling at P, 23.1 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	40	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	32	48	40	48	0	48	40	48	32	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	0	48	8	48	0	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
40	48	0	48	8	48	0	48	8	48	0	48	40	40
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	0	48	8	48	0	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	32	48	40	48	0	48	40	48	32	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	40	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

NO TIP DATA TAKEN FOR THIS DATA SET

CYCLE 1 DATA

DATASET 2, March 5, 1975

Reactor Conditions

Core Average Exposure, 448 MWd/t
Core Thermal Power, 1826 MWT
Dome Pressure, P, 980 psia
Core Flow, 82.3 Mlb/hr
Inlet Subcooling at P, 19.4 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	6	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	46	48	6	48	44	48	6	48	46	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	6	48	40	48	6	48	40	48	6	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	6	48	40	48	6	48	40	48	6	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	46	48	6	48	44	48	6	48	46	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	6	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

NO TIP DATA TAKEN FOR THIS DATA SET

CYCLE 1 DATA

DATASET 3, March 28, 1975

Reactor Conditions

Core Average Exposure, 637 MWd/t

Core Thermal Power, 1218 MWT

Dome Pressure, P, 959 psia

Core Flow, 34.5 Mlb/hr

Inlet Subcooling at P, 34.2 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	40	48	6	48	40	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	48	6	48	6	48	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	6	48	6	48	6	48	6	48	6	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	6	48	6	48	6	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	40	48	6	48	40	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005100.0134.1155.8163.3163.1152.5138.2130.2118.5108.1101.8 97.0
93.0 88.4 87.5 85.7 81.9 82.4 80.4 74.5 66.1 58.2 41.7 27.2
2805125.8147.4155.6160.4150.1137.5125.1115.6104.2 95.6 92.4 89.6
85.5 83.6 82.0 81.1 76.8 78.9 77.9 72.9 66.7 57.7 38.7 24.6
3605 91.2116.5136.3148.8148.4138.3124.7115.6105.2 96.0 90.9 86.5
82.0 78.3 76.6 75.2 71.5 72.4 68.6 61.7 54.9 46.8 31.4 19.7
1213 99.9131.6155.4175.3187.4184.9172.4163.1148.4136.8129.1125.7
122.5116.6116.0115.4110.5111.2110.5102.5 90.4 79.4 55.3 35.9
2013118.1140.8157.4172.8178.4172.9158.3150.2136.2126.7123.3121.5
119.5118.5116.4116.6113.2117.3117.4109.1 99.6 87.5 59.8 38.9
2813120.8139.3148.6156.2150.2141.6131.0124.1114.7107.6105.0103.2
100.2100.3100.1102.3 99.9104.9106.6104.2101.4 90.4 62.4 40.0
3613116.8136.7154.1175.5182.9175.4163.3153.9138.7128.4124.1120.3
115.9113.5112.9112.2108.1110.8109.4102.0 92.2 80.0 53.3 33.8
4413 88.7115.3136.6158.9168.2163.1152.4143.9129.3120.3114.6111.6
107.4101.4 99.3 97.2 90.8 90.3 87.6 80.6 71.6 62.0 42.8 26.9
0421130.5152.1166.1174.9169.4153.7139.2127.7114.9105.3 99.8 96.1
90.3 87.0 84.9 83.7 80.8 82.1 79.2 72.2 64.2 54.5 36.4 22.7
1221126.5146.4161.6178.2181.8176.8164.3155.4141.5131.4129.0123.9
120.0113.9111.5113.3111.9116.4115.6109.2 99.0 86.4 57.8 37.6
2021111.7129.3136.0141.4135.0125.7115.8110.0100.7 93.9 93.3 94.1
94.1 94.2 94.6 97.4 96.4102.9107.0107.2105.7 98.5 69.9 44.6

2821113.7127.3132.8136.7130.5120.8111.8106.1 97.4 92.4 91.5 91.2
 89.8 89.9 91.6 94.2 94.2101.5105.9105.4104.4 94.5 64.7 41.3
 3621116.8135.9146.2154.5149.7140.1128.2121.8112.9105.8103.0102.7
 100.9 99.5101.1101.3 98.8104.1106.1102.6 99.2 92.1 65.3 42.9
 4421117.2143.0161.4176.8179.8170.7156.6149.7135.0123.4119.6117.2
 114.9110.4109.1107.3102.4104.3103.7 96.7 86.9 77.6 54.1 34.2
 0429133.3151.4161.1167.0158.8144.2129.3120.9108.2 99.4 94.1 91.6
 88.0 85.9 85.0 83.6 80.1 82.2 80.6 74.9 67.7 58.2 39.1 24.6
 1229118.5138.9151.7159.0155.4145.7132.6123.4113.8108.9107.0105.0
 102.4100.0100.6100.1 96.6100.9102.6100.9 97.6 91.7 66.4 43.2
 2029106.3123.2131.0135.6129.6120.1110.5104.7 96.4 90.8 90.4 90.4
 90.4 89.4 90.1 91.4 90.9 95.5100.3100.8 99.7 95.3 68.8 45.7
 2829 98.3118.8128.5133.4129.4120.8110.1105.1 96.3 90.6 89.4 90.3
 91.1 90.0 90.6 93.2 92.6 98.8103.9105.7105.0 99.1 70.9 48.3
 3629111.9127.3133.5139.4133.7125.0116.0109.6102.0 96.6 96.0 96.1
 94.8 94.7 95.1 97.0 96.6102.1106.4105.9104.2 95.5 66.6 42.7
 4429114.1140.0152.7159.8154.7146.8134.1126.9115.5105.5101.5 99.8
 97.7 94.6 94.0 93.8 90.6 93.4 95.1 91.8 86.9 80.7 57.9 37.6
 0437100.3124.7143.8155.9152.9143.9129.9120.7108.8101.5 95.8 92.2
 86.5 81.7 79.2 76.4 70.7 70.3 67.2 61.2 54.6 46.6 31.0 19.4
 1237122.2144.9161.6180.8182.6177.3164.5155.6141.4131.7127.9124.0
 118.7116.5115.8116.3112.7115.6113.8106.6 95.5 82.6 56.3 36.7
 2037109.1131.4143.7152.4147.9139.0128.1120.9110.9103.8100.7 99.4
 97.5 95.3 96.5 97.3 95.4100.4102.4100.9 97.4 91.8 66.9 43.9
 2837 98.4121.5132.3137.7134.4124.5115.5110.6102.8 95.5 93.4 93.3
 93.0 91.0 92.4 93.5 92.3 96.5100.2100.2 97.3 93.3 70.1 46.7
 3637114.4135.9148.5159.3160.8154.6145.5139.5129.6120.3118.0115.4
 110.6107.8105.0104.1100.3104.0105.5102.8 97.6 88.7 62.7 40.9
 4437 66.6107.4141.6156.1177.2181.3174.0161.7150.3136.2125.0121.8
 118.1112.2109.3105.9103.6 99.6100.7 96.2 86.4 77.8 62.6 44.1
 1245 80.2107.6132.5154.3167.0166.1153.6147.8133.9122.8113.6108.2
 101.6 94.4 92.4 89.4 83.9 83.5 82.1 76.5 68.0 60.2 43.1 27.0
 2045129.5146.9158.9174.8176.3166.2151.6141.4127.0116.1113.0111.7
 107.5106.2105.0103.9 99.4100.8 99.2 91.2 82.3 70.0 46.3 30.3
 2845116.6135.8143.5149.6143.0132.0120.1114.1105.2 96.8 93.7 91.4
 88.4 86.4 85.6 85.2 82.3 85.0 85.1 81.6 78.0 72.1 50.9 32.7
 3645103.4127.4145.5165.2174.0171.2157.4148.0134.4124.8120.1115.7
 111.1107.2105.6103.3 97.9 98.7 96.1 88.2 78.0 67.5 46.2 29.6
 4445 51.6 69.5 88.9111.6128.8130.1124.0118.1106.8 97.7 91.9 88.0
 82.8 78.0 75.5 73.3 68.7 68.1 65.1 59.1 51.9 44.3 29.8 19.0

CYCLE 1 DATA

DATASET 4, May 24, 1975

Reactor Conditions

Core Average Exposure, 1163 MWd/t

Core Thermal Power, 2189 MWT

Dome Pressure, P, 997 psia

Core Flow, 68.0 Mlb/hr

Inlet Subcooling at P, 23.9 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	44	48	42	48	12	48	42	48	44	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	42	48	8	48	32	48	8	48	42	48	48	48
48	48	48	48	48	48	44	48	48	48	48	48	48	48
48	48	12	48	32	44	6	44	32	48	12	48	48	48
48	48	48	48	48	48	44	48	48	48	48	48	48	48
48	48	42	48	8	48	32	48	8	48	42	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	44	48	42	48	12	48	42	48	44	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	58.4	94.3	110.9	120.0	119.9	112.4	103.1	99.1	91.6	84.5	81.4	81.0
	78.4	74.0	74.9	75.6	71.7	73.0	72.3	67.2	58.8	51.6	36.1	22.5
2805	57.7	93.6	109.2	115.9	115.2	109.0	98.4	93.2	85.8	78.1	74.8	74.9
	73.6	70.4	72.1	73.2	70.9	73.8	75.9	72.2	63.8	57.4	41.3	26.6
3605	39.5	73.4	96.2	107.3	112.9	107.1	96.3	90.4	83.8	76.8	72.2	71.1
	68.6	64.0	64.6	64.0	61.5	60.1	60.4	56.1	48.7	43.3	32.8	21.8
1213	62.5	107.9	132.7	146.4	149.5	142.6	130.1	122.9	113.9	105.7	99.4	100.9
	99.4	94.6	95.9	97.3	93.3	93.1	94.0	89.4	77.8	68.2	49.1	31.4
2013	64.8	101.5	122.0	138.4	142.1	113.7	126.4	122.6	111.6	111.3	109.6	112.3
	110.8	107.9	110.1	111.3	210.9	311.2	811.3	610.6	4.93.2	81.5	56.2	35.2
2813	57.5	92.9	107.5	116.9	119.1	111.4	010.8	210.8	010.5	010.0	79.5	102.1
	101.5	98.3	102.6	107.0	106.1	114.2	212.2	711.9	310.6	4.94.4	66.9	41.6
3613	63.3	103.2	126.5	142.5	148.6	142.3	312.9	412.2	611.2	610.4	4.99.0	100.3
	98.9	94.5	96.5	99.0	95.0	95.7	97.1	93.4	82.6	73.9	53.7	35.4
4413	61.9	102.2	122.0	133.4	132.9	125.0	011.1	910.7	1.98.6	90.6	87.3	86.8
	83.9	79.3	79.6	79.4	74.3	73.6	73.9	67.6	58.8	51.3	36.3	22.5
0421	72.5	103.6	116.9	128.9	124.3	115.3	104.7	98.7	89.6	83.7	80.7	79.6
	75.8	73.2	73.5	74.3	70.2	72.5	72.9	65.6	57.8	49.7	32.8	20.8
1221	75.8	108.5	126.1	142.9	144.11	136.01	127.9	124.5	116.9	110.61	110.91	110.7
	107.4	103.0	103.7	107.9	106.1	111.2	210.4	3.92.3	79.8	53.1	34.7	
2021	56.4	82.8	93.2	103.8	106.4	105.51	104.4	105.71	104.71	104.11	107.71	12.2
	112.5	112.1	113.4	115.5	112.01	116.4	120.3	116.5	108.0	95.2	65.8	41.9

2821	39.4	65.9	82.2	94.4	102.0	103.4	105.2	114.9	119.2	121.1	124.7	127.7
	128.5	125.0	127.0	129.0	123.2	126.9	128.5	121.8	108.3	96.6	67.7	43.9
3621	66.7	96.9	109.6	119.0	119.0	114.0	107.0	107.0	104.7	101.1	102.7	105.5
	104.5	102.5	102.5	105.8	106.8	103.9	107.3	111.8	210.7	8100.3	90.1	62.1
4421	69.8	106.9	124.6	137.6	139.2	130.3	120.3	115.4	107.4	100.7	98.1	98.0
	95.8	93.2	95.7	97.8	94.0	96.4	98.0	92.6	81.2	71.2	49.9	31.8
0429	72.8	102.4	111.1	119.2	115.7	107.6	96.9	93.7	87.3	80.5	78.6	78.2
	76.4	75.0	76.3	77.5	75.0	78.0	78.9	72.6	64.5	55.1	36.8	22.6
1229	67.0	97.0	110.8	118.8	119.7	115.8	107.0	106.0	210.2	4100.0	101.0	2102.3
	102.1	110.0	110.2	9105.4	4103.8	112.5	120.0	115.2	2103.6	91.0	63.7	41.3
2029	45.7	69.7	83.2	95.2	110.0	8102.0	1103.9	9111.7	7116.6	120.6	125.6	129.0
	127.1	125.8	127.0	127.0	3120.5	123.5	124.4	116.3	104.9	92.3	64.5	42.7
2829	21.4	43.6	65.5	81.3	95.8	101.8	103.0	108.9	9111.7	111.8	113.8	119.5
	122.1	119.3	121.3	120.8	8119.8	116.8	120.4	119.0	110.4	104.6	87.0	61.9
3629	62.4	88.4	97.5	105.6	106.4	103.5	103.5	110.9	112.7	114.7	118.2	122.0
	121.0	118.7	122.2	125.2	1120.9	125.3	127.8	119.8	106.7	91.6	61.4	38.8
4429	66.8	100.7	113.5	120.5	121.9	114.0	106.5	102.6	95.1	88.3	87.2	88.9
	87.9	84.6	86.9	89.8	89.5	97.6	105.1	102.2	91.5	80.6	55.7	34.7
0437	59.6	88.6	9105.3	3116.3	114.6	106.7	96.9	91.6	83.9	78.6	75.4	72.9
	68.9	66.6	66.3	65.3	59.9	60.3	58.6	53.1	47.2	40.4	26.9	16.9
1237	77.7	115.0	133.0	148.0	148.9	139.8	127.8	123.6	9112.9	105.9	104.9	105.6
	101.9	99.9	2101.2	102.9	99.9	3101.9	102.7	96.5	85.1	73.6	50.0	32.5
2037	61.1	91.6	103.6	114.6	115.6	110.6	2105.3	3106.3	3102.6	99.7	100.6	102.3
	102.4	100.7	7102.8	105.6	101.1	105.5	110.5	5110.3	3107.9	101.2	92.0	64.6
2837	54.4	82.4	92.9	100.9	103.9	101.1	400.4	0105.7	108.2	114.8	117.9	117.9
	117.9	114.7	117.1	119.6	115.3	119.4	122.9	116.8	104.4	92.4	65.6	41.4
3637	70.2	103.9	115.6	126.4	127.4	121.2	114.6	112.2	8106.5	101.5	100.6	100.6
	98.3	95.2	96.0	96.8	93.1	96.1	100.4	98.6	91.0	82.2	57.4	36.8
4437	43.7	84.9	115.2	130.9	144.9	142.6	132.9	0121.0	114.4	103.9	95.8	95.9
	93.6	88.9	87.5	87.7	87.1	82.9	84.6	83.3	73.8	65.4	53.5	38.3
1245	56.8	95.7	117.1	133.2	2134.2	1125.9	112.2	2106.7	97.6	89.2	83.9	82.5
	79.1	74.0	74.1	73.7	69.7	69.5	69.0	65.1	56.8	50.4	36.4	23.5
2045	77.7	2108.6	123.6	138.8	1135.3	127.1	116.8	110.2	2100.4	92.7	92.1	92.7
	89.5	89.1	90.4	91.2	87.4	91.2	92.2	84.4	75.0	63.6	42.0	25.6
2845	67.1	94.8	103.8	111.6	109.6	3101.5	93.5	90.3	84.2	79.5	79.1	78.9
	76.8	75.5	78.1	80.2	79.8	88.4	94.1	90.3	81.5	71.5	48.5	29.7
3645	66.2	100.2	117.3	134.0	0136.4	128.4	116.8	111.3	2102.3	93.9	91.1	91.4
	88.4	85.3	86.2	86.8	81.9	82.7	82.8	76.2	66.4	57.8	39.3	24.9
4445	40.0	66.7	85.5	99.0	100.5	94.1	86.3	81.9	74.0	67.9	66.2	64.6
	61.6	58.9	58.4	58.2	54.5	54.3	52.8	47.8	41.6	35.8	24.1	14.7

CYCLE 1 DATA

DATASET 5, July 4, 1975

Reactor Conditions

Core Average Exposure, 1800 MWd/t

Core Thermal Power, 1950 MWT

Dome Pressure, P, 985 psia

Core Flow, 56.8 Mlb/hr

Inlet Subcooling at P, 26.3 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	44	48	44	48	48	48	48	48
48	48	40	48	40	48	10	48	40	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	6	48	20	48	6	48	40	48	48	48
48	44	48	48	48	48	44	48	48	48	48	44	48	48
48	48	8	48	20	44	0	44	20	48	8	48	48	48
48	44	48	48	48	48	44	48	48	48	48	44	48	48
48	48	40	48	6	48	20	48	6	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	40	48	10	48	40	48	40	48	48	48
48	48	48	48	48	44	48	44	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

NO TIP DATA TAKEN FOR THIS DATA SET

CYCLE 1 DATA

DATASET 6, August 26, 1975

Reactor Conditions

Core Average Exposure, 2344 MWd/t

Core Thermal Power, 2331 MWT

Dome Pressure, P, 996 psia

Core Flow 78.8 Mlb/hr

Inlet Subcooling at P₂ 21.1 Btu/lb

Control Configuration

Legend: 48. Full Out: 0. Full In:

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	32	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	44	48	2	48	36	48	2	48	44	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	18	48	12	48	6	48	12	48	18	48	48	48
48	48	48	42	48	48	48	48	48	48	42	48	48	48
48	48	18	48	12	48	6	48	12	48	18	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	44	48	2	48	36	48	2	48	44	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	32	48	48	48	48	48	48	48
48	48	48	48	48	48	49	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	73.8116.8134.5141.6138.3128.3117.6113.7105.7	97.9	93.6	95.6
	87.3 80.2 79.2 77.7 71.2 69.1 66.4 59.2 50.1 43.4	30.1	18.8	
2805	54.1 87.3104.4113.1114.7109.4103.5105.4106.3102.9	99.8	99.9	
	95.5 87.6 86.5 84.7 78.4 75.7 73.9 67.2 57.4 50.3	35.3	22.6	
3605	54.9 99.2127.7135.6136.8127.2112.5101.5 93.3	84.9	78.6	76.2
	72.5 66.4 65.3 63.3 59.9 56.8 55.3 50.6 42.9 37.3	28.1	18.4	
1213	79.6135.4164.4179.1175.3164.5144.5133.5120.5110.3101.2101.4			
	98.3 95.5 91.2 91.4 88.2 86.3 85.7 80.2 68.6 59.6	42.8	27.4	
2013	85.5128.2143.7152.6151.3143.9132.4128.0120.4113.3110.7111.0			
	108.3101.7101.1100.5 93.8 92.2 89.6 80.4 68.9 60.2	42.5	27.4	
2813	67.0112.4134.8144.1149.2148.4144.8147.3144.4138.1131.8131.4			
	127.9118.9119.6118.9118.2109.3107.7100.3 86.7 74.9	54.9	36.3	
3613	85.1133.4154.1161.8158.2146.9129.5121.2110.3100.7 94.1	93.4		
	89.8 83.2 83.4 84.6 80.2 79.2 77.9 72.3 62.4 55.1	39.3	25.9	
4413	77.7124.2148.2158.0153.4140.5122.0114.1101.6 93.0	86.8	86.0	
	82.1 75.9 74.9 75.8 71.8 70.9 69.0 63.0 53.7 42.9	33.6	21.2	
0421	88.7122.8135.1143.4136.8122.5109.0101.1 90.4	82.6	79.7	78.4
	75.6 75.5 77.0 79.6 76.8 79.4 77.1 69.1 59.3 50.1	32.5	20.0	
1221	93.9130.1143.0152.7148.1136.9124.9116.5106.9100.1 99.0	98.6		
	96.6 98.6106.8116.4117.9123.1121.9110.2 96.1 80.3	52.7	32.8	
2021	85.0118.4129.9140.3136.6127.2117.1113.3106.6 99.9101.2102.3			
	100.7 98.9101.4104.2104.4114.0119.4112.7101.4 87.3 58.5	36.5		

2821	66.1102.7119.3128.0130.8126.1117.1115.6109.6104.2101.4102.7
	100.6 95.9 98.4100.9 97.4100.2102.5 97.6 89.5 78.1 59.4 39.1
3621	77.5116.3131.0141.7138.9128.1115.0112.2104.8 97.8 95.6 95.4
	95.4 96.1100.8105.4105.2113.3122.5117.8103.0 89.8 61.6 38.5
4421	78.7119.9135.2141.8138.5127.6113.9108.8100.4 92.5 87.5 87.0
	87.0 86.9 95.9104.8104.4108.2109.4101.7 87.2 75.4 53.4 34.3
0429	87.7120.2130.2137.7132.0119.6106.3 99.3 90.7 83.0 81.5 81.0
	80.0 80.9 85.1 88.5 85.6 87.9 87.0 78.3 68.0 57.0 37.1 22.3
1229	61.8 91.5110.0128.3130.4123.2113.6107.7100.0 94.4 93.9 95.4
	96.0101.2113.6124.3125.6132.4133.3122.7107.2 92.9 63.5 39.6
2029	73.3103.2114.1124.6123.5117.7110.2106.0 98.3 94.6 95.3 96.5
	95.5 94.5 97.8102.4103.4114.6121.5116.1104.2 91.2 62.4 39.0
2829	62.9 97.9113.4124.5126.6122.7114.1111.1105.5100.3 98.0 99.4
	98.4 94.0 98.2103.1101.1104.1108.4106.3 99.3 93.9 70.4 46.1
3629	57.7 87.1106.1124.6127.5121.3112.3108.5101.5 96.2 95.9 97.1
	97.4 98.9104.3112.6115.4128.2137.0130.2113.9 98.2 65.8 41.0
4429	71.7111.1128.4137.4136.0126.8113.6107.7 98.7 86.9 85.4 87.4
	89.1 90.0 99.4111.2112.9119.8111.9 96.8 84.0 59.0 37.9
0437	77.5112.0130.0140.0133.0119.9103.7 97.2 87.3 79.4 75.9 73.3
	69.7 67.9 68.4 67.5 63.0 63.4 60.7 54.3 47.9 40.5 26.5 16.2
1237107.	5154.9171.6180.1169.8154.6137.9129.0117.4106.4104.4102.9
	99.9 97.7100.9104.1100.4103.2102.9 94.0 81.8 68.8 45.4 28.6
2037	79.1116.8129.8140.4139.9134.0122.0120.6112.0104.9101.7103.4
	102.2 96.8 98.9101.0 96.7 98.9 99.3 92.4 81.6 71.4 49.6 31.6
2837	72.1107.4120.9130.6136.4139.6135.4136.7130.5123.2120.3122.1
	118.6112.8112.7113.6108.2108.1107.2 99.6 87.3 76.3 54.4 35.3
3637	84.5123.6136.2144.5141.1133.6121.4116.6107.1100.4 96.7 96.2
	93.4 89.3 90.4 93.2 89.2 91.6 93.0 86.5 75.4 66.6 46.6 30.8
4437	55.0109.5149.5164.3168.6158.6143.7126.7117.0105.3 97.5 91.7
	89.7 84.7 83.7 85.7 85.8 82.5 83.4 81.7 72.4 63.7 52.9 37.4
1245	89.8137.2155.4162.4156.7142.2123.2113.9101.8 91.1 83.8 81.5
	76.3 70.0 69.7 68.9 63.8 62.5 61.3 56.6 48.9 43.3 31.0 19.9
2045115.	2153.6160.5166.8158.4144.8130.4123.8114.0104.4101.8101.9
	97.4 93.0 91.8 90.4 83.6 82.6 79.7 70.9 61.3 51.4 33.7 21.1
2845	85.6120.9128.6136.0132.4125.8118.4121.8119.8115.3114.5114.0
	108.8101.9101.7100.2 92.2 90.8 87.3 78.1 68.2 57.9 39.1 24.6
3645106.	7150.8162.0168.4158.9144.5127.4118.8108.1 97.7 92.8 91.8
	87.6 81.7 81.1 80.6 74.4 73.2 75.9 64.1 54.6 47.0 32.2 20.1
4445	66.3102.3116.1122.1116.4105.8 93.7 86.6 77.9 69.9 66.2 63.9
	60.5 56.5 55.8 55.3 51.4 50.4 48.6 43.4 37.3 32.3 21.8 13.3

CYCLE 1 DATA

DATASET 7, September 25, 1975

Reactor Conditions

Core Average Exposure, 2827 MWd/t

Core Thermal Power, 2098 MWT

Dome Pressure, P, 989 psia

Core Flow, 66.7 Mlb/hr

Inlet Subcooling at P, 24.0 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	28	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	0	48	32	48	0	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	16	48	4	48	0	48	4	48	16	48	48	48
48	48	48	42	48	48	48	48	48	42	48	48	48	48
48	48	16	48	4	48	0	48	4	48	16	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	40	48	0	48	32	48	0	48	40	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	28	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	90.5	5140.8	161.1	1167.7	7161.8	8147.7	128.8	123.0	1112.8	103.9	99.6	97.2
	94.4	85.4	83.5	81.7	73.1	70.8	67.3	59.3	49.9	43.1	29.8	18.9
2805	66.6	6105.7	124.5	132.5	132.3	3121.6	108.3	103.7	97.9	96.5	99.5	102.9
	100.3	93.3	91.9	88.7	80.9	77.7	74.9	67.2	56.6	49.4	34.5	21.6
3605	67.9	121.7	152.6	162.6	163.7	147.5	128.0	113.8	103.8	92.9	85.1	82.9
	77.7	71.0	68.8	66.7	62.3	58.0	55.7	50.2	42.1	36.5	27.1	17.8
1213	87.7	144.9	173.0	187.9	198.7	190.8	170.2	215.7	9141.5	126.4	115.4	111.5
	106.6	97.5	95.3	93.9	88.5	84.8	83.6	76.5	64.6	55.3	40.0	25.5
2013	104.7	156.8	175.0	182.0	187.6	1916.3	8147.5	140.2	2132.8	125.2	2121.9	121.1
	116.3	108.7	106.7	4103.9	94.0	91.3	86.4	75.9	63.2	53.8	36.8	23.3
2813	83.4	139.9	164.5	171.8	171.8	160.3	148.2	2147.3	3149.4	146.9	144.0	145.3
	140.2	130.1	128.5	125.9	117.9	2110.5	106.2	97.2	81.1	69.4	50.4	32.6
3613	101.4	159.3	182.3	191.1	188.9	173.5	151.8	139.1	126.8	114.4	104.9	102.2
	97.1	88.7	87.8	86.6	80.2	77.0	75.4	68.3	57.9	50.3	35.3	22.6
4413	81.7	127.6	149.3	166.3	172.2	163.6	143.9	134.9	120.7	107.8	99.0	95.6
	89.5	82.0	80.2	78.3	72.0	69.9	68.0	61.4	51.7	45.3	31.3	19.4
0421	91.6	138.0	155.6	164.9	159.0	144.0	127.5	116.0	103.2	93.0	85.7	82.1
	78.0	73.1	73.9	75.1	71.6	72.9	71.6	65.3	56.7	48.3	32.9	20.0
1221	80.7	136.8	165.5	180.5	184.5	173.3	156.4	144.8	132.8	121.6	111.9	109.2
	104.8	97.2	98.1	103.8	8106.8	108.7	109.4	102.2	86.9	76.3	55.5	35.9
2021	92.1	138.9	157.2	167.8	165.4	153.1	137.1	131.4	121.6	111.9	108.2	108.2
	105.2	2100.5	99.2	97.4	91.2	89.2	86.2	77.8	67.3	59.8	42.2	27.8

2821	84.1129.	8146.7156.	2155.5145.	5133.4129.	0121.9115.	3111.5110.2						
	105.3	98.4	97.0	95.7	88.0	86.5	83.5	75.3	63.7	55.1	37.6	24.0
3621	93.5138.	2156.2168.	1164.3151.	2134.7128.	3117.1107.	9103.2101.6						
	98.2	92.9	94.2	94.4	89.4	90.0	88.4	80.1	69.8	62.3	44.1	28.2
4421	91.5139.	3159.4170.	1167.7154.	3136.4127.	5115.9104.5	97.0 94.3						
	90.2	86.5	90.2	95.9	95.9	99.2100.0	92.4	78.4	68.3	47.6	30.3	
0429	83.1130.	4148.9159.	0158.2146.	1126.5115.	5104.5	93.5	86.5	83.3				
	80.0	76.4	79.1	80.7	78.3	79.4	80.0	74.4	64.7	56.4	40.6	25.2
1229	71.9110.	2134.0156.	1160.7152.	0135.2127.	3116.5107.	6103.2101.0						
	98.5	96.1101.	2108.9109.	8114.8113.	9101.8	89.9	77.4	52.2	32.8			
2029	79.9123.	1142.4153.	3155.0145.	2132.3126.	4117.4108.	5105.0103.9						
	99.7	93.3	92.7	91.4	84.8	83.5	81.3	73.9	65.4	59.4	43.7	28.3
2829	79.9123.	8141.3153.	8154.7146.	6134.2129.	0119.9111.	4106.4106.1						
	102.1	94.9	94.2	92.5	85.9	83.0	80.9	74.0	64.0	55.6	40.1	25.9
3629	71.4108.	4132.1153.	2155.1145.	9132.7126.	1116.4107.	1103.2101.3						
	98.1	94.7	95.0	97.1	92.7	94.3	93.4	84.9	74.2	65.6	45.3	29.0
4429	89.9138.	7157.9168.	8166.7153.	8135.4125.	7111.6	99.6	92.5	92.2				
	90.8	86.5	90.8	98.0100.	3105.5106.	9100.7	86.8	75.5	52.8	33.5		
0437	76.4120.	5141.9153.	9152.7140.	2123.3112.	8101.6	90.8	83.7	79.4				
	73.6	69.1	68.3	66.9	61.4	60.6	59.0	52.8	46.3	39.7	26.8	16.2
1237	97.5151.	1177.2196.	0199.4188.	9168.8157.	0140.5127.	1118.7115.6						
	108.7102.	1102.8103.	898.3	97.5	95.4	87.0	74.3	63.4	43.5	27.3		
2037	98.9144.	6160.8170.	9165.4153.	8140.0135.	5125.1117.	3114.1112.1						
	106.9	99.9	99.7	98.6	90.6	88.1	85.2	77.1	66.1	56.4	38.5	23.8
2837	89.1131.	9144.5152.	8151.4145.	4136.5139.	8138.5133.	8132.1131.8						
	126.6118.	1116.0114.	3104.4100.2	96.4	86.5	73.2	63.1	43.9	28.3			
3637100.	2148.0162.	3173.6171.	5160.5144.	7139.3125.	6116.1109.	1106.8						
	100.5	93.3	92.1	91.0	84.3	83.4	81.5	73.7	62.7	54.3	37.3	23.8
4437	58.5114.	3156.1173.	8190.8186.	9169.8154.	1141.2124.	3109.1103.6						
	97.5	90.1	86.2	85.7	84.6	78.9	79.4	77.2	67.6	58.7	48.5	33.8
1245102.	2158.0177.	4185.3181.	0163.8140.	6128.2114.	9101.4	92.0	88.5					
	81.6	73.9	71.6	69.5	63.7	61.2	59.7	54.2	46.4	40.7	28.6	18.7
2045141.	2186.2193.	3196.4182.	7163.9144.	9136.9122.	4111.2110.	2110.0						
	104.4	98.9	96.6	93.8	85.9	83.6	78.8	69.0	59.0	49.1	31.8	20.1
2845105.	2144.7153.	0159.9149.	2137.2123.	0120.0114.	6113.7117.	8119.0						
	114.3108.	7107.0104.	8.94.6	91.5	87.2	76.3	65.5	55.4	37.4	23.5		
3645127.	8179.6190.	2194.6185.	4166.7143.	9133.8120.	6108.2102.1	99.1						
	93.0	86.4	84.3	82.3	74.8	72.4	69.2	61.3	52.3	44.5	30.0	19.1
4445	74.1113.	1130.1140.	5135.4122.	3108.6	99.6	88.3	79.0	73.7	70.0			
	65.2	60.5	58.4	56.4	51.4	50.4	47.7	42.0	36.2	30.9	20.7	12.4

CYCLE 1 DATA

DATASET 8, October 24, 1975

Reactor Conditions

Core Average Exposure, 3308 MWd/t

Core Thermal Power, 2091 MWT

Dome Pressure, P, 988 psia

Core Flow, 60.9 Mlb/hr

Inlet Subcooling at P, 25.8 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	38	48	18	48	38	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	38	48	2	48	32	48	2	48	38	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	14	48	10	48	6	48	10	48	14	48	48	48
48	48	48	42	48	48	48	48	48	42	48	48	48	48
48	48	14	48	10	48	6	48	10	48	14	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	38	48	2	48	32	48	2	48	38	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	38	48	18	48	38	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	48.7	80.4	99.7	115.9	128.0	131.3	124.9	121.7	110.3	99.2	91.9	87.8	
	82.3	76.1	75.4	74.5	69.3	67.7	65.3	58.3	49.5	43.3	30.2	19.2	
2805	48.4	79.2	98.0	111.2	2115.7	111.2	2102.0	97.5	88.6	81.0	75.2	73.4	
	69.3	67.1	70.7	74.7	72.9	73.6	72.8	65.1	56.8	50.0	35.0	22.1	
3605	35.9	67.0	90.9	107.5	122.5	1126.8	120.2	2112.4	103.5	93.0	83.7	79.5	
	73.8	66.5	64.8	62.6	58.2	55.1	53.7	48.8	41.7	36.1	27.2	18.0	
1213	76.7	126.5	151.6	164.8	173.0	170.9	157.1	146.4	131.7	118.7	107.7	104.9	
	97.9	89.4	87.1	86.4	81.3	79.2	77.4	71.4	61.0	52.5	37.7	24.1	
2013	87.9	134.4	153.7	165.4	164.0	154.0	134.0	113.3	9124.5	5115.9	1111.8	109.6	
	104.3	98.0	96.8	95.6	89.0	87.1	83.5	74.2	62.7	54.7	38.4	24.7	
2813	72.9	124.0	149.8	158.8	160.7	151.1	143.9	139.6	138.2	133.6	127.0	126.6	
	121.2	2112.3	112.7	7112.9	1107.1	1103.5	102.6	94.5	80.7	70.0	51.7	34.0	
3613	84.1	135.2	159.0	169.0	170.1	159.3	159.7	141.2	132.2	118.2	105.3	97.5	93.8
	88.0	80.2	79.7	79.2	73.6	71.8	70.3	64.8	55.6	48.7	35.1	23.4	
4413	72.8	113.7	132.7	145.2	149.7	149.8	145.8	133.9	125.9	112.3	100.5	91.8	88.0
	82.0	74.5	73.0	71.4	64.9	63.8	61.9	56.1	47.8	42.0	29.3	18.2	
0421	91.6	137.5	154.5	162.0	155.0	1410.1	1121.4	110.4	97.0	85.6	78.7	74.4	
	69.6	64.7	64.8	65.8	63.5	65.1	64.6	58.4	51.1	43.5	28.7	17.6	
1221	90.7	139.3	159.3	172.3	170.6	159.6	141.7	131.8	118.7	107.0	101.1	97.8	
	91.5	85.2	85.1	89.3	92.4	99.4	101.2	94.1	82.7	70.9	48.1	30.5	
2021	87.4	134.5	154.4	163.7	161.0	147.0	131.2	123.2	113.0	103.4	98.4	98.3	
	95.4	90.9	91.3	92.3	88.4	91.4	95.3	93.2	84.7	74.9	52.1	33.3	

2821	82.0126.1143.4151.3149.9139.7126.7120.8112.8105.0100.8	98.9
	94.5 89.6 89.2 89.8 84.9 86.1 86.2 82.0 74.8 69.4 50.0	33.2
3621	90.5133.9149.8161.0156.7143.2126.0118.4107.9	98.4 93.6 91.4
	87.5 83.4 84.1 85.6 82.9 87.3 92.2 89.6 80.9 71.8 49.6	32.0
4421	88.8134.2151.1160.5156.9142.9125.9118.5107.3	96.4 88.6 86.0
	80.8 75.5 77.0 80.1 80.3 85.1 88.1 82.8 72.4 63.4 44.8	28.8
0429101	8140.5153.7161.8152.7134.7115.3107.2	94.3 82.4 78.2 74.6
	69.3 68.0 68.6 70.4 68.1 70.8 70.2 63.9 55.9 46.4 29.9	18.5
1229	62.7104.5131.6152.1158.9149.7131.8122.1109.2100.2	94.3 91.0
	86.6 83.3 86.1 90.3 92.5101.2106.4101.1 90.2 80.3 57.1	36.4
2029	76.6119.6140.0150.2149.5139.8124.5116.3106.3	98.7 94.4 92.3
	88.5 84.3 84.7 85.2 82.4 86.6 92.1 91.7 84.9 77.5 55.7	35.6
2829	82.2125.2141.6152.2150.9141.6128.0121.3111.4101.7	97.3 96.4
	92.7 87.6 87.4 88.4 85.0 86.2 88.7 86.5 80.6 75.5 55.4	36.6
3629	70.9107.5129.1149.8149.3138.8123.5115.8105.9	96.5 93.0 90.9
	87.0 83.7 85.3 88.2 87.6 95.1101.5 99.2 89.9 79.2 53.0	34.1
4429	86.8133.9153.4162.2158.7146.2128.7116.8103.5	89.4 83.2 82.7
	79.1 74.8 76.3 80.3 82.4 89.3 94.7 90.8 80.0 70.3 49.2	31.7
0437	70.7113.2134.2149.5145.9133.2116.4107.5	96.2 85.7 78.5 73.7
	67.5 62.3 61.8 59.9 55.1 54.9 52.9 47.9 42.0 36.3 24.2	14.7
1237	76.8129.9158.1172.2180.6176.0160.0150.1135.6122.0110.6107.6	
	101.2 93.4 93.1 93.6 90.0 89.8 90.4 85.0 73.9 64.3 46.6	30.3
2037	93.1137.2154.2163.5156.8144.8131.4126.2116.5108.0103.0101.7	
	96.3 90.5 90.7 90.6 86.0 86.0 85.5 79.3 69.9 61.5 43.6	28.5
2837	83.8124.4137.5145.2143.5136.5128.8128.3126.9121.5118.6117.2	
	113.2105.6104.2103.2 96.7 95.5 94.2 86.3 75.6 66.7 47.6	31.4
3637	93.1137.0152.5162.0160.5150.6135.6129.9118.0107.2101.0	97.9
	91.5 85.1 83.9 83.1 78.8 79.4 79.4 73.8 64.5 56.9 40.0	26.5
4437	55.0106.8143.7157.5171.0169.8158.1143.1131.0115.7103.1	95.7
	89.8 81.9 78.6 76.5 75.6 71.1 72.2 70.1 61.7 54.7 45.1	31.8
1245	82.9129.5151.5160.7159.9149.5131.8121.6109.1	96.8 87.0 82.6
	76.1 68.7 66.5 64.9 59.2 57.7 56.1 51.4 44.4 39.2 28.4	19.1
2045	92.0127.6141.7157.0158.5153.8141.6132.7118.2106.8101.3	98.4
	93.1 89.5 88.3 86.8 81.2 80.4 76.8 67.3 58.2 49.1 32.6	21.3
2845	83.3117.9130.0139.6136.1128.2116.8112.4103.5	94.8 92.2 89.4
	85.2 83.1 86.5 89.9 85.4 86.1 83.6 74.2 64.1 55.2 37.6	24.4
3645	82.7121.8138.2152.2157.1152.8140.1133.7118.7105.5	98.8 94.2
	87.3 80.6 79.2 76.9 70.7 69.2 66.9 59.3 50.8 44.1 30.4	20.0
4445	65.1 99.1114.3125.1122.7114.3101.9 94.2 83.8 75.0 70.4	66.1
	60.8 55.6 54.0 52.1 47.5 46.9 44.4 39.7 34.3 29.3 20.1	12.9

CYCLE 1 DATA

DATASET 9, January 13, 1976

Reactor Conditions

Core Average Exposure, 3772 MWd/t

Core Thermal Power, 1947 MWT

Dome Pressure, P, 995 psia

Core Flow, 64.3 Mlb/hr

Inlet Subcooling at P, 23.3 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	30	48	12	48	30	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	30	48	0	48	16	48	0	48	30	48	48	48	48	48
48	48	48	36	48	48	48	48	48	36	48	48	48	48	48	48
48	48	14	48	8	48	8	48	8	48	14	48	48	48	48	48
48	48	48	42	48	36	48	36	48	42	48	48	48	48	48	48
48	48	14	48	8	48	8	48	8	48	14	48	48	48	48	48
48	48	48	36	48	48	48	48	48	36	48	48	48	48	48	48
48	48	30	48	0	48	16	48	0	48	30	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	30	48	12	48	30	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

20	5	28.2	45.8	56.0	62.8	63.2	60.2	55.3	54.3	52.1	51.0	49.8	48.2		
		44.9	40.6	39.6	38.4	35.0	34.3	33.6	30.5	26.1	23.1	16.4	10.1		
28	5	27.6	45.2	55.1	61.4	62.9	59.0	53.8	51.0	46.6	42.5	40.0	38.2		
		36.0	33.2	32.7	32.3	30.5	32.1	34.0	32.4	28.8	25.9	18.4	11.8		
36	5	19.5	35.9	47.4	53.9	56.9	54.2	49.2	47.3	46.0	45.8	45.0	44.0		
		41.4	37.2	35.7	34.0	31.1	29.6	28.6	25.9	21.8	19.2	14.5	9.2		
1213		39.3	64.7	79.0	85.3	86.8	79.6	70.9	68.3	65.3	63.1	60.9	60.0		
		55.8	49.7	48.4	47.0	43.0	41.2	40.1	36.5	30.6	26.7	19.4	12.5		
2013		48.8	74.2	84.5	90.6	86.8	79.4	69.6	65.6	59.9	54.7	51.6	49.7		
		46.7	42.9	42.1	42.2	38.8	38.8	37.8	34.1	29.3	25.5	18.1	11.5		
2813		42.1	71.1	86.6	92.3	92.6	84.4	74.6	69.0	63.5	57.6	52.7	51.4		
		48.6	43.9	44.2	46.2	46.7	47.3	48.3	45.1	38.9	34.3	25.8	17.0		
3613		42.5	68.3	81.3	87.8	86.5	79.0	70.3	66.2	61.9	56.8	53.8	52.5		
		48.7	43.2	42.2	41.5	38.2	37.1	36.0	32.8	27.9	24.8	17.9	11.9		
4413		37.8	61.1	73.0	79.1	78.0	72.8	64.7	62.8	60.8	59.1	57.6	56.0		
		51.9	46.8	45.0	43.2	38.7	37.0	35.5	31.9	26.8	23.3	16.5	10.4		
421		51.5	78.6	91.1	97.0	92.9	81.6	69.0	63.0	55.8	49.1	44.8	42.2		
		38.7	35.3	34.8	34.5	32.0	32.3	31.6	28.5	24.8	21.5	15.0	9.3		
1221		32.5	53.5	66.6	77.5	82.6	82.9	80.6	78.7	72.6	66.6	63.0	60.1		
		54.5	48.7	47.4	48.2	47.4	49.6	49.2	45.1	39.4	34.2	24.1	15.2		
2021		37.4	60.3	73.2	81.6	83.7	79.5	72.3	69.6	64.2	57.8	53.6	52.5		
		49.4	44.7	44.1	43.1	40.4	41.5	42.4	41.2	38.1	35.2	26.0	16.6		

2821	39.4	61.7	72.8	80.1	81.4	77.7	70.4	67.0	61.8	56.3	52.5	50.5
	47.1	43.6	42.9	43.2	40.9	41.8	42.4	41.3	38.3	35.9	26.5	17.7
3621	31.1	48.2	57.7	67.2	71.0	70.9	69.4	68.5	62.2	56.1	53.2	50.8
	46.4	42.3	42.1	41.2	38.0	38.8	39.6	38.0	35.1	32.4	23.2	15.3
4421	44.2	70.0	82.3	88.2	86.6	78.5	69.0	63.8	57.4	51.7	48.6	46.9
	43.4	38.8	38.4	38.7	37.4	39.3	40.5	37.6	32.7	29.4	21.5	14.2
429	58.5	84.2	92.1	98.0	91.1	80.3	69.3	62.1	54.0	46.6	43.4	41.3
	37.4	35.0	35.2	35.3	33.1	34.0	33.7	30.2	26.5	22.5	14.9	9.1
1229	28.3	48.2	63.2	76.8	83.3	80.8	74.1	70.0	63.6	57.2	52.4	50.2
	46.5	42.4	42.9	43.6	43.3	46.5	48.4	45.8	40.5	36.5	27.0	17.7
2029	24.1	40.1	50.9	59.5	66.6	69.6	70.0	71.2	66.6	61.5	57.6	54.8
	51.2	46.7	45.4	44.6	42.3	42.3	43.9	43.4	40.4	38.0	29.6	20.3
2629	28.4	43.3	51.5	60.3	66.9	70.4	71.8	71.8	65.8	60.0	57.1	53.9
	49.2	45.1	44.6	43.9	40.7	42.1	43.3	42.1	40.2	37.7	27.2	17.6
3629	30.3	47.9	61.4	75.5	79.8	77.8	71.9	69.3	63.5	57.7	54.2	51.5
	47.4	44.0	43.5	43.8	41.6	43.3	44.0	42.5	39.4	35.7	24.8	16.1
4429	49.3	78.3	91.8	99.5	98.4	89.3	77.7	72.4	63.4	54.9	49.8	48.3
	44.8	40.6	40.5	41.9	41.2	43.6	45.8	43.0	37.1	32.8	23.7	15.4
437	37.5	61.5	75.3	81.4	80.7	74.1	64.6	59.7	54.5	50.0	46.6	44.3
	41.0	37.3	36.5	34.8	31.5	30.7	29.4	26.2	22.7	19.6	13.4	8.2
1237	27.4	48.4	62.6	71.2	76.6	75.8	73.1	74.3	72.2	69.9	66.0	64.2
	60.3	53.7	51.8	50.6	47.3	45.9	45.7	42.4	36.1	31.1	23.5	15.2
2037	39.7	65.2	79.0	87.0	87.3	81.6	72.2	68.9	62.4	56.3	52.2	51.0
	47.7	42.9	42.1	42.3	40.3	39.5	40.2	38.0	33.3	30.4	23.1	15.7
2837	47.5	68.8	76.3	82.1	79.8	72.9	64.7	61.0	55.6	49.9	47.8	46.2
	43.0	40.2	41.3	43.4	42.3	44.2	44.3	40.7	36.2	32.1	23.3	15.1
3637	33.9	52.3	61.3	68.9	71.5	71.7	70.7	70.2	64.8	59.5	56.1	54.0
	49.3	44.5	43.2	41.9	38.3	38.4	38.2	34.8	30.5	27.1	19.3	12.8
4437	27.3	53.2	73.5	80.3	84.8	79.2	71.1	65.1	63.4	60.1	56.0	54.8
	50.7	44.8	42.2	40.4	39.1	35.5	35.8	34.2	29.8	26.2	22.0	16.3
1245	48.4	73.9	85.0	89.9	87.0	78.2	67.8	63.6	59.1	53.5	49.6	47.8
	43.7	39.7	38.2	36.8	32.8	31.7	30.4	27.2	23.4	20.5	14.4	9.4
2045	41.6	67.4	81.2	88.3	89.2	82.3	72.7	68.5	64.5	61.8	59.8	59.6
	56.3	51.1	50.2	48.8	45.4	44.1	43.3	39.7	33.8	29.5	21.5	14.0
2845	37.3	61.5	74.5	79.8	80.0	73.9	64.8	60.9	56.9	51.7	48.3	47.0
	44.8	40.8	40.4	40.3	39.0	39.8	42.2	41.2	36.0	32.3	24.7	16.2
3645	40.2	62.6	73.4	78.7	77.2	70.8	62.5	60.1	57.8	55.9	54.4	52.8
	49.3	44.5	43.2	42.2	38.3	37.1	35.6	31.8	26.9	22.0	16.6	10.8
4445	30.6	51.3	63.2	67.9	68.0	63.3	55.2	52.0	47.6	43.9	41.0	39.1
	36.5	33.1	31.9	30.7	27.9	26.4	25.0	22.6	19.2	16.9	12.4	8.0

CYCLE 1 DATA

DATASET 10, January 25, 1976

Reactor Conditions

Core Average Exposure, 3919 MWd/t

Core Thermal Power, 1853 MWT

Dome Pressure, P, 991 psia

Core Flow, 78.5 Mlb/hr

Inlet Subcooling at P, 18.1 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	30	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	34	48	16	48	6	48	16	48	34	48	48	48
48	48	48	0	48	48	48	48	48	0	48	48	48	48
48	48	18	48	0	48	12	48	0	48	20	48	48	48
48	48	48	48	48	44	48	44	48	48	48	48	48	48
30	48	8	48	14	48	0	48	14	48	8	48	30	
48	48	48	48	48	44	48	44	48	48	48	48	48	
48	48	20	48	0	48	12	48	0	48	18	48	48	
48	48	48	0	48	48	48	48	48	0	48	48	48	
48	48	34	48	16	48	6	48	16	48	34	48	48	
48	48	48	48	48	48	48	48	48	48	48	48	48	
48	48	48	48	48	48	30	48	48	48	48	48	48	

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	90.0	140.0	163.0	178.7	171.7	155.1	133.2	121.0	106.7	93.2	86.1	81.7
	76.7	71.9	72.5	72.8	67.2	65.9	64.3	57.4	50.0	43.5	30.1	18.4
2805	69.0	111.7	132.6	146.3	146.5	134.2	211.6	8109.4	101.1	91.8	87.3	83.2
	77.2	70.2	69.3	68.0	62.4	61.9	62.0	57.2	49.8	44.9	32.8	21.0
3605	52.1	96.1	125.8	138.8	114.1	7131.7	115.7	102.3	92.4	81.9	72.7	68.9
	63.5	56.8	55.6	55.0	52.9	51.8	52.3	48.0	41.3	36.4	27.7	18.2
1213	48.5	82.8	105.2	121.2	129.9	2124.4	118.3	118.9	112.2	101.7	93.0	88.7
	83.3	76.4	76.8	76.6	72.4	72.0	71.7	65.5	55.4	48.1	34.9	21.5
2013	92.0	142.1	163.4	174.6	169.0	152.5	129.5	119.9	105.9	93.9	86.9	81.3
	75.9	71.4	73.5	77.6	76.9	80.5	81.6	74.1	63.8	56.4	39.5	24.0
2813	84.5	145.2	2177.5	187.2	2188.2	2172.3	149.7	137.7	2123.9	109.1	97.2	93.7
	87.2	79.1	79.6	81.0	78.4	78.3	80.5	77.9	71.0	65.1	49.9	33.2
3613	59.9	98.3	120.9	136.2	2137.7	126.7	2112.7	103.9	93.0	83.1	75.8	73.0
	67.9	62.5	64.1	68.3	69.6	72.8	73.8	68.3	59.1	51.6	36.8	22.7
4413	58.2	96.9	120.5	137.4	141.8	137.8	128.6	129.6	121.6	109.4	100.2	95.0
	87.9	79.8	78.9	77.8	72.2	70.9	68.7	62.8	53.1	46.8	33.4	20.9
0421	90.0	140.0	163.0	178.7	171.7	155.1	133.2	121.0	106.7	93.2	86.1	81.7
	76.7	71.9	72.5	72.8	67.2	65.9	64.3	57.4	50.0	43.5	30.1	18.4
1221	94.9	150.2	2176.9	191.7	187.7	169.7	148.5	135.5	111.8	2105.0	96.9	95.0
	90.8	87.5	91.4	95.3	90.4	90.5	88.8	80.2	69.6	60.5	42.0	26.2
2021	79.0	130.2	2163.4	183.7	184.0	168.2	143.7	132.7	118.3	103.9	95.5	93.2
	87.1	80.0	80.7	81.5	78.3	81.0	81.8	75.6	66.3	58.4	46.1	26.7

2821	75.8	125.6	6156.5	176.0	177.2	164.4	143.4	132.9	119.0	105.0	1.1	96.2	91.6
	85.8	78.7	79.3	81.0	79.3	83.5	87.6	82.6	72.4	64.6	46.0	29.2	
3621	94.5	142.7	163.5	174.5	169.5	150.7	129.7	118.4	104.1	92.1	84.9	81.6	
	76.6	71.2	72.6	74.1	71.5	73.2	73.5	67.6	58.7	52.4	37.4	24.4	
4421	94.3	146.0	168.1	180.1	173.6	154.8	131.8	120.2	105.0	92.9	86.2	83.3	
	78.3	73.1	76.9	80.8	77.9	78.9	79.2	73.7	63.6	56.5	41.4	27.1	
0429	86.9	127.1	145.1	158.6	152.6	136.7	119.6	112.3	101.7	93.5	90.1	87.8	
	81.2	76.8	76.3	75.1	69.6	70.2	69.1	61.7	54.4	46.3	30.8	18.2	
1229	90.8	146.5	171.8	184.0	184.0	167.1	143.2	128.3	114.9	101.9	92.9	89.3	
	84.5	77.5	78.6	79.6	76.8	78.6	80.7	78.6	71.6	65.8	48.8	31.5	
2029	73.7	125.5	158.8	179.8	180.0	169.9	167.0	145.0	133.4	119.3	105.6	96.9	
	88.0	80.8	80.9	82.8	82.0	85.8	89.8	84.5	73.4	65.0	48.3	30.4	
2829	76.2	124.9	154.5	176.4	179.1	166.1	147.5	135.6	120.2	105.2	96.6	92.5	
	86.7	79.1	79.3	79.7	76.1	78.3	79.0	74.0	65.4	57.9	41.8	27.7	
3629	106.1	153.0	169.0	182.8	175.4	157.1	136.6	125.1	110.7	99.3	92.5	88.3	
	83.6	78.5	80.2	84.0	84.2	90.1	91.6	84.1	73.3	64.1	44.4	28.7	
4429	97.6	154.1	181.0	194.0	189.3	172.6	149.7	135.8	120.9	105.3	96.4	94.5	
	90.4	82.8	82.8	83.1	78.3	77.9	79.5	76.7	69.4	62.8	46.5	30.4	
0437	66.5	110.6	136.8	151.6	153.0	140.4	123.4	112.3	100.0	89.3	82.3	78.4	
	72.8	66.2	66.2	65.2	60.2	59.9	57.9	51.6	44.8	39.2	26.8	16.0	
1237	53.4	94.3	123.3	139.4	145.4	137.5	124.5	115.6	103.8	92.1	83.1	80.1	
	75.3	71.1	74.2	80.3	81.4	81.7	81.6	76.5	65.1	57.2	42.2	26.3	
2037	94.5	142.7	163.5	174.5	169.5	150.7	129.7	118.4	104.1	92.1	84.9	81.6	
	76.6	71.2	72.6	74.1	71.5	73.2	73.5	67.6	58.7	52.4	37.4	24.4	
2837	101.6	143.5	157.6	169.7	162.8	146.8	126.3	116.5	101.9	91.3	84.9	81.6	
	75.5	70.2	70.9	72.3	70.1	76.0	79.7	75.3	67.1	59.4	46.2	27.1	
3637	69.1	110.5	123.6	135.8	134.7	125.6	111.1	103.7	91.7	80.9	75.6	73.5	
	69.1	65.1	66.1	67.4	64.6	66.6	65.8	60.8	52.6	46.7	33.0	21.4	
4437	49.8	97.2	133.7	150.2	161.2	151.3	134.2	120.4	10.7	98.0	86.9	83.0	
	79.0	73.4	74.3	78.3	78.1	72.4	72.6	70.0	60.3	53.1	44.3	32.8	
1245	61.2	95.6	113.7	128.6	130.6	125.7	119.1	119.0	110.4	99.4	89.9	84.0	
	77.1	70.5	69.5	68.4	62.6	63.0	62.0	55.8	47.9	42.1	28.9	17.7	
2045	88.8	141.4	167.7	182.6	182.0	166.1	143.1	129.8	116.8	100.9	91.8	89.2	
	84.3	77.4	78.5	82.2	80.9	82.8	82.6	76.4	66.2	58.5	42.3	26.6	
2845	80.8	130.5	155.1	164.5	163.9	149.2	129.2	120.5	107.8	95.9	87.6	84.2	
	78.8	72.2	71.1	71.5	68.1	68.0	69.0	65.8	59.1	56.2	43.7	29.0	
3645	72.8	112.8	132.1	145.4	143.2	143.4	115.2	115.2	108.8	96.9	85.5	79.3	
	69.8	64.3	65.8	69.2	68.3	71.3	70.5	64.5	55.7	45.2	33.6	20.8	
4445	33.0	55.9	70.9	82.2	87.9	90.0	91.4	96.5	92.6	84.9	79.9	75.4	
	69.4	62.1	60.5	59.0	54.6	53.5	51.6	46.3	39.3	34.6	24.7	15.3	

CYCLE 1 DATA

DATASET 11, February 18, 1976

Reactor Conditions

Core Average Exposure, 4251 MWd/t

Core Thermal Power, 1914 MWT

Dome Pressure, P, 997 psia

Core Flow, 74.1 Mlb/hr

Inlet Subcooling at P, 19.6 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	34	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	34	48	18	48	8	48	18	48	34	48	48	48
48	48	48	10	48	40	48	40	48	10	48	48	48	48
48	48	16	48	0	48	14	48	0	48	16	48	48	48
48	40	48	44	48	40	48	40	48	44	48	40	48	48
34	48	8	48	14	48	0	48	14	48	8	48	34	48
48	40	48	44	48	40	48	40	48	44	48	40	48	48
48	48	16	48	0	48	14	48	0	48	16	48	48	48
48	48	48	10	48	40	48	40	48	10	48	48	48	48
48	48	34	48	18	48	8	48	18	48	34	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	34	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	79.0	129.9	156.5	170.6	168.9	155.9	135.1	126.4	112.0	98.6	88.1	82.2
	75.6	68.4	68.4	68.6	64.4	63.8	63.9	58.5	50.8	45.2	32.4	20.8
2805	68.0	110.7	136.9	151.3	153.3	144.6	132.6	127.7	116.7	5102.5	92.2	86.6
	79.5	71.6	70.5	69.8	64.4	63.9	64.1	60.3	52.8	47.8	34.6	23.2
3605	52.0	95.1	124.6	139.0	144.3	133.3	117.5	1107.1	94.9	83.6	74.6	71.0
	66.1	59.6	59.3	58.7	57.4	55.7	55.7	51.9	44.9	40.1	30.8	19.7
1213	43.2	76.5	101.5	98.0	126.5	124.7	119.7	120.8	114.1	104.0	95.1	89.3
	83.9	77.3	78.1	78.9	77.0	78.4	81.3	82.4	74.7	67.1	48.2	30.5
2013	59.1	96.3	122.8	150.2	216.2	1156.6	140.9	132.9	115.8	102.7	95.2	89.8
	84.5	80.6	84.9	90.5	88.3	91.2	91.7	83.8	72.7	65.4	45.9	28.8
2813	50.9	92.1	125.3	157.3	178.3	178.0	162.7	153.7	140.6	123.6	9111.2	2104.4
	97.1	87.9	89.3	92.1	89.7	89.3	92.5	90.7	82.2	74.2	57.1	37.1
3613	51.1	85.7	110.6	129.2	2135.9	130.0	117.3	111.0	99.3	88.5	81.2	77.5
	72.9	68.1	72.6	78.5	79.1	84.0	88.0	86.1	77.6	70.3	50.4	31.3
4413	55.6	89.6	112.1	129.3	134.8	133.1	129.1	130.7	2121.0	108.9	100.4	93.9
	85.7	78.6	76.8	76.4	72.2	72.6	72.4	67.2	58.7	52.0	37.6	24.2
0421	52.3	87.6	119.5	143.2	216.9	162.9	147.5	139.5	0122.3	107.5	95.4	89.3
	80.8	73.1	72.4	71.2	65.5	66.3	66.2	59.5	52.8	46.2	32.0	19.6
1221	62.3	110.6	148.8	179.6	187.8	177.1	159.1	147.7	0129.8	114.4	103.6	98.6
	89.9	81.8	82.5	87.7	88.3	93.7	95.1	88.5	77.3	67.9	47.7	29.7
2021	52.1	88.4	118.8	151.1	172.1	170.9	156.3	148.3	113.1	7117.0	107.2	102.1
	95.1	87.5	87.7	89.0	85.7	88.7	89.7	82.9	72.6	63.3	44.7	27.9

2821	47.5	80.6	109.9	143.3	166.2	168.4	156.0	147.4	131.4	117.8	108.3	103.6
	95.6	87.4	87.8	91.6	90.1	95.6	97.7	90.3	78.5	69.5	49.1	31.4
3621	62.7	103.6	133.6	159.4	163.3	151.3	134.0	125.0	110.3	96.9	89.4	85.0
	78.8	72.9	73.7	74.9	72.5	75.6	76.6	71.3	63.4	56.7	41.3	27.8
4421	55.5	90.9	117.9	146.8	161.8	156.9	141.2	131.2	110.3	101.5	92.8	87.5
	80.6	73.4	74.1	77.7	76.5	79.6	80.8	76.4	67.4	60.8	45.0	30.6
0429	43.5	70.8	94.7	126.1	145.6	149.6	146.7	142.7	128.3	111.2	101.5	94.5
	85.3	79.0	76.5	75.5	69.7	70.8	69.5	62.6	55.7	47.7	31.3	18.6
1229	57.3	102.9	140.9	170.5	183.3	174.1	154.5	142.5	126.8	112.3	100.9	95.3
	88.1	79.6	79.6	80.5	78.2	80.2	83.3	81.7	75.2	70.0	53.4	34.9
2029	50.4	86.8	116.5	149.9	169.0	168.0	155.4	147.3	131.3	116.6	107.7	101.4
	93.6	85.9	86.2	88.6	87.4	91.5	94.3	87.8	76.5	67.7	49.3	31.7
2829	35.1	67.0	98.4	128.3	161.3	172.3	164.4	156.7	142.5	126.8	111.5	106.2
	99.8	89.6	87.3	87.3	85.6	83.8	86.4	83.4	72.6	65.0	52.0	37.0
3629	70.9	114.9	146.4	171.1	174.1	163.8	144.9	134.5	120.9	106.8	98.8	93.6
	86.8	81.1	81.9	85.4	85.1	91.6	92.5	86.5	75.7	66.6	46.7	31.4
4429	54.0	92.9	124.1	153.6	179.6	177.9	164.5	154.3	137.7	118.0	105.9	100.7
	92.5	83.7	81.9	82.1	77.6	78.3	80.6	78.1	71.1	65.4	49.0	32.7
0437	52.2	89.8	1110.5	135.5	144.1	140.7	126.7	119.2	106.8	96.0	86.1	80.4
	74.0	67.2	66.2	64.9	60.7	60.2	59.7	54.4	47.3	41.5	28.7	17.5
1237	44.2	75.8	109.7	129.0	142.3	139.2	127.5	119.5	108.8	96.1	86.3	81.9
	76.6	70.2	72.0	76.4	79.6	85.3	91.4	92.5	83.4	74.5	56.3	35.6
2037	49.1	85.1	1115.0	147.0	169.6	168.2	152.4	142.7	128.3	111.8	100.8	96.7
	90.5	82.3	83.1	85.0	82.3	84.3	86.2	81.3	71.9	64.7	48.5	31.7
2837	56.5	88.8	114.0	146.0	159.0	158.7	143.2	134.2	119.2	106.2	98.8	94.2
	86.0	80.8	81.0	84.6	83.7	91.2	93.0	85.8	76.1	67.1	47.2	30.9
3637	53.5	84.5	105.3	123.8	130.8	126.4	115.9	109.8	97.4	86.9	80.2	75.8
	71.6	66.9	67.9	70.0	68.8	74.6	78.7	75.7	69.5	63.0	45.2	30.2
4437	41.1	80.8	1114.0	135.0	150.5	148.5	137.5	125.5	116.8	102.1	99.2	84.0
	76.6	68.4	66.0	67.1	69.8	69.5	73.8	73.5	65.4	59.4	51.5	37.7
1245	59.8	93.9	114.8	129.8	133.8	128.6	122.6	122.4	112.4	102.5	93.3	86.8
	79.3	72.9	72.5	72.6	67.7	68.6	68.7	62.4	55.6	49.8	34.9	22.1
2045	80.8	132.7	162.0	181.3	184.3	170.4	151.8	139.3	123.9	108.4	97.9	95.1
	89.5	83.6	87.4	92.7	90.6	90.6	90.7	85.0	72.9	64.0	46.8	30.3
2845	72.8	1110.4	146.8	164.0	169.0	157.3	138.6	130.9	118.5	105.8	95.5	91.3
	85.3	77.1	77.3	78.2	75.3	74.6	75.9	74.5	68.8	64.1	49.3	32.8
3645	71.7	1110.8	133.5	148.5	147.5	136.0	120.9	113.6	102.2	90.4	83.7	78.6
	73.8	69.7	74.0	79.2	77.9	79.8	79.2	73.0	63.5	52.5	39.3	25.0
4445	32.4	55.2	70.4	83.3	90.4	92.7	95.5	99.8	95.0	87.4	81.5	76.7
	70.7	63.2	62.0	61.0	57.1	56.5	55.6	52.1	45.3	40.2	29.4	18.4

CYCLE 1 DATA

DATASET 12, March 11, 1976

Reactor Conditions

Core Average Exposure, 4558 MWd/t

Core Thermal Power, 1962 MWT

Dome Pressure, P, 1001 psia

Core Flow, 71.4 Mlb/hr

Inlet Subcooling at P, 20.8 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	34	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	34	48	18	48	08	48	18	48	34	48	48	48
48	48	48	10	48	40	48	40	48	10	48	48	48	48
48	48	16	48	00	48	14	48	00	48	16	48	48	48
48	40	48	44	48	40	48	40	48	44	48	40	48	48
34	48	08	48	14	48	00	48	14	48	08	48	34	48
48	40	48	44	48	40	48	40	48	44	48	40	48	48
48	48	16	48	00	48	14	48	00	48	16	48	48	48
48	48	48	10	48	40	48	40	48	10	48	48	48	48
48	48	34	48	18	48	08	48	18	48	34	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	34	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	38.7	66.6	90.4	115.7	133.6	6150.8	150.3	150.5	136.5	120.8	108.2	100.9	89.9
	80.1	78.3	77.4	71.5	71.2	70.2	62.8	54.6	48.4	34.4	21.8		
2805	25.7	45.1	63.3	85.7	112.7	135.9	149.4	155.8	144.8	128.8	116.9	106.7	96.3
	85.0	82.6	79.7	72.8	72.6	71.7	66.0	57.5	51.6	37.4	24.1		
3605	35.3	66.4	91.5	109.8	124.8	127.8	121.8	118.6	108.8	97.2	84.6	81.1	75.1
	66.5	65.8	64.9	62.0	60.1	59.4	55.0	47.3	41.7	31.9	21.0		
1213	41.8	72.7	95.4	114.9	125.9	0128.6	128.5	130.2	123.1	112.2	101.6	95.9	88.6
	80.8	81.6	82.8	81.1	85.6	90.3	86.8	75.7	67.0	48.8	31.0		
2013	46.4	78.4	106.0	0138.8	158.2	160.8	149.6	144.6	130.3	114.5	105.3	98.5	90.9
	85.3	89.1	94.6	91.8	94.3	95.1	86.7	75.2	66.4	47.1	29.0		
2813	38.3	72.1	104.1	139.9	171.9	179.4	172.8	168.8	153.1	136.9	121.3	115.1	104.7
	94.0	92.9	94.3	91.0	91.6	96.4	95.2	85.3	76.3	57.7	38.1		
3613	43.7	74.8	99.3	121.0	132.4	131.4	122.5	118.6	106.4	96.1	88.3	83.5	77.9
	72.3	76.8	83.4	59.0	89.9	95.1	91.4	79.7	70.5	50.7	32.6		
4413	51.5	82.2	102.9	121.6	131.1	129.7	128.7	131.1	122.1	108.9	100.4	92.9	84.0
	76.7	76.1	75.7	70.7	71.8	70.9	64.7	56.5	49.7	34.3	22.3		
0421	44.8	75.8	100.3	125.6	143.8	153.8	148.3	145.4	130.6	114.7	102.1	95.1	85.7
	77.6	76.5	75.1	69.7	69.9	68.2	61.3	53.4	46.3	32.5	19.9		
1221	47.1	82.8	114.9	151.3	176.8	180.0	169.1	156.6	139.6	124.7	112.4	105.8	97.4
	88.8	91.1	95.9	94.3	96.8	97.0	88.5	76.9	67.3	47.9	30.9		
2021	47.3	82.2	112.8	147.6	174.3	177.6	162.6	153.6	135.2	120.7	109.3	104.3	95.5
	85.5	83.4	82.7	77.6	79.3	80.6	76.5	68.1	61.5	44.4	28.6		

2821	47.8	81.8112.8149.1173.5175.0162.7153.1137.6123.0111.0104.5
	95.0	85.0 83.8 83.7 78.6 80.3 84.7 83.0 74.9 68.5 49.7 33.1
3621	44.2	77.1105.9138.4161.4163.4151.5142.2127.0111.0100.1 94.9
	86.9	78.6 78.3 78.9 74.8 76.2 78.0 73.9 65.2 58.6 43.4 28.1
4421	45.9	78.9103.9130.3150.9156.9149.1144.7128.3113.3103.6 97.5
	89.6	82.4 85.0 88.9 85.0 87.4 86.9 80.3 70.3 62.3 44.3 26.6
0429	36.6	59.9 79.6105.3129.9145.8151.3153.6138.8122.0112.2102.6
	92.1	84.1 82.3 80.7 74.2 74.8 72.8 65.5 57.5 49.0 32.5 19.3
1229	41.1	73.5103.4135.9164.1171.6159.8151.2135.9120.5108.2101.3
	92.9	83.5 83.4 83.7 80.6 81.9 86.8 85.0 76.6 69.8 52.9 34.4
2029	44.4	78.6110.0146.4172.6175.9162.8152.6137.6122.4110.5104.3
	94.7	84.2 81.9 81.0 76.2 76.6 80.5 80.4 73.3 67.2 51.4 33.6
2829	52.7	86.9116.1153.4177.3176.9162.7153.5134.8117.8107.9101.3
	90.7	81.0 80.2 79.2 73.7 75.6 78.2 77.2 72.6 68.1 49.1 32.9
3629	53.4	88.8119.4156.6177.3175.1161.5152.4136.0119.9109.9102.4
	93.0	85.9 85.0 84.4 80.4 84.3 88.4 84.2 76.3 67.2 46.0 29.4
4429	42.1	74.8104.4136.5164.7177.6174.0170.8153.4133.6119.0112.8
	103.4	92.4 91.1 90.8 85.2 87.0 90.6 87.0 77.2 69.1 48.9 29.7
0437	46.9	81.2106.2126.5137.7138.9129.1125.9113.7102.1 94.0 86.6
	79.0	72.0 70.9 69.8 65.1 63.5 61.9 56.1 48.9 42.4 29.3 17.8
1237	38.4	70.9 99.8120.6137.0137.7130.1123.3113.9101.9 92.2 87.2
	81.7	75.7 78.7 85.1 88.3 93.5 99.0 96.2 83.8 74.1 55.7 34.8
2037	44.2	78.6110.1146.4168.4169.4157.8149.7133.4117.6106.3100.5
	92.9	82.9 82.4 83.0 79.5 80.3 82.2 77.7 68.5 62.5 47.0 31.5
2837	52.1	83.2110.0145.0161.2160.7148.7140.5123.8110.0101.8 95.3
	86.0	79.0 78.5 78.5 73.8 77.7 81.6 78.7 71.8 64.7 46.5 30.4
3637	39.9	70.8 94.9116.1131.2134.2126.4121.9108.7 96.1 87.1 83.8
	78.1	71.3 72.3 74.3 73.8 80.3 85.1 81.7 72.4 65.0 47.5 29.3
4437	23.5	58.9 97.2122.1143.6151.6146.5134.3127.8115.2101.5 93.2
	86.3	79.0 72.4 75.8 80.3 77.8 79.3 79.0 72.1 62.7 55.6 41.1
1245	51.5	82.2102.9121.6131.1129.7128.1131.3122.1108.9100.4 92.9
	84.0	76.7 76.1 75.7 70.7 71.8 70.9 64.7 56.5 49.7 34.3 22.3
2045	41.9	72.8 99.2128.5155.6168.2163.8157.3143.7126.0115.0110.0
	102.2	93.6 96.2100.4 96.6 96.0 96.3 89.2 76.8 67.4 48.3 31.6
2845	32.2	57.4 80.1105.6132.6150.0150.5150.4140.1127.9115.3108.1
	98.8	87.3 85.7 85.9 82.2 81.7 84.8 83.3 74.7 68.3 52.1 34.4
3645	53.0	86.2109.3129.3138.9136.7127.6123.9110.7 99.5 91.7 86.7
	80.4	75.3 79.2 83.1 81.4 82.8 82.1 74.7 64.8 52.6 39.3 25.6
4445	29.6	50.5 65.5 78.7 87.6 91.9 96.3103.7100.6 92.8 85.5 79.0
	72.8	66.4 64.1 63.0 58.9 58.4 57.2 52.2 45.3 39.9 28.7 18.4

CYCLE 1 DATA

DATASET 13, May 25, 1976

Reactor Conditions

Core Average Exposure, 5256 MWd/t

Core Thermal Power, 2104 MWT

Dome Pressure, P, 989 psia

Core Flow, 73.5 Mlb/hr

Inlet Subcooling at P, 20.9 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	38	48	48	48	48	48	48	48
48	48	48	28	48	14	48	14	48	28	48	48	48	48
48	48	40	48	32	48	36	48	32	48	40	48	48	48
48	28	48	4	48	8	48	6	48	4	48	28	48	48
48	48	36	48	30	48	26	48	30	48	36	48	48	48
48	18	48	10	48	12	48	12	48	10	48	18	48	48
48	48	36	48	30	48	26	48	30	48	36	48	48	48
48	28	48	4	48	8	48	6	48	4	48	28	48	48
48	48	40	48	32	48	36	48	32	48	40	48	48	48
48	48	48	28	48	14	48	14	48	28	48	48	48	48
48	48	48	48	48	48	38	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	83.2	138.1	171.1	190.3	193.7	183.8	166.5	159.2	146.3	129.3	116.8	110.9	0.0
	99.6	87.1	84.6	82.2	75.4	73.3	72.2	65.2	55.7	49.2	35.8	23.6	
2805	66.4	106.6	133.6	159.9	174.7	176.0	164.6	156.6	140.7	0121.5	109.5	101.4	
	90.8	80.6	78.8	76.8	70.4	70.3	68.5	62.4	53.8	47.5	33.3	22.1	
3605	73.6	113.8	134.8	147.8	146.5	136.0	124.1	118.6	109.2	99.1	95.7	90.8	
	82.4	75.3	72.5	69.7	62.5	61.8	57.9	50.3	43.1	36.8	24.7	15.7	
1213	47.1	84.6	1115.1	1146.2	2170.8	175.4	168.6	170.6	164.5	1159.5	156.5	8157.1	
	146.3	127.9	121.9	116.5	105.2	98.0	93.2	84.3	70.4	61.4	46.0	30.7	
2013	56.2	93.1	1116.7	137.4	148.0	150.1	148.8	158.8	158.5	152.5	146.2	139.3	
	128.4	115.7	1112.7	1111.0	104.9	107.6	107.1	96.6	83.3	73.4	53.4	34.1	
2813	58.0	91.7	1115.0	0140.3	157.8	170.9	178.9	184.7	173.9	158.5	149.4	140.1	
	126.1	1117.1	1115.5	1116.0	1112.1	1116.4	1114.6	1101.7	88.7	75.1	50.7	33.2	
3613	54.0	88.8	1111.4	132.0	139.4	139.0	136.0	143.9	0143.0	145.0	147.8	153.2	151.1
	137.7	123.3	1118.1	1113.6	102.8	98.7	95.0	83.6	70.8	62.0	43.9	28.6	
4413	58.0	96.5	126.5	156.0	0177.3	180.3	172.4	172.0	162.0	150.6	142.0	0138.2	
	127.4	113.3	107.9	102.4	89.2	84.3	79.1	68.5	57.0	48.5	33.3	20.1	
0421	42.3	71.6	93.5	113.9	128.9	134.7	133.7	134.3	212.9	312.7	312.9	1127.4	
	118.8	106.4	104.6	99.8	89.1	85.5	80.0	70.1	59.2	50.7	35.0	21.4	
1221	43.6	75.8	102.3	129.8	153.7	171.4	180.6	185.6	176.7	164.4	156.9	149.2	
	136.2	119.2	113.0	0108.6	98.5	94.8	90.1	80.1	69.5	62.7	46.2	30.6	
2021	37.7	64.8	86.0	105.8	122.4	129.3	131.5	138.5	141.7	145.7	147.7	148.3	
	138.6	125.2	121.7	116.5	107.6	106.6	107.6	102.7	93.6	86.5	63.8	42.9	

2821	37.7	64.8	86.0105.	8122.	4129.	3131.	5138.	7141.	7145.	5147.	7148.3	
	138.	6125.	2121.	7116.	5107.	4106.	6107.	6102.7	93.6	86.5	63.8	42.9
3621	39.5	66.5	87.2107.	0123.	4132.	1135.	3143.	6143.	1142.	8143.	4140.5	
	129.	2114.	2110.	7106.5	96.4	94.2	92.2	84.6	74.1	69.2	52.3	33.4
4421	43.2	72.9	95.2119.	1138.	8152.	2159.	8164.	0154.	4149.	4150.	3147.4	
	134.	1120.	5117.	1112.0	98.0	94.8	90.8	80.2	68.4	59.3	42.3	26.3
0429	49.8	79.4100.	8123.	1136.	5140.	0136.	7135.	1124.	6115.	1110.	2106.4	
	100.2	96.9100.	2102.0	94.9	94.7	89.2	77.0	66.0	54.7	35.7	22.0	
1229	36.7	64.0	86.9110.	5133.	5153.	1164.	9172.	3163.	7153.	8144.	2136.6	
	128.	2113.	7111.	7108.3	99.8	97.1	98.2	93.5	82.5	74.5	56.3	37.6
2029	33.4	58.0	76.8	95.5110.	5117.	7122.	1130.	9136.	0140.	9145.	4145.0	
	135.	9122.	4119.	5116.	9108.	8110.	9115.	4110.6	97.5	87.2	65.6	43.7
2829	36.2	58.8	75.5	93.6106.	8112.	3115.	4119.	7116.	9116.	6124.	6132.4	
	128.	9120.	0118.	6116.	9110.	3116.	5120.	3112.	9100.0	89.7	64.5	42.7
3629	44.3	70.7	91.8114.	3128.	6135.	3140.	1147.	2151.	4150.	9151.	0145.1	
	133.	0122.	5118.	7115.	1105.	5108.	1108.	1100.1	89.1	77.6	52.9	34.6
4429	43.1	74.6100.	2127.	0150.	9167.	3177.	8183.	6172.	9155.	9146.	9141.3	
	132.	1121.	4123.	3124.	1114.	1111.	9107.8	95.7	80.7	69.9	48.4	29.5
0437	31.9	55.3	73.1	89.2103.	8112.	0113.	0115.	5114.	4115.	4119.	7119.1	
	111.	9101.5	97.5	90.8	80.1	74.4	69.2	60.3	51.3	43.8	30.1	17.8
1237	38.6	72.5105.	3137.	0165.	2176.	4173.	1174.	7166.	4155.	7146.	3143.3	
	133.	6117.	7112.	8107.5	98.2	91.7	88.3	80.5	68.4	60.7	47.2	32.3
2037	39.2	68.5	91.6112.	3129.	1135.	7137.	3147.	8152.	0149.	4144.	8140.5	
	129.	8116.	1112.	2108.5	99.6	97.2	97.7	93.6	85.2	79.2	62.0	41.8
2837	46.5	73.9	93.5115.	3134.	0146.	8153.	2157.	9149.	2139.	1135.	5130.9	
	119.	8108.	3106.	5104.8	96.7	97.4	96.3	89.5	81.6	76.4	56.6	38.0
3637	43.7	74.7	98.2120.	5135.	8141.	8142.	8155.	3157.	2154.	1150.	1145.7	
	133.	0117.	6113.	1108.4	96.8	92.8	90.4	81.9	71.1	65.3	48.8	32.3
4437	19.7	48.1	81.2108.	7142.	6161.	8165.	5160.	4159.	4151.	9143.	7142.4	
	137.	1124.	0110.	0105.	2100.1	86.9	83.2	78.1	68.1	57.8	50.3	36.7
1245	67.6	6106.	4131.	0151.	1154.	4148.	9137.	8133.	3126.	3122.	8121.	4119.9
	111.2	99.6	94.8	91.0	79.2	75.2	71.7	64.0	53.9	47.4	33.8	23.5
2045	81.	2136.	7172.	0195.	6204.	5198.	7184.	8177.	7165.	0150.	8139.	5135.7
	127.	4113.	6109.	3108.	2103.	8104.	2104.5	96.4	81.8	71.2	52.0	34.5
2845	54.1	93.2122.	2147.	5169.	7177.	8172.	9169.	4157.	0140.	9127.	5120.7	
	110.9	98.1	95.5	95.9	93.5	95.7	99.2	93.8	80.8	71.7	54.9	37.8
3645	79.	1125.	4150.	9169.	8171.	0163.	0148.	5143.	8139.	3133.	9131.	3129.9
	121.	7108.	4104.	7101.3	91.3	88.2	84.1	75.2	63.5	51.9	39.4	26.2
4445	50.5	86.8112.	0129.	4138.	8134.	9125.	6121.	5113.	4104.8	98.6	95.4	
	89.5	79.4	77.1	72.7	65.0	60.2	57.1	51.3	42.6	37.3	27.6	17.8

CYCLE 1 DATA

DATASET 14, July 22, 1976

Reactor Conditions

Core Average Exposure, 5981 MWd/t

Core Thermal Power, 2021 MWT

Dome Pressure, P, 979 psia

Core Flow, 62.4 Mlb/hr

Inlet Subcooling at P, 24.5 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	34	48	34	48	48	48	48	48	48
48	48	36	48	24	48	28	48	24	48	36	48	48	48
48	48	48	8	48	8	48	8	48	8	48	48	48	48
48	48	24	48	34	48	38	48	34	48	24	48	48	48
48	32	48	8	48	10	48	10	48	8	48	32	48	48
48	48	26	48	36	48	30	48	36	48	26	48	48	48
48	32	48	8	48	10	48	10	48	8	48	32	48	48
48	48	24	48	34	48	38	48	34	48	24	48	48	48
48	48	48	8	48	8	48	8	48	8	48	48	48	48
48	48	36	48	24	48	28	48	24	48	36	48	48	48
48	48	48	48	48	34	48	34	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	40.3	68.6	88.7	105.1	1118.8	125.6	132.0	144.2	144.0	134.9	126.9	119.5
108.5	95.8	91.9	86.9	76.4	71.4	67.1	59.7	49.6	43.3	31.4	20.8	
2805	43.7	71.7	93.1	113.1	1125.9	132.6	138.6	149.2	146.3	137.3	129.1	2122.3
109.1	96.8	92.0	86.2	75.1	71.4	67.2	58.2	49.3	42.7	29.8	19.7	
3605	46.2	72.9	88.2	2103.7	1111.1	1113.3	112.0	0113.4	108.3	101.1	98.3	93.0
85.1	77.4	74.8	70.5	62.2	59.7	55.3	47.2	40.6	34.3	22.6	14.5	
1213	36.3	63.9	85.3	103.7	119.5	131.8	139.8	148.5	141.5	131.3	121.5	5119.1
110.4	97.8	94.9	89.9	81.2	76.9	74.8	70.2	62.8	57.5	42.8	29.2	
2013	39.4	65.7	84.2	102.7	114.6	122.7	124.7	129.3	125.7	120.9	120.2	2120.8
117.9	9109.9	106.9	2100.4	89.7	85.8	83.8	77.1	69.0	62.7	45.8	29.9	
2813	46.4	73.6	93.5	115.4	129.3	137.0	144.0	151.2	152.0	152.3	155.3	1149.4
133.7	122.2	2116.9	110.5	98.3	95.9	92.2	83.6	75.1	64.7	44.2	30.3	
3613	41.8	68.3	87.5	105.1	117.3	123.9	125.3	129.2	2122.4	1115.2	1113.1	113.9
109.5	102.6	99.7	95.2	85.4	83.4	80.7	74.9	67.9	61.3	43.4	28.5	
4413	41.4	72.1	92.6	110.4	125.4	2137.0	142.9	151.9	147.5	137.1	127.3	1121.7
112.6	101.1	96.0	90.9	80.3	75.0	70.8	63.4	53.3	46.9	33.4	20.9	
0421	41.8	69.9	88.6	104.5	117.2	2122.5	126.6	136.6	138.7	132.7	128.8	9123.3
112.3	101.6	97.0	91.3	80.0	74.4	70.6	60.6	50.8	43.6	30.6	19.9	
1221	40.5	69.6	91.8	111.6	125.6	2134.0	139.0	146.0	139.6	135.2	135.8	7137.9
132.5	122.1	2116.1	1110.0	99.2	94.5	90.3	82.7	74.2	66.6	48.0	32.6	
2021	38.3	65.9	88.7	113.0	131.5	144.3	154.3	165.1	160.3	148.7	139.8	133.5
121.1	106.2	2101.1	95.4	86.8	87.2	89.1	86.0	78.9	71.8	52.6	35.2	

2821	41.3	68.6	91.6	1119.	1142.	9157.	3158.	8162.	8153.	3144.	8136.	6127.	4
	114.	6102.	7	98.6	94.6	86.9	88.5	90.1	85.6	77.5	70.3	49.8	33.9
3621	37.1	61.6	80.7	99.4	4116.	1127.	4136.	7148.	6144.	8135.	1128.	6121.	8
	110.3	98.9	95.3	90.5	80.5	79.9	80.0	76.0	70.4	66.1	48.9	32.1	
4421	41.0	66.8	84.1	1100.	8112.	2118.	2122.	8133.	8135.	7133.	0136.	5137.	0
	129.	5118.	7114.	1108.	2	94.0	88.9	84.8	74.6	63.5	55.9	39.3	25.2
0429	44.6	71.0	88.6	6107.	5120.	6127.	0133.	7144.	0147.	2141.	5136.	2132.	9
	121.	0109.	4103.	8	97.2	84.6	80.8	74.2	64.0	54.0	45.3	30.2	19.4
1229	33.5	58.2	78.0	95.5	5111.	3122.	3124.	4131.	7129.	4128.	7131.	2134.	7
	129.	6119.	1114.	0108.	0	96.6	91.9	89.2	82.5	74.2	68.0	51.6	35.5
2029	35.4	61.4	83.7	1106.	1126.	2141.	7153.	5163.	2156.	9147.	8139.	5132.	5
	118.	6104.	5	99.7	95.7	88.6	86.5	89.1	86.9	78.6	71.9	55.4	38.2
2829	41.2	67.6	88.3	3112.	0129.	8137.	6138.	5142.	3140.	8137.	5134.	1127.	4
	113.	6100.	7	97.1	93.6	86.1	88.0	91.1	88.5	80.4	73.7	53.8	36.5
3629	39.1	65.8	86.9	109.	5130.	3145.	9154.	3161.	0155.	6144.	5137.	6130.	7
	119.	2106.	6102.	4	97.7	88.4	86.9	86.8	82.3	75.6	68.8	49.0	31.8
4429	45.0	72.8	92.2	1112.	5126.	0133.	9142.	8157.	0160.	3159.	8165.	3164.	5
	153.	6140.	8132.	7123.	1107.	2102.	2	95.5	82.2	70.0	59.4	39.3	25.4
0437	39.8	67.5	86.8	101.	2112.	5119.	7120.	3122.	6119.	9113.	4110.	0105.	9
	99.6	90.4	86.9	80.7	71.2	66.2	61.9	54.1	45.9	39.4	27.3	17.0	
1237	33.4	60.8	84.2	1100.	5115.	8124.	7128.	1134.	2130.	8123.	3119.	7121.	7
	119.	1110.	3108.	9103.	7	95.4	89.7	88.5	84.0	74.2	67.9	52.3	34.3
2037	35.1	62.4	85.2	1106.	7123.	7136.	3143.	7156.	5154.	2145.	8136.	8131.	4
	120.	1106.	0102.	9	98.1	90.3	87.4	88.2	85.3	79.2	72.5	56.9	39.4
2837	42.4	67.2	86.8	1111.	7133.	4146.	7148.	3151.	0142.	5131.	1125.	6119.	2
	107.1	96.5	92.1	89.5	81.2	81.2	80.9	77.4	72.2	67.1	49.7	33.7	
3637	40.9	66.0	84.5	1102.	8117.	6127.	8137.	3144.	9140.	3130.	7125.	1118.	4
	108.4	98.9	94.6	90.6	81.8	82.1	81.1	76.2	70.7	63.9	45.2	29.2	
4437	14.4	43.0	76.4	1102.	2118.	7130.	9133.	7132.	5135.	2131.	1123.	2115.	7
	114.	1111.	1102.	3	98.6	93.9	84.5	78.3	74.3	67.6	57.1	51.7	43.0
1245	45.8	73.3	93.0	1111.	0124.	6135.	6141.	1144.	3136.	1124.	2115.	4109.	5
	99.2	88.2	84.6	81.1	71.4	68.2	65.0	58.0	49.6	44.2	31.7	21.5	
2045	40.7	69.5	90.3	1110.	0126.	0136.	9145.	2159.	7158.	8151.	8146.	8149.	6
	145.	8133.	6128.	1121.	7108.	2100.	4	94.8	84.8	71.0	62.0	45.4	30.5
2845	35.8	62.3	82.5	1100.	1115.	0125.	0132.	8146.	8151.	0150.	4150.	5150.	2
	141.	2125.	0113.	9112.	9102.	0	94.1	89.9	81.0	69.0	60.7	46.3	32.4
3645	49.7	80.4	100.	5117.	4126.	0130.	0129.	3132.	7124.	6115.	6111.	8110.	4
	108.	0100.	5	97.9	94.2	83.5	79.3	75.5	67.0	56.7	46.9	35.4	25.3
4445	21.0	40.0	56.2	68.4	82.2	94.4	105.	6115.	3113.	8105.	1	98.3	93.7
	86.2	76.3	72.5	67.7	62.6	56.6	54.5	50.1	42.6	37.6	30.0	20.9	

CYCLE 1 DATA

DATASET 15, August 13, 1976

Reactor Conditions

Core Average Exposure, 6332 MWd/t
Core Thermal Power, 2269 MWT
Dome Pressure, P, 986 psia
Core Flow, 75.3 Mlb/hr
Inlet Subcooling at P, 21.8 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	34	48	34	48	48	48	48	48	48
48	48	36	48	24	48	28	48	24	48	36	48	48	48
48	48	48	8	48	8	48	8	48	8	48	48	48	48
48	48	24	48	34	48	38	48	34	48	24	48	48	48
48	32	48	8	48	10	48	10	48	8	48	32	48	48
48	48	26	48	36	48	30	48	36	48	26	48	48	48
48	32	48	8	48	10	48	10	48	8	48	32	48	48
48	48	24	48	34	48	38	48	34	48	24	48	48	48
48	48	48	8	48	8	48	8	48	8	48	48	48	48
48	48	36	48	24	48	28	48	24	48	36	48	48	48
48	48	48	48	34	48	34	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	36.3	61.7	80.4	97.0	0111.5121.3133.3149.1149.2139.2133.5125.7	114.4101.2	95.5	90.1	78.2	72.7	68.3	59.3	49.5	42.9	30.7	20.2								
2805	40.1	65.9	85.6	105.2	120.6	130.5	140.9	155.2	152.9	144.1138.2128.4	114.9101.6	95.8	89.5	77.0	72.4	67.6	58.2	49.4	42.8	29.6	19.4			
3605	40.8	64.6	78.9	93.5	102.8	108.4	111.6	114.6	110.1105.6	103.0	96.9	88.3	80.8	77.9	73.5	64.2	61.5	56.0	47.4	40.5	34.3	22.7	14.3	
1213	32.2	57.1	76.3	93.5	109.9	124.9	135.7	146.2	142.2142.7	134.9	127.0	123.3	114.9101.9	98.3	93.3	83.3	78.3	76.1	70.7	62.8	57.0	42.5	28.7	
2013	35.4	59.2	75.8	93.5	107.9	116.4	122.9	130.3	128.1124.9	124.7	125.8	122.9	113.7	108.8	102.7	90.5	86.5	83.5	76.9	68.6	62.1	44.9	28.8	
2813	42.0	66.8	85.5	106.5	121.8	132.6	143.4	153.6	154.6	157.3	161.9	155.6	138.5	126.1120.2	113.2	99.1	95.9	92.1	82.7	74.5	64.5	43.7	29.0	
3613	37.3	61.1	77.4	94.6	108.5	117.8	123.7	128.7	124.0	119.0	117.9	117.6	114.0	106.2	102.8	97.4	86.8	84.2	80.6	74.5	67.4	61.1	43.0	28.0
4413	36.2	62.5	81.9	97.8	114.6	129.4	140.1	152.5	148.3	141.3	132.9	129.2	119.3	105.5	99.9	94.4	83.2	76.3	72.6	63.9	53.6	46.8	33.8	20.8
0421	37.7	62.7	79.2	94.1	108.0	117.9	126.2	140.5	145.6	141.0	137.1	131.3	120.2	106.5	101.9	94.4	81.9	76.7	71.5	61.2	51.0	43.6	30.6	19.5
1221	36.3	62.3	82.4	101.1	116.6	128.0	136.1	144.5	143.5	139.5	139.5	142.9	138.1	126.6	118.5	111.6	99.5	94.5	89.2	82.5	73.4	65.5	47.4	31.3
2021	34.2	59.8	81.7	104.4	125.0	140.7	152.1	165.8	163.4	153.3	144.9	138.2	125.9	109.4	104.5	98.8	89.1	88.3	89.1	86.3	78.2	71.2	52.1	35.1

2821	38.0	63.0	85.2	112.5	137.6	152.3	158.5	163.7	156.7	147.7	139.1	132.8
	118.2	104.9	100.6	96.7	87.8	88.0	90.0	84.9	76.8	68.2	48.7	32.5
3621	33.7	56.2	73.8	91.5	108.6	121.8	135.7	150.8	147.9	139.0	134.0	127.6
	115.2	102.0	98.0	93.2	82.6	80.5	80.1	76.1	70.0	65.4	48.9	31.1
4421	36.5	59.6	74.8	90.9	102.7	111.5	121.5	135.8	138.9	139.0	143.4	144.3
	135.6	123.5	118.5	111.1	96.8	90.6	85.5	75.2	63.3	55.0	39.0	24.8
0429	40.2	64.4	81.4	99.2	111.8	123.7	134.7	149.2	152.2	149.3	146.3	138.6
	125.6	113.0	107.1	100.2	87.0	81.6	75.0	63.9	53.9	45.0	29.5	18.5
1229	30.8	53.6	71.4	87.5	104.1	111.4	123.7	133.7	133.5	133.2	136.2	141.2
	135.5	122.5	118.5	111.1	88.8	99.0	92.9	88.8	82.6	73.7	67.1	50.3
2029	32.7	57.1	78.4	99.6	120.9	138.9	151.7	162.7	159.9	150.9	142.9	135.7
	122.6	107.4	101.9	97.0	88.7	87.0	88.4	85.3	77.3	70.4	53.3	37.0
2829	35.3	60.9	82.8	104.2	110.4	124.0	134.4	138.6	146.3	145.5	142.9	132.8
	120.1	110.4	99.8	96.0	87.8	88.1	90.5	88.0	79.7	72.4	53.3	34.0
3629	36.4	61.0	80.6	102.7	124.2	142.2	154.3	163.0	158.0	150.8	143.8	135.9
	122.9	110.6	105.3	100.8	90.8	88.3	86.8	82.0	75.3	68.2	48.9	31.2
4429	39.9	65.4	83.1	102.4	111.6	128.8	142.4	159.5	165.4	165.0	167.1	173.3
	159.3	145.2	137.1	127.7	109.4	103.1	95.3	81.5	69.3	58.7	39.0	25.1
0437	34.4	58.7	75.7	90.2	102.9	111.1	116.8	121.1	120.9	116.6	112.0	110.6
	103.5	93.1	89.3	83.4	72.8	67.8	63.0	54.8	46.1	39.2	27.3	16.8
1237	29.3	54.5	75.2	90.2	105.2	116.6	123.6	132.8	131.1	127.4	124.3	125.3
	124.6	114.3	111.3	106.7	96.5	89.9	88.5	83.3	73.7	67.1	51.2	33.8
2037	39.0	63.3	82.3	103.6	120.9	132.9	146.7	159.1	154.9	145.9	141.7	133.8
	119.5	106.7	102.1	98.6	88.2	87.4	87.0	82.1	75.3	67.7	49.4	32.1
2837	37.6	61.1	79.7	103.0	125.0	141.1	146.2	152.3	142.0	133.6	129.2	122.7
	110.8	98.6	94.6	91.2	82.0	80.8	80.9	77.1	70.6	66.2	49.0	32.6
3637	37.1	60.5	77.3	95.5	110.0	123.0	137.8	148.0	144.7	134.2	130.7	125.6
	114.8	103.2	94.3	93.2	83.3	82.6	82.0	77.0	70.4	63.7	45.2	29.7
4437	12.4	37.8	68.1	90.6	107.0	121.0	127.5	131.0	138.8	135.8	129.3	121.9
	121.6	117.6	107.1	104.4	98.6	88.1	80.0	76.2	68.7	58.2	51.7	42.8
1245	42.4	67.5	84.2	101.4	117.7	130.9	139.3	145.3	138.4	127.6	120.6	113.7
	103.3	92.6	88.3	83.4	72.6	69.1	65.1	57.1	49.1	42.9	30.0	19.1
2045	39.5	65.3	83.4	101.9	119.0	132.0	147.9	162.0	161.9	156.6	155.8	156.1
	150.6	137.3	132.0	124.0	110.8	100.5	93.9	82.5	68.4	59.4	41.9	28.0
2845	39.6	63.2	80.2	98.8	113.8	125.1	135.8	152.8	155.1	157.0	160.8	155.6
	143.4	127.0	120.6	114.6	100.7	94.6	88.2	77.4	65.4	57.2	40.2	26.9
3645	47.9	74.8	91.9	108.3	119.9	126.9	128.4	133.6	127.9	119.6	117.9	116.7
	112.3	105.0	90.1	86.6	84.8	81.0	75.4	65.6	56.1	45.3	33.7	21.6
4445	25.7	42.9	55.2	67.6	80.6	94.2	107.1	115.6	111.7	104.2	99.5	94.3
	85.6	76.8	72.8	68.3	60.9	57.7	53.7	47.5	39.7	34.8	24.3	15.1

CYCLE 1 DATA

DATASET 16, September 16, 1976

Reactor Conditions

Core Average Exposure, 6912 MWd/t

Core Thermal Power, 2230 MWT

Dome Pressure, P, 987 psia

Core Flow, 78.4 Mlb/hr

Inlet Subcooling at P, 20.9 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	32	48	48	48	48	48	48	48	48
48	48	48	24	48	10	48	10	48	24	48	48	48	48	48
48	48	32	48	28	48	28	48	28	48	32	48	48	48	48
48	20	48	8	48	8	48	8	48	8	48	20	48	48	48
48	48	26	48	30	48	30	48	30	48	26	48	48	48	48
48	18	48	10	48	8	48	8	48	10	48	18	48	48	48
48	48	26	48	30	48	30	48	30	48	26	48	48	48	48
48	20	48	8	48	8	48	8	48	8	48	20	48	48	48
48	48	32	48	28	48	28	48	28	48	32	48	48	48	48
48	48	48	24	48	10	48	10	48	24	48	48	48	48	48
48	48	48	48	48	48	32	48	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	46.3	79.1	99.7	114.4	125.6	130.4	132.2	138.9	136.1	131.6	126.8	122.4	
	112.2	97.9	94.4	89.1	79.3	74.2	71.2	64.1	54.3	47.8	35.2	23.7	
2805	41.1	67.5	85.9	100.9	111.9	118.2	122.8	135.9	140.9	136.5	132.5	126.0	
	113.0	99.2	93.9	88.3	77.4	74.4	71.1	64.2	55.0	48.7	34.7	23.1	
3605	35.3	58.7	71.8	84.8	92.0	96.5	99.3	104.9	103.5	102.5	101.1	100.8	
	95.0	87.5	84.8	81.7	72.1	68.4	64.7	54.9	47.5	41.2	28.5	17.8	
1213	23.3	41.4	55.6	66.6	78.2	88.9	98.9	118.6	133.0	141.6	148.7	158.4	
	159.3	146.5	142.5	135.7	120.9	111.2	106.5	94.9	78.6	68.1	50.9	34.3	
2013	32.5	53.9	68.4	81.9	93.1	101.6	110.4	121.9	128.6	140.5	150.0	153.1	
	147.6	132.4	125.7	119.0	106.6	102.7	100.9	93.5	81.8	73.8	54.2	35.0	
2813	35.0	55.7	69.6	84.2	96.3	107.7	120.2	135.3	143.5	154.4	167.1	166.6	
	152.5	137.9	131.3	123.3	110.8	109.6	109.2	99.4	88.6	76.1	51.8	34.6	
3613	30.3	49.6	62.8	74.7	85.7	94.5	104.6	117.3	123.3	132.0	148.0	159.0	
	159.0	146.6	140.7	134.5	118.3	111.5	105.7	93.1	79.3	69.5	49.6	33.1	
4413	25.0	42.8	55.3	66.0	77.5	89.2	103.8	126.8	140.2	148.6	152.6	152.5	
	146.2	134.3	130.2	124.5	110.2	103.7	96.9	84.1	69.4	59.6	42.1	25.7	
0421	22.2	37.3	48.1	58.7	69.2	79.0	88.1	99.3	103.9	108.0	112.0	113.8	
	112.8	113.6	119.5	121.6	110.8	107.0	99.3	85.4	71.2	60.2	41.6	25.5	
1221	25.1	42.8	56.1	69.4	82.3	95.5	110.1	126.4	137.0	147.8	163.4	170.4	
	165.3	150.4	142.2	135.7	122.9	117.9	111.1	100.9	89.6	78.7	56.6	37.3	
2021	25.4	44.1	58.9	72.3	86.4	98.7	111.6	128.6	142.7	154.8	163.5	165.7	
	155.2	127.8	129.5	121.6	108.8	104.0	102.2	97.2	88.4	80.3	59.7	39.9	

2821	26.7	44.4	58.1	71.7	84.7	96.2	108.9	125.8	140.3	154.3	163.4	161.9	
	150.	6134.	6126.	2118.	3105.	6102.	8100.	0	94.1	85.5	77.4	55.7	37.4
3621	24.4	40.4	52.6	64.4	76.1	87.6	101.4	118.5	132.8	143.6	154.6	154.6	
	144.	9129.	8123.	1116.	6103.	1100.	5	98.1	92.0	83.5	77.0	57.3	37.4
4421	22.8	37.3	47.3	58.0	68.6	79.2	90.4	104.0	112.8	120.4	135.7	144.1	
	142.	2138.	8144.	4142.	4126.	5122.	0113.	7	99.3	83.8	73.1	51.3	32.0
0429	26.4	42.4	53.4	65.8	76.8	85.9	94.1	103.6	106.7	108.0	112.0	112.3	
	110.	4113.	0120.	9124.	4115.	7113.	0105.	9	89.8	76.3	62.9	40.6	24.6
1229	21.4	37.5	50.2	61.5	73.4	84.8	95.8	109.8	1119.	7128.	9141.	4151.6	
	149.	2138.	3137.	0131.	9119.	6115.	1114.	0106.	3	92.4	82.9	61.0	41.2
2029	24.0	41.9	56.7	70.1	83.9	95.4	107.0	125.0	140.6	153.6	161.7	160.0	
	148.	5131.	0123.	5116.	3103.	9	99.0	96.9	91.5	83.6	77.4	59.2	40.1
2829	27.0	45.3	59.7	75.0	89.7	102.1	114.3	132.8	144.8	151.8	157.7	157.0	
	144.	8125.	7118.	7112.	8100.	7	96.3	95.0	90.6	83.7	77.5	58.5	38.8
3629	26.2	43.9	57.6	71.9	85.1	96.7	110.2	128.6	143.6	154.8	163.2	163.4	
	152.	4137.	7131.	5125.	5112.	2111.	4110.	6103.	3	91.3	81.7	58.1	37.0
4429	27.3	44.5	57.0	71.1	82.5	94.0	106.1	119.2	123.5	130.6	146.5	157.1	
	155.	6151.	5155.	8154.	8141.	3137.	3127.	9109.	1	92.3	77.4	51.3	32.3
0437	15.4	26.2	34.3	41.8	50.5	58.9	67.1	78.1	86.1	92.9	100.8	101.6	
	102.	1103.	3110.	5111.	5100.	9	94.9	87.5	76.3	64.4	54.5	37.3	22.4
1237	20.4	37.2	51.6	61.4	73.9	85.9	9100.	0123.	1139.	6149.	9156.	3160.7	
	154.	5140.	7137.	5132.	7120.	6111.	2107.	1	99.7	86.3	77.6	59.8	39.3
2037	32.0	51.1	65.0	80.1	91.8	102.6	113.9	128.9	136.3	147.3	161.9	163.3	
	151.	6135.	8128.	2121.	0106.	9104.	3101.	6	94.4	86.5	78.1	56.1	37.4
2837	28.9	46.9	59.5	72.7	83.9	92.9	102.6	114.6	122.6	131.5	142.8	146.2	
	135.	3120.	6115.	4109.	5	97.9	94.9	93.2	89.3	81.6	75.4	56.9	38.8
3637	28.5	46.3	58.6	71.5	83.7	95.2	107.0	121.0	131.6	138.4	153.1	155.4	
	145.	4131.	6123.	8117.	1103.	3101.	3	97.9	89.1	80.6	72.8	51.2	33.9
4437	6.4	18.9	34.2	46.2	55.6	66.2	77.7	79.7	90.7	112.3	126.8	137.8	
	136.	5132.	5123.	8126.	4125.	4114.	6105.	9101.	4	90.4	74.9	66.6	55.2
1245	38.9	60.5	73.3	86.8	96.6	103.3	109.4	116.4	116.7	116.3	120.5	124.0	
	122.	9116.	3113.	3107.	4	94.0	88.4	82.1	71.1	59.7	51.4	35.6	22.8
2045	52.2	84.2	2103.	4120.	1131.	6139.	7144.	9152.	3150.	3147.	4147.	8148.2	
	141.	3126.	4119.	6114.	3101.	3	97.0	95.3	88.1	76.3	66.9	47.4	31.5
2845	41.3	64.2	79.0	94.2	103.8	1111.	9120.	1134.	2140.	9143.	144.6	138.0	
	125.	2111.	6105.	1100.	1	89.4	89.0	88.7	82.6	73.3	65.7	46.8	31.1
3645	49.5	75.2	89.3	103.	4111.	5115.	2118.	0125.	2125.	1122.	3126.	5129.4	
	126.	3118.	6114.	7110.	4	97.1	92.1	86.2	74.8	63.5	51.0	38.3	24.5
4445	29.4	48.0	59.7	70.9	79.7	84.9	90.2	99.2	100.7	101.1	1103.	8102.7	
	98.1	91.5	88.5	84.7	75.5	71.3	66.4	57.9	48.3	41.7	29.1	18.0	

CYCLE 1 DATA

DATASET 17, October 12, 1976

Reactor Conditions

Core Average Exposure, 7312 MWd/t

Core Thermal Power, 2129 MWT

Dome Pressure, P, 981 psia

Core Flow, 75.8 Mlb/hr

Inlet Subcooling at P, 21.0 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	32	48	48	48	48	48	48	48
48	48	48	24	48	10	48	10	48	24	48	48	48	48
48	48	32	48	28	48	28	48	28	48	32	48	48	48
48	20	48	8	48	8	48	8	48	8	48	20	48	48
48	48	26	48	30	48	30	48	30	48	26	48	48	48
48	18	48	10	48	8	48	8	48	10	48	18	48	48
48	48	26	48	30	48	30	48	30	48	26	48	48	48
48	20	48	8	48	8	48	8	48	8	48	20	48	48
48	48	32	48	28	48	28	48	28	48	32	48	48	48
48	48	48	24	48	10	48	10	48	24	48	48	48	48
48	48	48	48	48	48	32	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	43.1	72.9	91.6	104.4	117.0	123.7	126.7	136.1	135.1	131.6	129.0	126.6	
	116.0	103.1	98.3	93.1	81.9	77.6	73.9	66.0	55.8	49.2	36.1	24.2	
2805	38.3	62.7	79.8	93.8	104.5	112.0	119.0	134.4	139.9	138.8	136.8	129.6	
	117.8	102.7	97.4	91.2	80.3	76.7	73.6	65.3	55.9	49.8	35.5	23.3	
3605	38.4	59.8	71.5	82.2	89.3	94.4	98.4	104.4	105.0	103.0	103.7	104.0	103.2
	97.4	90.7	87.9	83.5	74.3	71.4	65.6	56.8	48.6	41.3	27.5	17.5	
1213	22.1	39.3	52.1	62.3	73.8	84.4	96.4	116.3	133.0	143.5	153.1	163.2	
	164.0	153.5	149.5	114.0	2125.1	1115.3	109.2	97.5	80.7	69.9	52.4	36.2	
2013	29.9	49.9	63.0	74.9	86.1	95.4	105.6	118.8	128.3	139.5	153.8	157.5	
	151.3	136.9	129.9	122.6	6109.0	105.2	104.1	95.2	82.7	74.2	54.1	35.8	
2813	32.9	51.8	63.6	77.3	90.1	1100.9	114.4	130.8	141.8	153.1	166.8	168.4	
	154.5	142.2	134.3	126.3	2112.4	1111.4	110.4	101.0	89.9	78.0	52.6	35.2	
3613	28.4	46.4	57.6	69.1	80.2	89.2	99.2	113.1	121.1	132.8	150.9	162.0	
	161.2	149.0	143.3	137.6	120.7	114.0	107.7	95.3	80.4	70.2	50.5	33.7	
4413	23.3	39.8	51.5	61.5	73.0	83.9	98.7	120.8	136.3	146.3	153.4	154.6	
	151.3	138.3	135.3	129.4	113.9	106.9	99.9	86.3	72.0	61.8	43.9	27.1	
0421	20.8	35.1	45.2	55.2	65.6	75.1	84.9	97.6	103.6	109.6	116.4	117.9	
	117.0	118.2	124.7	125.9	115.5	110.7	102.1	86.7	72.4	62.5	42.9	26.4	
1221	23.0	40.0	52.3	64.3	77.2	89.3	103.6	121.7	135.7	148.7	166.7	176.0	
	170.2	155.3	147.3	141.7	126.3	120.5	113.9	103.7	91.6	80.9	59.2	39.4	
2021	23.8	41.5	55.4	68.2	82.1	94.1	106.2	124.6	141.6	154.8	165.8	168.7	
	161.5	143.9	135.6	126.2	113.3	108.3	106.4	100.8	91.0	82.8	61.9	41.6	

2621	25.7	42.3	54.6	68.0	80.5	91.8	105.1123.	5139.4155.3165.9165.5				
	155.2138.	5129.4122.	0108.9105.	7103.3	96.5	87.5	79.4	57.1	38.3			
3621	22.6	37.7	48.9	59.8	71.2	82.3	95.8114.	7131.1145.6156.9157.7				
	148.5133.	4127.6120.	4106.3103.	6100.5	93.3	85.1	78.4	58.1	38.1			
4421	21.1	34.5	43.5	53.2	62.9	73.4	84.5	98.9103.	0119.7135.1145.1			
	145.3141.	8146.0144.	4128.2122.	8115.0	99.1	84.4	72.9	51.1	32.4			
0429	24.9	40.0	51.0	62.6	72.9	82.5	92.5102.	3106.6110.6116.6117.8				
	115.8118.	1125.4129.	9120.6117.	2108.7	92.0	77.2	64.3	41.7	25.7			
1229	19.8	34.8	46.8	57.0	68.6	79.4	90.7106.	1117.7129.1143.8154.1				
	153.7144.	3140.9135.	9124.3117.	7116.3108.9	94.7	84.1	62.8	42.8				
2029	22.5	39.7	53.6	66.3	79.0	91.0103.	2122.0137.	9151.4161.9163.8				
	153.8134.	3128.0121.	1109.5101.8	98.9	93.4	85.2	79.9	62.5	42.6			
2829	24.9	42.8	56.6	70.7	85.0	97.4110.	3128.2142.	4153.0160.6159.7				
	147.3130.	0121.7116.	1103.8100.0	98.1	92.2	84.4	79.3	59.0	36.8			
3629	24.6	41.3	54.0	66.8	79.0	91.2105.	1123.1139.	5153.6164.0164.3				
	156.1141.	3134.2127.	8114.7113.	1111.9104.5	92.4	82.3	58.2	36.9				
4429	25.8	42.0	53.7	66.4	78.1	88.9102.	0115.4123.	3132.2149.1161.2				
	159.6157.	6159.8158.	7143.1140.	0129.4110.4	93.1	78.2	52.3	32.9				
0437	14.4	24.7	32.4	39.1	47.5	55.8	64.1	75.3	84.7	92.5100.5104.7		
	105.0107.	3113.0113.	9103.8	97.3	89.9	78.0	65.5	56.4	38.6	23.6		
1237	18.8	34.3	47.2	56.9	69.0	80.4	94.1117.	7137.5150.0156.	2162.6			
	159.0147.	1142.1135.	4123.2113.	8109.9101.5	87.6	79.2	61.0	40.8				
2037	28.8	46.8	59.7	73.1	85.4	95.7108.	0122.8133.	9145.3160.9163.2				
	154.3139.	2131.4123.	2110.1105.	5102.7	95.2	86.8	78.6	57.4	37.9			
2837	27.0	43.9	55.7	68.1	78.3	87.6	97.7111.	4121.5131.	9145.1147.2			
	138.0123.	8118.5111.	8100.0	96.9	95.9	90.1	81.8	76.5	57.6	38.7		
3637	26.5	43.0	53.8	66.4	78.3	89.8102.	7118.7127.	0141.1156.	4158.3			
	149.7136.	4128.3121.	3106.6104.1	99.6	90.7	82.4	73.7	51.7	34.2			
4437	5.8	17.7	31.5	42.3	51.1	61.7	72.4	85.5106.	1122.4131.9136.4			
	138.5132.	7124.5127.	7127.1115.	7107.9102.1	91.4	75.1	66.8	54.9				
1245	36.2	55.8	67.8	79.7	89.7	98.0104.	9113.4115.	9116.8122.	7127.8			
	126.4119.	2115.9109.4	96.0	90.8	84.6	72.1	60.8	52.3	36.1	23.5		
2045	46.2	75.7	93.9109.	6122.4131.	9138.1148.	6151.2150.	2151.2153.7					
	147.6131.	3125.7119.	0105.7	99.7	97.6	91.3	78.8	68.6	49.9	32.5		
2845	38.0	59.4	72.7	86.2	97.1106.	5115.9130.	3139.9143.	7145.2140.5				
	128.8113.	8107.8103.0	91.9	90.4	89.6	84.2	74.6	66.4	47.3	31.6		
3645	45.5	68.4	80.6	94.3103.	2109.1114.	0122.1122.	9122.5127.	0131.6				
	128.3121.	4116.9112.2	98.5	93.9	87.5	75.9	64.4	51.6	38.5	25.1		
4445	27.4	44.5	55.4	65.9	74.6	81.3	86.6	96.0	98.9100.	4103.7104.0		
	99.4	93.0	91.2	87.1	77.4	73.3	68.1	59.1	49.3	42.6	29.9	19.0

Cycle 1 DATA

DATASET 18, November 29, 1976

Reactor Conditions

Core Average Exposure, 8109 MWd/t

Core Thermal Power, 2037 MWT

Dome Pressure, P, 996 psia

Core Flow, 78.5 Mlb/hr

Inlet Subcooling at P, 19.4 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	48	32	48	48	48	48	48	48	48
48	48	48	24	48	10	48	10	48	24	48	48	48	48
48	48	32	48	28	48	28	48	28	48	32	48	48	48
48	20	48	8	48	8	48	8	48	8	48	20	48	48
48	48	26	48	30	48	30	48	30	48	26	48	48	48
48	18	48	10	48	8	48	8	48	10	48	18	48	48
48	48	26	48	30	48	30	48	30	48	26	48	48	48
48	20	48	8	48	8	48	8	48	8	48	20	48	48
48	48	32	48	28	48	28	48	28	48	32	48	48	48
48	48	48	24	48	10	48	10	48	24	48	48	48	48
48	48	48	48	48	48	32	48	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	22.9	55.1	69.8	81.2	93.3	103.7	113.5	127.0	130.2	131.8	133.7	133.3	
	127.3	113.8	109.3	103.7	92.9	86.2	84.1	75.1	63.6	56.4	41.2	27.7	
2805	19.7	48.9	62.4	73.9	84.9	94.4	106.7	127.2	137.6	141.3	144.2	138.7	
	128.3	115.4	109.8	104.0	91.7	88.1	84.0	74.0	63.9	56.8	40.5	26.0	
3605	19.2	45.3	54.5	63.8	71.9	79.8	86.5	96.0	100.5	103.7	108.2	108.4	
	104.4	98.5	95.5	92.6	82.6	79.9	74.5	63.7	54.9	46.9	31.4	20.0	
1213	17.1	30.5	40.5	48.2	57.7	68.3	81.4	100.9	122.9	137.2	153.2	166.2	
	173.3	165.0	161.3	154.8	138.8	128.1	122.0	109.2	90.0	77.7	58.1	39.4	
2013	18.5	38.9	49.1	58.7	68.9	79.1	90.4	107.8	122.4	138.2	155.3	163.2	
	159.3	149.4	141.4	123.5	91.2	31.1	6.6	11.5	9.0	2.4	8.2	60.9	39.3
2813	15.6	40.4	49.8	60.8	72.0	84.1	99.4	117.5	132.6	152.0	169.4	173.3	
	163.7	154.4	147.3	139.6	126.3	125.3	212.4	1113.0	99.8	86.6	58.4	38.7	
3613	17.2	35.9	44.9	54.2	63.3	73.1	85.1	102.0	114.0	130.0	152.0	166.4	
	169.7	160.9	156.9	149.7	132.9	127.3	119.6	105.1	90.0	79.1	56.4	37.5	
4413	13.1	31.2	39.8	47.9	57.1	68.0	82.2	105.0	123.7	140.7	153.1	160.0	
	156.6	147.9	146.6	140.1	125.6	118.4	111.5	98.3	80.8	69.2	49.4	29.4	
0421	16.5	27.7	35.9	43.6	52.2	61.3	71.0	83.7	95.0	106.0	116.0	122.3	
	122.9	126.7	134.2	136.3	125.3	121.3	211.2	1.1	96.6	80.4	68.2	48.2	30.7
1221	13.6	31.8	41.4	51.1	61.7	73.3	87.7	106.2	122.3	141.9	164.9	177.7	
	177.0	165.1	158.7	152.7	139.0	132.1	112.5	81.4	91.0	9.9	90.2	64.7	42.6
2021	14.0	33.2	44.7	54.6	65.5	76.6	89.9	109.9	130.5	149.6	166.4	171.6	
	167.0	155.3	148.2	139.4	126.0	121.0	119.6	112.9	102.1	93.6	69.5	46.3	

2821	15.6	34.1	43.8	53.8	64.4	75.6	88.9	109.6	128.9	150.3	165.8	167.8
	160.0	143.0	141.8	134.9	120.9	117.2	115.0	107.4	97.8	89.4	64.0	42.2
3621	13.1	30.0	38.4	46.8	56.2	66.7	79.2	99.6	120.4	138.3	154.7	160.2
	154.4	141.8	137.5	130.5	118.9	114.2	111.6	103.3	94.5	87.5	65.3	42.0
4421	11.6	27.3	34.6	42.3	50.3	59.3	70.4	85.6	98.8	116.0	136.3	148.3
	152.3	152.4	156.4	155.2	139.2	135.1	126.0	109.4	92.4	80.4	56.9	36.2
0429	19.9	31.8	40.2	49.7	58.1	66.9	76.5	89.5	99.4	108.5	119.7	123.5
	124.1	128.1	135.3	141.3	130.1	128.3	118.9	100.9	84.6	70.2	46.2	27.9
1229	11.2	28.3	37.9	46.0	55.1	64.6	76.2	92.2	107.6	125.9	146.5	158.2
	161.4	155.4	152.3	148.3	135.0	130.5	128.5	120.1	104.6	93.7	69.8	47.4
2029	13.3	32.1	43.3	53.0	63.6	74.2	86.8	105.3	126.4	145.5	161.8	166.0
	159.8	145.2	139.0	132.0	119.5	113.6	111.2	104.4	95.1	88.7	68.2	46.3
2829	15.1	34.3	45.3	56.4	68.0	79.8	93.9	113.7	132.6	147.6	152.7	162.7
	153.4	140.8	133.0	126.1	114.4	111.4	109.4	104.1	95.1	87.8	64.9	41.4
3629	14.6	33.0	43.0	53.3	63.6	74.3	88.6	108.5	128.6	148.1	164.2	167.2
	162.7	152.6	140.0	126.6	125.8	125.6	116.6	104.0	92.3	65.2	41.2	
4429	15.5	33.5	42.1	52.2	62.1	73.1	85.4	100.9	113.4	130.2	152.1	166.2
	169.4	168.5	172.5	173.6	157.1	153.3	142.3	121.3	101.9	86.5	58.5	36.7
0437	11.4	19.7	25.8	31.2	38.1	45.7	53.4	65.1	75.4	85.9	97.6	104.3
	109.1	113.6	120.7	121.7	112.6	107.5	99.4	86.4	72.9	62.1	43.2	26.1
1237	9.8	27.3	37.5	44.9	54.8	64.8	78.9	101.4	124.5	142.5	157.6	167.3
	166.0	157.0	154.2	148.2	135.6	126.6	122.4	112.5	98.0	88.5	67.3	45.3
2037	17.7	36.7	46.9	57.4	67.8	77.6	91.7	109.0	123.0	142.7	162.6	167.9
	161.7	150.7	143.3	136.3	121.2	118.8	114.4	105.7	96.3	88.1	64.2	41.0
2837	16.8	35.1	44.3	53.8	63.4	72.8	83.7	100.0	113.7	129.7	146.7	151.6
	145.4	132.9	127.7	122.7	110.5	107.8	106.0	100.2	91.5	85.0	63.9	42.6
3637	16.3	34.3	43.3	52.6	62.9	75.1	88.8	106.4	121.1	139.9	160.6	167.1
	158.7	148.9	142.4	134.9	119.8	111.8	113.3	102.0	92.9	83.0	57.8	37.6
4437	3.6	14.1	25.5	34.0	41.0	49.6	59.5	71.4	92.3	112.2	125.1	136.3
	142.1	139.7	136.2	139.2	137.3	127.1	119.2	113.2	100.7	83.8	74.2	60.9
1245	17.7	43.1	52.7	63.0	72.0	80.9	91.6	104.1	110.6	116.5	127.4	134.3
	134.3	129.9	126.3	121.3	110.6	101.5	94.5	81.3	68.5	59.2	40.6	26.1
2045	21.5	58.4	72.1	86.4	100.3	111.9	122.9	138.3	144.8	149.2	155.6	158.0
	155.5	144.0	137.2	131.2	116.4	111.7	108.9	101.5	87.7	76.4	54.6	36.5
2845	19.7	46.6	57.1	68.4	78.5	90.4	103.8	122.3	135.4	144.2	149.7	148.7
	137.9	124.9	120.2	114.4	103.0	101.4	100.7	94.3	82.9	74.3	53.1	35.5
3645	24.9	52.8	63.4	75.1	84.3	93.2	102.8	115.6	121.9	125.9	131.6	137.5
	139.1	132.7	129.0	123.0	109.8	105.2	98.4	84.8	71.9	57.7	43.3	27.4
4445	16.6	34.8	43.8	52.2	60.2	67.1	75.7	86.5	92.7	98.4	106.4	108.2
	105.9	100.0	98.3	95.5	85.5	81.5	75.8	66.4	55.8	48.0	33.5	21.1

CYCLE 1 DATA

DATASET 19, December 29, 1976

Reactor Conditions

Core Average Exposure, 8530 MWd/t

Core Thermal Power, 2231 MWT

Dome Pressure, P, 987 psia

Core Flow, 78.2 Mlb/hr

Inlet Subcooling at P, 20.6 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	18	48	12	48	12	48	18	48	48	48	48
48	48	28	48	48	48	34	48	48	48	48	28	48	48
48	20	48	12	48	10	48	10	48	12	48	20	48	48
48	48	32	48	34	48	48	48	34	48	32	48	48	48
48	20	48	12	48	10	48	10	48	12	48	20	48	48
48	48	28	48	48	48	34	48	48	48	48	28	48	48
48	48	48	18	48	12	48	12	48	18	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	19.2	31.9	40.1	46.4	53.6	60.5	67.5	78.5	86.6	93.3	101.8	104.6
105.2	2105.8	1115.1	1117.6	108.5	104.1	98.1	86.7	71.7	61.9	44.8	30.2	
2805	20.6	33.8	42.5	50.4	57.7	64.5	71.5	82.1	88.8	94.3	101.8	104.7
104.7	1108.2	2117.4	4119.4	109.3	3106.0	0100.0	86.1	72.2	62.3	43.7	28.5	
3605	24.4	37.4	44.1	50.3	55.9	61.3	67.0	74.4	79.3	85.0	90.7	93.3
91.4	90.2	91.0	90.4	83.0	81.4	76.2	65.6	56.0	47.7	31.8	20.3	
1213	35.7	61.5	76.9	85.9	93.7	96.0	96.5	5102.6	105.4	108.7	111.3	116.3
116.8	1112.1	1117.8	8122.8	1119.2	2116.8	8113.3	3101.5	84.0	72.7	54.0	37.4	
2013	28.4	46.5	57.1	65.8	73.4	79.6	86.3	96.1	102.9	112.4	125.1	130.9
130.6	126.8	8127.2	2127.2	2120.8	1223.1	1123.0	0110.1	93.0	81.2	58.7	38.9	
2813	28.8	44.4	53.4	63.6	72.6	83.3	97.9	117.6	129.4	136.4	143.7	143.9
138.5	133.8	8135.7	136.9	130.5	5135.2	2133.1	1115.5	99.6	84.4	56.9	38.0	
3613	32.6	52.1	62.4	71.1	77.1	81.3	86.3	94.1	98.1	104.5	116.8	122.6
121.4	117.4	123.9	130.9	125.9	1124.0	0118.8	104.8	87.9	76.3	53.9	36.0	
4413	38.7	65.0	79.3	87.4	92.6	96.4	97.8	105.4	108.1	110.6	114.6	117.5
116.1	109.8	110.9	9109.5	102.8	100.5	95.8	84.9	69.9	60.8	43.8	26.6	
0421	24.4	40.3	50.1	57.7	65.7	72.4	79.5	89.0	94.0	99.2	105.2	106.5
106.2	2106.8	1111.8	8114.2	2105.1	1101.8	95.7	82.2	69.4	59.3	41.6	25.9	
1221	31.9	52.8	66.2	75.6	84.4	90.5	98.4	108.5	116.7	125.8	138.6	144.4
141.0	132.2	2130.7	131.0	126.6	6126.7	7124.3	112.6	96.3	84.1	60.4	39.9	
2021	46.5	78.6	97.8	110.9	9119.0	120.9	9120.3	126.0	122.0	119.9	119.9	123.8
120.8	113.3	114.2	115.8	111.2	116.3	111.4	111.8	99.2	89.3	65.5	43.3	

2821	40.9	64.9	78.8	90.4	98.2	104.5	112.3	122.1	122.7	120.7	120.4	120.5	119.5
	114.9	108.7	109.5	110.5	105.8	105.5	109.5	112.8	106.7	94.9	85.1	61.1	40.3
3621	44.1	71.0	85.4	96.1	103.5	106.5	107.5	112.0	112.3	109.9	109.3	111.4	112.6
	109.7	103.9	105.7	107.7	103.9	107.8	110.5	103.6	89.9	60.8	59.0	38.0	
4421	25.6	40.7	49.3	57.8	64.6	71.2	78.1	89.2	97.8	108.6	120.6	125.7	125.1
	123.7	122.4	127.0	128.0	116.3	115.8	110.0	97.4	82.5	71.8	50.7	32.1	
0429	24.6	38.8	47.9	56.8	64.3	71.8	80.1	90.6	96.8	101.7	108.7	109.0	109.7
	108.9	113.3	118.9	120.4	109.6	107.3	99.7	86.0	73.1	61.2	40.7	25.2	
1229	23.8	40.9	52.6	60.4	69.3	77.6	87.4	104.4	118.0	126.0	130.6	132.7	129.7
	129.7	121.5	121.9	122.1	118.0	118.3	120.0	111.8	96.1	85.1	63.5	43.0	
2029	36.9	62.4	79.3	90.3	98.9	103.0	108.0	118.0	120.7	119.6	118.7	118.9	114.5
	114.5	106.5	106.8	107.0	103.0	103.4	107.7	104.3	93.0	84.0	64.9	44.0	
2829	55.7	89.0	108.7	121.1	126.7	125.7	122.8	124.8	119.6	113.4	111.5	110.2	105.8
	105.8	97.5	98.5	99.1	94.5	97.7	102.7	99.3	90.0	82.6	62.4	42.1	
3629	35.1	57.0	70.5	81.4	90.7	99.7	110.9	111.0	124.7	126.7	128.7	128.9	122.3
	122.3	115.6	115.8	118.3	112.9	118.2	121.1	111.9	97.9	86.1	60.6	38.5	
4429	26.6	42.3	52.0	62.7	71.5	81.2	95.2	111.6	212.7	213.4	142.0	144.2	142.1
	142.1	141.6	145.6	144.4	131.6	128.9	122.8	105.5	89.4	75.5	49.8	32.2	
0437	25.1	41.7	51.5	59.0	66.2	72.2	76.2	82.4	87.9	92.2	210.0	2.2	99.0
	99.0	95.5	96.8	93.9	86.4	83.4	79.2	69.5	59.6	51.2	36.1	22.1	
1237	28.0	50.0	65.9	73.5	81.4	85.5	88.9	96.1	101.1	107.1	118.9	128.9	130.2
	130.2	22.6	32.8	39.7	135.0	130.3	127.4	116.7	97.4	84.1	63.7	41.6	
2037	49.6	77.6	93.2	210.5	511.1	611.3	911.4	412.1	211.9	811.9	212.2	712.4	120.2
	120.2	116.6	119.1	121.1	117.6	122.5	123.4	112.8	98.0	84.9	61.6	40.7	
2837	34.1	53.2	64.4	74.0	82.1	89.0	98.7	111.5	116.4	117.0	119.0	118.3	114.4
	114.4	107.1	108.2	110.3	107.4	112.8	116.8	109.1	95.2	85.3	63.4	42.5	
3637	48.9	77.0	90.8	101.4	107.2	107.9	109.3	112.9	111.1	112.3	117.4	120.6	117.8
	117.8	116.1	122.9	128.6	122.6	123.3	119.7	105.8	90.6	77.6	53.2	35.1	
4437	10.1	31.2	54.0	68.8	76.7	83.7	87.9	90.2	97.2	101.8	105.8	13.8	12.2
	122.4	121.1	111.2	81.3	0.112.7	105.6	6100.0	97.5	88.7	73.2	63.6	53.2	
1245	45.5	67.6	78.4	89.2	93.7	97.4	99.6	104.4	104.9	105.1	109.0	110.8	105.7
	105.7	99.2	210.0	210.4	92.2	90.4	85.9	74.7	63.1	54.7	38.4	25.0	
2045	23.9	38.6	47.4	55.6	64.2	72.4	82.3	95.7	107.2	120.8	135.0	145.5	149.2
	149.2	147.6	153.0	0154.5	143.5	137.8	130.8	114.9	93.7	79.9	57.7	38.7	
2845	23.8	36.8	44.7	53.3	60.7	68.9	80.6	97.8	110.6	120.0	129.8	133.0	131.6
	131.6	131.5	138.5	141.4	131.1	127.6	120.6	105.4	88.1	76.3	53.2	35.4	
3645	36.0	52.8	61.0	70.1	76.2	82.2	89.3	97.3	102.3	109.5	120.5	124.3	120.8
	120.8	116.3	117.8	118.3	109.0	106.2	99.7	86.2	73.0	58.0	42.8	27.8	
4445	34.6	54.3	64.3	71.1	74.7	76.5	76.2	80.6	80.9	81.7	83.6	84.4	81.9
	81.9	78.4	79.2	79.2	73.2	71.6	67.7	59.5	50.3	43.9	30.9	19.6	

CYCLE 1 DATA

DATASET 20, January 21, 1977

Reactor Conditions

Core Average Exposure, 8917 MWd/t

Core Thermal Power, 2131 MWT

Dome Pressure, P, 992 psia

Core Flow, 78.7 Mlb/hr

Inlet Subcooling at P, 20.0 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	18	48	12	48	12	48	18	48	48	48	48
48	48	28	48	48	48	34	48	48	48	28	48	48	48
48	20	48	12	48	10	48	10	48	12	48	20	48	48
48	48	32	48	34	48	48	48	34	48	32	48	48	48
48	20	48	12	48	10	48	10	48	12	48	20	48	48
48	48	28	48	48	34	48	48	48	48	28	48	48	48
48	48	48	18	48	12	48	12	48	18	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

2005	20.7	31.8	38.2	44.7	50.9	58.2	66.2	77.5	86.5	95.3	104.8	108.4
111.3	115.0	120.9	122.9	114.4	4111.0	0103.5	88.8	75.3	63.8	44.4	27.8	
2805	19.3	31.5	39.5	46.7	53.4	60.5	67.9	78.8	86.4	94.3	104.8	109.5
110.8	114.2	123.1	125.6	116.6	112.6	6105.3	92.5	77.7	66.8	46.6	29.5	
3605	20.3	33.1	40.3	45.6	51.5	57.0	62.6	71.0	78.3	84.8	91.9	95.7
95.6	94.3	96.3	96.9	91.0	88.3	82.5	72.9	62.3	54.1	37.7	23.1	
1213	38.5	60.7	73.0	81.5	87.0	90.6	94.9	102.6	107.1	110.8	116.0	120.2
119.6	119.1	126.1	131.7	126.3	125.7	7120.8	106.5	88.2	75.9	53.5	33.9	
2013	26.7	42.7	52.3	60.8	68.1	74.6	82.1	92.8	102.2	113.4	127.6	133.8
135.6	132.5	134.4	136.1	130.1	132.1	131.3	118.3	99.9	87.3	62.8	40.8	
2813	23.8	39.0	48.2	56.5	65.9	76.3	90.1	110.2	124.5	134.6	141.8	146.6
144.4	139.9	142.9	144.1	144.5	138.0	142.6	140.9	127.7	108.7	94.1	66.6	42.5
3613	29.8	46.8	56.9	64.9	71.9	77.1	82.6	92.1	98.2	106.3	118.9	125.5
125.8	123.6	131.6	138.0	132.5	131.9	126.9	112.4	94.8	82.8	59.1	38.6	
4413	33.8	56.6	71.1	78.4	84.9	89.5	93.5	102.3	106.0	109.0	115.0	120.8
119.3	114.1	111.6	116.3	109.2	106.6	103.5	93.0	77.4	67.6	49.9	33.0	
0421	21.9	36.4	45.4	52.4	59.6	66.7	74.0	84.6	92.6	98.2	107.2	110.8
110.4	109.8	117.8	119.1	110.5	106.3	98.7	92.1	74.6	64.6	46.3	29.7	
1221	28.1	47.5	60.0	68.3	77.2	84.4	91.3	103.8	111.2	122.3	137.1	144.3
144.0	135.9	134.8	136.8	131.8	131.3	132.7	120.8	103.1	90.7	66.9	44.8	
2021	40.4	68.9	87.5	99.8	108.5	113.0	114.8	120.8	120.3	118.6	119.3	123.8
124.1	117.3	119.4	119.8	116.3	118.6	122.9	106.2	96.1	72.5	51.6		

2821	37.8	60.1	72.8	83.2	91.2	98.7	108.3	120.1	1121.9	120.4	121.6	121.5
	119.0	114.5	115.4	116.9	113.0	116.8	120.1	114.4	102.2	91.1	65.8	43.4
3621	37.2	61.5	76.6	86.2	94.4	99.5	102.3	109.5	110.3	110.1	112.7	115.6
	114.7	108.8	111.9	114.0	110.0	114.0	118.3	112.7	98.2	88.2	67.3	46.3
4421	22.2	35.7	44.2	51.1	58.4	64.9	73.2	84.2	94.7	107.4	120.6	127.8
	128.3	126.4	132.9	134.5	125.5	123.1	119.1	106.1	89.8	79.4	58.0	38.6
0429	19.6	33.2	42.3	49.7	57.7	65.4	72.5	83.7	93.0	99.4	107.5	111.4
	112.1	114.8	122.5	125.3	117.0	112.4	107.1	94.8	80.1	69.3	48.8	30.4
1229	23.7	39.2	48.7	56.4	64.7	72.6	84.2	102.4	115.9	125.1	131.6	134.7
	130.3	125.9	128.3	127.3	122.5	126.1	127.3	117.9	101.2	89.9	65.2	44.1
2029	36.5	59.7	73.9	83.5	91.3	97.1	104.2	115.0	119.0	118.0	120.5	120.8
	118.1	111.1	114.2	113.2	113.6	108.6	111.1	211.5	110.5	98.9	89.5	67.8
2829	47.0	77.9	97.6	109.6	116.9	118.8	117.6	120.6	118.6	113.8	111.9	112.4
	109.4	102.4	103.4	104.0	100.0	103.4	109.6	106.6	96.8	88.5	67.5	45.3
3629	30.6	50.5	62.8	72.7	82.5	92.2	104.6	120.6	0124.0	2127.1	129.9	130.7
	128.1	121.1	122.4	0123.0	120.5	124.4	128.8	121.4	105.7	94.3	68.9	46.0
4429	21.3	35.8	46.1	54.7	64.3	73.8	85.3	105.1	121.9	132.5	142.0	145.1
	145.8	146.2	151.2	152.8	214.1	0136.5	130.7	117.6	99.3	85.7	62.9	40.0
0437	22.2	37.2	46.3	52.6	60.1	65.9	70.8	78.6	84.8	91.0	97.1	101.3
	102.2	97.6	99.8	97.5	91.7	88.4	84.8	75.8	64.7	57.0	41.6	27.3
1237	28.3	47.8	60.4	67.7	74.7	79.6	84.3	92.8	100.0	108.6	121.8	131.1
	133.2	131.0	140.2	214.4	140.5	137.5	134.7	121.1	8102.3	88.9	66.2	44.0
2037	41.6	67.9	83.9	96.2	104.0	0107.6	110.1	119.1	119.4	121.0	124.8	128.7
	127.3	122.8	126.8	112.9	112.5	113.6	131.0	131.9	122.2	106.3	91.6	67.2
2837	27.7	45.9	57.4	65.9	73.8	82.1	92.5	107.6	113.8	116.8	120.7	0121.9
	119.1	111.1	114.5	111.6	114.7	111.8	124.6	211.7	6102.9	92.4	69.6	47.6
3637	42.0	67.5	81.5	91.1	98.1	102.0	105.8	111.9	111.5	113.3	118.6	123.7
	123.2	212.1	612.9	413.6	113.0	213.1	312.8	0115.4	97.7	85.3	60.	40.3
4437	10.9	30.5	51.5	64.3	70.7	77.9	82.9	87.4	95.8	101.1	108.4	118.9
	126.1	126.5	119.3	31.19	111.9	711.2	410.6	9103.9	93.8	78.8	69.4	58.8
1245	37.9	59.3	71.2	79.7	85.7	91.2	95.3	102.9	104.6	106.6	111.6	0114.2
	111.0	105.8	106.9	98.9	97.4	93.0	81.9	69.5	5.7	41.7	27.1	
2045	19.7	33.2	42.3	49.7	58.1	66.9	75.9	89.4	102.0	115.9	134.8	146.9
	153.0	153.2	216.0	516.2	115.2	914.6	613.9	312.3	8101.9	87.0	63.7	41.8
2845	19.0	31.7	40.0	46.5	54.5	63.2	73.8	89.9	105.9	113.5	129.4	135.3
	137.1	136.8	145.8	145.6	614.9	514.1	413.6	713.0	911.6.3	96.9	84.4	62.6
3645	28.3	45.4	54.9	62.1	69.4	75.8	83.0	93.2	100.4	110.3	121.2	126.7
	126.3	122.0	0122.9	124.3	115.9	113.1	110.7.7	95.4	79.7	65.7	48.1	31.8
4445	29.0	47.7	58.2	65.2	69.5	72.1	73.3	77.8	79.9	81.7	85.3	86.7
	85.1	82.4	83.9	83.8	78.1	76.4	72.9	64.5	55.0	48.0	33.9	21.3

CYCLE 1 DATA

DATASET 21, January 25, 1977

Reactor Conditions

Core Average Exposure, 8966 MWd/t

Core Thermal Power, 2153 MWT

Dome Pressure, P, 994 psia

Core Flow, 71.3 Mlb/hr

Inlet Subcooling at P, 22.3 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	18	48	14	48	14	48	18	48	48	48	48
48	48	28	48	48	34	48	48	48	48	28	48	48	48
48	20	48	14	48	14	48	14	48	14	48	20	48	48
48	48	32	48	34	48	48	48	34	48	32	48	48	48
48	20	48	14	48	14	48	14	48	14	48	20	48	48
48	48	28	48	48	34	48	48	48	48	28	48	48	48
48	48	48	18	48	14	48	14	48	18	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

20	5	12.1	18.9	22.6	26.5	30.6	34.7	39.2	46.2	51.4	56.6	62.5	65.1
		66.5	68.8	72.9	74.6	69.6	67.7	62.9	54.6	45.9	39.4	27.3	17.1
28	5	11.8	19.1	24.1	28.3	32.2	36.5	41.1	47.3	52.0	57.0	62.4	65.1
		67.1	69.9	74.9	77.0	70.9	68.3	64.6	56.2	47.6	40.9	29.1	18.7
36	5	12.3	19.9	24.2	27.4	30.9	34.3	37.7	43.0	46.7	50.8	55.6	57.7
		57.8	56.6	58.1	58.8	55.3	53.7	50.7	44.9	38.1	33.0	23.3	14.7
1213		23.2	36.5	43.8	48.8	52.5	55.6	57.4	62.1	64.1	66.5	70.1	72.6
		72.5	72.8	76.5	80.5	77.2	76.6	73.9	65.3	54.0	46.3	33.0	21.6
2013		16.0	25.8	31.6	36.5	41.2	45.5	49.6	56.4	61.8	68.8	76.6	80.7
		82.7	82.1	84.6	86.7	85.1	87.6	85.1	75.1	62.9	54.5	39.2	26.2
2813		14.5	23.5	29.2	34.3	39.9	45.9	54.0	66.6	74.7	80.1	85.8	88.9
		88.4	86.5	89.9	93.6	92.0	94.5	90.8	80.7	67.8	58.2	41.0	27.0
3613		17.8	28.4	34.4	39.2	42.8	46.5	49.9	55.3	58.9	64.4	71.7	76.2
		76.6	75.9	81.1	86.1	82.9	82.2	78.1	69.8	58.3	50.9	36.6	23.8
4413		19.9	34.2	42.5	46.4	50.1	53.2	56.2	61.5	63.7	65.6	69.2	72.4
		72.9	69.0	70.3	71.1	67.4	65.1	62.8	56.8	47.6	41.1	30.5	20.0
421		13.5	22.2	27.7	31.8	36.3	40.7	45.1	51.0	55.5	60.1	63.9	65.3
		66.4	65.9	71.0	71.9	67.2	65.0	61.5	54.2	45.5	39.3	28.1	17.7
1221		16.9	28.5	36.2	41.6	46.5	50.4	55.1	62.7	68.2	74.6	83.2	87.1
		87.3	83.4	85.4	86.7	86.1	87.0	84.5	76.4	64.0	55.7	41.1	28.3
2021		24.7	42.3	53.6	60.3	65.8	68.0	69.0	72.5	73.2	72.0	72.9	75.8
		76.6	75.0	78.2	80.9	81.9	86.9	88.3	81.4	69.3	60.7	45.1	31.2

2821	22.7	36.1	43.8	50.1	54.9	59.4	64.7	71.4	73.1	73.3	74.3	74.6
	74.7	74.5	77.7	82.1	83.4	88.2	88.0	79.3	67.8	58.6	42.3	28.2
3621	22.5	37.1	46.1	51.7	56.8	59.5	61.2	66.0	66.2	66.2	68.2	70.3
	70.3	68.3	72.1	74.7	75.2	78.9	79.1	72.6	61.8	54.8	41.4	28.9
4421	13.3	21.6	26.7	30.8	35.1	38.9	43.3	50.6	56.8	64.6	72.6	76.9
	77.6	77.2	80.9	82.7	77.5	76.5	73.4	65.3	55.6	48.4	35.4	23.1
429	12.0	20.4	25.9	30.4	35.2	39.6	44.2	50.7	56.0	60.5	65.3	67.2
	68.0	69.0	74.1	76.0	71.5	69.4	65.0	57.8	48.1	41.8	30.0	19.3
1229	14.4	23.7	29.4	34.0	38.7	43.7	50.2	60.9	69.6	74.8	78.7	80.7
	79.7	77.4	79.3	81.7	80.5	82.7	82.2	74.6	63.0	55.1	40.5	27.6
2029	22.1	36.0	44.5	50.6	54.9	58.1	62.9	69.6	71.0	70.7	72.7	74.1
	73.4	71.4	74.4	78.7	79.5	83.6	83.5	76.5	65.0	57.2	42.5	29.4
2829	29.5	48.5	59.5	66.4	70.2	71.2	70.9	72.3	70.5	68.5	68.4	69.7
	68.8	67.0	70.4	75.0	76.5	82.1	83.0	75.8	64.6	57.2	41.8	27.6
3629	18.6	30.4	37.9	43.7	49.4	54.8	62.5	71.9	74.6	76.5	78.7	79.8
	79.6	77.2	79.8	83.7	84.2	87.8	87.4	79.2	67.4	58.9	42.3	29.4
4429	12.9	21.8	28.1	33.1	38.7	44.5	51.9	63.4	73.3	79.7	85.6	88.2
	89.2	89.1	93.5	93.9	88.0	85.1	82.2	72.9	61.7	52.8	38.2	24.9
437	13.6	22.6	28.3	32.1	36.6	39.8	42.7	47.7	51.1	54.9	58.8	61.5
	61.2	59.9	60.1	59.4	55.9	54.1	51.5	46.1	39.2	34.6	25.2	16.3
1237	17.2	29.1	37.0	41.2	45.2	48.2	51.4	56.4	60.0	65.5	73.5	78.5
	81.0	80.7	86.1	89.2	87.0	85.3	83.0	75.0	62.8	54.0	39.8	25.9
2037	25.5	41.1	50.5	57.7	62.7	65.6	66.5	71.0	71.9	72.7	75.0	77.8
	77.9	77.7	81.2	85.2	85.2	88.1	87.3	78.5	66.4	57.1	40.8	27.9
2837	17.0	27.9	34.9	40.1	45.0	49.7	55.9	64.8	68.9	70.7	73.7	74.9
	74.1	71.6	74.5	78.5	80.2	84.1	84.2	76.6	64.5	57.3	43.0	29.4
3637	25.3	40.6	48.7	54.5	58.9	61.2	62.4	66.1	67.2	68.2	71.6	75.1
	75.8	75.8	81.1	85.9	83.4	84.1	81.2	72.3	61.3	53.1	37.9	25.6
4437	6.7	18.4	30.8	38.4	42.8	46.9	49.7	52.6	57.2	60.6	65.4	71.2
	75.8	76.1	72.2	71.9	72.2	68.1	64.9	63.1	57.0	47.8	42.3	35.6
1245	23.2	36.0	43.1	48.4	52.3	54.9	57.7	61.8	63.2	64.5	66.8	67.9
	66.4	63.7	64.5	64.4	59.4	58.9	56.0	49.6	41.9	36.1	25.4	16.8
2045	12.1	20.3	25.9	30.3	35.3	40.5	46.4	54.5	62.3	71.5	81.1	88.4
	92.7	94.7	98.4	99.4	94.1	90.0	85.9	76.2	62.8	53.1	38.4	25.0
2845	11.7	19.4	24.5	28.6	33.4	38.3	44.6	54.7	64.0	71.9	78.5	81.6
	83.5	84.3	90.5	92.7	87.9	85.1	80.7	70.9	59.1	51.5	37.8	26.0
3645	17.3	27.5	33.2	37.5	42.1	45.8	50.1	56.6	60.8	65.9	72.9	76.3
	76.7	74.1	75.1	76.1	71.2	69.8	65.9	58.7	48.9	40.1	30.0	20.0
4445	18.0	29.1	35.2	39.3	41.9	43.3	44.1	47.5	48.5	49.5	51.6	52.4
	51.6	49.7	50.4	50.4	47.0	45.9	44.1	38.9	33.0	28.7	20.1	12.6

CYCLE 1 DATA

DATASET 22, February 23, 1977

Reactor Conditions

Core Average Exposure, 9180 MWd/t

Core Thermal Power, 2208 MWT

Dome Pressure, P, 995 psia

Core Flow, 78.6 Mlb/hr

Inlet Subcooling at P, 20.6 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full In.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	18	48	14	48	14	48	18	48	48	48	48
48	48	28	48	48	48	34	48	48	48	48	28	48	48
48	20	48	14	48	14	48	14	48	14	48	20	48	48
48	48	32	48	34	48	48	48	34	48	32	48	48	48
48	20	48	14	48	14	48	14	48	14	48	20	48	48
48	48	28	48	48	48	34	48	48	48	28	48	48	48
48	48	48	18	48	14	48	14	48	18	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

20	5	11.2	17.0	20.3	24.0	27.4	31.5	36.3	43.2	48.8	54.9	61.3	64.7
		66.6	70.1	73.6	75.3	69.0	67.4	63.4	54.4	45.8	39.3	27.1	17.4
28	5	10.4	16.8	21.2	25.1	28.8	32.5	36.8	43.2	49.0	53.9	60.1	64.1
		66.2	69.1	74.7	76.7	70.0	68.4	63.9	56.4	47.0	40.9	29.0	19.2
36	5	10.7	17.4	21.2	24.1	27.4	30.7	34.0	39.4	44.1	48.5	53.8	56.3
		56.9	55.8	58.3	58.7	55.0	53.8	50.9	45.0	38.6	33.3	23.6	14.9
1213		19.9	31.7	38.2	43.1	47.1	49.9	53.1	58.4	60.9	63.8	68.2	70.4
		71.9	71.8	76.5	80.3	77.3	76.3	73.7	65.4	54.0	46.3	33.2	21.7
2013		14.0	22.7	27.7	32.0	35.9	40.4	45.1	52.1	57.6	65.0	73.4	78.3
		80.8	80.9	83.2	85.8	84.6	86.6	84.5	74.2	62.0	54.0	38.9	25.4
2813		12.6	20.6	25.6	30.2	35.3	41.0	49.1	61.6	71.3	77.7	83.8	85.2
		85.8	85.5	89.6	93.6	91.8	93.8	90.6	80.1	67.4	58.0	41.0	26.9
3613		15.6	24.8	30.0	34.2	38.1	41.6	45.3	51.0	55.6	60.7	68.9	74.6
		75.1	74.3	79.4	84.6	81.9	81.7	77.8	69.1	58.1	50.9	36.2	23.9
4413		18.0	30.2	37.7	41.7	45.7	48.9	52.3	57.7	61.4	64.3	68.3	72.2
		73.0	69.8	70.8	71.2	67.6	65.7	63.4	57.5	47.6	41.7	31.1	20.7
421		11.7	19.1	24.0	27.9	31.8	36.3	40.4	46.9	51.6	56.9	61.8	64.5
		66.4	66.2	69.7	71.8	67.5	64.7	61.8	54.4	45.8	39.3	28.5	18.9
1221		14.7	25.0	31.5	36.1	40.9	45.1	50.0	57.4	63.2	70.6	79.9	85.0
		86.2	82.6	84.2	87.3	86.1	87.0	84.7	76.4	64.3	55.8	41.5	28.3
2021		21.4	36.6	46.9	52.9	58.5	61.8	64.4	69.3	69.1	69.8	71.8	74.9
		76.2	74.5	77.9	81.3	82.6	87.1	88.9	82.5	70.5	61.4	46.1	32.6

2621	19.8	31.7	38.6	44.3	49.2	54.1	60.2	67.8	69.5	70.2	72.2	73.9
	74.1	73.2	77.0	82.4	84.0	88.5	87.5	79.1	67.5	58.3	42.2	28.3
3621	19.9	32.8	40.5	45.6	50.6	53.6	56.7	61.2	63.0	64.0	66.6	69.3
	68.8	67.5	70.9	74.1	74.6	78.3	79.2	72.2	61.3	54.5	41.5	30.0
4421	11.9	19.1	23.7	27.5	31.5	35.2	39.9	47.4	53.9	62.0	71.0	75.0
	76.3	77.3	80.9	82.9	78.1	75.9	73.7	65.2	54.7	48.8	35.7	24.7
429	10.3	17.7	22.5	26.4	30.9	34.9	39.4	46.2	51.7	56.8	62.5	65.9
	67.5	68.8	74.4	75.5	71.0	68.9	65.8	58.7	49.0	42.3	30.4	19.4
1229	12.5	20.7	25.7	29.8	34.3	39.0	45.5	56.3	65.2	71.1	76.8	78.5
	78.6	76.4	79.2	81.6	80.3	82.6	82.0	73.9	63.2	55.3	41.0	28.4
2029	19.2	31.2	38.8	44.2	48.6	52.5	57.6	64.9	67.5	68.1	70.9	72.6
	72.6	71.0	74.4	78.5	79.9	84.0	84.2	76.0	64.4	56.6	43.0	29.9
2829	25.8	42.7	52.2	58.8	63.4	65.4	66.9	69.9	68.7	67.1	67.6	69.2
	69.1	67.2	70.7	76.1	78.0	82.3	83.4	76.7	65.8	57.7	42.3	28.7
3629	16.4	26.9	33.7	39.1	44.6	50.0	57.8	67.3	71.8	73.7	76.5	78.3
	78.2	76.5	79.4	83.1	83.3	87.5	87.0	79.1	67.0	58.7	42.6	29.4
4429	11.4	19.1	24.8	29.3	34.5	39.9	46.6	58.2	68.8	76.3	83.2	86.9
	88.2	88.6	93.7	93.7	88.1	84.8	81.1	72.9	61.4	53.0	38.6	25.8
437	11.7	19.7	24.9	28.2	31.9	35.6	38.7	43.5	48.3	52.9	57.6	60.5
	60.9	59.2	60.6	59.5	56.1	54.3	51.8	47.0	40.2	35.3	25.6	17.2
1237	14.9	25.2	32.1	36.0	40.1	43.1	46.5	52.1	57.0	62.5	71.3	77.6
	79.6	79.8	85.5	90.2	88.0	86.3	83.0	75.2	63.6	55.0	40.5	26.6
2037	22.0	36.0	43.9	50.1	55.1	58.2	61.6	66.3	68.8	69.0	72.5	74.2
	75.4	75.8	80.1	84.6	84.8	87.9	86.3	77.4	65.7	57.0	41.3	28.1
2837	14.7	24.3	30.4	35.2	40.0	44.6	51.0	60.4	65.1	67.9	70.8	73.1
	72.8	70.6	73.9	78.4	79.5	83.4	83.8	76.6	64.9	56.9	43.0	30.7
3637	22.4	36.1	43.4	48.5	53.0	56.2	59.1	63.7	64.1	66.7	70.4	73.6
	74.9	75.3	80.4	85.6	82.9	83.9	81.3	72.0	60.7	52.5	38.0	26.5
4437	5.9	16.2	27.2	33.9	37.7	41.7	45.2	48.2	53.9	58.2	63.1	70.2
	74.3	74.9	72.3	72.7	72.4	67.1	65.6	63.3	57.3	48.3	43.0	36.7
1245	20.1	31.3	37.6	42.4	46.4	49.9	53.3	57.8	60.2	62.0	65.4	67.4
	66.2	63.8	64.6	64.7	60.2	58.9	56.4	50.1	42.3	36.7	25.4	16.8
2045	10.5	17.7	22.7	26.6	31.5	36.2	41.7	49.9	58.3	67.5	76.1	86.8
	91.0	93.6	98.2	99.4	93.5	90.4	86.0	76.0	63.0	53.5	39.0	26.7
2645	10.1	16.7	21.3	25.1	29.4	34.1	40.1	50.1	59.2	67.8	75.5	79.2
	81.9	83.0	89.1	92.1	87.4	85.1	80.8	71.1	59.4	51.9	37.9	26.8
3645	14.9	23.9	29.0	32.9	36.8	40.9	45.7	52.5	57.4	63.6	70.8	74.4
	75.9	73.8	75.7	75.5	70.8	69.0	66.2	58.4	49.0	40.1	30.2	20.8
4445	15.3	25.0	30.5	34.1	36.9	39.1	41.0	44.1	45.8	47.7	50.5	52.2
	50.8	49.3	50.4	50.3	47.4	46.8	44.4	39.6	33.5	29.3	21.0	13.6

-113-

CYCLE 1 DATA

DATASET 23, March 7, 1977

Reactor Conditions

Core Average Exposure, 9354 MWd/t

Core Thermal Power, 2114 MWT

Dome Pressure, P, 1000 psia

Core Flow, 77.2 Mlb/hr

Inlet Subcooling at P, 20.4 Btu/lb

Control Configuration

Legend: 48, Full Out; 0, Full in.

48	48	48	48	48	48	48	48	48	48	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	28	48	32	48	28	48	48	48	48	48
48	48	48	18	48	14	48	14	48	18	48	48	48	48
48	48	28	48	48	48	34	48	48	48	48	28	48	48
48	20	48	14	48	14	48	14	48	14	48	48	20	48
48	48	32	48	34	48	48	48	34	48	32	48	48	48
48	20	48	14	48	14	48	14	48	14	48	20	48	48
48	48	28	48	48	48	34	48	48	48	48	28	48	48
48	48	48	18	48	14	48	14	48	18	48	48	48	48
48	48	48	28	48	28	48	32	48	28	48	48	48	48
48	48	48	48	48	20	48	20	48	48	48	48	48	48
48	48	48	48	48	48	48	48	48	48	48	48	48	48

Axial TIP Distribution, Bottom to Top of Core

See Figure 11

20	5	10.2	15.9	19.3	22.4	25.7	29.6	34.0	40.7	46.2	52.3	59.1	63.3
		65.7	69.0	72.9	75.0	70.3	68.2	64.0	55.7	47.2	40.3	28.6	18.2
28	5	9.9	16.1	20.2	24.0	27.5	30.9	35.1	41.9	47.2	52.6	59.4	63.0
		65.6	68.9	75.2	76.4	70.4	68.7	64.8	57.2	48.1	41.7	29.7	19.5
36	5	10.1	16.5	20.2	22.9	26.1	29.5	32.6	37.4	42.1	46.9	52.3	55.6
		56.4	56.0	57.7	58.2	55.2	53.9	51.0	45.5	39.0	34.0	24.2	15.0
1213	18.9	30.1	36.8	40.9	45.1	48.5	51.6	56.6	59.6	63.0	67.7	71.0	
		72.1	71.3	75.9	80.5	77.4	77.5	74.8	66.2	55.4	47.8	33.9	22.0
2013	13.2	21.6	26.4	30.4	34.6	38.8	43.0	50.0	56.0	64.0	72.9	78.1	
		80.3	81.0	84.0	86.7	85.6	87.8	85.6	75.6	63.1	54.9	39.4	25.7
2813	12.0	19.5	24.3	28.5	33.3	38.9	46.6	58.5	68.3	74.3	81.3	84.8	
		85.7	84.8	89.3	92.6	91.5	93.5	90.6	80.7	68.2	58.8	42.2	28.4
3613	14.6	23.2	28.3	32.5	35.9	39.5	43.6	49.0	53.0	59.3	67.8	72.2	
		74.0	74.0	79.7	85.0	82.5	81.9	78.2	69.8	59.1	52.2	37.6	26.1
4413	17.3	28.8	35.7	39.8	43.2	46.8	50.2	55.9	59.7	63.3	68.0	70.5	
		71.8	69.8	70.9	71.3	67.2	65.4	64.1	58.0	48.3	42.0	31.3	20.7
421	11.2	18.6	23.0	26.6	30.7	34.8	38.7	45.1	49.5	55.0	60.7	64.3	
		65.2	65.9	70.0	71.8	67.2	65.5	61.7	55.3	46.3	40.1	29.1	19.0
1221	14.0	23.7	29.8	34.4	39.0	43.1	47.6	54.7	60.9	69.1	78.4	83.3	
		84.3	82.4	84.8	86.5	86.5	87.3	85.3	76.9	64.9	56.6	41.8	28.5
2021	20.4	34.5	44.0	50.1	55.7	58.9	61.4	66.5	67.7	68.4	71.0	74.5	
		74.9	74.1	78.2	81.6	83.0	87.2	89.6	82.8	70.3	62.1	47.2	34.0

2821	18.5	29.9	36.5	41.7	46.5	51.4	57.3	64.9	67.6	68.9	71.6	72.9
	72.8	73.4	77.5	82.6	83.7	89.0	87.9	79.7	68.2	59.5	43.0	28.7
3621	19.0	31.3	38.7	43.2	48.2	51.5	54.9	59.5	61.5	63.3	65.4	67.9
	68.7	67.4	71.4	74.2	74.6	79.0	79.4	72.3	62.1	55.6	41.6	29.0
4421	11.3	18.3	22.6	26.2	29.9	33.7	38.1	45.3	52.3	60.7	69.3	74.0
	75.2	75.8	80.3	81.9	77.1	76.2	73.4	65.3	55.6	48.9	35.8	24.1
429	10.0	17.0	21.4	25.3	29.5	33.4	37.5	44.5	50.4	55.5	60.8	64.9
	67.4	68.7	73.7	75.0	71.0	69.1	66.2	58.7	49.7	43.1	30.5	19.1
1229	11.9	19.6	24.4	28.1	32.4	37.0	42.9	53.5	62.0	69.2	75.2	77.2
	77.5	75.6	78.5	81.1	79.8	82.6	81.7	74.4	63.6	56.1	41.1	27.7
2029	18.4	29.8	36.9	42.1	46.5	50.2	54.7	62.7	66.0	67.4	70.4	72.2
	72.1	70.8	74.4	78.8	80.6	84.3	85.0	76.8	65.5	58.0	43.3	30.0
2829	23.6	39.6	49.4	55.6	59.7	61.8	63.6	67.5	66.6	65.6	66.2	68.6
	68.4	66.5	70.3	75.6	77.4	82.1	83.3	77.1	66.1	58.6	43.3	29.2
3629	15.7	25.7	32.3	37.1	42.3	47.9	55.4	64.8	69.1	72.1	75.5	77.4
	77.6	76.3	78.7	82.6	83.4	88.3	87.5	79.3	67.8	59.8	43.4	29.1
4429	11.0	18.4	23.6	28.1	32.7	37.9	44.8	56.2	66.4	74.0	81.3	84.8
	86.5	87.5	93.0	93.8	87.8	84.9	81.2	73.3	62.3	53.7	39.0	25.2
437	11.1	18.7	23.5	26.7	30.7	34.3	37.4	42.1	46.4	51.3	56.0	59.1
	60.3	58.5	59.7	59.4	56.0	53.9	52.3	47.0	41.0	35.6	25.8	17.0
1237	14.1	24.0	30.6	34.1	37.8	41.1	44.6	49.6	54.8	61.0	69.6	76.0
	78.7	78.9	84.9	89.7	87.5	85.7	83.9	75.3	63.2	54.9	40.2	26.6
2037	20.9	34.1	41.8	48.0	52.7	56.3	59.4	65.0	66.9	67.6	71.7	75.1
	75.4	75.3	80.5	84.4	84.6	88.2	87.5	78.5	66.5	57.9	41.8	27.4
2837	14.1	23.1	29.1	33.3	38.0	42.7	49.2	58.0	63.0	65.7	69.9	72.4
	71.9	70.7	74.1	77.6	78.9	83.7	84.1	76.3	65.0	57.7	43.5	31.2
3637	21.3	34.4	41.4	46.6	50.9	54.5	57.2	61.5	63.1	65.1	69.5	72.7
	74.1	75.5	81.8	86.5	83.7	84.5	82.3	72.6	61.6	53.8	38.5	25.9
4437	5.6	15.5	26.0	32.1	35.7	39.9	42.9	46.4	52.6	56.9	61.4	68.0
	73.4	74.4	71.3	72.0	71.3	68.3	65.8	63.8	57.7	48.8	43.8	36.7
1245	19.1	29.8	35.7	40.5	44.7	47.8	51.1	55.8	58.3	60.8	64.0	65.9
	65.2	62.6	64.3	64.3	59.8	59.4	56.8	50.5	42.8	37.2	26.2	17.4
2045	10.1	17.0	21.8	25.6	30.1	34.8	40.1	48.4	56.6	65.8	76.8	85.1
	90.4	92.9	98.8	99.4	94.3	90.7	86.8	76.8	64.1	54.7	39.3	25.9
2845	9.8	16.2	20.5	24.0	28.2	32.4	38.6	48.0	57.7	66.2	73.5	77.8
	81.1	83.6	89.0	91.7	88.3	86.0	81.4	71.7	60.1	52.5	38.6	26.7
3645	14.3	22.9	27.7	31.4	35.5	39.7	44.1	51.1	55.8	62.5	70.0	74.0
	74.7	73.4	75.1	75.4	70.5	69.2	66.2	59.2	50.0	40.7	30.3	20.8
4445	14.8	24.3	29.5	32.8	36.2	38.1	39.5	43.0	44.5	47.0	50.1	51.6
	51.0	49.4	50.3	50.8	48.1	47.2	45.2	40.2	34.5	30.1	21.3	14.0