Reactor Core Physics Design and Operating Data for Cycles 1, 2, and 3 of Surry Unit 1 PWR Power Plant

EPRI

EPRI NP-79-2-LD
Project 519
Final Report
March 1979

Keywords:
Reactor Plant Operating Data
PWR Reactor History
Reactor State Point Data
PWR Core Design Data

Final

Prepared by
Georgia Institute of Technology
Atlanta, Georgia

ELECTRIC POWER RESEARCH INSTITUTE

Reactor Core Physics Design and Operating Data for Cycles 1, 2, and 3 of Surry Unit 1 PWR Power Plant

NP-79-2-LD
Research Project 519

Final Report, March 1979

Prepared by

GEORGIA INSTITUTE OF TECHNOLOGY
225 North Avenue
Atlanta, Georgia 30332

Principal Investigator
R. W. Carlson

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.

NOTICE

Prepared by
Georgia Institute of Technology
Atlanta, Georgia

ABSTRACT

Data which describe the design and operation of the Surry Unit 1 reactor during its first two complete cycles and the start of the third cycle have been collected. These data are intended to provide the necessary base for methods qualification calculations prior to the application of the calculation techniques for the prediction of the performance of reactors similar to Surry Unit 1. Surry Unit 1 is shown to be similar, with the exception of core size, to more recent pressurized water reactors that utilized fuel assemblies with a 15x15 array of fuel rods.

ACKNOWLEDGMENT

The collection of the data presented in this volume was made possible by the cooperation and assistance of Virginia Electric and Power Company (operator of Surry Unit 1), Georgia Institute of Technology, and Nuclear Assurance Corporation.

Project Manager for the Electric Power Research Institute was Dr. Robert N. Whitesel who contributed many helpful suggestions as the work progressed. Dr. Y.S. Kim of NUS Corporation has participated in the technical as well as general editing of the final report.

CONTENTS

ILLUSTRATIONS

TABLES

SECTION I. INTRODUCTION

The prediction of the reactivity, power distribution and other related performance data for a nuclear reactor requires a system of computer codes that is extremely complex. The approximations required to perform these calculations using the present generation of computers can introduce considerable uncertainty into calculated results. The only means available to reduce the uncertainty is to perform qualification calculations where the results of the system of codes is compared to the performance of an operating reactor. By showing that the calculations are in agreement with measured data for that reactor, confidence can be established in the system of codes so that it can be employed for predictive calculation on other similar power reactors.

The qualification of a system of computer codes is dependent upon the particular codes involved as well as the manner in which they are coupled. Thus, not only must the originator of the system of codes perform the qualification calculations, but also each user of the codes must independently qualify the system of codes to assure that none of the characteristics of the input preparation introduces an error that is uncompensated by other errors. Consequently, the design and operating data required to qualify a system of codes will have to be accumulated by a large number of organizations as part of their initial efforts related to the prediction of reactor performance.

The total amount of effort that would be required within the nuclear industry to individually accumulate the design and operational data that are required for code qualification would be excessive. Also the effort

required of the utility that operates the reactor would be prohibitive if aid were to be given to each person who requests data. Additionally, the requestors would be in a learning situation, thus placing additional burden upon the utility that provides the data.

To avoid such unnecessary duplication of effort a project has been undertaken by the School of Nuclear Engineering of Georgia Institute of Technology and Nuclear Assurance Corporation with the support of the Electric Power Research Institute. This is one of three such projects sponsored by EPRI to gather and accumulate the design and operating data for several operating power reactors and to present these data in a form that is usable for the qualification calculations. Considerable effort has been expended to assure that these data are correct so that the results of calibrations using these data will not be clouded by lack of confidence in the basic data.

The reactor that has been selected as the vehicle for this qualification data gathering project is the Surry Unit 1 reactor that is owned and operated by the Virginia Electric and Power Company (VEPCO). Surry Unit 1 is a pressurized water reactor that was designed by Westinghouse Electric Corporation and constructed by Stone and Webster in southeastern Virginia. Surry Unit 1 has completed its first two cycles of operation and started its third cycle in December 1975.

The data that have been gathered are presented in the data chapters at the end of this report and are maintained on the Georgia Tech computer. Any requests regarding the most current values for any of the parameters included in the data tables should be directed to the Georgia Tech computer

using the instructions included in the first chapter of the data section.

Every effort has been made to protect the proprietary interests that are involved in the design of the Surry Unit 1 reactor and its fuel assemblies. Where proprietary data were necessary to provide a complete description of the reactor or fuel an estimated number was substituted and so indicated, and the correct data have been withheld in such instances. Section II of this report is a brief description of the Surry Unit 1 reactor and its operating history. Section III describes the design data for the Surry Unit 1 reactor. Section IV describes the operating data and the techniques that were employed in reducing the data. The remainder of the report constitutes the data that have been collected and is organized into chapters which present the design data in Chapters 2, 3, 4, and 5, and the operating data in Chapters 6, 7, and 8. Instructions for obtaining computer generated listings of the data and any updates to the data are included in Chapter 1.

SECTION II. DESCRIPTION OF SURRY UNIT 1

Surry Unit 1 is a three loop reactor that is rated at 2441 MW(th) and 824 MW(e) which was designed by Westinghouse Electric Corporation. The reactor consists of 157 fuel assemblies, each of which has a 15x15 array of fuel rods with guide tubes to permit the insertion of a control rod with 20 absorber rods and a single instrumentation thimble.

The fuel assemblies in Surry Unit 1 represent the final stage of the design evolution of the fuel assemblies that utilized a 15x15 array of fuel rods. The first fuel assembly design with a 15x15 array of fuel rods was used in Connecticut Yankee and employed stainless steel for the fuel rod cladding and guide tubes. The Indian Point Unit 2 and Zorita reactors were the first reactor designs to utilize zircaloy as the cladding material. The Indian Point Unit 2 reactor was built in the United States while the Zorita reactor was built in Spain. Additionally, the R. E. Ginna reactor was designed with zircaloy cladding and began operation prior to the Indian Point Unit 2 making it the first operational United States reactor with zircaloy cladding. All three of these reactors retained stainless steel for the guide tubes to assure the structural strength while confidence in the performance of zircaloy was being developed. This was followed by the H. B. Robinson Unit 2 plant which employed fuel assemblies with a 15x15 array of fuel rods where both the fuel rod cladding and the guide tubes were fabricated from zircaloy. Following this plant the Surry Unit 1, Turkey Point 3, Surry Unit 2, D. C. Cook Units 1 and 2, and Turkey Point Unit 4 plants all employed the same fuel assembly design. These plants range in power from 2200 Mw(th) to 3250 MW(th) by changing the

number of fuel assemblies but without any change in the fuel assembly design. The similarities of the fuel assembly design and the evolution of the fuel design are further illustrated in Table 1.

The fuel for Surry Unit 1 and Turkey Point 3 was fabricated at the same time in Westinghouse's Columbia, S. C. plant. The similarity of enrichments and other fuel dimensions indicates the similarity of the fabrication techniques for the two batches of fuel. Likewise, the fuel for Surry Unit 2 and Turkey Point 4 was fabricated at the same time and also has dimensions reflecting the similarity of the fabrication techniques and philosophies that were employed.

The reactors that are being designed and built at the current time are utilizing a fuel design that has a 17x17 array of fuel rods rather than the 15x15 array that characterizes the Surry Unit 1 fuel and its contemporaries. The new fuel assembly design results in more fuel rods with a smaller diameter which reduces the linear heating rate for the fuel assembly and provides larger safety margins. The successful performance of the new fuel assembly design is being demonstrated by the introduction of two fuel assemblies into the second cycle of Surry Unit 1 but no transition to a complete core of 17x17 fuel assemblies is currently planned.

Fuel designs for the four similar Westinghouse plants (Robinson 2, Turkey Point 3, Turkey Point 4, and Surry 2) are identical with the exception of some fuel rod design and initial enrichment variations. The more important variations are summarized in Table 2. In no instance does the Surry 1 design data for initial core fuel vary significantly from these Westinghouse three-loop plants.

Table 1
Comparison of Surry 1 Fuel Design with Westinghouse 15x15 Fuel Designs

	Connecticutt Yankee	Indian Point 2	Robinson 2	Surry 1 Surry 2 Turkey Pt 3	Cook 1 & 2 Salem 1 & 2 Turkey Pt 4
Fuel Rod Array	15X15	15X15	15X15	15X15	15X15
Nominal Active Fuel Height, In.	120	144	144	144	144
Number of Grids/ Assembly	7	9	7	7	7
Number of Guide Tubes/Assembly	20	20	20	20	20
Number of Instrumentation Tubes/Asbly.	1	1	1	1	1
Overall Fuel Assembly Length, In.	137.060	160.100	159.765	159.765	159.765
Nominal Envelope, In.	8.426 X 8.426	8.426 X 8.426	8.426 X 8.426	8.426 X 8.426	8.426 X 8.426
Fuel Rod Pitch, In.	.563	.563	.563	.563	.563
Guide Tube Material	304 SS	304 SS	Zirc-4	Zirc-4	Zirc-4
Grid Material	Inconel 718	Inconel 718	Inconel 718	Inconel 718	Inconel 718
Fuel Rod, O.D., In.	.422	.422	.422	.422	.422
Fuel Rod Clad Thick., In.	.0165	.0243	.0243	.0243	.0243
Fuel Rod Clad Material	304 SS	Zirc-4	Zirc-4	Zirc-4	Zirc-4
Overall Fuel Rod Length, In.	126.686	149.726/ 149.370	152.060	162.06	152.360
Fuel Pellet, O.D., In.	0.3835	.3669/ .3659	.3669/ .3659/ .3649	.3659/ .3649	.3659
Fuel Pellet Length, In.	0.600	.600	.600	.600	.600
Pellet-to-Clad Diametrical Gap, In.	0.0055	.0065/ .0075	.0065/ .0075/ .0085*	.0075	.0075
Prepressurized	no	yes	yes*	yes	yes

* The first region of the Robinson 2 first core was not pressurized.

Table 2
Fuel Design Variations for Operating
Westinghouse Three Loop Plants

	Surry 1	Robinson 2	Turkey Point 3	Turkey Point 4	Surry 2
Region 1					
Enrichment, w/o U	1.868	1.846	1.85	1.85	1.85
Pellet density, % T.D.	93.5	92.9	93.8	93.8	93.7
Diametral gap, cold, in.	.0075	.0065	.0075	.0075	.0075
Fuel pellet O.D., in.	.3659	.3669	.3659	.3659	.3659
Region 2					
Enrichment, w/o U	2.573	2.561	2.55	2.55	2.55
Pellet density, % T.D.	92.9	90.9	92.8	92.9	92.8
Diametral gap, cold, in.	.0075	.0075	.0075	.0075	.0075
Fuel pellet O.D., in.	.3659	.3659	.3659	.3659	.3659
Region 3					
Enrichment, w/o U	3.117	3.096	3.10	3.10	3.10
Pellet density, % T.D.	91.9	89.9	92.0	92.8	91.8
Diametral gap, cold, in.	.0085	.0075	.0085	.0085	.0085
Fuel pellet O.D., in.	.3649	.3659	.3649	.3649	.3649

Table 3 compares the Surry 1 fuel design with the Westinghouse designed fuel assemblies which had a 14x14 array of fuel rods. An evolution of 14x14 rod array fuel identical to that seen for 15x15 rod array fuel can be traced. Note that the fuel rod design for 14x14 rod array plants is identical to that for 15x15 rod array plants in similar stages of design evolution. The fuel rod pitch in the 14x14 fuel assemblies is nearly identical to the pitch in the 15x15 fuel assembly, and the nominal active height and critical fuel rod parameters are essentially identical.

Table 4 offers a comparison of Surry 1 fuel design with Babcock and Wilcox and Combustion Engineering fuel designs. While there are major differences in these fuel designs, many of the parameters which are of importance from a fuel management standpoint, i.e., fuel rod and fuel pellet geometry, are quite similar.

The only variation in the design of the fuel in the 15x15 assemblies occurred in the density of the fuel pellet, the gap between the fuel and clad and the prepressurization of the helium-fill gas. These design changes resulted from attempts to compensate for the densification of the fuel column and subsequent collapse of the clad into the gaps in the fuel stack.

The operation and fuel management of the Surry Unit 1 were affected by the steps that were taken to compensate for the failures due to clad collapse. The first cycle was limited to 75% power during its first 3-1/2 months and was followed by a restriction to 92% power during the investigation into the causes of fuel densification. Additionally the reactor coolant system pressure was reduced to 2000 psia to extend the minimum predicted time to clad collapse. After approximately 9 months of operation the limitation

Table 3
Comparison of Surry 1 Fuel Design with Westinghouse 14x14 Fuel Designs

	Surry 1	San Onofre-1	Ginna	Point Beach 2	Prarie Island 1 Prarie Island 2 Kewaunee
Fuel Rod Array	15X15	14X14	14X14	14X14	14X14
Nominal Active Fuel Height, In.	144	120	144	144	144
Number of Grids/ Assembly	7	7	9	7	7
Number of Guide Tubes/Assembly	20	16	16	16	16
Number of Instrumentation Tubes/Asbly.	1	0	1	1	1
Overall Fuel Assembly Length, In.	159.765	137.060	160.100	159.765	159.765
Nominal Envelope, In.	8.426 x 8.426	7.763 x 7.763	7.763 x 7.763	7.763 x 7.763	7.763 x 7.763
Fuel Rod Pitch, In.	.563	.556	.556	.556	.556
Guide Tube Material	Zirc-4	304 SS	304 SS	Zirc-4	Zirc-4
Grid Material	Inconel 718	Inconel 718	Inconel 718	Inconel 718	Inconel 718
Fuel Rod, O.D., In.	.422	.422	.422	.422	.422
Fuel Rod Clad Thick., In.	.0243	.0165	.0243	.0243	.0243
Fuel Rod Clad Material	Zirc-4	SS	Zirc-4	Zirco-4	Zirc-4
Overall Fuel Rod Length, In.	152.06	126.686	148.646/ 149.726	152.060	152.360
Fuel Pellet, O.D., In.	.3659/ .3649	.3835	.3669	.3669/ .3659	.3659
Fuel Pellet Length, In.	.600	.600	.600	.600	.600
Pellet-to-Clad Diametral Gap, In.	.0075/ .0085	.0055	.0065	.0065/ .0075	.0065
Prepressurized	Yes	No	No	Yes	Yes

Table 4
Comparison of Surry 1 Fuel Design with Babcock & Wilcox
and Combustion Engineering Fuel Designs

	Westinghouse	Babcock & Wilcox	Combustion Engineering
	Surry 1	Oconee 1,2, & 3 3 Mile Island 1 & 2 Crystal River 3 Arkansas Nuclear 1 Rancho Seco Davis Besse 1	Maine Yankee Calvert Cliffs 1 & 2 St. Lucie 1 Millstone 2
Fuel Rod Array	15 x 15	15 x 15	14 x 14
Nominal Fuel Height, In.	144	144	136.7
Number of Grids/Assembly	7	8	8
Number of Guide Tubes/Assembly	20	16	5
Number of Instrumentation Tubes/Assembly	1	1	1 *
Overall Length, In.	159.765	165.625	167.804
Nominal Envelope, In.	8.426 x 8.426	8.536 x 8.536	8.180 x 8.180
Fuel Rod Pitch, In.	.563	.568	.580
Guide Tube Material	Zirc-4	Zirc-4	Zirc-4
Grid Material	Inconel 718	Inconel 718	Zirc-4
Fuel Rod, O.D., In.	.422	.430	.440
Fuel Rod Clad Thickness, In.	.0243	.0265	.0260
Fuel Rod Clad Material	Zirc-4	Zirc-4	Zirc-4
Pellet O.D., In.	.3659/.3649	.3700	.3795
Pellet Length, In.	.600	.700	.600
Diametral Gap, In.	.0075/.0085	.0070	.0085
Prepressurized	Yes	Yes	Yes **

* Instrumentation tube location is an empty control rod guide tube.
** Maine Yankee initial core was not pressurized.

on power was lifted and operation was only restricted by the need to compensate for the effects of the clad collapse. After achieving a burnup of about 9,000 MWD/MTU (three fourths of the cycle length) it was possible to achieve 100% power and the plant was operated at this level for the remainder of the cycle.

Surry Unit 1 was shut down prematurely in the fall of 1974 for refueling. Early shutdown was required to replace seismic coupling support on all steam generators. During this refueling 84 fuel assemblies were replaced. These assemblies included 52 of the high enrichment fuel assemblies that had been scheduled for three cycles of burnup and only 32 of the low enrichment fuel assemblies that were scheduled for discharge at the end of the first cycle. The second cycle was terminated after only 8 months of operation which resulted in a burnup of 6,915 MWD/MTU. This cycle was terminated early to permit refueling prior to the peak load periods during the cold months of the winter. The boron letdown curve suggests that a burnup of approximately 9,000 MWD/MTU could have been attained if this cycle had been operated to the depletion of excess reactivity.

The power history of the Surry Unit 1 reactor is shown in Figures 16a through 16d in Section IV for the period from July 1, 1973 to January 1, 1976. This period includes the first two cycles and the start of the third.

At the start of the second cycle two demonstration fuel assemblies which had 17x17 arrays of fuel rods were inserted into the reactor to begin irradiation in a power reactor prior to their full scale commercial application in other plants. The presence of these demonstration assemblies is reported to have very little effect upon the neutronic characteristics

of the reactor due to the similarity in the uranium metal to water ratio for the 15x15 and 17x17 fuel assemblies.[10]

SECTION III. DESIGN DATA

The data which describe the design of the Surry Unit 1 reactor are presented in Chapters 2, 3, 4, and 5 of the data at the end of this report. These data are organized into chapters that present the data for the fuel rod types, the fuel assembly types, the control rods and burnable poison clusters and the reactor core.

The data which are presented Chapters 2, 3, 4, and 5 were taken from references 1 to 6 with every effort being made to protect the information that has been identified as proprietary by the reactor vendor. Where it has been necessary to provide information that was proprietary, the best estimates of the authors have been inserted into the data tables and surrounded by asterisks to indicate that they are merely an educated guess and do not accurately represent conditions within the reactor or fuel. None of these data are considered crucial to qualification calculations.

The data in Chapter 2, which describe the fuel rod types that compose the various types of fuel assemblies, are entirely as-built data with the exception of the data for rod types 4X and 5. Fuel rod type 4X is the fuel rod that is used in the demonstration fuel assemblies that have a 17x17 array of fuel rods and is considered to be largely proprietary by Westinghouse. Fuel rod type 5 is used in the reload fuel that was inserted at the start of cycle 3 and as-built data were not available at the time of publication of this document.

The helium-fill gas pressures reported are estimates of the pressures and are surrounded by asterisks (**) to indicate that they are proprietary data which have been replaced by best estimates of the authors. Such

information is not needed for the neutronic calculations, but is included for completeness.

Similarly, in the remaining chapters any value that is surrounded by asterisks is a proprietary item that has been estimated by the authors. The data in Chapters 3, 4, and 5 are nominal design values that have been taken from safety reports and reference drawings.

The maps of the core that are presented in Chapter 5 include both the type of the fuel and the label of the individual fuel assembly. All of the fuel assemblies are oriented in the same direction so there is no rotation of fuel assemblies during refueling. The refueling patterns can be determined by following the location of given assemblies during subsequent cycles.

The data in the data tables is complemented by the drawings of the various components of the reactor that are presented in Figures 1 to 8.

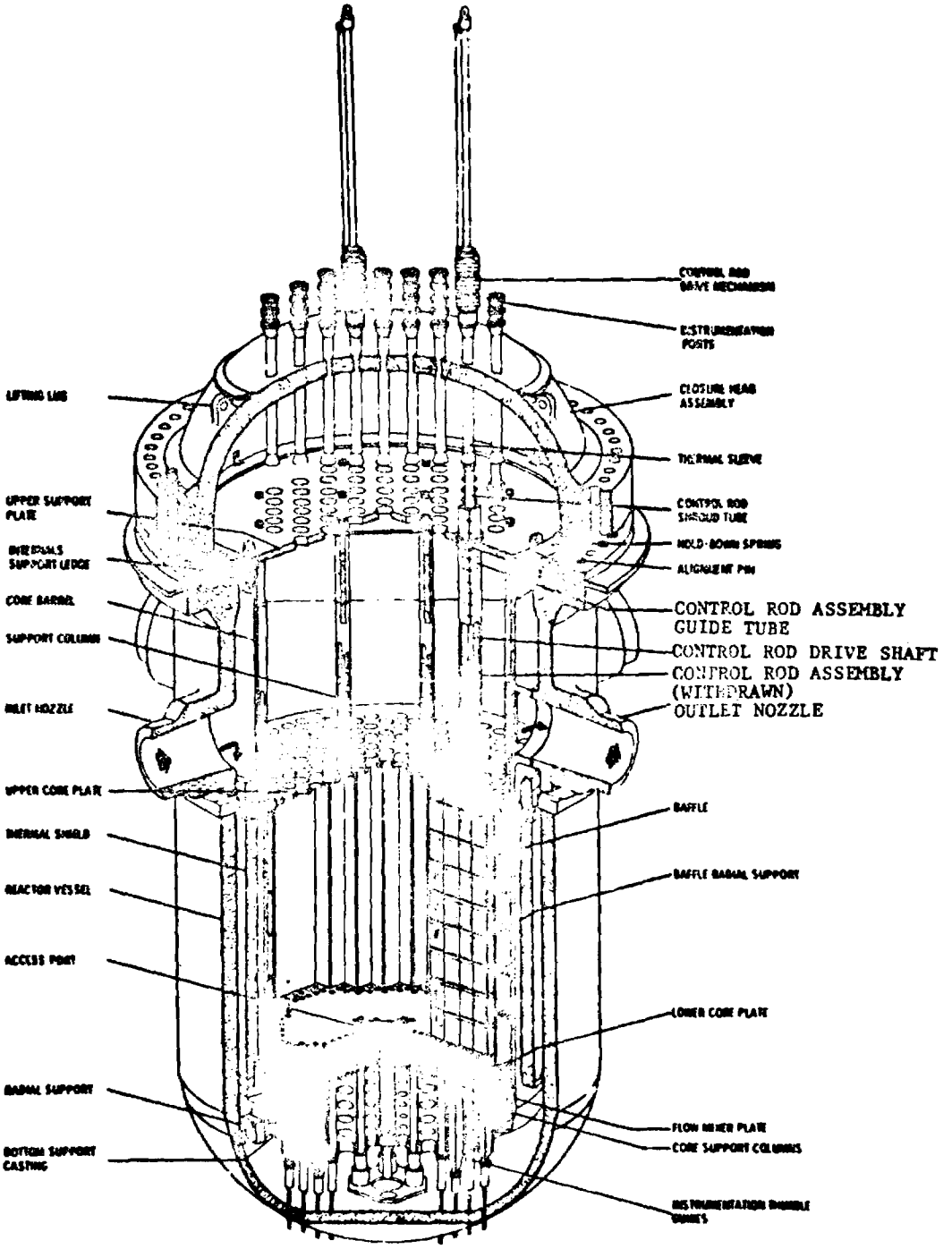


Figure 1 Reactor Vessel and Internals

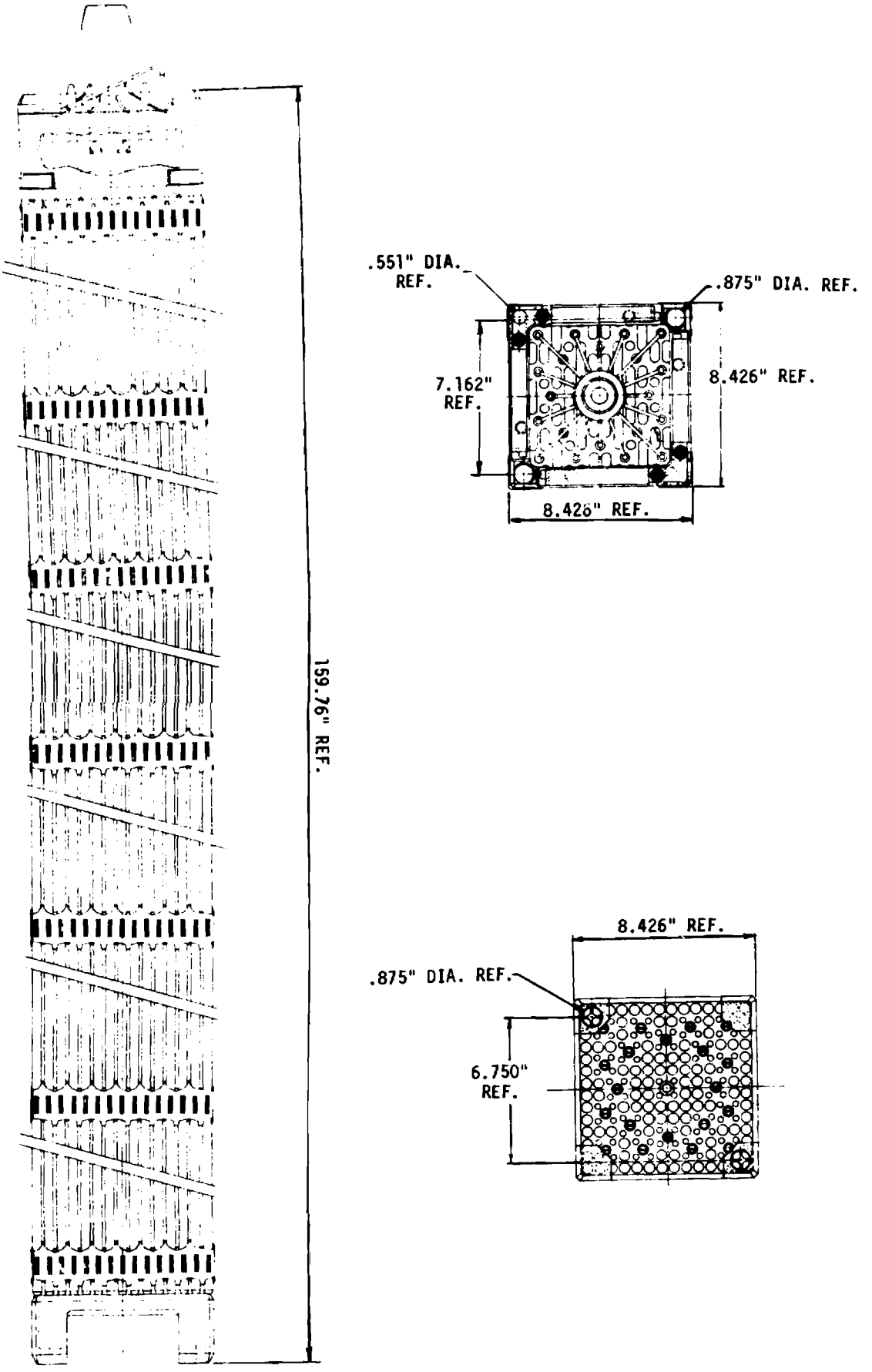
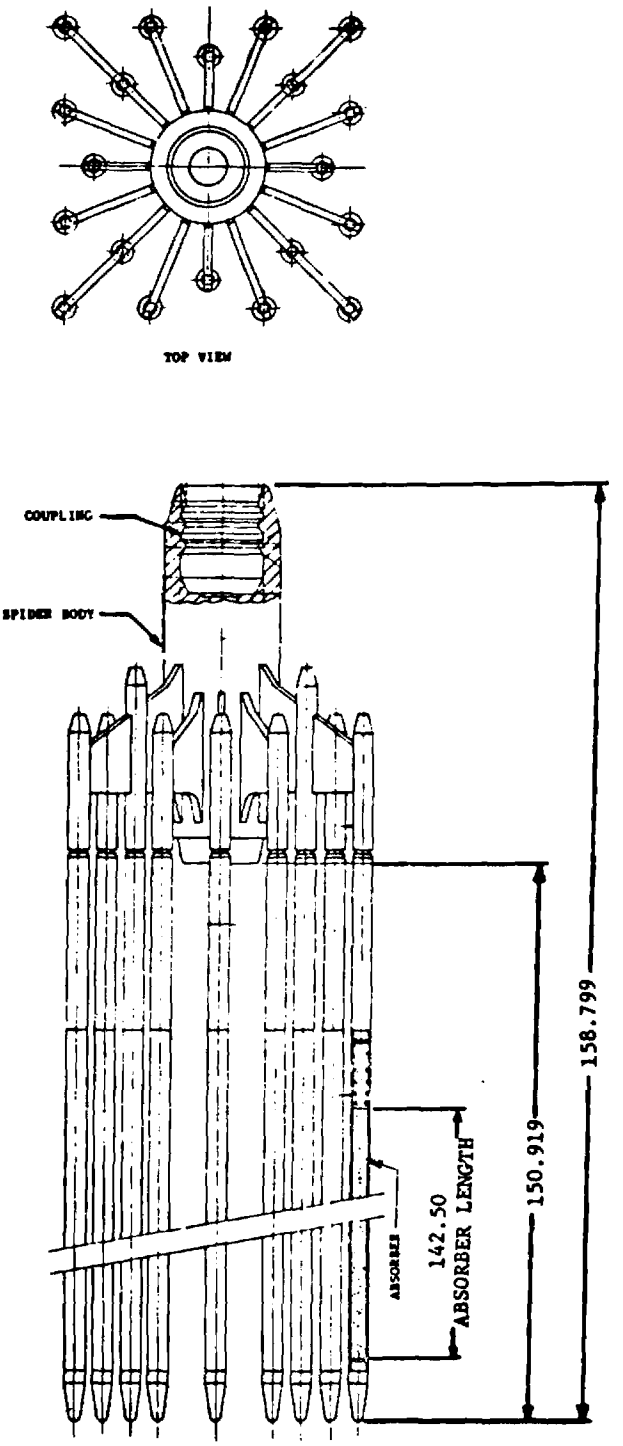
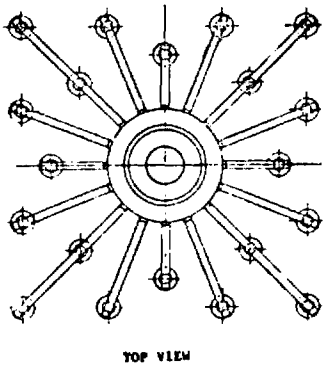


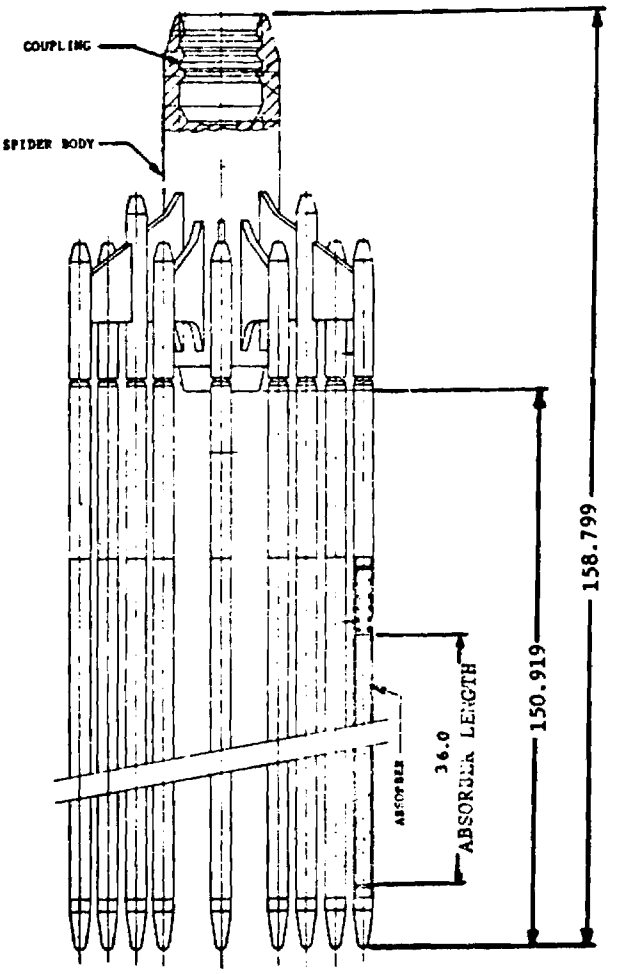
Figure 2 Fuel Assembly Drawing (15x15)



Dimensions are in inches

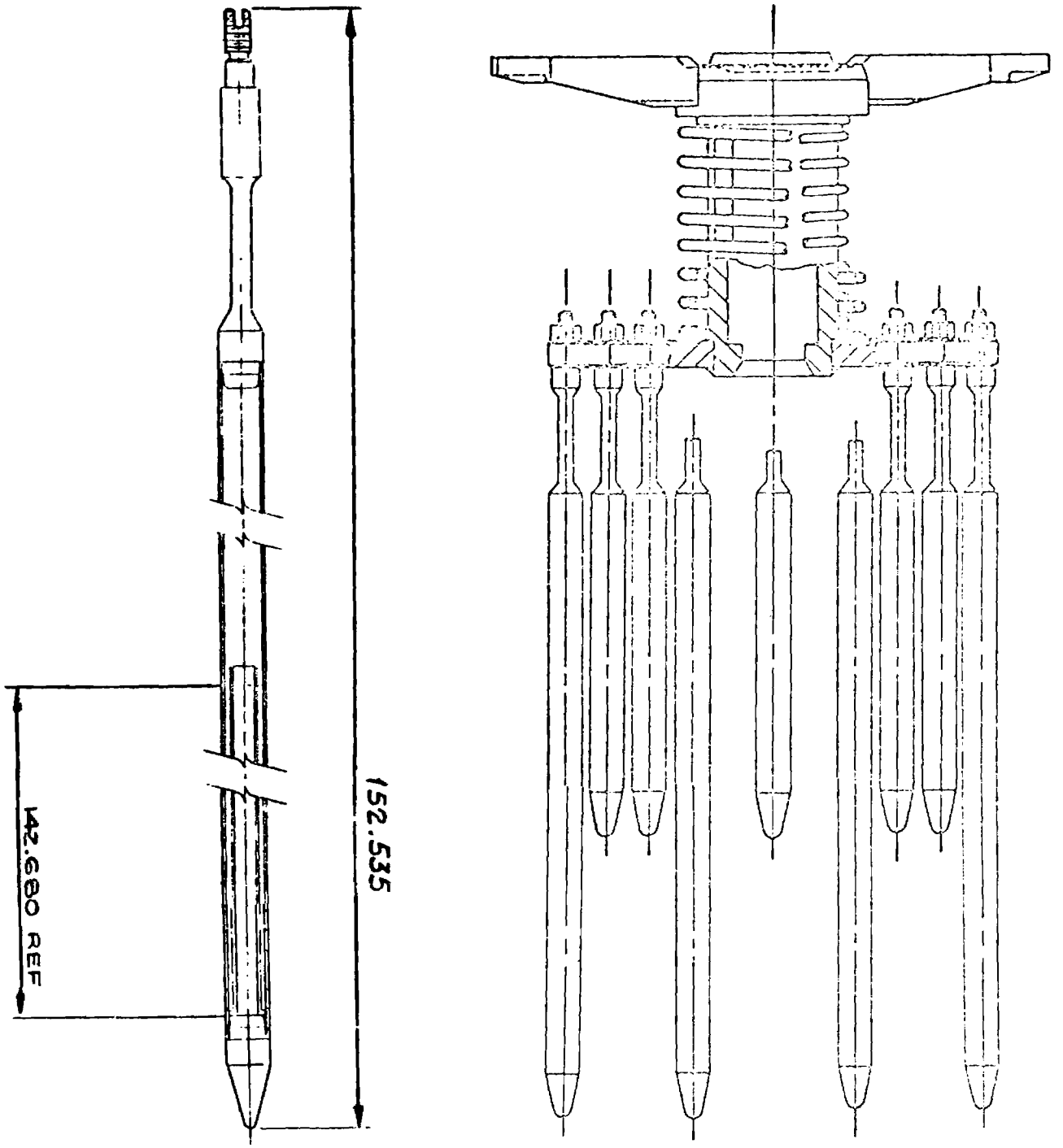
Figure 3 Full Length Control Rod Assembly





Dimensions are in inches

Figure 4 Part Length Control Rod Assembly



Dimensions are in inches

Figure 5 Burnable Poison Assembly

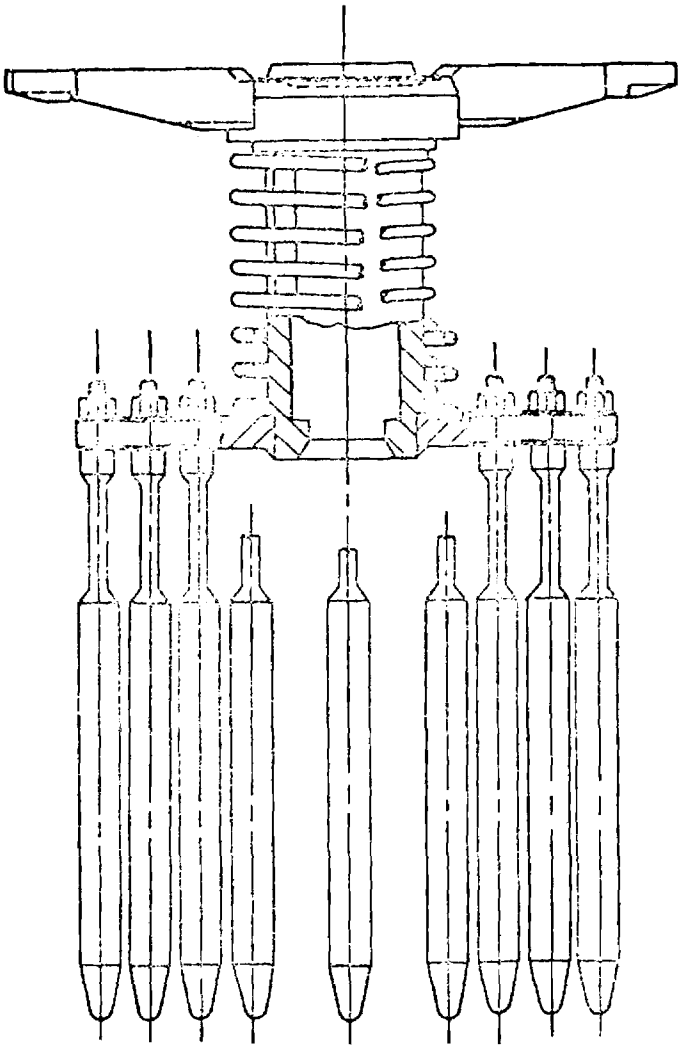
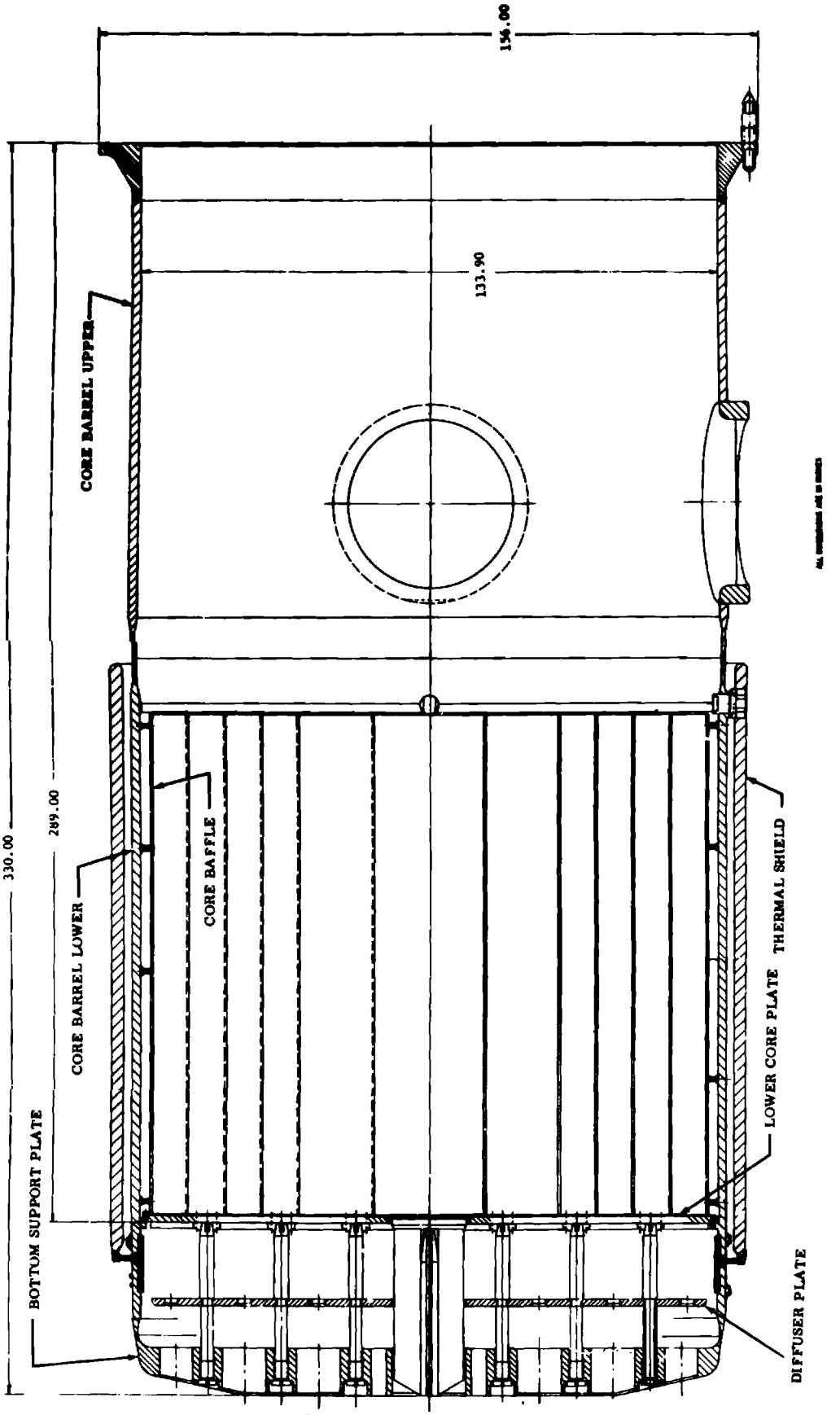


Figure 6 Guide Tube Plug



Dimensions are in inches

Figure 7 Core Support, Core Barrel and Thermal Shields

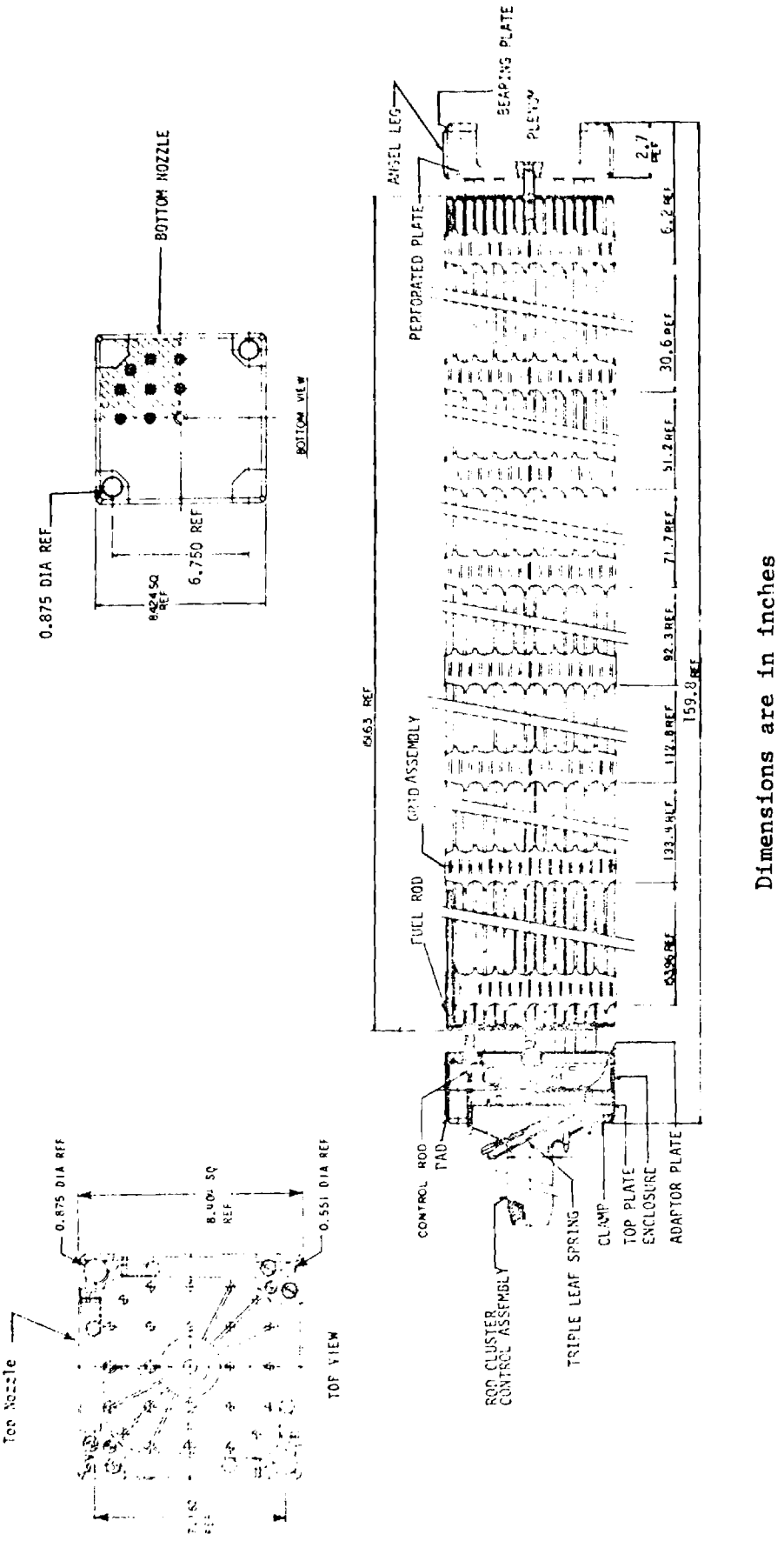


Figure 8 Fuel Assembly Drawing (17x17)

SECTION IV. OPERATING DATA

The operating data consist of two types that are designated as history data and state point data. The history data describe the progression of the cycle by presenting the values of important parameters throughout the cycle. The state point data describe the entire reactor performance at a specific point in time and include the measured power distribution in the instrumented fuel assemblies. Both types of data are included in Chapters 6, 7, and 8 for cycles one, two and three, respectively.

The history data include the reactor power, average coolant temperature, measured boron concentration and the control rod positions. The control rods are grouped into six banks labeled A, B, C, D, shutdown A and shutdown B, and an additional group of part length control rods. The part length control rods were in a fully withdrawn configuration at all times except during testing.

The points of measurement of the boron concentration and coolant temperatures are identified on Figure 9 which is a schematic of the primary coolant cycle system of Surry Unit 1. The coolant sampling points are located in the coolant outlet pipes between the reactor and the steam generator in all three coolant loops. It should be noted that the coolant injection points occurs in the cold leg of the system as the flow is returned to the reactor so that there can be no contamination of the boron measurements by coolant injection.

The coolant temperatures are measured in the coolant pipes at both the inlet and outlet to the reactor vessel at a point approximately midway between the reactor and the steam generator. The temperature is measured

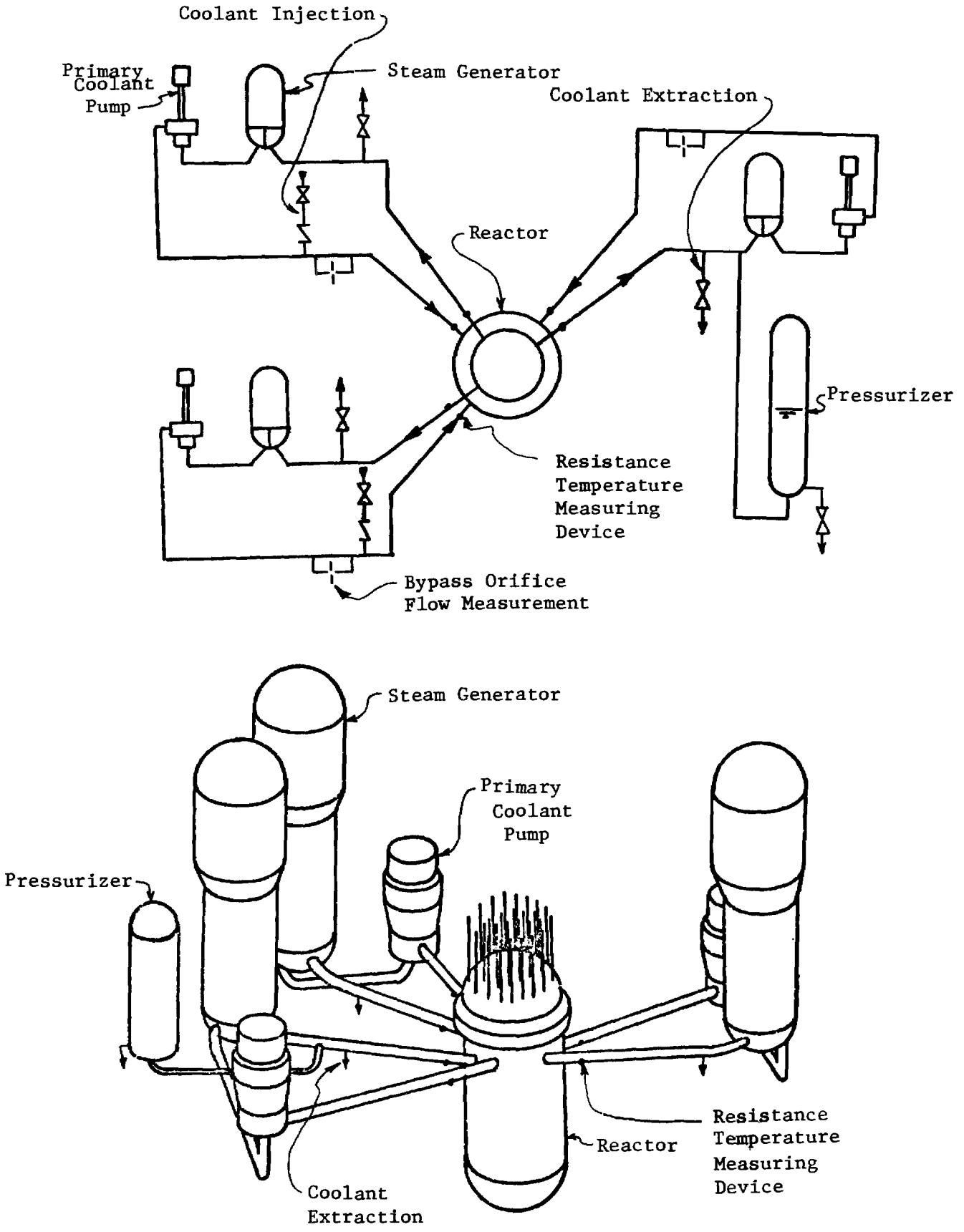


Figure 9. Surry Unit 1 Flow Diagram

by a platinum resistance temperature measuring device. The entries in the data chapters that present the coolant temperature are the average of all of the resistance readings which give the average of the coolant inlet and outlet temperatures.

The pressurizer is also indicated in Figure 9. The coolant pressure is maintained by a bubble of steam in the pressurizer which is in equilibrium with the primary coolant water. The pressure is monitored by measuring the temperature of the steam bubble with a platinum resistance temperature measuring device and relating the temperature to the saturation pressure.

The core power level is determined from an heat balance of the primary coolant loops. A description of the procedure is presented in Appendix C along with a description of the method employed to determine the coolant flow rate.

An additional column of boron concentrations is presented which includes all of the corrections to represent the value that would be expected if the control rods were all fully withdrawn, the power level was at 2,441 MWt and the coolant temperature was the nominal average coolant temperature. This column does not represent measured data, but is included to provide the data necessary for extrapolation to the end of cycle at full power. Caution should be exercised in using this column of data in that it incorporates corrections that introduce uncertainty into the data. These data were obtained from the output of the FOLLOW[8] code (described in Appendix A) which determines the corrections that are applied to the measured boron concentration to simulate nominal conditions.

The coolant pressure is included in the history data in Chapter 6 (cycle 1) because it was varied during this cycle to accommodate the interim decisions that were made to minimize the effects of the clad collapse. The coolant pressure is not included in the history data in Chapter 7 and 8 because the pressure was always 2,235 psig and was not intentionally varied.

The power distribution within the core is measured by a system of moveable detectors that consist of fission chambers that can be moved through the instrument thimbles of selected fuel assemblies. There are five fission detectors that can traverse a total of fifty (50) fuel assemblies. The five fission detectors are all traversed through a single assembly as part of the mapping of the power distribution to provide a means of establishing a relationship between output of the various detectors. Additionally, the axial position of the detector is established by reference to the depressions in the flux trace that are caused by the presence of the fuel rod grid spacers.

The output of the fission detectors is an electrical current that is recorded on a strip chart and also digitized for use with both the process computer and the remote computers at the main offices of VEPCO. The data from the fission chambers are reduced with the aid of the computer program INCORE[9] (described in Appendix B) which establishes the cross calibration of all of the detectors and determines the axial positions of the traces. The background is subtracted from each of the data entries, and a scan is made to identify any data that are unreasonable. The three dimensional power distribution within the core is computed by employing coupling factors that relate the power in each assembly to the flux in the instrument thimbles.

The coupling factors are derived from PDQ calculations on the power distribution for the correct combination of control rod positions, core fuel burnup and core power level.

The data that are presented in Chapters 6, 7, and 8 are the output of the INCORE program for the assemblies that were traversed by the detectors. The use of INCORE output eliminated the need for repeating the digitizing process, the cross calibration and the axial identification of each of the fifty tracers for a given core map. However, to eliminate the possibility of including data within this compilation that had been altered by the INCORE program, three criteria were employed to eliminate any of the output that had been substantially altered by the INCORE program. These criteria were:

1. Number of thimbles used in data analysis exceeds 1.
2. F_z from source is more than 0.5% different from the final F_z.
3. Any unusual behavior in the raw or reduced data.

The first criteria assures that the data represents the power in the indicated assembly and not a weighted average of several adjacent detectors. The second criteria assures that the INCORE program has not corrected the data by an amount that would compromise the application of the data for methods qualification. The final criteria merely insures that the data included in the compilation is free of unexplainable abnormalities. Thus, the data presented in Chapters 6, 7, and 8 represent the output of INCORE for those fuel assemblies that were traversed by the fission detectors with no alteration of the data.

For the purpose of verifying the INCORE results as valid representations

of the data from the flux maps, Figures 10 through 15 were prepared. In Figures 10 through 13 the results of INCORE data reduction are superimposed by the data from the strip chart for the corresponding fuel assemblies. The assemblies chosen for the first two comparisons were acceptable with regard to the three rejection criteria given previously. The data in these two figures are summarized in Figure 12 where the INCORE value for each point is plotted as a function of the value from the strip chart. The closeness of these points to the 45^{o} line indicates that very little error will be introduced by using the results of the INCORE data reductions.

To complement the data in these first three figures, two additional assemblies were chosen and comparisons between the INCORE results and the strip chart data were made. The results of these comparisons are presented in Figures 13 and 14 and summarized in Figure 15. These two assemblies were rejected from the tabulation of data because assembly A9 (Figure 13) results from INCORE were derived from instrument data for three thimbles and assembly D7 (Figure 14) results from INCORE were derived from instrument data for two thimbles. This supports the rejection of these and all similar fuel assemblies from the data presented at the end of this report.

A summary of the operation of the Surry Unit 1 reactor is presented in Figures 16a through 16d which includes a histogram of the power level, boron concentration, coolant pressure, coolant flow rate, coolant temperature and control rod position. Data for cycles 1 and 2 and the start of cycle 3 are included in these figures.

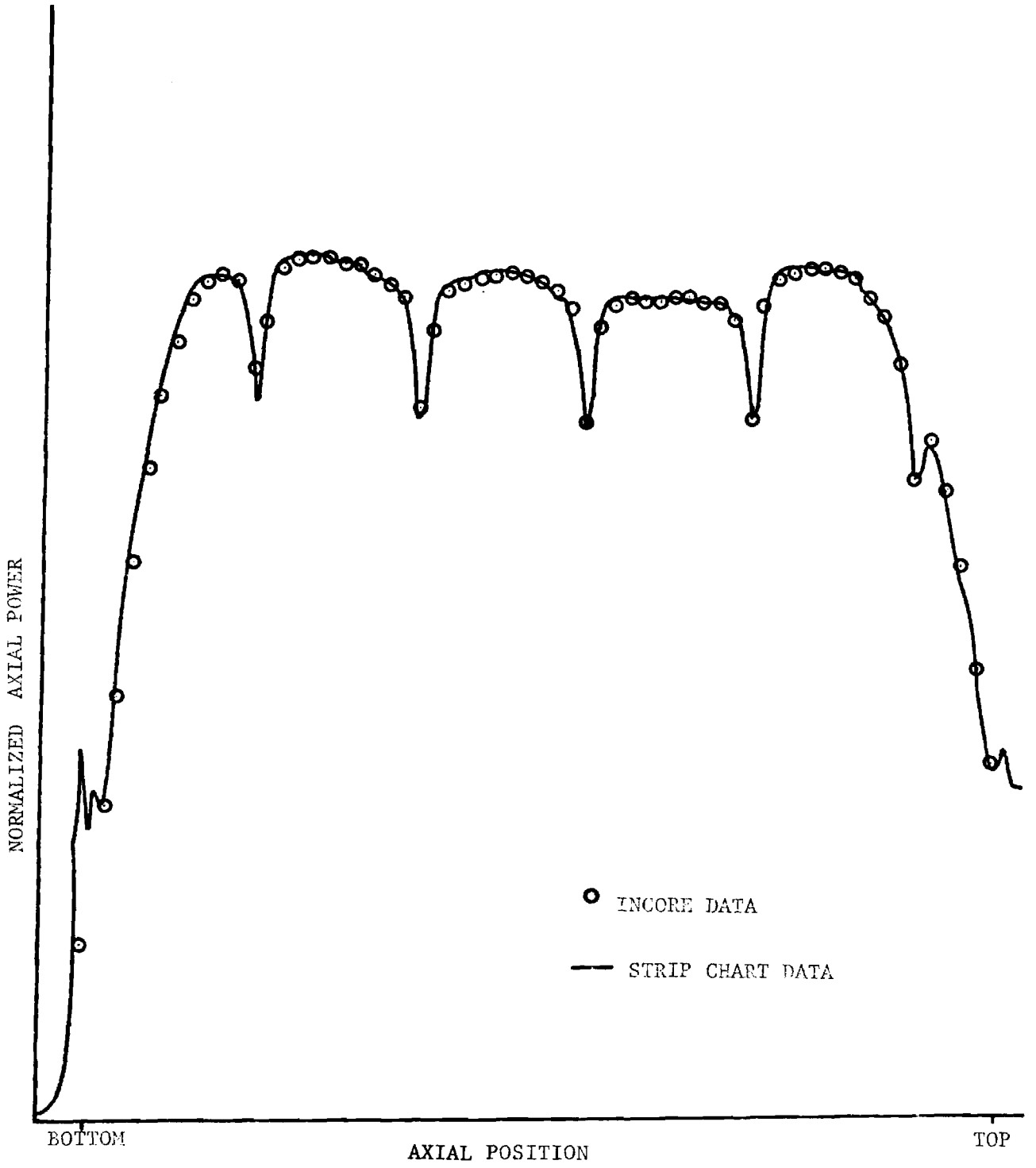


Figure 10. Axial Power Profile in Assembly L11,
Surry Unit 1, Cycle 2, Map 17

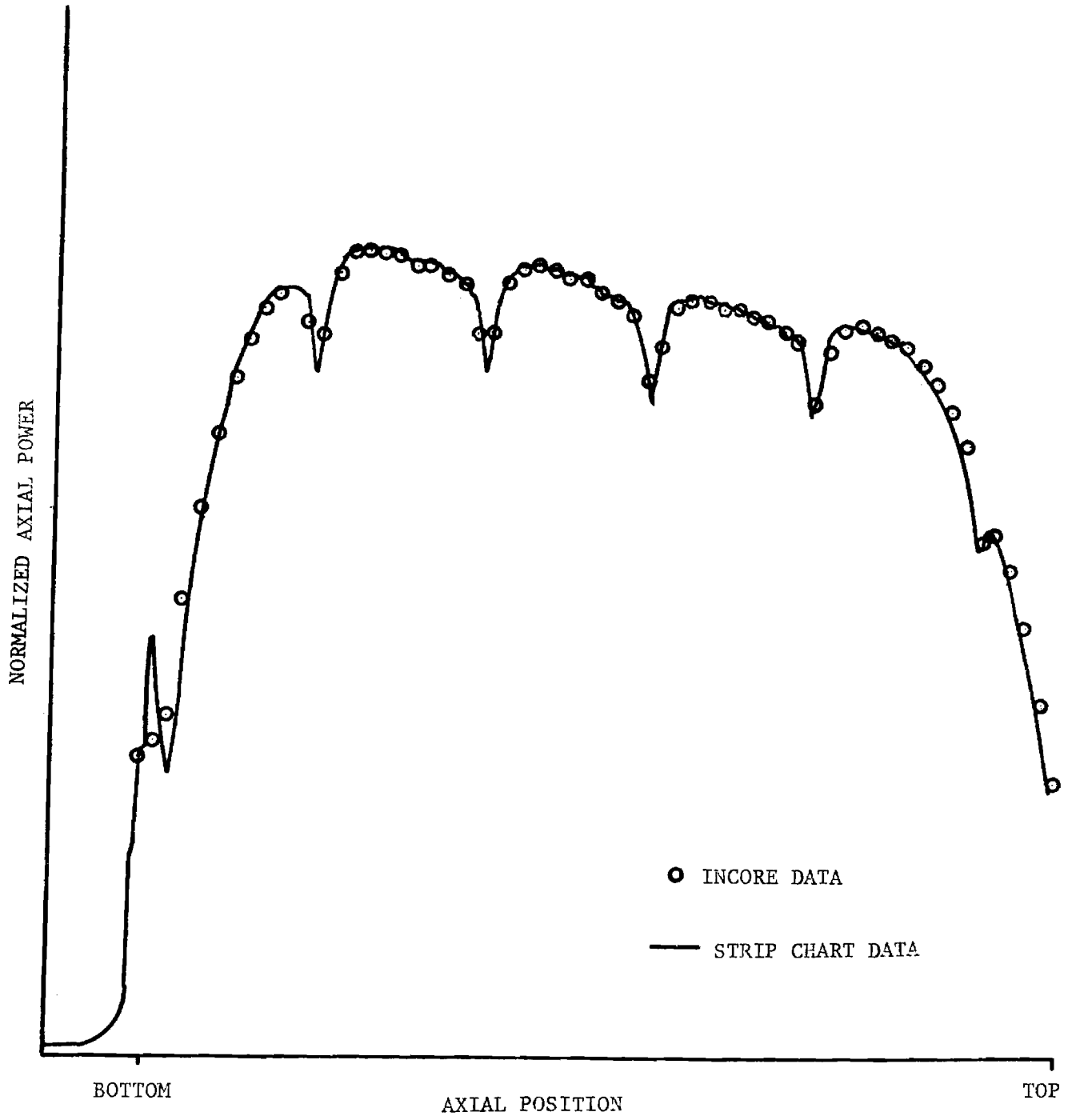


Figure 11. Axial Power Profile in Assembly N5,
Surry Unit 1, Cycle 2, Map 17

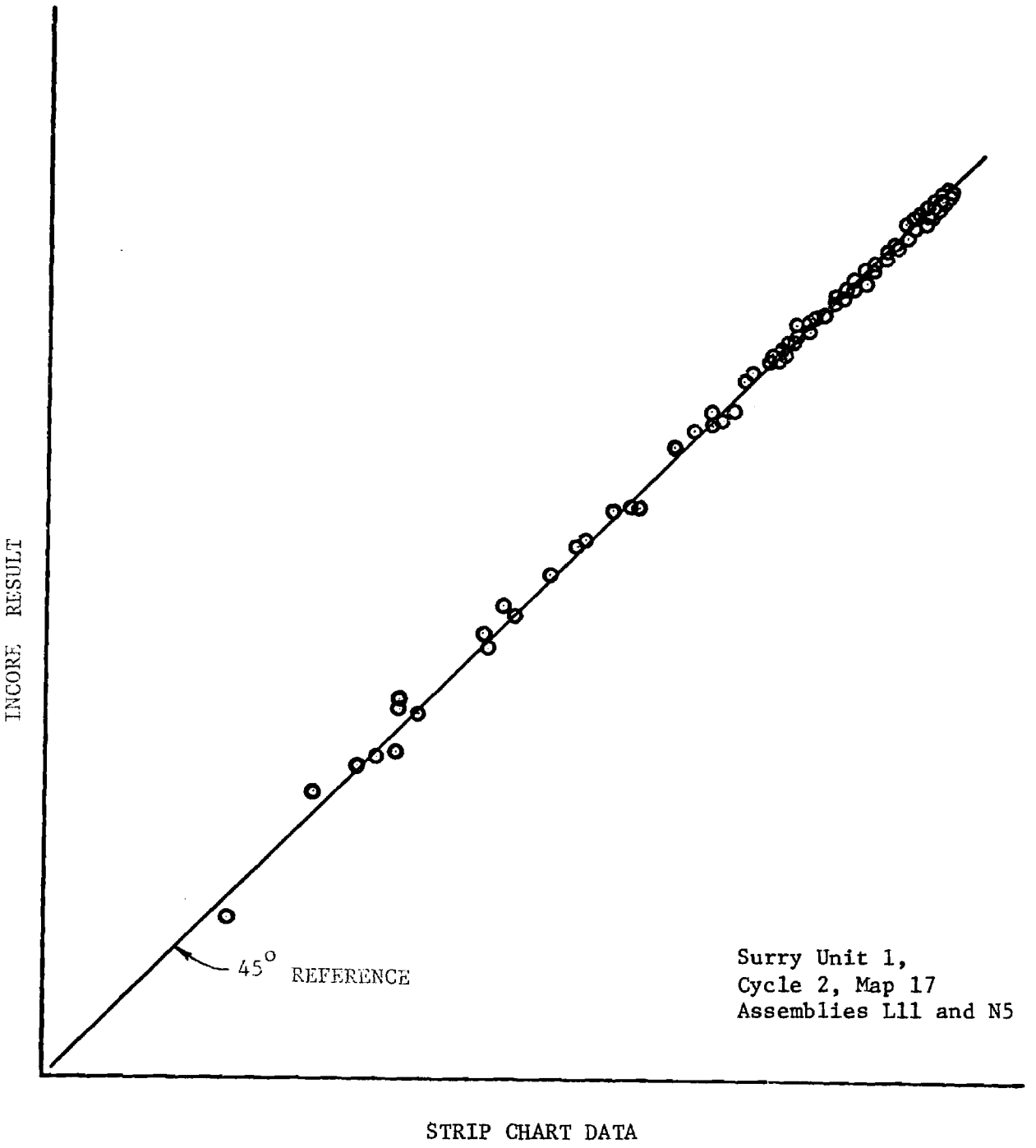


Figure 12. Comparison of INCORE Results and Strip Chart Data for Assemblies L11 and N5 Included in Data

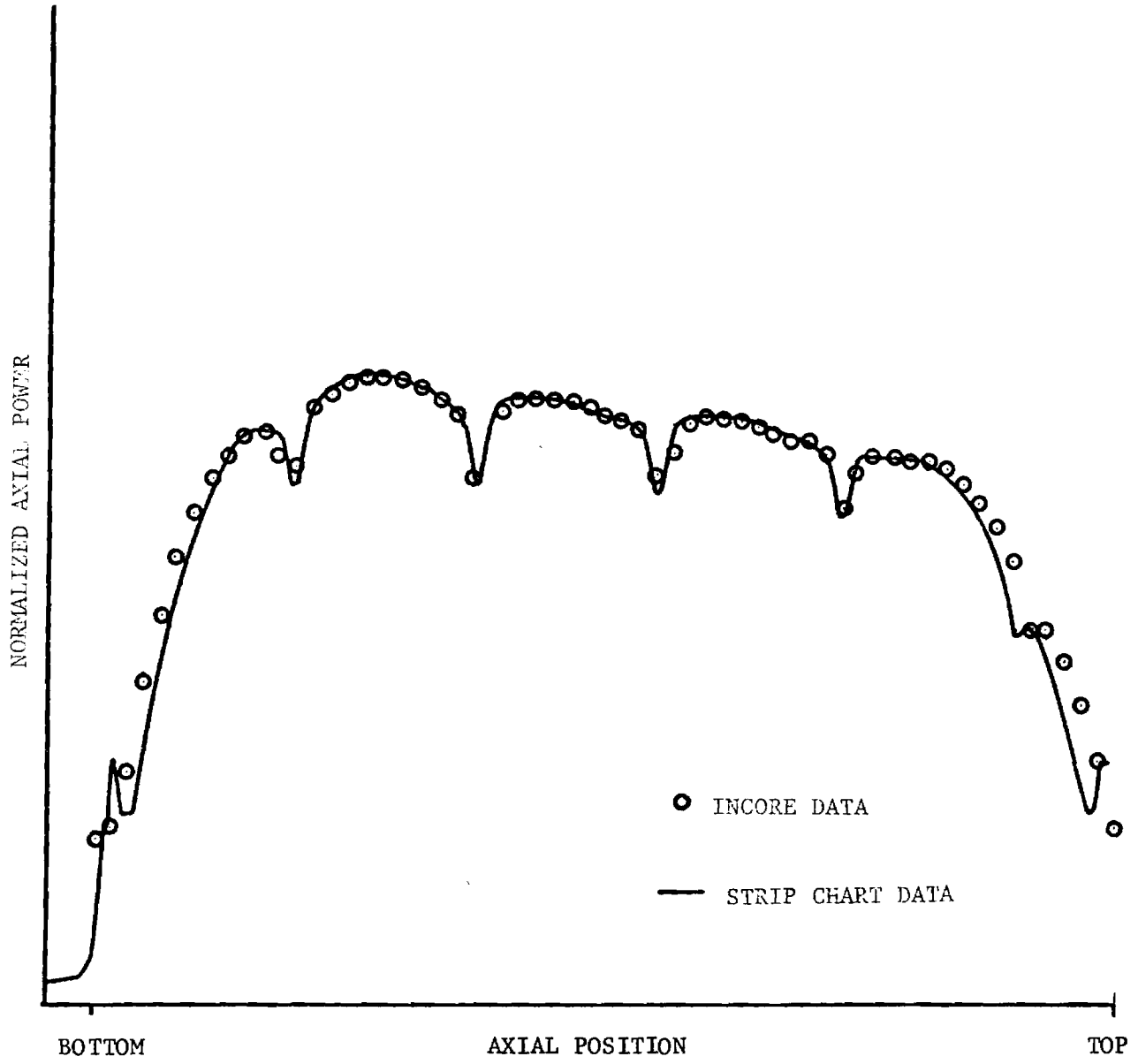


Figure 13. Axial Power Profile in Assembly A9, Surry Unit 1, Cycle 2, Map 17

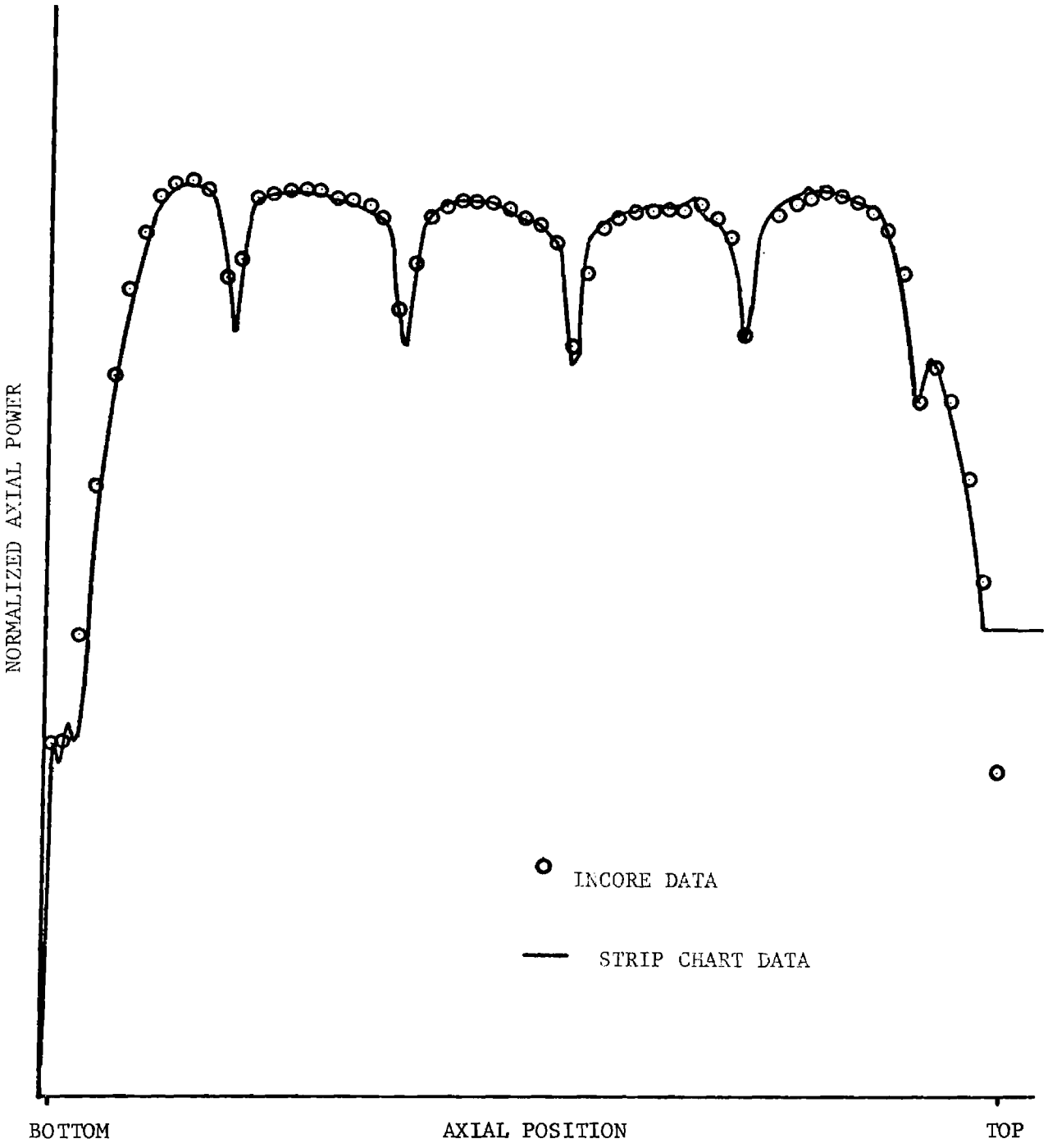


Figure 14. Axial Power Profile in Assembly D7,
Surry Unit 1, Cycle 2, Map 17

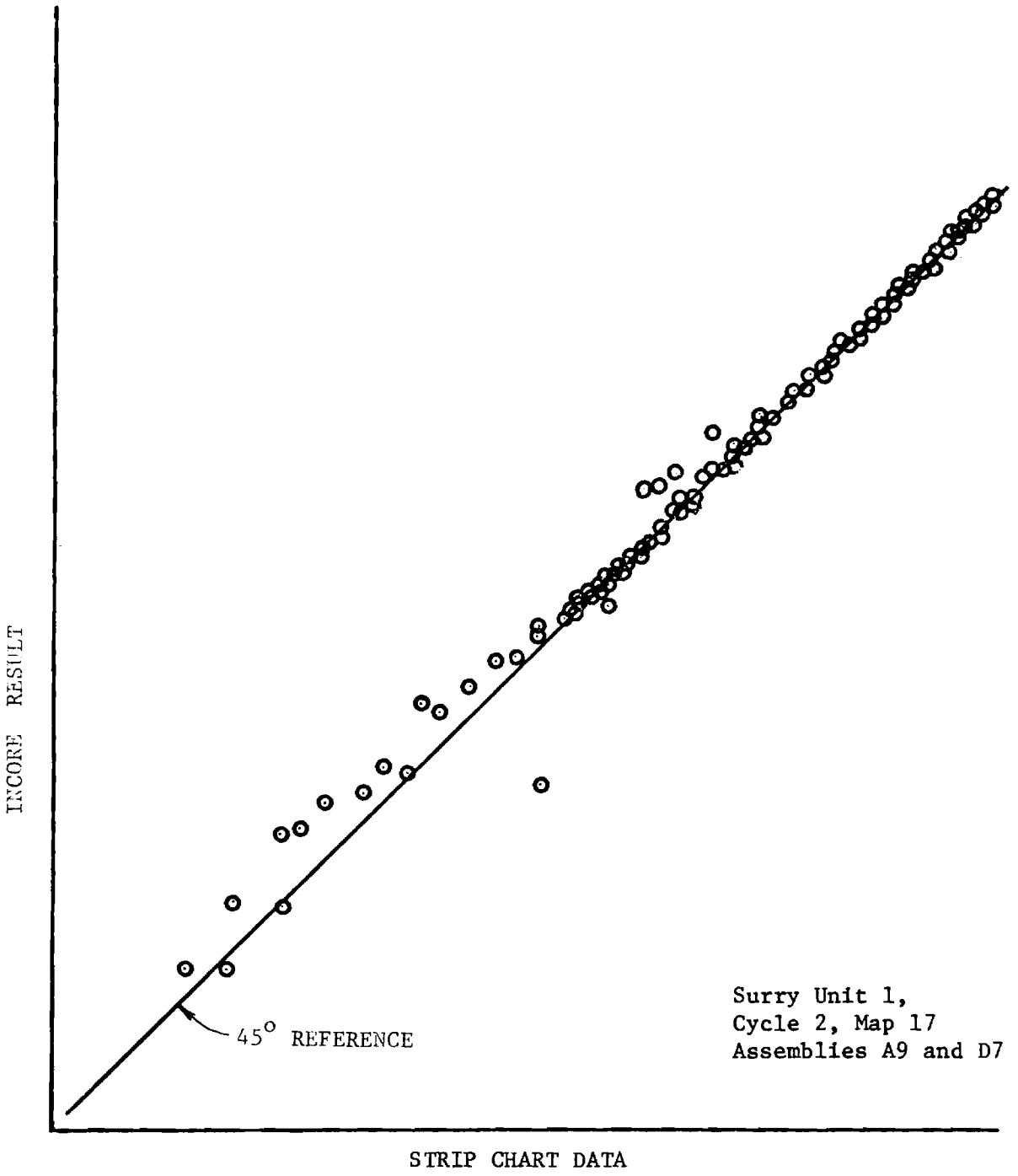


Figure 15. Comparison of INCORE Results and Strip Chart Data for Rejected Assemblies

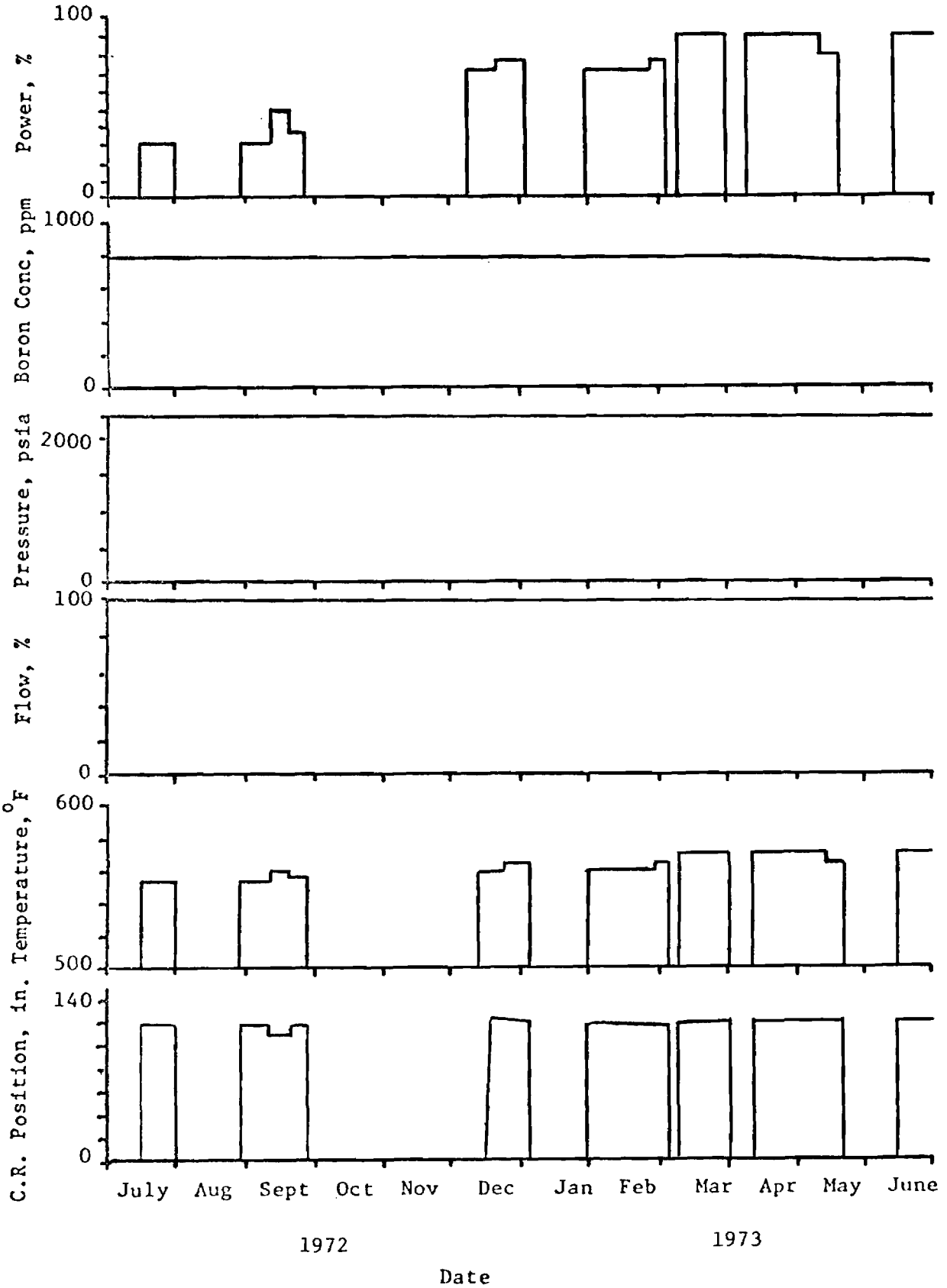


Figure 16a. Operating Parameter Histogram, July 1972 to June 1973

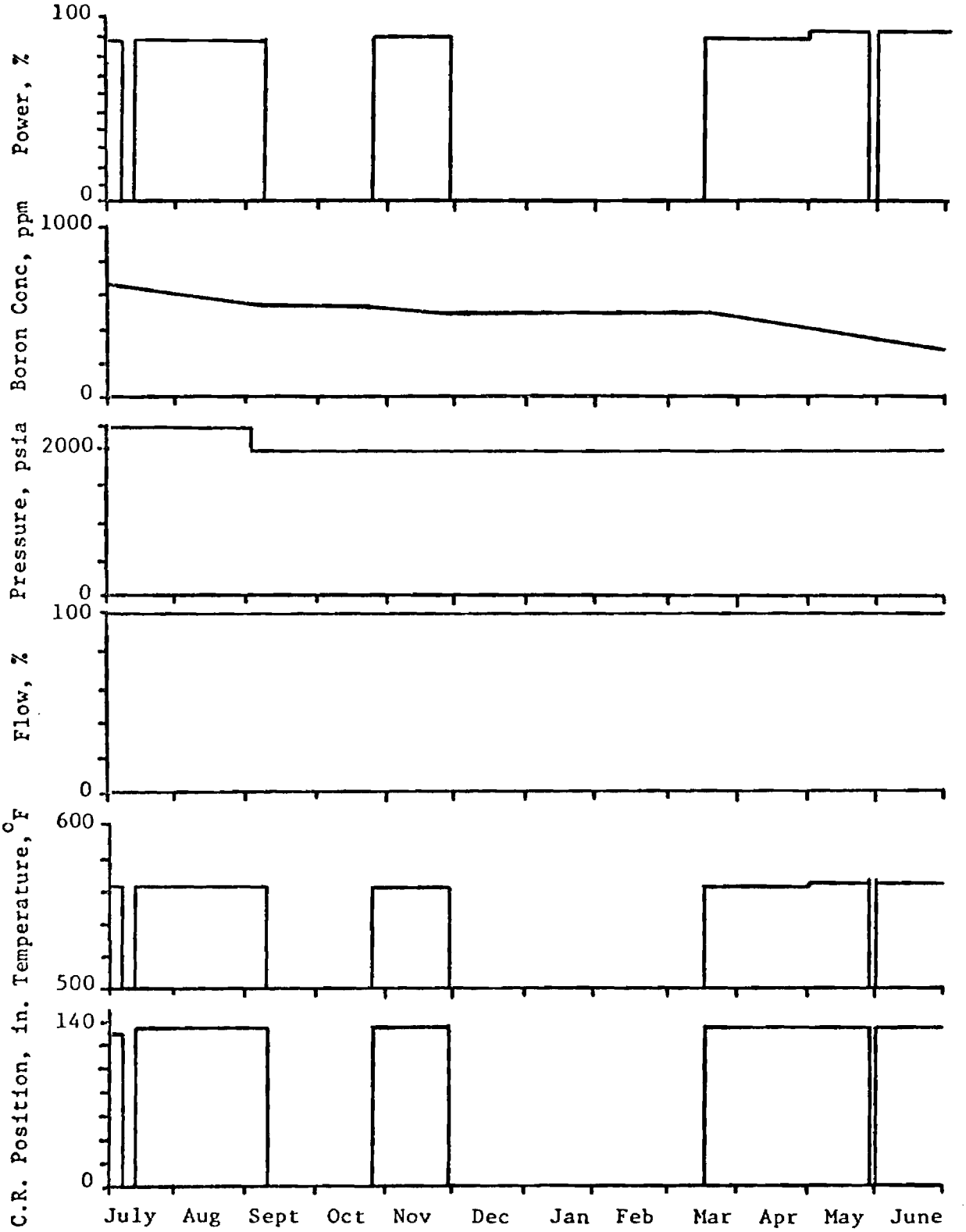


Figure 16b. Operating Parameter Histogram, July 1973 to June 1974

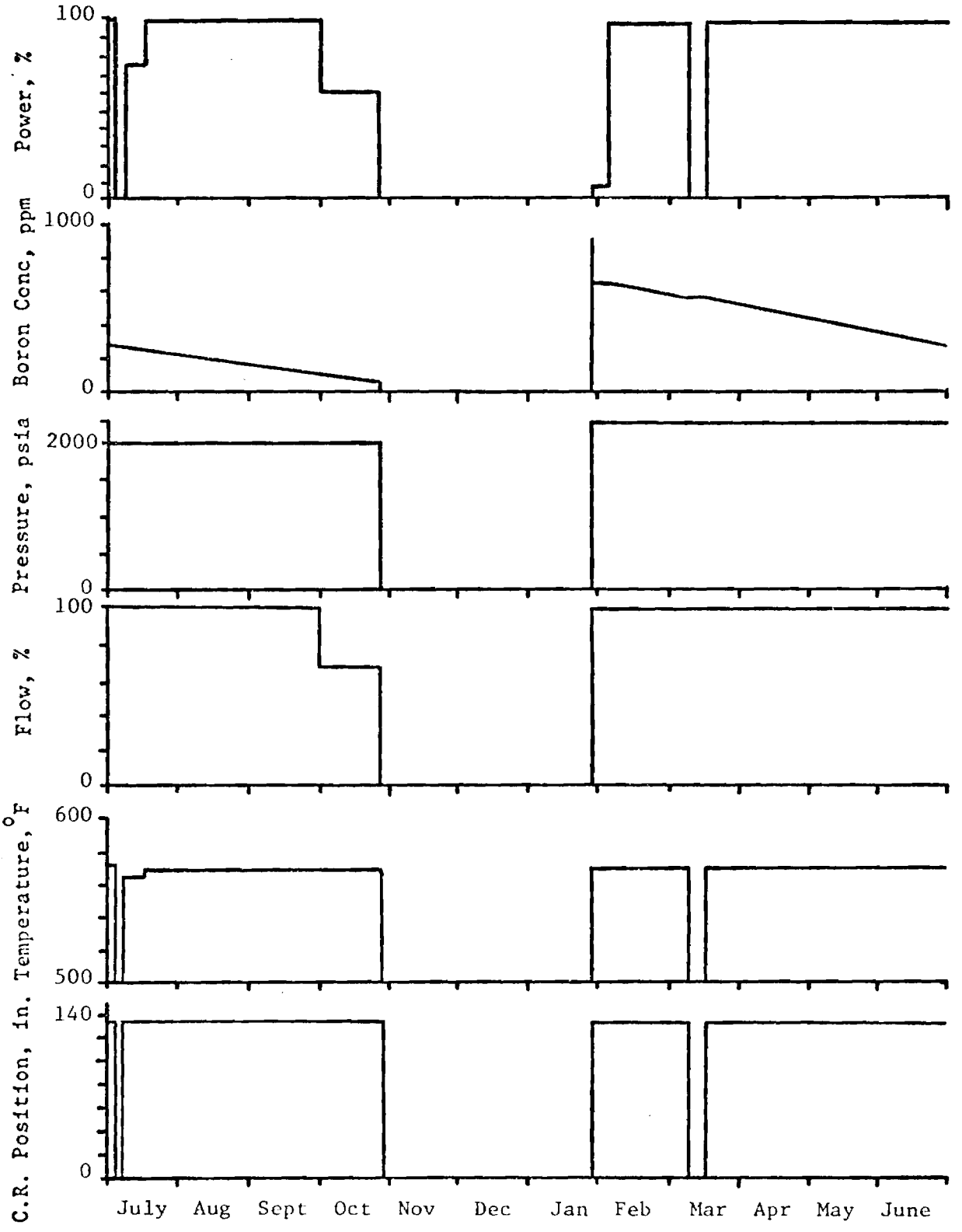


Figure 16c. Operating Parameter Histogram, July 1974 to June 1975

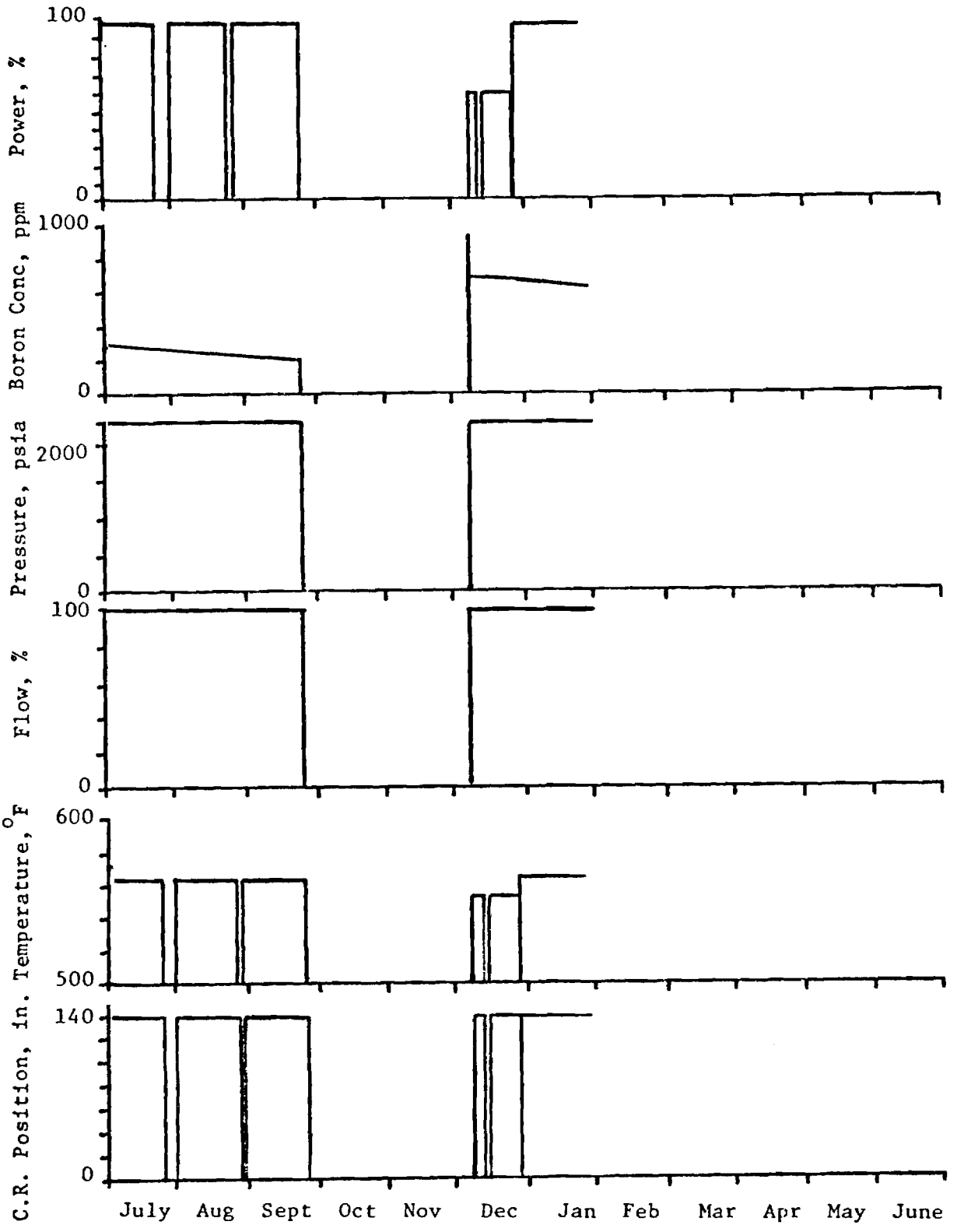


Figure 16d. Operating Parameter Histogram, July 1975 to December 1975

V. REFERENCES

1. Surry Unit 1 Final Safety Analysis Report, Virginia Electric and Power Company, Docket 50-280.

2. Gardner, D. A., Jr. and S. P. Keck, "Surry Unit 1 Startup Physics Test Report," VEP-FRD-1, Rev 1, Virginia Electric and Power Company, May, 1974.

3. Flournoy, L. L., S. P. Keck, and J. T. Rhodes, "Surry Unit 1 Core Performance Report," VEP-FRD-9, Virginia Electric and Power Company, January, 1975.

4. Lippard, D. W. and S. P. Keck, "Surry Unit 1 Startup Physics Test Report--Cycle 2," VEP-FRD-11, Virginia Electric and Power Company, July, 1975.

5. Flournoy, L. L., S. P. Keck, and K. F. McLaughlin, "Surry Unit 1 Core Performance Report--Cycle 2 - January 30, 1975 to June 30, 1975," VEP-FRD-14, Virginia Electric and Power Company, July, 1975.

6. Final Fabrication Drawings as Modified to Include As-Built Dimensions and Data, Virginia Electric and Power Company.

7. Leggett, W. D., III and L. E. Eisenhart, "The INCORE Code," WCAP 7149, December, 1967 (Westinghouse Proprietary Information).

8. Klatt, R. D., W. D. Leggett, III, and L. E. Eisenhart, "Follow--A Code for Providing a Standard Reactivity Follow Procedure by Calculating Effective Critical Boron Concentrations as a Function of Burnup," WCAP 7482, February, 1970 (Westinghouse Proprietary Information).

9. Fuel Trac Data, Nuclear Assurance Corporation, December, 1975.

10. Keck, S. P. and J. T. Rhodes, Personal Communication, September, 1975.

11. Boger, Bruce, Personal Communication, May, 1975.

APPENDIX A

FOLLOW PROGRAM DESCRIPTION[3,8]

FOLLOW is a data analysis computer program written by Westinghouse to process the data that is routinely monitored during reactor operation and calculate nominal boron concentrations.

The FOLLOW Code is designed to describe the nearly linear relationship between available core reactivity and cycle burnup. It is most convenient to use boron as a measure of core reactivity with off-nominal* corrections being made for power, xenon and samarium, temperature, and control rods in terms of their boron worth. These off nominal corrections are made with the following equation:

$$\begin{aligned}\text{corrected or nominal boron concentration} = \text{measured boron concentration} &+ \left[\text{inverse boron worth}\right]\left[\text{off-nominal reactivity correction due to control rod position}\right] \\ &+ \text{off-nominal reactivity correction due to moderator temperature} \\ &+ \left[\text{off-nominal reactivity correction due to power} + \text{off-nominal reactivity correction due to transient xenon or samarium}\right]\end{aligned}$$

The inverse boron worth and the reactivity correction terms represent a combination of data that is measured at the beginning of the cycle and analytic predictions of the reactor performance. Since most of the correction terms are small, the assumed linearity and independence of the correction terms is reasonable.

*Nominal conditions are defined as hot, full power, equilibrium conditions with control rods at their upper limits.

The boric acid concentration in the primary coolant is typically measured one to three times per day. After proper normalization, this data is plotted against cycle burnup and form the "boron depletion (letdown) curve." Since this curve is well behaved and nearly linear from beginning to end of the cycle, it can provide the following information:

1) Detection of abnormal (unexpected) behavior in core reactivity.

2) Extrapolation to end-of-cycle life for scheduling refueling, or determination of end-of-life for contractual purposes.

3) Rate of loss of reactivity with burnup for confirmation of design procedures.

4) Indication of the need for updating reactivity coefficients needed for plant operation.

5) Best estimate of beginning of cycle, hot-full-power criticality under equilibrium conditions.

The output of the FOLLOW code provides both a summary of the data that represents the plant operating conditions and the boron concentration that has been corrected to represent nominal conditions. Also the magnitude of each of the correction terms is included in the output.

APPENDIX B

INCORE PROGRAM DESCRIPTION[4,9]

INCORE is a data analysis computer program written by Westinghouse to process data obtained by in-core instrumentation.

In the reduction of in-core flux and temperature measurements the INCORE code performs the following functions:

1. Reads input consisting of (a) a description of the amount and type of data to be read in (such as number of flux traces and thermocouple readings, etc.); (b) a description of the reactor when the measurements were made (such as power level, inlet and outlet temperature, etc.); (c) the actual data and information relevant to it (such as what flux thimbles were used, neutron cross sections of the sensor, etc.); (d) analytical information (such as calculated thimble fluxes); and (e) specification of options as to what thimbles will be employed in local power predictions, what calculations are to be employed in local power predictions, what calculations are to be done, etc.
2. Corrects raw pointwise flux measurements for background current, changes in power level between measurements, relative detector sensitivities, etc., to determine pointwise reaction rate in the flux thimbles.
3. Compares the measured reaction rates determined above with expected values and rejects data if they differ from expected values by more than an input rejection criteria. An error analysis is performed for subsequent determination of the uncertainty applicable to calculated peaking factors.
4. Computes relative local power in each fuel assembly, and in each selected fuel rod location. Local relative power is computed as:

$$\frac{\left[\text{Reaction Rate in Flux Thimble}\right]_{\text{Measured}} \times \left[\frac{\text{Local Power}}{\text{Reaction Rate in Flux Thimble}}\right]_{\text{Analytical}}}{\left[\text{Average of Numerator for All Fuel in Core}\right]}$$

Local absolute power or heat flux is then computed by multiplying the above quantity by the average specific power or heat flux in the core determined from the measured total core power at the time the data was taken. A weighted average of data from all nearby thimbles can be used in determining local relative power. Different PDQ ratios of power to reaction rate are used depending on the control rod configuration at each elevation.

5. Calculates the relative quadrant powers and the power weighted average axial distribution in the core. The expected and measured power peaking factors are compared for each power generating region.
6. Outputs the twenty highest values of $F^N_{\Delta H}$ and F^N_Q in descending order with an identifying number so that hot spot locations in the core can be determined.
7. Calculates the rate at which burnup is being accumulated for four axial regions for each fueled area.
8. Corrects thermocouple data for calibration, and converts them to local enthalpy. Relative local enthalpy rise is then calculated using the vessel inlet and outlet temperatures and the core bypass flow. The local enthalpy rise measured by thermocouples is compared with that predicted from flux measurements using relative local flow rates.

9. Calculates the margin to departure from nucleate boiling (DNB) using the (W)-3 correlation for selected channels.
10. Prints the input data, parameters used, and major calculated values.

The input data includes three types of information. The first is a description of the reactor operating configuration including data such as power level, coolant temperatures, instrument thimbles being used and others. The second portion of the input is the results of several two dimensional PDQ calculations of the flux and power distribution in the reactor with differing control rod positions. The final part of the input is the digitized output of the instrument thimbles for each of the measurements made.

The corrections to the digitized data are made as identified in item 2 above, and the results of the PDQ calculations to relate the flux in the instrument thimble to the power in each fuel assembly are used as described in item 4 above.

The output of this program includes the power in each assembly in units of kw/ft at each of sixty-one axial locations, along with a characterization of the corrections to the instrument thimble data that have been made to obtain the power in each fuel assembly. Also, the enthalpy data, peaking factors, and DNBR data are included in the output to give detailed information on the operation of the reactor core at the time of the measurements.

APPENDIX C

DETERMINATION OF CORE POWER[11]

The core power is not measured directly but has to be inferred from the combination of the results of other measurements. The largest source of uncertainty in the core power determination is the coolant flow measurement.

The coolant flow rate in each of the three main coolant loops is determined by measuring the pressure drop across a venturi that is inserted into a bypass flow line. The bypass lines are in parallel with the cold leg of each of the main coolant loops. The pressure drop is related to the flow through the bypass line by the calibration of the venturi. The pressure drop in the bypass line must equal the pressure drop in the main coolant pipe, thus the measured pressure drop can be directly related to the total coolant flow rate in each main coolant loop.

The coolant temperature at the inlet to the steam generator is measured by a platinum resistance temperature measuring device in each loop of the main coolant system.

The power transmitted to the coolant by the main coolant pumps is subtracted from the power that is transferred to the secondary system in the steam generators to determine the reactor power. The power that is produced by the main coolant pumps is assumed to be invariant and includes a correction to account for the heat losses from the pipes that transport the main coolant between the reactor and the steam generators.

This technique for determining the power is similar to the procedure utilized in at most nuclear power plants, and any uncertainties in the power determined in this manner should cause no significant errors in the calibration of analytical methods.

CHAPTER #1 OPERATING INSTRUCTIONS

THE EPRI FILE IS A COLLECTION OF DESIGN AND OPERATING DATA FOR USE IN CALIBRATING COMPUTATIONAL TECHNIQUES. THE DATA DESCRIBES VIRGINIA ELECTRIC POWER COMPANY'S SURRY UNIT I REACTOR. THE INFORMATION IS ARRANGED AS FOLLOWS:

CHAPTER #2	FUEL ROD DESIGN DATA
CHAPTER #3	FUEL ASSEMBLY DESIGN DATA
CHAPTER #4	CONTROL ROD DESIGN DATA
CHAPTER #5	REACTOR CORE DESIGN
CHAPTER #6	CYCLE 1 - OPERATING DATA
CHAPTER #7	CYCLE 2 - OPERATING DATA
CHAPTER #8	CYCLE 3 - OPERATING DATA

CHAPTERS 6,7 AND 8 CONTAIN CORE FOLLOW AND AXIAL POWER DISTRIBUTIONS FROM SELECTED CORE MAPS FOR THE RESPECTIVE CYCLE

TO OBTAIN THE DATA DIRECTLY FROM THE GEORGIA TECH COMPUTER PROCEED WITH THE FOLLOWING INSTRUCTIONS:

CALL 404-894-2131 FOR 300 BAUD CONNECTIONS
404-894-2111 FOR 110 BAUD CONNECTIONS

THE COMMUNICATION WITH THE COMPUTER WILL BE AS FOLLOWS (YOUR RESPONSES ARE ON SEPARATE LINES AND MUST FOLLOW A / OR ? AND ARE TERMINATED BY A CARRIAGE RETURN)

USER NUMBER: NE101RC
PASSWORD
XXXXXX
(CALL DR CARLSON AND ASK FOR CURRENT PASSWORD)
TERMINAL: XX,TTY
RECOVER/SYSTEM: ATTACH,EPRI
/ED,EPRI
ED 1.1. YY/MM/DD. HH.MM.SS. (DATE AND TIME)
OUTPUT FILE WRITE LOCKOUT.
0? L UPDATES:
COMMENTS AND UPDATES
71? P 10
(IF COMMENTS AND UPDATES OCCUPY MORE THAN 10 LINES ENTER

P+10 AS MANY TIMES AS NECESSARY TO GET A COMPLETE COPY OF
ALL COMMENTS AND UPDATES)
80? LC #
(AT THIS POINT THE EDITOR WILL PRINT THE STARTING LINE NUMBERS AND TITLES OF EACH CHAPTER OF THE DATA)
0? P LN1,LN2
(LN1 AND LN2 REFER TO THE STARTING AND FINAL LINE NUMBERS OF THE DATA CHAPTER THAT IS DESIRED, THIS COMMAND CAN BE REPEATED TO PRINT OUT MULTIPLE CHAPTERS IF DESIRED)
LN2? OMIT
LINES XXXX
$ED,EPRI.
/ BYE
(THIS COMMAND TERMINATES THE CONNECTION TO THE COMPUTER)

COMMENTS AND UPDATES:
FIRST RELEASE ON FEBRUARY 1,1977

March 1, 1979 — This data file is no longer supported by EPRI.
RMW

CHAPTER #2 FUEL ROD DESIGN DATA

* * INDICATE ESTIMATED DATA

FUEL ROD TYPE	1	2	3	4A
FUEL MATERIAL	UO2	UO2	UO2	UO2
CLAD MATERIAL	ZIRC-4	ZIRC-4	ZIRC-4	ZIRC-4
ENRICHMENT,WEIGHT % U-235	1.868	2.573	3.117	1.860
PELLET DENSITY, GMS/CC	93.5	92.9	91.9	94.3
CLAD OUTSIDE DIAMETER,IN.	.422	.422	.422	.422
CLAD THICKNESS,IN.	.0243	.0243	.0243	.0243
DIAMETRAL GAP,COLD,IN.	.0075	.0075	.0085	.0075
PELLET DIAMETER,IN.	.3659	.3659	.3649	.3659
PELLET LENGTH,IN.	0.600	0.600	0.600	0.600
STACK HEIGHT,IN.	144.45	144.45	143.85	144.00
DISHING FRACTION,% OF CYLINDER	*2%*	*2%*	*2%*	*2%*
FILL GAS	HELIUM	HELIUM	HELIUM	HELIUM
INITIAL PRESSURIZATION, PSI	*300*	*300*	*200*	*400*
PLENUM LENGTH,IN.	6.830	6.830	7.430	7.280
SPRING VOLUME,CU. IN.	*0.40*	*0.40*	*0.44*	*0.43*
END PLUG MATERIAL	ZIRC-4	ZIRC-4	ZIRC-4	ZIRC-4
LENGTH OF LOWER END PLUG,IN.	0.688	0.688	0.688	0.688
LENGTH OF UPPER END PLUG,IN.	0.688	0.688	0.688	0.688
POISON MATERIAL	NONE	NONE	NONE	NONE
U236 CONTENT,GM./ROD	TRACE	TRACE	TRACE	TRACE
PU239 CONTENT,GM./ROD	NONE	NONE	NONE	NONE
PU240 CONTENT,GM./ROD	NONE	NONE	NONE	NONE
PU241 CONTENT,GM./ROD	NONE	NONE	NONE	NONE
PU242 CONTENT,GM./ROD	NONE	NONE	NONE	NONE

CONTINUATION OF CHAPTER #2 FUEL ROD DESIGN DATA

FUEL ROD TYPE	4X	4B	4C	5
FUEL MATERIAL	UO2	UO2	UO2	UO2
CLAD MATERIAL	ZIRC-4	ZIRC-4	ZIRC-4	ZIRC-4
ENRICHMENT,WEIGHT % U-235	1.860	2.610	3.330	2.10
PELLET DENSITY, GMS/CC	94.3	94.6	94.4	95.0
CLAD OUTSIDE DIAMETER,IN.	.374	.422	.422	.422
CLAD THICKNESS,IN.	.0225	.0243	.0243	.0243

DIAMETRAL GAP,COLD,IN.	.0065	.0075	.0075	.0075
PELLET DIAMETER,IN.	.3225	.3659	.3659	.3659
PELLET LENGTH,IN.	0.530	0.600	0.600	0.600
STACK HEIGHT,IN.	144.00	144.00	144.00	144.00
DISHING FRACTION,% OF CYLINDER	*2%*	*2%*	*2%*	*2%*
FILL GAS	HELIUM	HELIUM	HELIUM	HELIUM
INITIAL PRESSURIZATION, PSI	*400*	*400*	*400*	*400*
PLENUM LENGTH,IN.	7.280	7.280	7.280	7.280
SPRING VOLUME,CU. IN.	*0.43*	*0.43*	*0.43*	*0.43*
END PLUG MATERIAL	ZIRC-4	ZIRC-4	ZIRC-4	ZIRC-4
LENGTH OF LOWER END PLUG,IN.	0.688	0.688	0.688	0.688
LENGTH OF UPPER END PLUG,IN.	0.688	0.688	0.688	0.688
POISON MATERIAL	NONE	NONE	NONE	NONE
U236 CONTENT,GM./ROD	TRACE	TRACE	TRACE	TRACE
PU239 CONTENT,GM./ROD	NONE	NONE	NONE	NONE
PU240 CONTENT,GM./ROD	NONE	NONE	NONE	NONE
PU241 CONTENT,GM./ROD	NONE	NONE	NONE	NONE
PU242 CONTENT,GM./ROD	NONE	NONE	NONE	NONE

CHAPTER #3 FUEL ASSEMBLY DESIGN DATA

FUEL ASSEMBLY TYPE	1	2	3	4A
FUEL ROD ARRAY	15X15	15X15	15X15	15X15
NUMBER OF FUEL RODS	204	204	204	204
FUEL ROD PITCH,IN.	0.563	0.563	0.563	0.563
ENVELOPE DIMENSION,IN.	8.426	8.426	8.426	8.426
NUMBER OF SPACERS	7	7	7	7
LOCATION OF SPACERS	5.776	5.776	5.776	5.776
BOTTOM OF FUEL TO	29.933	29.933	29.933	29.933
TOP OF SPACER,IN.	56.123	56.123	56.123	56.123
	82.313	82.313	82.313	82.313
	108.503	108.503	108.503	108.503
	134.693	134.693	134.693	134.693
	153.653	153.653	153.653	153.653
SPACER HEIGHT,IN.	1.5	1.5	1.5	1.5
SPACER MATERIAL	INCONEL-718	INCONEL-718	INCONEL-718	INCONEL-718
SPACER WEIGHT,GM.	675	675	675	675
SPACER MIXING VANES	YES - MIDDLE 5			
	NO - TOP AND BOTTOM			
SPACER PRESSURE LOSS COEF.*	*1.5*	*1.5*	*1.5*	*1.5*
NUMBER OF GUIDE TUBES	20	20	20	20
GUIDE TUBE MATERIAL	ZIRC-4	ZIRC-4	ZIRC-4	ZIRC-4
GUIDE TUBE OUTSIDE DIA.,IN.	.5434	.5434	.5434	.5434
GUIDE TUBE THICKNESS,IN.	*.030*	*.030*	*.030*	*.030*
NUMBER OF INSTRUMENTATION TUBES	1	1	1	1
INSTRUMENTATION TUBE MATERIAL	ZIRC-4	ZIRC-4	ZIRC-4	ZIRC-4
INSTRUMENTATION TUBE O.D.,IN.	.5434	.5434	.5434	.5434
INSTRUMENTATION TUBE THICKNESS,IN.	*.030*	*.030*	*.030*	*.030*
LOWER END FITTING MATERIAL	304 SS	304 SS	304 SS	304 SS
LOWER END FITTING HEIGHT,IN.	3.188	3.188	3.188	3.188
UPPER END FITTING MATERIAL	304 SS + SMALL AMOUNTS OF INCONEL 718 & INCONEL 600			
UPPER END FITTING HEIGHT,IN.	3.480	3.480	3.480	3.480

CONTINUATION OF CHAPTER #3 FUEL ASSEMBLY DESIGN DATA

FUEL ASSEMBLY TYPE	4X	4B	4C	5
FUEL ROD ARRAY	17X17	15X15	15X15	15X15
NUMBER OF FUEL RODS	264	204	204	204

* SPACER COEF. IS DEFINED AS PRESSURE DROP PER UNIT VELOCITY HEAD (RHO*VELOCITY SQUARED/2*G)

FUEL ROD PITCH,IN.	0.496	0.563	0.563	0.563
ENVELOPE DIMENSION,IN.	8.426	8.426	8.426	8.426
NUMBER OF SPACERS	7	7	7	7
LOCATION OF SPACERS	5.776	5.776	5.776	5.776
BOTTOM OF FUEL TO	29.933	29.933	29.933	29.933
TOP OF SPACER,IN.	56.123	56.123	56.123	56.123
	82.313	82.313	82.313	82.313
	108.503	108.503	108.503	108.503
	134.693	134.693	134.693	134.693
	153.653	153.653	153.653	153.653
SPACER HEIGHT,IN.	1.5	1.5	1.5	1.5
SPACER MATERIAL	INCONEL-718	INCONEL-718	INCONEL-718	INCONEL-718
SPACER WEIGHT,GM.	675	675	675	675
SPACER MIXING VANES	YES - MIDDLE 5			
		NO - TOP AND BOTTOM		
SPACER PRESSURE LOSS COEF.*	*1.5*	*1.5*	*1.5*	*1.5*
NUMBER OF GUIDE TUBES	24	20	20	20
GUIDE TUBE MATERIAL	ZIRC-4	ZIRC-4	ZIRC-4	ZIRC-4
GUIDE TUBE OUTSIDE DIA.,IN.	.482	.5434	.5434	.5434
GUIDE TUBE THICKNESS,IN.	*.030*	*.030*	*.030*	*.030*
NUMBER OF INSTRUMENTATION TUBES	1	1	1	1
INSTRUMENTATION TUBE MATERIAL	ZIRC-4	ZIRC-4	ZIRC-4	ZIRC-4
INSTRUMENTATION TUBE O.D.,IN.	.482	.5434	.5434	.5434
INSTRUMENTATION TUBE THICKNESS,IN.	*.030*	*.030*	*.030*	*.030*
LOWER END FITTING MATERIAL	304 SS	304 SS	304 SS	304 SS
LOWER END FITTING HEIGHT,IN.	3.188	3.188	3.188	3.188
UPPER END FITTING MATERIAL	304 SS + SMALL AMOUNTS OF INCONEL 718 & INCONEL 600			
UPPER END FITTING HEIGHT,IN.	3.480	3.480	3.480	3.480

* SPACER COEF. IS DEFINED AS PRESSURE DROP PER UNIT VELOCITY HEAD (RHO*VELOCITY SQUARED/2*G)

FUEL ASSEMBLY DIAGRAM
TYPE 1

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	GT	1	1	GT	1	1	1	GT	1	1	GT	1	1
1	1	1	1	1	1	1	GT	1	1	1	1	1	1	1
1	1	1	1	GT	1	1	1	1	1	GT	1	1	1	1
1	1	GT	1	1	1	1	1	1	1	1	1	GT	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	GT	1	1	1	IT	1	1	1	GT	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	GT	1	1	1	1	1	1	1	1	1	GT	1	1
1	1	1	1	GT	1	1	1	1	1	GT	1	1	1	1
1	1	1	1	1	1	1	GT	1	1	1	1	1	1	1
1	1	GT	1	1	GT	1	1	1	GT	1	1	GT	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

1 - FUEL ROD TYPE 1
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE

FUEL ASSEMBLY DIAGRAM
TYPE 2

2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	GT	2	2	GT	2	2	2	GT	2	2	GT	2	2
2	2	2	2	2	2	2	GT	2	2	2	2	2	2	2
2	2	2	2	GT	2	2	2	2	2	GT	2	2	2	2
2	2	GT	2	2	2	2	2	2	2	2	2	GT	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	GT	2	2	2	IT	2	2	2	GT	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	GT	2	2	2	2	2	2	2	2	2	GT	2	2
2	2	2	2	GT	2	2	2	2	2	GT	2	2	2	2
2	2	2	2	2	2	2	GT	2	2	2	2	2	2	2
2	2	GT	2	2	GT	2	2	2	GT	2	2	GT	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

2 - FUEL ROD TYPE 2
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE

FULL ASSEMBLY DIAGRAM
TYPE 3

3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3	3	GT	3	3	GT	3	3	3	GT	3	3	GT	3	3
3	3	3	3	3	3	3	GT	3	3	3	3	3	3	3
3	3	3	3	GT	3	3	3	3	3	GT	3	3	3	3
3	3	GT	3	3	3	3	3	3	3	3	3	GT	3	3
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3	3	3	GT	3	3	3	IT	3	3	3	GT	3	3	3
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3	3	GT	3	3	3	3	3	3	3	3	3	GT	3	3
3	3	3	3	GT	3	3	3	3	3	GT	3	3	3	3
3	3	3	3	3	3	3	GT	3	3	3	3	3	3	3
3	3	GT	3	3	GT	3	3	3	GT	3	3	GT	3	3
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

3 - FUEL ROD TYPE 3
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE

FULL ASSEMBLY DIAGRAM
TYPE 4A

4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
4A	4A	GT	4A	4A	GT	4A	4A	4A	GT	4A	4A	GT	4A	4A
4A	4A	4A	4A	4A	4A	4A	GT	4A	4A	4A	4A	4A	4A	4A
4A	4A	4A	4A	GT	4A	4A	4A	4A	4A	GT	4A	4A	4A	4A
4A	4A	GT	4A	4A	4A	4A	4A	4A	4A	4A	4A	GT	4A	4A
4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
4A	4A	4A	GT	4A	4A	4A	IT	4A	4A	4A	CT	4A	4A	4A
4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
4A	4A	GT	4A	4A	4A	4A	4A	4A	4A	4A	GT	4A	4A	
4A	4A	4A	4A	GT	4A	4A	4A	4A	4A	GT	4A	4A	4A	4A
4A	4A	4A	4A	4A	4A	4A	GT	4A	4A	4A	4A	4A	4A	4A
4A	4A	GT	4A	4A	GT	4A	4A	4A	GT	4A	4A	GT	4A	4A
4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A
4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A	4A

4A - FUEL ROD TYPE 4A
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE

FUEL ASSEMBLY DIAGRAM
TYPE 4B

4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B
4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B
4B 4B GT 4B 4B GT 4B 4B 4B GT 4B 4B GT 4B 4B
4B 4B 4B 4B 4B 4B 4B GT 4B 4B 4B 4B 4B 4B 4B
4B 4B 4B 4B GT 4B 4B 4B 4B 4B GT 4B 4B 4B 4B
4B 4B GT 4B 4B 4B 4B 4B 4B 4B 4B 4B GT 4B 4B
4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B
4B 4B 4B GT 4B 4B 4B IT 4B 4B 4B GT 4B 4B 4B
4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B
4B 4B GT 4B 4B 4B 4B 4B 4B 4B 4B 4B GT 4B 4B
4B 4B 4B 4B GT 4B 4B 4B 4B 4B GT 4B 4B 4B 4B
4B 4B 4B 4B 4B 4B 4B GT 4B 4B 4B 4B 4B 4B 4B
4B 4B GT 4B 4B GT 4B 4B 4B GT 4B 4B GT 4B 4B
4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B
4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B 4B

4B - FUEL ROD TYPE 4B
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE

FUEL ASSEMBLY DIAGRAM
TYPE 4C

4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C
4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C
4C 4C GT 4C 4C GT 4C 4C 4C GT 4C 4C GT 4C 4C
4C 4C 4C 4C 4C 4C 4C GT 4C 4C 4C 4C 4C 4C 4C
4C 4C 4C 4C GT 4C 4C 4C 4C 4C GT 4C 4C 4C 4C
4C 4C GT 4C 4C 4C 4C 4C 4C 4C 4C 4C GT 4C 4C
4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C
4C 4C 4C GT 4C 4C 4C IT 4C 4C 4C GT 4C 4C 4C
4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C
4C 4C GT 4C 4C 4C 4C 4C 4C 4C 4C 4C GT 4C 4C
4C 4C 4C 4C GT 4C 4C 4C 4C 4C GT 4C 4C 4C 4C
4C 4C 4C 4C 4C 4C 4C GT 4C 4C 4C 4C 4C 4C 4C
4C 4C GT 4C 4C GT 4C 4C 4C GT 4C 4C GT 4C 4C
4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C
4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C 4C

4C - FUEL ROD TYPE 4C
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE

FUEL ASSEMBLY DIAGRAM
TYPE 5

5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5	5	GT	5	5	GT	5	5	5	GT	5	5	GT	5	5
5	5	5	5	5	5	5	GT	5	5	5	5	5	5	5
5	5	5	5	GT	5	5	5	5	5	GT	5	5	5	5
5	5	GT	5	5	5	5	5	5	5	5	5	GT	5	5
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5	5	5	GT	5	5	5	IT	5	5	5	GT	5	5	5
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5	5	GT	5	5	5	5	5	5	5	5	5	GT	5	5
5	5	5	5	GT	5	5	5	5	5	GT	5	5	5	5
5	5	5	5	5	5	5	GT	5	5	5	5	5	5	5
5	5	GT	5	5	GT	5	5	5	GT	5	5	GT	5	5
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

5 - FUEL ROD TYPE 5
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE

FUEL ASSEMBLY DIAGRAM
TYPE 4X (17X17)

4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	4X	4X	4X	GT	4X	4X	GT	4X	4X	GT	4X	4X	4X	4X	4X
4X	4X	4X	GT	4X	4X	4X	4X	4X	4X	4X	4X	4X	GT	4X	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	GT	4X	4X	GT	4X	4X	GT	4X	4X	GT	4X	4X	GT	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	GT	4X	4X	GT	4X	4X	IT	4X	4X	GT	4X	4X	GT	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	GT	4X	4X	GT	4X	4X	GT	4X	4X	GT	4X	4X	GT	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	4X	GT	4X	4X	4X	4X	4X	4X	4X	4X	4X	GT	4X	4X	4X
4X	4X	4X	4X	4X	GT	4X	4X	GT	4X	4X	GT	4X	4X	4X	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X
4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X	4X

4X - FUEL ROD TYPE 4X
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE

CHAPTER #4 CONTROL ROD DESIGN DATA

MOVEABLE RODS

TYPE	FULL LENGTH	PART LENGTH
NUMBER OF MOVEABLE CONTROL ROD ASSEMBLIES	48	5
CONTROL ROD CLADDING O.D.,IN.	.4395	.4395
CONTROL ROD CLADDING THICKNESS,IN.	.079	.019
CONTROL ROD CLADDING MATERIAL	STAINLESS STEEL	
CONTROL MATERIAL	5% CD, 15% IN,	80% AG
CONTROL MATERIAL LENGTH,INCHES	142.5	36.0
MATERIAL ABOVE CONTROL MATERIAL	N/A	AL2O3
LENGTH,INCHES	N/A	*106.*
MATERIAL BELOW CONTROL MATERIAL	SS304	SS304
LENGTH,INCHES	*0.75*	*0.75*
NUMBER OF CONTROL PINS IN CONTROL ROD	20	20
FULLY INSERTED LOCATION OF CONTROL MATERIAL		
(TOP) - INCHES FROM BOTTOM OF FUEL	*143.5*	*143.5*
(BOTTOM) - INCHES FROM BOTTOM OF FUEL	*0.5*	*0.5*
FULLY WITHDRAWN LOCATION OF CONTROL MATERIAL		
(BOTTOM) - INCHES FROM BOTTOM OF FUEL	*144.0*	*144.0*
DIRECTION OF INSERTION	FROM ABOVE	

BURNABLE POISON RODS

NUMBER OF ASSEMBLIES	68
RODS/ASSEMBLY	(SEE CORE MAPS IN CHAPTER 5)
POISON MATERIAL	BOROSILICATE GLASS
POISON LENGTH	142.680
OUTSIDE DIA,IN.	.4395
INNER TUBE O.D.,IN.	.2365
CLAD MATERIAL	304 SS
INNER TUBE MATERIAL	304 SS

GUIDE TUBE PLUGS

NUMBER OF GUIDE TUBE PLUGS	(SEE CORE MAPS IN CHAPTER 5)
GUIDE TUBE PLUG O.D.,IN.	.4395
GUIDE TUBE PLUG MATERIAL	STAINLESS STEEL
LENGTH,INCHES	*6.0*

FUEL ASSEMBLY DIAGRAM
8 BURNABLE POISON RODS

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	GT	0	0	BP	0	0	0	BP	0	0	GT	0	0
0	0	0	0	0	0	0	GT	0	0	0	0	0	0	0
0	0	0	0	GT	0	0	0	0	0	GT	0	0	0	0
0	0	BP	0	0	0	0	0	0	0	0	0	BP	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	GT	0	0	0	IT	0	0	0	GT	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	BP	0	0	0	0	0	0	0	0	0	BP	0	0
0	0	0	0	GT	0	0	0	0	0	GT	0	0	0	0
0	0	0	0	0	0	0	GT	0	0	0	0	0	0	0
0	0	GT	0	0	BP	0	0	0	BP	0	0	GT	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0 - FUEL ROD
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE
BP - BURNABLE POISON ROD

FUEL ASSEMBLY DIAGRAM
12 BURNABLE POISON RODS

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	BP	0	0	BP	0	0	0	BP	0	0	BP	0	0
0	0	0	0	0	0	0	GT	0	0	0	0	0	0	0
0	0	0	0	GT	0	0	0	0	0	GT	0	0	0	0
0	0	BP	0	0	0	0	0	0	0	0	0	BP	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	GT	0	0	0	IT	0	0	0	GT	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	BP	0	0	0	0	0	0	0	0	0	BP	0	0
0	0	0	0	GT	0	0	0	0	0	GT	0	0	0	0
0	0	0	0	0	0	0	GT	0	0	0	0	0	0	0
0	0	BP	0	0	BP	0	0	0	BP	0	0	BP	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

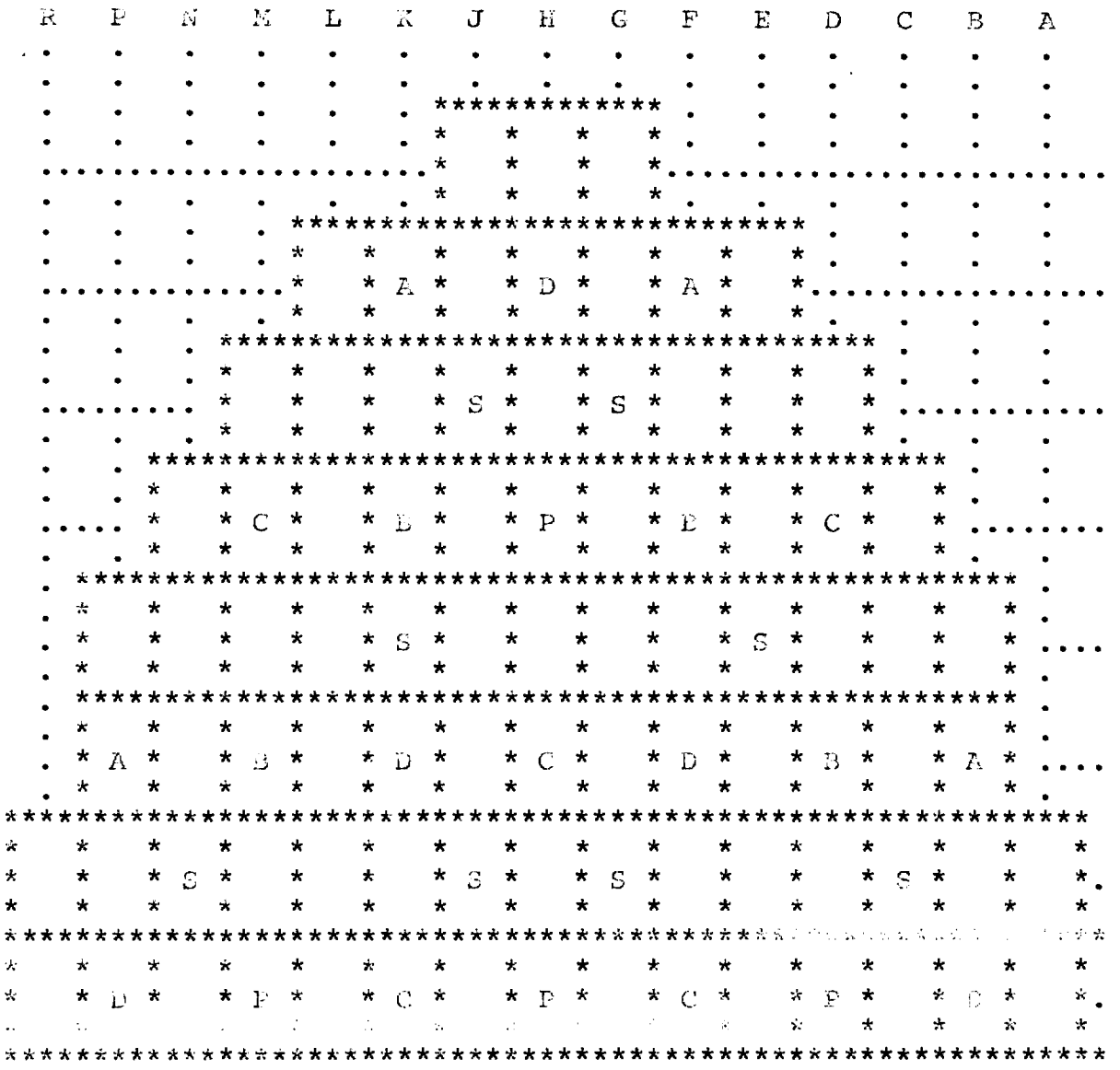
0 - FUEL ROD
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE
BP - BURNABLE POISON ROD

FUEL ASSEMBLY DIAGRAM
20 BURNABLE POISON RODS

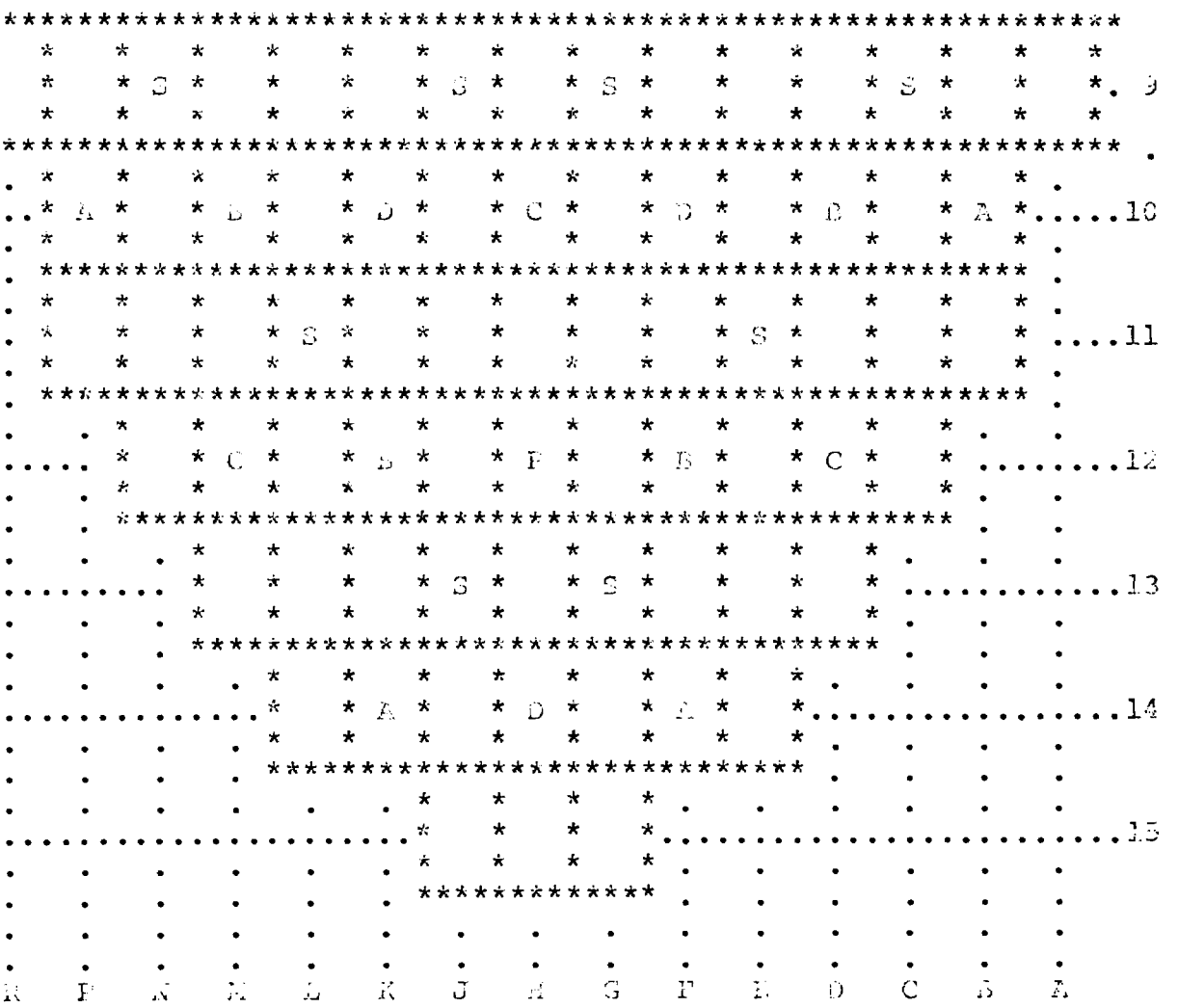
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	BP	0	0	BP	0	0	0	BP	0	0	BP	0	0
0	0	0	0	0	0	0	BP	0	0	0	0	0	0	0
0	0	0	0	BP	0	0	0	0	0	BP	0	0	0	0
0	0	BP	0	0	0	0	0	0	0	0	0	BP	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	BP	0	0	0	IT	0	0	0	BP	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	BP	0	0	0	0	0	0	0	0	0	BP	0	0
0	0	0	0	BP	0	0	0	0	0	BP	0	0	0	0
0	0	0	0	0	0	0	BP	0	0	0	0	0	0	0
0	0	BP	0	0	BP	0	0	0	BP	0	0	BP	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

0 - FUEL ROD
GT - GUIDE TUBE
IT - INSTRUMENTATION TUBE
BP - BURNABLE POISON ROD

MAP OF CONTROL RODS IN EACH BANK



LOCATION OF CONTROL RODS IN EACH BANK (CONT)

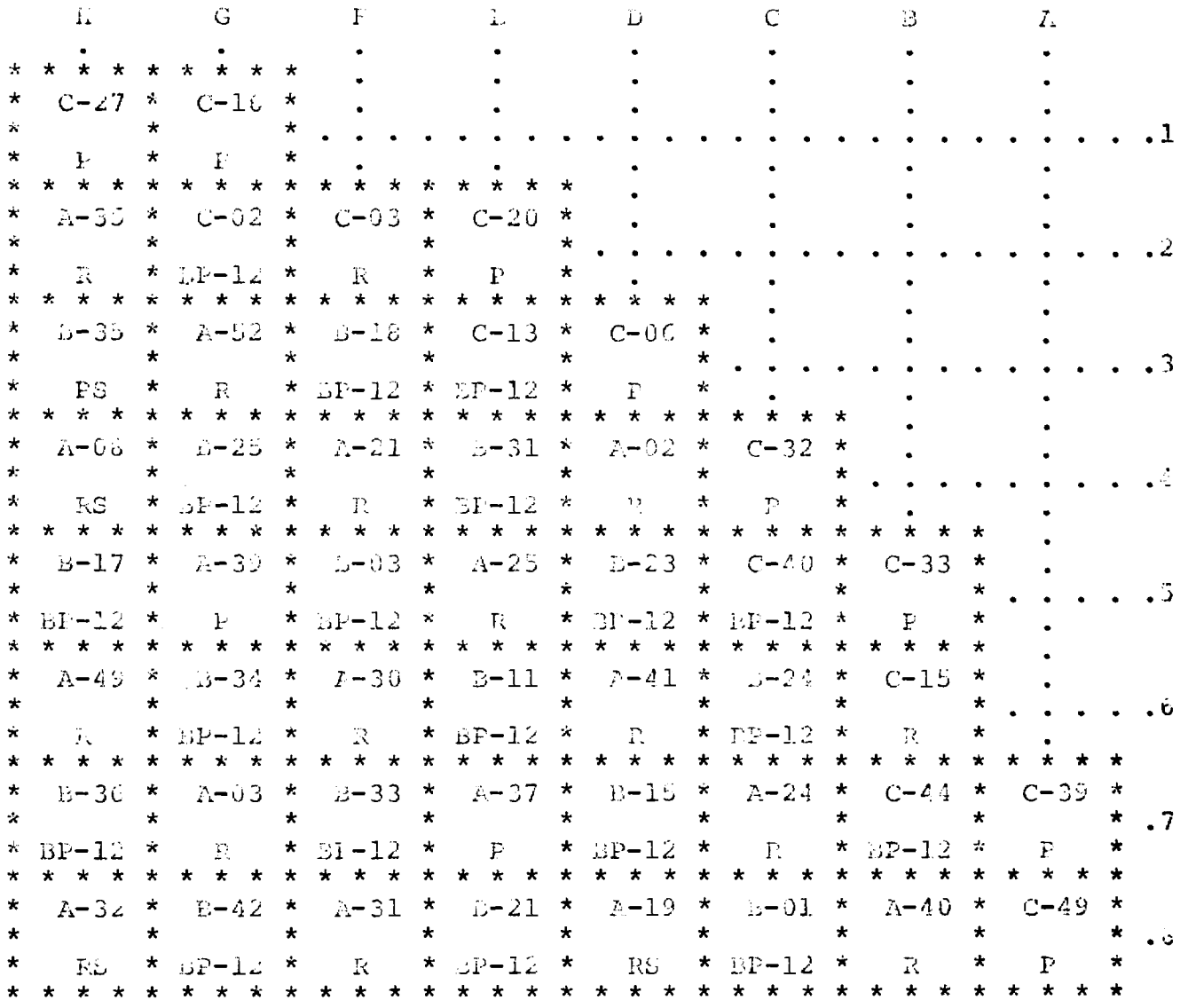


A - CONTROL ROD BANK A
B - CONTROL ROD BANK B
C - CONTROL ROD BANK C
D - CONTROL ROD BANK D
S - SHUTDOWN CONTROL ROD BANK
P - PART LENGTH CONTROL RODS

CHAPTER #5 REACTOR CORE DESIGN DATA

0NUMBER OF FUEL ASSEMBLIES	157
TOTAL GROSS ELECTRICAL OUTPUT,MWE	823
TOTAL NET ELECTRICAL OUTPUT,MWE	788
TOTAL CORE HEAT OUTPUT,MWT	2441
NOMINAL COOLANT FLOW RATE,LB/HR	100.9E06
PRESSURE DROP ACROSS CORE,PSI	26.5
PRESSURE DROP ACROSS VESSEL,PSI	47.0
CORE EQUIVALENT DIAMETER,IN.	119.7
FUEL ASSEMBLY PITCH,IN.	8.466
LOWER CORE PLATE MATERIAL	304 SS
LOWER CORE PLATE LOCATION (TOP)	
- INCHES FROM BOTTOM OF FUEL	*4.1*
LOWER CORE PLATE THICKNESS,INCHES	*3.0*
LOWER CORE PLATE METAL VOLUME FRACTION,%	*50.0*
UPPER CORE PLATE MATERIAL	304 SS
UPPER CORE PLATE LOCATION (BOTTOM)	
- INCHES FROM TOP OF FUEL	*10.9*
UPPER CORE PLATE METAL VOLUME FRACTION,%	*70.0*
REACTOR SHROUD MATERIAL	304 SS
REACTOR SHROUD THICKNESS,INCHES	*1.0*
SPACING FROM FUEL ASSEMBLY TO SHOOUD,INCHES	*0.060*
THERMAL SHIELD MATERIAL	304 SS
CORE BARREL I.D.,IN.	133.9
CORE BARREL O.D.,IN.	137.9
THERMAL SHIELD I.D.,IN.	142.6
THERMAL SHIELD O.D.,IN.	148.0
REFLECTOR THICKNESS AND COMPOSITION	
TOP - WATER PLUS STEEL,IN.	APPROX. 10
BOTTOM - WATER PLUS STEEL,IN.	APPROX. 10
SIDE - WATER PLUS STEEL,IN.	APPROX. 15

CORE MAP - CYCLE 1



X-XX...FUEL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

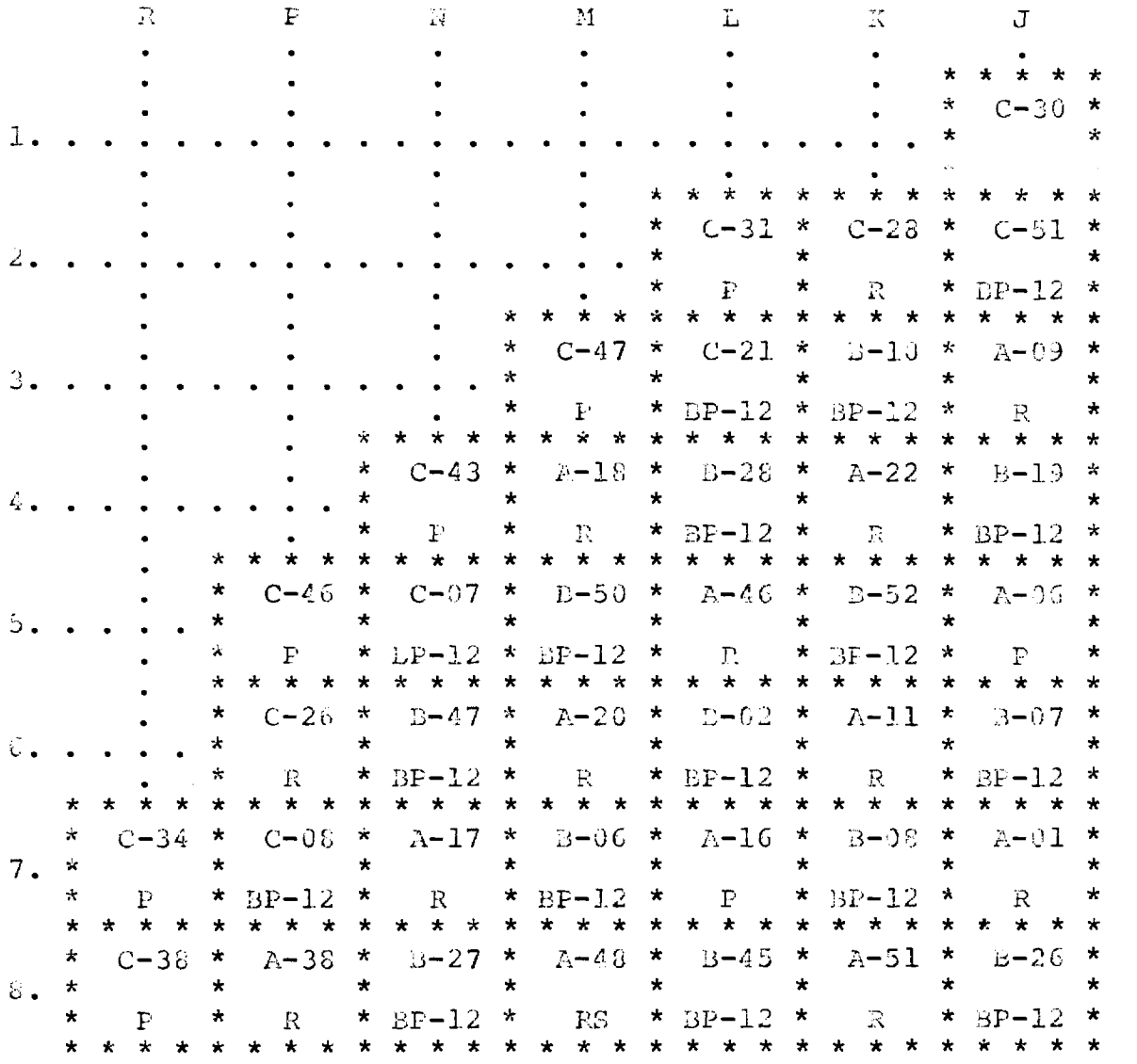
FUEL ASSEMBLY IDENTIFICATION

A-XX - REGION 1 ASSEMBLIES @ 1.868 W/O U-235
B-XX - REGION 2 ASSEMBLIES @ 2.573 W/O U-235
C-XX - REGION 3 ASSEMBLIES @ 3.117 W/O U-235

IN-CORE DEVICE IDENTIFICATION

P - PLUG
BP - BURNABLE POISON
R - FULL LENGTH CONTROL ROD
RS - PART LENGTH CONTROL ROD
PS - PRIMARY SOURCE

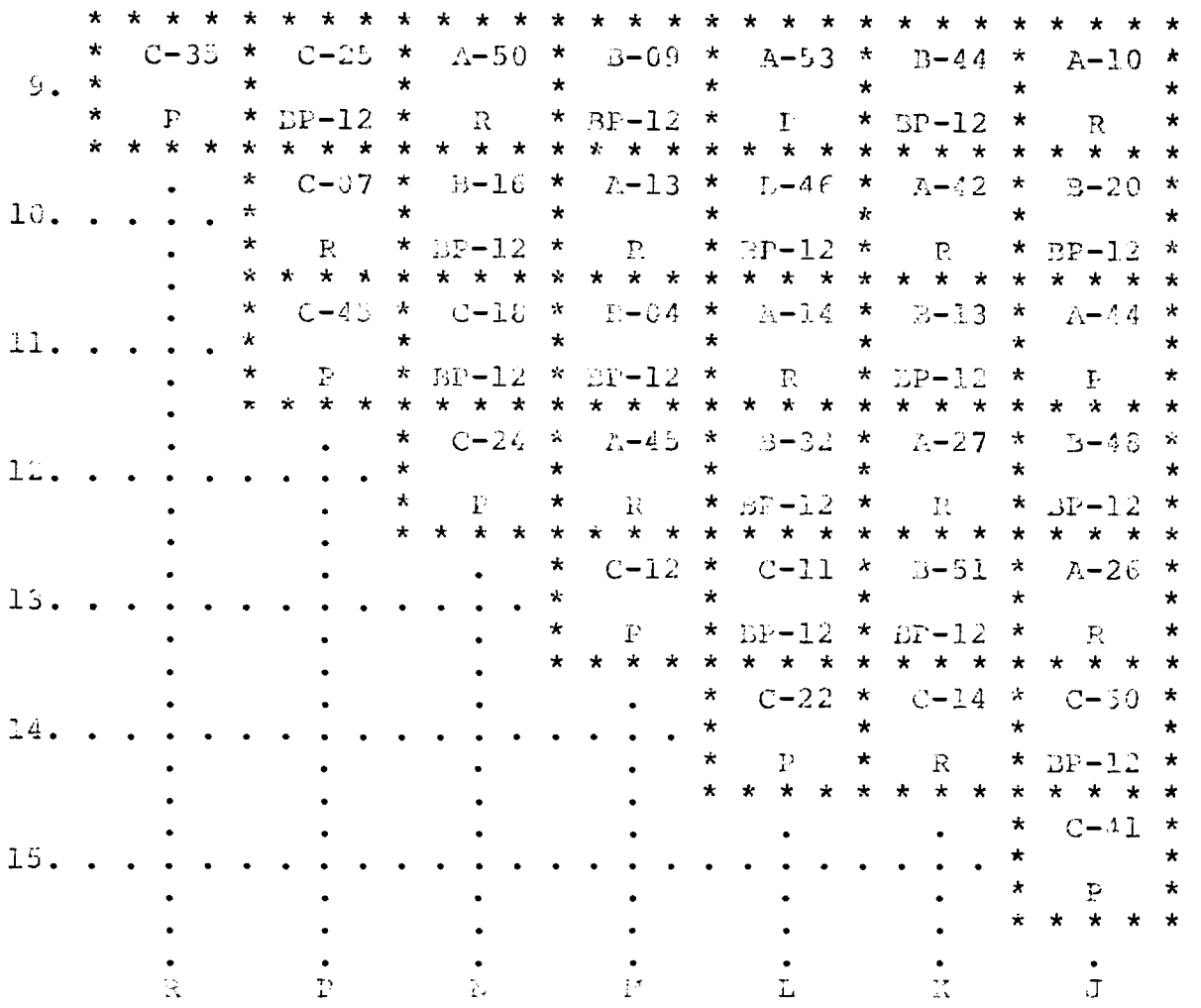
CORE MAP - CYCLE 1 (CONT.)



X-XX...FUEL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

FUEL ASSEMBLY IDENTIFICATION	IN-CORE DEVICE IDENTIFICATION
A-XX - REGION 1 ASSEMBLIES @ 1.868 W/O U-235	P - PLUG
B-XX - REGION 2 ASSEMBLIES @ 2.573 W/O U-235	BP - BURNABLE POISON
C-XX - REGION 3 ASSEMBLIES @ 3.117 W/O U-235	R - FULL LENGTH CONTROL ROD
	RS - PART LENGTH CONTROL ROD
	PS - PRIMARY SOURCE

CORE MAP - CYCLE 1 (CONT.)



X-XX...FULL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

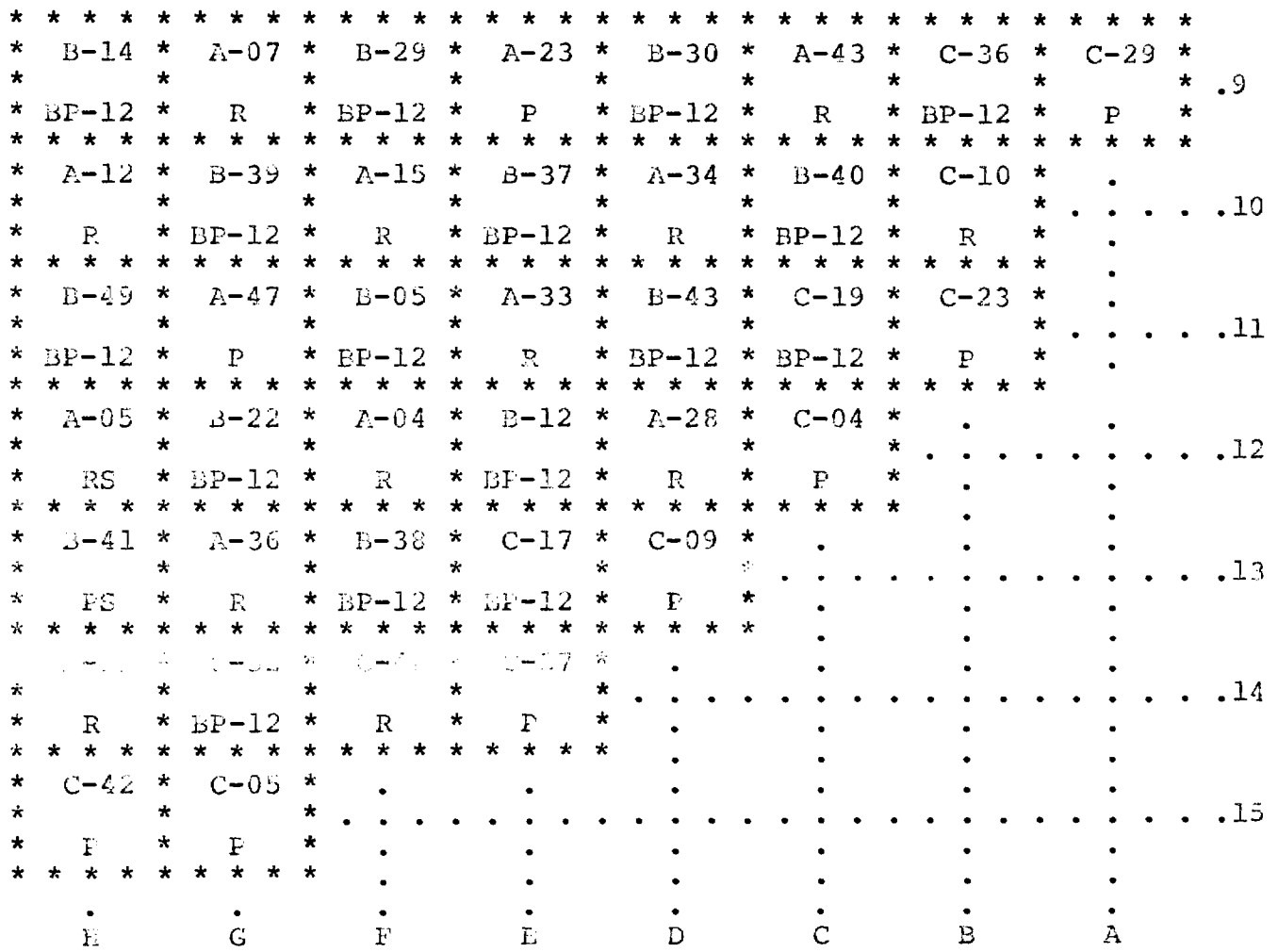
FULL ASSEMBLY IDENTIFICATION

A-XX - REGION 1 ASSEMBLIES @ 1.860 W/O U-235
B-XX - REGION 2 ASSEMBLIES @ 2.573 W/O U-235
C-XX - REGION 3 ASSEMBLIES @ 3.117 W/O U-235

IN-CORE DEVICE IDENTIFICATION

P - PLUG
BP - BURNABLE POISON
R - FULL LENGTH CONTROL ROD
PS - PART LENGTH CONTROL ROD
PS - PRIMARY SOURCE

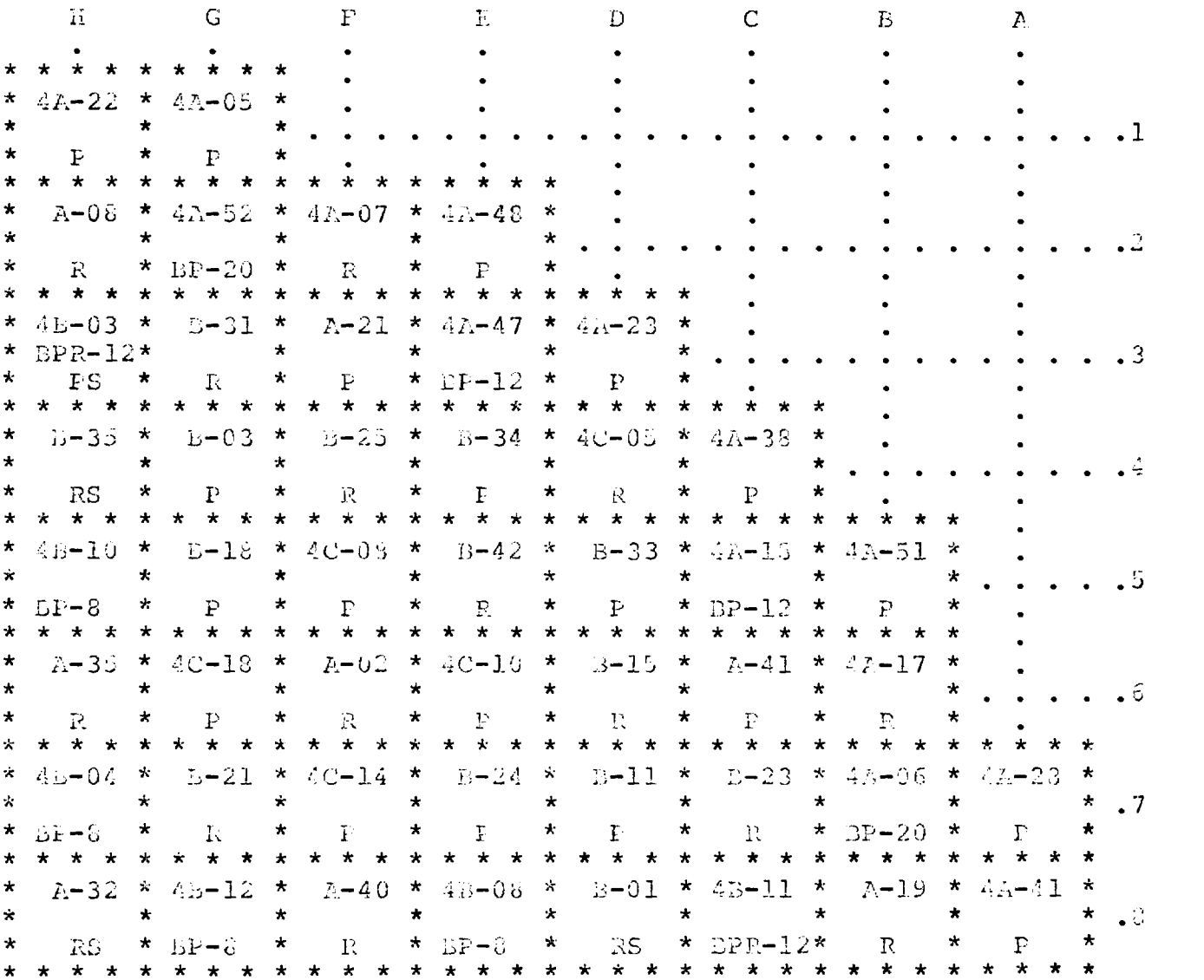
CORE MAP - CYCLE 1 (CONT.)



X-XX...FULL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

FULL ASSEMBLY IDENTIFICATION	IN-CORE DEVICE IDENTIFICATION
A-XX - REGION 1 ASSEMBLIES @ 1.868 W/O U-235	P - PLUG
B-XX - REGION 2 ASSEMBLIES @ 2.573 W/O U-235	BP - BURNABLE POISON
C-XX - REGION 3 ASSEMBLIES @ 3.117 W/O U-235	R - FULL LENGTH CONTROL ROD
	RS - PART LENGTH CONTROL ROD
	PS - PRIMARY SOURCE

CORE MAP - CYCLE 2



A-XX...FUEL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

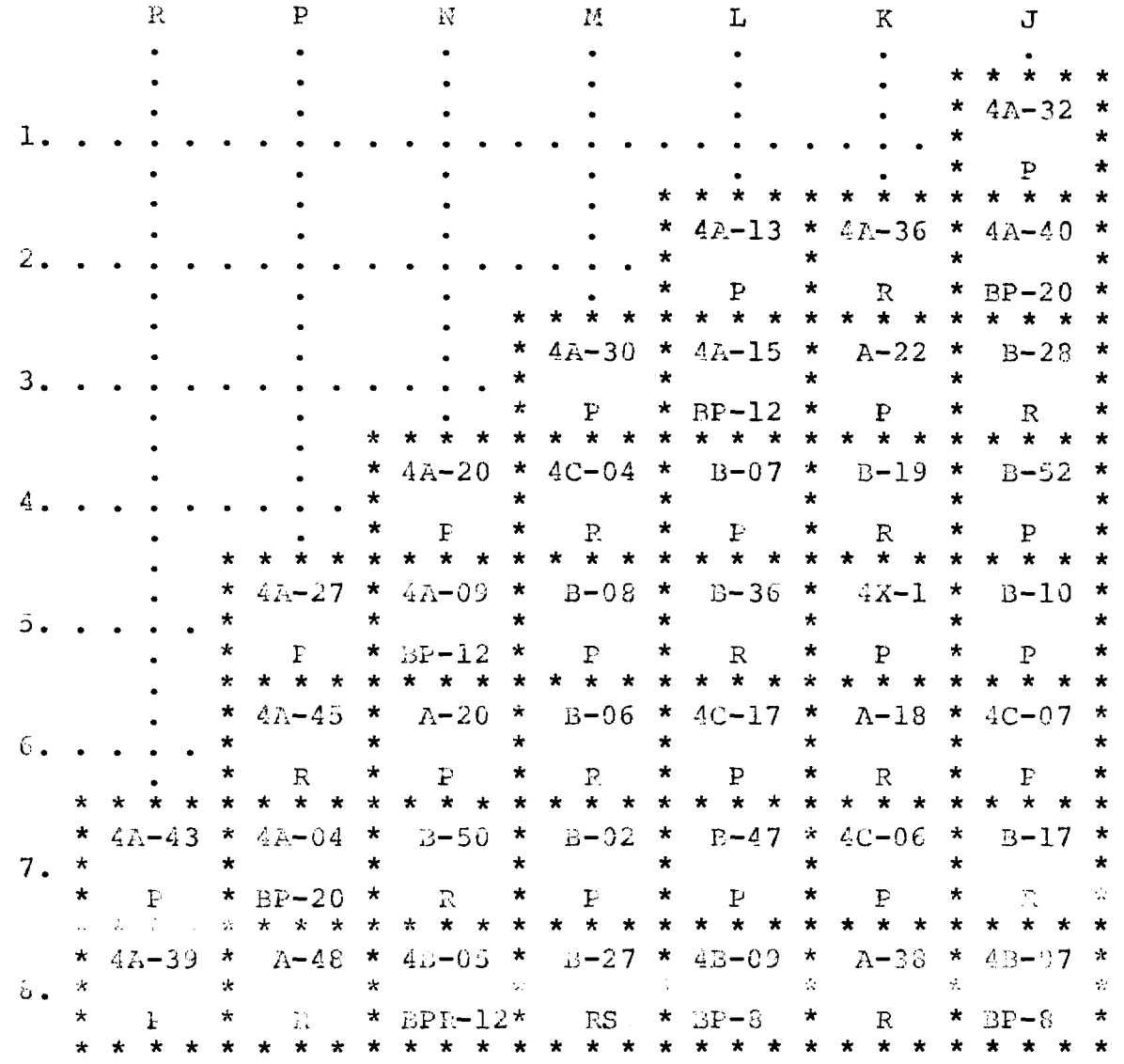
FUEL ASSEMBLY IDENTIFICATION

A-XX- TYPE 1 ASSY @ 1.868 W/O U-235
B-XX- TYPE 2 ASSY @ 2.573 W/O U-235
C-XX- TYPE 3 ASSY @ 3.117 W/O U-235
4A-XX- TYPE 4A ASSY @ 1.860 W/O U-235
4B-XX- TYPE 4B ASSY @ 2.610 W/O U-235
4C-XX- TYPE 4C ASSY @ 3.330 W/O U-235
4X-XX- TYPE 4X ASSY @ 1.860 W/O U-235

IN-CORE DEVICE IDENTIFICATION

P- PLUG
BP-XX- BURNABLE POISON-NO. RODS
BPR-XX- BURNABLE POISON RODS
RFINSERTED FROM C1 -NO. RODS
R- FULL LENGTH CONTROL ROD
RS- PART LENGTH CONTROL ROD
PS- PRIMARY SOURCE

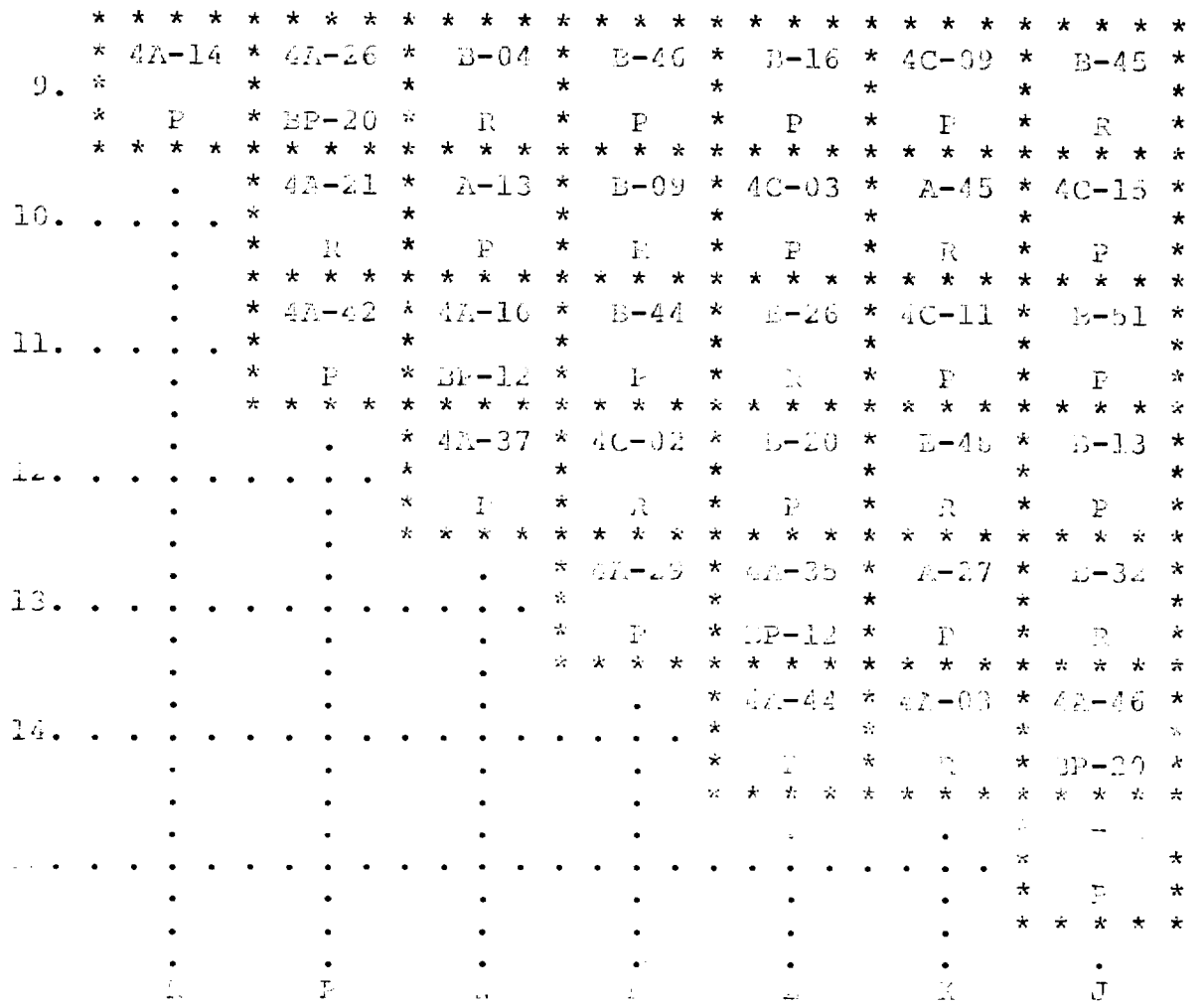
CORE MAP - CYCLE 2 (CONT.)



X-XX...FULL ASSERBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

FUEL ASSEMBLY IDENTIFICATION	IN-CORE DEVICE IDENTIFICATION
A-XX- TYPE 1 ASSY @ 1.868 W/O U-235	P- PLUG
B-XX- TYPE 2 ASSY @ 2.573 W/O U-235	BP-XX- BURNABLE POISON-NO. RODS
C-XX- TYPE 3 ASSY @ 3.117 W/O U-235	BPR-XX- BURNABLE POISON RODS
4A-XX- TYPE 4A ASSY @ 1.860 W/O U-235	REINSERTED FROM C1 -NO. RODS
4B-XX- TYPE 4B ASSY @ 2.610 W/O U-235	R- FULL LENGTH CONTROL ROD
4C-XX- TYPE 4C ASSY @ 3.330 W/O U-235	RS- PART LENGTH CONTROL ROD
4X-XX- TYPE 4X ASSY @ 1.860 W/O U-235	PS- PRIMARY SOURCE

CORE MAP - CYCLE 2 (CONT.)



A-AX...FULL ASSEMBLY NUMBER
AA....TYPE OF IN-CORE DEVICE

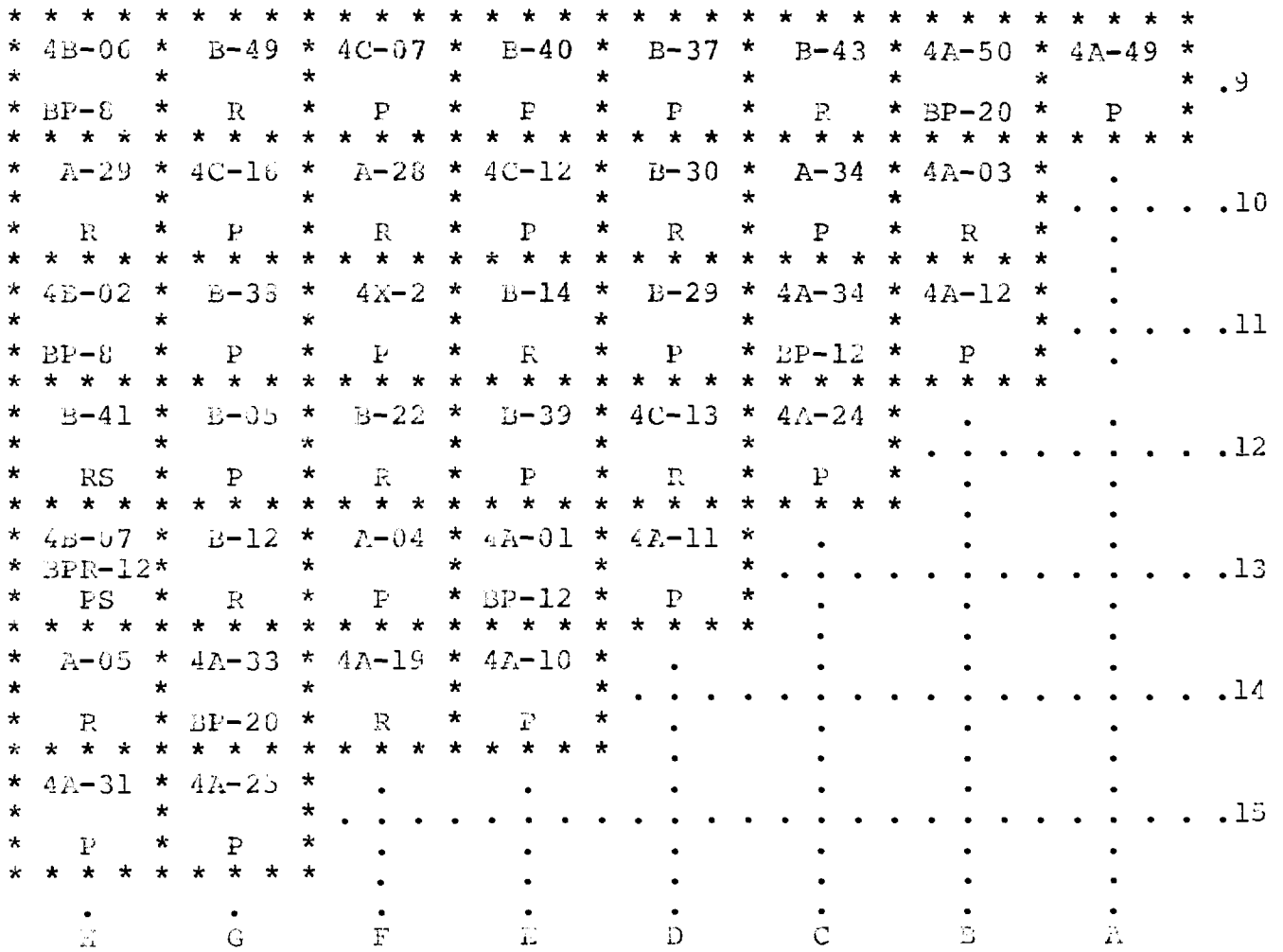
FULL ASSEMBLY IDENTIFICATION

A-XX- TYPE 1 ASSY 2.866 W/O U-235
B-XX- TYPE 2 ASSY 2.575 W/O U-235
C-XX- TYPE 3 ASSY 3.117 W/O U-235
4A-XX- TYPE 4A ASSY 1.860 W/O U-235
4B-XX- TYPE 4B ASSY 2.610 W/O U-235
4C-XX- TYPE 4C ASSY 3.330 W/O U-235
4X-XX- TYPE 4X ASSY 1.860 W/O U-235

IN-CORE DEVICE IDENTIFICATION

P- PLUG
BP-XX- BURNABLE POISON-NO.RODS
BPR-XX- BURNABLE POISON RODS
REINSERTED FROM C1 -NO.RODS
R- FULL LENGTH CONTROL ROD
RS- PART LENGTH CONTROL ROD
PS- PRIMARY SOURCE

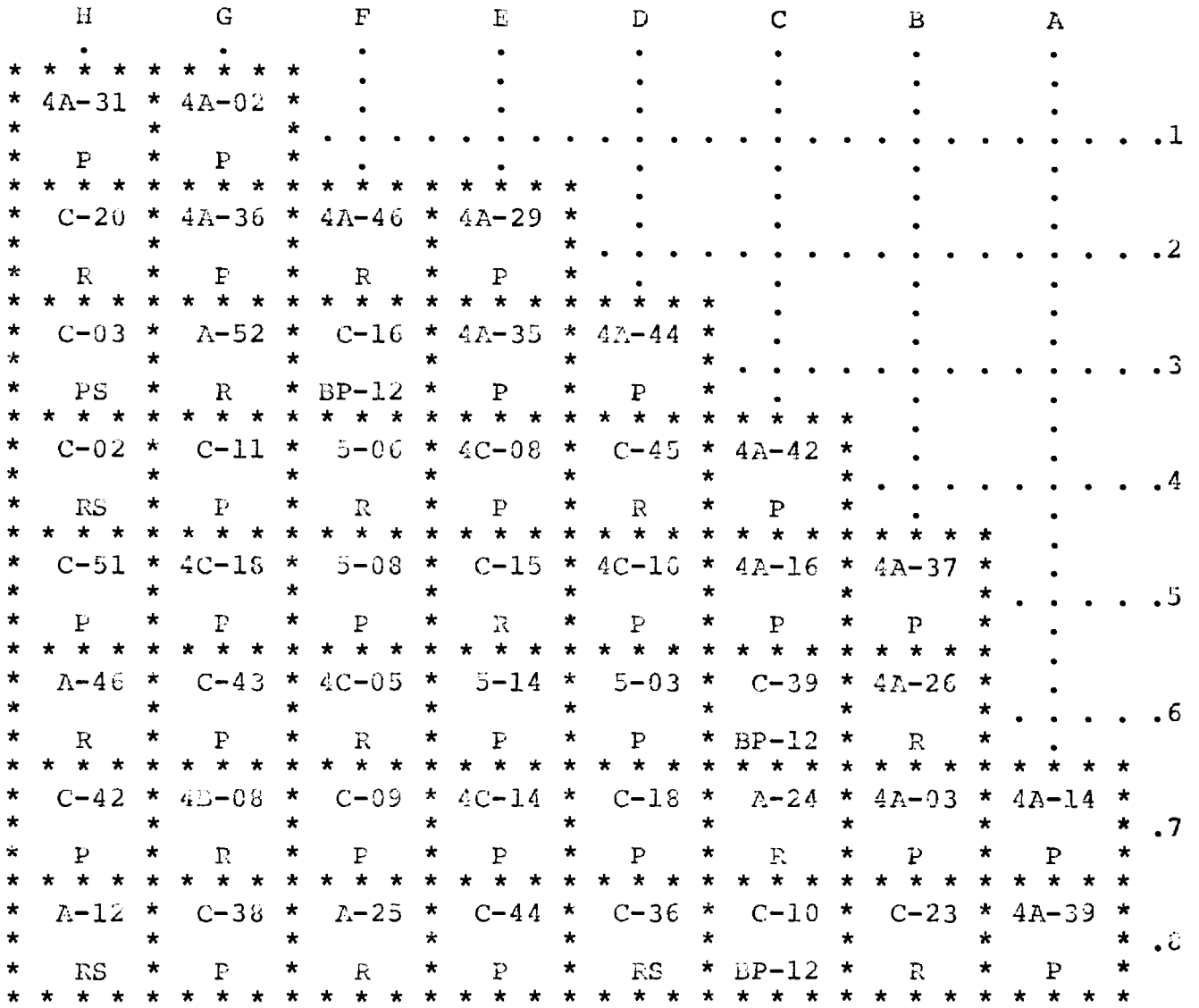
CORE MAP - CYCLE 2 (CONT.)



X-XX...FUEL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

FUEL ASSEMBLY IDENTIFICATION	IN-CORE DEVICE IDENTIFICATION
A-XX- TYPE 1 ASSY @ 1.868 W/O U-235	P- PLUG
B-XX- TYPE 2 ASSY @ 2.573 W/O U-235	BP-XX- BURNABLE POISON-NO.RODS
C-XX- TYPE 3 ASSY @ 3.117 W/O U-235	BPR-XX- BURNABLE POISON RODS
4A-XX- TYPE 4A ASSY @ 1.860 W/O U-235	REINSERTED FROM C1 -NO. RODS
4B-XX- TYPE 4B ASSY @ 2.610 W/O U-235	R- FULL LENGTH CONTROL ROD
4C-XX- TYPE 4C ASSY @ 3.330 W/O U-235	RS- PART LENGTH CONTROL ROD
4X-XX- TYPE 4X ASSY @ 1.860 W/O U-235	PS- PRIMARY SOURCE

CORE MAP - CYCLE 3



X-XX....[illegible]
XX....TYPE OF IN-CORE DEVICE

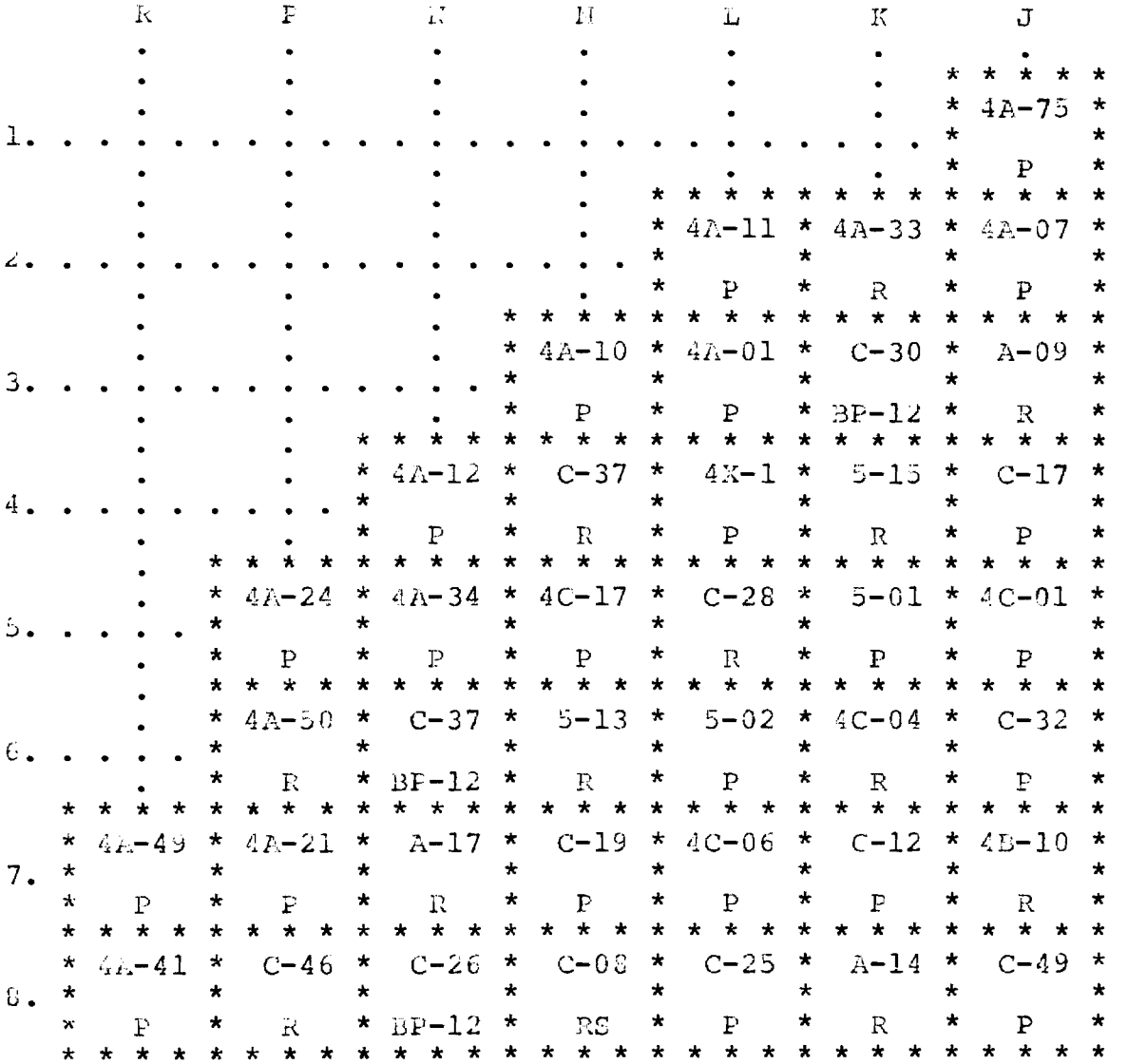
FUEL ASSEMBLY IDENTIFICATION

A-XX- TYPE [illegible]
B-XX- TYPE 2 ASSY @ 2.573 W/O U-235
C-XX- TYPE 3 ASSY @ 3.117 W/O U-235
4A-XX- TYPE 4A ASSY @ 1.860 W/O U-235
4B-XX- TYPE 4B ASSY @ 2.610 W/O U-235
4C-XX- TYPE 4C ASSY @ 3.330 W/O U-235
4X-XX- TYPE 4X ASSY @ 1.860 W/O U-235
5-XX- TYPE 5 ASSY @ 2.100 W/O U-235

IN-CORE DEVICE IDENTIFICATION

[illegible]
BP-XX- BURNABLE POISON-NO.RODS
R- FULL LENGTH CONTROL ROD
RS- PART LENGTH CONTROL ROD
PS- PRIMARY SOURCE

CORE MAP - CYCLE 3 (CONT.)



X-XX...FUEL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

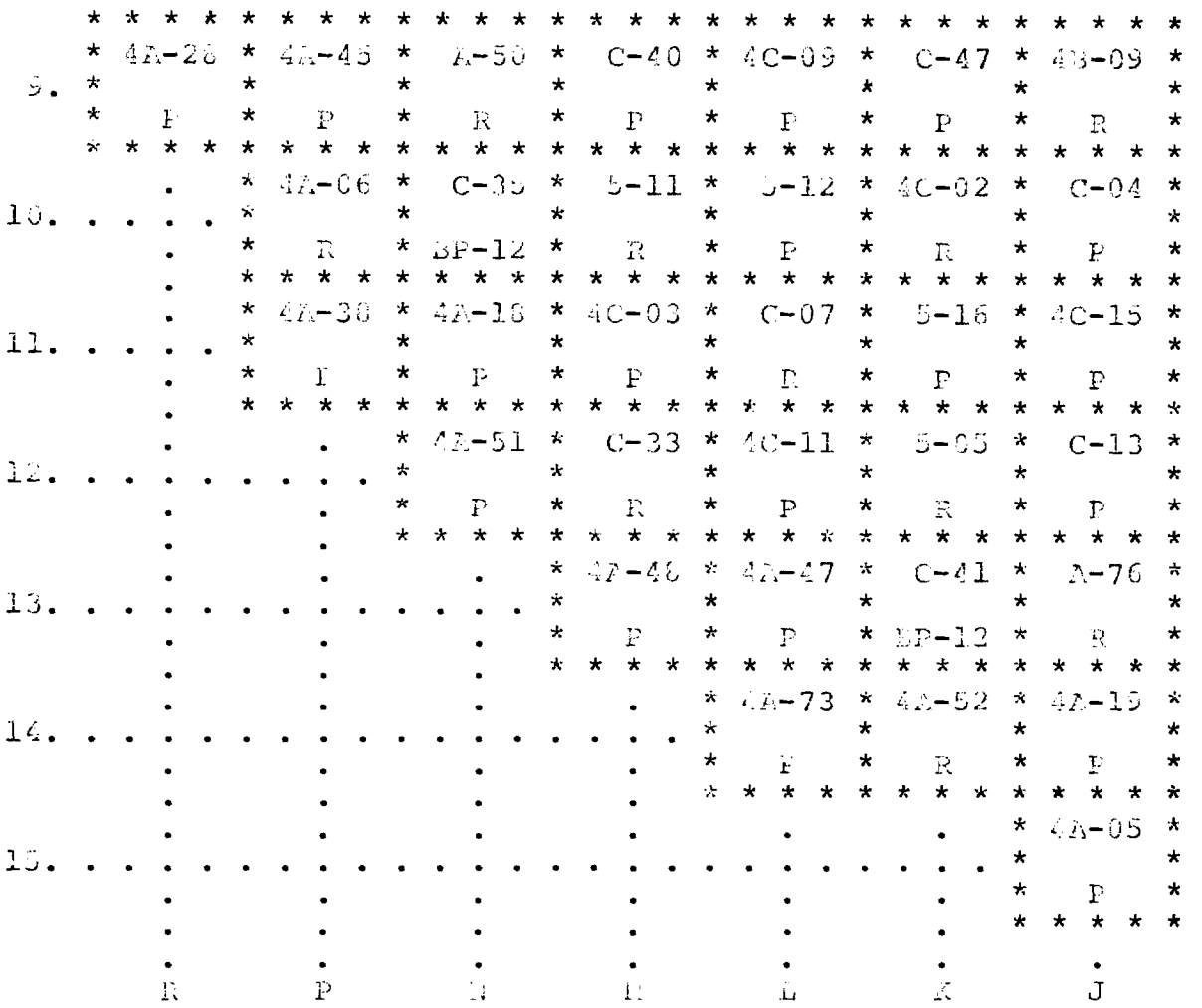
FULL ASSEMBLY IDENTIFICATION

A-XX- TYPE 1 ASSY @ 1.868 W/O U-235
B-XX- TYPE 2 ASSY @ 2.573 W/O U-235
C-XX- TYPE 3 ASSY @ 3.117 W/O U-235
4A-XX- TYPE 4A ASSY @ 1.860 W/O U-235
4B-XX- TYPE 4B ASSY @ 2.610 W/O U-235
4C-XX- TYPE 4C ASSY @ 3.330 W/O U-235
4X-XX- TYPE 4X ASSY @ 1.860 W/O U-235
5-XX- TYPE 5 ASSY @ 2.100 W/O U-235

IN-CORE DEVICE IDENTIFICATION

P- PLUG
BP-XX- BURNABLE POISON-NO.RODS
R- FULL LENGTH CONTROL ROD
RS- PART LENGTH CONTROL ROD
PS- PRIRARY SOURCE

CORE MAP - CYCLE 3 (CONT.)



X-XX...FUEL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

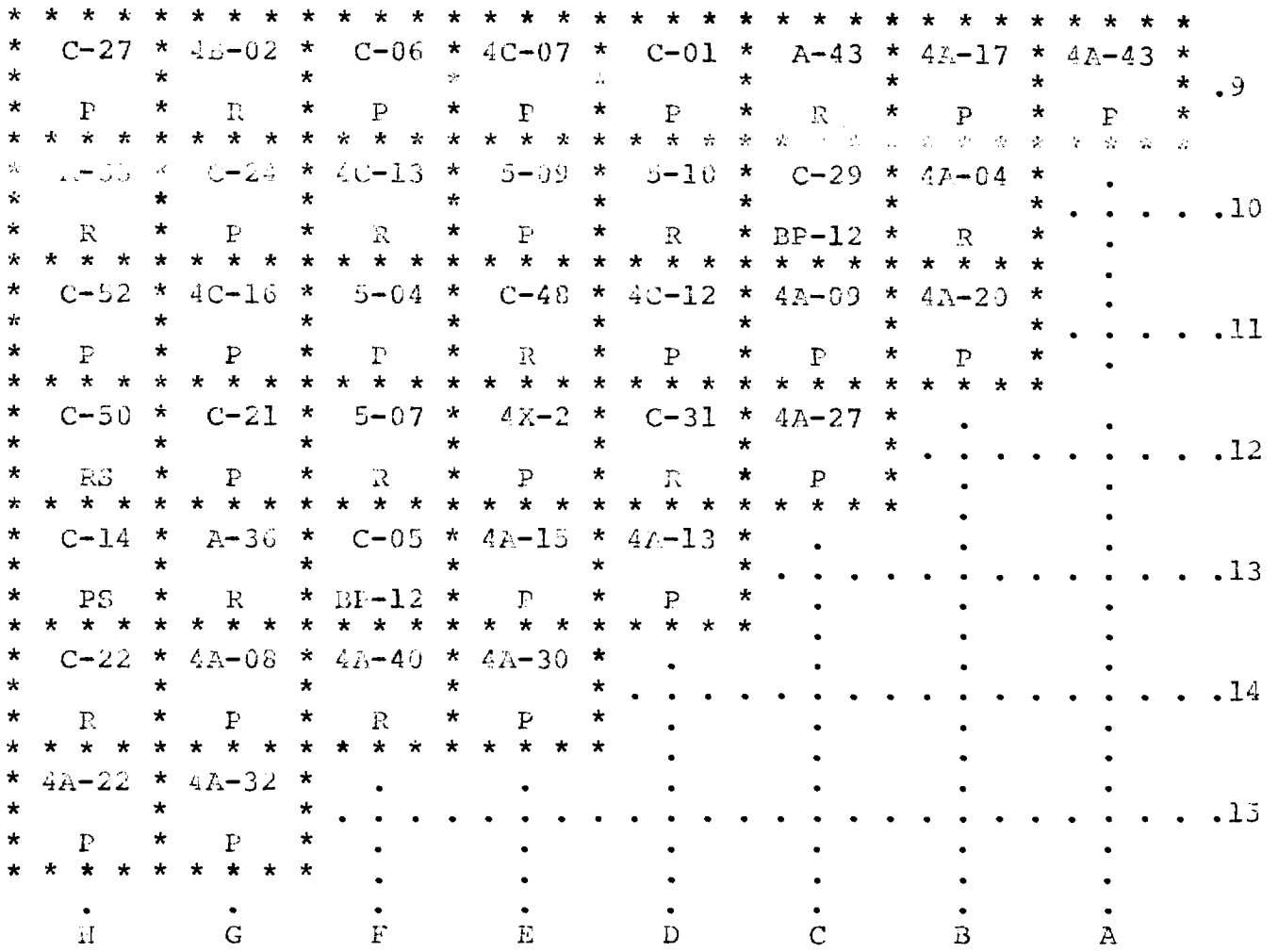
FUEL ASSEMBLY IDENTIFICATION

A-XX- TYPE 1 ASSY @ 1.808 W/O U-235
B-XX- TYPE 2 ASSY @ 2.573 W/O U-235
C-XX- TYPE 3 ASSY @ 3.117 W/O U-235
4A-XX- TYPE 4A ASSY @ 1.860 W/O U-235
4B-XX- TYPE 4B ASSY @ 2.610 W/O U-235
4C-XX- TYPE 4C ASSY @ 3.330 W/O U-235
4X-XX- TYPE 4X ASSY @ 1.800 W/O U-235
B-XX- TYPE B ASSY @ 2.100 W/O U-235

IN-CORE DEVICE IDENTIFICATION

P- PLUG
BP-XX- BURNABLE POISON-NO.RODS
R- FULL LENGTH CONTROL ROD
RS- PART LENGTH CONTROL ROD
PS- PRIMARY SOURCE

CORE MAP - CYCLE 3 (CONT.)



X-XX...FULL ASSEMBLY NUMBER
XX....TYPE OF IN-CORE DEVICE

FUEL ASSEMBLY IDENTIFICATION	IN-CORE DEVICE IDENTIFICATION
A-XX- TYPE 1 ASSY @ 1.868 W/O U-235	P- PLUG
B-XX- TYPE 2 ASSY @ 2.573 W/O U-235	BP-XX- BURNABLE POISON-NO.RODS
C-XX- TYPE 3 ASSY @ 3.117 W/O U-235	R- FULL LENGTH CONTROL ROD
4A-XX- TYPE 4A ASSY @ 1.860 W/O U-235	RS- PART LENGTH CONTROL ROD
4B-XX- TYPE 4B ASSY @ 2.610 W/O U-235	PS- PRIMARY SOURCE
4C-XX- TYPE 4C ASSY @ 3.330 W/O U-235	
4X-XX- TYPE 4X ASSY @ 1.860 W/O U-235	
5-XX- TYPE 5 ASSY @ 2.100 W/O U-235	

CHAPTER #6

CYCLE 1 - OPERATING DATA

THE FOLLOWING HISTORY DATA REPRESENTS THE OPERATION OF THE REACTOR BY PROVIDING THE POWER AS A FUNCTION OF TIME ALONG WITH THE BORON CONCENTRATION IN THE PRIMARY COOLANT AND CONTROL ROD POSITIONS. THE COOLANT TEMPERATURE THAT IS PRESENTED IS THE AVERAGE TEMPERATURE AND IS THE UNWEIGHTED AVERAGE OF THE INLET AND OUTLET TEMPERATURES OF ALL OF THE PRIMARY COOLANT LOOPS. THE COLUMN LABELED CORRECTED BORON CONCENTRATION INCLUDES ALL OF THE CORRECTIONS TO THE BORON CONCENTRATION TO ESTIMATE THE BORON CONCENTRATION FOR CRITICALITY IF THE REACTOR WERE AT FULL POWER WITH ALL CONTROL RODS WITHDRAWN AND THE AVERAGE COOLANT TEMPERATURE WERE THE NOMINAL VALUE. THIS COLUMN SHOULD ONLY BE USED FOR EXTRAPOLATION TO DETERMINE AN EFFECTIVE END OF CYCLE AT NOMINAL CONDITIONS.

CORE FOLLOW CYCLE 1

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
12/ 9/72	0800	1044	121	551.4	2250.	144.	62.5	730	27[illegible]
[illegible]/72	1000	1040	715	555.8	2250.	144.	87.8	742	274
12/ 9/72	1200	1040	767	556.0	2250.	144.	99.8	744	293
12/ 9/72	[illegible]	[illegible]	777	[illegible]	[illegible]	[illegible]	77.7	739	284
12/10/72	2000	873	1076	557.6	2250.	144.	89.7	737	288
12/11/72	0074	873	1501	563.7	2250.	144.	97.9	748	313
12/13/72	0900	803	1775	566.3	2250.	144.	122.5	734	364
12/14/72	0076	808	1837	565.0	2250.	144.	101.1	754	365
1/ 1/73	2359	810	1841	565.8	2250.	144.	114.9	771	764
1/ 2/73	2359	808	1811	564.4	2250.	144.	117.5	769	790
1/ 3/73	23 3	816	1819	565.5	2250.	144.	114.9	778	815
1/ 4/73	1100	816	1819	567.4	2250.	144.	115.6	779	826
2/ 5/73	0075	806	1742	566.2	2250.	144.	118.1	760	983
2/ 6/73	00(5	805	1820	566.0	2250.	144.	116.8	761	1009
2/ 6/73	0815	804	1820	566.7	2250.	144.	117.5	761	1077
2/15/73	0007	790	1803	566.0	2250.	144.	114.9	750	1207
2/16/73	0001	789	1807	566.9	2250.	144.	123.8	748	1232
2/17/73	0001	788	1811	566.7	2250.	144.	125.1	746	1258
2/21/73	0006	791	1831	564.3	2250.	144.	122.5	757	1353
2/22/73	0006	781	1812	566.8	2250.	144.	120.6	743	1379
2/23/73	0006	779	1839	566.0	2250.	144.	125.1	739	1405
2/24/73	0007	778	1859	566.6	2250.	144.	125.1	739	1431
2/25/73	0007	778	1827	561.9	2250.	144.	123.2	737	1456
2/27/73	0007	827	1828	562.5	2250.	144.	142.1	774	1485
2/28/73	0021	807	1848	561.9	2250.	144.	125.1	770	1571
3/ 2/73	2350	811	1804	563.0	**2250.**	144.	126.3	774	1590
3/ 9/73	1900	809C	1827	560.5	**2250.**	144.	125.1	772	1755
3/19/73			2245		**2250.**	144.	128.2		1880
3/23/73	1940	798C	1928	563.0	**2250.**	144.	118.1	771	2075
4/ 1/73	0930	787B	2217	566.4	**2250.**	144.	123.2	772	2190
4/19/73	2100	796B	2137	563.6	**2250.**	144.	126.3	771	2449
4/29/73	0830	775B	2147	564.6	**2250.**	144.	128.8	754	2720
5/ 8/73	0930	746C	2158	565.1	**2250.**	144.	129.5	730	2990
5/15/73	1000	738C	2173	565.3	**2250.**	144.	125.7	723	3204
5/22/73	0915	738C	2185	557.1	**2250.**	144.	126.9	711	3646
6/28/73	0930	690C	2182	564.7	**2250.**	144.	126.9	673	3830
7/ 6/73	0930	676C	2176	565.4	**2250.**	144.	126.9	661	4043
7/15/73	1000	674C	2188	564.6	**2250.**	144.	123.2	657	4257
7/22/73	0900	666C	2224	563.7	**2250.**	144.	127.6	650	4476
7/31/73	0930	678C	1998	562.7	**2250.**	144.	126.3	659	4732
8/ 1/73	0900	654D	2220	564.1	2250.	144.	120.3	633	4753
8/ 9/73	0900	649C	2219	562.0	**2000.**	144.	123.8	637	4990

LETTER AFTER MEAS PPM INDICATES QUALITY (A=BEST)
UNLESS SPECIFIED, READING IS OF 'A' QUALITY

CORE FOLLOW CYCLE 1

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPR	MWD/T
8/17/73	0900	715C	2290	562.0	2000.	144.	127.6	631	5176
8/22/73	0930	620C	2335	562.4	2000.	144.	135.8	608	5328
8/28/73	0930	735B	2186	560.8	2000.	144.	135.8	636	5450
9/ 5/73	0930	608C	2312	567.9	2000.	144.	129.5	604	5608
9/14/73	0930	576B	2118	561.4	2000.	144.	133.9	546	5890
9/15/73	0930	582C	2155	563.3	2000.	144.	133.9	550	5915
10/30/73	0910	569C	2309	563.2	2000.	144.	136.4	556	6296
11/ 4/73	1000	582C	2300	562.5	2000.	144.	133.9	570	6456
11/13/73	0930	565C	2304	562.2	2000.	144.	135.2	557	6750
11/20/73	0910	548C	2295	563.5	2000.	144.	132.6	541	6968
11/28/73	0930	527D	2295	563.8	2000.	144.	133.9	521	7227
3/20/74	0915	530C	2352	562.0	2000.	144.	134.5	524	7370
3/30/74	0900	489	2346	563.0	2000.	144.	135.2	480	7676
3/31/74	0900	491	2362	563.0	2000.	144.	134.5	483	7700
4/11/74	0930	458	2342	564.0	2000.	144.	133.3	454	8045
4/21/74	0800	414B	2340	562.0	2000.	144.	132.0	408	8370
5/ 4/74	0800	414	2409	564.0	2000.	144.	139.6	411	8775
5/ 5/74	0830	434	2379	563.0	2000.	144.	144.0	429	8810
5/ 6/74	1000	422	2415	564.0	2000.	144.	139.6	419	8845
5/15/74	0930	394	2387	563.0	2000.	144.	135.8	390	9130
5/16/74	0930	390	2406	563.0	2000.	144.	136.4	386	9765
5/17/74	0930	418	2425	563.0	2000.	144.	135.2	415	9200
5/18/74	0930	390	2420	568.0	2000.	144.	137.1	388	9235
5/19/74	1000	398	2413	563.0	2000.	144.	137.7	395	9270
5/20/74	0930	390	2426	564.0	2000.	144.	134.5	389	9305
5/21/74	0930	390	2412	563.0	2000.	144.	135.2	388	9333
5/23/74	0930	391	2406	563.0	2000.	144.	137.1	389	9405
5/24/74	0930	391	2413	563.0	2000.	144.	136.4	389	9438
5/25/74	1830	372	2406	563.0	2000.	144.	136.4	370	9470
6/ 6/74	0930	364	2424	563.0	2000.	144.	136.4	358	9715
6/ 9/74	0900	366	2433	563.0	2000.	144.	137.1	361	9810
6/13/74	0930	368	2429	562.0	2000.	144.	138.3	364	9935
6/14/74	0900	368	2437	563.0	2000.	144.	137.7	365	9965
6/15/74	0815	364	2408	562.0	2000.	144.	130.7	360	9995
6/19/74	0930	378D	2410	562.0	2000.	144.	133.3	374	10730
6/26/74	0900	317	2394	563.0	2000.	144.	136.4	313	10335
6/27/74	0930	317	2403	563.0	2000.	144.	135.8	312	10365
6/28/74	0900	302	2427	563.0	2000.	144.	138.3	297	10405
6/29/74	0900	295	2419	562.0	2000.	144.	133.3	290	10445
7/ 2/74	0930	292	2435	563.4	2000.	144.	135.8	290	10540
7/ 3/74	0930	302	2435	562.5	2000.	144.	137.1	299	10570
7/20/74	0930	324	1658	558.1	2000.	144.	125.1	273	10732

LETTER AFTER MEAS PPM INDICATES QUALITY (A=BEST)
UNLESS SPECIFIED, READING IS OF 'A' QUALITY

CORE FOLLOW CYCLE 1

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
7/21/74	0930	284	2283	561.0	2000.	144.	136.4	256	10465
7/22/74	0930	288	2274	561.0	2000.	144.	135.2	270	10796
7/24/74	0930	288	2279	561.5	2000.	144.	134.5	271	10859
7/25/74	0980	284	2319	561.8	2000.	144.	136.4	269	10891
7/28/74	0900	283	2341	562.4	2000.	144.	137.7	273	10990
7/30/74	0930	265	2350	562.7	2000.	144.	137.1	256	11050
8/ 3/74	0830	245	2367	563.0	2000.	144.	138.3	238	11190
8/ 4/74	0900	248	2394	562.0	2000.	144.	137.7	242	11225
8/16/74	0930	233	2407	562.0	2000.	144.	136.4	230	11630
8/23/74	0930	222	2433	562.0	2000.	144.	138.3	219	11865
8/24/74	0930	215	2423	563.0	2000.	144.	137.7	214	11895
8/27/74	0900	204	2428	563.0	2000.	144.	142.1	202	12000
8/28/74	0900	215	2425	563.0	2000.	144.	142.7	213	12035
8/30/74	0930	206	2406	562.0	2000.	144.	136.4	204	12100
8/31/74	1000	207	2418	562.0	2000.	144.	136.4	204	12135
9/ 2/74	0930	187	2394	563.0	2000.	144.	132.6	185	12200
9/ 3/74	0930	187	2439	563.0	2000.	144.	140.8	185	12230
9/ 4/74	0930	189	2408	563.0	2000.	144.	140.2	188	12260
9/14/74	0900	149	2436	564.0	2000.	144.	143.4	144	12530
9/15/74	0900	148	2405	563.0	2000.	144.	138.3	143	12560
9/16/74	0930	144	2412	563.0	2000.	144.	141.5	139	12595
9/18/74	0930	141	2422	564.0	2000.	144.	143.4	138	12665
9/19/74	0930	141	2385	564.0	2000.	144.	141.5	138	12700
9/20/74	0845	130	2411	563.0	2000.	144.	142.1	125	12730
9/24/74	0930	128	2254	563.0	2000.	144.	129.5	123	12865
9/27/74	0900	110	2407	563.0	2000.	144.	143.4	105	12960
10/ 3/74	0900	145	1480	562.0	2000.	144.	128.2	95	13120
10/10/74	0900	164	1440	560.0	2000.	144.	128.8	100	13250
10/13/74	0930	157	1450	561.0	2000.	144.	133.9	92	13310
10/14/74	0930	156	1460	560.0	2000.	144.	135.2	90	13330
10/18/74	0930	157C	1500	563.0	2000.	144.	137.1	98	13420
10/23/74	0900	148	1489	561.0	2000.	144.	132.0	83	13560
10/24/74	1000	148	1450	561.0	2000.	144.	132.6	84	13540

LETTER AFTER MEAS PPR INDICATES QUALITY (A=BEST)
UNLESS SPECIFIED, READING IS OF 'A' QUALITY

HOT ZERO POWER CRITICAL CONDITIONS DURING CYCLE 1

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
8/24/72	0500		0		2250.	47.4	0.0		
8/24/72	1244		0		2250.	51.8	0.0		
12/ 9/72	0600	1044	0	542.6	2250.	144.	49.9	738	270

OPERATIONAL TRANSIENTS DURING CYCLE 1

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
12/ 9/72	0600	1044	0	542.6	2250.	144.	49.9	738	270
12/ 9/72	0800	1044	121	551.4	2250.	144.	62.5	730	272
12/ 9/72	1000	1040	715	555.8	2250.	144.	87.8	742	274
12/ 9/72	1200	1040	767	556.0	2250.	144.	99.8	744	280
12/ 9/72	1400	1005	747	555.2	2250.	144.	77.7	739	284
12/10/72	2000	873	1016	557.6	2250.	144.	89.7	737	288
12/11/72	0014	873	1504	563.7	2250.	144.	97.9	748	313
12/13/72	0900	803	1775	566.3	2250.	144.	122.5	734	364
12/14/72	0016	808	1837	565.0	2250.	144.	107.1	754	365

LETTER AFTER MEAS PPM INDICATES QUALITY (A=BEST)
UNLESS SPECIFIED, READING IS OF 'A' QUALITY

MONTHLY OPERATING STATISTICS

MONTH	HOURS CRITICAL	GROSS THERMAL ENERGY GEN.,MWH
INITIAL CRITICALITY	JULY 1,1972	
JULY 1972	298.	120650.
AUG 1972	92.	0.
SEPT 1972	416.	317069.
OCT 1972	2.	0.
NOV 1972	13.	635.
DEC 1972	526.	840196.
COMMERCIAL OPERATION	DEC 22,1972	
JAN 1973	149.2	212399.
FEB 1973	638.2	1108376.
MAR 1973	560.	1053648.
APR 1973	500.3	987377.
MAY 1973	526.3	1012476.
JUNE 1973	426.7	850420.
JULY 1973	675.	1419718.
AUG 1973	690.	1322046.
SEPT 1973	430.	899649.
OCT 1973	244.	507608.
NOV 1973	687.	1541412.
DEC 1973	0.	0.
JAN 1974	0.	0.
FEB 1974	0.	0.
MAR 1974	378.4	799151.
APR 1974	700.5	1578456.
MAY 1974	676.5	1502043.
JUNE 1974	693.3	1607196.
JULY 1974	550.5	1041653.
AUG 1974	744.	1773564.
SEPT 1974	654.2	1508172.
OCT 1974	553.3	839890.
END OF CYCLE 1	OCT 24,1974	

SHUTDOWNS DATE FROM	TO	DURATION HOURS
JUL 30,1972	AUG 28,1972	705.2
SEP 20,1972	DEC 10,1972	1934.8
JAN 4,1973	JAN 29,1973	594.8
FEB 6,1973	FEB 7,1973	16.8
FEB 7,1973	FEB 7,1973	1.5
FEB 25,1973	FEB 25,1973	14.8
FEB 25,1973	FEB 25,1973	0.8
MAR 3,1973	MAR 3,1973	5.4
MAR 9,1973	MAR 15,1973	125.2
MAR 23,1973	MAR 25,1973	48.5
MAR 27,1973	MAR 27,1973	4.9
APR 3,1973	APR 11,1973	191.4
APR 11,1973	APR 13,1973	41.0
APR 21,1973	APR 21,1973	5.2
MAY 27,1973	JUN 12,1973	507.5
JUN 13,1973	JUN 13,1973	1.0
JUN 13,1973	JUN 13,1973	7.8
JUL 7,1973	JUL 10,1973	65.3
SEP 13,1973	OCT 24,1973	965.8
NOV 30,1973	MAR 16,1974	2553.6
MAR 20,1974	MAR 20,1974	22.7
APR 6,1974	APR 6,1974	6.6
APR 6,1974	APR 6,1974	2.0
APR 25,1974	APR 25,1974	3.9
MAY 26,1674	MAY 29,1974	97.5
JUN 9,1974	JUN 9,1974	10.0
JUN 10,1974	JUN 10,1774	0.6
JUN 20,1974	JUN 20,1774	14.4
JUN 21,1974	JUN 21,1774	1.0
JUN 22,1974	JUN 21,1774	0.6
JUL 3,1974	JUL 11,1974	190.9
JUL 11,1974	JUL 11,1974	0.5
JUL 14,1974	JUL 14,1974	0.4
JUL 16,1974	JUL 14,1974	1.3
SEP 4,1974	SEP 6,1974	46.8
SEP 29,1974	SEP 29,1974	0.5
SEP 29,1974	SEP 29,1974	0.2
SEP 29,1974	SEP 29,1974	17.9
OCT 3,1974	OCT 3,1974	18.7
OCT 24,1974	FEB 2,1975	2711.7

END OF CYCLE 1 OCT 24,1974

AXIAL POWER DISTRIBUTIONS
FROM SELECTED CORE MAPS

THE DATA IN THE FOLLOWING TABLES REPRESENT THE REDUCTION OF THE DATA FROM THE INCORE DETECTORS WHICH WERE INSERTED INTO THE INSTRUMENTATION THIMBLES. THE AXIAL POWER PROFILES ARE GIVEN FOR 60 EQUAL INTERVALS THAT SPAN THE FUEL REGION ONLY AND WITH THE FIRST ENTRY REPRESENTING THE BOTTOM OF THE FUEL AND THE 61ST ENTRY REPRESENTING THE TOP OF THE FUEL. THE DATA ARE EXPRESSED IN UNITS OF KW/FT AND WHEN SUMED OVER ALL OF THE FUEL IN THE CORE WILL EQUAL THE POWER BEING PRODUCED IN THE REACTOR.

CYCLE 1 - MAP 8

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
8/24/72	0000		0		2250.	47.4	0.0		

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	0.536	0.683	0.767	1.001	0.516
2	0.692	1.013	0.639	1.007	0.743
3	0.982	1.586	0.831	1.335	1.032
4	1.206	1.939	0.959	1.668	1.362
5	1.474	2.269	1.086	2.002	1.568
6	1.607	2.446	0.959	2.113	1.774
7	2.099	3.173	1.534	2.780	2.228
8	3.438	3.707	1.977	3.058	2.600
9	2.590	4.208	2.173	3.448	2.868
10	2.880	4.516	2.237	3.614	3.178
11	3.103	4.913	2.556	3.892	3.384
12	3.282	5.199	2.620	4.004	3.590
13	3.438	5.530	2.620	4.449	3.755
14	3.959	5.706	2.748	4.560	3.879
15	3.684	5.838	2.876	5.005	3.982
16	3.438	5.442	2.556	4.504	3.714
17	4.086	6.499	3.195	5.116	4.354
18	4.331	6.808	3.451	5.561	4.607
19	4.406	7.072	3.451	5.783	4.828
20	4.666	7.403	3.834	6.006	5.035
21	4.711	7.535	3.898	6.172	5.139
22	4.800	7.755	3.898	6.395	5.262
23	4.924	7.894	4.078	6.549	5.395
24	4.980	7.944	3.883	6.647	5.467
25	5.069	8.032	4.010	6.758	5.529
26	4.558	7.264	3.628	6.093	5.075
27	5.425	8.514	4.392	7.257	5.940
28	5.714	9.019	4.520	7.534	6.228
29	5.808	9.480	4.774	8.032	6.618

CYCLE 1 - MAP 8 (CONT)

	ASSEMBLY R 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
30	6.092	9.831	5.029	8.364	6.865
31	6.314	10.226	5.284	8.752	7.111
32	6.537	10.643	5.475	9.085	7.461
33	6.715	10.841	5.665	9.306	7.564
34	6.781	11.016	5.729	9.639	7.666
35	6.826	10.926	5.920	9.694	7.704
36	6.670	10.841	6.047	10.062	7.687
37	7.442	12.357	6.952	10.878	8.567
38	7.837	12.977	7.285	11.455	9.147
39	8.104	13.527	7.924	12.234	9.491
40	8.283	13.946	8.627	12.678	9.677
41	8.417	14.249	9.459	13.268	9.969
42	8.394	14.331	9.914	13.525	10.075
43	8.214	14.176	10.044	13.525	10.013
44	7.945	13.711	10.173	13.358	9.723
45	7.364	12.133	9.396	11.960	8.769
46	6.755	12.138	9.004	12.016	8.417
47	7.025	12.227	9.331	12.128	8.707
48	6.688	11.740	9.072	11.569	8.230
49	6.284	10.898	8.488	10.731	7.650
50	5.635	10.034	7.776	9.837	6.903
51	5.184	8.771	6.804	8.719	6.074
52	4.511	7.442	5.573	7.377	5.183
53	3.681	5.914	4.925	5.924	4.043
54	2.716	4.231	3.564	4.192	2.736
55	1.816	2.769	2.268	3.130	1.949

	ASSEMBLY R 8	ASSEMBLY A 10	ASSEMBLY L 11	ASSEMBLY N 12	ASSEMBLY L 14
1	0.452	0.673	0.576	0.538	0.295
2	0.774	1.044	0.800	0.498	0.506
3	1.291	1.416	1.140	0.797	0.865
4	1.355	1.823	1.510	0.996	1.139
5	1.549	2.213	1.807	1.275	1.476
6	1.549	2.372	1.940	1.275	1.539
7	2.065	3.045	2.547	1.593	1.961
8	2.194	3.505	2.917	1.729	2.256
9	2.646	4.001	3.317	2.061	2.615
10	2.904	4.461	3.598	2.191	2.805
11	3.226	4.760	3.865	2.330	3.100
12	3.291	5.028	4.146	2.529	3.311
13	3.355	5.311	4.353	2.609	3.416
14	3.484	5.359	4.516	2.728	3.585

CYCLE 1 - MAP 8 (CONT)

	ASSEMBLY R 8	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY T 12	ASSEMBLY L 14
15	3.549	5.718	4.635	2.848	3.754
16	3.355	5.311	4.265	2.649	3.458
17	4.139	6.320	5.005	3.206	4.070
18	4.259	6.661	5.346	3.366	4.344
19	4.388	6.866	5.568	3.485	4.513
20	4.561	7.134	5.716	3.600	4.618
21	4.517	7.258	5.893	3.684	4.829
22	4.581	7.417	6.042	3.784	4.935
23	4.765	7.561	6.150	3.916	5.093
24	4.884	7.650	6.215	3.968	5.108
25	4.948	7.791	6.268	3.968	5.209
26	4.562	7.104	5.713	3.690	4.768
27	5.147	8.320	6.953	4.305	5.545
28	5.462	8.743	7.351	4.563	5.945
29	5.783	9.237	7.735	4.821	6.218
30	6.040	9.695	8.045	5.039	6.554
31	6.169	10.100	8.414	5.238	6.785
32	6.490	10.435	8.768	5.456	7.058
33	6.554	10.870	9.167	5.615	7.352
34	6.812	11.105	9.388	5.753	7.478
35	6.747	11.317	9.418	5.892	7.520
36	6.940	10.611	9.226	5.833	7.562
37	7.405	12.595	11.118	6.838	8.503
38	7.872	13.224	11.861	7.448	8.983
39	8.066	13.950	12.513	8.145	9.342
40	8.130	14.375	13.105	8.822	9.679
41	8.216	14.704	13.655	9.506	9.977
42	8.238	14.862	13.911	9.956	10.043
43	8.043	14.791	13.896	10.178	9.873
44	7.914	14.504	13.643	9.956	9.534
45	7.135	13.653	11.857	9.148	8.793
46	6.746	12.533	12.408	9.067	8.094
47	6.876	13.155	12.795	9.391	8.411
48	6.557	12.569	12.334	9.027	8.009
49	6.097	11.733	11.515	8.462	7.500
50	5.514	10.720	10.623	7.694	6.822
51	4.995	9.600	9.284	6.684	5.932
52	4.411	8.124	7.662	5.634	5.000
53	3.632	6.436	6.040	4.503	4.068
54	2.854	4.569	4.567	2.948	2.754
55	1.761	3.076	2.648	2.080	1.907

	ASSEMBLY J 15
1	0.562

CYCLE 1 - MAP 8 (CONT)

	ASSEMBLY 8 15
2	0.749
3	0.937
4	0.999
5	1.374
6	1.124
7	1.624
8	1.999
9	2.248
10	2.436
11	2.623
12	2.686
13	2.998
14	3.123
15	3.123
16	2.623
17	3.373
18	3.623
19	3.498
20	3.935
21	3.997
22	3.997
23	3.990
24	4.231
25	4.231
26	3.733
27	4.542
28	4.604
29	4.853
30	5.102
31	5.226
32	5.538
33	5.724
34	5.786
35	5.724
36	5.786
37	6.359
38	6.496
39	6.745
40	6.870
41	7.075
42	6.840
43	6.652
44	6.464
45	5.836
46	5.711

CYCLE 1 - MAP 8 (CONT)

	ASSEMBLY J 15
47	5.836
48	5.585
49	5.020
50	4.644
51	4.142
52	3.703
53	2.887
54	2.134
55	1.443

CYCLE 1 - MAP 9

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/
8/24/72	1244		0		2250.	51.8	0.0		

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSERBLY F 4	ASSEMBLY N 5
1	0.299	0.684	0.605	0.810	0.134
2	0.407	0.769	0.743	0.911	0.207
3	0.570	1.140	0.936	1.350	0.246
4	0.787	1.481	1.238	1.754	0.358
5	0.869	1.852	1.486	2.193	0.425
6	0.950	1.966	1.596	2.328	0.470
7	1.168	2.536	2.036	3.003	0.626
8	1.330	2.906	2.284	3.441	0.693
9	1.493	3.362	2.587	3.981	0.805
10	1.629	3.618	2.807	4.285	0.872
11	1.738	3.875	2.972	4.589	0.962
12	1.819	4.131	3.219	4.892	1.006
13	1.928	4.302	3.330	5.095	1.051
14	1.982	4.507	3.467	5.331	1.096
15	2.036	4.615	3.605	5.466	1.185
16	1.928	4.330	3.330	5.128	1.118
17	2.226	5.043	3.962	5.972	1.297
18	2.335	5.385	4.127	6.377	1.386
19	2.471	5.612	4.293	6.647	1.431
20	2.525	5.783	4.430	6.849	1.521
21	2.607	5.954	4.568	7.052	1.588
22	2.688	6.125	4.650	7.254	1.655
23	2.690	6.173	4.713	7.094	1.707

CYCLE 1 - MAP 9

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY F 4	ASSEMBLY N 5
24	2.691	6.191	4.746	6.891	1.736
25	2.717	6.219	4.719	6.922	1.802
26	2.504	5.772	4.396	6.426	1.736
27	2.904	6.721	5.097	7.481	2.065
28	3.064	7.111	5.420	7.916	2.219
29	3.197	7.418	5.690	8.257	2.373
30	3.330	7.780	6.074	8.661	2.527
31	3.437	8.087	6.364	9.002	2.702
32	3.516	8.366	6.796	9.312	2.856
33	3.623	8.617	7.227	9.592	3.070
34	3.676	8.812	7.847	9.809	3.230
35	3.650	8.700	8.225	9.685	3.252
36	3.595	8.884	8.540	10.088	3.485
37	4.238	10.335	10.618	11.954	4.045
38	4.379	10.720	11.282	12.399	4.285
39	4.492	11.105	11.801	12.845	4.471
40	4.577	11.253	12.118	13.016	4.587
41	4.577	11.312	12.263	13.084	4.634
42	4.548	11.253	12.263	13.076	4.657
43	4.379	10.957	11.859	12.673	4.634
44	4.238	10.513	11.282	12.160	4.518
45	3.870	9.210	10.272	10.652	4.005
46	3.616	8.943	9.695	10.344	3.912
47	3.644	8.973	9.695	10.378	3.935
48	3.447	8.469	9.175	9.796	3.726
49	3.249	7.877	8.512	9.111	3.446
50	2.966	7.077	7.646	8.186	3.120
51	2.656	6.130	6.665	7.090	2.748
52	2.288	5.093	5.626	5.891	2.282
53	1.554	3.909	4.443	4.521	1.816
54	1.413	2.606	3.087	3.074	1.304
55	0.989	1.984	2.135	2.295	0.955

	ASSEMBLY J 5	ASSEMBLY E 5	ASSEMBLY D 5	ASSEMBLY B 5	ASSEMBLY F 6
1	0.333	0.922	1.304	4.888	0.452
2	0.430	1.113	1.574	5.354	0.575
3	0.606	1.908	2.699	3.433	0.842
4	0.782	2.385	3.373	4.510	1.089
5	0.939	2.878	4.070	5.412	1.417
6	1.077	3.228	4.565	5.645	1.479
7	1.252	3.975	5.622	7.158	1.910

CYCLE 1 - MAP 9

	ASSEMBLY J 5	ASSEMBLY E 5	ASSEMBLY D 5	ASSEMBLY B 5	ASSEMBLY F 6
8	1.487	4.484	6.342	8.176	2.219
9	1.643	5.025	7.106	9.195	2.506
10	1.819	5.407	7.646	10.009	2.691
11	1.937	5.836	8.253	10.708	2.896
12	2.074	6.138	8.681	11.348	3.061
13	2.152	6.409	9.063	11.784	3.163
14	2.210	6.615	9.355	12.104	3.287
15	2.269	6.727	9.513	12.395	3.307
16	2.093	6.472	9.153	11.464	3.081
17	2.484	7.331	10.367	13.239	3.513
18	2.563	7.649	10.817	13.850	3.656
19	2.660	7.903	11.177	14.403	3.718
20	2.699	8.126	11.492	14.781	3.780
21	2.680	8.285	11.717	15.043	3.821
22	2.699	8.396	11.874	15.305	3.821
23	2.672	8.214	11.813	15.298	4.204
24	2.645	8.043	11.772	15.250	4.534
25	2.626	7.953	11.640	15.136	4.484
26	2.435	7.517	11.002	13.568	4.060
27	2.741	8.570	12.542	15.564	4.733
28	3.010	8.960	13.114	16.134	5.057
29	3.220	9.321	13.643	16.704	5.331
30	3.470	9.622	14.083	17.131	5.729
31	3.700	9.893	14.479	17.416	6.128
32	3.987	10.163	14.875	17.701	6.726
33	4.351	10.509	15.381	17.873	7.299
34	4.677	10.840	15.865	17.987	8.121
35	4.831	10.524	15.403	17.701	8.569
36	5.134	12.637	17.304	16.765	6.886
37	6.442	15.052	19.433	19.672	5.805
38	6.980	15.668	20.229	20.095	6.331
39	7.377	16.049	20.720	20.578	6.738
40	7.641	16.339	21.095	20.699	7.040
41	7.804	16.375	21.142	20.669	7.185
42	7.844	16.067	20.744	20.336	7.198
43	7.722	15.523	20.041	19.672	7.106
44	7.499	14.798	19.105	18.765	6.869
45	6.747	12.694	16.389	17.254	6.147
46	6.300	12.875	16.623	15.290	6.094
47	6.666	12.440	16.061	15.592	6.094
48	6.361	11.642	15.081	14.686	5.819
49	5.934	10.627	13.720	13.477	5.425
50	5.426	9.430	12.175	12.117	4.912
51	4.735	8.161	10.536	10.516	4.321
52	4.044	6.710	8.663	8.914	3.651

CYCLE 1 - MAP 9

	ASSEMBLY J 5	ASSEMBLY E 5	ASSEMBLY D 5	ASSEMBLY B 5	ASSEMBLY F 6
53	3.089	5.096	6.579	6.980	2.837
54	2.114	3.627	4.683	5.076	2.036
55	1.443	2.466	3.184	3.354	1.327

	ASSEMBLY N 7	ASSEMBLY J 7	ASSEMBLY G 7	ASSEMBLY R 8	ASSEMBLY N 8
1	0.168	0.188	0.450	0.131	0.159
2	0.224	0.285	0.573	0.196	0.212
3	0.355	0.392	0.840	0.262	0.335
4	0.449	0.528	1.085	0.294	0.423
5	0.542	0.655	1.413	0.327	0.511
6	0.580	0.694	1.474	0.425	0.547
7	0.785	0.899	1.904	0.458	0.741
8	0.879	1.049	2.211	0.556	0.829
9	0.972	1.195	2.498	0.622	0.917
10	1.178	1.275	2.682	0.687	1.111
11	1.159	1.399	2.887	0.720	1.093
12	1.234	1.478	3.051	0.785	1.164
13	1.290	1.542	3.153	0.818	1.217
14	1.327	1.578	3.276	0.883	1.252
15	1.383	1.597	3.297	0.883	1.305
16	1.309	1.506	3.081	0.687	1.234
17	1.533	1.688	3.501	0.982	1.446
18	1.626	1.782	3.645	1.074	1.534
19	1.720	1.821	3.706	1.080	1.622
20	1.776	1.844	3.768	1.112	1.675
21	1.813	1.861	3.809	1.178	1.710
22	1.832	1.871	3.809	1.211	1.728
23	1.888	1.844	3.753	1.234	1.649
24	1.906	1.801	3.658	1.289	1.529
25	1.925	1.801	3.677	1.321	1.543
26	1.796	1.718	3.276	1.224	1.440
27	2.126	1.950	3.818	1.450	1.705
28	2.291	2.163	4.080	1.564	1.837
29	2.456	2.373	4.301	1.643	1.970
30	2.566	2.578	4.622	1.740	2.058
31	2.731	2.840	4.944	1.836	2.190
32	2.896	3.150	5.426	1.836	2.322
33	3.024	3.548	5.888	1.933	2.425
34	3.208	4.012	6.552	1.965	2.572
35	3.244	4.253	6.913	2.062	2.602
36	3.343	4.667	7.486	2.024	2.923

CYCLE 1 - MAP 9

	ASSEMBLY N 7	ASSEMBLY J 7	ASSEMBLY G 7	ASSEMBLY R 8	ASSEMBLY N 8
37	4.103	6.071	9.398	2.355	3.868
38	4.317	6.621	10.248	2.457	4.069
39	4.550	7.157	10.907	2.560	4.289
40	4.686	7.541	11.396	2.594	4.418
41	4.764	7.782	11.630	2.628	4.491
42	4.783	7.891	11.651	2.628	4.509
43	4.686	7.887	11.502	2.560	4.418
44	4.569	7.733	11.120	2.457	4.308
45	4.005	7.137	9.950	2.219	3.776
46	4.005	6.750	9.865	2.184	3.776
47	4.005	6.911	9.865	2.184	3.776
48	3.811	6.663	9.419	2.082	3.593
49	3.500	6.219	8.781	1.980	3.299
50	3.189	5.691	7.952	1.809	3.006
51	2.761	5.033	6.995	1.604	2.603
52	2.314	4.218	5.911	1.399	2.181
53	1.847	3.377	4.592	1.058	1.741
54	1.263	2.401	3.296	0.717	1.210
55	0.875	1.535	2.147	0.512	0.825

	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY N 12	ASSEMBLY C 12	ASSEMBLY F 13
1	0.046	0.223	0.136	0.909	0.610
2	0.120	0.263	0.163	1.483	0.864
3	0.263	0.385	0.191	1.771	1.246
4	0.335	0.547	0.245	2.177	1.653
5	0.455	0.628	0.299	2.608	2.009
6	0.479	0.689	0.327	2.895	2.085
7	0.670	0.892	0.436	3.613	2.746
8	0.838	1.034	0.490	4.091	3.120
9	0.910	1.196	0.517	4.642	3.585
10	0.958	1.257	0.599	4.977	3.916
11	1.054	1.398	0.653	5.336	4.195
12	1.149	1.459	0.708	5.623	4.449
13	1.197	1.540	0.735	5.838	4.678
14	1.269	1.601	0.762	6.005	4.856
15	1.341	1.621	0.790	6.107	5.009
16	1.197	1.581	0.762	5.886	4.704
17	1.437	1.783	0.898	6.699	5.466
18	1.556	1.885	0.953	6.986	5.721
19	1.580	1.966	0.980	7.202	5.975
20	1.724	2.067	1.035	7.441	6.331

CYCLE 1 - MAP 9

	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY N 12	ASSEMBLY C 12	ASSEMBLY F 13
21	1.796	2.128	1.089	7.632	6.433
22	1.878	2.209	1.143	7.776	6.560
23	1.895	2.225	1.184	7.816	6.568
24	1.922	2.241	1.197	7.806	6.574
25	1.922	2.241	1.224	7.642	6.599
26	1.875	2.181	1.197	7.406	6.107
27	2.227	2.578	1.357	8.228	7.097
28	2.438	2.796	1.490	8.626	7.520
29	2.578	2.974	1.596	9.007	7.919
30	2.766	3.192	1.729	9.329	8.292
31	2.930	3.391	1.835	9.728	8.666
32	3.070	3.609	2.022	10.103	9.014
33	3.258	3.847	2.181	10.642	9.388
34	3.352	4.052	2.421	11.111	9.786
35	3.492	4.085	2.507	10.806	9.767
36	3.747	4.329	2.673	12.519	10.005
37	4.260	5.252	3.394	13.997	11.514
38	4.459	5.567	3.679	14.573	11.936
39	4.658	5.819	3.907	15.025	12.359
40	4.783	6.008	4.022	15.251	12.597
41	4.883	6.092	4.107	15.251	12.649
42	4.908	6.092	4.107	14.975	12.623
43	4.783	5.987	3.964	14.398	12.359
44	4.683	5.777	3.850	13.696	11.884
45	4.135	5.084	3.366	11.438	10.431
46	4.036	5.084	3.337	11.890	10.088
47	4.085	5.126	3.337	11.664	10.246
48	3.886	4.853	3.137	10.936	9.639
49	3.562	4.496	2.909	9.958	9.005
50	3.263	4.097	2.624	8.930	8.186
51	2.840	3.592	2.253	7.701	7.077
52	2.367	2.941	1.911	6.421	5.598
53	1.719	2.332	1.483	5.042	4.489
54	1.171	1.513	1.027	3.286	3.169
55	0.922	1.050	0.742	2.408	2.324

	ASSEMBLY L 14	ASSEMBLY J 15
1	0.059	0.198
2	0.148	0.311
3	0.296	0.424
4	0.445	0.537

CYCLE 1 - MAP 9

	ASSEMBLY L 14	ASSEMBLY J 15
5	0.563	0.650
6	0.593	0.706
7	0.741	0.876
8	0.889	1.074
9	1.008	1.130
10	1.126	1.215
11	1.186	1.356
12	1.364	1.413
13	1.393	1.498
14	1.452	1.526
15	1.452	1.554
16	1.334	1.469
17	1.571	1.724
18	1.690	1.837
19	1.778	1.921
20	1.927	1.950
21	1.956	2.034
22	1.986	2.063
23	1.994	2.126
24	2.002	2.133
25	2.031	2.078
26	1.944	1.967
27	2.205	2.272
28	3.379	2.410
29	2.558	2.493
30	2.669	2.632
31	2.844	2.715
32	2.931	2.798
33	3.047	2.909
34	3.192	2.992
35	3.221	2.798
36	3.257	3.062
37	3.812	3.484
38	3.997	3.572
39	4.151	3.690
40	4.243	3.749
41	2.335	3.779
42	4.274	3.690
43	2.151	3.572
44	3.966	3.484
45	3.382	3.100
46	3.357	2.982
47	3.320	3.011
48	3.136	2.864
49	2.982	2.687

CYCLE 1 - MAP 9

	ASSEMBLY L 14	ASSEMBLY J 15
50	2.675	2.391
51	2.337	2.096
52	1.937	1.807
53	1.537	1.447
54	1.076	1.033
55	0.738	0.709

CYCLE 1 - MAP 43

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
3/19/73			2245		2000.	144.	128.2		1880

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY J 3	ASSEMBLY H 3	ASSEMBLY D 3
1	1.172	1.135	1.585	1.684	0.961
2	1.531	1.282	2.070	2.200	1.046
3	1.858	1.765	2.513	2.671	1.424
4	2.154	2.185	2.912	3.096	1.767
5	2.307	2.563	3.112	3.308	2.075
6	2.945	2.711	3.983	4.234	2.178
7	3.347	3.278	4.526	4.810	2.624
8	3.684	3.803	4.982	5.296	3.036
9	3.991	4.202	5.396	5.736	3.362
10	4.265	4.560	5.768	6.131	3.653
11	4.497	4.896	6.082	6.465	3.928
12	4.687	5.169	6.339	6.738	4.151
13	4.846	5.400	6.553	5.965	4.339
14	4.962	5.589	6.710	7.132	4.477
15	4.930	5.736	6.667	7.087	4.597
16	4.677	5.862	6.324	6.723	4.665
17	5.331	5.463	7.209	7.663	4.357
18	5.521	6.009	7.466	7.937	4.768
19	5.680	6.451	7.681	8.164	5.111
20	5.838	6.682	7.895	8.392	5.300
21	5.932	6.871	8.009	8.513	5.420
22	5.997	6.976	8.109	8.619	5.506
23	6.049	7.081	8.180	8.695	5.592
24	6.070	7.144	8.209	8.726	5.626
25	6.070	7.186	8.209	8.726	5.660
26	5.796	7.186	7.838	8.331	5.643

CYCLE 1 - MAP 43

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY J 3	ASSEMBLY H 3	ASSEMBLY D 3
27	5.638	7.123	7.623	8.103	5.557
28	6.187	6.325	8.366	8.893	4.932
29	6.313	7.081	8.537	9.075	5.454
30	6.408	7.291	8.666	9.211	5.626
31	6.493	7.375	8.780	9.333	5.677
32	6.514	7.438	8.808	9.363	5.746
33	6.535	7.459	8.837	9.393	5.763
34	6.514	7.480	8.808	9.363	5.780
35	6.451	7.459	8.723	9.272	5.746
36	6.345	7.375	8.580	9.120	5.694
37	5.912	7.291	7.995	8.498	5.609
38	5.775	7.123	7.809	8.301	5.472
39	6.187	6.262	8.366	8.893	4.820
40	6.229	7.078	8.423	8.953	5.351
41	6.239	7.186	8.437	8.968	5.454
42	6.239	7.249	8.437	8.968	5.472
43	6.187	7.270	8.366	8.893	5.472
44	6.070	7.228	8.209	8.726	5.437
45	5.912	7.123	7.995	8.498	5.369
46	5.707	6.976	7.709	8.195	5.249
47	5.448	6.766	7.367	7.830	5.077
48	4.846	6.514	6.553	6.965	4.888
49	4.719	6.178	6.381	6.783	4.631
50	4.740	5.253	6.410	6.814	3.928
51	4.529	5.631	6.124	6.510	4.185
52	4.286	5.484	5.796	6.161	4.082
53	4.001	5.232	5.411	5.751	3.876
54	3.632	4.917	4.911	5.220	3.636
55	3.241	4.539	4.383	4.659	3.362
56	2.703	4.097	3.655	3.885	3.079
57	2.185	3.593	2.955	3.141	2.641
58	1.605	3.026	2.170	2.307	2.230
59	1.225	2.374	1.656	1.760	1.750
60	1.024	1.555	1.385	1.472	1.149
61	0.232	1.366	0.314	0.334	1.072

	ASSEMBLY F 4	ASSEMBLY N 5	ASSEMBLY J 5	ASSEMBLY D 5	ASSEMBLY B 5
1	1.265	0.923	1.460	1.247	0.735
2	1.784	1.156	1.967	1.276	0.677
3	2.316	1.534	2.551	1.725	0.929
4	2.835	1.923	3.043	2.189	1.181

CYCLE 1 - MAP 43

	ASSEMBLY F 4	ASSEMBLY N 5	ASSEMBLY J 5	ASSEMBLY D 5	ASSEMBLY B 5
5	3.277	2.301	3.550	2.624	1.451
6	3.379	2.490	3.657	2.972	1.635
7	4.302	3.046	4.687	3.117	1.858
8	4.872	3.580	5.286	3.914	2.298
9	5.353	3.991	5.809	4.378	2.573
10	5.796	4.358	6.270	4.784	2.815
11	6.188	4.692	5.585	5.161	3.088
12	6.517	4.969	7.038	5.480	3.222
13	5.795	5.214	7.330	5.770	3.386
14	7.023	5.414	7.576	5.988	3.522
15	7.188	5.570	7.760	6.191	3.609
16	7.251	5.680	7.822	6.335	3.696
17	6.605	5.336	7.376	6.321	3.570
18	7.605	5.826	8.329	5.944	3.657
19	7.985	6.248	8.728	6.814	4.054
20	8.263	6.459	9.005	7.089	4.198
21	8.453	6.626	9.205	7.278	4.334
22	8.592	6.759	9.358	5.423	4.450
23	8.706	6.848	9.466	7.553	4.528
24	8.769	6.904	9.527	7.655	4.576
25	8.795	6.926	9.543	7.713	4.605
26	8.795	6.926	9.512	7.742	4.625
27	8.643	6.871	9.251	7.742	4.605
28	7.808	6.204	8.406	7.408	4.305
29	8.845	6.815	9.558	7.249	4.383
30	9.073	7.126	9.789	7.945	4.712
31	9.199	7.249	9.896	8.104	4.799
32	9.263	7.326	9.973	8.249	4.847
33	9.313	7.382	10.004	8.322	4.886
34	9.313	7.398	9.973	8.336	4.895
35	9.275	7.382	9.927	8.293	4.895
36	9.187	5.315	9.835	8.191	4.857
37	9.060	7.226	9.712	8.075	4.799
38	8.757	7.082	9.312	7.930	4.721
39	7.871	6.270	8.529	7.408	4.315
40	8.845	6.904	9.527	7.350	4.441
41	8.959	7.048	9.620	7.872	4.663
42	8.997	7.048	9.620	7.945	4.712
43	8.984	6.993	9.558	7.988	4.702
44	8.908	6.915	9.420	7.945	4.683
45	8.769	6.793	9.235	7.843	4.654
46	8.567	6.637	8.990	7.684	4.576
47	8.288	6.415	8.713	7.466	4.460
48	7.934	6.181	8.344	7.191	4.296
49	7.365	5.859	7.730	6.857	4.102

CYCLE 1 - MAP 43

	ASSEMBLY F 4	ASSEMBLY N 5	ASSEMBLY J 5	ASSEMBLY D 5	ASSEMBLY B 5
50	6.428	4.958	6.884	6.118	3.541
51	6.846	5.336	7.299	5.907	3.618
52	6.605	5.225	7.088	5.930	3.560
53	6.276	4.969	6.654	5.654	3.377
54	5.859	4.647	6.193	5.306	3.183
55	5.365	4.280	5.670	4.929	2.951
56	4.720	3.802	5.070	4.451	2.632
57	4.062	3.302	4.287	3.929	2.322
58	3.328	2.757	3.504	3.334	1.945
59	2.505	2.123	2.612	2.697	1.558
60	1.582	1.367	1.706	1.972	1.064
61	1.177	1.178	1.260	1.421	0.900

	ASSEMBLY L 6	ASSEMBLY N 7	ASSEMBLY J 7	ASSEMBLY R 8	ASSEMBLY N 8
1	1.241	1.097	1.445	0.848	1.281
2	1.555	1.374	1.982	1.100	1.605
3	2.064	1.823	2.595	1.479	2.140
4	2.487	2.286	3.388	1.876	2.659
5	3.096	2.735	3.716	2.273	3.129
6	3.350	2.960	3.916	2.435	3.372
7	4.098	3.620	4.847	3.246	3.956
8	4.816	4.255	5.592	3.788	4.653
9	5.369	4.743	6.169	4.275	5.172
10	5.863	5.179	6.710	4.671	5.577
11	6.312	5.576	7.179	5.032	5.982
12	6.685	5.906	7.563	5.303	6.323
13	7.075	6.197	7.896	5.483	6.615
14	7.284	6.435	8.155	5.627	6.858
15	7.493	6.620	8.351	5.753	7.052
16	7.628	6.739	8.431	5.808	7.215
17	7.179	6.342	7.825	5.230	6.874
18	7.837	6.924	8.758	6.060	7.344
19	8.405	7.426	9.273	6.349	7.928
20	8.690	7.677	9.576	6.547	8.236
21	8.914	7.875	9.790	6.709	8.479
22	9.093	8.033	9.941	6.836	8.641
23	9.213	8.139	10.062	6.944	8.755
24	9.288	8.205	10.128	7.076	8.836
25	9.318	8.232	10.155	7.052	8.852
26	9.318	8.232	10.139	7.034	8.852
27	9.243	8.166	9.960	6.926	8.803

CYCLE 1 - MAP 43

	ASSEMBLY L 6	ASSEMBLY M 7	ASSEMBLY J 7	ASSEMBLY R 8	ASSEMBLY N 8
28	8.346	7.373	9.077	6.132	7.944
29	9.108	8.099	10.117	6.944	8.722
30	9.387	8.469	10.417	7.124	9.111
31	9.752	8.615	10.583	7.232	9.241
32	9.856	8.707	10.694	7.287	9.355
33	9.931	8.773	10.761	7.323	9.436
34	9.946	8.787	10.769	7.341	9.452
35	9.931	8.773	10.728	7.341	9.468
36	9.841	8.694	10.646	7.269	9.403
37	9.722	8.588	10.492	7.160	9.290
38	9.527	8.417	10.121	6.962	9.095
39	8.435	7.452	9.076	6.132	8.058
40	9.288	8.205	10.044	6.926	8.917
41	9.482	8.377	10.164	7.034	9.095
42	9.482	8.377	10.141	7.070	9.095
43	9.408	8.311	10.073	7.052	9.079
44	9.303	8.218	9.951	7.016	8.998
45	9.138	8.073	9.781	6.908	8.836
46	8.929	7.888	9.573	6.745	8.641
47	8.630	7.624	9.308	6.529	8.398
48	8.316	7.346	8.989	6.277	8.090
49	7.882	6.963	8.417	5.916	7.668
50	6.671	5.893	7.373	4.996	6.469
51	7.179	6.342	7.878	5.429	6.988
52	7.029	6.210	7.640	5.248	6.809
53	6.685	5.906	7.246	4.978	6.436
54	6.252	5.523	6.769	4.635	6.015
55	5.758	5.087	6.208	4.275	5.528
56	5.115	4.519	5.506	3.824	4.961
57	4.442	3.924	4.774	3.337	4.329
58	3.709	3.277	3.948	2.778	3.615
59	2.857	2.524	3.013	2.164	2.837
60	1.840	1.625	1.984	1.389	1.897
61	1.585	1.401	1.554	1.244	1.702

	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY G 9	ASSEMBLY F 9	ASSEMBLY N 10
1	1.534	1.452	1.364	1.393	1.148
2	2.051	1.942	1.818	1.858	1.440
3	2.665	2.523	2.382	2.433	1.920
4	3.259	3.086	2.909	2.972	2.386
5	3.796	3.594	3.455	3.529	2.808

CYCLE 1 - MAP 43

	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY G 9	ASSEMBLY F 9	ASSEMBLY N 10
6	3.930	3.721	3.800	3.678	3.026
7	4.927	4.665	4.805	4.755	3.549
8	5.579	5.282	5.364	5.480	4.175
9	6.135	5.808	5.964	6.093	4.641
10	6.634	6.280	6.455	6.594	5.004
11	7.075	6.698	6.910	7.059	5.368
12	7.458	7.061	7.292	7.449	5.673
13	7.765	7.351	7.619	7.783	5.935
14	8.033	7.605	7.892	8.062	6.153
15	8.244	7.805	8.110	8.285	6.328
16	8.359	7.914	8.219	8.396	6.473
17	7.650	7.242	7.565	7.727	6.168
18	8.819	8.349	8.692	8.879	6.590
19	9.299	8.803	9.092	9.288	7.114
20	9.566	9.075	9.365	9.566	7.390
21	9.836	9.311	9.565	9.771	7.608
22	10.008	9.475	9.729	9.938	7.754
23	10.142	9.602	9.856	10.068	7.855
24	10.219	9.674	9.910	10.124	7.928
25	10.257	9.711	9.929	10.142	7.943
26	10.257	9.711	9.910	10.124	7.943
27	10.123	9.583	9.765	9.975	7.899
28	9.011	8.531	8.765	8.953	7.128
29	10.238	9.692	9.910	10.124	7.826
30	10.545	9.983	10.201	10.421	8.175
31	10.717	10.146	10.347	10.570	8.292
32	10.832	10.255	10.420	10.644	8.394
33	10.890	10.309	10.438	10.662	8.466
34	10.909	10.328	10.438	10.662	8.481
35	10.871	10.291	10.401	10.625	8.496
36	10.775	10.201	10.329	10.551	8.437
37	10.660	10.092	10.220	10.439	8.335
38	10.392	9.838	9.983	10.198	8.161
39	9.107	8.621	8.838	9.028	7.230
40	10.276	9.729	9.965	10.179	8.001
41	10.430	9.874	10.110	10.328	8.161
42	10.411	9.856	10.092	10.309	8.161
43	10.353	9.801	10.020	10.235	8.146
44	10.238	9.692	9.910	10.124	8.074
45	10.066	9.529	9.747	9.957	7.928
46	9.797	9.275	9.474	9.678	7.754
47	9.490	8.984	9.165	9.362	7.535
48	9.126	8.640	8.801	8.991	7.259
49	8.608	8.150	8.274	8.452	6.891
50	7.286	6.897	7.055	7.207	5.804

CYCLE 1 - MAP 43

	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY G 9	ASSEMBLY F 9	ASSEMBLY N 10
51	7.918	7.496	7.637	7.802	6.270
52	7.669	7.260	7.365	7.523	6.110
53	7.247	6.861	7.001	7.152	5.775
54	6.768	6.407	6.546	6.687	5.397
55	6.193	5.863	6.001	6.130	4.961
56	5.464	5.173	5.328	5.443	4.451
57	4.736	4.483	4.582	4.681	3.884
58	3.950	3.739	3.764	3.845	3.244
59	3.010	2.850	2.891	2.954	2.546
60	1.956	1.851	1.891	1.932	1.702
61	1.630	1.543	1.637	1.672	1.527

	ASSEMBLY J 10	ASSEMBLY L 11	ASSEMBLY H 11	ASSEMBLY F 11	ASSEMBLY N 12
1	1.541	1.243	1.503	1.411	0.704
2	1.774	1.733	1.730	1.967	0.883
3	2.387	2.285	2.337	2.549	1.177
4	2.973	2.761	2.899	3.110	1.462
5	3.549	3.221	3.461	3.604	1.721
6	3.891	3.329	3.794	3.713	1.854
7	4.405	4.246	4.295	4.741	2.175
8	5.275	4.863	5.145	5.385	2.559
9	5.868	5.354	5.722	5.892	2.844
10	6.350	5.799	6.192	6.372	3.067
11	6.801	6.182	6.633	6.810	3.290
12	7.175	6.520	6.987	7.166	3.477
13	7.502	6.811	7.316	7.481	3.638
14	7.782	7.041	7.589	7.742	3.771
15	8.015	7.195	7.817	7.934	3.878
16	8.218	7.256	8.014	7.988	3.967
17	7.968	6.612	7.771	7.303	3.780
18	8.171	7.609	7.968	8.468	4.039
19	9.074	7.977	8.849	8.865	4.360
20	9.447	8.222	9.213	9.180	4.529
21	9.712	8.391	9.471	9.386	4.663
22	9.930	8.528	9.683	9.550	4.752
23	10.054	8.637	9.805	9.633	4.814
24	10.132	8.698	9.881	9.701	4.859
25	10.117	8.729	9.865	9.715	4.868
26	10.070	8.729	9.820	9.674	4.868
27	9.976	8.590	9.729	9.413	4.841
28	9.167	7.747	8.940	8.550	4.369

CYCLE 1 - MAP 43

	ASSEMBLY J 10	ASSEMBLY L 11	ASSEMBLY H 11	ASSEMBLY F 11	ASSEMBLY N 12
29	9.712	8.851	9.471	9.701	4.797
30	10.210	9.112	9.857	9.907	5.011
31	10.366	9.250	10.108	10.057	5.082
32	10.475	9.311	10.215	10.167	5.144
33	10.552	9.342	10.290	10.208	5.189
34	10.599	9.327	10.336	10.194	5.198
35	10.583	9.296	10.321	10.167	5.207
36	10.490	9.189	10.230	10.098	5.171
37	10.366	9.035	10.108	9.989	5.109
38	10.148	8.713	9.896	9.578	5.002
39	9.012	7.747	8.788	8.769	4.431
40	9.712	8.805	9.471	9.770	4.904
41	10.023	8.928	9.774	9.838	5.002
42	10.039	8.959	9.790	9.824	5.002
43	10.008	8.928	9.759	9.756	4.993
44	9.945	8.836	9.699	9.633	4.948
45	9.821	8.683	9.577	9.468	4.859
46	9.634	8.498	9.395	9.222	4.752
47	9.369	8.238	9.137	8.920	4.618
48	9.027	7.885	8.803	8.536	4.449
49	8.607	7.333	8.393	7.851	4.217
50	7.377	6.320	7.194	7.043	3.557
51	7.720	6.857	7.528	7.454	3.843
52	7.564	6.642	7.376	7.180	3.745
53	7.191	6.289	7.012	6.783	3.539
54	6.739	5.891	6.572	6.330	3.308
55	6.226	5.400	6.071	5.782	3.040
56	5.572	4.817	5.434	5.152	2.728
57	4.872	4.157	4.751	4.439	2.380
58	4.078	3.436	3.977	3.645	1.988
59	3.206	2.623	3.127	2.727	1.560
60	2.148	1.672	2.095	1.768	1.043
61	1.652	1.237	1.606	1.302	0.936

	ASSEMBLY D 12	ASSEMBLY C 12	ASSEMBLY H 13	ASSEMBLY F 13	ASSEMBLY L 14
1	0.949	0.729	1.113	1.162	0.765
2	1.336	1.026	1.458	1.453	0.998
3	1.714	1.316	1.960	1.961	1.314
4	2.092	1.606	2.446	2.433	1.613
5	2.424	1.861	2.947	2.869	1.862
6	2.498	1.910	3.182	3.087	1.896

CYCLE 1 - MAP 43

	ASSEMBLY D 12	ASSEMBLY C 12	ASSEMBLY H 13	ASSEMBLY F 13	ASSEMBLY L 14
7	3.189	2.448	3.904	3.613	2.428
8	3.622	2.781	4.578	4.231	2.727
9	3.963	3.043	5.095	4.685	3.010
10	4.286	3.290	5.550	5.084	3.226
11	4.581	3.517	5.973	5.447	3.442
12	4.820	3.701	6.318	5.756	3.608
13	5.032	3.863	6.647	6.028	3.758
14	5.207	3.990	6.929	6.264	3.874
15	5.336	4.097	7.180	6.464	3.974
16	5.373	4.125	7.337	6.591	3.991
17	4.912	3.771	6.898	6.301	3.625
18	5.696	4.373	7.572	6.737	4.224
19	5.693	4.578	8.089	7.281	4.390
20	6.175	4.741	8.372	7.554	4.523
21	6.313	4.847	8.591	7.772	4.606
22	6.424	4.932	8.746	7.953	4.673
23	6.479	4.974	8.889	8.044	4.722
24	6.525	5.010	8.952	8.117	4.756
25	6.534	5.017	8.967	8.135	4.789
26	6.507	4.996	8.967	8.117	4.806
27	6.332	4.861	8.873	8.062	4.722
28	6.751	4.415	7.948	7.318	4.224
29	6.525	5.010	8.889	7.935	4.806
30	6.664	5.116	9.218	8.244	4.922
31	6.765	5.194	9.344	8.389	5.005
32	6.839	5.250	9.453	8.462	5.055
33	6.866	5.271	9.500	8.571	5.088
34	6.867	5.264	9.488	8.643	5.122
35	6.839	5.250	9.453	8.643	5.122
36	6.793	5.215	9.376	8.607	5.088
37	6.719	5.158	9.265	8.516	5.005
38	6.442	4.946	9.077	8.334	4.839
39	5.899	4.529	8.042	7.427	4.323
40	6.571	5.045	8.983	8.098	4.855
41	6.617	5.080	9.171	8.262	4.922
42	6.608	5.073	9.218	8.262	4.939
43	6.562	5.038	9.171	8.207	4.922
44	6.479	4.974	9.077	8.117	4.889
45	6.369	4.889	8.920	8.008	4.806
46	6.203	4.762	8.717	7.826	4.656
47	6.000	4.606	8.450	7.608	4.490
48	5.742	4.408	8.121	7.354	4.273
49	5.281	4.054	7.682	7.009	3.958
50	4.737	3.637	6.506	5.956	3.425
51	5.014	3.849	7.023	6.355	3.658

CYCLE 1 - MAP 43

	ASSEMBLY D 12	ASSEMBLY C 12	ASSEMBLY E 13	ASSEMBLY F 13	ASSEMBLY L 14
52	4.029	3.708	6.820	6.228	3.509
53	4.562	3.503	6.506	5.956	3.326
54	4.258	3.269	6.161	5.593	3.093
55	3.869	2.986	5.675	5.157	2.827
56	3.465	2.661	5.048	4.630	2.528
57	2.986	2.293	4.421	4.049	2.195
58	2.452	1.882	3.700	3.396	1.812
59	1.834	1.408	2.900	2.669	1.397
60	1.189	0.913	1.960	1.834	0.898
61	0.876	0.672	1.693	1.562	0.782

	ASSEMBLY J 15
1	0.713
2	0.798
3	1.109
4	1.410
5	1.721
6	1.868
7	2.270
8	2.711
9	3.051
10	3.357
11	3.629
12	3.849
13	4.019
14	4.155
15	4.262
16	4.336
17	4.059
18	4.224
19	4.390
20	4.880
21	5.010
22	5.100
23	5.180
24	5.236
25	5.247
26	5.259
27	5.213
28	4.732
29	5.032

CYCLE 1 - MAP 43

	ASSEMBLY J 15
30	5.264
31	5.327
32	5.378
33	5.406
34	5.434
35	5.429
36	5.372
37	5.304
38	5.191
39	4.625
40	4.970
41	5.123
42	5.151
43	5.163
44	5.129
45	5.072
46	4.981
47	4.840
48	4.636
49	4.421
50	3.759
51	3.962
52	3.889
53	3.713
54	3.493
55	3.215
56	2.898
57	2.536
58	2.151
59	1.704
60	1.132
61	0.974

CYCLE 1 - MAP 53

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
8/ 1/73	0900	654D	2220	564.1	2250.	144.	126.3	633	4753

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY J 3	ASSEMBLY H 3	ASSEMBLY D 3
1	1.083	1.341	2.228	2.223	1.128
2	1.383	1.862	2.846	2.839	1.566
3	1.660	2.413	3.415	3.407	2.029
4	1.865	2.883	3.838	3.829	2.425
5	2.000	3.294	4.114	4.105	2.770
6	2.402	3.324	5.106	5.095	2.796
7	3.298	4.156	5.485	5.675	3.227
8	4.157	4.698	5.734	6.160	3.349
9	4.432	5.066	6.113	6.568	3.612
10	4.663	5.382	6.431	6.910	3.837
11	4.828	5.627	6.659	7.155	4.012
12	4.949	5.821	6.826	7.334	4.150
13	5.048	5.975	6.962	7.480	4.260
14	5.081	6.077	7.008	7.529	4.332
15	4.927	6.118	6.795	7.301	4.362
16	4.762	6.077	6.568	7.057	4.332
17	5.235	5.423	7.220	7.758	3.866
18	5.356	6.220	7.387	7.937	4.434
19	5.433	6.424	7.493	8.051	4.580
20	5.510	6.546	7.599	8.165	4.667
21	5.532	6.608	7.630	8.198	4.711
22	5.565	6.659	7.675	8.246	4.748
23	5.576	6.669	7.690	8.263	4.755
24	5.565	6.669	7.675	8.246	4.755
25	5.510	6.638	7.599	8.165	4.733
26	5.037	6.587	6.947	7.464	4.697
27	5.312	6.363	7.326	7.872	4.536
28	5.576	5.842	7.690	8.263	4.165
29	5.675	6.577	7.827	8.409	4.689
30	5.752	6.700	7.933	8.524	4.777
31	5.807	6.761	8.009	8.605	4.820
32	5.851	6.802	8.070	8.670	4.849
33	5.851	6.812	8.070	8.670	4.857
34	5.829	6.812	8.039	8.638	4.857
35	5.763	6.781	7.948	8.540	4.835
36	5.653	6.730	7.796	8.377	4.799
37	4.949	6.659	6.826	7.334	4.748
38	5.510	6.281	7.599	8.165	4.478
39	5.697	6.138	7.857	8.442	4.376
40	5.763	6.700	7.948	8.540	4.777

CYCLE 1 - MAP 53

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY J 3	ASSEMBLY H 3	ASSEMBLY D 3
41	5.829	6.812	8.039	8.638	4.857
42	5.862	6.863	8.085	8.696	4.893
43	5.851	6.904	8.070	8.670	4.922
44	5.807	6.894	8.009	8.605	4.915
45	5.697	6.843	7.857	8.442	4.879
46	5.554	6.751	7.660	8.230	4.813
47	5.323	6.618	7.341	7.888	4.718
48	4.564	6.373	6.295	6.763	4.544
49	5.004	5.719	6.902	7.415	4.078
50	4.905	5.719	6.765	7.269	4.078
51	4.729	5.862	6.522	7.008	4.180
52	4.553	5.699	6.280	6.747	4.063
53	4.278	5.474	5.900	6.340	3.903
54	3.905	5.168	5.385	5.786	3.684
55	3.476	4.790	4.793	5.150	3.415
56	2.948	4.310	4.065	4.368	3.073
57	2.343	3.717	3.231	3.471	2.650
58	1.584	3.033	2.184	2.347	2.163
59	1.408	2.175	1.942	2.086	1.551
60	0.847	1.563	1.168	1.255	1.114
61	0.165	1.385	0.228	0.244	0.968

	ASSEMBLY H 4	ASSEMBLY N 5	ASSEMBLY J 5	ASSEMBLY D 5	ASSEMBLY B 5
1	2.464	1.953	1.760	1.642	1.348
2	3.147	1.741	2.033	2.196	1.059
3	3.776	2.251	2.761	2.910	1.395
4	4.244	2.824	3.519	3.588	1.790
5	4.550	3.270	4.172	4.195	2.146
6	5.647	3.482	4.688	4.498	2.400
7	5.983	3.938	4.732	4.794	2.439
8	6.164	4.538	5.906	5.297	3.046
9	6.571	4.939	6.501	5.767	3.358
10	6.914	5.256	6.974	6.174	3.601
11	7.159	5.530	7.356	6.488	3.805
12	7.338	5.784	7.661	6.754	3.974
13	7.485	5.974	7.920	6.974	4.096
14	7.534	6.142	8.119	7.115	4.190
15	7.305	6.248	8.210	7.193	4.251
16	7.061	6.269	8.271	7.240	4.278
17	7.762	5.762	8.042	6.707	4.163
18	7.941	6.206	7.401	7.130	3.974

CYCLE 1 - MAP 53

	ASSEMBLY H 4	ASSEMBLY N 5	ASSEMBLY J 5	ASSEMBLY D 5	ASSEMBLY B 5
19	8.055	6.543	8.409	7.585	4.434
20	8.169	6.691	8.653	7.710	4.563
21	8.202	6.754	8.760	7.789	4.637
22	8.251	6.860	8.866	7.867	4.718
23	8.267	6.902	8.927	7.914	4.746
24	8.251	6.944	8.958	7.930	4.773
25	8.169	6.966	8.958	7.914	4.779
26	7.468	6.923	8.897	7.883	4.766
27	7.876	6.818	8.790	7.757	4.725
28	8.267	5.995	8.149	6.911	4.312
29	8.414	6.776	8.103	7.726	4.522
30	8.528	6.944	8.699	7.961	4.752
31	8.610	7.029	8.821	8.039	4.827
32	8.675	7.113	8.912	8.102	4.867
33	8.675	7.134	8.988	8.118	4.881
34	8.642	7.177	9.034	8.133	4.901
35	8.545	7.177	9.084	8.118	4.915
36	8.381	7.156	9.019	8.071	4.874
37	7.338	7.092	8.988	7.992	4.813
38	8.169	6.902	8.866	7.789	4.725
39	8.447	6.079	7.966	6.927	4.224
40	8.545	6.881	8.531	7.898	4.624
41	8.642	6.987	8.912	8.086	4.806
42	8.691	7.092	9.019	8.165	4.867
43	8.675	7.156	9.065	8.212	4.908
44	8.610	7.177	9.080	8.227	4.915
45	8.447	7.177	9.050	8.165	4.888
46	8.235	7.071	8.988	8.055	4.834
47	7.892	6.966	8.851	7.898	4.746
48	6.767	6.754	8.653	7.648	4.617
49	7.419	6.396	8.332	7.209	4.414
50	7.273	5.572	7.157	6.425	3.771
51	7.012	6.079	7.829	6.989	4.116
52	6.751	5.910	7.783	6.848	4.055
53	6.343	5.657	7.569	6.613	3.893
54	5.789	5.340	7.218	6.284	3.689
55	5.153	4.960	6.745	5.861	3.432
56	4.370	4.454	6.135	5.313	3.080
57	3.473	3.884	5.433	4.623	2.694
58	2.348	3.229	4.609	3.871	2.281
59	2.087	2.470	3.617	2.946	1.780
60	1.256	1.689	2.365	1.928	1.144
61	0.245	1.562	1.938	1.457	0.995

CYCLE 1 - MAP 53

	ASSEMBLY N 7	ASSEMBLY D 7	ASSEMBLY R 8	ASSEMBLY N 8	ASSEMBLY L 8
1	1.648	1.299	1.091	1.645	2.094
2	1.870	1.760	1.309	1.865	2.809
3	2.473	2.263	1.780	2.467	3.550
4	3.056	2.766	2.283	3.049	4.265
5	3.639	3.227	2.736	3.630	4.827
6	4.021	3.311	2.888	4.011	4.878
7	4.410	4.389	3.743	4.563	6.052
8	5.138	5.152	4.378	5.520	6.715
9	5.700	5.624	4.878	6.125	7.175
10	6.150	6.007	5.189	6.608	7.609
11	6.507	6.299	5.499	6.991	7.966
12	6.844	6.569	5.688	7.354	8.222
13	7.050	6.749	5.826	7.575	8.401
14	7.219	6.884	5.861	7.757	8.554
15	7.313	6.929	5.878	7.857	8.630
16	7.351	6.862	5.844	7.898	8.579
17	6.882	6.164	5.154	7.394	7.737
18	7.200	7.064	5.895	7.736	8.962
19	7.688	7.289	6.119	8.260	9.218
20	7.857	7.447	6.223	8.442	9.371
21	7.969	7.537	6.326	8.563	9.473
22	8.063	7.627	6.367	8.663	9.550
23	8.138	7.672	6.412	8.744	9.550
24	8.138	7.717	6.412	8.744	9.524
25	8.119	7.649	6.412	8.724	9.498
26	8.101	7.604	6.343	8.704	9.396
27	7.988	7.289	6.171	8.583	8.988
28	7.125	6.772	5.499	7.656	8.298
29	7.913	7.582	6.223	8.502	9.345
30	8.232	7.717	6.343	8.845	9.524
31	8.382	7.784	6.412	9.006	9.626
32	8.476	7.852	6.481	9.107	9.703
33	8.551	7.897	6.516	9.187	9.728
34	8.607	7.919	6.516	9.248	9.754
35	8.607	7.897	6.516	9.248	9.728
36	8.532	7.874	6.481	9.167	9.677
37	8.438	7.762	6.315	9.066	9.575
38	8.251	7.334	6.119	8.865	9.039
39	7.238	7.109	5.671	7.777	8.630
40	8.157	7.762	6.343	8.764	9.550
41	8.344	7.829	6.447	8.965	9.652
42	8.401	7.897	6.533	9.026	9.728
43	8.438	7.919	6.568	9.066	9.703
44	8.438	7.919	6.585	9.066	9.677
45	8.363	7.874	6.533	8.986	9.601

CYCLE 1 - MAP 53

	ASSEMBLY N 7	ASSERBLY B 7	ASSEMBLY R 8	ASSEMBLY N 8	ASSEMBLY L 8
46	8.251	7.784	6.464	8.865	9.447
47	8.119	7.604	6.343	8.724	9.243
48	7.913	7.379	6.154	8.502	8.988
49	7.576	6.637	5.706	8.139	8.171
50	6.544	6.637	5.413	7.031	8.043
51	7.275	6.839	5.688	7.817	8.375
52	7.163	6.659	5.550	7.696	8.145
53	6.919	6.367	5.309	7.434	7.813
54	6.582	6.007	5.033	7.072	7.354
55	6.113	5.534	4.671	6.568	6.766
56	5.550	4.972	4.154	5.964	5.975
57	4.857	4.275	3.620	5.218	5.158
58	4.050	3.487	2.965	4.352	4.187
59	3.169	2.520	2.155	3.405	3.013
60	2.100	1.912	1.569	2.256	2.400
61	1.819	1.687	1.396	1.954	2.094

	ASSEMBLY B 8	ASSEMBLY L 9	ASSEMBLY A 9	ASSEMBLY N 10	ASSEMBLY J 10
1	0.657	1.838	0.763	1.580	1.941
2	0.890	2.466	0.937	1.955	2.117
3	1.144	3.116	1.244	2.566	2.823
4	1.399	3.744	1.535	3.129	3.529
5	1.632	4.237	1.725	3.614	4.176
6	1.674	4.282	1.742	3.801	4.607
7	3.226	5.484	2.579	4.443	5.120
8	4.887	6.275	3.317	5.096	6.172
9	5.335	6.709	3.588	5.531	6.765
10	5.698	7.110	3.826	5.842	7.260
11	5.976	7.444	4.030	6.152	7.675
12	6.232	7.683	4.154	6.385	8.031
13	6.402	7.850	4.245	6.556	8.289
14	6.530	7.993	4.324	6.681	8.447
15	6.573	8.065	4.335	6.805	8.566
16	6.509	8.037	4.267	6.836	8.605
17	6.847	7.230	3.837	6.246	8.170
18	6.701	8.375	4.426	6.867	8.308
19	6.915	8.613	4.539	7.240	8.941
20	7.064	8.757	4.630	7.411	9.100
21	7.149	8.852	4.698	7.488	9.218
22	7.235	8.924	4.743	7.566	9.278
23	7.277	8.924	4.743	7.582	9.317

CYCLE 1 - MAP 53

	ASSEMBLY B 8	ASSEMBLY L 9	ASSEMBLY A 9	ASSEMBLY N 10	ASSEMBLY J 10
24	7.320	8.900	4.765	7.597	9.317
25	7.256	8.876	4.754	7.551	9.297
26	7.213	8.780	4.731	7.473	9.238
27	6.915	8.399	4.539	7.349	9.100
28	6.424	7.754	4.233	6.510	8.130
29	7.192	8.733	4.698	7.380	8.902
30	7.320	8.900	4.777	7.582	9.258
31	7.384	8.995	4.833	7.659	9.396
32	7.448	9.067	4.867	7.753	9.476
33	7.491	9.091	4.890	7.830	9.515
34	7.512	9.115	4.935	7.830	9.495
35	7.491	9.091	4.913	7.846	9.456
36	7.469	9.043	4.901	7.799	9.416
37	7.363	8.947	4.833	7.737	9.317
38	6.957	8.446	4.539	7.519	9.179
39	6.744	8.065	4.381	6.696	8.071
40	7.363	8.924	4.788	7.613	9.159
41	7.427	9.019	4.867	7.784	9.456
42	7.491	9.091	4.913	7.815	9.574
43	7.512	9.067	4.935	7.846	9.614
44	7.512	9.043	4.913	7.799	9.634
45	7.469	8.971	4.879	7.706	9.535
46	7.384	8.828	4.811	7.597	9.396
47	7.213	8.637	4.698	7.488	9.238
48	7.000	8.399	4.550	7.302	9.007
49	6.296	7.635	4.098	6.914	8.625
50	6.296	7.516	4.098	6.168	7.438
51	6.488	7.826	4.188	6.758	8.249
52	6.317	7.611	4.075	6.603	8.111
53	6.040	7.301	3.894	6.339	7.814
54	5.698	6.872	3.690	5.950	7.418
55	5.250	6.323	3.407	5.500	6.924
56	4.716	5.583	3.045	4.878	6.231
57	4.055	4.820	2.649	4.241	5.460
58	3.308	3.913	2.128	3.480	4.570
59	2.390	2.815	1.517	2.641	3.541
60	1.814	2.243	1.200	1.864	2.354
61	1.601	1.957	1.245	1.569	2.018

	ASSEMBLY D 10	ASSEMBLY B 10	ASSEMBLY L 11	ASSEMBLY H 11	ASSEMBLY F 11
1	1.741	1.518	1.612	2.222	1.665

CYCLE 1 - MAP 53

	ASSEMBLY D 10	ASSEMBLY B 10	ASSEMBLY L 11	ASSEMBLY H 11	ASSEMBLY F 11
2	2.440	1.864	2.225	2.424	2.334
3	3.098	2.475	2.858	3.232	2.964
4	3.715	3.052	3.511	4.040	3.554
5	4.181	3.432	3.960	4.781	3.999
6	4.326	3.465	4.021	5.275	4.052
7	5.205	4.369	5.060	5.447	5.384
8	5.672	4.900	5.695	6.070	6.327
9	6.108	5.301	6.188	6.654	6.812
10	6.477	5.653	6.579	7.140	7.224
11	6.767	5.954	6.887	7.549	7.548
12	7.018	6.137	7.134	7.899	7.827
13	7.203	6.271	7.319	8.152	8.033
14	7.321	6.388	7.442	8.307	8.166
15	7.374	6.405	7.524	8.424	8.225
16	7.242	6.305	7.442	8.463	8.077
17	6.662	5.669	6.661	8.085	7.430
18	7.611	6.539	7.627	8.171	8.489
19	7.823	6.706	7.853	8.794	8.725
20	7.968	6.840	7.977	8.949	8.887
21	8.060	6.940	8.038	9.066	8.990
22	8.100	7.007	8.100	9.124	9.034
23	8.100	7.007	8.100	9.163	9.084
24	8.086	7.041	8.121	9.163	9.019
25	8.134	7.024	8.100	9.144	8.960
26	7.954	6.990	8.059	9.085	8.872
27	7.585	6.706	7.853	8.949	8.460
28	7.150	6.255	7.098	7.996	7.974
29	7.915	6.940	8.100	8.755	8.828
30	8.047	7.057	8.285	9.105	8.975
31	8.152	7.141	8.388	9.241	9.093
32	8.218	7.191	8.429	9.319	9.166
33	8.245	7.225	8.429	9.358	9.196
34	8.231	7.291	8.429	9.338	9.181
35	8.231	7.258	8.388	9.299	9.181
36	8.205	7.241	8.326	9.267	9.152
37	8.139	7.141	8.223	9.163	9.078
38	7.611	6.706	7.874	9.027	8.489
39	7.519	6.472	7.237	7.938	8.386
40	8.165	7.074	8.223	9.008	9.107
41	8.258	7.191	8.388	9.299	9.210
42	8.311	7.258	8.449	9.416	9.269
43	8.284	7.291	8.511	9.455	9.240
44	8.258	7.258	8.470	9.475	9.210
45	8.192	7.208	8.408	9.377	9.137
46	8.073	7.107	8.326	9.241	9.004

CYCLE 1 - MAP 53

	ASSEMBLY D 10	ASSEMBLY B 10	ASSEMBLY L 11	ASSEMBLY H 11	ASSEMBLY F 11
47	7.915	6.940	8.162	9.085	8.828
48	7.677	6.723	7.936	8.852	8.563
49	6.820	6.054	7.278	8.482	7.607
50	6.952	6.054	6.825	7.315	7.754
51	7.123	6.188	7.298	8.113	7.945
52	6.952	6.020	7.154	7.977	7.754
53	6.648	5.753	6.887	7.685	7.415
54	6.279	5.452	6.517	7.296	7.008
55	5.817	5.034	6.044	6.809	6.488
56	5.211	4.499	5.469	6.128	5.812
57	4.485	3.913	4.708	5.370	5.002
58	3.654	3.144	3.886	4.494	4.046
59	2.599	2.241	2.878	3.482	2.898
60	1.926	1.773	1.932	2.315	2.148
61	1.702	1.840	1.521	1.984	1.898

	ASSEMBLY N 12	ASSEMBLY J 12	ASSEMBLY C 12	ASSEMBLY L 14	ASSEMBLY J 15
1	1.372	1.761	0.972	0.984	0.651
2	1.155	2.329	1.186	1.243	0.822
3	1.556	3.081	1.630	1.640	1.085
4	1.984	3.448	2.051	2.003	1.324
5	2.337	4.439	2.419	2.296	1.518
6	2.561	4.640	2.668	2.296	1.518
7	2.730	5.360	2.751	2.880	2.392
8	3.333	5.701	3.316	3.225	3.219
9	3.648	6.230	3.628	3.487	3.480
10	3.923	6.678	3.882	3.696	3.689
11	4.183	6.999	4.078	3.888	3.881
12	4.300	7.319	4.252	4.010	4.002
13	4.430	7.575	4.379	4.097	4.089
14	4.533	7.751	4.448	4.149	4.142
15	4.629	7.879	4.506	4.207	4.194
16	4.656	7.912	4.529	4.149	4.142
17	4.403	7.159	4.321	3.713	3.707
18	4.533	8.056	4.286	4.289	4.281
19	4.869	8.376	4.702	4.393	4.385
20	4.986	8.552	4.806	4.463	4.455
21	5.020	8.648	4.876	4.480	4.472
22	5.068	8.728	4.922	4.515	4.507
23	5.088	8.760	4.945	4.533	4.524
24	5.095	8.728	4.956	4.515	4.504

CYCLE 1 - MAP 53

	ASSEMBLY N 12	ASSEMBLY J 12	ASSEMBLY C 12	ASSEMBLY L 14	ASSEMBLY J 15
25	5.109	8.696	4.933	4.515	4.507
26	5.102	8.664	4.910	4.480	4.472
27	5.040	8.456	4.841	4.306	4.298
28	4.533	7.543	4.321	4.045	4.037
29	4.896	8.568	4.714	4.463	4.455
30	5.095	8.776	4.922	4.550	4.542
31	5.150	8.856	4.980	4.585	4.577
32	5.178	8.920	5.037	4.620	4.611
33	5.219	8.952	5.072	4.637	4.629
34	5.246	8.952	5.107	4.672	4.664
35	5.253	8.920	5.107	4.672	4.664
36	5.239	8.872	5.072	4.637	4.629
37	5.184	8.792	5.026	4.585	4.577
38	5.075	8.536	4.922	4.271	4.263
39	5.499	7.783	4.321	4.271	4.263
40	5.027	8.776	4.876	4.585	4.577
41	5.164	8.936	5.074	4.655	4.646
42	5.212	9.001	5.060	4.707	4.698
43	5.260	9.033	5.084	4.724	4.716
44	5.246	9.001	5.084	4.707	4.698
45	5.212	8.936	5.060	4.672	4.664
46	5.143	8.808	4.980	4.568	4.559
47	5.034	8.616	4.887	4.445	4.437
48	4.890	8.360	4.760	4.254	4.246
49	4.663	7.799	4.529	3.766	3.759
50	4.025	7.175	3.928	3.835	3.828
51	4.416	7.687	4.333	3.870	3.863
52	4.300	7.527	4.263	3.748	3.741
53	4.128	7.287	4.113	3.574	3.567
54	3.902	6.967	3.894	3.347	3.341
55	3.614	6.454	3.628	3.086	3.080
56	3.285	5.862	3.258	2.720	2.715
57	2.887	5.109	2.854	2.353	2.349
58	2.428	4.244	2.357	1.900	1.897
59	1.893	3.283	1.791	1.290	1.288
60	1.221	2.306	1.167	1.081	1.079
61	1.084	1.890	0.878	0.941	0.940

CYCLE 1 - MAP 68

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
6/19/74	0930	3780	2410	562.0	2000.	144.	133.3	374	10730

	ASSEMBLY N 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	1.668	2.303	1.963	2.783	1.937
2	2.070	2.800	2.412	3.239	1.752
3	2.576	3.508	3.026	4.025	2.287
4	3.147	4.040	3.491	4.560	2.748
5	3.613	4.402	3.779	4.827	3.122
6	3.623	4.409	3.763	5.095	3.108
7	4.548	5.334	4.564	5.928	3.663
8	4.953	5.725	4.879	6.369	4.033
9	5.222	6.009	5.104	6.636	4.237
10	5.473	6.187	5.330	6.903	4.422
11	5.589	6.329	5.465	7.092	4.552
12	5.666	6.436	5.570	7.171	4.644
13	5.666	6.436	5.585	7.265	4.644
14	5.646	6.471	5.570	7.328	4.644
15	5.569	6.400	5.495	7.265	4.663
16	5.377	6.116	5.240	6.777	4.570
17	4.779	5.547	4.744	6.479	4.052
18	5.434	6.294	5.390	7.060	4.422
19	5.531	6.365	5.435	7.171	4.626
20	5.531	6.471	5.465	7.155	4.626
21	5.492	6.542	5.435	7.123	4.644
22	5.492	6.400	5.420	7.139	4.644
23	5.454	6.329	5.390	7.139	4.607
24	5.434	6.294	5.315	7.108	4.589
25	5.357	6.222	5.255	7.076	4.570
26	5.280	6.080	5.149	6.982	4.515
27	5.049	5.725	4.864	6.447	4.404
28	4.471	5.369	4.519	6.227	3.867
29	5.068	5.938	4.984	6.777	4.311
30	5.145	5.974	4.984	6.825	4.422
31	5.145	6.009	5.074	6.903	4.459
32	5.145	5.974	4.969	6.919	4.478
33	5.184	5.974	4.999	6.888	4.496
34	5.184	5.938	5.014	6.903	4.478
35	5.165	5.902	4.954	6.935	4.459
36	5.126	5.902	4.939	6.856	4.422
37	5.088	5.796	4.879	6.777	4.348
38	4.837	5.476	4.609	6.259	4.293
39	4.509	5.262	4.444	6.243	3.756
40	5.068	5.876	4.909	6.746	4.255

CYCLE 1 - MAP 68

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
41	5.184	6.009	4.999	6.872	4.422
42	5.222	6.151	5.074	6.982	4.515
43	5.261	6.187	5.119	7.046	4.589
44	5.300	6.222	5.164	7.171	4.644
45	5.319	6.222	5.194	7.202	4.700
46	5.357	6.222	5.194	7.171	4.681
47	5.357	6.187	5.134	7.155	4.626
48	5.280	6.116	5.089	7.029	4.570
49	4.933	5.725	4.759	6.447	4.441
50	4.741	5.511	4.594	6.447	3.840
51	5.184	6.045	4.954	6.809	4.330
52	5.222	6.046	4.954	6.715	4.348
53	5.145	5.938	4.864	6.557	4.274
54	5.070	5.760	4.714	6.306	4.163
55	4.741	5.511	4.489	5.913	3.904
56	4.336	5.085	4.144	5.441	3.626
57	3.873	4.551	3.693	4.796	3.312
58	3.276	3.876	3.153	4.041	2.812
59	2.505	2.987	2.432	3.098	2.257
60	1.734	2.027	1.666	2.280	1.480
61	0.899	1.031	0.856	1.248	0.728

	ASSEMBLY D 7	ASSEMBLY L 8	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY N 12
1	3.432	3.216	2.598	2.410	1.791
2	3.629	3.713	3.237	3.079	2.071
3	4.734	4.674	4.021	3.919	2.649
4	5.759	5.570	4.688	4.740	3.135
5	6.197	6.278	5.261	5.360	3.493
6	6.029	6.290	5.179	5.530	3.421
7	6.646	7.155	6.285	6.088	4.151
8	7.674	7.921	6.911	6.939	4.487
9	8.153	8.287	7.216	7.364	4.711
10	8.462	8.587	7.434	7.630	5.067
11	8.702	8.786	7.609	7.870	5.085
12	8.839	8.953	7.696	7.949	5.104
13	8.904	8.919	7.754	8.002	5.123
14	8.941	8.886	7.740	8.056	5.160
15	8.873	8.853	7.725	7.949	5.104
16	8.702	8.720	7.594	7.790	4.992
17	7.982	7.888	6.707	7.045	4.375
18	7.914	8.254	7.507	7.152	4.992

CYCLE 1 - MAP 68

	ASSERBLY D 7	ASSEMBLY L 3	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY N 12
19	8.496	8.753	7.754	7.630	5.104
20	8.530	8.720	7.798	7.630	5.067
21	8.530	8.720	7.769	7.604	5.048
22	8.530	8.686	7.754	7.577	5.029
23	8.496	8.653	7.725	7.524	4.992
24	8.462	8.520	7.638	7.471	4.973
25	8.359	8.387	7.565	7.418	4.936
26	8.256	8.320	7.391	7.338	4.861
27	8.119	8.121	7.202	7.205	4.655
28	7.400	7.222	6.300	6.434	4.169
29	7.468	7.588	7.187	6.806	4.711
30	8.076	8.021	7.362	7.231	4.786
31	8.085	8.087	7.420	7.311	4.824
32	8.119	8.154	7.449	7.338	4.824
33	8.153	8.121	7.478	7.338	4.842
34	8.188	8.087	7.522	7.285	4.842
35	8.188	8.121	7.507	7.231	4.824
36	8.188	8.087	7.478	7.231	4.824
37	8.158	8.054	7.362	7.205	4.768
38	8.051	7.888	7.129	7.079	4.543
39	7.297	7.022	6.329	6.307	4.207
40	7.605	7.588	7.289	6.779	4.730
41	8.153	8.021	7.492	7.258	4.842
42	8.290	8.154	7.565	7.418	4.898
43	8.462	8.254	7.653	7.524	4.973
44	8.496	8.254	7.682	7.550	4.955
45	8.565	8.287	7.653	7.604	4.973
46	8.633	8.287	7.653	7.630	4.936
47	8.633	8.320	7.638	7.630	4.917
48	8.565	8.287	7.580	7.604	4.861
49	8.462	8.187	7.332	7.471	4.562
50	7.571	7.255	6.489	6.514	4.375
51	7.982	7.888	7.449	7.125	4.749
52	8.462	8.320	7.492	7.471	4.730
53	8.393	8.287	7.347	7.471	4.581
54	8.222	8.154	7.129	7.338	4.431
55	7.948	7.821	6.751	7.099	4.132
56	7.503	7.388	6.270	6.700	3.833
57	6.920	6.732	5.645	6.168	3.421
58	6.098	5.924	4.830	5.450	2.898
59	5.070	4.959	3.884	4.493	2.206
60	3.803	3.661	2.619	3.297	1.533
61	2.878	2.008	1.324	1.799	0.798

CYCLE 1 - MAP 68

	ASSEMBLY L 14	ASSEMBLY J 15
1	1.839	1.500
2	1.775	1.942
3	2.302	2.442
4	2.814	2.898
5	3.155	3.192
6	3.360	3.295
7	3.705	3.998
8	4.074	4.319
9	4.346	4.572
10	4.60z	4.794
11	4.683	4.883
12	4.731	4.913
13	4.747	4.913
14	4.763	4.898
15	4.747	4.824
16	4.667	4.616
17	4.322	4.207
18	4.475	4.705
19	4.619	4.780
20	4.619	4.794
21	4.619	4.765
22	4.555	4.765
23	4.555	4.720
24	4.539	4.690
25	4.723	4.631
26	4.443	4.557
27	4.362	4.260
28	3.785	4.008
29	4.234	4.379
30	4.362	4.408
31	4.362	4.423
32	4.378	4.438
33	4.427	4.423
34	4.427	4.453
35	4.410	4.408
36	4.410	4.394
37	4.378	4.319
38	4.282	4.052
39	3.837	3.933
40	4.250	4.290
41	4.410	4.364
42	4.507	4.453
43	4.539	4.512
44	4.587	4.527
45	4.619	4.542

CYCLE 1 - MAP 68

	ASSEMBLY L 14	ASSEMBLY J 15
46	4.587	4.527
47	4.539	4.512
48	4.459	4.408
49	4.298	4.112
50	3.737	4.008
51	4.218	4.290
52	4.250	4.245
53	4.170	4.201
54	4.058	4.067
55	3.881	3.859
56	3.609	3.562
57	3.272	3.191
58	2.839	2.731
59	2.277	2.308
60	1.508	1.456
61	1.459	0.752

CYCLE 1 - MAP 71

DATE	TIME	MEAS PPM	BNT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
9/18/74	0930	141	2422	564.0	2000.	144.	143.4	138	12665

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	3.634	2.293	2.165	4.904	2.511
2	2.814	2.840	2.221	3.852	2.158
3	2.998	3.631	2.736	4.443	2.762
4	3.707	4.238	3.224	5.309	3.261
5	4.296	4.707	3.592	5.799	3.619
6	4.684	4.709	3.612	6.843	3.555
7	4.389	5.060	3.930	6.319	4.130
8	5.259	5.707	4.418	6.881	4.437
9	5.580	5.938	4.627	7.184	4.629
10	5.754	6.082	4.766	5.343	4.782
11	5.915	6.146	4.876	7.473	4.908
12	5.988	6.177	4.925	7.545	4.859
13	5.975	6.161	4.915	7.545	4.846
14	5.921	6.082	4.876	7.388	4.821
15	5.768	5.962	4.806	7.031	4.795
16	5.621	5.834	4.697	7.415	4.629

CYCLE 1 - MAP 71

	ASSEMBLY M 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY M 5	ASSEMBLY B 5
17	5.406	5.204	4.189	6.780	4.002
18	4.724	5.355	4.338	6.930	4.468
19	5.366	5.651	4.527	7.213	4.655
20	5.160	5.643	4.527	7.370	4.629
21	5.420	5.667	4.517	7.184	4.629
22	5.400	5.635	4.488	7.188	4.603
23	5.406	5.671	4.458	7.184	4.565
24	5.353	5.631	4.438	7.155	4.565
25	5.299	5.515	4.383	7.126	4.507
26	5.259	5.459	4.348	7.083	4.437
27	5.179	5.323	4.279	6.982	4.322
28	4.844	4.733	3.781	6.174	3.759
29	4.510	5.092	4.129	6.795	4.335
30	5.005	5.371	4.318	6.968	4.412
31	5.072	5.443	4.388	7.040	4.450
32	5.099	5.467	4.428	7.054	4.488
33	5.139	5.507	4.448	7.069	4.501
34	5.159	5.499	4.448	7.112	4.514
35	5.192	5.499	4.428	7.126	4.488
36	5.206	5.491	4.418	7.147	4.476
37	5.379	5.491	4.358	7.054	4.437
38	5.139	5.379	4.308	6.982	4.297
39	4.724	4.781	3.807	6.290	3.811
40	4.804	5.347	4.308	7.011	4.463
41	5.192	5.667	4.557	7.184	4.602
42	5.286	5.810	4.667	7.300	4.693
43	5.393	5.906	4.776	7.473	4.795
44	5.433	6.078	4.866	7.530	4.846
45	5.500	6.098	4.905	7.675	4.885
46	5.560	6.169	4.925	7.718	4.923
47	5.634	6.185	4.945	7.718	4.923
48	5.674	6.207	4.925	7.761	4.885
49	5.604	6.068	4.836	7.631	4.629
50	5.032	5.260	4.189	6.824	4.322
51	5.433	6.066	4.836	7.617	4.834
52	5.707	6.289	4.965	7.732	4.859
53	5.760	6.329	4.955	7.675	4.808
54	5.728	6.265	4.806	7.516	4.680
55	5.500	6.130	4.677	7.343	4.450
56	5.286	5.850	4.388	6.997	4.194
57	4.871	5.395	3.970	6.492	3.734
58	4.309	4.781	3.433	5.814	3.210
59	3.613	3.927	2.746	4.918	2.481
60	2.596	2.690	1.871	3.347	1.726
61	2.235	1.389	0.955	3.448	0.899

CYCLE 1 - MAP 71

	ASSEMBLY D 7	ASSEMBLY R 8	ASSEMBLY L 9	ASSEMBLY L 9	ASSEMBLY N 10
1	4.476	2.004	3.763	3.280	3.240
2	4.430	2.970	4.441	3.953	3.755
3	5.106	4.068	5.506	5.002	4.703
4	5.903	4.506	6.370	5.788	5.454
5	6.633	4.721	6.978	6.340	5.950
6	6.586	4.667	6.722	6.104	5.742
7	7.284	5.320	7.650	6.951	6.894
8	8.169	5.543	8.259	7.503	7.422
9	8.436	5.659	8.483	7.704	7.646
10	8.603	5.731	8.579	7.794	7.799
11	8.687	5.767	8.643	7.852	7.790
12	8.695	5.713	8.643	7.852	7.806
13	8.653	5.686	8.515	7.736	7.774
14	8.569	5.606	8.387	7.620	7.710
15	8.434	5.525	8.291	7.532	7.662
16	8.172	5.284	8.035	7.300	7.406
17	7.262	4.926	6.946	6.311	6.398
18	7.567	5.320	7.746	7.038	7.310
19	7.956	5.329	7.971	7.242	7.438
20	7.939	5.338	7.971	7.242	7.470
21	7.889	5.320	7.939	7.213	7.470
22	7.856	5.311	7.875	7.154	7.406
23	7.788	5.266	7.810	7.096	7.358
24	7.729	5.248	7.746	7.038	7.294
25	7.679	5.195	7.618	6.922	7.166
26	7.587	5.141	7.522	6.834	7.054
27	7.409	4.864	7.266	6.602	6.830
28	6.543	4.756	6.210	5.642	6.080
29	7.163	5.141	7.170	6.515	6.910
30	7.478	5.212	7.362	6.689	7.102
31	7.537	5.257	7.394	6.718	7.166
32	7.570	5.284	7.394	6.718	7.214
33	7.604	5.302	7.458	6.776	7.246
34	7.672	5.320	7.458	6.776	7.262
35	7.671	5.320	7.458	6.776	7.310
36	7.704	5.311	7.490	6.805	7.262
37	7.696	5.239	7.426	6.747	7.214
38	7.493	4.917	7.202	6.544	6.878
39	6.671	4.926	6.274	5.700	6.398
40	7.524	5.257	7.394	6.718	7.294
41	7.899	5.338	7.618	6.922	7.534
42	8.024	5.391	7.746	7.038	7.646
43	8.158	5.445	7.842	7.125	7.710
44	8.268	5.504	7.904	7.183	7.790
45	8.385	5.516	8.003	7.271	7.822

CYCLE 1 - MAP 71

	ASSEMBLY D 7	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10
46	8.435	5.552	8.035	7.300	7.854
47	8.485	5.570	8.067	7.329	7.886
48	8.469	5.552	8.067	7.329	7.854
49	8.239	5.132	7.875	7.154	7.358
50	7.488	5.391	7.010	6.369	7.310
51	8.421	5.695	8.259	7.503	8.061
52	8.687	5.722	8.483	7.707	8.109
53	8.686	5.704	8.483	7.704	8.045
54	8.526	5.615	8.323	7.562	7.870
55	8.265	5.400	8.035	7.300	7.486
56	7.760	5.069	7.522	6.834	6.926
57	7.062	5.640	6.754	6.137	6.206
58	6.112	4.014	5.858	5.322	5.294
59	4.876	3.073	4.609	4.188	4.063
60	3.482	2.494	3.233	2.937	3.007
61	3.237	1.490	1.697	1.541	1.653

	ASSEMBLY D 10	ASSEMBLY L 11	ASSEMBLY F 11	ASSEMBLY R 11	ASSEMBLY N 12
1	4.390	3.100	3.486	2.569	3.062
2	3.452	3.819	4.421	3.000	2.215
3	4.047	4.796	5.683	4.189	2.565
4	4.985	5.638	6.518	5.121	3.236
5	5.833	6.122	7.053	5.857	3.739
6	5.922	5.969	6.669	6.237	4.067
7	5.878	6.735	7.755	6.030	3.893
8	6.890	7.398	8.290	7.180	4.680
9	7.247	7.679	8.474	7.560	4.950
10	7.455	7.857	8.574	7.613	5.118
11	7.842	7.883	8.574	7.917	5.543
12	7.782	7.908	8.507	7.986	5.350
13	7.738	7.883	8.440	7.940	5.363
14	7.663	7.755	8.323	7.894	5.311
15	7.529	7.628	8.173	7.813	5.260
16	7.395	7.398	7.922	7.675	5.208
17	6.860	6.378	6.803	7.249	4.963
18	6.428	6.888	7.705	6.686	4.486
19	7.113	7.168	7.956	7.422	5.015
20	7.187	7.117	7.972	7.434	5.049
21	7.172	7.066	7.889	7.491	5.075
22	7.202	7.041	7.872	7.411	4.968
23	7.172	6.964	7.789	7.365	4.950

CYCLE 1 - MAP 71

	ASSEMBLY D 10	ASSEMBLY L 11	ASSEMBLY F 11	ASSEMBLY H 11	ASSEMBLY N 12
24	7.128	6.989	7.755	7.353	4.899
25	7.113	6.838	7.588	7.284	4.886
26	7.023	6.760	7.438	7.196	4.847
27	6.890	6.658	7.137	7.077	4.783
28	6.205	5.791	6.204	6.467	4.512
29	6.384	6.454	7.204	6.600	4.280
30	6.741	6.760	7.354	7.042	4.705
31	6.830	6.837	7.421	7.169	4.783
32	6.890	6.862	7.454	7.203	4.770
33	6.949	6.913	7.504	7.249	4.796
34	6.994	6.888	7.555	7.295	4.847
35	7.023	6.837	7.538	7.342	4.873
36	7.038	6.862	7.504	7.330	4.873
37	7.053	6.786	7.421	7.284	4.873
38	6.964	6.633	7.103	7.203	4.821
39	6.220	5.740	6.368	6.398	4.461
40	6.637	6.658	7.421	6.950	4.512
41	7.142	6.964	7.571	7.353	4.873
42	7.336	7.143	7.672	7.491	4.950
43	7.440	7.270	7.789	7.595	5.066
44	7.574	7.321	7.889	7.710	5.105
45	7.604	7.398	8.023	7.756	5.118
46	7.663	7.475	8.106	7.848	5.182
47	7.723	7.500	8.173	7.836	5.195
48	7.693	7.526	8.173	7.859	5.208
49	7.574	7.347	7.822	7.744	5.182
50	6.681	6.327	7.471	6.789	4.680
51	7.395	7.423	8.390	7.710	5.002
52	7.678	7.704	8.574	7.966	5.221
53	7.693	7.730	8.557	7.986	5.208
54	7.569	7.679	8.407	7.905	5.105
55	7.410	7.475	8.106	7.710	4.950
56	7.083	7.041	7.589	7.342	4.705
57	6.577	6.480	6.853	6.778	4.383
58	5.833	5.612	5.867	6.008	3.855
59	4.910	4.566	4.546	4.914	3.249
60	3.467	3.036	3.226	3.349	2.359
61	3.036	1.514	1.710	1.711	1.960

	ASSEMBLY L 14	ASSEMBLY J 15
1	2.643	1.952

CYCLE 1 - MAP 71

	ASSEMBLY L 14	ASSEMBLY J 15
2	1.994	2.947
3	2.545	2.973
4	3.111	3.048
5	3.482	3.473
6	3.641	3.660
7	3.764	3.660
8	4.383	4.272
9	4.577	4.497
10	4.807	4.647
11	4.860	4.797
12	4.843	4.835
13	4.860	4.760
14	4.825	4.710
15	4.772	4.635
16	4.684	4.522
17	4.259	4.235
18	4.242	4.023
19	4.524	4.360
20	4.507	4.397
21	4.507	4.397
22	4.489	4.347
23	4.436	4.372
24	4.401	4.322
25	4.407	4.297
26	4.348	4.235
27	4.259	4.160
28	3.747	3.760
29	4.047	3.860
30	4.242	4.060
31	4.277	4.098
32	4.277	4.123
33	4.348	4.135
34	4.348	4.160
35	4.383	4.148
36	4.383	4.160
37	4.365	4.160
38	4.312	4.098
39	3.800	3.660
40	4.242	3.973
41	4.418	4.185
42	4.542	4.260
43	4.630	4.360
44	4.707	4.397
45	4.737	4.447
46	4.754	4.510

CYCLE 1 - MAP 71

	ASSEMBLY L 14	ASSEMBLY J 15
47	4.737	4.497
48	4.719	4.472
49	4.613	4.410
50	3.977	3.873
51	4.542	4.335
52	4.606	4.497
53	4.630	4.447
54	4.542	4.385
55	4.383	4.260
56	4.153	4.048
57	3.817	3.735
58	3.376	3.298
59	2.775	2.748
60	1.873	1.961
61	1.803	1.724

CYCLE 1 - MAP 73

DATE	TIME	MEAS PPM	INT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
10/13/74	0930	157C	1500	563.0	2000.	144.	137.1	97	13420

	ASSEMBLY M 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	2.242	2.851	2.233	4.804	2.624
2	2.454	3.304	2.455	3.706	2.300
3	3.121	4.078	3.107	4.214	2.929
4	3.819	4.709	3.574	5.188	3.464
5	4.282	5.058	3.895	5.759	3.963
6	4.159	4.963	3.883	5.886	3.735
7	5.083	5.929	4.307	6.331	4.415
8	5.422	6.289	4.817	7.072	4.701
9	5.730	6.478	5.038	7.515	4.978
10	5.884	6.611	5.173	7.707	5.076
11	5.984	6.706	5.296	7.834	5.085
12	5.915	6.744	5.345	7.961	5.134
13	5.854	6.668	5.321	7.982	5.095
14	5.823	6.630	5.296	7.961	5.086
15	5.669	6.459	5.210	8.024	4.996
16	5.391	6.137	5.068	7.770	4.809
17	4.806	5.626	4.448	6.945	4.159
18	5.483	6.251	4.755	7.135	4.671

CYCLE 1 - MAP 73

	ASSEMBLY E 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY M 5	ASSEMBLY B 5
19	5.515	6.327	4.915	7.432	4.799
20	5.484	6.422	4.915	7.453	4.750
21	5.453	6.459	4.866	7.453	4.750
22	5.483	6.289	4.841	7.389	4.740
23	5.391	6.213	4.780	7.389	4.681
24	5.299	6.137	4.755	7.347	4.652
25	5.268	6.062	4.731	7.305	4.592
26	5.176	5.910	4.645	7.241	4.543
27	4.899	5.569	4.534	7.042	4.405
28	4.498	5.247	3.944	6.161	3.804
29	4.960	5.740	4.436	6.818	4.385
30	5.022	5.815	4.596	7.008	4.435
31	5.022	5.834	4.645	7.050	4.464
32	5.053	5.853	4.657	7.072	4.504
33	5.083	5.815	4.657	7.093	4.484
34	5.083	5.777	4.657	7.114	4.474
35	5.114	5.740	4.608	7.114	4.464
36	5.053	5.702	4.571	7.093	4.415
37	4.991	5.626	4.522	7.029	4.356
38	4.560	5.247	4.436	6.902	4.228
39	4.652	5.247	3.858	6.034	3.755
40	5.022	5.740	4.510	6.839	4.326
41	5.083	5.891	4.694	7.072	4.454
42	5.145	6.043	4.805	7.177	4.533
43	5.204	6.099	4.878	7.368	4.612
44	5.237	6.175	4.952	7.432	4.681
45	5.299	6.175	5.004	7.559	4.707
46	5.391	6.213	5.026	7.622	4.730
47	5.391	6.175	5.013	7.664	4.730
48	5.299	6.156	4.989	7.622	4.671
49	4.714	5.569	4.866	7.537	4.454
50	5.114	5.834	4.239	6.563	4.149
51	5.422	6.251	4.940	7.474	4.632
52	5.453	6.327	5.050	7.643	4.642
53	5.361	6.270	5.026	7.580	4.573
54	5.268	6.137	4.952	7.432	4.464
55	4.929	5.891	4.768	7.177	4.247
56	4.529	5.474	4.473	6.818	3.952
57	4.036	4.849	4.055	6.132	3.567
58	3.266	4.092	3.514	5.441	3.016
59	2.311	3.031	2.826	4.467	2.296
60	2.157	2.368	2.071	3.049	1.685
61	1.387	1.358	1.069	3.112	0.920

CYCLE 1 - MAP 73

	ASSEMBLY D 7	ASSEMBLY E 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY L 11
1	2.608	3.798	3.322	3.226	2.892
2	4.036	4.378	3.830	3.909	3.732
3	5.464	5.503	4.814	4.858	4.697
4	5.779	6.413	5.725	5.624	5.589
5	6.363	7.062	6.430	6.182	6.190
6	6.845	6.832	6.221	5.935	5.979
7	7.379	7.733	7.041	7.209	6.906
8	8.609	8.439	7.684	7.761	7.579
9	8.770	8.568	7.893	7.989	7.916
10	8.983	8.774	7.989	8.103	8.085
11	9.144	8.827	8.033	8.180	8.127
12	9.197	8.880	8.086	8.199	8.127
13	9.197	8.721	7.941	8.142	8.085
14	9.197	8.683	7.861	8.084	8.000
15	9.037	8.429	7.732	8.008	7.832
16	8.823	8.245	7.504	7.723	7.579
17	7.754	7.168	6.527	6.695	6.527
18	7.860	7.892	7.186	7.647	7.158
19	8.342	8.192	7.459	7.780	7.369
20	8.342	8.156	7.427	7.799	7.369
21	8.342	8.104	7.379	7.761	7.285
22	8.342	8.068	7.346	7.704	7.243
23	8.288	7.962	7.250	7.685	7.200
24	8.235	7.839	7.137	7.609	7.158
25	8.128	7.750	7.057	7.457	7.074
26	8.074	7.627	6.945	7.324	6.999
27	7.914	7.397	6.736	7.057	6.779
28	7.433	6.303	5.739	6.182	5.895
29	6.791	7.203	6.559	7.133	6.653
30	7.593	7.415	6.752	7.247	6.864
31	7.700	7.433	6.768	7.324	6.906
32	7.754	7.415	6.752	7.381	6.948
33	7.754	7.433	6.768	7.381	6.906
34	7.754	7.433	6.768	7.400	6.906
35	7.754	7.433	6.768	7.400	6.564
36	7.754	7.397	6.736	7.362	6.821
37	7.754	7.380	6.720	7.228	6.779
38	7.700	7.150	6.511	6.943	6.569
39	7.005	6.179	5.626	6.256	5.642
40	7.112	7.238	6.597	7.228	6.611
41	7.754	7.486	6.816	7.438	6.906
42	7.914	7.592	6.972	7.514	7.032
43	8.074	7.662	6.977	7.571	7.158
44	8.128	7.697	7.009	7.647	7.200
45	8.181	7.786	7.089	7.685	7.243

CYCLE 1 - MAP 73

	ASSEMBLY D 7	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBTY L 11
46	8.280	7.803	7.105	7.723	7.327
47	8.342	7.821	7.121	7.723	7.327
48	8.342	7.856	7.154	7.742	7.285
49	8.280	7.680	6.903	7.305	7.158
50	7.326	6.762	6.157	7.000	6.190
51	8.074	8.033	7.314	7.894	7.243
52	8.449	8.227	7.491	7.970	7.495
53	8.502	8.262	7.523	7.932	7.537
54	8.502	8.139	7.411	7.761	7.495
55	8.342	7.874	7.170	7.419	7.285
56	7.967	7.397	6.736	6.886	6.864
57	7.379	6.762	6.157	6.103	6.274
58	6.577	5.890	5.369	5.269	5.432
59	5.561	4.731	4.308	4.099	4.379
60	2.941	3.248	2.958	2.929	2.905
61	2.246	1.671	1.522	2.758	1.446

	ASSEMBLY P 11	ASSEMBLY W 12	ASSEMBLY J 15
1	3.203	3.392	2.414
2	4.176	2.442	1.779
3	5.043	2.888	2.211
4	6.064	3.606	2.762
5	6.778	4.146	3.229
6	6.643	4.503	3.511
7	7.863	4.354	3.511
8	8.253	5.109	4.208
9	8.456	5.498	4.530
10	8.558	5.690	4.690
11	8.608	6.144	4.895
12	8.575	5.845	4.972
13	8.541	5.975	4.921
14	8.422	5.780	4.895
15	8.253	5.726	4.870
16	7.978	5.667	4.716
17	7.151	5.388	4.480
18	7.914	4.921	4.120
19	8.015	5.420	4.562
20	7.990	5.488	4.588
21	7.914	5.398	4.562
22	7.863	5.368	4.536
23	7.761	5.279	4.511

CYCLE 1 - MAP 73

	ASSEMBLY F 11	ASSEMBLY N 12	ASSEMBLY J 15
24	7.676	5.219	4.485
25	7.558	5.189	4.434
26	7.388	5.160	4.383
27	6.795	5.040	4.306
28	6.592	4.712	3.896
29	7.253	4.503	3.921
30	7.267	4.921	4.152
31	7.338	4.951	4.178
32	7.371	4.951	4.203
33	7.354	4.921	4.203
34	7.354	4.921	4.229
35	7.321	4.951	4.229
36	7.338	4.921	4.203
37	7.287	4.891	4.178
38	6.592	4.831	4.126
39	6.848	4.384	3.665
40	7.388	4.533	3.896
41	7.506	4.861	4.152
42	7.609	4.921	4.203
43	7.693	4.981	4.280
44	7.744	5.040	4.331
45	7.778	5.040	4.357
46	7.846	5.070	4.408
47	7.803	5.040	4.383
48	7.795	5.040	4.357
49	6.948	4.981	4.306
50	7.541	4.444	3.793
51	8.049	4.861	4.152
52	8.151	5.070	4.331
53	8.023	5.070	4.306
54	7.931	4.891	4.229
55	7.556	4.742	4.152
56	7.049	4.444	3.896
57	6.270	4.116	3.588
58	5.236	3.638	3.204
59	3.728	3.042	2.614
60	3.118	2.147	1.845
61	1.875	1.938	1.717

CHAPTER #7 CYCLE 2 - OPERATING DATA

THE FOLLOWING HISTORY DATA REPRESENTS THE OPERATION OF THE REACTOR BY PROVIDING THE POWER AS A FUNCTION OF TIME ALONG WITH THE BORON CONCENTRATION IN THE PRIMARY COOLANT AND CONTROL ROD POSITIONS. THE COOLANT TEMPERATURE THAT IS PRESENTED IS THE AVERAGE TEMPERATURE AND IS THE UNWEIGHTED AVERAGE OF THE INLET AND OUTLET TEMPERATURES OF ALL OF THE PRIMARY COOLANT LOOPS. THE COLUMN LABELED CORRECTED BORON CONCENTRATION INCLUDES ALL OF THE CORRECTIONS TO THE BORON CONCENTRATION TO ESTIMATE THE BORON CONCENTRATION FOR CRITICALITY IF THE REACTOR WERE AT FULL POWER WITH ALL CONTROL RODS WITHDRAWN AND THE AVERAGE COOLANT TEMPERATURE WERE THE NOMINAL VALUE. THIS COLUMN SHOULD ONLY BE USED FOR EXTRAPOLATION TO DETERMINE AN EFFECTIVE END OF CYCLE AT NOMINAL CONDITIONS.

CORE FOLLOW

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
1/31/75	1700		73		2250.		0.0		
1/31/75	2400		73		2250.		135.0		
2/ 7/75	0900	624E	2403	564.0	2250.	144.	137.7	643	115
2/ 8/75	0900	620C	2419	565.0	2250.	144.	140.2	636	145
2/13/75	0900	596C	2430	565.0	2250.	144.	134.5	603	290
2/19/75	0900	604	2436	565.0	2250.	144.	134.5	605	495
2/20/75	0900	600	2430	564.0	2250.	144.	135.2	599	530
2/21/75	0900	594	2441	565.0	2250.	144.	135.2	594	565
2/22/75	0900	567	2441	565.0	2250.	144.	135.2	568	600
2/25/75	0900	586	2441	565.0	2250.	144.	135.2	506	700
3/ 3/75	0900	582	2430	566.0	2250.	144.	135.8	582	860
3/ 4/75	0900	574	2435	566.0	2250.	144.	135.2	573	895
3/19/75	0900	567	2415	565.0	2250.	144.	137.1	536	1150
3/20/75	0900	567	2417	566.0	2250.	144.	136.3	559	1190
3/21/75	0900	563	2407	566.0	2250.	144.	137.7	555	1220
3/22/75	0900	555	2386	565.0	2250.	144.	137.7	545	1250
3/23/75	0600	558	2411	566.0	2250.	144.	139.6	549	1295
3/24/75	0900	550	2400	566.0	2250.	144.	137.1	544	1325
3/25/75	0900	513	2434	567.0	2250.	144.	140.2	508	1350
4/ 4/75	0900	523	2422	566.0	2250.	144.	142.1	519	1685
4/ 5/75	0900	523	2403	565.0	2250.	144.	144.0	516	1725
4/ 6/75	0730	515	2430	566.0	2250.	144.	144.0	510	1765
4/ 7/75	0900	510	2429	567.0	2250.	144.	142.1	508	1790
4/ 9/75	0900	498	2412	567.0	2250.	144.	138.3	498	1860
4/11/75	0900	496	2438	567.0	2250.	144.	141.5	496	1920
4/14/75	0900	487B	2420	566.0	2250.	144.	141.5	483	2020
4/13/75	0900	502	2425	567.0	2250.	144.	142.7	500	1990
4/16/75	0900	500	2415	566.0	2250.	144.	142.7	495	2090
4/17/75	0900	492	2430	566.0	2250.	144.	143.4	487	2125
4/18/75	0900	489	2389	566.0	2250.	144.	143.4	484	2160
4/19/75	0930	495	2398	566.0	2250.	144.	144.0	488	2190
4/20/75	0900	485	2425	566.0	2250.	144.	140.8	481	2220
5/ 6/75	0930	474	2441	562.0	2250.	144.	144.0	458	2570
5/ 7/75	0930	468	2441	562.0	2250.	144.	144.0	451	2600
5/ 8/75	0930	456	2441	562.0	2250.	144.	144.0	439	2640
5/ 9/75	0930	445	2441	562.0	2250.	144.	144.0	428	2670
5/10/75	0930	449	2441	562.0	2250.	144.	144.0	432	2710
5/11/75	0930	447	2441	562.0	2250.	144.	144.0	431	2740
5/12/75	0930	439	2441	562.0	2250.	144.	144.0	423	2775
5/13/75	1000	435	2441	562.0	2250.	144.	144.0	420	2810
5/14/75	1000	433	2441	562.0	2250.	144.	144.0	418	2845
5/15/75	1000	437	2441	562.0	2250.	144.	144.0	422	2880

*LETTER AFTER MEAS PPM INDICATES QUALITY (A=BEST)
UNLESS SPECIFIED, READING IS OF 'A' QUALITY

CORE FOLLOW

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
5/16/75	1000	433	2441	562.0	2250.	144.	144.0	418	2910
5/17/75	1000	433	2441	562.0	2250.	144.	144.0	419	2945
5/18/75	1000	427	2441	562.0	2250.	144.	144.0	413	2980
5/19/75	0930	439	2441	562.0	2250.	144.	144.0	425	3010
5/20/75	1000	423	2441	562.0	2250.	144.	144.0	409	3045
5/21/75	1000	425	2441	562.0	2250.	144.	144.0	411	3085
5/22/75	1000	417	2441	562.0	2250.	144.	144.0	403	3110
5/23/75	1000	409	2441	562.0	2250.	144.	144.0	395	3150
5/24/75	1000	409	2441	562.0	2250.	144.	144.0	395	3190
5/25/75	1000	405	2441	562.0	2250.	144.	144.0	391	3220
5/26/75	1000	405	2441	562.0	2250.	144.	144.0	391	3250
5/27/75	1000	409	2441	562.0	2250.	144.	144.0	395	3290
5/28/75	1000	401	2441	562.0	2250.	144.	144.0	387	3320
5/29/75	1000	393	2441	562.0	2250.	144.	144.0	379	3350
5/30/75	1000	395	2441	562.0	2250.	144.	144.0	380	3385
5/31/75	1000	395	2441	562.0	2250.	144.	144.0	380	3420
6/ 4/75	1000	381	2441	566.0	2250.	144.	140.8	377	3552
6/ 5/75	1000	382	2441	566.0	2250.	144.	141.5	378	3590
6/14/75	1030	352	2441	565.0	2250.	144.	143.4	344	3890
6/15/75	0100	363	2441	565.0	2250.	144.	142.1	356	3915
6/16/75	1000	355	2439	566.0	2250.	144.	140.8	351	3960
6/17/75	0930	355	2438	566.0	2250.	144.	140.8	351	3990
6/18/75	0930	351	2438	565.0	2250.	144.	143.4	343	4025
6/19/75	1000	351B	2439	566.0	2250.	144.	142.7	316	4060
6/20/75	0930	363	2441	565.0	2250.	144.	141.5	353	4095
6/21/75	1100	351	2437	565.0	2250.	144.	140.2	344	4130
6/22/75	1100	371	2438	566.0	2250.	144.	143.4	365	4165
7/ 2/75	1000	327B	2420	566.0	2250.	144.	138.9	313	4400
7/ 8/75	0930	311B	2436	565.7	2250.	144.	142.1	299	4610
7/15/75	0930	292B	2435	565.6	2250.	144.	140.2	285	4845
7/22/75	1000	272B	2429	565.6	2250.	144.	143.4	265	5080
8/ 9/75	0800	258B	2412	566.0	2250.	144.	135.8	248	5385
8/19/75	0930	230B	2433	565.6	2250.	144.	140.2	223	5730
8/31/75	1000	213B	2296	564.1	2250.	144.	132.0	196	6060
9/15/75			2441		2250.	144.	135.8		6550

*LETTER AFTER MEAS PPM INDICATES QUALITY (A=BEST)
UNLESS SPECIFIED, READING IS OF 'A' QUALITY

OPERATIONAL TRANSIENTS DURING CYCLE 1

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
1/31/75	1700		73		2250.		0.0		
1/31/75	2400		73		2250.		135.0		
2/ 7/75	0900	624E	2403	564.0	2250.	144.	137.7	643	115

*LETTER AFTER MEAS PPM INDICATES QUALITY (A=BEST)
UNLESS SPECIFIED, READING IS OF 'A' QUALITY

MONTHLY OPERATING STATISTICS

MONTH	HOURS CRITICAL	GROSS THERMAL ENERGY GEN.,MWH
INITIAL CRITICALITY	JAN 30,1975	
JAN 1975	42.2	611.
FEB 1975	665.3	1329659.
MAR 1975	716.1	1363940.
APR 1975	625.	1475404.
MAY 1975	717.7	1712641.
JUNE 1975	662.3	1566410.
JULY 1975	553.7	1338774.
AUG 1975	704.9	1621773.
SEPT 1975	613.4	1418801.
END OF CYCLE 2	SEPT 26,1975	

SHUTDOWNS DATE FROM	TO	DURATION HOURS
OCT 24,1974	FEB 2,1975	2711.7
FEB 2,1975	FEB 2,1975	3.0
FEB 2,1975	FEB 2,1975	3.1
FEB 2,1975	FEB 2,1975	2.2
FEB 2,1975	FEB 2,1975	2.4
FEB 3,1975	FEB 4,1975	3.8
FEB 9,1975	FEB 9,1975	13.5
FEB 25,1975	FEB 26,1975	20.1
MAR 7,1975	MAR 14,1975	174.4
APR 2,1975	APR 2,1975	1.5
APR 21,1975	APR 24,1975	74.6
APR 24,1975	APR 24,1975	1.1
APR 24,1975	APR 24,1975	1.1
APR 25,1975	APR 25,1975	11.9
APR 30,1975	MAY 2,1975	37.1
JUN 24,1975	JUN 27,1975	59.2
JUL 24,1975	AUG 1,1975	190.2
AUG 23,1975	AUG 24,1975	32.3
SEP 26,1975	DEC 8,1975	1757.2

END OF CYCLE 2 SEPT 26,1975

AXIAL POWER DISTRIBUTIONS
FROM SELECTED CORE MAPS

THE DATA IN THE FOLLOWING TABLES REPRESENT THE REDUCTION OF THE DATA FROM THE INCORE DETECTORS WHICH WERE INSERTED INTO THE INSTRUMENTATION THIMBLES. THE AXIAL POWER PROFILES ARE GIVEN FOR 60 EQUAL INTERVALS THAT SPAN THE FUEL REGION ONLY AND WITH THE FIRST ENTRY REPRESENTING THE BOTTOM OF THE FUEL AND THE 61ST ENTRY REPRESENTING THE TOP OF THE FUEL. THE DATA ARE EXPRESSED IN UNITS OF KW/FT AND WHEN SUMED OVER ALL OF THE FUEL IN THE CORE WILL EQUAL THE POWER BEING PRODUCED IN THE REACTOR.

CYCLE 2 - MAP 1

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
1/31/75	1700		73		2250.		0.0		

	ASSEMBLY N 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	1.590	3.386	2.697	3.077	1.997
2	2.192	4.538	3.480	4.233	2.701
3	2.816	5.554	4.285	5.303	3.584
4	3.374	6.638	5.003	6.272	4.352
5	3.826	7.179	5.221	7.020	5.081
6	3.826	7.596	6.737	7.275	5.183
7	4.771	9.000	7.809	9.026	6.374
8	5.244	9.821	8.897	9.927	7.154
9	5.631	10.498	9.441	10.709	7.769
10	5.983	10.972	10.028	11.338	8.319
11	6.211	11.379	10.463	11.831	8.780
12	6.383	11.717	10.746	12.205	9.074
13	6.491	11.863	10.941	12.477	9.177
14	6.555	11.446	11.007	12.613	9.369
15	6.577	11.446	10.898	12.630	9.343
16	6.448	11.175	9.767	12.222	9.305
17	5.846	10.701	11.042	11.457	8.345
18	6.598	11.717	11.377	12.613	9.445
19	6.727	11.582	11.464	12.732	9.829
20	6.770	11.785	11.485	12.766	9.919
21	6.792	11.921	11.464	12.766	9.957
22	6.727	11.717	11.311	12.749	10.021
23	6.641	11.311	11.116	12.647	9.996
24	6.512	11.514	10.898	12.494	9.604
25	6.383	11.243	10.615	12.256	9.714
26	6.211	10.905	10.071	11.916	9.458
27	5.889	9.821	8.897	11.015	8.985
28	5.373	9.869	9.810	10.726	7.833

CYCLE 2 - MAP 1

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
29	5.825	10.092	9.789	11.270	8.716
30	5.803	10.295	9.680	11.202	8.716
31	5.760	9.889	9.549	11.083	8.626
32	5.674	10.092	9.397	10.947	8.690
33	5.567	9.821	9.201	10.777	8.562
34	5.416	9.618	8.962	10.522	8.409
35	5.287	9.347	8.701	10.216	8.204
36	5.115	9.753	8.375	9.876	7.999
37	4.922	8.602	7.831	9.502	7.718
38	4.492	7.654	6.896	8.618	7.244
39	4.299	7.654	7.548	8.448	6.310
40	4.535	7.857	7.483	8.669	6.950
41	4.470	7.789	7.418	8.499	6.809
42	4.406	7.654	7.265	8.329	6.783
43	4.320	7.518	7.091	8.125	6.694
44	4.213	7.383	6.896	7.904	6.527
45	4.084	6.841	6.656	7.649	6.310
46	3.912	6.705	6.330	7.360	6.079
47	3.697	6.163	5.982	7.037	5.721
48	3.460	6.163	5.482	6.663	5.465
49	3.052	5.351	4.764	5.830	5.043
50	2.923	5.351	5.047	5.813	4.339
51	2.923	4.944	4.786	5.745	4.607
52	2.773	5.072	4.546	5.490	4.428
53	2.601	4.470	4.242	5.150	4.160
54	2.407	4.402	3.872	4.777	3.891
55	2.192	3.725	3.459	4.352	3.443
56	1.913	3.657	2.958	3.842	3.033
57	1.655	3.048	2.436	3.281	2.675
58	1.333	2.506	1.849	2.618	2.176
59	0.989	1.556	1.218	1.921	1.600
60	0.881	1.556	1.436	1.836	1.101
61	0.552	1.039	1.080	1.195	0.567

	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY D 10
1	1.647	3.073	2.806	2.582	2.984
2	2.285	4.448	4.143	3.206	3.958
3	2.884	5.548	5.107	4.227	4.841
4	3.413	6.552	6.103	4.965	5.572
5	3.829	7.222	6.726	5.419	5.815
6	3.918	7.222	6.726	5.078	6.028

CYCLE 2 - MAP 1

	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY D 10
7	4.823	8.753	8.152	6.412	7.125
8	5.313	9.805	9.132	6.866	7.642
9	5.699	10.235	9.532	7.433	8.007
10	6.011	10.905	10.156	7.717	8.373
11	6.263	11.240	10.468	8.001	8.616
12	6.411	11.431	10.646	8.143	8.799
13	6.545	11.574	10.780	8.228	8.921
14	6.574	11.527	10.735	8.114	8.982
15	6.574	11.431	10.646	8.228	8.708
16	6.411	11.144	10.379	7.959	8.403
17	5.877	9.996	9.310	7.036	7.794
18	6.634	11.096	10.334	7.972	8.860
19	6.767	11.240	10.468	8.143	9.043
20	6.642	11.240	10.468	8.114	8.951
21	6.871	11.192	10.423	8.086	8.860
22	6.856	11.144	10.379	7.972	8.799
23	6.827	10.905	10.156	8.069	8.586
24	6.738	10.427	9.711	7.745	8.525
25	6.619	10.235	9.532	7.802	8.282
26	6.426	10.140	9.443	7.632	8.251
27	6.005	9.661	8.998	7.320	7.612
28	5.580	8.848	8.241	6.384	7.277
29	6.055	9.513	8.864	7.121	7.642
30	5.996	9.470	8.820	7.121	7.581
31	5.951	9.087	8.463	7.036	7.459
32	5.877	9.183	8.552	6.923	7.429
33	5.773	8.800	8.196	6.866	7.185
34	5.669	8.800	8.196	6.724	7.246
35	5.536	8.561	7.973	6.525	7.125
36	5.358	8.322	7.751	6.213	6.911
37	5.135	7.892	7.350	6.075	6.333
38	4.734	7.461	6.949	5.476	5.998
39	4.452	6.552	6.103	4.937	5.846
40	4.675	7.318	6.815	5.334	6.181
41	4.615	7.126	6.637	5.447	6.089
42	4.556	7.079	6.593	5.362	5.998
43	4.437	6.887	6.414	5.164	5.876
44	4.363	6.744	6.281	5.048	5.724
45	4.200	6.552	6.103	4.965	5.511
46	4.022	6.696	6.236	4.625	5.298
47	3.844	6.074	5.657	4.596	5.176
48	3.636	5.835	5.434	4.256	4.811
49	3.235	5.309	4.944	4.057	4.202
50	3.028	4.974	4.633	3.603	4.293
51	3.057	5.213	4.855	3.830	4.415

CYCLE 2 - MAP 1

	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY D 10
52	2.909	5.022	4.677	3.717	4.293
53	2.716	4.783	4.454	3.575	4.080
54	2.508	4.496	4.187	3.206	3.867
55	2.271	3.826	3.564	3.121	3.471
56	1.974	3.731	3.474	2.695	3.227
57	1.677	3.061	2.851	2.553	2.740
58	1.351	2.726	2.539	2.098	2.405
59	0.979	2.104	1.960	1.674	1.796
60	0.331	1.626	1.514	1.163	1.192
61	0.568	0.925	0.861	0.605	0.594

	ASSEMBLY L 11	ASSEMBLY F 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
1	2.628	2.659	1.728	2.017	1.471
2	3.260	3.528	2.412	2.353	1.994
3	4.324	4.315	3.195	3.151	2.497
4	5.022	4.966	3.941	3.866	2.942
5	5.721	5.183	4.612	4.434	3.252
6	5.621	5.373	4.824	5.168	3.426
7	6.719	6.350	6.266	5.294	4.161
8	7.517	6.811	7.235	6.681	4.548
9	8.049	7.137	8.106	7.311	4.858
10	8.615	7.463	8.851	7.857	5.129
11	8.748	7.680	9.448	8.361	5.342
12	8.947	7.843	9.896	8.656	5.458
13	9.114	7.951	10.207	8.906	5.516
14	9.180	8.005	10.405	9.034	5.574
15	9.213	7.761	10.505	9.034	5.574
16	9.080	7.490	10.443	9.118	5.381
17	8.116	6.947	9.411	8.656	5.110
18	8.648	7.897	10.729	8.656	5.652
19	8.980	8.060	11.027	9.118	5.729
20	8.881	7.978	11.127	9.370	5.729
21	9.080	7.897	11.201	9.538	5.729
22	9.047	7.843	11.189	9.370	5.690
23	8.914	7.653	11.102	9.496	5.632
24	8.814	7.598	10.977	9.370	5.555
25	8.648	7.381	10.766	9.244	5.652
26	8.515	7.354	10i530	9.034	5.303
27	8.282	6.764	10.020	8.824	4.974
28	7.251	6.486	8.839	7.773	4.684
29	7.783	6.811	9.764	8.193	4.974

CYCLE 2 - MAP 1

	ASSEMBLY L 11	ASSEMBLY F 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
30	8.016	6.757	9.771	8.235	4.974
31	7.916	6.649	9.697	8.403	4.936
32	7.816	6.621	9.597	8.361	4.877
33	7.683	6.404	9.473	8.319	4.800
34	7.517	6.459	9.311	8.193	4.684
35	7.351	6.350	9.045	8.065	4.548
36	7.118	6.160	8.802	7.773	4.394
37	6.918	5.644	8.441	7.521	4.181
38	6.652	5.346	7.907	7.059	3.832
39	5.721	5.210	7.074	6.219	3.600
40	6.087	5.509	7.646	6.555	3.794
41	6.220	5.427	7.583	6.597	3.716
42	6.453	5.346	7.496	6.555	3.658
43	6.337	5.237	7.372	6.429	3.581
44	6.821	5.102	7.186	6.303	3.465
45	5.688	4.912	6.937	6.135	3.368
46	5.555	4.722	6.688	5.862	3.232
47	5.388	4.613	6.390	5.672	3.047
48	5.189	4.288	6.077	5.294	2.884
49	4.923	3.745	5.458	4.958	2.574
50	3.991	3.626	4.935	4.202	2.419
51	4.456	3.935	5.072	4.328	2.439
52	4.424	3.820	4.848	3.908	2.342
53	4.357	3.636	4.575	3.992	2.168
54	4.158	3.446	4.252	3.613	1.994
55	3.892	3.094	3.879	3.403	1.800
56	3.592	2.876	3.419	3.025	1.587
57	3.226	2.442	2.921	2.689	1.335
58	2.761	2.144	2.374	2.269	1.084
59	2.328	1.601	1.728	1.765	0.813
60	1.597	1.063	1.256	1.050	0.658
61	0.820	0.529	0.680	1.345	0.542

CYCLE 2 - MAP 2

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
1/31/75	2400		73		2250.		135.0		

	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY F 4	ASSEMBLY N 5	ASSEMBLY L 5
1	3.459	2.550	3.312	3.611	3.255
2	4.713	3.477	4.395	4.872	4.263
3	5.838	4.404	5.567	6.047	5.152
4	6.832	5.172	6.561	7.036	5.861
5	7.241	5.755	7.215	7.694	6.642
6	7.783	5.860	6.969	7.952	6.955
7	9.305	7.114	8.105	9.510	8.232
8	9.827	7.726	8.767	10.203	8.667
9	10.609	8.192	9.154	10.708	8.980
10	10.957	8.557	9.379	11.098	9.156
11	11.348	8.834	9.516	11.357	9.306
12	11.479	8.965	9.591	11.516	9.333
13	11.479	9.009	9.579	11.574	9.292
14	11.218	8.994	9.491	11.531	9.211
15	11.261	8.892	9.354	11.401	9.020
16	10.479	8.571	9.092	10.780	8.572
17	10.131	7.799	7.955	10.246	7.689
18	10.870	8.688	8.542	10.968	8.586
19	10.870	8.746	8.742	10.989	8.613
20	10.827	8.717	8.667	10.867	8.545
21	10.696	8.644	8.605	10.751	8.477
22	10.348	8.528	8.417	10.621	8.327
23	10.348	8.367	8.342	10.434	8.151
24	9.957	8.149	8.105	10.217	7.974
25	9.827	7.915	7.880	9.943	7.771
26	9.522	7.624	7.618	9.597	7.526
27	8.783	7.157	7.331	8.673	6.969
28	8.392	6.414	6.232	8.659	6.276
29	8.827	6.939	6.744	8.861	6.888
30	8.653	6.866	6.831	8.745	6.806
31	8.522	6.735	6.644	8.558	6.697
32	8.305	6.603	6.519	8.385	6.534
33	8.087	6.458	6.382	8.183	6.358
34	7.826	6.283	6.244	7.966	6.195
35	7.566	6.093	6.032	7.677	5.991
36	7.174	5.860	5.845	7.389	5.787
37	6.913	5.598	5.632	7.028	5.556
38	6.087	5.189	5.333	6.148	5.108
39	6.000	4.679	4.508	6.379	4.551
40	6.000	5.000	4.871	6.350	4.945

CYCLE 2 - MAP 2

	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY F 4	ASSEMBLY N 5	ASSEMBLY L 5
41	6.131	4.956	4.858	6.191	4.863
42	6.000	4.869	4.746	6.032	4.741
43	5.826	4.752	4.633	5.859	4.619
44	5.652	4.621	4.496	5.686	4.456
45	5.435	4.475	4.371	5.469	4.320
46	5.000	4.286	4.246	5.239	4.143
47	4.957	4.067	4.084	4.979	3.967
48	4.478	3.834	3.921	4.690	3.777
49	4.174	3.469	3.697	3.983	3.437
50	3.609	3.134	3.122	4.171	3.070
51	4.000	3.222	3.384	4.055	3.260
52	3.783	3.061	3.322	3.839	3.152
53	3.522	2.886	3.197	3.579	3.002
54	3.087	2.682	3.047	3.305	2.826
55	2.957	2.434	2.872	2.987	2.622
56	2.478	4.143	2.635	2.612	2.364
57	2.261	1.822	2.373	2.222	2.065
58	1.826	1.467	2.036	1.761	1.739
59	1.348	1.093	1.648	1.212	1.318
60	1.130	0.802	1.099	1.429	0.924
61	0.661	0.729	0.549	1.024	0.761

	ASSEMBLY J 7	ASSEMBLY K 8	ASSEMBLY N 8	ASSEMBLY N 10	ASSEMBLY D 10
1	3.763	2.399	4.038	3.130	3.887
2	4.926	3.333	5.525	4.113	5.261
3	6.122	4.267	6.946	5.064	6.399
4	7.157	5.153	8.239	5.862	7.302
5	7.847	5.783	9.080	6.346	7.423
6	7.769	6.242	9.600	6.060	7.541
7	9.270	7.562	11.364	7.328	8.503
8	9.805	8.263	12.180	8.008	9.042
9	10.241	8.633	12.735	8.194	9.157
10	10.648	9.273	13.160	8.627	9.580
11	10.768	9.583	13.421	8.750	9.657
12	10.864	9.746	13.519	8.905	9.696
13	10.863	9.843	13.454	8.781	9.388
14	10.734	9.827	13.356	8.688	9.580
15	10.515	9.713	13.127	8.441	9.349
16	10.068	9.257	12.376	8.101	8.657
17	8.879	8.800	11.625	7.050	8.118
18	9.782	9.599	12.507	8.132	8.888

CYCLE 2 - MAP 2

	ASSEMBLY J 7	ASSEMBLY R 6	ASSEMBLY N 8	ASSEMBLY A 10	ASSEMBLY D 10
19	9.352	9.680	12.474	8.132	8.849
20	9.770	9.680	12.311	8.070	8.695
21	9.606	9.631	12.147	7.915	8.541
22	9.436	9.517	11.866	7.761	8.387
23	9.243	9.387	11.658	7.483	8.234
24	8.975	9.175	11.364	7.390	7.849
25	8.718	8.914	11.037	7.142	7.772
26	8.404	8.605	10.580	7.081	7.464
27	7.877	7.855	9.698	6.586	6.695
28	6.940	7.578	9.209	6.029	6.656
29	7.538	7.888	9.600	6.493	6.810
30	7.457	7.774	9.437	6.400	6.541
31	7.314	7.611	9.209	6.277	6.541
32	5.285	7.464	9.073	6.153	6.271
33	6.962	7.286	8.719	5.998	6.233
34	6.764	7.073	8.458	5.844	6.079
35	6.542	6.828	8.164	5.658	5.925
36	4.385	6.566	7.837	5.443	5.694
37	6.063	6.225	7.511	5.133	5.425
38	5.809	5.806	6.792	4.709	4.655
39	4.947	5.476	6.662	4.143	4.848
40	5.293	5.606	6.826	4.545	4.848
41	5.273	5.476	6.662	4.360	4.886
42	5.197	5.362	6.466	4.422	4.771
43	5.065	5.182	6.270	4.298	4.617
44	4.933	5.079	6.041	4.174	4.463
45	4.777	4.840	5.812	4.020	4.348
46	4.582	4.612	5.519	3.772	4.117
47	4.362	4.351	5.257	3.525	3.963
48	4.117	4.091	4.996	3.432	3.732
49	3.757	3.536	4.376	2.968	3.232
50	3.286	3.504	4.343	2.968	3.309
51	3.541	3.422	4.310	3.091	3.347
52	3.464	3.243	4.082	2.968	3.232
53	3.294	3.178	3.853	2.783	3.116
54	3.101	2.770	3.559	2.566	2.732
55	2.845	2.477	3.265	2.257	2.693
56	2.553	2.151	2.874	2.133	2.270
57	2.262	1.809	2.449	1.979	2.048
58	1.895	1.434	1.959	1.639	1.731
59	1.482	0.994	1.404	1.237	1.231
60	1.109	1.010	1.274	0.897	0.776
61	0.714	0.636	0.806	0.484	0.365

CYCLE 2 - MAP 2

	ASSEMBLY L 11	ASSEMBLY M 11	ASSEMBLY C 12	ASSEMBLY H 13	ASSEMBLY F 13
1	3.339	3.755	2.588	3.304	2.922
2	3.960	5.082	3.540	4.700	4.053
3	5.474	6.182	4.428	6.029	4.992
4	6.406	7.055	5.202	7.289	5.593
5	7.251	7.274	5.689	8.352	5.928
6	7.241	7.495	5.872	8.394	5.917
7	8.141	8.451	7.047	10.286	6.993
8	8.885	8.986	7.609	11.146	7.562
9	9.433	9.101	8.068	11.731	7.721
10	9.551	9.521	8.387	12.143	8.069
11	9.942	9.598	8.617	12.453	8.164
12	9.942	9.636	8.706	12.591	8.227
13	9.942	9.330	8.732	12.625	8.195
14	9.825	9.521	8.694	12.556	8.132
15	9.746	9.292	8.566	12.419	7.879
16	9.433	8.604	8.209	12.075	7.499
17	8.455	8.068	7.583	10.595	6.961
18	8.533	8.833	8.349	11.731	7.752
19	8.924	8.795	8.387	11.799	7.721
20	8.807	8.642	8.374	11.696	7.657
21	8.689	8.489	8.323	11.524	7.436
22	8.533	8.336	8.221	11.318	7.404
23	8.337	8.183	8.081	11.111	7.151
24	8.141	7.801	7.889	10.802	7.056
25	7.907	7.724	7.672	10.492	6.740
26	7.711	7.418	7.392	10.114	6.645
27	7.437	6.654	6.894	9.598	5.917
28	6.458	6.615	6.294	8.325	5.977
29	6.811	6.768	6.677	9.082	6.138
30	6.928	6.501	6.600	9.073	6.072
31	6.732	6.501	6.472	8.841	5.977
32	6.654	6.233	6.345	8.634	5.790
33	6.458	6.195	6.217	8.428	5.632
34	6.342	6.042	6.094	8.153	5.474
35	6.106	5.889	5.872	7.843	5.316
36	5.871	5.659	5.630	7.534	5.094
37	5.676	5.392	5.349	7.224	4.841
38	5.362	4.627	4.889	6.611	4.082
39	4.619	4.818	4.532	5.848	4.042
40	4.854	4.818	4.787	6.398	4.367
41	4.854	4.856	4.685	6.295	4.177
42	4.775	4.742	4.583	6.123	4.240
43	4.656	4.589	4.494	5.951	4.050
44	4.540	4.436	4.353	5.779	3.924
45	4.384	4.321	4.213	5.538	3.797

CYCLE 2 - MAP 2

	ASSEMBLY L 11	ASSEMBLY E 11	ASSEMBLY C 12	ASSEMBLY H 13	ASSEMBLY F 13
46	4.736	4.092	4.034	5.332	3.607
47	4.384	3.989	3.817	5.057	3.354
48	3.914	3.709	3.574	4.816	3.322
49	3.718	3.212	3.153	4.506	2.784
50	3.170	3.289	2.987	3.853	2.9z3
51	3.405	3.327	3.000	4.128	2.911
52	3.327	3.212	2.847	3.956	2.816
53	3.210	3.097	2.681	3.784	2.595
54	3.092	2.715	2.464	3.578	2.500
55	2.857	2.677	2.247	3.302	2.183
56	2.622	2.256	1.966	2.958	2.120
57	2.309	2.065	1.647	2.614	1.867
58	1.996	1.721	1.328	2.167	1.550
59	1.683	1.224	0.970	1.686	1.139
60	1.174	0.771	0.740	1.170	0.854
61	0.613	0.363	0.417	1.307	0.475

	ASSEMBLY L 14	ASSEMBLY J 15
1	2.195	1.717
2	2.444	2.399
3	3.591	3.120
4	4.190	3.815
5	5.255	4.410
6	5.473	4.481
7	6.226	5.564
8	7.080	6.186
9	7.632	6.648
10	8.034	7.078
11	8.335	7.283
12	8.536	7.454
13	8.636	7.534
14	8.636	7.560
15	8.586	7.534
16	8.134	7.375
17	7.733	6.516
18	7.984	7.335
19	8.185	7.441
20	8.134	7.428
21	8.235	7.362
22	8.134	7.269
23	7.984	7.150

CYCLE 2 - MAP 2

	ASSEMBLY L 14	ASSEMBLY J 15
24	7.783	7.005
25	7.482	6.833
26	7.130	6.622
27	6.979	6.304
28	5.925	5.498
29	6.628	5.987
30	6.678	5.961
31	6.628	5.855
32	6.477	5.763
33	6.276	5.617
34	5.925	5.485
35	5.925	5.326
36	5.574	5.075
37	5.574	4.851
38	5.272	4.520
39	4.419	3.899
40	4.770	4.243
41	4.770	4.177
42	4.720	4.056
43	4.569	3.939
44	4.469	3.793
45	4.316	3.688
46	4.117	3.542
47	3.917	3.331
48	3.665	3.159
49	3.314	2.908
50	2.912	2.458
51	2.711	2.591
52	2.561	2.435
53	2.711	2.300
54	2.511	2.128
55	2.310	1.930
56	1.958	1.731
57	1.707	1.494
58	1.205	1.216
59	1.004	0.925
60	0.854	0.621
61	0.954	0.727

CYCLE 2 - MAP 9

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
2/ 7/75	0900	6245	2403	564.0	2250.	144.	137.7	643	115

	ASSEMBLY N 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	1.840	1.449	1.051	1.421	1.493
2	2.482	2.530	1.923	2.508	1.960
3	3.115	3.244	2.618	3.263	2.480
4	3.630	3.657	3.135	3.977	2.920
5	4.005	4.305	3.560	4.548	3.266
6	3.926	4.285	3.581	4.874	3.226
7	4.767	5.107	4.210	4.976	3.880
8	5.123	5.591	4.657	5.874	4.213
9	5.380	5.917	4.964	6.261	4.439
10	5.568	6.203	5.194	6.567	4.626
11	5.697	6.428	5.397	6.791	4.773
12	5.776	6.591	5.557	6.975	4.853
13	5.825	6.693	5.641	7.138	4.919
14	5.825	6.754	5.676	7.199	4.959
15	5.825	6.774	5.697	7.240	4.959
16	5.677	6.693	5.676	7.240	4.906
17	5.133	5.979	5.138	6.954	4.386
18	5.796	6.693	5.662	6.567	4.946
19	5.924	6.897	5.906	7.220	5.066
20	5.993	6.999	5.990	7.321	5.173
21	6.043	7.081	6.074	7.403	5.226
22	6.072	7.162	6.116	7.485	5.279
23	6.082	7.183	6.137	7.546	5.319
24	6.042	7.223	6.116	7.607	5.319
25	6.003	7.244	6.074	7.627	5.319
26	5.993	7.203	6.032	7.607	5.306
27	5.707	7.121	5.967	7.546	5.186
28	5.548	6.326	5.278	7.097	4.679
29	6.003	7.162	5.906	7.158	5.279
30	6.161	7.326	6.003	7.648	5.386
31	6.231	7.427	6.116	7.750	5.479
32	6.280	7.529	6.178	7.811	5.519
33	6.310	7.550	6.220	7.933	5.546
34	6.359	7.611	6.241	7.995	5.573
35	6.359	7.591	6.283	8.075	5.546
36	6.330	7.550	6.262	8.075	5.519
37	6.250	7.448	6.199	7.995	5.453
38	6.865	7.285	6.044	7.893	5.306
39	5.766	6.468	5.397	7.260	4.853
40	6.231	7.387	6.137	7.587	5.426

CYCLE 2 - MAP 9

	ASSEMBLY N 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
41	6.290	7.591	6.304	7.913	5.546
42	6.349	7.693	6.409	7.995	5.559
43	6.379	7.774	6.451	8.046	5.586
44	6.399	7.815	6.472	8.117	5.599
45	6.399	7.836	6.451	8.158	5.573
46	6.399	7.754	6.409	8.117	5.546
47	6.270	7.632	6.304	8.056	5.453
48	6.152	7.448	6.137	7.913	5.346
49	5.598	7.121	5.885	7.709	5.093
50	5.667	6.183	5.138	6.893	4.653
51	5.875	6.877	5.676	7.179	4.999
52	5.815	6.774	5.620	7.260	4.893
53	5.697	6.591	5.473	7.138	4.719
54	5.489	6.305	5.257	6.852	4.479
55	5.123	5.917	4.943	6.506	4.200
56	4.638	5.407	4.503	6.076	3.760
57	4.045	4.795	3.986	5.343	3.266
58	3.323	4.061	3.372	4.589	2.760
59	2.443	3.183	2.618	3.712	2.106
60	2.186	2.021	1.655	2.590	1.680
61	1.612	2.673	2.108	3.100	1.760

	ASSEMBLY L 6	ASSEMBLY N 7	ASSEMBLY J 7	ASSEMBLY R 8	ASSEMBLY N 8
1	2.577	1.989	3.305	1.771	2.470
2	3.246	2.528	4.096	2.436	3.138
3	4.211	3.287	4.975	2.996	4.082
4	5.071	3.992	5.655	3.472	4.956
5	5.680	4.558	6.046	3.696	5.650
6	5.899	4.807	6.076	3.927	5.968
7	6.239	5.110	6.946	4.613	6.346
8	7.138	5.884	7.423	4.956	7.306
9	7.522	6.257	7.714	5.208	7.769
10	7.796	6.492	8.024	5.452	8.061
11	7.961	6.671	8.140	5.513	8.284
12	8.070	6.837	8.241	5.711	8.489
13	8.103	6.892	8.287	5.774	8.558
14	8.081	6.934	8.258	6.816	8.609
15	8.059	6.934	8.221	5.795	8.609
16	7.972	6.892	7.955	5.529	8.558
17	7.423	6.478	7.264	5.452	8.043
18	7.511	6.478	8.025	5.984	8.043

CYCLE 2 - MAP 9

	ASSEMBLY L 6	ASSEMBLY N 7	ASSEMBLY J 7	ASSEMBLY R 8	ASSEMBLY N 8
19	8.075	6.961	8.261	6.131	8.644
20	8.158	7.058	8.322	6.236	8.764
21	8.213	7.141	8.366	6.299	8.867
22	8.246	7.182	8.406	6.404	8.918
23	8.246	7.224	8.432	6.425	8.970
24	8.224	7.238	8.437	6.425	8.987
25	8.191	7.251	8.396	6.404	9.004
26	8.114	7.224	8.310	6.341	8.970
27	7.994	7.141	7.895	5.858	8.867
28	7.314	6.602	7.378	6.005	8.198
29	7.566	6.699	8.071	6.320	8.318
30	8.026	7.168	8.248	6.425	8.901
31	8.114	7.279	8.335	6.488	8.036
32	8.158	7.376	8.401	6.551	9.158
33	8.213	7.445	8.472	6.600	9.244
34	8.213	7.472	8.522	6.642	9.278
35	8.202	7.500	8.493	6.642	9.313
36	8.169	7.472	8.454	6.600	9.278
37	8.114	7.431	8.385	6.530	9.227
38	7.983	7.348	7.939	6.005	9.124
39	7.226	6.740	7.554	6.257	8.369
40	7.687	7.044	8.297	6.572	8.747
41	8.059	7.417	8.517	6.663	9.210
42	8.169	7.514	8.635	6.768	9.330
43	8.235	7.583	8.711	6.817	9.415
44	8.268	7.597	8.706	6.817	9.433
45	8.257	7.597	8.672	6.768	9.433
46	8.213	7.541	8.577	6.684	9.364
47	8.125	7.459	8.449	6.551	9.261
48	7.994	7.348	8.228	6.362	9.124
49	7.763	7.155	7.573	5.655	8.884
50	6.831	6.354	7.104	5.858	7.869
51	7.330	6.713	7.637	5.900	8.335
52	7.456	6.796	7.602	5.711	8.438
53	7.336	6.657	7.416	5.487	8.266
54	7.105	6.423	7.135	5.194	7.975
55	6.787	6.105	6.751	4.781	7.580
56	6.272	5.691	6.210	4.270	7.066
57	5.680	5.166	5.556	3.696	6.414
58	4.912	4.489	4.721	2.982	5.574
59	3.969	3.646	3.627	2.051	4.528
60	2.719	2.597	2.621	2.009	3.224
61	2.752	2.555	1.968	1.351	3.173

CYCLE 2 - MAP 9

	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY F 11
1	3.483	3.208	2.407	2.742	3.146
2	3.044	2.803	3.079	3.516	3.850
3	4.024	3.706	3.609	4.377	4.743
4	5.022	4.625	4.117	5.027	5.431
5	5.884	5.419	4.294	5.502	5.995
6	6.476	5.964	4.318	5.326	5.603
7	6.290	5.793	5.061	6.187	6.574
8	7.373	6.790	5.344	6.697	7.028
9	7.964	7.335	5.533	6.943	7.247
10	8.303	7.646	5.651	7.119	7.435
11	8.539	7.864	5.745	7.242	7.560
12	8.708	8.020	5.804	7.312	7.623
13	8.810	8.114	5.792	7.348	7.707
14	8.827	8.129	5.781	7.312	7.717
15	8.827	8.129	5.745	7.260	7.654
16	8.810	8.114	5.427	7.101	7.497
17	8.658	7.973	5.108	6.187	6.543
18	7.711	7.101	5.710	6.873	7.372
19	8.522	7.849	5.804	7.101	7.670
20	8.793	8.098	5.863	7.137	7.701
21	8.877	8.176	5.910	7.172	7.732
22	8.945	8.238	5.969	7.189	7.778
23	8.979	8.269	5.946	7.172	7.795
24	8.979	8.269	5.958	7.207	7.795
25	8.945	8.238	5.946	7.189	7.748
26	8.894	8.191	5.875	7.154	7.717
27	8.844	8.145	5.391	7.049	7.513
28	8.691	8.005	5.498	6.170	6.605
29	7.745	7.132	5.887	7.014	7.466
30	8.658	7.973	6.005	7.260	7.607
31	8.877	8.176	6.064	7.383	7.701
32	8.962	8.254	6.111	7.418	7.795
33	9.013	8.300	6.170	7.453	7.842
34	9.047	8.332	6.158	7.453	7.904
35	9.047	8.332	6.170	7.418	7.951
36	9.047	8.332	6.111	7.348	8.045
37	9.013	8.300	6.005	7.312	7.873
38	8.962	8.254	5.450	7.137	7.650
39	8.793	8.098	5.616	6.187	6.683
40	7.711	7.101	6.017	7.049	7.732
41	8.776	8.082	6.123	7.277	7.967
42	8.962	8.254	6.146	7.365	8.077
43	9.047	8.332	6.182	7.418	8.108
44	9.114	8.394	6.194	7.435	8.155
45	9.114	8.394	6.170	7.435	8.123

CYCLE 2 - MAY 9

	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY L 10	ASSEMBLY L 11	ASSEMBLY F 11
46	9.063	8.347	6.123	7.418	8.045
47	8.990	8.285	6.040	7.365	7.951
48	8.928	8.223	5.899	7.260	7.826
49	8.793	8.098	5.203	7.074	7.482
50	8.489	7.818	5.498	6.072	6.496
51	7.373	6.790	5.639	6.855	7.372
52	8.286	7.631	5.557	6.908	7.435
53	8.252	7.600	5.427	6.803	7.341
54	8.066	7.428	5.214	6.644	7.169
55	7.761	7.148	4.896	6.346	6.856
56	7.271	6.696	4.471	5.871	6.370
57	6.713	6.183	3.929	5.344	5.760
58	5.986	5.513	3.232	4.641	4.930
59	5.124	4.719	2.312	3.779	3.913
60	4.058	3.736	1.876	2.549	2.598
61	2.790	2.570	1.105	2.303	2.301

	ASSEMBLY N 12	ASSEMBLY C 12	ASSEMBLY L 14	ASSEMBLY J 15
1	1.745	1.192	1.373	0.938
2	2.347	2.087	1.798	1.655
3	2.908	2.687	2.354	2.149
4	3.428	3.204	2.796	2.575
5	3.781	3.596	3.156	2.891
6	3.739	3.617	3.205	2.843
7	4.549	4.278	3.711	3.488
8	4.903	4.692	4.137	3.817
9	5.193	5.002	4.398	4.085
10	5.401	5.229	4.660	4.284
11	5.567	5.415	4.840	4.429
12	5.692	5.518	4.954	4.538
13	5.734	5.580	5.086	4.593
14	5.754	5.622	5.065	4.614
15	5.754	5.622	5.085	4.635
16	5.671	5.580	5.052	4.593
17	5.173	5.022	4.611	4.099
18	5.879	5.601	4.970	4.689
19	6.024	5.828	5.216	4.840
20	6.108	5.973	5.265	4.902
21	6.170	6.035	5.314	4.978
22	6.211	6.097	5.395	5.012
23	6.211	6.139	5.395	5.053

CYCLE 2 - MAP 9

	ASSEMBLY N 12	ASSEMBLY C 12	ASSEMBLY L 14	ASSEMBLY J 15
24	6.232	6.159	5.412	5.053
25	6.170	6.159	5.412	5.053
26	6.128	6.118	5.395	5.033
27	5.879	6.044	5.297	4.976
28	5.526	5.332	4.709	4.470
29	6.087	5.973	5.265	5.072
30	6.191	6.118	5.477	5.129
31	6.294	6.200	5.592	5.191
32	6.357	6.283	5.706	5.246
33	6.378	6.324	5.804	5.307
34	6.440	6.366	5.853	5.328
35	6.440	6.407	5.853	5.307
36	6.357	6.366	5.821	5.246
37	6.274	6.304	5.755	5.170
38	5.921	6.138	5.624	4.978
39	5.713	5.456	4.905	4.483
40	6.232	6.160	5.575	5.053
41	6.357	6.324	5.755	5.129
42	6.440	6.443	5.870	5.225
43	6.523	6.552	5.935	5.287
44	6.523	6.593	5.968	5.287
45	6.481	6.572	5.951	5.287
46	6.419	6.490	5.853	5.211
47	6.294	6.345	5.722	5.108
48	6.108	6.138	5.543	4.957
49	5.547	5.849	5.265	4.710
50	5.443	5.120	4.545	4.188
51	5.630	5.622	4.970	4.593
52	5.505	5.539	4.889	4.504
53	5.318	5.374	4.741	4.339
54	5.027	5.126	4.529	4.120
55	4.633	4.733	4.218	3.817
56	4.155	4.299	3.875	3.454
57	3.573	3.782	3.450	3.021
58	2.888	3.183	2.927	2.465
59	2.057	2.480	2.273	1.826
60	1.807	1.612	1.408	1.208
61	1.122	1.984	1.848	1.366

CYCLE 2 - MAP 10

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
2/13/75	0900	596C	2438	565.0	2250.	144.	134.5	608	290

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	1.284	1.863	1.050	2.213	1.677
2	1.696	2.448	1.910	2.741	2.132
3	2.290	3.192	2.588	3.522	2.739
4	2.867	3.895	3.188	4.225	3.301
5	3.308	4.439	3.687	4.797	3.734
6	3.490	4.613	3.884	4.940	3.734
7	4.043	5.114	4.140	5.409	4.409
8	4.558	5.832	4.845	6.103	4.891
9	4.925	6.224	5.189	6.491	5.180
10	5.219	6.572	5.497	6.797	5.445
11	5.415	6.833	5.746	7.042	5.614
12	5.587	7.007	5.900	7.205	5.734
13	5.709	7.116	6.025	7.348	5.806
14	5.783	7.181	6.091	7.430	5.831
15	5.832	7.203	6.113	7.450	5.855
16	5.807	7.181	6.069	7.430	5.855
17	5.317	6.637	5.790	6.858	5.276
18	5.783	6.898	5.790	7.022	5.903
19	6.053	7.290	6.244	7.389	6.144
20	6.151	7.399	6.354	7.491	6.264
21	6.224	7.486	6.420	7.573	6.312
22	6.273	7.551	6.486	7.614	6.385
23	6.273	7.595	6.486	7.675	6.433
24	6.273	7.638	6.486	7.695	6.457
25	6.224	7.638	6.464	7.716	6.409
26	6.175	7.595	6.376	7.675	6.336
27	6.047	7.508	6.266	7.614	6.216
28	5.366	6.811	5.768	7.001	5.493
29	6.053	7.290	5.981	7.887	6.168
30	6.200	7.595	6.266	7.634	6.312
31	6.273	7.682	6.354	7.716	6.385
32	6.347	7.747	6.398	7.797	6.457
33	6.396	7.791	6.412	7.879	6.505
34	6.420	7.812	6.486	7.899	6.505
35	6.420	7.812	6.486	7.879	6.505
36	6.371	7.725	6.464	7.899	6.433
37	6.322	7.638	6.398	7.838	6.385
38	6.175	7.530	6.288	7.716	6.216
39	5.464	6.724	5.731	7.007	5.541
40	6.224	7.355	6.069	7.430	6.288

CYCLE 2 - MAP 10

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
41	6.371	7.660	6.398	7.757	6.409
42	6.445	7.769	6.508	7.818	6.481
43	6.516	7.878	6.574	7.859	6.553
44	6.543	7.921	6.610	7.879	6.577
45	6.519	7.943	6.618	7.899	6.577
46	6.429	7.899	6.596	7.838	6.481
47	6.273	7.791	6.508	7.757	6.361
48	6.077	7.638	6.354	7.654	6.192
49	5.807	7.377	6.157	7.450	5.927
50	4.999	6.376	5.416	6.593	5.228
51	5.538	6.942	5.709	7.042	5.710
52	5.464	6.864	5.768	7.103	5.614
53	5.293	6.790	5.643	6.920	5.445
54	5.048	6.529	5.453	6.695	5.180
55	4.729	6.159	5.167	6.369	4.867
56	4.313	5.702	4.786	5.879	4.457
57	3.823	5.114	4.302	5.307	3.879
58	3.210	4.396	3.687	4.593	3.328
59	2.475	3.569	2.968	3.735	2.906
60	1.642	2.459	2.060	2.674	1.638
61	0.817	2.677	1.854	2.980	0.803

	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY J 10
1	1.548	3.003	2.830	2.261	2.352
2	2.201	3.913	3.687	2.318	3.088
3	2.648	4.954	4.768	2.967	4.244
4	3.420	5.811	5.709	3.550	5.349
5	3.806	6.449	6.336	4.011	5.829
6	3.976	6.328	6.217	4.114	5.678
7	4.785	7.363	7.234	4.241	6.830
8	5.208	8.078	7.878	4.932	7.297
9	5.542	8.398	8.250	5.209	5.585
10	5.838	8.639	8.487	5.405	7.810
11	6.031	8.845	8.691	5.520	7.969
12	6.165	8.967	8.809	5.672	8.065
13	6.254	9.004	8.843	5.715	8.133
14	6.276	9.036	8.877	5.682	8.161
15	6.276	9.001	8.843	5.659	8.147
16	6.054	8.846	8.697	5.672	8.070
17	5.757	7.880	7.742	5.255	7.187
18	6.432	8.794	8.640	5.048	8.120

CYCLE 2 - MAP 10

	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY J 10
19	6.610	9.079	8.860	5.566	8.290
20	6.699	9.088	8.928	5.647	8.394
21	6.788	9.156	8.996	5.682	8.435
22	6.899	9.174	9.013	5.716	8.463
23	6.899	9.156	8.996	5.739	8.463
24	6.877	9.105	8.945	5.716	8.449
25	6.933	9.070	8.911	5.728	8.380
26	6.766	8.967	8.809	5.705	8.284
27	6.387	8.760	8.606	5.635	8.037
28	6.187	7.777	7.640	5.232	7.201
29	6.677	8.760	8.606	5.198	8.106
30	6.743	8.915	8.759	5.635	8.229
31	6.788	8.950	8.792	5.705	8.298
32	6.855	8.967	8.809	5.751	8.325
33	6.899	9.001	8.843	5.785	8.353
34	6.922	8.984	8.826	5.831	8.367
35	6.899	8.950	8.792	5.831	8.325
36	6.877	8.932	8.775	5.831	8.257
37	6.766	8.846	8.691	5.751	8.175
38	6.343	8.622	8.471	5.647	7.845
39	6.321	7.622	7.488	5.163	7.110
40	6.743	8.708	8.555	5.186	8.070
41	6.855	8.863	8.708	5.624	8.147
42	6.922	8.950	8.792	5.682	8.216
43	6.966	8.984	8.826	5.716	8.243
44	7.018	8.984	8.826	5.739	8.243
45	6.922	8.950	8.792	5.751	8.229
46	6.855	8.881	8.725	5.728	8.188
47	6.721	8.777	8.523	5.617	8.106
48	6.543	8.639	8.487	5.589	7.983
49	5.927	8.294	8.149	5.486	7.599
50	5.883	7.311	7.183	4.921	6.973
51	6.076	8.191	8.047	4.990	7.571
52	5.905	8.122	7.979	5.244	7.489
53	5.690	7.932	7.793	5.186	7.324
54	5.378	7.639	7.505	5.082	7.077
55	4.985	7.225	7.098	4.898	6.680
56	4.488	6.673	6.556	4.633	6.186
57	3.890	5.984	5.879	4.264	5.514
58	3.190	5.121	5.031	3.734	4.663
59	2.300	4.035	3.964	3.112	3.621
60	1.788	2.828	2.778	2.282	2.537
61	1.565	1.483	1.457	1.763	1.330

CYCLE 2 - MAP 10

	ASSEMBLY L 11	ASSEMBLY F 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
1	2.683	2.636	1.882	1.522	1.210
2	3.425	3.244	2.517	1.876	1.682
3	4.304	4.345	3.234	2.466	2.184
4	5.029	5.428	3.856	2.971	2.638
5	5.527	6.063	4.299	3.397	2.948
6	5.402	5.669	4.249	3.504	2.984
7	6.273	6.633	5.109	3.931	3.698
8	6.842	7.179	5.600	4.465	4.044
9	7.073	7.420	5.920	4.749	4.303
10	7.322	7.645	6.190	5.034	4.556
11	7.464	7.773	6.362	5.230	4.707
12	7.517	7.837	6.534	5.390	4.808
13	7.570	7.902	6.583	5.461	4.887
14	7.553	7.966	6.632	5.496	4.923
15	7.482	7.918	6.632	5.479	4.923
16	7.339	7.757	6.558	5.461	4.844
17	6.398	6.777	5.895	5.084	4.440
18	7.073	7.500	6.657	5.301	5.046
19	7.286	7.934	6.853	5.585	5.161
20	7.322	7.934	6.951	5.657	5.226
21	7.375	7.984	7.025	5.692	5.284
22	7.375	7.982	7.074	5.781	5.305
23	7.339	7.966	7.074	5.745	5.348
24	7.357	7.950	7.025	5.745	5.348
25	7.322	7.902	6.976	5.728	5.327
26	7.268	7.837	6.951	5.728	5.305
27	7.108	7.580	6.730	5.657	5.147
28	6.202	6.663	6.067	5.052	4.729
29	7.126	7.532	6.828	5.514	5.262
30	7.339	7.677	6.927	5.710	5.363
31	7.393	7.741	6.976	5.817	5.428
32	7.446	7.789	7.050	5.959	5.471
33	7.464	7.821	7.074	6.030	5.485
34	7.446	7.853	7.099	6.048	5.485
35	7.375	7.869	7.099	6.048	5.471
36	7.322	7.934	7.050	6.072	5.406
37	7.251	7.773	6.951	5.906	5.327
38	7.055	7.564	6.706	5.817	5.082
39	6.095	6.585	6.116	5.070	4.649
40	6.984	7.645	6.828	5.674	5.204
41	7.197	7.821	6.976	5.870	5.284
42	7.251	7.934	7.074	5.959	5.327
43	7.286	7.966	7.123	6.030	5.363
44	7.286	7.950	7.099	6.066	5.384
45	7.304	7.934	7.123	6.072	5.363

CYCLE 2 - MAP 10

	ASSEMBLY L 11	ASSEMBLY F 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
46	7.286	7.869	7.074	5.941	5.327
47	7.233	7.757	6.902	5.817	5.183
48	7.126	7.645	6.755	5.639	5.046
49	6.877	7.323	6.337	5.408	4.750
50	6.662	6.376	5.846	4.643	4.346
51	6.717	7.211	6.239	5.052	4.671
52	6.789	7.275	6.141	4.981	4.592
53	6.700	7.211	5.969	4.838	4.419
54	6.540	7.034	5.723	4.625	4.210
55	6.265	6.761	5.306	4.340	3.974
56	5.864	6.328	4.839	4.002	3.503
57	5.349	5.750	4.200	3.575	3.121
58	4.674	4.963	3.463	3.077	2.552
59	3.765	3.951	2.628	2.455	1.903
60	2.577	2.618	1.891	1.672	1.240
61	1.315	1.307	1.075	1.921	1.478

CYCLE 2 - MAP 13

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L MT	D-BANK MT	CORR PPM	MWD/T
4/14/75	0900	487D	2420	566.0	2250.	144.	141.5	483	2020

	ASSEMBLY N 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	1.763	2.107	1.218	2.569	1.843
2	2.362	2.469	2.144	3.319	2.169
3	2.972	3.273	2.778	4.095	2.833
4	3.513	3.938	3.367	4.697	3.395
5	3.928	4.491	3.835	5.085	3.844
6	3.848	4.683	4.001	4.992	3.889
7	4.665	5.130	4.349	5.968	4.462
8	5.069	5.789	4.952	6.356	4.946
9	5.345	6.194	5.270	6.664	5.261
10	5.599	6.471	5.526	6.878	5.485
11	5.783	6.726	5.738	7.066	5.665
12	5.921	6.875	5.904	7.186	5.766
13	6.002	6.981	5.994	7.280	5.823
14	6.036	7.024	6.040	7.333	5.879
15	6.086	7.008	6.040	7.280	5.890
16	5.967	6.939	6.009	7.092	5.856

CYCLE 2 - MAP 13

	ASSEMBLY M 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
17	5.380	6.471	5.617	6.356	5.317
18	6.117	6.877	5.692	7.146	5.789
19	6.290	6.981	6.115	7.253	6.081
20	6.370	7.109	6.206	7.320	6.182
21	6.428	7.173	6.296	7.387	6.261
22	6.462	7.216	6.342	7.467	6.328
23	6.451	7.258	6.342	7.507	6.362
24	6.428	7.258	6.342	7.507	6.385
25	6.405	7.258	6.296	7.534	6.362
26	6.370	7.237	6.251	7.481	6.306
27	6.209	7.194	6.160	7.320	6.193
28	5.518	6.662	5.723	6.544	5.508
29	6.290	6.811	5.783	7.374	6.047
30	6.405	7.237	6.145	7.547	6.238
31	6.486	7.301	6.221	7.601	6.272
32	6.555	7.386	6.266	7.695	6.362
33	6.612	7.428	6.326	7.748	6.430
34	6.635	7.471	6.357	7.802	6.430
35	6.647	7.428	6.372	7.788	6.452
36	6.635	7.386	6.357	7.762	6.430
37	6.578	7.322	6.311	7.708	6.373
38	6.324	7.216	6.236	7.467	6.261
39	5.806	6.556	5.707	6.731	5.530
40	6.578	6.960	5.964	7.521	6.250
41	6.716	7.343	6.326	7.655	6.396
42	6.808	7.514	6.432	7.721	6.497
43	6.877	7.620	6.523	7.748	6.564
44	6.900	7.705	6.568	7.802	6.587
45	6.854	7.726	6.583	7.829	6.632
46	6.797	7.684	6.568	7.802	6.587
47	6.647	7.620	6.508	7.748	6.474
48	6.462	7.492	6.372	7.601	6.317
49	6.048	7.307	6.221	7.307	6.081
50	5.622	6.385	5.572	6.544	5.272
51	6.086	6.790	5.783	7.253	5.868
52	5.944	6.896	5.904	7.186	5.811
53	5.760	6.747	5.783	7.026	5.631
54	5.483	6.534	5.602	6.745	5.429
55	5.092	6.194	5.330	6.356	5.092
56	4.654	5.726	4.968	5.794	4.687
57	4.066	5.193	4.454	5.179	4.170
58	3.375	4.491	3.880	4.363	3.563
59	2.500	3.682	3.141	3.412	2.799
60	2.062	2.575	2.250	2.462	1.821
61	1.229	2.746	2.144	3.198	0.888

CYCLE 2 - MAP 13

	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY W 10	ASSEMBLY L 11
1	1.327	3.443	3.242	1.384	2.887
2	2.325	4.429	4.171	2.423	3.532
3	2.998	5.466	5.148	3.118	4.416
4	3.556	6.245	5.881	3.705	5.129
5	4.042	6.729	6.337	4.172	5.621
6	4.071	6.435	6.060	4.325	5.469
7	4.786	7.646	7.201	4.292	6.233
8	5.212	8.096	7.624	5.063	6.742
9	5.516	8.355	7.869	5.346	6.997
10	5.789	8.528	8.032	5.520	7.184
11	5.987	8.684	8.178	5.639	7.286
12	6.100	8.771	8.260	5.715	7.320
13	6.199	8.771	8.260	5.781	7.337
14	6.245	8.736	8.227	5.748	7.320
15	6.245	8.684	8.178	5.726	7.269
16	6.184	8.511	8.075	5.650	7.082
17	5.561	7.542	7.103	5.335	6.199
18	6.184	8.459	7.967	4.955	6.725
19	6.442	8.650	8.146	5.552	7.031
20	6.549	8.707	8.195	5.609	7.065
21	6.640	8.753	8.244	5.661	7.065
22	6.710	8.771	8.260	5.715	7.082
23	6.762	8.788	8.276	5.748	7.082
24	6.777	8.753	8.244	5.737	7.048
25	6.762	8.701	8.195	5.694	7.031
26	6.731	8.632	8.130	5.694	6.997
27	6.579	8.355	7.869	5.639	6.912
28	5.835	7.508	7.071	5.237	6.080
29	6.397	8.459	7.967	5.172	6.725
30	6.594	8.580	8.081	5.607	7.048
31	6.670	8.615	8.113	5.726	7.133
32	6.704	8.632	8.130	5.781	7.167
33	6.731	8.632	8.130	5.802	7.218
34	6.807	8.667	8.162	5.868	7.207
35	6.822	8.667	8.162	5.868	7.150
36	6.807	8.632	8.130	5.868	7.116
37	6.777	8.598	8.097	5.802	7.048
38	6.655	8.286	7.804	5.694	6.895
39	5.895	7.542	7.103	5.140	6.072
40	6.594	8.563	8.064	5.281	6.691
41	6.777	8.70(	8.195	5.672	6.980
42	6.896	8.771	8.260	5.770	7.065
43	6.974	8.840	8.325	5.813	7.150
44	7.005	8.857	8.341	5.824	7.150
45	7.020	8.822	8.309	5.846	7.167

CYCLE 2 - MAP 13

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
46	7.005	8.788	8.276	5.846	7.167
47	6.929	8.719	8.211	5.802	7.150
48	6.777	8.580	8.081	5.737	7.082
49	6.518	8.096	7.624	5.607	6.895
50	5.683	7.500	7.119	4.987	5.944
51	6.260	8.286	7.804	5.194	6.657
52	6.215	8.234	7.755	5.444	6.810
53	6.063	8.027	7.559	5.389	6.759
54	5.835	7.733	7.282	5.292	6.640
55	5.500	7.335	6.908	5.118	6.386
56	5.060	6.747	6.354	4.868	6.029
57	4.528	6.003	5.653	4.498	5.553
58	3.905	5.086	4.790	3.999	4.925
59	3.115	3.675	3.649	3.358	4.059
60	2.127	3.131	2.949	2.543	2.836
61	2.708	2.900	2.737	1.891	1.483

	ASSEMBLY F 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
1	3.456	1.993	1.641	0.982
2	4.190	2.645	2.211	1.733
3	5.100	3.367	2.780	2.251
4	5.699	3.951	3.300	2.725
5	6.454	4.432	3.616	3.110
6	6.961	4.829	3.951	3.214
7	7.366	5.222	4.305	3.584
8	7.471	5.869	4.656	4.058
9	7.686	5.978	4.941	4.324
10	7.836	6.216	5.142	4.547
11	7.994	6.390	5.293	4.724
12	8.025	6.529	5.377	4.858
13	8.056	6.631	5.410	4.917
14	8.102	6.665	5.444	4.961
15	8.010	6.665	5.444	4.991
16	7.825	6.502	5.310	4.993
17	6.772	5.846	4.807	4.650
18	7.640	6.681	5.444	4.843
19	7.949	6.837	5.527	5.154
20	7.994	6.940	5.594	5.258
21	8.010	7.043	5.628	5.302
22	8.025	7.043	5.678	5.332
23	8.065	7.043	5.661	5.376

CYCLE 2 - MAP 13

	ASSEMBLY F 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
24	8.070	7.043	5.661	5.376
25	7.963	6.974	5.661	5.361
26	7.902	6.905	5.594	5.346
27	7.671	6.699	5.444	5.287
28	6.700	5.978	4.908	4.754
29	7.578	6.768	5.594	5.169
30	7.748	6.905	5.695	5.361
31	7.794	6.974	5.795	5.435
32	7.871	7.043	5.896	5.524
33	7.933	7.077	5.979	5.569
34	7.948	7.112	5.979	5.583
35	8.025	7.112	5.996	5.569
36	8.071	7.009	5.946	5.539
37	7.902	6.940	5.879	5.465
38	7.702	6.665	5.628	5.332
39	6.685	6.115	5.109	4.754
40	7.763	6.871	5.745	5.183
41	8.010	7.009	5.896	5.332
42	8.118	7.112	5.963	5.391
43	8.164	7.215	6.030	5.435
44	8.195	7.249	6.063	5.480
45	8.179	7.249	6.063	5.494
46	8.118	7.180	5.979	5.450
47	8.040	7.077	5.845	5.361
48	7.933	6.905	5.645	5.258
49	7.640	6.459	5.310	5.109
50	7.608	6.047	4.841	4.354
51	7.568	6.493	5.209	4.858
52	7.671	6.390	5.109	4.828
53	7.625	6.150	4.924	4.724
54	7.471	5.944	4.707	4.547
55	7.193	5.463	4.388	4.265
56	6.793	4.947	4.037	3.954
57	6.101	4.329	3.584	3.525
58	5.391	3.607	3.075	3.021
59	4.313	2.680	2.311	2.414
60	2.850	2.892	1.608	1.629
61	1.412	1.202	1.826	2.044

CYCLE 2 - MAP 17

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
6/19/75	1000	351[illegible]	2439	566.0	2250.	144.	142.7	316	4060

	ASSEMBLY N 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	1.087	2.418	1.307	2.735	1.879
2	2.231	2.617	2.319	3.534	2.332
3	3.314	3.409	3.033	4.285	2.983
4	4.009	4.104	3.616	4.860	3.512
5	4.524	4.662	4.064	5.244	3.904
6	4.892	4.832	4.141	5.129	3.823
7	4.808	5.124	4.557	6.107	4.503
8	5.534	5.907	5.126	6.446	4.871
9	5.787	6.241	5.419	6.715	5.124
10	5.976	6.508	5.650	6.894	5.309
11	6.113	6.751	5.835	7.086	5.447
12	6.186	6.848	5.988	7.163	5.539
13	6.228	6.945	6.035	7.227	5.585
14	6.239	6.969	6.059	7.278	5.608
15	6.229	6.969	6.050	7.252	5.573
16	6.770	6.890	6.004	7.022	5.516
17	5.810	6.435	5.527	6.421	4.940
18	5.702	6.308	5.804	7.137	5.573
19	6.186	6.896	6.127	7.214	5.792
20	6.249	6.993	6.204	7.316	5.907
21	6.313	7.066	6.266	7.355	5.965
22	6.365	7.115	6.296	7.431	6.071
23	6.380	7.139	6.312	7.420	6.024
24	6.376	7.103	6.296	7.521	6.046
25	6.344	7.163	6.281	7.521	6.000
26	6.334	7.115	6.219	7.457	5.942
27	6.271	7.091	6.096	7.043	5.804
28	5.829	6.362	5.404	6.753	5.170
29	5.892	6.896	5.973	7.431	5.838
30	6.323	7.212	6.142	7.508	5.953
31	6.407	7.285	6.204	7.585	5.988
32	6.491	7.362	6.250	7.738	6.046
33	6.534	7.382	6.296	7.730	6.102
34	6.565	7.406	6.327	7.815	6.138
35	6.586	7.358	6.343	7.853	6.138
36	6.565	7.309	6.327	7.828	6.126
37	6.535	7.285	6.296	7.700	6.080
38	6.430	7.163	6.219	7.214	5.815
39	5.787	6.386	5.465	7.176	5.504
40	6.144	7.115	6.235	7.674	6.103

CYCLE 2 - MAP 17

	ASSEMBLY E 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
41	6.407	7.431	6.435	7.764	6.195
42	6.431	7.600	6.558	7.863	6.310
43	6.523	7.722	6.685	7.853	6.368
44	6.576	7.819	6.697	7.956	6.414
45	6.597	7.843	6.712	8.007	6.437
46	6.628	7.819	6.712	8.007	6.391
47	6.649	7.770	6.650	7.969	6.287
48	6.639	7.649	6.558	7.815	6.172
49	6.544	7.431	6.343	7.176	5.654
50	5.787	6.362	5.511	7.303	5.643
51	6.355	7.163	6.189	7.636	5.896
52	6.502	7.212	6.219	7.572	5.792
53	6.523	7.094	6.127	7.431	5.608
54	6.481	6.872	5.942	7.124	5.366
55	6.302	6.556	5.650	6.741	5.009
56	5.455	6.046	5.200	6.191	4.560
57	5.408	5.468	4.695	5.462	3.938
58	4.734	4.735	4.078	4.579	3.213
59	3.861	3.812	3.171	3.415	2.246
60	2.704	2.550	2.124	3.159	2.441
61	3.493	3.400	2.771	2.993	1.693

	ASSEMBLY F 7	ASSEMBLY K 8	ASSEMBLY H 8	ASSEMBLY L 8	ASSEMBLY L 9
1	2.088	1.328	2.224	3.798	2.860
2	3.436	2.358	3.959	4.414	3.849
3	4.262	3.085	5.199	5.294	5.079
4	4.847	3.705	5.913	6.150	5.706
5	5.241	4.207	6.393	6.712	6.164
6	5.072	4.309	6.114	6.517	5.810
7	5.981	4.743	7.297	7.385	6.851
8	6.329	5.303	7.721	7.947	7.289
9	6.521	5.673	7.955	8.210	7.455
10	6.656	5.952	8.122	8.375	7.643
11	6.709	6.138	8.245	8.473	7.705
12	6.795	6.247	8.290	8.485	7.726
13	6.850	6.340	8.357	8.473	7.726
14	6.859	6.386	8.368	8.473	7.684
15	6.823	6.371	8.323	8.387	7.622
16	6.640	6.309	8.100	8.216	7.393
17	5.930	5.875	7.241	7.275	6.352
18	6.731	6.123	8.212	8.033	7.208

CYCLE 2 - MAP 17

	ASSEMBLY M 7	ASSEMBLY R 8	ASSEMBLY M 8	ASSEMBLY L 8	ASSEMBLY L 9
19	6.804	6.495	8.307	8.326	7.435
20	6.859	6.650	8.368	8.424	7.435
21	6.951	6.712	8.479	8.461	7.476
22	6.978	6.774	8.513	8.461	7.476
23	6.930	6.882	8.490	8.461	7.435
24	6.930	6.913	8.490	8.412	7.425
25	6.960	6.882	8.490	8.363	7.455
26	6.914	6.836	8.435	8.302	7.393
27	6.622	6.727	8.078	8.106	7.185
28	6.128	6.045	7.475	7.128	6.331
29	6.850	6.417	8.357	8.082	7.372
30	6.997	6.681	8.535	8.314	7.539
31	7.079	6.758	8.685	8.363	7.622
32	7.179	6.805	8.758	8.399	7.684
33	7.234	6.851	8.825	8.424	7.705
34	7.262	6.898	8.859	8.461	7.684
35	7.243	6.944	8.836	8.436	7.643
36	7.179	6.960	8.758	8.399	7.607
37	7.134	6.960	8.702	8.387	7.539
38	6.614	6.867	8.312	8.106	7.185
39	6.512	6.138	7.944	7.275	6.477
40	7.198	6.743	8.781	8.302	7.476
41	7.289	6.991	8.892	8.497	7.607
42	7.362	7.084	8.981	8.563	7.684
43	7.472	7.208	9.115	8.644	7.768
44	7.509	7.316	9.160	8.705	7.789
45	7.490	7.316	9.138	8.705	7.851
46	7.454	7.316	9.093	8.681	7.851
47	7.399	7.285	9.026	8.632	7.830
48	7.298	7.208	8.908	8.534	7.747
49	6.786	7.006	8.278	8.179	7.268
50	6.667	6.107	8.133	7.482	6.831
51	7.106	6.743	8.669	8.375	7.622
52	7.040	6.774	8.624	8.436	7.684
53	6.951	6.665	8.479	8.338	7.622
54	6.731	6.479	8.212	8.155	7.455
55	6.437	6.169	7.877	7.874	7.060
56	6.009	5.735	7.330	7.421	6.581
57	5.390	5.208	6.583	6.737	5.934
58	4.463	4.495	5.445	5.820	5.060
59	3.347	3.612	4.083	4.585	3.853
60	3.058	2.480	3.726	3.277	2.874
61	2.451	3.193	2.990	3.307	1.590

CYCLE 2 - MAP 17

	ASSEMBLY N 10	ASSEMBLY D 10	ASSEMBLY L 11	ASSEMBLY F 11	ASSEMBLY N 12
1	1.749	3.247	2.879	3.071	2.120
2	2.958	3.945	3.651	4.040	2.779
3	3.626	4.696	4.503	5.278	3.453
4	4.153	5.253	5.120	5.908	4.075
5	4.452	5.506	5.531	6.108	4.413
6	4.153	5.190	5.213	5.832	4.264
7	4.989	6.127	6.147	6.385	5.127
8	5.361	6.405	6.540	7.198	5.507
9	5.536	6.532	6.689	7.340	5.782
10	5.601	6.633	6.857	7.454	5.934
11	5.764	6.696	6.914	7.525	6.086
12	5.816	6.722	6.932	7.554	6.168
13	5.774	6.747	6.932	7.582	6.204
14	5.754	6.747	6.895	7.592	6.192
15	5.723	6.633	6.839	7.454	6.180
16	5.526	6.317	6.633	7.098	6.028
17	4.762	5.709	5.699	6.416	5.507
18	5.485	6.481	6.521	7.283	6.227
19	5.650	6.671	6.671	7.497	6.379
20	5.671	6.671	6.671	7.497	6.484
21	5.723	6.671	6.708	7.497	6.520
22	5.785	6.722	6.708	7.554	6.560
23	5.754	6.709	6.671	7.539	6.578
24	5.754	6.658	6.671	7.482	6.555
25	5.754	6.633	6.689	7.454	6.473
26	5.762	6.544	6.633	7.354	6.436
27	5.516	6.046	6.446	6.828	6.180
28	4.865	5.924	5.680	6.657	5.700
29	5.599	6.456	6.675	7.255	6.356
30	5.754	6.544	6.764	7.354	6.473
31	5.805	6.582	6.839	7.397	6.531
32	5.878	6.645	6.895	7.468	6.683
33	5.929	6.709	6.914	7.539	6.637
34	5.950	6.747	6.895	7.582	6.707
35	5.981	6.848	6.857	7.696	6.730
36	5.950	6.760	6.820	7.596	6.613
37	5.857	6.671	6.764	7.497	6.496
38	5.588	6.038	6.446	6.785	6.122
39	5.051	6.266	5.811	7.041	6.028
40	5.774	6.810	6.708	7.653	6.566
41	5.919	6.937	6.820	7.795	6.695
42	5.981	7.073	6.895	7.881	6.836
43	6.033	7.076	6.970	7.952	6.941
44	6.074	7.046	6.988	7.952	6.988
45	6.084	7.089	7.044	7.966	6.929

CYCLE 2 - MAP 17

	ASSEMBLY A 10	ASSEMBLY B 10	ASSEMBLY L 11	ASSEMBLY F 11	ASSEMBLY H 12
46	6.084	7.028	7.044	7.909	6.906
47	6.022	6.975	7.026	7.838	6.812
48	5.950	6.851	6.951	7.710	6.637
49	5.578	6.073	6.321	6.757	6.040
50	5.186	6.494	6.129	7.298	6.168
51	5.795	6.610	6.839	7.653	6.414
52	5.816	6.348	6.895	7.696	6.297
53	5.764	6.798	6.839	7.639	6.180
54	5.630	6.620	6.689	7.440	5.876
55	5.392	6.279	6.334	7.056	5.490
56	5.051	5.772	5.905	6.467	5.070
57	4.814	5.107	5.307	5.733	4.366
58	3.853	4.203	4.541	4.723	3.582
59	2.934	3.006	3.457	3.243	2.517
60	2.116	2.071	2.379	2.602	2.069
61	1.787	1.799	1.427	1.921	1.830

	ASSEMBLY L 14	ASSEMBLY G 13
1	1.771	0.970
2	2.277	1.758
3	2.893	2.336
4	3.416	2.849
5	3.746	3.271
6	3.842	3.497
7	4.355	3.633
8	4.743	4.251
9	4.936	4.552
10	5.196	4.746
11	5.326	4.929
12	5.456	5.050
13	5.456	5.125
14	5.456	5.170
15	5.439	5.200
16	5.391	5.195
17	4.776	4.899
18	5.391	4.869
19	5.536	5.306
20	5.601	5.426
21	5.684	5.592
22	5.698	5.532
23	5.696	5.547

CYCLE 2 - MAP 17

	ASSEMBLY L 14	ASSEMBLY J 15
24	5.650	5.562
25	5.650	5.577
26	5.634	5.532
27	5.504	5.487
28	4.873	5.004
29	5.569	5.300
30	5.747	5.502
31	5.844	5.668
32	5.909	5.743
33	6.006	5.803
34	6.054	5.803
35	6.071	5.803
36	6.038	5.788
37	5.984	5.698
38	5.779	5.562
39	5.110	4.974
40	5.660	5.426
41	6.006	5.637
42	6.152	5.713
43	6.233	5.788
44	6.233	5.818
45	6.265	5.848
46	6.200	5.833
47	6.135	5.758
48	5.941	5.698
49	5.569	5.502
50	5.099	4.838
51	5.536	5.330
52	5.422	5.306
53	5.326	5.245
54	5.132	5.125
55	4.840	4.854
56	4.484	4.507
57	3.982	4.025
58	3.400	3.467
59	2.623	2.789
60	1.862	1.869
61	2.105	2.427

CYCLE 2 - MAP 20

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L H 1	D-BANK HT	CORR PPM	MWD/T
9/15/75			2441		2250.	144.	135.8		6550

	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY L 6	ASSEMBLY N 7
1	2.450	1.357	2.935	3.044	2.002
2	3.164	2.372	3.668	3.578	3.559
3	3.904	3.046	4.415	4.454	4.672
4	4.526	3.652	5.023	5.170	5.040
5	4.920	4.108	5.418	5.665	5.164
6	4.741	4.210	5.151	5.460	4.910
7	5.715	4.446	6.181	6.214	5.337
8	6.099	5.062	6.550	6.731	6.192
9	6.381	5.323	6.805	6.925	6.383
10	6.586	5.523	6.983	7.054	6.519
11	6.765	5.708	7.135	7.151	6.610
12	6.868	5.816	7.250	7.151	6.692
13	6.893	5.877	7.263	7.173	6.728
14	6.919	5.908	7.313	7.151	6.737
15	6.868	5.862	7.326	7.097	6.710
16	6.714	5.831	7.161	6.989	6.546
17	5.894	5.462	6.337	6.171	5.764
18	6.765	5.523	7.148	6.828	6.537
19	6.893	5.939	7.237	7.046	6.692
20	6.970	6.047	7.364	7.130	6.755
21	7.043	6.108	7.428	7.173	6.810
22	7.124	6.154	7.530	7.205	6.856
23	7.150	6.200	7.555	7.173	6.874
24	7.150	6.154	7.593	7.119	6.883
25	7.150	6.154	7.619	7.130	6.865
26	7.124	6.047	7.530	7.087	6.837
27	6.945	5.985	7.364	6.979	6.687
28	6.125	5.416	6.312	6.104	5.837
29	7.062	5.739	7.428	6.993	6.737
30	7.175	5.970	7.606	7.130	6.892
31	7.252	5.985	7.631	7.216	6.974
32	7.329	6.047	7.746	7.216	7.044
33	7.355	6.108	7.860	7.248	7.137
34	7.329	6.108	7.886	7.291	7.174
35	7.252	6.139	7.937	7.302	7.156
36	7.227	6.154	7.937	7.270	7.107
37	7.207	6.139	7.873	7.216	7.065
38	7.022	6.093	7.631	7.033	6.865
39	6.304	5.477	6.856	6.171	6.119
40	7.252	5.985	7.746	7.065	7.010

CYCLE 2 - MAP 20

	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY L 6	ASSEMBLY N 7
41	7.457	6.277	7.899	7.302	7.156
42	7.631	6.431	7.949	7.388	7.228
43	7.713	6.539	8.073	7.431	7.319
44	7.816	6.600	8.077	7.442	7.365
45	7.842	6.600	8.140	7.496	7.419
46	7.842	6.616	8.204	7.496	7.383
47	7.739	6.585	8.204	7.474	7.319
48	7.652	6.508	8.140	7.420	7.246
49	7.303	6.354	7.846	7.205	7.070
50	6.509	5.539	6.995	6.333	6.246
51	7.360	6.139	7.975	7.280	7.107
52	7.406	6.277	8.000	7.399	7.128
53	7.303	6.231	7.971	7.410	7.065
54	7.124	6.108	7.733	7.313	6.930
55	6.791	5.893	7.415	7.130	6.692
56	6.355	5.570	6.983	6.828	6.355
57	5.766	5.096	6.321	6.322	5.846
58	4.997	4.477	5.444	5.633	5.146
59	3.998	3.646	4.388	4.599	4.137
60	2.742	2.508	3.091	3.209	2.987
61	3.690	2.954	4.566	3.856	3.964

	ASSEMBLY J 7	ASSEMBLY K 8	ASSEMBLY L 8	ASSEMBLY M 10	ASSEMBLY L 11
1	2.893	1.331	2.164	1.660	2.797
2	3.520	2.349	3.846	2.771	3.457
3	4.305	3.056	5.048	3.451	4.254
4	5.258	3.723	5.795	4.070	4.909
5	5.777	4.227	6.262	4.470	5.373
6	6.021	4.305	5.953	4.450	5.119
7	6.201	4.926	7.078	4.640	5.842
8	6.920	5.485	7.508	5.334	6.330
9	7.194	5.765	7.739	5.575	6.545
10	7.432	6.029	7.908	5.695	6.662
11	7.635	6.185	8.075	5.796	6.740
12	7.643	6.325	8.114	5.866	6.740
13	7.695	6.371	8.158	5.876	6.779
14	7.663	6.434	8.169	5.878	6.780
15	7.605	6.449	8.136	5.816	6.682
16	7.499	6.371	7.938	5.735	6.545
17	6.688	5.612	6.990	5.223	5.607
18	7.077	6.154	7.927	5.223	6.232

CYCLE 2 - MAP 20

	ASSEMBLY G 7	ASSEMBLY H 8	ASSEMBLY K 9	ASSEMBLY L 10	ASSEMBLY E 11
19	7.526	6.842	8.114	5.695	6.486
20	7.610	6.651	8.191	5.745	6.545
21	7.640	6.775	8.258	5.796	6.604
22	7.673	6.853	8.313	5.876	6.584
23	7.704	6.900	8.335	5.896	6.565
24	7.724	6.962	8.346	5.886	6.565
25	7.690	6.931	8.324	5.876	6.565
26	7.643	6.884	8.291	5.846	6.525
27	7.482	6.775	8.043	5.775	6.389
28	6.491	5.993	7.078	5.233	5.510
29	7.197	6.604	8.169	5.414	6.389
30	7.523	6.806	8.357	5.806	6.643
31	7.626	6.884	8.456	5.926	6.721
32	7.684	6.915	8.577	5.986	6.760
33	7.759	6.946	8.654	6.027	6.819
34	7.820	7.009	8.699	6.098	6.779
35	7.830	7.024	8.677	6.087	6.760
36	7.794	7.040	8.670	6.107	6.740
37	7.756	7.009	8.566	6.037	6.682
38	7.603	6.869	8.324	5.896	6.486
39	6.578	6.045	7.429	5.223	5.568
40	6.457	6.729	8.500	5.565	6.447
41	7.850	6.977	8.677	5.986	6.662
42	7.997	7.086	8.765	6.097	6.760
43	8.121	7.195	8.875	6.147	6.877
44	8.160	7.242	8.930	6.187	6.877
45	8.212	7.257	8.996	6.238	6.916
46	8.206	7.288	8.952	6.258	6.955
47	8.158	7.319	8.875	6.248	6.986
48	8.070	7.257	8.787	6.207	6.916
49	7.752	7.117	8.500	6.087	6.682
50	6.613	6.200	7.574	5.273	5.744
51	7.532	6.962	8.610	5.796	6.721
52	7.793	7.040	8.643	6.067	6.897
53	7.761	6.977	8.566	6.104	6.936
54	7.689	6.838	8.379	6.037	6.858
55	7.406	6.573	8.114	5.896	6.643
56	7.025	6.154	7.706	5.665	6.291
57	6.506	5.610	7.089	5.283	5.783
58	5.775	4.926	6.240	4.721	5.099
59	4.781	4.025	5.076	3.998	4.181
60	3.353	2.732	3.561	2.903	2.813
61	2.788	3.528	4.807	2.380	1.420

CYCLE 2 - MAP 20

	ASSEMBLY F 11	ASSEMBLY M 12	ASSEMBLY C 12	ASSEMBLY L 14	ASSEMBLY J 15
1	2.912	1.450	1.423	1.914	1.371
2	3.570	2.588	2.566	2.467	2.320
3	4.299	3.414	3.428	3.084	2.847
4	5.265	3.938	4.021	3.567	3.309
5	6.065	4.266	4.336	3.910	3.563
6	5.557	4.134	4.164	3.751	3.638
7	6.669	4.889	4.997	4.466	4.361
8	7.012	5.247	5.314	4.800	4.639
9	7.163	5.459	5.539	5.054	4.851
10	7.300	5.618	5.737	5.197	5.078
11	7.382	5.710	5.843	5.372	5.124
12	7.362	5.777	5.896	5.404	5.215
13	7.437	5.829	5.909	5.467	5.245
14	7.437	5.856	5.896	5.451	5.245
15	7.327	5.843	5.843	5.335	5.260
16	7.300	5.737	5.711	5.372	5.078
17	6.134	5.088	5.063	4.736	4.775
18	7.135	5.046	5.790	5.388	5.336
19	7.396	5.962	6.001	5.515	5.473
20	7.368	6.081	6.081	5.630	5.488
21	7.410	6.147	6.226	5.610	5.533
22	7.423	6.187	6.266	5.658	5.564
23	7.437	6.214	6.292	5.674	5.609
24	7.396	6.187	6.279	5.626	5.624
25	7.353	6.147	6.239	5.594	5.624
26	7.300	6.081	6.173	5.578	5.579
27	6.302	5.962	6.075	5.419	5.336
28	6.312	5.233	5.314	4.927	5.094
29	7.135	5.922	6.075	5.594	5.594
30	7.231	6.028	6.147	5.353	5.685
31	7.300	6.134	6.239	5.849	5.791
32	7.368	6.214	6.305	5.912	5.852
33	7.423	6.293	6.358	5.944	5.867
34	7.465	6.280	6.371	5.992	5.867
35	7.492	6.306	6.398	6.055	5.852
36	7.506	6.240	6.371	6.089	5.776
37	7.396	6.147	6.305	5.928	5.700
38	6.998	6.028	6.094	5.642	5.276
39	6.477	5.313	5.406	5.181	5.200
40	7.451	6.055	6.239	5.880	5.670
41	7.670	6.253	6.371	5.992	5.791
42	7.739	6.346	6.464	6.135	5.867
43	7.794	6.505	6.570	6.182	5.927
44	7.835	6.571	6.623	6.182	5.958
45	7.835	6.545	6.676	6.230	5.958

CYCLE 2 - MAP 20

	ASSEMBLY F 11	ASSEMBLY M 12	ASSEMBLY C 12	ASSEMBLY L 14	ASSEMBLY J 15
46	7.808	6.545	6.609	6.198	5.927
47	7.794	6.465	6.543	6.135	5.932
48	7.670	6.412	6.451	5.944	5.776
49	7.000	6.240	6.213	5.578	5.412
50	6.806	5.459	5.539	5.229	5.291
51	7.629	6.161	6.226	5.642	5.670
52	7.739	6.167	6.279	5.630	5.670
53	7.753	6.031	6.200	5.515	5.473
54	7.657	5.975	6.067	5.308	5.321
55	7.396	5.777	5.790	5.070	5.083
56	6.957	5.379	5.393	4.736	4.669
57	6.298	4.942	4.878	4.275	4.184
58	5.371	4.279	4.204	3.655	3.502
59	4.130	3.445	3.384	2.829	2.683
60	3.040	2.332	2.274	2.066	2.047
61	1.670	2.941	2.987	2.336	2.138

CHAPTER #6 CYCLE 3 - OPERATING DATA

THE FOLLOWING HISTORY DATA REPRESENTS THE OPERATION OF THE REACTOR BY PROVIDING THE POWER AS A FUNCTION OF TIME ALONG WITH THE BORON CONCENTRATION IN THE PRIMARY COOLANT AND CONTROL ROD POSITIONS. THE COOLANT TEMPERATURE THAT IS PRESENTED IS THE AVERAGE TEMPERATURE AND IS THE UNWEIGHTED AVERAGE OF THE INLET AND OUTLET TEMPERATURES OF ALL OF THE PRIMARY COOLANT LOOPS. THE COLUMN LABELED CORRECTED BORON CONCENTRATION INCLUDES ALL OF THE CORRECTIONS TO THE BORON CONCENTRATION TO ESTIMATE THE BORON CONCENTRATION FOR CRITICALITY IF THE REACTOR WERE AT FULL POWER WITH ALL CONTROL RODS WITHDRAWN AND THE AVERAGE COOLANT TEMPERATURE WERE THE NOMINAL VALUE. THIS COLUMN SHOULD ONLY BE USED FOR EXTRAPOLATION TO DETERMINE AT EFFECTIVE END OF CYCLE AT NOMINAL CONDITIONS.

CORE FOLLOW CYCLE 3

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
			73		2250.		135.8		
			1758		2250.		133.9		
			2002		2250.		94.1		
			2099		2250.		101.0		
			2197		2250.		104.4		
12/16/75			2441		2250.		121.3		
12/22/75			2441		2250.		133.9		

LETTER AFTER MEAS PPM INDICATES QUALITY (A=BEST)
UNLESS SPECIFIED, READING IS OF 'A' QUALITY

MONTHLY OPERATING STATISTICS

MONTH		HOURS CRITICAL	GROSS THERMAL ENERGY GEN.,MWH
INITIAL CRITICALITY		DEC 8,1975	
DEC	1975	471.4	760792.
JAN	1976	744.	1807897.
FEB	1976	696.	1669424.
MAR	1976	582.2	1215803.
APR	1976	574.	1363416.

SHUTDOWNS DATE FROM	TO	DURATION HOURS
SEP 26,1975	DEC 8,1975	1757.2
DEC 10,1975	DEC 16,1975	133.4
DEC 16,1975	DEC 16,1975	1.3
DEC 16,1975	DEC 16,1975	1.1
DEC 27,1975	DEC 28,1975	7.1
DEC 28,1975	DEC 28,1975	2.4
DEC 28,1975	DEC 28,1975	2.9

AXIAL POWER DISTRIBUTIONS
FROM SELECTED CORE MAPS

THE DATA IN THE FOLLOWING TABLES REPRESENT THE REDUCTION OF THE DATA FROM THE INCORE DETECTORS WHICH WERE INSERTED INTO THE INSTRUMENTATION THIMBLES. THE AXIAL POWER PROFILES ARE GIVEN FOR 60 EQUAL INTERVALS THAT SPAN THE FUEL REGION ONLY AND WITH THE FIRST ENTRY REPRESENTING THE BOTTOM OF THE FUEL AND THE 61ST ENTRY REPRESENTING THE TOP OF THE FUEL. THE DATA ARE EXPRESSED IN UNITS OF KW/FT AND WHEN SUMED OVER ALL OF THE FUEL IN THE CORE WILL EQUAL THE POWER BEING PRODUCED IN THE REACTOR.

CYCLE 3 - MAP 1

DATE	TIME	MEAS PPM	NVT	TEMP	PRESS	P/L MT	D-BANK MT	CORR PPM	MWD/T
			73		2250.		135.8		

	ASSEMBLY M 1	ASSEMBLY P 2	ASSEMBLY M 3	ASSEMBLY J 3	ASSEMBLY T 3
1	1.678	2.361	1.342	2.355	2.634
2	3.062	3.367	2.383	4.085	4.569
3	4.173	4.392	3.073	4.877	5.829
4	4.992	5.405	3.520	5.413	6.944
5	5.659	6.007	4.011	5.965	7.613
6	5.632	6.229	4.129	6.008	7.707
7	6.833	7.481	4.759	7.156	9.179
8	7.394	8.130	5.309	7.624	9.779
9	7.794	8.608	5.643	7.933	10.177
10	8.115	8.956	5.938	8.189	10.496
11	8.326	9.200	6.155	8.285	10.589
12	8.462	9.348	6.312	8.328	10.633
13	8.542	9.416	6.410	8.291	10.636
14	8.542	9.405	6.450	8.285	10.638
15	8.488	9.314	6.469	8.146	10.449
16	8.302	8.960	6.410	7.830	10.044
17	7.367	8.312	5.840	7.113	9.124
18	8.221	9.375	6.174	7.848	10.067
19	8.275	9.177	6.371	7.884	10.114
20	8.195	9.165	6.377	7.927	10.168
21	8.088	9.097	6.332	7.945	10.192
22	7.928	8.972	6.253	7.678	9.849
23	7.741	8.824	6.194	7.501	9.623
24	7.561	8.630	6.076	7.350	9.429
25	7.447	8.474	5.958	7.131	9.147
26	7.234	8.140	5.807	6.912	8.867
27	6.913	7.628	5.584	6.438	8.259
28	6.633	7.002	4.955	5.831	7.480

CYCLE 3 - MAP 1

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY M 3	ASSEMBLY J 3	ASSEMBLY H 3
29	6.647	7.446	5.250	6.274	8.049
30	6.566	7.366	5.230	6.183	7.932
31	6.460	7.241	5.132	6.019	7.721
32	6.353	7.059	5.014	5.898	7.566
33	6.193	6.865	4.877	5.691	7.301
34	6.033	6.660	4.759	5.509	7.067
35	5.846	6.421	4.621	5.315	6.818
36	5.579	6.171	4.444	5.169	6.631
37	5.339	5.909	4.287	4.932	6.327
38	4.992	5.430	4.070	4.507	5.781
39	4.298	4.964	3.559	4.112	5.275
40	4.671	5.249	3.756	4.385	5.625
41	4.564	5.169	3.716	4.270	5.477
42	4.431	5.021	3.598	4.155	5.329
43	4.298	4.884	3.500	4.021	5.158
44	4.164	4.725	3.382	3.863	4.955
45	4.004	4.543	3.244	3.711	4.761
46	3.870	4.349	3.107	3.571	4.581
47	3.684	4.144	2.949	3.413	4.379
48	3.523	3.916	2.812	3.280	4.207
49	3.283	3.529	2.635	2.994	3.841
50	2.829	3.222	2.261	2.758	3.537
51	3.016	3.324	2.360	2.897	3.716
52	2.910	3.188	2.261	2.855	3.662
53	2.749	3.006	2.143	2.721	3.490
54	2.616	2.778	2.006	2.606	3.342
55	2.402	2.516	1.848	2.411	3.093
56	2.162	2.220	1.671	2.205	2.828
57	1.895	1.901	1.455	1.919	2.462
58	1.575	1.537	1.219	1.603	2.057
59	1.228	1.115	0.964	1.196	1.535
60	0.881	0.730	0.669	0.875	1.122
61	0.908	0.358	0.708	0.729	0.935

	ASSEMBLY D 3	ASSEMBLY F 4	ASSEMBLY N 5	ASSEMBLY D 5	ASSEMBLY B 5
1	1.216	3.203	2.579	2.698	1.198
2	2.180	4.478	4.506	3.714	2.168
3	2.910	5.780	5.450	4.635	2.918
4	3.586	6.913	6.069	5.525	3.443
5	4.104	7.670	6.867	6.018	3.883
6	4.264	7.961	6.778	6.124	3.961

CYCLE 3 - MAP 1

	ASSEMBLY D 3	ASSEMBLY F 4	ASSEMBLY N 5	ASSEMBLY D 5	ASSEMBLY B 5
7	4.861	9.562	8.284	7.426	4.685
8	5.459	10.391	8.993	8.024	5.126
9	5.818	11.002	9.525	8.446	5.436
10	6.097	11.439	9.901	8.833	5.747
11	6.336	11.759	10.278	9.045	5.902
12	6.535	11.948	10.544	9.256	6.057
13	6.615	12.035	10.654	9.326	6.187
14	6.694	12.020	10.721	9.396	6.187
15	6.694	11.904	10.654	9.291	6.187
16	6.615	11.452	10.366	9.009	6.161
17	6.136	10.624	9.104	8.200	6.488
18	6.375	11.598	10.366	9.150	5.980
19	6.615	11.729	10.477	9.150	6.109
20	6.615	11.715	10.477	9.185	6.213
21	6.615	11.627	10.521	9.080	6.161
22	6.535	11.467	10.433	9.045	6.161
23	6.455	11.278	10.322	8.869	6.032
24	6.296	11.030	10.189	8.728	5.850
25	6.176	10.754	9.901	8.481	5.721
26	6.017	10.405	9.591	8.235	5.566
27	5.818	9.749	9.104	7.742	5.436
28	5.140	8.950	7.841	6.968	4.685
29	5.260	9.517	8.683	7.566	4.996
30	5.339	9.415	8.572	7.496	4.970
31	5.220	9.255	8.417	7.285	4.918
32	5.140	9.022	8.196	7.179	4.789
33	4.981	8.775	7.974	7.003	4.763
34	4.861	8.513	7.775	6.792	4.634
35	4.742	8.207	7.509	6.546	4.478
36	4.543	7.887	7.243	6.299	4.323
37	4.383	7.552	6.955	5.983	4.116
38	4.144	6.940	6.512	5.560	3.883
39	3.586	6.345	5.671	4.927	3.339
40	3.706	6.708	6.158	5.314	3.624
41	3.706	6.606	6.003	5.173	3.546
42	3.626	6.417	5.848	5.068	3.459
43	3.546	6.243	5.648	4.857	3.417
44	3.427	6.039	5.493	4.751	3.288
45	3.307	5.806	5.294	4.505	3.184
46	3.188	5.559	5.072	4.329	3.055
47	3.028	5.297	4.851	4.082	2.899
48	2.869	5.006	4.607	3.906	2.770
49	2.710	4.511	4.253	3.516	2.563
50	2.271	4.118	3.699	3.203	2.174
51	2.351	4.249	3.965	3.273	2.330

CYCLE 3 - MAP 1

	ASSEMBLY D 3	ASSEMBLY F 4	ASSEMBLY N 5	ASSEMBLY D 5	ASSEMBLY B 5
52	2.271	4.074	3.788	3.203	2.226
53	2.192	3.841	3.588	2.956	2.097
54	2.032	3.550	3.345	2.780	1.967
55	1.873	3.216	3.079	2.463	1.838
56	1.713	2.837	2.769	2.252	1.683
57	1.514	2.430	2.392	1.971	1.476
58	1.275	1.964	1.994	1.584	1.268
59	1.036	1.426	1.528	1.197	1.035
60	0.717	0.933	1.041	0.880	0.725
61	0.677	0.458	0.886	0.669	0.777

	ASSEMBLY N 7	ASSEMBLY G 7	ASSEMBLY D 7	ASSEMBLY R 8	ASSEMBLY L 8
1	1.436	3.233	2.667	1.347	2.009
2	2.600	5.511	4.674	2.539	3.637
3	3.502	6.943	6.034	3.595	4.732
4	4.408	8.173	7.213	4.506	5.750
5	5.075	8.832	8.002	5.243	6.619
6	5.434	8.588	7.851	5.530	7.087
7	6.049	10.223	9.542	6.308	7.889
8	6.946	10.784	10.293	7.128	9.059
9	7.433	11.126	10.744	7.619	9.694
10	7.843	11.296	11.045	7.988	10.229
11	8.099	11.467	11.195	8.275	10.563
12	8.304	11.467	11.308	8.439	10.831
13	8.407	11.492	11.308	8.520	10.965
14	8.484	11.443	11.345	8.520	11.065
15	8.433	11.296	11.082	8.479	10.998
16	8.407	10.857	10.782	8.357	10.965
17	7.766	9.759	9.504	7.660	10.129
18	7.894	10.857	10.481	7.865	10.296
19	8.279	10.857	10.556	8.193	10.797
20	8.304	10.760	10.481	8.193	10.831
21	8.202	10.638	10.331	8.152	10.697
22	8.176	10.394	10.256	8.070	10.664
23	7.997	10.223	10.181	7.947	10.430
24	7.843	9.955	9.767	7.742	10.229
25	7.638	9.711	9.542	7.578	9.962
26	7.407	9.442	9.392	7.414	9.661
27	7.125	8.881	8.903	7.169	9.293
28	6.331	7.954	7.588	6.390	8.257
29	6.613	8.686	8.415	6.554	8.625

CYCLE 3 - MAP 1

	ASSEMBLY N 7	ASSEMBLY G 7	ASSEMBLY D 7	ASSEMBLY R 8	ASSEMBLY L 8
30	6.690	8.564	8.302	6.636	8.725
31	6.561	8.344	8.077	6.513	8.558
32	6.433	8.125	7.851	6.390	8.391
33	6.280	7.905	7.664	6.226	8.190
34	6.100	7.661	7.401	6.022	7.956
35	5.895	7.417	7.213	5.817	7.689
36	5.664	7.173	6.987	5.653	7.388
37	5.434	6.880	6.724	5.366	7.087
38	5.203	6.368	6.311	5.120	6.786
39	4.460	5.734	5.410	4.465	5.817
40	4.716	6.173	5.898	4.629	6.151
41	4.716	6.026	5.748	4.629	6.151
42	4.614	5.831	5.560	4.506	6.017
43	4.485	5.636	5.334	4.383	5.850
44	4.357	5.490	5.147	4.260	5.683
45	4.178	5.294	4.921	4.096	5.449
46	4.050	5.099	4.771	3.973	5.282
47	3.819	4.904	4.583	3.769	4.981
48	3.640	4.685	4.433	3.605	4.747
49	3.383	4.294	4.170	3.359	4.413
50	2.871	3.928	3.569	2.908	3.744
51	2.999	4.148	3.907	2.949	3.911
52	2.922	4.026	3.794	2.90z	3.811
53	2.742	3.855	3.606	2.745	3.577
54	2.614	3.660	3.381	2.622	3.410
55	2.358	3.416	3.156	2.417	3.075
56	2.153	3.123	2.855	2.212	2.808
57	1.871	2.757	2.555	1.966	2.440
58	1.563	2.342	2.179	1.720	2.039
59	1.205	1.830	1.728	1.393	1.571
60	0.820	1.293	1.165	0.983	1.070
61	0.846	1.025	1.052	0.942	1.103

	ASSEMBLY F 8	ASSEMBLY L 9	ASSEMBLY B 9	ASSEMBLY F 9	ASSEMBLY A 9
1	3.636	2.529	4.884	4.658	1.955
2	2.951	2.721	3.965	3.781	2.634
3	3.710	3.582	5.048	5.004	3.375
4	4.728	4.976	6.525	6.732	3.971
5	5.193	5.650	7.167	7.394	4.371
6	5.814	5.698	8.023	8.277	4.421
7	6.046	6.789	8.344	8.608	5.322

CYCLE 3 - MAP 1

	ASSEMBLY F 8	ASSEMBLY L 9	ASSEMBLY B 9	ASSEMBLY F 9	ASSEMBLY A 9
8	7.092	7.337	9.788	10.098	5.706
9	7.403	7.674	10.215	10.540	6.006
10	7.674	8.391	10.590	10.926	6.240
11	7.790	8.602	10.750	11.091	6.423
12	8.100	8.939	11.178	11.533	6.523
13	7.906	9.066	10.911	11.257	6.557
14	8.139	9.108	11.232	11.588	6.504
15	7.984	8.939	11.018	11.367	6.457
16	7.906	8.855	10.911	11.257	6.223
17	7.403	7.801	10.215	10.540	5.656
18	7.131	8.307	9.814	10.153	6.256
19	7.364	8.518	10.162	10.484	6.306
20	7.558	8.771	10.429	10.760	6.240
21	7.286	8.771	10.055	10.374	6.173
22	7.441	8.729	10.269	10.595	6.090
23	7.209	8.602	9.948	10.264	5.956
24	7.170	8.476	9.895	10.208	5.856
25	7.015	8.349	9.681	9.988	5.756
26	6.860	8.096	9.467	9.767	5.556
27	6.395	7.843	8.825	9.105	5.255
28	5.930	6.915	8.183	8.443	4.705
29	5.930	7.211	8.183	8.443	5.089
30	6.085	7.337	8.397	8.663	5.005
31	5.814	7.253	8.023	8.277	4.905
32	5.775	7.168	7.969	8.222	4.788
33	5.542	7.000	7.648	7.891	4.705
34	5.465	6.705	7.541	7.781	4.555
35	5.348	6.367	7.381	7.615	4.421
36	5.077	6.367	7.006	7.229	4.238
37	4.690	6.114	6.472	6.677	4.054
38	4.845	5.819	6.686	6.898	3.737
39	4.224	4.807	5.830	6.015	3.403
40	4.302	5.060	5.937	6.125	3.587
41	4.341	5.144	5.990	6.180	3.504
42	4.147	5.018	5.723	5.904	3.403
43	3.798	4.681	5.241	5.408	3.303
44	3.914	4.807	5.402	5.573	3.220
45	3.566	4.638	4.921	5.077	3.086
46	3.759	4.470	5.188	5.353	2.953
47	3.488	4.175	4.814	4.966	2.820
48	3.411	3.922	4.707	4.856	2.603
49	3.256	3.542	4.493	4.635	2.402
50	2.790	3.163	3.851	3.973	2.186
51	2.635	3.120	3.637	3.752	2.286
52	2.829	3.331	3.904	4.028	2.186

CYCLE 3 - MAP 1

	ASSEMBLY F 8	ASSEMBLY L 9	ASSEMBLY B 9	ASSEMBLY F 9	ASSEMBLY A 9
53	2.480	3.205	3.423	3.532	2.069
54	2.674	2.994	3.690	3.807	1.919
55	2.480	2.741	3.423	3.532	1.752
56	2.248	2.488	3.102	3.200	1.518
57	1.977	2.193	2.728	2.814	1.385
58	1.783	1.898	2.460	2.538	1.068
59	1.473	1.518	2.032	2.097	0.834
60	1.046	1.054	1.444	1.490	0.651
61	0.555	0.548	0.767	0.791	0.551

	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY H 11	ASSEMBLY F 11	ASSEMBLY N 12
1	1.916	3.569	5.274	3.085	1.268
2	3.609	3.840	5.372	3.611	2.324
3	5.091	4.825	6.657	5.028	3.176
4	6.358	6.413	7.704	6.327	3.819
5	7.309	7.283	8.244	7.130	4.336
6	7.641	7.337	8.391	6.988	4.388
7	8.653	8.750	9.667	8.562	5.217
8	9.816	9.457	10.108	9.396	5.721
9	10.525	9.891	10.403	9.931	6.045
10	10.918	10.815	10.550	10.482	6.343
11	11.220	11.087	10.648	10.750	6.550
12	11.537	11.522	10.697	11.159	6.705
13	11.643	11.685	10.648	11.364	6.783
14	11.764	11.739	10.599	11.332	6.822
15	11.734	11.522	10.501	11.254	6.822
16	11.567	11.413	9.961	11.411	6.770
17	10.435	10.054	9.274	9.648	6.084
18	10.994	10.707	10.059	10.876	6.718
19	11.311	10.978	10.010	11.017	6.873
20	11.341	11.304	9.912	11.096	6.873
21	11.296	11.304	9.765	11.033	6.847
22	11.220	11.250	9.617	10.955	6.783
23	11.069	11.087	9.421	10.829	6.705
24	10.858	10.924	9.274	10.593	6.575
25	10.677	10.761	9.029	10.309	6.433
26	10.374	10.435	8.783	10.026	6.239
27	9.982	10.109	8.096	9.569	6.019
28	8.728	8.913	7.507	8.121	5.216
29	8.955	9.294	7.998	8.971	5.605
30	9.076	9.457	7.851	8.971	5.566

CYCLE 3 - MAP 1

	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY H 11	ASSEMBLY F 11	ASSEMBLY N 12
31	8.910	9.348	7.655	8.845	5.436
32	8.668	9.239	7.458	8.704	5.333
33	8.426	9.022	7.262	8.499	5.190
34	8.230	8.641	7.017	8.295	5.074
35	7.928	8.207	6.722	7.980	4.931
36	7.717	8.207	6.477	7.791	4.763
37	7.384	7.881	6.232	7.397	4.556
38	7.098	7.500	5.692	7.004	4.349
39	6.146	6.196	5.398	5.965	3.715
40	6.342	6.522	5.643	6.485	4.013
41	6.448	6.631	5.545	6.343	3.935
42	6.297	6.467	5.348	6.233	3.805
43	6.071	6.033	5.201	5.981	3.728
44	5.889	6.196	5.054	5.871	3.598
45	5.678	5.978	4.907	5.587	3.482
46	5.467	5.761	4.760	5.399	3.326
47	5.195	5.380	4.563	5.162	3.171
48	4.908	5.054	4.318	4.879	3.008
49	4.666	4.565	3.876	4.533	2.809
50	3.956	4.076	3.680	3.840	2.382
51	4.062	4.022	3.778	4.092	2.537
52	4.017	4.294	3.631	3.982	2.420
53	3.760	4.130	3.435	3.777	2.304
54	3.579	3.859	3.189	3.557	2.149
55	3.277	3.533	2.993	3.305	1.980
56	2.960	3.207	2.699	2.975	1.799
57	2.658	2.826	2.404	2.581	1.579
58	2.280	2.446	1.963	2.188	1.333
59	1.857	1.957	1.521	1.700	1.074
60	1.329	1.359	1.129	1.133	0.738
61	1.057	0.707	1.030	1.007	0.841

	ASSEMBLY B 12	ASSEMBLY H 13	ASSEMBLY F 13	ASSEMBLY L 14
1	3.420	3.503	2.889	1.094
2	4.003	4.658	4.838	2.038
3	4.843	5.873	5.863	2.838
4	5.287	6.916	6.946	3.491
5	5.958	7.353	7.106	3.985
6	5.840	8.044	7.694	4.067
7	7.155	9.246	8.923	4.792
8	7.852	10.046	9.832	5.270

CYCLE 3 - MAP 1

	ASSEMBLY B 12	ASSEMBLY H 13	ASSEMBLY F 13	ASSEMBLY L 14
9	8.299	10.083	10.580	5.599
10	8.760	10.301	11.114	5.928
11	8.983	10.483	11.167	6.142
12	9.325	10.665	11.328	6.208
13	9.496	10.811	11.381	6.340
14	9.470	10.520	11.274	6.373
15	9.404	10.374	10.954	6.324
16	9.536	9.646	10.793	6.307
17	8.063	9.537	9.618	5.665
18	9.089	10.083	11.221	6.175
19	9.207	10.046	11.167	6.291
20	9.273	9.937	11.114	6.258
21	9.220	9.864	10.900	6.291
22	9.154	9.719	10.740	6.225
23	9.049	9.573	10.366	6.093
24	8.852	9.355	10.526	6.071
25	8.615	9.100	9.778	5.830
26	8.378	8.845	9.938	5.731
27	7.997	7.899	9.137	5.484
28	6.787	7.826	8.442	4.759
29	7.497	8.081	8.923	5.138
30	7.497	7.935	8.816	5.121
31	7.392	7.790	8.709	4.957
32	7.273	7.608	8.549	4.891
33	7.103	7.389	8.335	4.776
34	6.932	7.171	8.122	4.644
35	6.668	6.880	7.807	4.496
36	6.511	6.625	7.481	4.380
37	6.182	6.370	7.160	4.216
38	5.853	5.606	5.878	4.078
39	4.985	5.606	6.038	3.442
40	5.419	5.751	6.198	3.705
41	5.301	5.606	5.771	3.639
42	5.209	5.424	6.091	3.557
43	4.998	5.242	5.771	3.442
44	4.906	5.060	5.557	3.294
45	4.669	4.878	5.023	3.228
46	4.511	4.659	4.969	3.079
47	4.314	4.441	4.542	2.882
48	4.077	4.259	4.488	2.750
49	3.788	3.713	3.847	2.520
50	3.209	3.713	4.114	2.141
51	3.420	3.749	4.061	2.207
52	3.328	3.604	3.901	2.108
53	3.157	3.422	3.527	2.042

CYCLE 3 - MAP 1

	ASSEMBLY B 12	ASSEMBLY H 13	ASSEMBLY F 13	ASSEMBLY L 14
54	2.973	3.240	3.527	1.910
55	2.762	2.985	2.832	1.729
56	2.486	2.694	2.672	1.614
57	2.157	2.330	2.084	1.383
58	1.828	1.929	2.191	1.219
59	1.420	1.383	1.550	0.939
60	0.947	1.128	1.122	0.675
61	0.842	0.667	0.962	0.708

CYCLE 3 - MAP 4

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
			1758		2250.		133.9		

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY B 5	ASSEMBLY L 8
1	0.441	1.272	0.984	0.725	2.529
2	0.830	1.734	1.697	1.332	2.944
3	1.168	2.236	2.138	1.820	3.624
4	1.453	2.659	2.513	2.189	4.152
5	1.686	3.006	2.777	2.440	4.454
6	1.829	2.968	2.755	2.390	4.341
7	1.847	3.585	3.350	2.891	5.133
8	2.206	3.854	3.615	3.142	5.435
9	2.367	4.086	3.813	3.325	5.662
10	2.475	4.278	3.989	3.492	5.888
11	2.583	4.394	4.143	3.609	5.926
12	2.672	4.548	4.276	3.710	5.964
13	2.744	4.625	4.364	3.793	6.077
14	2.798	4.741	4.452	3.843	6.153
15	2.852	4.818	4.496	3.894	6.115
16	2.888	4.818	4.496	3.970	6.002
17	2.852	4.355	4.143	3.559	5.511
18	2.780	5.011	4.739	4.061	6.266
19	3.157	5.242	4.915	4.244	6.455
20	3.282	5.396	5.047	4.378	6.643
21	3.426	5.589	5.157	4.529	6.870
22	3.551	5.704	5.267	4.629	7.021
23	3.731	5.859	5.356	4.729	7.209
24	3.928	6.051	5.444	4.829	7.398

CYCLE 3 - MAP 4

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY B 5	ASSEMBLY L 8
25	4.197	6.205	5.510	4.913	7.587
26	4.502	6.398	5.554	4.996	7.700
27	4.860	6.475	5.488	4.980	7.511
28	5.020	5.947	5.009	4.537	7.413
29	5.436	6.848	5.744	5.233	8.375
30	6.199	7.157	5.899	5.417	8.716
31	6.636	7.351	6.081	5.618	8.944
32	6.963	7.505	6.142	5.685	9.133
33	7.290	7.660	6.208	5.853	9.323
34	7.490	7.776	6.252	5.920	9.437
35	7.636	7.854	6.296	5.987	9.437
36	7.690	7.815	6.296	5.971	9.437
37	7.672	7.737	6.230	5.887	9.285
38	7.599	7.583	6.009	5.769	8.679
39	7.017	6.732	5.346	5.082	8.375
40	7.054	7.660	6.053	5.736	9.058
41	7.472	7.776	6.120	5.820	9.020
42	7.490	7.854	6.142	5.836	8.982
43	7.490	7.854	6.142	5.887	8.906
44	7.454	7.854	6.120	5.853	8.830
45	7.399	7.776	6.076	5.753	8.716
46	7.308	7.660	5.965	5.652	8.679
47	7.163	7.467	5.833	5.518	8.603
48	6.999	7.273	5.612	5.367	8.489
49	6.799	6.886	5.280	5.098	7.731
50	6.108	5.958	4.728	4.444	7.655
51	6.127	6.577	5.081	4.847	8.072
52	6.272	6.422	4.949	4.730	7.958
53	6.127	6.190	4.750	4.562	7.731
54	5.927	5.919	4.507	4.344	7.428
55	5.636	5.532	4.220	4.075	7.011
56	5.218	5.029	3.866	3.723	6.405
57	4.727	4.449	3.380	3.321	5.685
58	4.127	3.793	2.850	2.807	4.737
59	3.400	2.940	2.165	2.130	3.524
60	2.509	2.012	1.502	1.426	2.691
61	2.127	2.515	1.524	1.593	2.388

	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
1	0.987	2.480	0.820	0.721	0.518
2	1.861	2.338	1.508	1.270	0.920

CYCLE 3 - MAP 4

	ASSEMBLY N 10	ASSEMBLY L 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
3	2.623	2.975	2.063	1.649	1.205
4	3.273	3.613	2.484	1.973	1.424
5	3.818	4.074	2.804	2.243	1.621
6	4.130	4.074	2.821	2.216	1.599
7	4.286	4.817	3.321	2.649	1.928
8	5.091	5.278	3.649	2.919	2.108
9	5.377	5.632	3.873	3.108	2.234
10	5.662	5.880	4.055	3.270	2.344
11	5.922	6.163	4.207	3.406	2.463
12	6.104	6.341	4.322	3.514	2.519
13	6.286	6.447	4.408	3.568	2.563
14	6.415	6.589	4.486	3.622	2.607
15	6.519	6.695	4.538	3.676	2.650
16	6.545	6.659	4.572	3.703	2.672
17	6.364	6.057	4.193	3.379	2.453
18	6.208	6.589	4.710	3.838	2.804
19	6.985	7.014	4.969	4.027	2.957
20	5.195	7.191	5.107	4.162	3.067
21	7.428	7.439	5.245	4.271	3.198
22	7.662	7.651	5.349	4.352	3.329
23	7.896	7.864	5.452	4.460	3.505
24	8.104	8.147	5.556	4.541	3.680
25	8.286	8.395	5.633	4.622	3.899
26	8.441	8.608	5.677	4.703	4.096
27	8.519	8.820	5.677	4.730	4.293
28	8.087	8.125	5.157	4.305	4.004
29	8.331	9.134	5.777	4.964	4.818
30	9.008	9.723	5.985	5.127	5.105
31	9.268	10.129	6.106	5.235	5.348
32	9.476	10.448	6.210	5.344	5.569
33	9.633	10.697	6.288	5.425	5.724
34	9.815	10.875	6.383	5.506	5.856
35	9.945	11.053	6.417	5.561	5.945
36	10.049	10.875	6.400	5.588	5.945
37	10.049	10.804	6.348	5.561	5.923
38	9.997	10.555	6.210	5.479	5.790
39	9.268	9.347	5.535	4.855	5.149
40	9.529	10.271	6.184	5.533	5.790
41	10.127	10.591	6.262	5.642	5.874
42	10.231	10.697	6.270	5.669	5.790
43	10.257	10.697	6.270	5.669	5.768
44	10.205	10.591	6.262	5.615	5.812
45	10.127	10.448	6.184	5.533	5.702
46	9.997	10.306	6.054	5.398	5.702
47	9.789	10.093	5.907	5.235	5.547

CYCLE 3 - MAP 4

	ASSEMBLY N 10	ASSERBLY L 11	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
48	9.529	9.844	5.725	5.078	5.392
49	9.190	9.524	5.466	4.774	5.171
50	8.123	8.174	4.731	4.096	4.398
51	8.279	8.849	5.155	4.476	4.906
52	8.409	8.849	5.077	4.367	4.795
53	8.175	8.600	4.904	4.204	4.663
54	7.836	8.245	4.653	3.987	4.486
55	7.446	7.747	4.376	3.716	4.132
56	6.899	7.108	4.030	3.418	3.845
57	6.248	6.397	3.598	3.071	3.425
58	5.389	5.509	3.036	2.550	2.895
59	4.478	4.407	2.387	1.980	2.320
60	3.280	2.985	1.583	1.302	1.525
61	2.473	2.665	1.868	1.519	1.812

CYCLE 3 - MAP 5

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
			2002		2250.		94.1		

	ASSEMBLY H 1	ASSERBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5	ASSEMBLY D 7
1	0.526	0.864	1.876	0.783	1.343
2	0.959	1.530	2.316	1.415	2.402
3	1.300	1.996	3.004	1.898	3.176
4	1.549	2.388	3.605	2.230	3.847
5	1.706	2.705	4.074	2.483	4.294
6	1.770	2.724	4.089	2.451	4.321
7	1.979	3.227	4.866	2.973	4.965
8	2.237	3.563	5.364	3.226	5.547
9	2.398	3.787	5.716	3.432	5.806
10	2.543	3.992	6.023	3.606	6.084
11	2.671	4.197	6.317	3.764	6.263
12	2.784	4.365	6.595	3.874	6.433
13	2.913	4.496	6.829	4.007	6.576
14	3.025	4.626	7.035	4.080	6.826
15	3.154	4.701	7.211	4.175	6.889
16	3.283	4.776	7.313	4.207	6.952
17	3.234	4.458	6.654	3.859	6.451
18	3.556	4.943	7.606	4.491	7.086

CYCLE 3 - MAP 5

	ASSEMBLY H 1	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5	ASSEMBLY D 7
19	4.039	5.223	7.973	4.697	7.569
20	4.409	5.391	8.207	4.871	7.819
21	4.810	5.556	8.461	5.043	8.090
22	5.215	5.683	8.703	5.200	8.361
23	5.541	5.777	8.907	5.296	8.640
24	5.851	5.852	9.054	5.375	8.667
25	6.095	5.890	9.201	5.439	8.820
26	6.291	5.890	9.290	5.470	9.017
27	6.421	5.852	9.231	5.359	8.981
28	5.916	5.271	8.274	4.930	8.055
29	6.519	5.758	9.452	5.566	8.999
30	6.845	5.965	9.672	5.677	9.296
31	7.008	6.040	9.790	5.741	9.341
32	7.106	6.077	9.878	5.804	9.332
33	7.187	6.096	9.878	5.852	9.341
34	7.204	6.077	9.878	5.836	9.314
35	7.187	6.077	9.805	5.820	9.341
36	7.089	6.021	9.687	5.725	9.368
37	6.926	5.908	9.584	5.582	9.224
38	6.731	5.758	9.290	5.280	8.981
39	5.949	4.989	8.200	4.850	7.939
40	6.356	5.477	9.142	5.311	8.667
41	6.470	5.571	9.201	5.311	8.739
42	6.438	5.571	9.157	5.296	8.640
43	6.372	5.533	9.098	5.280	8.496
44	6.291	5.496	8.995	5.216	8.325
45	6.193	5.440	8.818	5.105	8.163
46	6.095	5.327	8.612	4.977	8.010
47	5.982	5.196	8.347	4.834	7.885
48	5.769	5.008	8.068	4.675	7.759
49	5.557	4.783	7.685	4.325	7.489
50	4.775	4.108	6.684	3.944	6.572
51	5.183	4.427	7.332	4.182	7.183
52	5.150	4.352	7.184	4.055	7.174
53	5.003	4.183	6.919	3.896	6.959
54	4.808	3.995	6.566	3.705	6.698
55	4.531	3.751	6.154	3.451	6.347
56	4.172	3.470	5.594	3.149	5.898
57	3.748	3.095	4.961	2.767	5.349
58	3.227	2.663	4.181	2.322	4.621
59	2.640	2.157	3.295	1.765	3.749
60	1.809	1.444	2.303	1.224	2.553
61	2.021	1.576	1.204	1.240	2.239

CYCLE 3 - MAP 5

	ASSEMBLY B 7	ASSEMBLY R 8	ASSEMBLY N 10	ASSEMBLY N 12	ASSEMBLY L 14
1	0.896	0.558	1.033	0.892	0.804
2	1.642	0.977	1.949	1.618	1.405
3	2.240	1.256	2.748	2.178	1.804
4	2.687	1.507	3.429	2.572	2.147
5	3.036	1.712	3.974	2.872	2.411
6	3.061	1.703	4.269	2.856	2.379
7	3.556	2.037	4.473	3.472	2.898
8	3.956	2.242	5.336	3.756	3.185
9	4.205	2.400	5.654	3.993	3.401
10	4.404	2.540	5.972	4.182	3.576
11	4.603	2.679	6.290	4.356	3.728
12	4.778	2.791	6.540	4.498	3.856
13	4.927	2.903	6.767	4.608	3.959
14	5.076	2.996	6.949	4.703	4.047
15	5.226	3.126	7.153	4.798	4.143
16	5.400	3.226	7.289	4.829	4.199
17	5.076	3.061	7.130	4.466	3.856
18	5.773	3.619	7.062	5.161	4.478
19	6.320	4.019	7.925	5.381	4.678
20	6.766	4.410	8.288	5.539	4.814
21	7.256	4.878	8.627	5.713	4.963
22	7.773	5.324	8.989	5.839	5.105
23	8.175	5.663	9.217	5.935	5.194
24	8.502	5.946	9.400	6.030	5.274
25	8.754	6.191	9.537	6.062	5.338
26	8.930	6.388	9.605	6.077	5.378
27	8.993	6.454	9.582	6.019	5.338
28	8.180	5.981	8.736	5.443	4.792
29	8.166	6.043	9.280	6.093	5.435
30	8.385	6.869	9.765	6.157	5.539
31	9.463	6.962	9.879	6.220	5.595
32	9.584	7.057	9.924	6.252	5.643
33	9.564	7.067	9.947	6.268	5.667
34	9.609	7.057	9.993	6.220	5.659
35	9.559	7.010	10.016	6.220	5.651
36	9.483	6.907	9.970	6.141	5.627
37	9.358	6.765	9.833	6.046	5.547
38	9.131	6.577	9.651	5.712	5.378
39	7.949	5.736	8.601	5.332	4.736
40	8.905	6.379	9.194	5.776	5.354
41	9.031	6.464	9.514	5.760	5.394
42	8.955	6.445	9.559	5.728	5.394
43	8.905	6.407	9.491	5.697	5.338
44	8.829	6.370	9.377	5.617	5.258
45	8.628	6.275	9.240	5.538	5.130

CYCLE 3 - MAP 5

	ASSEMBLY B 7	ASSEMBLY R 8	ASSEMBLY N 10	ASSEMBLY N 12	ASSEMBLY L 14
46	6.427	6.143	9.057	5.379	4.993
47	6.251	5.964	8.829	5.252	4.816
48	6.024	5.776	8.533	5.030	4.608
49	7.723	5.493	8.190	4.586	4.327
50	6.591	4.721	7.027	4.316	3.725
51	7.320	5.173	7.483	4.522	4.062
52	7.194	5.079	7.483	4.380	3.958
53	6.943	4.919	7.232	4.205	3.797
54	6.691	4.711	6.936	3.983	3.604
55	6.314	4.429	6.548	3.697	3.355
56	5.836	4.089	6.046	3.364	3.083
57	5.257	3.675	5.430	2.967	2.729
58	4.503	3.147	4.677	2.491	2.320
59	3.622	2.516	3.833	1.888	1.830
60	2.465	1.696	2.715	1.365	1.204
61	3.019	2.082	2.236	1.301	1.421

	ASSEMBLY J 15
1	0.475
2	0.672
3	1.192
4	1.434
5	1.621
6	1.621
7	1.937
8	2.142
9	2.291
10	2.422
11	2.552
12	2.667
13	2.776
14	2.869
15	2.962
16	3.074
17	2.906
18	3.390
19	3.726
20	3.986
21	4.282
22	4.581
23	4.806

CYCLE 3 - MAP 5

	ASSEMBLY J 15
24	5.050
25	5.182
26	5.313
27	5.313
28	4.769
29	5.426
30	5.557
31	5.637
32	5.651
33	5.707
34	5.688
35	5.707
36	5.595
37	5.538
38	5.332
39	4.675
40	5.163
41	5.219
42	5.144
43	5.031
44	5.013
45	4.994
46	4.862
47	4.806
48	4.600
49	4.374
50	3.774
51	4.205
52	4.093
53	3.942
54	3.774
55	3.492
56	3.229
57	2.910
58	2.459
59	1.952
60	1.314
61	1.539

CYCLE 3 - MAP 6

	ASSEMBLY R 8	ASSEMBLY N 10	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
14	3.539	7.418	4.644	4.367	3.252
15	3.742	7.613	4.926	4.476	3.409
16	3.963	7.722	4.942	4.554	3.585
17	3.908	7.374	4.556	4.226	3.482
18	4.621	7.731	5.269	4.774	3.990
19	5.251	8.460	5.490	5.034	4.417
20	5.662	8.765	5.630	5.175	4.680
21	6.054	9.070	5.728	5.301	4.912
22	6.316	9.288	5.819	5.380	5.114
23	6.522	9.463	5.876	5.450	5.273
24	6.652	9.572	5.901	5.490	5.395
25	6.765	9.637	5.909	5.513	5.462
26	6.839	9.637	5.868	5.505	5.511
27	6.802	9.506	5.679	5.435	5.462
28	6.092	8.721	5.210	4.822	4.943
29	6.763	8.939	5.753	5.427	5.291
30	6.970	9.397	5.802	5.505	5.444
31	7.008	9.463	5.819	5.513	5.468
32	7.008	9.441	5.786	5.521	5.493
33	6.989	9.419	5.786	5.513	5.493
34	6.914	9.375	5.737	5.482	5.444
35	6.821	9.354	5.679	5.442	5.450
36	6.690	9.266	5.564	5.387	5.291
37	6.522	9.114	5.457	5.285	5.175
38	6.335	8.939	5.152	5.152	5.059
39	5.513	8.067	4.774	4.492	4.491
40	6.092	8.394	5.185	5.050	4.833
41	6.167	8.743	5.144	5.097	4.882
42	6.148	8.743	5.119	5.073	4.821
43	6.129	8.700	5.053	5.034	4.759
44	6.073	8.591	4.979	4.955	4.643
45	5.961	8.460	4.897	4.830	4.588
46	5.849	8.285	4.757	4.704	4.509
47	5.681	8.067	4.601	4.539	4.448
48	5.494	7.806	4.436	4.343	4.356
49	5.251	7.500	4.090	4.107	4.179
50	4.503	6.476	3.827	3.487	3.605
51	4.896	6.846	3.992	3.809	3.886
52	4.840	6.803	3.876	3.715	3.855
53	4.672	6.606	3.720	3.573	3.702
54	4.485	6.301	3.547	3.385	3.544
55	4.242	5.931	3.292	3.173	3.299
56	3.906	5.494	3.004	2.914	3.061
57	3.476	4.928	2.642	2.568	2.755
58	2.971	4.186	2.173	2.175	2.419

CYCLE 3 - MAP 6

	ASSEMBLY R 8	ASSEMBLY N 10	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
59	2.373	3.380	1.630	1.712	1.973
60	1.588	2.289	1.226	1.131	1.350
61	1.962	2.071	1.127	1.304	1.350

CYCLE 3 - MAP 7

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
			2197	2250.			107.4		

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY B 5	ASSEMBLY R 8
1	0.663	1.723	0.830	0.853	0.660
2	1.195	2.313	1.536	1.544	1.159
3	1.598	2.834	2.117	2.071	1.498
4	1.870	3.265	2.574	2.436	1.783
5	2.056	3.514	2.907	2.718	2.033
6	2.107	3.741	2.959	2.668	2.033
7	2.549	4.376	3.432	3.264	2.476
8	2.787	4.716	3.835	3.546	2.746
9	3.008	5.010	4.115	3.778	2.978
10	3.229	5.260	4.342	3.977	3.209
11	3.450	5.487	4.553	4.159	3.441
12	3.688	5.691	4.763	4.292	3.691
13	3.960	5.895	4.903	4.424	3.958
14	4.266	6.076	5.008	4.507	4.244
15	4.620	6.246	5.102	4.615	4.596
16	4.858	6.121	5.178	4.640	4.917
17	4.841	6.076	4.844	4.224	4.682
18	5.085	6.604	5.248	4.390	5.568
19	5.978	6.032	5.546	5.073	5.983
20	6.185	7.214	5.669	5.222	6.273
21	6.305	7.326	5.775	5.322	6.508
22	6.391	7.419	5.845	5.405	6.652
23	6.443	7.464	5.898	5.455	6.743
24	6.477	7.510	5.898	5.455	6.779
25	6.512	7.510	5.880	5.438	6.815
26	6.495	7.487	5.827	5.405	6.815
27	6.236	7.055	5.722	5.272	6.688
28	5.892	6.695	5.073	4.673	5.929
29	6.495	7.315	5.529	5.272	6.670

CYCLE 3 - MAP 7

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY B 5	ASSEMBLY R 8
30	6.581	7.396	5.652	5.322	6.761
31	6.615	7.373	5.652	5.339	6.761
32	6.633	7.328	5.669	5.372	6.761
33	6.596	7.305	5.634	5.355	6.688
34	6.546	7.259	5.582	5.305	6.598
35	6.443	7.168	5.546	5.255	6.526
36	6.305	7.032	5.476	5.139	6.399
37	6.133	6.850	5.353	4.973	6.237
38	5.719	6.258	5.178	4.707	6.002
39	5.392	6.281	4.458	4.324	5.242
40	5.771	6.645	4.932	4.690	5.893
41	5.737	6.668	4.985	4.690	5.947
42	5.702	6.668	4.967	4.673	5.911
43	5.633	6.645	4.950	4.657	5.875
44	5.564	6.577	4.897	4.590	5.839
45	5.478	6.486	4.844	4.507	5.748
46	5.375	6.372	4.757	4.374	5.622
47	5.237	6.190	4.634	4.258	5.477
48	5.062	5.962	4.493	4.125	5.315
49	4.851	5.348	4.283	3.825	5.025
50	4.479	5.371	3.686	3.493	4.375
51	4.686	5.464	3.967	3.709	4.808
52	4.565	5.302	3.914	3.592	4.700
53	4.445	5.097	3.774	3.459	4.555
54	4.221	4.824	3.598	3.293	4.357
55	3.928	4.506	3.388	3.077	4.085
56	3.549	4.096	3.124	2.794	3.778
57	3.135	3.596	2.826	2.461	3.380
58	2.550	2.958	2.440	2.062	2.892
59	1.695	2.185	1.931	1.580	2.296
60	1.568	1.866	1.299	1.081	1.537
61	1.275	1.616	1.457	1.114	1.934

	ASSEMBLY N 10	ASSEMBLY B 10	ASSEMBLY L 11	ASSEMBLY N 12	ASSEMBLY J 15
1	1.175	1.133	1.532	0.812	0.545
2	2.190	1.986	2.654	1.517	0.964
3	3.045	2.559	3.366	2.114	1.257
4	3.740	3.060	4.122	2.603	1.550
5	4.312	3.471	4.683	2.984	1.774
6	4.578	3.469	4.812	3.100	1.843
7	4.966	4.151	5.460	3.482	2.118

CYCLE 3 - MAP 7

	ASSEMBLY N 10	ASSEMBLY B 10	ASSEMBLY L 11	ASSEMBLY N 12	ASSEMBLY J 15
8	5.824	4.599	6.172	3.946	2.411
9	6.213	4.903	6.625	4.228	2.618
10	6.560	5.189	7.035	4.476	2.807
11	6.928	5.457	7.467	4.675	2.997
12	7.255	5.672	7.790	4.841	3.186
13	7.500	5.869	8.071	4.990	3.393
14	7.745	6.048	8.351	5.090	3.600
15	7.959	6.238	8.646	5.179	3.806
16	8.091	6.339	8.769	5.252	4.031
17	7.743	5.854	8.271	4.986	3.927
18	7.948	6.609	8.682	5.302	4.327
19	8.747	6.968	9.440	5.668	4.726
20	9.033	7.183	9.613	5.801	4.917
21	9.238	7.345	9.916	5.900	5.091
22	9.443	7.507	10.111	5.984	5.213
23	9.525	7.614	10.219	6.017	5.282
24	9.545	7.704	10.371	6.050	5.352
25	9.525	7.704	10.457	6.050	5.369
26	9.443	7.668	10.414	6.000	5.369
27	9.259	7.578	10.306	5.917	5.317
28	8.296	6.770	9.353	5.369	4.813
29	8.706	7.363	9.743	5.618	5.004
30	9.074	7.525	10.198	5.817	5.196
31	9.095	7.543	10.284	5.801	5.196
32	9.074	7.525	10.349	5.784	5.178
33	9.033	7.471	10.349	5.767	5.161
34	9.013	7.381	10.306	5.751	5.126
35	8.972	7.309	10.263	5.701	5.091
36	8.849	7.183	9.960	5.601	5.056
37	8.685	7.058	9.765	5.518	4.865
38	8.501	.878	9.416	5.352	4.761
39	7.599	6.034	8.336	4.787	4.205
40	8.097	6.627	8.790	5.036	4.500
41	8.357	6.681	9.093	5.136	4.570
42	8.357	6.645	9.093	5.086	4.535
43	8.316	6.555	9.029	5.053	4.500
44	8.214	6.483	8.899	5.003	4.414
45	8.091	6.411	8.790	4.936	4.327
46	7.948	6.285	8.595	4.820	4.309
47	7.763	6.124	8.401	4.687	4.275
48	7.518	5.926	8.184	4.521	4.188
49	7.210	5.711	7.903	4.338	4.031
50	6.248	4.885	6.907	3.740	3.510
51	6.596	5.334	7.275	4.022	3.666
52	6.616	5.280	7.318	3.972	3.649

53	6.411	5.118	7.123	3.856	3.545
54	6.166	4.885	6.842	3.673	3.388
55	5.817	4.597	6.452	3.474	3.215
56	5.408	4.236	5.997	3.175	2.971
57	4.855	3.735	5.369	2.892	2.693
58	4.199	3.215	4.633	2.493	2.294
59	3.441	2.568	3.746	2.044	1.877
60	2.438	1.724	2.620	1.413	1.286
61	1.987	2.119	2.187	1.463	1.321

CYCLE 3 - MAP 9

DATE	TIME	MEAS PPM	MWT	TEMP	PRESS	P/L HT	D-BANK HT	CORR PPM	MWD/T
12/22/75			2441		2250.		133.9		

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY B 5
1	1.031	1.693	1.405	2.302	0.909
2	1.877	2.055	1.865	3.034	1.634
3	2.538	2.741	2.351	3.754	2.175
4	3.034	3.331	2.773	4.382	2.537
5	3.349	3.823	3.092	4.776	2.806
6	3.607	4.025	3.077	4.776	2.765
7	4.281	4.329	3.676	5.731	3.336
8	4.568	4.996	3.979	6.176	3.595
9	4.833	5.279	4.212	6.490	3.783
10	5.042	5.562	4.391	6.765	3.936
11	5.189	5.765	4.577	7.013	4.060
12	5.287	5.947	4.687	7.236	4.148
13	5.361	6.048	4.769	7.393	4.207
14	5.422	6.149	4.831	7.484	4.242
15	5.422	6.210	4.872	7.524	4.266
16	5.177	6.250	4.838	7.354	4.207
17	5.091	5.926	4.357	6.817	3.818
18	5.557	5.947	4.934	7.615	4.342
19	5.631	6.412	5.071	7.733	4.448
20	5.643	6.533	5.147	7.838	4.530
21	5.643	6.634	5.188	7.903	4.595
22	5.619	6.634	5.230	7.982	4.636
23	5.606	6.675	5.230	8.047	4.648
24	5.606	6.675	5.216	8.073	4.648
25	5.606	6.695	5.181	8.060	4.624

CYCLE 3 - MAP 9

	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY L 11
4	3.035	5.447	4.684	4.209	4.810
5	3.483	5.990	5.252	4.852	5.471
6	3.504	5.754	5.044	5.126	5.529
7	4.338	6.897	6.046	5.509	6.412
8	4.722	7.350	6.444	6.421	7.103
9	5.000	7.646	6.703	6.767	7.564
10	5.235	8.020	7.031	7.077	7.909
11	5.427	8.079	7.083	7.369	8.312
12	5.556	8.138	7.135	7.624	8.504
13	5.620	8.237	7.221	7.789	8.619
14	5.620	8.375	7.342	7.898	8.715
15	5.598	8.257	7.238	7.989	8.811
16	5.513	8.060	7.066	7.971	8.896
17	4.979	7.094	6.219	7.497	7.928
18	5.641	8.020	7.031	7.533	8.312
19	5.791	8.178	7.169	8.153	8.754
20	5.855	8.217	7.204	8.318	8.811
21	5.919	8.316	7.290	8.445	8.927
22	5.962	8.335	7.307	8.555	9.022
23	5.940	8.375	7.342	8.591	9.061
24	5.940	8.335	7.307	8.591	9.138
25	5.940	8.296	7.273	8.537	9.195
26	5.897	8.217	7.204	8.464	9.138
27	5.769	8.040	7.048	8.336	9.061
28	5.192	7.074	6.202	7.515	8.178
29	5.833	8.040	7.048	7.807	8.696
30	5.962	8.178	7.169	8.190	9.080
31	6.004	8.237	7.221	8.190	9.195
32	6.026	8.276	7.252	8.226	9.310
33	6.004	8.257	7.238	8.245	9.368
34	5.962	8.257	7.238	8.299	9.368
35	5.940	8.197	7.186	8.336	9.445
36	5.876	8.119	7.117	8.336	9.195
37	5.812	7.981	6.996	8.299	9.099
38	5.598	7.705	6.755	8.208	8.869
39	5.085	6.739	5.908	7.406	7.909
40	5.705	7.665	6.720	7.898	8.543
41	5.812	7.705	6.755	8.299	8.869
42	5.855	7.646	6.703	8.391	8.946
43	5.897	7.626	6.686	8.427	8.984
44	5.919	7.587	6.651	8.427	8.946
45	5.876	7.587	6.651	8.391	8.888
46	5.812	7.587	6.651	8.336	8.773
47	5.727	7.587	6.651	8.226	8.658
48	5.577	7.567	6.634	8.044	8.504

CYCLE 3 - MAP 9

	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15		
49	5.256	7.311	6.409	7.807	8.274
50	4.786	6.463	5.666	6.785	7.237
51	5.192	7.311	6.409	7.223	7.794
52	5.085	7.311	6.409	7.296	7.871
53	4.979	7.173	6.288	7.132	7.698
54	4.786	6.976	6.115	6.895	7.429
55	4.466	6.660	5.839	6.548	7.026
56	4.103	6.187	5.424	6.092	6.527
57	3.632	5.577	4.889	5.527	5.893
58	3.056	4.769	4.181	4.743	5.087
59	2.329	3.764	3.300	3.867	4.108
60	1.731	2.642	2.229	2.663	2.784
61	0.954	2.266	1.987	2.335	1.414

	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
1	0.970	0.980	1.181
2	1.752	1.702	1.547
3	2.346	2.164	1.995
4	2.757	2.554	2.413
5	3.091	2.848	2.752
6	3.050	2.790	2.752
7	3.676	3.409	3.389
8	3.972	3.693	3.697
9	4.196	3.893	3.923
10	4.374	4.073	4.108
11	4.521	4.208	4.272
12	4.634	4.305	4.375
13	4.699	4.369	4.437
14	4.752	4.408	4.478
15	4.787	4.434	4.478
16	4.752	4.402	4.437
17	4.285	3.963	3.964
18	4.682	4.518	4.498
19	5.006	4.627	4.621
20	5.071	4.659	4.662
21	5.112	4.685	4.704
22	5.130	4.711	4.724
23	5.130	4.730	4.745
24	5.118	4.717	4.724
25	5.095	4.705	4.724
26	5.041	4.679	4.704

CYCLE 3 - MAP 9

	ASSEMBLY H 1	ASSEMBLY F 2	ASSEMBLY D 3	ASSEMBLY N 5	ASSEMBLY E 5
26	5.582	6.695	5.133	8.008	4.595
27	5.238	6.655	5.010	7.694	4.454
28	5.226	6.230	4.405	7.236	4.036
29	5.643	6.169	4.989	8.021	4.530
30	5.729	6.594	5.065	8.139	4.589
31	5.803	6.634	5.106	8.204	4.642
32	5.852	6.655	5.126	8.256	4.689
33	5.876	6.655	5.126	8.270	4.724
34	5.868	6.675	5.133	8.256	4.730
35	5.827	6.675	5.147	8.230	4.713
36	5.753	6.655	5.113	8.165	4.660
37	5.655	6.574	5.044	8.099	4.560
38	5.177	6.452	4.879	7.641	4.366
39	5.287	5.967	4.281	7.406	3.995
40	5.557	6.038	4.886	8.021	4.436
41	5.594	6.452	4.962	8.139	4.483
42	5.619	6.553	5.003	8.165	4.524
43	5.606	6.614	5.023	8.178	4.554
44	5.594	6.634	5.030	8.152	4.554
45	5.557	6.634	5.016	8.073	4.501
46	5.508	6.614	4.955	7.942	4.424
47	5.422	6.533	4.865	7.772	4.354
48	5.300	6.412	4.735	7.576	4.242
49	4.696	6.230	4.474	6.961	3.989
50	4.932	5.542	4.073	6.856	3.659
51	5.030	5.724	4.357	7.157	3.973
52	4.932	5.846	4.267	7.000	3.836
53	4.809	5.684	4.130	6.752	3.707
54	4.586	5.502	3.944	6.412	3.560
55	4.269	5.239	3.711	5.993	3.354
56	3.864	4.895	3.408	5.404	3.065
57	3.374	4.450	3.044	4.724	2.695
58	2.797	3.904	2.584	3.873	2.224
59	1.926	3.236	2.034	2.975	1.677
60	1.951	2.407	1.354	2.031	1.200
61	1.325	2.083	0.676	1.039	1.153

	ASSEMBLY R 8	ASSEMBLY L 8	ASSEMBLY L 9	ASSEMBLY N 10	ASSEMBLY L 11
1	1.412	3.474	2.928	1.301	3.291
2	1.918	3.768	3.176	2.435	3.081
3	2.467	4.691	3.954	3.403	3.942

CYCLE 3 - MAP 9

	ASSEMBLY N 12	ASSEMBLY L 14	ASSEMBLY J 15
27	4.906	4.607	4.601
28	4.391	4.079	4.026
29	4.923	4.606	4.560
30	4.965	4.606	4.621
31	5.000	4.685	4.621
32	5.024	4.737	4.642
33	5.047	4.737	4.683
34	5.047	4.759	4.683
35	5.059	4.756	4.662
36	5.006	4.737	4.621
37	4.941	4.698	4.560
38	4.775	4.585	4.498
39	4.379	4.092	3.964
40	4.862	4.647	4.416
41	4.923	4.730	4.478
42	4.947	4.775	4.478
43	4.959	4.782	4.478
44	4.941	4.769	4.539
45	4.923	4.705	4.498
46	4.634	4.350	4.313
46	4.840	4.614	4.437
47	4.752	4.492	4.395
49	4.314	4.105	4.128
50	3.995	3.596	3.677
51	4.265	3.957	4.046
52	4.184	3.880	3.944
53	4.037	3.757	3.841
54	3.883	3.577	3.677
55	3.647	3.364	3.471
56	3.333	3.100	3.225
57	2.943	2.726	2.814
58	2.447	2.294	2.403
59	1.874	1.779	1.849
60	1.365	1.199	1.273
61	1.336	1.366	1.315